

998-187

4.5 PSP Cover Sheet

Proposal Title: Howard Slough Riparian Restoration Project

Applicant Name: The CSU, Chico Research Foundation-Office of Sponsored Programs

Mailing Address: Kendall Hall, Room 114, Chico, California 95929-0870

Telephone: 530-898-5206

Fax: 530-898-6804

Email: kcooper-carter@csuchico.edu

Amount of funding requested: \$ \$265,288 for 2 years

Indicate the Topic for which you are applying (check only one box).

- Fish Passage/Fish Screens
- Habitat Restoration
- Local Watershed Stewardship
- Water Quality
- Introduced Species
- Fish Management/Hatchery
- Environmental Education

Does the proposal address a specified Focused Action? yes X no

What county or counties is the project location in? Butte

Indicate the geographic area of your proposal (check only one box):

- Sacramento River Mainstem
- Sacramento Trib: Butte Creek
- San Joaquin River Mainstem
- San Joaquin Trib: _____
- Delta: _____
- East Side Trib: _____
- Suisun Marsh and Bay
- North Bay/South Bay: _____
- Landscape (entire Bay-Delta watershed)
- Other: _____

Indicate the primary species which the proposal addresses (check all that apply):

- San Joaquin and East-side Delta tributaries fall-run chinook salmon
- Winter-run Chinook salmon
- Late-fall run chinook salmon
- Delta smelt
- Splittail
- Green sturgeon
- Migratory birds
- Other: _____
- Spring-run chinook salmon
- Fall-run chinook salmon
- Longfin smelt
- Steelhead trout
- Striped bass
- All chinook species
- All anadromous salmonids

Specify the ERP strategic objective and target (s) and the project addresses: Include page numbers from January 1999 version of ERP Volume I and II:

The vision for the Butte Creek Ecological Management Unit for protecting and restoring riparian corridor (vII, p. 261). The Stream Meander and Floodplain Target 1 (vII, page 268). The Coarse Sediment Supply Target 3 (vII, Page 268). Habitats-Seasonal Wetlands Programmatic Actions

1A and 2A (vII, page 269). Riparian and Riverine Aquatic Habitats Target 4 and Programmatic Action 4A (vII, page 271). Agricultural Lands Objective (v. I, p. 174 and v. II p. 262). The Chinook salmon objective, fall-run Chinook salmon vision and programmatic action (vol. II, p. 263 and p. 273).

Indicate the type of applicant (check only one box):

- | | |
|--|---|
| <input type="checkbox"/> State agency | <input type="checkbox"/> Federal Agency |
| <input type="checkbox"/> Public/Non-profit joint venture | <input type="checkbox"/> Non-profit |
| <input type="checkbox"/> Local government/district | <input type="checkbox"/> Private party |
| <input checked="" type="checkbox"/> University | <input type="checkbox"/> Other: _____ |

Indicate the type of project (check only one box):

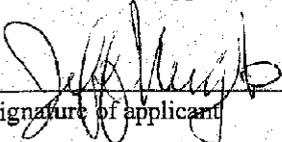
- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Planning | <input checked="" type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring | <input type="checkbox"/> Education |

By signing below, the applicant declares the following:

- 1.) The truthfulness of all representations in their proposal;
- 2.) The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and
- 3.) The person submitting the application has read and understood the conflict of interest and confidentiality discussion on the PSP (Section 2.4) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

The CSU, Chico Research Foundation

Jeff Wright
Printed name of applicant


Signature of applicant

Howard Slough Riparian Restoration Project

Applicant:

California State University, Chico
Research Foundation

Participants and Collaborators:

CSU Chico
CDFG
Glenn County Resource Conservation District
Natural Resource Conservation Service

Applicant Information:

certified nonprofit organization
exempt tax status
Federal ID#: 68-0386318

Technical contact person:

Donald Holtgrieve, Ph.D.
dholtgrieve@csuchico.edu
Richard Haiman, Ph.D.
rhaiman@csuchico.edu

II. EXECUTIVE SUMMARY

A. PROJECT TITLE/APPLICANT NAME

Howard Slough Riparian Restoration Project

Research Foundation, California State University, Chico

Project Director: Donald Holtgrieve, Ph.D., AICP

Principle Investigator: Richard Haiman, Ph.D.

B. Project Description/Primary Biological and Ecological Objectives

The Howard Slough Riparian Restoration is a project in cooperation with the California Department of Fish and Game (DFG) to restore to proper functioning condition approximately 120 acres of riparian forest along 2.5 miles of Butte Creek. The restoration of Shaded Riverine Aquatic (SRA) habitat is essential to maintain processes that contribute to biological and ecological integrity in the Butte Basin Ecological Zone. Much of this area has been under wetland restoration programs of DFG and has been utilized as a mitigation site for the CALFED restoration projects related to Western Canal dam removals and siphon projects. This project would serve to connect several areas of significant riparian forests, the mitigation sites, areas with no riparian forest and areas with marginal riparian strips, to complete a continuous segment on Lower Butte Creek. This area is a significant holding and migrating area for anadromous fish species as well as important rearing habitat. Reestablishment of these SRA habitats will allow for the long-term processes of creation and evolution of important in-stream and off-channel areas for holding and rearing of juvenile salmonids to occur in a more natural manner. In addition, providing a continuous corridor will have important benefits to waterfowl, raptors and many neo-tropical migrant bird species and additional species of special concern.

C. Approach/Tasks/Schedules

The project will coordinate with existing plans developed by DFG to do initial contouring of former rice production areas that have recently come under DFG control and which are in need of restoration to SRA habitats. The specific tasks of the project are to: (1) develop a riparian restoration plan for the entire project area; (2) implement the restoration plan; (3) monitor and replace plant material that does not survive and; (4) modify restoration strategy with the monitoring results. The schedule would be to initiate the planning process immediately upon approval of the contract in the fall of 1999. DFG will prepare the contouring of the former rice ground and some initial planting in this area may take place while the restoration plan is being finalized. In the spring of 2000, major planting efforts will occur on the other areas of the project and monitoring will begin. Replacement plant material will be added on a bi-monthly basis as determined from the monitoring program. Modifications to the planting strategy will be made in the fall of 2000 as determined by the monitoring. Modified planting strategies will be implemented in the fall of 2000 and spring of 2001. Final reports will be delivered 2 years after approval of the contracts, presumably in summer 2001.

D. Justification for Projects and Funding by CALFED

The project is a high priority for CALFED on a priority watershed. DFG has owned and managed the Howard Slough Unit for many years but has had to rely on limited funding for restoration projects. Most of the restoration work has been focused away from Butte Creek in areas that provide critically needed wetland habitat for migrating waterfowl. Almost all of the riparian habitat has been left to restore itself naturally, which, in some cases has been effective.

The recent mitigation project with Western Canal Irrigation District is the first riparian restoration project funded on the Howard Slough Unit. Continued restoration of the riparian corridor is very much dependent on the development of outside funding sources such as CALFED. Funding of this project will help to strengthen collaborative partnerships that will have greater capacity to leverage funding for continued restoration and enhancement of these already protected areas.

E. Budget Costs and Third Party Impacts

The budget for the entire project is approximately \$305,000 of which CSU Chico is requesting \$265,286. DFG is providing in kind services for the site preparations on the newly acquired lands and project supervision and coordination. The NRCS and the Glenn County RCD have indicated an interest in providing in-kind services for project review. There will be positive impacts to the Howard Slough Refuge and surrounding wildlife areas, private hunting clubs, and surrounding agricultural lands. Wildlife areas and hunting clubs will benefit from increasing continuity of wildlife habitats which will serve to increase overall wildlife populations, improving public and private hunting and viewing opportunities.. Agricultural lands will benefit from the project by the creation larger and more efficient areas for distribution of drainage water thereby reducing the impacts of non-point source pollution from agricultural runoff.

F. Applicant Qualifications

The protection and enhancement of local creeks and watersheds by local community groups is a high priority at California State University, Chico. Toward this end, faculty and resources, conservation groups, public agencies, and others are utilized. As a part of its community service mission, it is the policy of the University Research Foundation to organize teams for special projects and to provide the kinds of services such as project administration, direction, management, and support through the many involved faculty, department, institutes, centers, laboratories, internships, and class projects.

G. Monitoring and Data Evaluation

The project will include a monitoring program to monitor the success of the revegetation efforts to ensure that planted material will be maintained, replacement plants will be planted promptly and the revegetation plan will be modified in an adaptive manner. Data generated from successful areas will be utilized to adaptively manage areas that do not meet success criteria. This data will be evaluated by CSU Chico faculty, DFG personnel and NRCS conservation specialist.

H. Local Support/Coordination with Other Programs/Compatibility with CALFED Objectives

The project is supported by the California Department of Fish and Game, California State University, Chico, Glenn County RCD (requested), Natural Resource Conservation Service (NRCS)(requested). The project is coordinated with DFG's restoration program and will serve to complement their efforts. The project will also be coordinated with NRCS and the North American Waterfowl Management Plan (NAWMP) riparian and wetlands restoration objectives.

III. PROJECT DESCRIPTION

A. *Proposed scope of work*

The Howard Slough Riparian Restoration is a project in cooperation with the California Department of Fish and Game (DFG) to restore to proper functioning condition approximately 120 acres of riparian forest along 2.5 miles of the west bank of Butte Creek owned by DFG. The restoration of Shaded Riverine Aquatic (SRA) habitat is essential to maintain processes that contribute to biological and ecological integrity in the Butte Basin Ecological Zone. Much of this area has been under restoration programs of DFG and has been utilized as a mitigation site for the CALFED restoration projects related to Western Canal dam removals and siphon projects. This project would serve to connect several areas of significant riparian forests, the mitigation sites, areas with no riparian forest and areas with marginal riparian strips, to complete a continuous segment on Lower Butte Creek. This area is a significant holding and migrating area for anadromous fish species as well as an important rearing habitat. Reestablishment of these SRA habitats will allow for the long-term processes of creation and maintenance of important in-stream and off-channel areas for holding and rearing of juvenile salmonids to occur in a more natural manner. In addition, providing a continuous corridor will have important benefits to waterfowl, raptors and many neo-tropical migrant bird species, California Hibiscus and the giant garter snake.

Approach/Tasks/Schedules

The project will coordinate with existing plans developed by DFG to do initial contouring of former rice production areas that have recently come under DFG control which are in need of restoration to SRA habitats. The specific tasks of the project are to: (1) develop a riparian restoration plan for the entire project area; (2) implement the restoration plan; (3) monitor and replace plant material that does not survive and; (4) modify restoration strategy with the monitoring results. The schedule would be to initiate the planning process immediately upon approval of the contract in the fall of 1999. DFG will prepare the contouring of the former rice ground and some initial planting in this area may take place while the restoration plan is being finalized. In the spring of 2000, major planting efforts will occur on the other areas of the project and monitoring will begin. Replacement plant material will be added on a bi-monthly basis as determined from the monitoring program. Modifications to the planting strategy will be made in the fall of 2000 as determined by the monitoring. Modified planting strategies will be implemented in the fall of 2000 and spring of 2001. Final reports will be delivered 2 years after approval of the contracts, presumably in summer 2001. Deliverables for the tasks will be a restoration plan, six months after contract signing; photo documentation, news clips and other information on the implementation, twelve months after contracts; a monitoring report on a bi-annual basis, eighteen months after contracts; and a final report, twenty four months after contracts.

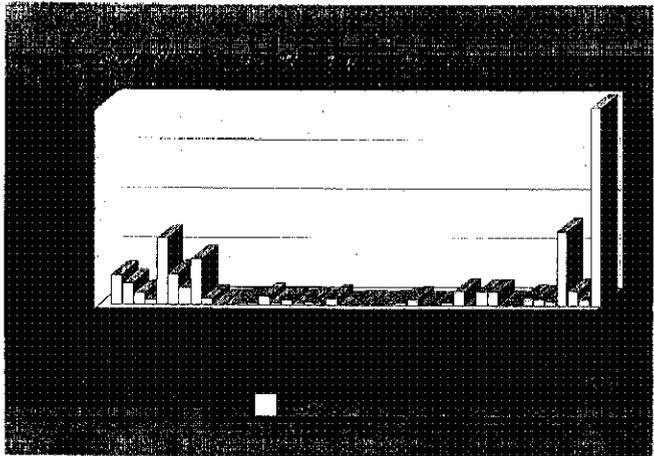
B. *Location And Geographic Boundaries*

The proposed project is located in the Butte Basin of the Sacramento River watershed on Butte Creek extending approximately four miles upstream. The project is located entirely within Glenn County.

IV. ECOLOGICAL/BIOLOGICAL BENEFITS

A. Ecological/Biological Objectives

Butte Creek, a tributary to the Sacramento River, flows from its headwaters in the Lassen National Forest, through Sierra foothills to the Central Valley. Much of the stream in this Central Valley reach has levees with adjacent intensive agricultural development. Butte Creek is one of the most important streams remaining in California for the conservation of spring-run Chinook salmon and steelhead with historic salmon populations recorded at over 22,000 adults. This Butte Creek population was one of California's largest spring run, Sacramento River being the largest with nearly a million fish. Over the last 30 years, with the exception of 1995 and 1998, the population has ranged from around fifty to just over a thousand. The decline of these populations (see chart) reflect the effects of stressors such as hydromodification, loss of the stream's deep cool pools and shaded riverine habitat, excess sediment transport, agricultural runoff and other physical, chemical and biological changes.



The project's plan of lengthening, widening and connecting the riparian forest habitats along Butte Creek will have a greater

ecological goal than expansion of SRA habitat for the creek's salmonid populations. A major goal will also be to widen the riparian forest zone so that at least three currently recognized sensitive natural communities will become established. Along the immediate stream bank, The Great Valley Willow Scrub will be encouraged through the planting of sandbar willow (*Salix hindstana*), arroyo willow (*S. lasiolepis*), yellow willow (*S. lasiandra*), and Fremont cottonwood (*Populus fremontii*). Individuals of these willow species occur in patches along the stream, and understory species of shrubs and herbs would be expected to spread naturally onto restored sites. This habitat type will provide forage and cover for many riparian animal species and be important locally for stream bank stability. A main stressor will be fluvial erosion as Butte Creek establishes a meandering pattern, especially during peak storm runoff such as occurred in January 1997. Such peak flows tend to scour willows from the stream banks and considerably debilitate this habitat type.

The Great Valley Willow Scrub merges into the Great Valley Mixed Riparian Forest along the upper stream banks. This community will be encouraged through the planting of Fremont cottonwood, white alder (*Alnus rhombifolia*), western sycamore (*Platanus racemosa*), and box elder (*Acer negundo*). Additional mixed riparian forest species are found scattered at the site and would be expected to spread naturally into restored areas. These include Oregon ash (*Fraxinus*

latifolia), big-leafed maple (*Acer macrophyllum*), buttonbush (*Cephalanthus occidentalis*), and poison oak (*Toxicodendron diversilobum*). A major stressor to the establishment of the full diversity of the mixed riparian forest habitat is the presence of invasive, introduced weedy plants such as Himalayan blackberry, verbena and pepperweed. The Great Valley Mixed Riparian Forest merges into the Great Valley valleyOak Riparian Forest along the drier margins from 5-20 feet upslope from the stream level. Restoration of this community will involve the planting of Valley oak (*Quercus lobata*) and blue elderberry (*Sambucus mexicana*). A major stressor upon this community is high soil moisture throughout the year. Care must be taken to ensure that land contouring operations provide adequate well-drained, mesic sites for the valley oak plantings and that surface runoff is directed southward into Butte Creek. Valley oak is currently on the "watch list" of the California Native Plant Society.

The restoration of the three main NDDB riparian communities would be expected to have additional favorable impacts on currently recognized animal species of special concern recorded from the project area. The Western yellow-billed cuckoo (*Coccyzus americanus*), a species currently listed by the State of California as threatened, would be benefitted by expansion of its primary habitat; willow scrub. The giant garter snake (*Thamnophis gigas*), which has a federal and state status as threatened, will benefit by the expansion of its primary habitat within the project area, stream banks and canal banks with associated slow moving water and tules. The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), a species that has both the federal and state status of threatened, would benefit from the expansion of its host plant, blue elderberry. Swainson's hawk (*Buteo swainsoni*), a raptorial species protected by the Migratory Bird Act and listed as threatened by the State of California, currently nests within the project area. It will be aided by the expansion of its preferred nesting habitat containing large valley oaks and cottonwoods. Care must be taken to prevent the spread of star thistle onto any restored sites, since this common invasive species has been noted to relate to a decline in Swainson's hawk foraging areas.

The expansion of riparian forest communities along Butte Creek would be expected to expand and extend the habitat for migrating waterfowl species which decreased earlier due to riparian forest clearing. Chief among these would be the wood duck (*Aix sponsa*), The common merganser (*Mergus serrator*), and the hooded merganser (*Lophodytes cuculatus*). Another secondary result of this proposed project would be the opportunity to assess the balance between rarer native species and aggressive exotics. California hibiscus (*Hibiscus californicus*) is a threatened species in California primarily because its primary habitat of moist stream banks has been overgrown by introduced Himalayan blackberry (*Rubus discolor*). The phased removal of blackberry from preferred California hibiscus sites would be expected to benefit this species which has been recorded from the general vicinity of the proposed project.

The overall ecological goal of the restoration plan is to reestablish the riparian forest as a physiognomic entity. The transition from willow scrub through mixed riparian forest to valley oak riparian forest should allow the full range of habitat types immediately along Butte Creek. These will grade into associated wetland communities such as marshes and meadows as

abandoned rice fields undertake post-agricultural succession. Shrub and herb layer species, and native vines, are expected to fill into restored areas; however, these may in time need to be aided by supplemental planting programs. Species included in such a consideration might be California grape (*Vitis Californica*), (*clematis ligusticifolia*), and California blackberry (*Vitis vitifolius*), which at present, are rare within the project site. The basis for expected benefits from the proposed restoration plan is that its purpose is directed towards the main ecological thrust of the Howard Slough Reserve--the maintenace of maximum biodiversity by means of integrated ecosystem management. This proposal seeks to maximize all three types of biodiversity; Species biodiversity, by maintaining and expanding habitats for species of special concern; Population biodiversity, by expanding riparian forests and encouraging larger numbers of resident individuals; and, Habitat biodiversity, by reestablishing riparian forest communities that had been eliminated by earlier agricultural practices.

Alternatives to this program would be a no action alternative. Reestablishment of the riparian corridor would occur slowly at best if competition from exotic verbena, Himalayan blackberry, and pepperweed did not overtake the native forest plants. The widely dispersed pattern of individual trees would, as well, retard succession to riparian forest.

Third party beneficiaries include: agricultural landowners, other wildlife refuges, hunting clubs, and individual hunters and wildlife visitors to the DFG Howard Slough Refuge.

B. Linkages

CVPIA seeks to double and sustain the natural production of anadromous fish in Central Valley rivers and streams. The Anadromous Fish Restoration Plan (AFRP) identifies 29 actions and 14 evaluations for Butte Creek restoration. Section 3406 (e)(6) refers to "developing land use plans that create buffer zones between the creek and urban development". The goal of the CALFED Bay-Delta program for ecosystem quality is to improve and increase aquatic and terrestrial habitats and improve ecological functions to support sustainable populations of diverse and valuable plant and animal species. Loss of riparian habitat is noted as a significant contributing factor to the decline of anadromous fish populations. Restoration of natural ecological processes that are associated with streamflow, stream channels, watersheds, and flood plains is a major CALFED goal. Specific targets related to this project for the Butte Basin Ecological zone are Target 1, Stream Meander, page 268 of the ERP; Target 2, Seasonal Wetlands, page 269; Target 4, Riparian and Riverine Aquatic Habitats, page 270; Target 1, Freshwater Fish Habitat and Essential Fish Habitat; Target 1B, Agricultural Lands, page 271.

In conjunction with other riparian restoration being conducted by the DFG, Center for Natural Lands Management (CNLM), and CSU Chico, diversion dam removals, ladder and screen modifications to existing dams and acquisitions and easements in the riparian corridor, this project will help to establish the ecological linkage to all the fish passage and habitat restoration efforts.

C. System-Wide Ecosystem Benefits

Restoring stream bank lands is essential to recreating healthy downstream conditions. Land restoration to riparian vegetation will largely eliminate direct soil-water contact and overland flow runoff from adjacent agricultural lands. It will also provide a filter to reduce levels of siltation, sedimentation, chemical runoff, and damage from large woody debris. The restored and managed floodplains will also greatly increase natural groundwater recharge by increasing infiltration in the wetlands and undisturbed riparian areas. This will contribute to system-wide benefits with increased base flows in the creek and attenuated peak flood flows.

Restoration of stream bank and associated flood plain lands will also contribute to flood management and reduce the risk of flood hazards to agricultural and downstream development. At present many crops are grown adjacent to the waterway and even between the levees of Butte Creek. In the 1996-97 storm events, farmers experienced major losses from the flood waters.

D. Compatibility with Non-Ecosystem Objectives

This project is compatible with other objective of the CALFED program. The riparian forest will help to improve water quality by absorbing runoff, quantity by allowing for increased recharge on the floodplain, attenuated peak flood flows by capturing flood waters and runoff, and watershed management by improving the functioning condition of this important part of the watershed.

V. TECHNICAL FEASIBILITY AND TIMING

The project is will use common restoration planning and implementation techniques. Several predecessor restoration projects have been completed in the area including numerous private hunting clubs. Howard Slough is located in the upper reaches of what is known as the Butte Sink on the west side of Butte Creek. The areas to the south on Butte Creek are mostly managed wildlife areas, either state (Little Dry Creek Unit and Graylodge), federal (The Bean Field) or private wildlife properties. As a result, the majority of the riparian corridor of Butte Creek is protected and has excellent Shaded Riverine Aquatic habitat. The upper ends of Howard Slough have only recently been converted from agriculture through acquisitions from willing sellers to the DFG. From the Howard Slough upstream, the riparian corridor is severely limited by levees and agricultural encroachment. Completion of restoration on the Howard Slough Unit will connect the west side of Butte Creek to the extensive, relatively intact, riparian areas in the Butte sink.

The tremendous efforts that have been expended on Butte Creek including the dam upgrades and removals, Western Canal's siphon project, the CNLM Keeney Restoration, DFG and CSU Chico projects in the lower canyon area have combined to develop a momentum that has helped to support the return of 1998's record run of 20,000 salmon. Continued diligence in these efforts could establish a model restoration effort that would have tremendous ecological, social, and economic implications for the CALFED Bay-Delta Program, USFWS Anadromous Fish Restoration Program, EPA funded Sacramento River Watershed Program and other efforts to protect, restore, and enhance watersheds.

VI. MONITORING AND DATA COLLECTION METHODOLOGY

Bio/Ecological Objectives			
Hypothesis	Monitoring parameter	Data Evaluation Approach	Comments/Data Priority
Riparian Restoration will speed recovery	Success rates of monitored species	Data evaluated for adaption of restoration strategy	

VII. LOCAL INVOLVEMENT

The local Butte Creek watershed education project through Chico, Durham and Paradise schools will participate in the project and endeavor to bring as many school kids as possible out to see and volunteer on the project. The RCD has been made aware of the project and the applicants expect that some cooperative support will be provided. The Meridian Environmental Academy will provide students to work on various aspects of the restoration plan.

VIII. COSTS AND SCHEDULE TO IMPLEMENT

A. BUDGET

Table 3 Total Budget

Task	Direct Labor Hours	Direct Salaries, Benefits	Service Contracts	Materials, Acquisition costs	Miscellaneous and other direct costs	Indirect Costs	Total Costs
Task 1	600	13734	3,000	2,000	3,000	4,697.3	26,431.3
Task 2	1800	41202	60,000	80,000	5,500	15,658	207,438
Task 3	500	11445			2,500	3,914.4	18,359.4
Task 4	260	5951.4			1,500	2,818.4	13,058.8
Task 5	300	6867			1,500		8367
Total	3460	79199.4	63000	82000	14000	27088	265288

Table 4 Quarterly Budget

Tasks	10-12 1999	1-3 2000	4-6 2000	7-9 2000	10-12 2000	1-3 2001	4-6 2001	7-9 2001	Total
Task 1	8000	6000	8000	4431					26,431
Task 2	48,864	15,000	48,864	48,864	28,064	4,000	5,438		207,438
Task 3			4,000	5,000	5,000	4,313			18,359
Task 4						4,000	3,964	5,058	13,058
Task 5	1046	1046	1046	1046	1046	1046	1046	1046	8368
Total	57910	22046	61910	59341	34110	13359	10448	6104	265228

B. Scheduled milestones

Milestones will be the completion of the restoration plan in spring of 2000. The second milestone will be the completion of the implementation of the restoration plan in fall of 2000. The third milestone will be the completion of the monitoring in the spring of 2001. The final milestone will be the completion of the adapted restoration strategy with the results and analysis of the monitoring in summer 2001.

C. Third Party Impacts

No significant third party impacts are anticipated as a result of this project. Third party beneficiaries include farmers, hunters, and wildlife viewers. Property owners with downstream investments will also benefit from a reduction in flood risks due to this project. This project may play a role in the protecting investments in Sacramento and the Delta. Downstream water purveyors will benefit from cleaner stream flows which reduce the cost of purification and plant maintenance. Fisheries users, both commercial and sport, will benefit from increased production of anadromous species. Waterfowl enthusiasts will benefit from increased habitat and production of resident and migratory birds.

Several projects on Butte Creek are planned which in combination with increased riverine edge habitat created by this project will greatly change the creek's and the fishery's condition. The Butte Creek Watershed Conservancy and CSU Chico are completing an Existing Conditions Report and creating a Watershed Management Strategy. The Nature Conservancy, Northern California Water Association and California Waterfowl Association are working on improvements in the Butte Sink, on the Butte and Sacramento Sloughs at the junction of Butte Creek and the Sacramento River and improvements to several dams are likely. This project helps to link those projects to improve conditions for anadromous fish recovery the full length of Butte Creek.

The Parks and Preserves Foundation is working on developing a restoration project with CSU Chico. The Center for Natural Lands Management is restoring a 56 acre riparian project in

Durham. Both of these organizations support and encourage this proposed projects to protect habitat and the dependent species, improve recreational use of wildlife resources and further monitor and analyze restoration efforts on Butte Creek.

IX. COST SHARING

DFG will contribute in-kind services for much of the land contouring and equipment need. They will also provide project oversight and support. NRCS has indicated a willingness to work cooperatively on this project and a formal request of support has been submitted.

X. APPLICANT QUALIFICATIONS

CALIFORNIA STATE UNIVERSITY, CHICO

Statement of Capabilities for Watershed Restoration, Research and Planning

The protection and enhancement of local creeks and watersheds by local community groups is a high priority at California State University, Chico. Toward this end, faculty and resources, conservation groups, public agencies, and others as needed are utilized. As a part of its community service mission, it is the policy of the University Research Foundation to organize teams for special projects and to provide the kinds of services described below.

Project Administration: The Research Foundation, as part of its regular operation, searches for government and foundation funding opportunities, makes contact with those organizations and provides assistance in grant proposal writing. Foundation personnel then administer the grant funds, provide auditing, and bookkeeping functions, and insure compliance with all government regulations and procedures.

Faculty: The primary mission of our faculty is teaching our own students. However, with funds generated from grants and contracts, our faculty often undertake research, planning, and other community based projects. Faculty who have particular expertise in watershed research and planning are listed on attached pages. Faculty can also be of service by supervising interns and conducting class projects that relate to the mission of the watershed protection groups (see below). Environmental education faculty are also available to assist local school teachers in creating and teaching curricula about our region's diverse natural environments.

Department, Institutes, Centers and Laboratories: Special units of the university are often organized and called upon to address specific community and regional needs. Those related to watershed protection are listed on the attached pages. In addition to the more obvious administrative units, such as the Department of Geography and Planning, there are others that could be called on to fill specific needs, such as the Department of Communication Design and Journalism, which can produce informational material such as newsletters, videos, and press releases. The Geographic Information Center (GIC) has the capability of collecting and compiling public domain maps through the internet as well as producing GIS maps on request.

Internships and Class Projects: Other possible resources are community based internships supervised by several of the departments and faculty listed on the attachments. In the past, interns have gained personal knowledge and skills while providing community service in environmental monitoring, report writing, field mapping, GIS mapping, interviewing informants, documentary research, classroom teaching assistance, plan design, and questionnaire design and administration. Such win-win arrangements can also be established for small groups of students, and sometimes an entire class may be organized around a particular issue or need, e.g., Geography 224 Planning Studio.

Project Personnel:

Director: **Dr. Donald Holtgrieve**, Professor of Geography and Planning, CSUC. He teaches courses in water resources and environmental planning. Dr. Holtgrieve has been the recipient of many grants and awards, with a particular focus on the environment, specifically water quality and watershed management. He has extensive experience in directing grants awarded by both State and Federal Agencies, as well as official certification in Land Use, Transportation, and Wetlands Planning. Dr. Holtgrieve has supervised over 200 projects over the last 25 years. As Project Director, Dr. Holtgrieve will provide assurance that adequate resources are provided to the project, and will be the first line of communication between CAL FED Category III and CSU Chico.

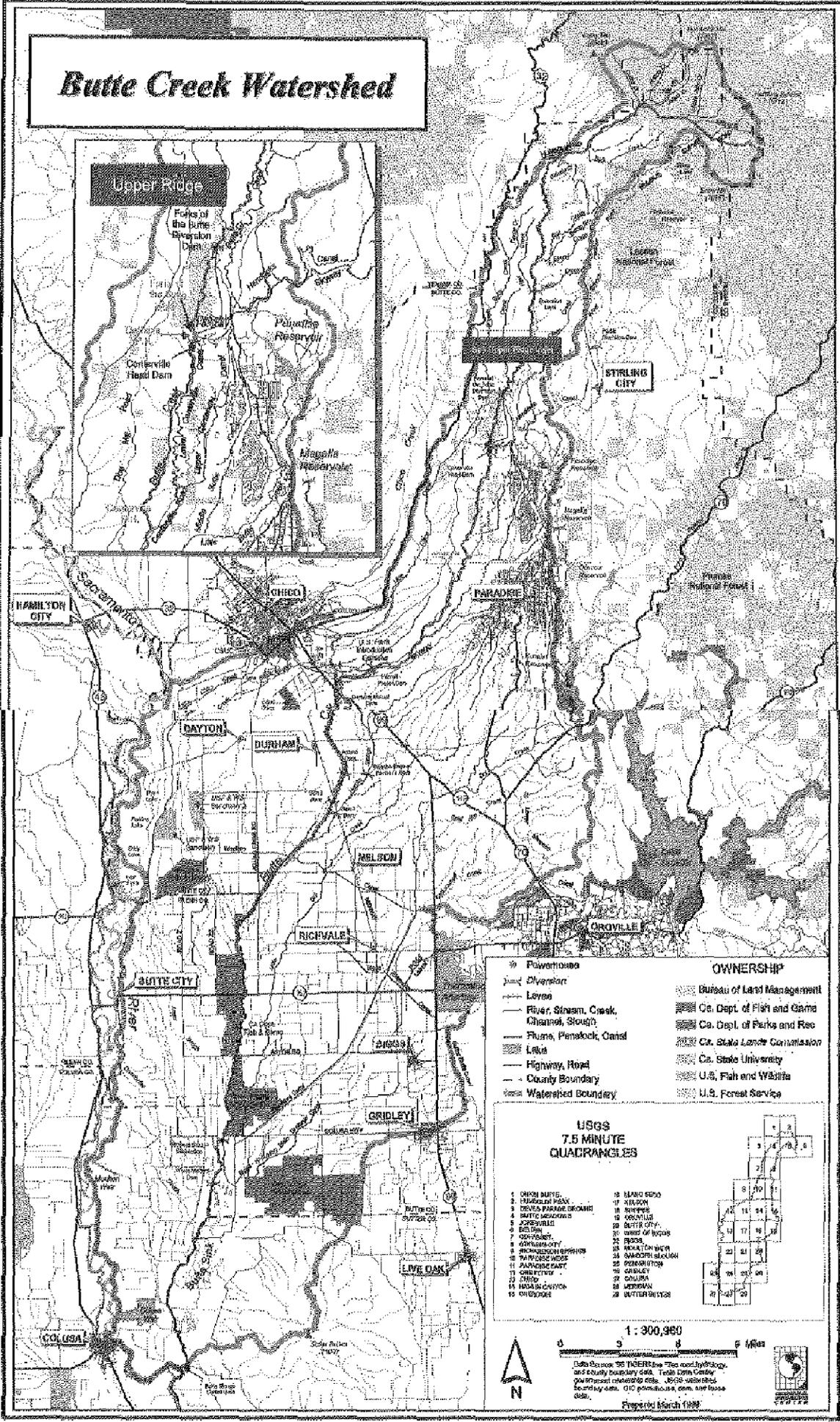
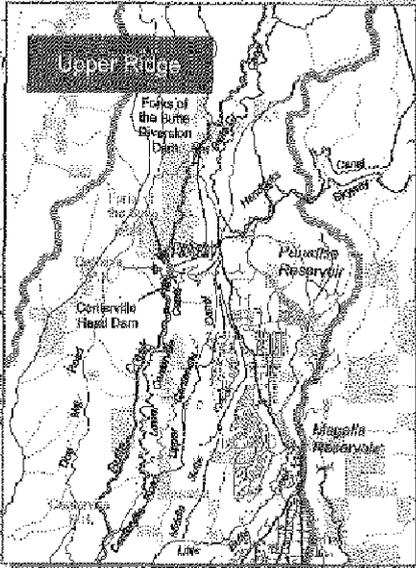
Principle Investigator: **Dr. Richard Haiman**, Professor of Geography and Planning, CSU Chico, has been involved in projects dealing with wetlands and forest in California for the past 29 years in association with U.C.L.A., U.C. Santa Barbara, U.C. Berkeley, and CSU Chico. He teaches courses in biogeography, climatology, natural hazards and physical geography. He has also consulted on projects dealing with biogeography, natural resources, and natural hazards planning throughout Northern California. He is a faculty associate of the Butte Creek Watershed Project at CSU Chico.

Manager: **Allen Harthorn, MS**, has nine years of experience managing projects for CSU Chico, as well as being an avid fisherman. His personal involvement with and love for the Butte Creek Watershed led him to start the Butte Creek Watershed Conservancy. Mr. Harthorn was personally responsible for obtaining the initial USFWS grant to develop a Management Strategy for the Butte Creek Watershed and many others. As Project Manager, Mr. Harthorn will continue his public outreach efforts, as well as continuing to develop his extensive and exhaustive list of professional, agency and personal contacts for the watershed. He will ensure that tasks of the project are initiated at the proper time, completed on schedule and the most efficient manner. He will coordinate with DFG and CSU Chico.

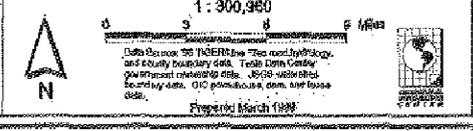
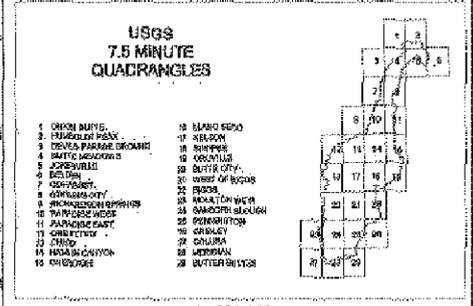
XI. Compliance with Standard Terms and Conditions

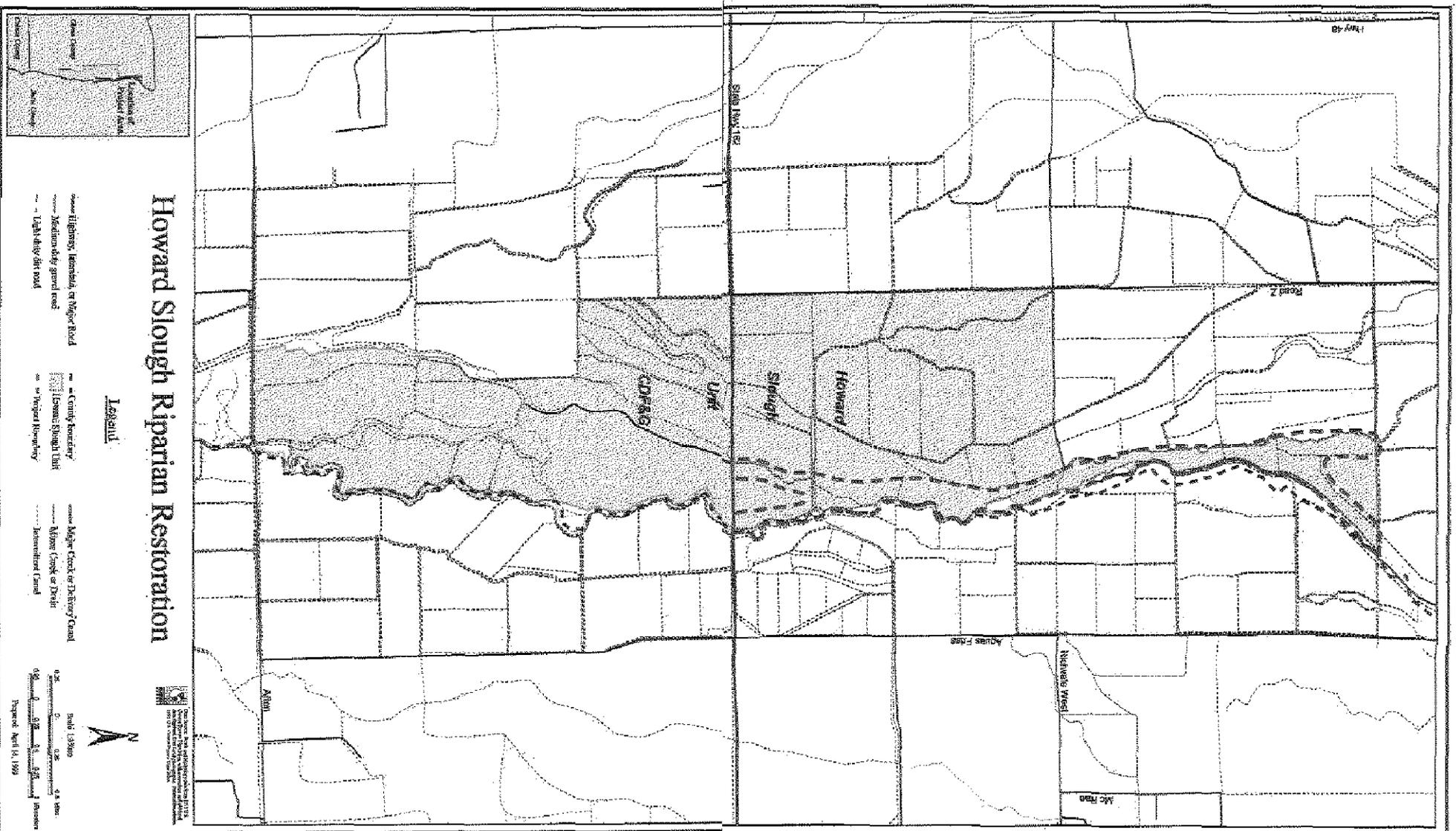
CSU Chico will comply with standard terms and conditions associated with a CALFED grant award.

Butte Creek Watershed



- | | |
|--|--|
| <ul style="list-style-type: none"> Powerhouse Diversion Levee River, Stream, Creek, Channel, Slough Fume, Penstock, Canal Rail Highway, Road County Boundary Watershed Boundary | <p>OWNERSHIP</p> <ul style="list-style-type: none"> Bureau of Land Management Co. Dept. of Fish and Game Co. Dept. of Parks and Rec Co. State Lands Commission Co. State University U.S. Fish and Wildlife U.S. Forest Service |
|--|--|





1-016480

1-016480

U.S. Department of the Interior

**Certifications Regarding Debarment, Suspension and
Other Responsibility Matters, Drug-Free Workplace
Requirements and Lobbying**

Persons signing this form should refer to the regulations referenced below for complete instructions:

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions - The prospective primary participant further agrees by submitting this proposal that it will include the clause titled, "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions. See below for language to be used; use this form for certification and sign; or use Department of the Interior Form 1954 (DI-1954). (See Appendix A of Subpart D of 43 CFR Part 12.)

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions - (See Appendix B of Subpart D of 43 CFR Part 12.)

Certification Regarding Drug-Free Workplace Requirements - Alternate I. (Grantees Other Than Individuals) and Alternate II. (Grantees Who are Individuals) - (See Appendix C of Subpart D of 43 CFR Part 12)

Signature on this form provides for compliance with certification requirements under 43 CFR Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of the Interior determines to award the covered transaction, grant, cooperative agreement or loan.

**PART A: Certification Regarding Debarment, Suspension, and Other Responsibility Matters -
Primary Covered Transactions**

CHECK IF THIS CERTIFICATION IS FOR A PRIMARY COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

**PART B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -
Lower Tier Covered Transactions**

CHECK IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

01-2014
March 1995
(This form consolidates DI-1953, DI-1954,
DI-1955, DI-1956 and DI-1962)

PART C: Certification Regarding Drug-Free Workplace Requirements

CHECK IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL.

Alternate I. (Grantees Other Than Individuals)

A. The grantee certifies that it will or continue to provide a drug-free workplace by:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing an ongoing drug-free awareness program to inform employees about--
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will --
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- (e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification numbers(s) of each affected grant;
- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted --
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a) (b), (c), (d), (e) and (f).

B. The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

Glenn County and Butte County

Check if there are workplaces on file that are not identified here.

PART D: Certification Regarding Drug-Free Workplace Requirements

CHECK IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS AN INDIVIDUAL.

Alternate II. (Grantees Who Are Individuals)

- (a) The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant;
- (b) If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction, in writing, within 10 calendar days of the conviction, to the grant officer or other designee, unless the Federal agency designates a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

PART E: Certification Regarding Lobbying
Certification for Contracts, Grants, Loans, and Cooperative Agreements

CHECK IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT, SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

CHECK IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL LOAN EXCEEDING THE AMOUNT OF \$150,000, OR A SUBGRANT OR SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.

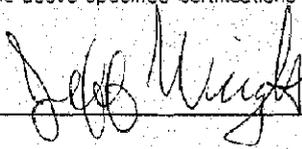
The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL



TYPED NAME AND TITLE Jeff Wright, Director, Office of Sponsored Programs

DATE 4-12-99

ASSURANCES - NON-CONSTRUCTION PROGRAMS

reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

I, duly authorized representative of the applicant, I certify that the applicant:

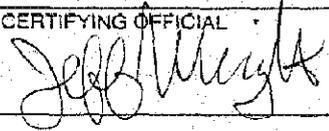
1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.

Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.

Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523), and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).

12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL Jeff Wright 	TITLE Director, Office of Sponsored Programs
APPLICANT ORGANIZATION The CSU, Chico Research Foundation	DATE SUBMITTED 4-16-99

Standard Form 424B (Rev. 7-97) Back

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Task 1		\$	\$	\$ 26,431	\$	\$ 26,431
2. Task 2	N/A			\$ 207,438		\$ 207,438
3. Task 3				\$ 18,359		\$ 18,359
4. Task 4				\$ 13,058		\$ 13,058
5. TOTALS		\$ 0	\$ 0	\$ 265,286	\$ 0	\$ 265,286

SECTION B - BUDGET CATEGORIES

6. OBJECT CLASS CATEGORIES	GRANT PROGRAM FUNCTION OR ACTIVITY				Total (5)
	(1) Task 1	(2) Task 2	(3) Task 3	(4) Task 4	
a. Personnel	\$ 10,603	\$ 35,351	\$ 8,838	\$ 6,363	\$ 61,155
b. Fringe Benefits	\$ 3,131	\$ 10,429	\$ 2,607	\$ 1,877	\$ 18,044
c. Travel	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 8,000
d. Equipment	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
e. Supplies	\$ 1,000	\$ 4,000	\$ 1,000	\$ 0	\$ 6,000
f. Contractual	\$ 3,000	\$ 60,000	\$ 0	\$ 0	\$ 63,000
g. Construction	\$ 2,000	\$ 80,000	\$ 0	\$ 0	\$ 82,000
h. Other	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
i. Total Direct Charges (sum of 6a-6h)	\$ 21,734	\$ 191,780	\$ 14,445	\$ 10,240	\$ 238,199
j. Indirect Charges	\$ 4,697	\$ 15,658	\$ 3,914	\$ 2,818	\$ 27,087
k. TOTALS (sum of 6i and 6j)	\$ 26,431	\$ 207,438	\$ 18,359	\$ 13,058	\$ 265,286
7. PROGRAM INCOME	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other sources	(e) TOTALS	
8. Task 1	\$0	\$0	\$0	\$0	
9. Task 2				\$0	
10. Task 3				\$0	
11. Task 4				\$0	
12. TOTALS (sum of lines 8 and 11)	\$0	\$0	\$0	\$0	
SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$190,413	\$58,000	\$21,000	\$62,000	\$49,413
14. NonFederal	\$0	\$0	\$0	\$0	\$0
15. TOTAL (sum of lines 13 and 14)	\$0	\$58,000	\$21,000	\$62,000	\$49,413
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (YEARS)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16. Task 1	\$190,413	\$74,873	\$	\$	
17. Task 2					
18. Task 3					
19. Task 4					
20. TOTALS (sum of lines 16 - 19)	\$190,413	\$74,873	\$0	\$0	
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges:	\$238,197	22. Indirect Charges	\$64,499	Base (Salaries & Wages)	
			\$27,089	Total Indirect (42% of S&W)	
23. Remarks					

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*CSU, Chico Research Foundation
California State University, Chico
Chico, California 95329-0870
(530) 898-4044; FAX: (530) 898-6804*

April 14, 1999

Glenn County Planning Department
John Benoit, Director
125 South Murdock Avenue
Willows, CA 95988

Kristin Cooper-Carter
Environmental Resource Program
Office of Sponsored Programs
California State University, Chico
Chico, CA 95929-0870

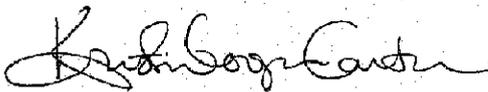
Dear Mr. Benoit,

A proposal titled, "Butte Creek Howard Slough Riparian Restoration" will be submitted on April 16, 1999 for consideration by the CALFED Bay-Delta Program's Ecosystem Restoration Program and Strategic Plan in response to the 1999 Proposal Solicitation Package. The project period for this proposal runs from November of 1999 to July of 2001. The Project Director is Dr. Donald Holtgrieve. He can be reached on the CSU, Chico campus at (530) 898-5780.

An Executive Summary of this proposal will be forthcoming by the end of the month.

If you have any questions about this proposal, please feel free to call my office at (530) 898-5026.

Sincerely,



Kristin Cooper-Carter, Coordinator
Environmental Resource Center

KCC/lk

*CSU, Chico Research Foundation
California State University, Chico
Chico, California 95929-0870
(530) 898-4044; FAX: (530) 898-6804*

April 14, 1999

Glenn County Board of Supervisors
P.O. Box 391
Willows, CA 95988

Kristin Cooper-Carter, Coordinator
Environmental Resource Program
Office of Sponsored Programs
California State University, Chico
Chico, CA 95929-0870

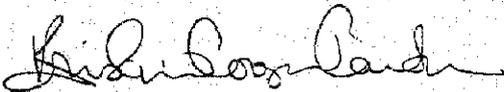
Dear Supervisors Bungarz, Freeman, Hansen, Harris, and Mudd,

A proposal titled, "Butte Creek Howard Slough Riparian Restoration" will be submitted on April 16, 1999 for consideration by the CALFED Bay-Delta Program's Ecosystem Restoration Program and Strategic Plan in response to the 1999 Proposal Solicitation Package. The project period for this proposal runs from November of 1999 to July of 2001. The Project Director is Dr. Donald Holtgrieve. He can be reached on the CSU, Chico campus at (530) 898-5780.

An Executive Summary of this proposal will be forthcoming by the end of the month.

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Sincerely,



Kristin Cooper-Carter, Coordinator
Environmental Resource Center

KCC/lk

*CSU, Chico Research Foundation
California State University, Chico
Chico, California 95929-0870
(530) 898-4044, FAX: (530) 898-6804*

April 12, 1999

Butte County Board of Supervisors
Beeler, Davis, Dolan, Houx and Josiassen
25 County Center Drive
Oroville, CA 95965

Kristin Cooper Carter, Coordinator
Environmental Resource Program
Office of Sponsored Programs
California State University, Chico
Chico, CA 95929-0870

Dear Supervisors Beeler, Davis, Dolan, Houx and Josiassen,

In compliance with the requirements of the CALFED Bay-Delta Program's Ecosystem Restoration Program and Strategic Plan 1999 Proposal Solicitation Package, we are formally notifying you of the submission of eight grant applications that reside either in part or fully within the boundaries of Butte County.

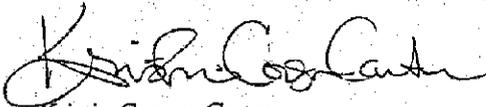
A list of the proposals submitted follows:

1. Upper Butte Creek Road Management Improvement Project
2. Butte Creek Watershed Education Program
3. Cherokee Watershed Sediment Transport and Water Quality Analysis
4. Butte Creek Howard Slough Riparian Restoration
5. Development of a Watershed Management Strategy for Little Chico Creek Watershed, Phase II and III.
6. Watershed Coordination for Big and Little Chico Creeks
7. Butte Creek Acquisition, Revegetation, and Restoration Assessment Project
8. Sacramento Valley: Eastside Small Streams

Executive summaries of all of these proposals will be forthcoming.

If you have any questions about these proposals, please feel free to call my office at (530) 898-5026.

Sincerely,



Kristin Cooper Carter
cc. Butte County Planning Department,
Thomas Parilo
Project Coordinators
Jeff Wright

CSU, Chico Research Foundation
California State University, Chico
Chico, California 95729-0870
(530) 898-4044; FAX: (530) 898-6804

April 12, 1999

Tom Parilo
Butte County Planning Department
7 County Center Drive
Oroville, CA 95965

Kristin Cooper Carter, Coordinator
Environmental Resource Program
Office of Sponsored Programs
California State University, Chico
Chico, CA 95929-0870

Dear Mr. Parilo

In compliance with the requirements of the CALFED Bay-Delta Program's Ecosystem Restoration Program and Strategic Plan 1999 Proposal Solicitation Package, we are formally notifying you of the submission of eight grant applications that reside either in part or fully within the boundaries of Butte County.

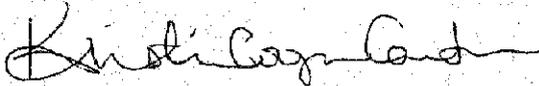
A list of the proposals submitted follows:

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4. Butte Creek Howard Slough Riparian Restoration
5. Development of a Watershed Management Strategy for Little Chico Creek Watershed, Phase II and III.
6. Watershed Coordination for Big and Little Chico Creeks
7. Butte Creek Acquisition, Revegetation, and Restoration Assessment Project
8. Sacramento Valley: Eastside Small Streams

Executive summaries of all of these proposals will be forthcoming.

If you have any questions about these proposals, please feel free to call my office at (530) 898-5026.

Sincerely,



Kristin Cooper Carter
Butte County Board of Supervisors
Project Coordinators
Jeff Wright