

4.5 PSP Cover Sheet

Proposal Title: Northeastern Sacramento Valley: Small Streams Mapping Project-Phase I
 Applicant Name: The CSU, Chico Research Foundation-Office of Sponsored Programs
 Mailing Address: Kendall Hall, Room 114, Chico, California 95929-0870
 Telephone: 530-898-5969 530-898-5026
 Fax: 530-898-6781 530-898-6804
 Email: cwnelson@csuchico.edu kcooper-carter@csuchico.edu

Amount of funding requested: \$80,263.20 for 1 years

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

- | | |
|---|---|
| <input type="checkbox"/> Fish Passage/Fish Screens | <input type="checkbox"/> Introduced Species |
| <input type="checkbox"/> Habitat Restoration | <input type="checkbox"/> Fish Management/Hatchery |
| <input checked="" type="checkbox"/> Local Watershed Stewardship | <input type="checkbox"/> Environmental Education |
| <input type="checkbox"/> Water Quality | |

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

What county or counties is the project location in? Butte, Tehama & Shasta

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

- | | |
|---|---|
| <input type="checkbox"/> Sacramento River Mainstem | <input type="checkbox"/> East Side Trib: _____ |
| <input checked="" type="checkbox"/> Sacramento Trib: <u>miscellaneous</u> | <input type="checkbox"/> Suisun Marsh and Bay |
| <input type="checkbox"/> San Joaquin River Mainstem | <input type="checkbox"/> North Bay/South Bay: _____ |
| <input type="checkbox"/> San Joaquin Trib: _____ | <input type="checkbox"/> Landscape (entire Bay-Delta watershed) |
| <input type="checkbox"/> Delta: _____ | <input type="checkbox"/> Other: _____ |

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

- | | |
|--|---|
| <input type="checkbox"/> San Joaquin and East-side Delta tributaries fall-run chinook salmon | |
| <input type="checkbox"/> Winter-run Chinook salmon | <input checked="" type="checkbox"/> Spring-run chinook salmon |
| <input checked="" type="checkbox"/> Late-fall run chinook salmon | <input checked="" type="checkbox"/> Fall-run chinook salmon |
| <input type="checkbox"/> Delta smelt | <input type="checkbox"/> Longfin smelt |
| <input type="checkbox"/> Splittail | <input checked="" type="checkbox"/> Steelhead trout |
| <input type="checkbox"/> Green sturgeon | <input type="checkbox"/> Striped bass |
| <input checked="" type="checkbox"/> Migratory birds | <input type="checkbox"/> All chinook species |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> 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:

In order to carry out the goals listed in Volume I of the ERP, it is extremely important to have a comprehensive mapping program. This is addressed in the Comprehensive Management Assessment and Research (CMARP, pp. 8-10). Acquiring and monitoring information on tributary streams is a program goal throughout the entire document. Volume II specifically addresses two major watershed management units identified by ERP which have no mapping

strategy. Our project attempts to consolidate all the remaining unmapped watersheds in the Butte Basin Ecological Management Zone (Volume II, p. 236) and fill in data gaps that were not included in the individual conservancy efforts (Butte, Big Chico, Little Chico, Deer, Mill and Battle).

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):

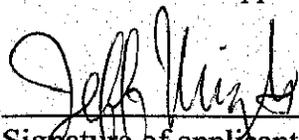
- | | |
|--|---|
| <input type="checkbox"/> Planning | <input type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring | <input type="checkbox"/> Education |
| <input checked="" type="checkbox"/> Research | |

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

TITLE PAGE

Project Title: Northeastern Sacramento Valley Small Streams Mapping Project -
Phase 1

Primary Contact: The Research Foundation, California State University, Chico
Chico, CA 95929
Kristin Cooper-Carter, Environmental Resources

Coordinator

Phone: (530) 898-5026, Fax 898-6804

Email:

kcooper-carter@csuchico.edu

Chuck Nelson, Director, Geographical Information Center

Phone: (530) 898-5969

Email:

cwnelson@csuchico.edu

Type of Organization: State Controlled Institution of Higher Learning

Tax Status: Non-Profit 501(c)(3)

Tax Identification Number: 68-0386518

PROJECT DESCRIPTION

Our proposal seeks funding to begin collecting spatial (map) data for areas not mapped by existing watershed conservancy groups. We intend to focus on a stretch of the northeastern Sacramento Valley (Valley) extending from Butte Creek on the south to Battle Creek on the north. CalFed refers to this area in their Ecosystem Restoration Program Plan (ERP) as the Butte Basin Ecological Management Zone. Our project area includes a series of smaller streams interspersed between six prominent Sacramento River tributary streams - Butte, Big Chico, Little Chico, Deer, Mill, and Battle Creeks. While all six of these streams have organized conservancy groups, there are major spatial data gaps between their boundaries which need to be filled. Our proposal seeks to fill these gaps in an effort to fill a regional mapping void and also to support future watershed planning efforts.

The Geographical Information Center has mapped four of the six major tributaries through the watershed conservancy program. However, there are numerous smaller streams within the region which support significant populations of protected fish. Two of these streams, Paynes and Antelope Creeks, are major tributary streams which CalFed recognizes and targeted as Ecological Management Units.

Some of the information that we have already mapped overlaps into parts of these watershed areas, but, in many areas, major data gaps exist. Gaps exist both in the nature of what is available but also in the quality of the information that was found.

Collecting spatial digital information on small streams requires large scale maps. Scales smaller than 1:24,000 are unacceptable, as the detail needed to show specific stream dynamics is not available. For this reason, even much of our initial watershed mapping work has had to be upgraded as new agency information has become available over the World Wide Web.

Thematic information on watersheds is also variable in quality. Geological information at scales of 1:100,000 and 1:250,000 is of little use to a watershed like Little Chico Creek because the maps are extremely generalized.

For this reason, in Phase 1 of our Northeastern Sacramento Valley Small Streams Mapping proposal, we intend to research the nature of spatial data in the northeastern Valley in an effort to:

- *identify what information is available for our study area*
- *identify data gaps where spatial information needs to be acquired (downloaded or purchased) or created,*
- *identify agencies where this information is housed and how we can obtain it so that we can address these issues in Phase 2.*

After we have identified our mapping needs, we will have a better idea of how to fill this need. This will prepare us for Phase 2 where we will seek funding to begin the actual mapping of eastside streams.

EXECUTIVE SUMMARY

Proposal Summary:

Our proposal seeks funding to begin collecting spatial (map) data for areas not mapped by existing watershed conservancy groups. We intend to focus on a stretch of the northeastern Sacramento Valley (northeastern Valley) extending from Butte Creek on the south to Battle Creek on the north (see map). CalFed refers to this area in their *Ecosystem Restoration Program Plan* (ERP) as the Butte Basin Ecological Management Zone. Our project area includes a series of smaller streams interspersed between six prominent Sacramento River tributary streams - Butte, Big Chico, Little Chico, Deer, Mill, and Battle Creeks. While all six of these streams have organized conservancy groups, there are major spatial data gaps between their boundaries which need to be filled. Our proposal seeks to fill these gaps in an effort to fill a regional mapping void and also to support future watershed planning efforts.

Information on these areas varies in quality and availability. Some areas have large scale digital base information at 1:24,000 scale while other areas are using lower quality data at 1:100,000 scales. Map scale data tends vary by area and by agency jurisdiction.

Many areas also have large topical gaps. Thematic map data (like vegetation and land use) is sporadic as projects were contracted by agencies or by political units for specific purposes. In some areas three maps from three different agencies exist for a single topic (like land use) and cover parts of a single watershed.

Some watersheds have available airphoto coverage while others have none, poor quality or older antiquated flights. Our proposal seeks to:

- *identify map coverages available within the project area, and*
- *identify gaps where more data needs to be collected,*

Our intent is to gather any and all mapping data relevant to watershed planning. We are particularly interested in digital and scanned information but we have the ability to scan or digitize large format paper maps as well.

Our major focus will be on:

- base map information. We prefer to work at the 1:24,000 scale (topographic, roads, hydrology, section lines, bench marks, buildings, cultural features (where relevant),*
- public and private parcel coverages,*
- land use,*
- vegetation,*
- riparian vegetation,*
- stream flow data,*
- fish habitat,*
- fire data, and*
- other physical thematic layers (soils, geology, geomorphology, slope, etc.)*

This proposal seeks funding to do research only. We intend to find out what mapping

is available, the quality of the data, location, and the extent of coverage. If practical, we will download easily assessable data onto CD's for future conservancy use. We intend to research all relevant federal, state, county and local agencies in this region in addition to searching online and in major research institutions that do research in these areas.

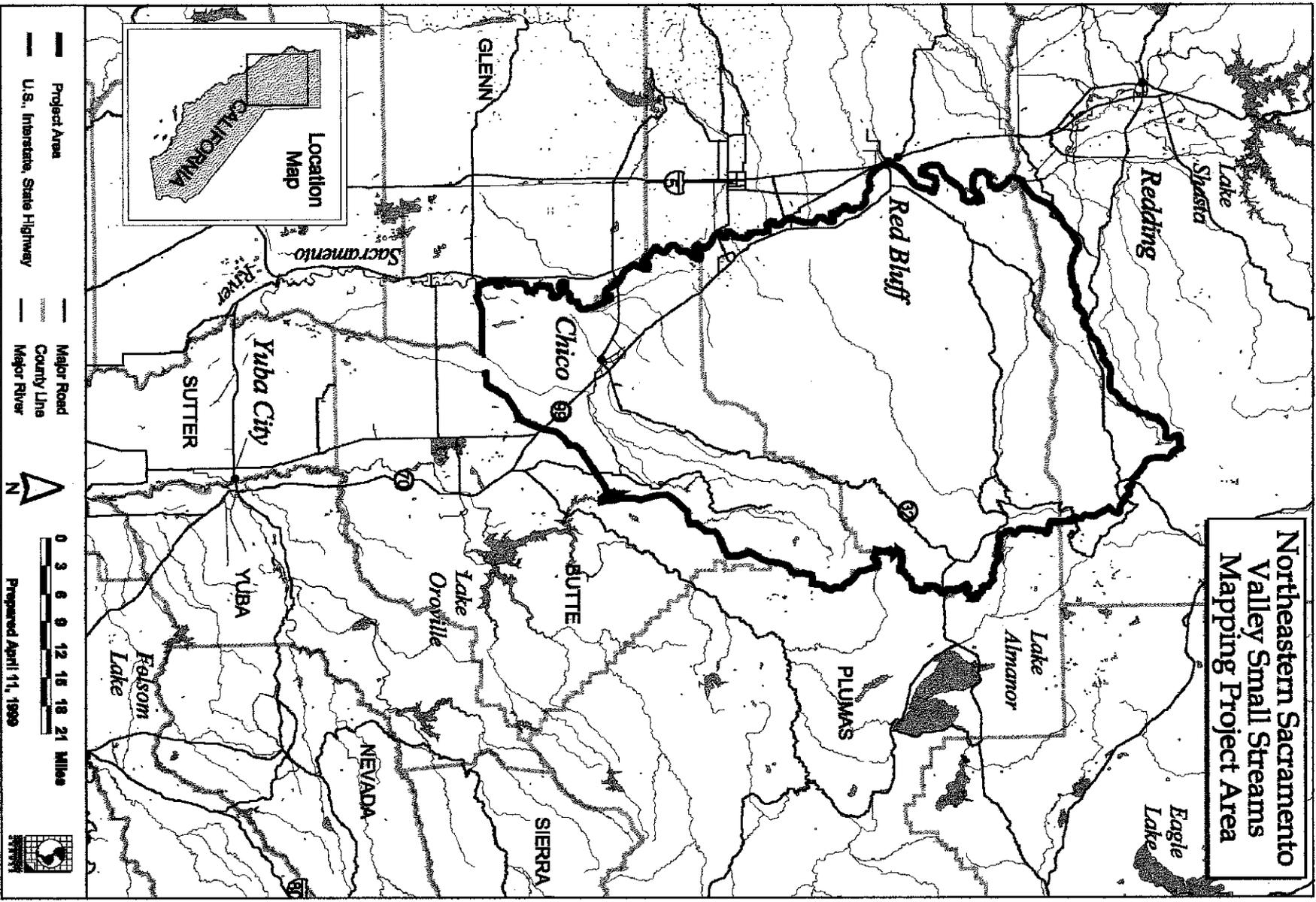
Our Phase 1 proposal covers only the identification of data gaps and how to fill them. When we identify the extent of the void, a future proposal (Phase 2) will address how we intend to fill the gaps.

This proposal will be extremely useful to smaller conservancy groups who need mapped information in their watershed planning process. It will bring out an efficiency of scale by tackling this area as one unit rather than as a series of smaller individual conservancy projects.

The Geographical Information Center (GIC) is a full service applied GIS laboratory associated with the Department of Geography and Planning at California State University, Chico. We are tied to the non-profit CSU, Chico Research Foundation and are entirely supported by external funding. We have been involved with mapping the Sacramento River since 1991. We have also produced maps for four watershed projects in the project area and will be providing support to three upcoming mapping efforts. Our Sacramento River riparian mapping projects produced 1:1000' scale and larger riparian vegetation maps of the entire river and the lower sections of major tributary streams from Collinsville to Keswick Dam. In addition, we are currently finishing a two-year project to produce vegetation maps of the entire Cantara watershed (Sacramento River from Shasta Lake to Box Canyon Reservoir).

Requested Amount: \$80,000 over a one year period.

Northeastern Sacramento Valley Small Streams Mapping Project Area



 Project Area
 U.S. Interstate, State Highway

 Major Road
 County Line
 Major River



 0 3 6 9 12 15 18 21 Miles
 Prepared April 11, 1999



Our intent is to take a threefold approach. Our first and principal search will be on the Internet. Most state and federal agencies have web sites and many are starting to publish their data. The U.S. Geological Survey publishes digital base map data at three scales. Data includes place locations, coordinate information, roads, digital elevation points (DEM's), and digital orthophoto quads (DOQ's) as well as water monitoring data. This information is constantly being updated. Scales vary and quality varies by scale but more and more data is becoming available at the 1:24,000 scale that we need.

Many other state and federal agencies like the California Department of Forestry and Fire Protection and the Department of Water Resources also develop and distribute data. This includes a variety of digital files from fire history maps to vegetation maps. Much of this information is available for free downloading to state and federal agencies.

County and local governments provide a good source of large scale maps; however, only two counties of the three in our project area and one city are currently using digital map data. For this reason, our second approach will be to visit counties and search files for maps that can be scanned. These include parcel maps as well as other special study maps. These include maps used in general and specific plans as well as those used for environmental impact reports.

Finally, our third approach will be to contact private companies and academic institutions that collect maps and map data. For instance, the ICE program based at the University of California, Davis has been keeping an inventory on watershed data throughout the state. Much of their data is regionally based but they would be a good source to begin our Internet search.

Many private companies also sell data. Companies like Teale Data Center in Sacramento and various other companies sell up-to-date scanned public and private parcel and topographic digital (scanned and GIS) map data that could prove to be an extremely valuable source of information on watersheds.

Private agencies like Teale Data Center download USGS spatial information, re-project it for use with specific mapping applications and sell it. They also obtain and sell digital products from various other federal and California state government resource agencies. Most agencies are familiar with this organization as the State of California is Teale Data Center's best customer.

Since the GIC has provided maps for four out of the six watershed conservancy groups in the project area, we are extremely familiar with the nature of the mapped information; however, seeking out and evaluating existing spatial information for each watershed conservancy group is time consuming and expensive and takes a percentage of the overall mapping budget. The process is repeated for each separate conservancy project so there is a significant duplication of effort. Many of these watersheds are so small that it is doubtful if funding will ever be available for this type of mapping effort. We see this proposal as a way to tackle an entire region, comprising many smaller but significant creeks, as one complete project.

ECOLOGICAL/BIOLOGICAL BENEFITS

The Northeastern Sacramento Valley Small Streams Mapping Project will have significant ecological and biological benefits by giving us the ability to collect valuable information on smaller streams that will probably never be studied by individual conservancy efforts. Further, it will give us the first opportunity to collect cumulative thematic map information on these smaller but significant streams.

Finding and understanding map data is usually the first step in learning to understand the ecology of an area. Maps provide a spatial diagram at a variety of different thematic levels. Spatial snapshots are used as symbols to give us a diagram of the real world. In Deer Creek alone, the GIC collected over 24 thematic layers of map information that will be used to help their conservancy in its overall planning effort. When we add GIS, we begin to look at maps in layers (multi-theme) and begin to understand and analyze the interrelationships between map themes.

In order to develop any strategy to address ecological or biological benefits, it is extremely important to have good map data. Our proposal seeks to develop a regional mapping focus even though our efforts will be concentrated on local watershed units.

Finally, at least one limnologist from this university (Dr. Paul Maslin) has focused his research on these smaller watersheds and has documented their importance to the CalFed and SB1086 process. An effort to beginning mapping these streams can greatly support his effort.

TECHNICAL FEASIBILITY

Because the GIC has mapped four of the six watersheds that are included within the northeastern Valley project area, we have an important "jump start" on this effort. Our center has generated over 20 thematic map overlays for each of the four conservancies where we continue to provide mapping services, including Butte, Big Chico, Deer, and Battle Creeks. As an example, we have included a list of GIS coverages generated for the Deer Creek Watershed mapping effort.

Because the project area is in our service region, we know the area and work with many of the federal, state and county agency people on a daily basis. Therefore, we have made many of the local contacts that it will take to complete this project.

Our only limitations involve what type of data that we will find. Larger scale local information is important along smaller streams and many of these areas are lacking usable data; however, it is the nature of this proposal to find out exactly what is available so that we can move into to Phase 2. Under Phase 2, we would begin producing these maps.

MONITORING AND DATA COLLECTION METHODOLOGY

We intend to take advantage of our prior expertise and the contacts that we have made providing mapping services for the major tributary streams in the region. Our first priority will be locating existing spatial data. While we intend to use online services and locate digital maps where possible, we also intend to rely on our local agency contacts. The GIC has done contract work for most if not all of the agencies that have jurisdiction in the northeastern Sacramento Valley.

Our strategy is to locate, evaluate, and archive sources of spatial data. While we would prefer GIS or other types of digital information, we are more concerned with locating usable maps. Where possible and practical, the GIC will attempt to obtain maps in whatever form and/or copy information for CD-ROM storage; however, due to the amount of information that we are talking about, this may not be practical and will not occur in all cases. Also, obtaining the actual data is not in the scope of this proposal (this is a part of Phase 2) so anything that we do toward this end will be driven by budgets and time.

LOCAL INVOLVEMENT

Even though this project does not include a specific site nor propose to do any physical work on the ground, we will still need to coordinate our work with local government. This includes not only counties and local government, but also federal, state, local, private agencies (like utility companies) and new watershed groups (like the newly formed Little Chico Creek Conservancy) who are working in the area. For this reason, we plan to notify all of these groups of the nature of our proposal and will make contacts in an effort to access information on local mapping efforts within their jurisdictions.

COST

Table 3. Total Budget 9 (CALFED funds only)

Task	Direct Labor Hours	Direct Salary and Benefits	Service Contracts	Material and Acquisition Costs	Miscellaneous and other Direct Costs	Overhead and Indirect Costs	Total Cost
Phase 1	1700	30,420	0	4,200	1,800	11,340	47,760
Project Management	790	24,658	0	0	0	7,846	32,504
Total	2490	59,078	0	4,200	1,800	19,186	80,263

Table 4. Quarterly Budget

Task	Quarterly Budget Oct-Dec 99	Quarterly Budget Jan-Mar 00	Quarterly Budget Apr-Jun 00	Quarterly Budget Jul-Sep 00	Quarterly Budget Oct-Dec 00	Total Budget
Phase 1	11,952	8,952	8,952	8,952	8,952	47,760
Project Management	6,501	6,500	6,501	6,500	65,01	32,504
Total	18,453	15,452	15,453	15,452	15,453	80,264

COST SHARING

No specific cost sharing proposals are being developed at this time; however, we do plan to build on the spatial information that we have collected in prior mapping efforts.

APPLICANT QUALIFICATIONS

CHARLES W. NELSON

EDUCATION

- 1978 Master of Arts - California State University, Chico (Geography)
1972 Bachelor of Arts - California State University, Chico (Geography)
Various Professional Training - ARC/INFO , Introduction to Avenue, and
Managing a GIS Training Workshops, Environmental Systems
Research Institute (ESRI), Redlands, California.

EMPLOYMENT

- 1995-present Director, Geographical
Information Center, California State University,
Chico.
1998-present Adjunct Research
Professor in Geography, Department of
Geography and
Planning, California State University, Chico.
1978-1995 Cartographic Analyst/Project Director - Department of Geography
and Planning, California State University, Chico.
1976-1995 Professional Cartographer / Graphic Computer Systems Specialist.

COMMUNITY SERVICE

- Development Review Committee** - County of Butte, California. 1995-present.
Planning Commissioner - County of Butte, California. 1991-present.
Mayor/Vice Mayor - City of Chico, California.
Planning Commissioner- Planning Commission, City of Chico, California.
1977-1984.
Member - Architectural Review Board, City of Chico, California. 1980-1983.

THE GEOGRAPHICAL INFORMATION CENTER

The Geographical Information Center (GIC) at California State University, Chico, was established in 1988 to introduce digital mapping technology to the region and to provide valuable on-the-job training and employment opportunities for our students. The Center's mission is both academic and service oriented. While the training and eventual placement of students is the key aspect and reason for the Center, the development of the GIC has resulted in a renewed University commitment to strengthen ties to the public and private sector of the North State.

Our primary areas of expertise include geographical information systems (GIS), cartography, remote sensing, and global positioning systems (GPS). Contracts are administered through the University Foundation, providing both direct contracts and interagency agreements. The GIC offers ESRI-certified instruction in ArcView.

RECENT GIC CONTRACTS

Butte, Deer, Big Chico, and Battle Creek Conservancy Mapping. Developing supporting maps and a GIS to support four individual conservancy efforts. 1996-present.

Sacramento River Stream Corridor Protection Program - Phases 1-4. Mapping riparian vegetation along the Sacramento River and its Sacramento Valley tributaries from Keswick Dam to Collinsville, for the CalFed Bay-Delta Program, California Department of Water Resources, the U.S. Bureau of Reclamation and the California Department of Fish and Game. 1991-present.

Cantara Vegetation Mapping. Mapping vegetation in the Cantara watershed of the Upper Sacramento River for the California Department of Fish and Game. 1997-present.

Delta Flood Mapping. Mapping Sacramento-San Joaquin Delta islands for a flood information web site for the California Department of Water Resources- Central Division. 1997-1998.

GIS and Web site Assistance. Helping agency staff in developing an Internet site for the Division of Planning and Local Assistance and miscellaneous GIS and Avenue programming assistance for the Department of Water Resources - Central District. 1998-present.

Sacramento River Access: Peterson Addition. Mapping and GIS development for a potential park site for the California Department of Parks and recreation. 1998-present.

Butte County Wildlife Refuges GIS. Using GIS to develop a mosquito control strategy for the Butte County Mosquito and Vector Control District. 1998-present.

CEC Statewide GIS. Developing a statewide GIS and supporting maps for the California Energy Commission. 1998-present.

San Joaquin Valley Vernal Pool Mapping. Mapping and classifying vernal pool complexes in Madera, Merced, San Joaquin, Stanislaus, and Fresno Counties for the California Department of Fish and Game. 1998-present.

Various GIS Projects- GIS to support study of various wind generating facilities and various San Joaquin Valley mitigation mapping projects for the California Energy Commission. 1996-present.

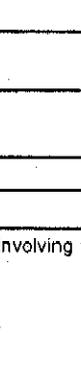
Tehama County Vernal Pool Mapping. Mapping and classifying vernal pool complexes for the California Department of Fish and Game. 1997-1998.

Northern Sacramento Valley Sustainable Landscapes Project. Using digitized growth projections and hardwood GIS coverages to assess potential hardwood loss in five northern California counties for the California Department of Forestry and Fire Protection. 1995-1998.

California Rangeland Statistics. Development of a manual and web site illustrating distribution of rangelands in California for the California Department of Forestry and Fire Protection. 1996-1998.

Feather River Riparian Mapping. Assessing river channel and vegetation change to a portion of the Feather River in Butte County for the California Department of Water Resources- Central Division. 1998.

APPLICATION FOR FEDERAL ASSISTANCE

		2. DATE SUBMITTED 4/16/99	Applicant Identifier
1. TYPE OF SUBMISSION <i>Application</i> <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction	<i>Preapplication</i> <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction	3. DATE RECEIVED BY STATE	State Applicant Identifier
		4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier
5. APPLICANT INFORMATION			
Legal Name: The CSU, Chico Research Foundation		Organizational Unit:	
Address (give city, county, state, and zip code): Kendall Hall, Room 114 CSU, Chico Chico, CA 95929-0870		Name and telephone number of person to be contacted on matters involving this application (give area code) Technical: Chuck Nelson: (530) 898-5969 Budgetary: Kristin Cooper-Carter: (530) 898-5026 Contractual: Virginia Sturr: (530) 898-5700	
6. EMPLOYER IDENTIFICATION NUMBER (EIN): 6 8 - 0 3 8 6 5 1 8		7. TYPE OF APPLICANT: (enter appropriate letter in box) <input checked="" type="checkbox"/> I	
8. TYPE OF APPLICATION: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es): <input type="checkbox"/> <input type="checkbox"/> A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other (specify):		A. State H. Independent School Dist. B. County I. State Controlled Institution of Higher Learning C. Municipal J. Private University D. Township K. Indian Tribe E. Interstate L. Individual F. Intermunicipal M. Profit Organization G. Special District N. Other (Specify) _____	
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: TITLE:		9. NAME OF FEDERAL AGENCY: CalFed	
12. AREAS AFFECTED BY PROJECT (cities, counties, states, etc.): Butte, Shasta & Tehama Counties		11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Northeastern Sacramento Valley Small Streams Mapping Project Phase I	
13. PROPOSED PROJECT: Start Date: Oct. 99 Ending Date: Sep. 00		14. CONGRESSIONAL DISTRICTS OF: a. Applicant: 2 b. Project: 2 & 3	
15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?	
a. Federal	\$ 80,263.20	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____	
b. Applicant	\$.00	b. NO. <input checked="" type="checkbox"/> PROGRAM IS NOT COVERED BY E.O. 12372	
c. State	\$.00	<input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
d. Local	\$.00	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. <input checked="" type="checkbox"/> No	
e. Other	\$.00		
f. Program Income	\$.00		
g. TOTAL	\$ 80,263.20		
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.			
a. Typed Name of Authorized Representative Jeff Wright		b. Title Director, Office of Sponsored Programs	c. Telephone number (530) 898-5700
d. Signature of Authorized Representative 		e. Date Signed 4/15/99	

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.

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)

Butte, Tehama and Shasta Counties

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.

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.

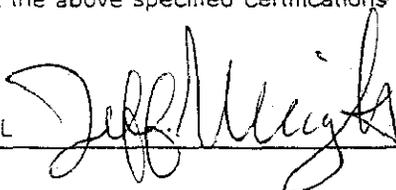
The undersigned certifies, to the best of his or her knowledge and belief, that:

- (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

Public 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.

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

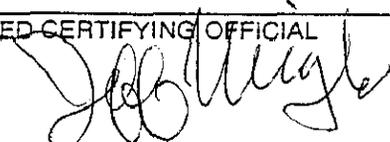
1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give 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.

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

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.

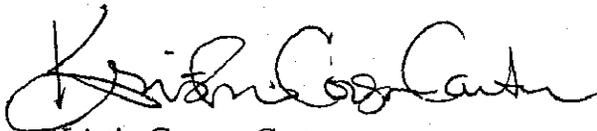
A list of the proposals submitted follows:

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 95929-0870
(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

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Sincerely,



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

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

April 15, 1999

Tehama County Board of Supervisors
P.O. Box 250
Red Bluff, CA 96080

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

Dear Supervisors Borrer, McIver, Russell, Turner and Willard,

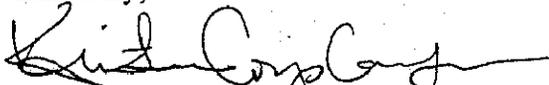
A proposal titled, "Sacramento Valley: Eastside Small Streams - Phase I" will be submitted on April 16, 1999 for consideration by the CALFED Bay-Delta Program's Ecosystem Restoration Program and Strategic Plan in response to the 1999 Proposal Solicitation Package. The project period for this proposal runs from October 1999 to September 2000. The Project Director is Charles Nelson, Professor of Geography and Planning at CSU, Chico; he can be reached at (530) 898-5969.

If accepted, this proposal will provide funding to collect spatial (mapping) data for areas not currently mapped by local watershed conservancy groups. Specifically, the project area focuses on a stretch of the northeastern Sacramento Valley extending from Butte Creek on the south to Battle Creek on the north. The small streams that will be mapped lie between six prominent Sacramento River tributary streams with organized conservancy groups: Butte, Big Chico, Little Chico, Deer, Mill and Battle Creeks. Phase I of this project will identify map coverage currently available within the study area as well as data gaps. A future Phase II project will focus on the intention to address the data gaps.

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

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

April 15, 1999

Tehama County Planning Department
George Robson, Director
Courthouse Annex, Room I
444 Oak Street
Red Bluff, CA 96080

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

Dear Mr. Robson,

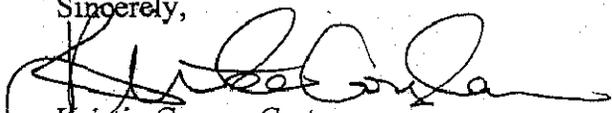
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Kristin Cooper Carter

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

April 15, 1999

Shasta County Board of Supervisors
1815 Yuba Street, Suite I
Redding, CA 96001

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

Dear Supervisors Clarke, Fust, Hawes, Kehoe and Wilson,

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Sincerely,



Kristin Cooper Carter

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

April 15, 1999

Shasta County Planning Department
Jim Cook, Director
1855 Placer Street, Suite 103
Redding, CA 96001

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

Dear Mr. Cook,

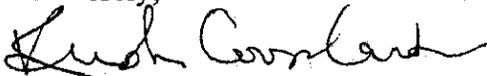
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Kristin Cooper Carter