

## **Environmental Education Program for Battle Creek Watershed Residents: “Your Watershed at Work”**

### **I. PROGRAM INFORMATION**

The Battle Creek Watershed Conservancy was formed in 1997 to "preserve the environmental and economic resources of the watershed." The most powerful tool available to the Conservancy for reaching this goal is education: a citizenry which is well informed regarding environmental and economic issues is one of the best guarantees that the community will make wise decisions regarding its future in these areas.

Conservancy members propose a strategy to link the environmental aspects of the watershed and the residents of the watershed by basing discussions on the local economy. Several of the most important local economic activities have substantial effects upon, and are substantially affected by, the local environment. For example, in the Battle Creek watershed consider these economic activities:

- Ranching (on private and federal lands)
- Hydro power generation (PG&E as well as private)
- Agriculture (vineyards, apples)
- Recreation (fishing, hunting, camping, hiking)
- Forestry (on private and federal lands)
- Aquaculture (trout, salmon - federal, state, and commercial)

It is clear from the many public meetings that have been held by the Conservancy that local residents are interested in their environment - in the appearance of the land, the health of the streams and forests, the health of the natural and hatchery produced fish populations, the health of the local economy - and that they would like to participate in the decisions which will affect the future of the area. If citizen participation is going to be effective, it seems important that the citizenry understands the close relationship between the types of economic activities mentioned above and the health of the environment.

Most local people have some knowledge of one or two or three of these industries, but few understand the relationship of these activities to the environment well enough. It is with this in mind that the Battle Creek Watershed Conservancy is interested in entering into a subcontract with Western Shasta Resource Conservation District (WSRCD) to have the Conservancy carry-out an educational program based upon the relationship between the health of the watershed and the local economy.

"Your Watershed at Work" takes a multi-level approach to education, in order to reach the adults as well as the younger children and teenagers. Curriculum units for primary, middle, and junior high education will be coordinated with newsletter articles, newspaper press releases, presentations before local groups, and field trips for adults as well as children, in order to reach a wide range of ages. The Conservancy hopes to take advantage of the natural curiosity of Battle Creek watershed residents by providing an opportunity to see aspects of the watershed they might not have seen

despite decades of living in the area - the inside of a power house or a fish hatchery, and operations at a lumber mill or logging site.

The fact that Battle Creek is about to undergo a major transformation to become one of the state's most important salmon and steelhead streams will help focus the interest of the students and parents on these curriculum units. We will emphasize the relationship between each industry and the streams/anadromous fish to take advantage of this interest, but other environmental elements will be considered as well.

**Funding Information:**

In 1997, Western Shasta Resource Conservation District (WSRCD) entered into a \$50,000 cooperative agreement with the U. S. Fish and Wildlife Service (USFWS) to involve stakeholders in the Battle Creek Watershed, form a watershed advisory group and draft a watershed plan/strategy (1448-11330-97-J075). [1997 Category III funds matched the USFWS funds to initiate the group.] In 1998, a \$10,000 amendment was provided, then in 1999 an additional \$3,985 funds were provided to WSRCD to finalize the strategy.

This \$28,733 of 2000 AFRP funding will be used to develop curriculum units and the products described below (see note on separate CALFED funding, page 5).

**II. OBJECTIVES**

- A. Develop “first” and “second (revised)” curriculum units highlighting watershed processes, anadromous fish life history, and resource availability/utilization for approximately 900 school children in the primary and Junior High schools in the Battle Creek watershed.
- B. Organize and conduct three field trips for approximately 60 watershed residents/landowners to learn more about some of the economic activities underway in the watershed.
- C. Prepare three types of outreach materials (newsletter, newspaper press releases and expand the Battle Creek Watershed Conservancy’s web page) for information distribution on topics encompassing anadromous fish life history, population status, watershed processes, restoration activities and specific attributes of the Battle Creek watershed.

**III. WORK PRODUCTS**

<u>Task</u>	<u>Milestone</u>	<u>Description</u>
Task 1	January 15, 2000	Complete research and consultations with educators and industry representatives. Submit an outline of the proposed

curriculum.

- |         |                   |  |
|---------|-------------------|--|
| Task 2  | April 15, 2000    | Compile writings, photographs, illustrations, and submit draft curriculum unit for review/comment.   |
| Task 3  | April 15, 2000    | Publish educational/environmental newsletter and distribute press releases to newspapers and radio stations that describe the school activities and announce the field trips.  |
| Task 4  | July 15, 2000     | Document (e.g. outline) the six presentations given by local resource representatives at schools/fieldtrips.   |
| Task 5  | July 15, 2000     | Develop and distribute curriculum unit for Junior High school (7th/8th grade) children (1 <sup>st</sup> version).  |
| Task 6  | October 15, 2000  | Develop and distribute curriculum unit for primary school children (1 <sup>st</sup> version).  |
| Task 7  | October 15, 2000  | Expand existing Battle Creek Conservancy website to include text of curriculum unit, graphical materials, student essays and artwork.  |
| Task 8  | December 15, 2000 | Incorporate comments on the 1 <sup>st</sup> versions of the primary and Junior High school curriculum units, revise materials and produce 2 <sup>nd</sup> versions.  |
| Task 9  | April 15, 2001    | Distribute 2 <sup>nd</sup> versions of primary and Junior High school curriculum units.  |
| Task 10 | July 15, 2001     | Revise website to include revised text of curriculum units, additional graphical materials, additional student essays and additional/new artwork.  |
| Task 11 | [ongoing]         | Build public awareness of the stakeholder based watershed process through involvement in local activities (e.g. Salmon Festival at Coleman National Fish Hatchery, Cattlemen's Barbeque, Grange meetings), media coverage, and informational handouts. |
| Task 12 | October 15, 2001  | Final report summarizing all activities and documenting accomplishment of all tasks.   |

#### IV. METHODS

The research for Task 1 will include coordinating and communicating with other local watershed groups to learn about the educational materials that they have developed (e.g. Deer Creek Conservancy, Mill Creek Conservancy, see <http://www.lmusd.tehama.k12.ca.us> for the Partners in Education program developed for the Mill Creek Conservancy).

The project will be under the guidance of the Project Manager at Western Shasta Resource Conservation District (WSRCD), who will appoint an employee/subcontractor to develop these curriculum materials. This person will work closely with the Service's Project Manager (Patricia Parker) and will need to become thoroughly familiar with salmon/steelhead life history, the goals of the Battle Creek restoration effort, and the roles varying agencies and stakeholders play in carrying out the restoration activities.

The North Fork of Battle Creek is the boundary between Shasta and Tehama counties, so part of the Battle Creek watershed is outside the jurisdiction of the WSRCD. In order to prevent duplication of efforts, WSRCD will assure coordination with Tehama County RCD in contacting teachers on the Tehama County side of the Battle Creek watershed.

## V. COORDINATION WITH OTHER FUNDING SOURCES

The Battle Creek Watershed Conservancy (BCWC) is the recipient of a 1998 CALFED Grant. To help clarify how this funding source and deliverables differ from what is expected from the AFRP grant, we are providing the following information on the CALFED grant:

The 1998 CALFED grant will be handled as a contract with the National Fish and Wildlife Foundation (NFWF), the agent for the CALFED grant with EPA. There are five tasks in this grant; four of these tasks are unrelated to the question of education (fuels management, conservation easement planning, noxious weed abatement, and upper watershed processes). Task 1, watershed stewardship, is most closely aligned with this USFWS agreement. It is shown here for clarity:

Implement Watershed Strategy - Implementation of the watershed community strategy, a significant task for the BCWC, will help direct the scope of the Conservancy's work for the next several years. The Strategy has been developed by the Battle Creek Watershed Project (funded by Category III and CVPIA [1448-11330-97-J075]) and has been disseminated to the Battle Creek watershed community and other interested parties. The strategy focuses on a number of issues, all of which support the central thrusts of this project. The staff will implement the watershed strategy under the direction of the BCWC board of directors.

Education is the key to helping people, from landowners/residents of the area to county planners, to understand what constitutes a healthy watershed. The needs of the fisheries, the potential impacts of acres and acres of noxious and invasive weeds, the impact that a conflagration might have on the area, all require further explanation for the public to understand the relationship of these issues to a fully functioning watershed. How the existing natural resources can be best protected into the future while maintaining the economic viability of the area is the question that needs to be addressed.

Education is the key to understanding these issues.

Education will include coordination with schools in the watershed. There are three elementary schools in the watershed, serving approximately 900 students. The local -sponsored AmeriCorp program provides a Community Coordinator to assist teachers with watershed curricula (Adopt-A-Watershed and other), to coordinate activities and field trips for the classrooms. The participating students learn from watershed-wide approaches about the region's natural resources.

#### 1998 CALFED Deliverables

1.1 Manton Apple Festival and the Salmon Festival.

1.2 Conservancy newsletter.

1.3 Develop and conduct nine workshops for public school teachers concerning watershed processes and the special protection and restoration challenges of the Battle Creek watershed. Working with resources available from State Forestry, Fish & Game, AmeriCorps' watershed program and other program cooperators, staff will develop no fewer than nine classroom and in-the-field workshops for school teachers, rotating among the watershed's three public schools. Workshop handouts and workshop sign-up sheets will be submitted to NFWF.

1.4 KRIS/Battle Creek data base, and its use in the schools and community.

1.5 Community meetings.

[as shown in the 1998 CALFED proposal (via Bob Lee, Secretary for BCWC Board of Directors 8/26/99)]

#### Coordination between CALFED and AFRP

CALFED Deliverable 1.3, which supports educational programs, is the work most closely related to the "Your Watershed at Work" educational program for USFWS. This deliverable will be to continue the wildlife educational program in the schools (i.e. provide help to teachers by funding additional staff-time --- an AmeriCorps student or an experienced educator and materials) to develop and conduct workshops. On the other hand, the two tasks outlined in this AFRP statement of work (#3 and #4) announce the workshops and then document their results. The budget for this CALFED sub-task is \$10,000. These funds do not cover the costs of developing the curriculum units.

A 1999 CALFED proposal has also been submitted to develop curriculum units -- although funds were not granted in the first funding cycle. If funds are received in the second funding cycle, they will be used to implement the curriculum development program for High School students.

**ATTACHMENT 2**

COOPERATIVE AGREEMENT  
14-48-0001-99XXX  
ESTIMATED BUDGET  
PROJECT 00-NCV-01

a. Salary . . . (includes education outreach to schools, website expansion, fieldtrips)	\$13,000
b. Transportation. . . .	1,890
c. Equipment (includes office supplies, newsletters, telephone) . . . . .	3,820
d. Materials, supplies (includes printing, copying, postage) . . . . .	6,275
e. General and Administrative Expenses (overhead) . . .	3,748
	<hr/>
<b><u>TOTAL PROJECT COST TO USFWS</u></b>	<b>\$28,733</b>

[Funds from other sources include \$10,000 from the 1998 CALFED grant.]

D:\EVNFile\PROJECTS\WebPage\Proj Descriptions\f2ywaw~1.wpd