

1,4,7

351K

F1-066

DWR WHITE HOUSE

I. Executive Summary:

a) *Project Title:* Communities for Healthy Watersheds  
*Applicant Name:* Adopt-A-Watershed

b) *Project Description and Primary Biological/Ecological Objectives*

California continue to face an array of increasingly complex watershed health issues dealing with non-point source pollution, habitat degradation, and biological diversity. California desperately needs a generation of citizens and workers who are environmentally and scientifically literate and have a sense of stewardship of our natural resources. To achieve this, there is a need for an integrated and engaging K-12 natural resources education curriculum. Adopt-A-Watershed (AAW) is such a program. It guides children in adopting a local watershed beginning in kindergarten and collaborating with the local community to carry out increasingly sophisticated monitoring, restoration, and community education projects over a period of thirteen years. Since 1989, more than 25,000 California students have benefited from this unique program.

The AAW: Communities for Healthy Watersheds project addresses two major categories of need: 1) the need to strengthen community-based watershed management efforts and 2) the need for relevant, hands on K-12 watershed education. It focuses on many of the parameters of concern mentioned in the RFP including the development and implementation of watershed management plans that support priority species and habitats, restoration of priority aquatic and terrestrial habitats, improvements to water quality, and monitoring of species, habitats, and stressors of concern. This project will strengthen the ability of AAW to meet the needs of these communities and make possible the expansion of the curriculum and services to many additional areas in the Bay-Delta system.

The primary objectives fall into four distinct categories including watersheds, students, teachers, and schools. The act of providing Professional Development Workshops, AAW curriculum units, regional network training and support, and the AAW telecommunication network, will result in benefits to stressors, species, and habitats of the Bay-Delta system.

c) *Approach/Tasks/Schedule*

This project is an important part of community-based watershed management efforts. It provides a strong delivery system to assist communities in generating watershed education that is linked directly to local watershed management efforts. The methods of implementation include the establishment of local Advisory Committees, collaboration with Regional Coordinators, and adoption of the AAW strategy.

The specific tasks supported by this grant include providing Professional Development Workshops, AAW curriculum units, regional network support, and the AAW telecommunication network.

This one year project works in collaboration with Regional Coordinators to provide curriculum and services at the appropriate time of the year.

d) *Justification for Project and Funding by CALFED*

A major problem facing natural resource managers is that communities have little understanding of the value and vulnerability of these resources. In the area of water resources, common land use practices undertaken by government, businesses, and individuals undermine water quality. In many communities, the cumulative effect of discharging pollutants into storm-waters, encroaching on flood plains, and building obstructions to aquatic animal migrations is devastating for the health of the Bay-Delta ecosystem. For watershed management efforts to be sustainable, they must be built upon a base of community education and commitment.

One underlying cause of the problem is the weakness and irrelevance of science education

in most elementary and secondary schools. Throughout California, there is a lack of K-12 educational opportunities that integrate with local watershed management efforts. There is a need to link science education to the local community and watershed. Children, their parents, and the rest of the community need to learn about the ecological dynamics of watersheds and how they are impacted by human actions.

Adopt-A-Watershed(AAW) is effective in meeting this need because it combines an engaging science curriculum, with an implementation model based on collaboration with the community.

*f) Applicant Qualifications*

Adopt-A-Watershed was started in 1989 by Kim Stokely, an elementary school science teacher in Hayfork, California. She had a dream of a developing a science-based environmental education curriculum which would be a catalyst for school-wide education reform. The integrated, relevant curriculum she envisioned would help students develop both scientific literacy and a sense of stewardship toward the environment. With the support of a \$300,000 grant from the Trinity River Task Force, a partnership of 14 Federal, state, local, and tribal organizations, she began the development of the first curriculum units. Over the past eight years, Adopt-A-Watershed has developed 17 of the 26 planned units and trained more than 2,500 teachers and 200 Community Coordinators. It has managed more than \$1.8 million in federal, state, and local grants. These accomplishments have been made possible through a collaborative approach which has brought together a broad range of groups in support of this unique program.

*g) Monitoring and Data Evaluation*

Environmental monitoring is a critical component of AAW's strategy. Students and the community have the opportunity to participate in long-term monitoring projects. Some of these monitoring projects include amphibian studies, plant surveys, riparian corridor studies, bird populations studies, wildlife population studies, forest succession, water quality tests, fish population studies, and aquatic insect studies. This data is collected at a permanent study-site and brought back to the classroom for further analysis. The data is used in other academic areas such as mathematics and language arts, students work closely with natural resource professionals to determine the relevance of the data, and students compare data with other students across America via the internet.

*h) Local Support/Coordination With Other Programs/Compatibility With CALFED Objectives*

This project supported is by 17 Regional Coordinators who are positioned in eight regions of the Bay-Delta system. The implementation of AAW has been and continues to be supported by federal resource management agencies, including the Natural Resource Conservation Service, the Bureau of Reclamation, the U.S. Fish and Wildlife Service, and the U.S. Forest Service; state agencies such as California Conservation Corps, the California Department of Forestry and Fire Prevention, and the California Department of Fish and Game; and many local agencies, businesses, and nonprofit organizations.

II. Title Page:

a) *Title of Project:* Adopt-A-Watershed: Communities for Healthy Watersheds

b) *Name of Applicant:*

Adopt-A-Watershed  
Jesse Miller, Associate Director  
731 Market Street, Suite 600A  
San Francisco, CA 94103  
phone: (415) 541-9657  
fax: (415) 541-9653  
email: jessesf@earthlink.net

Adopt-A-Watershed  
Kim Stokely, Executive Director  
P.O. Box 1850, 98B Clinic Avenue  
Hayfork, CA 96041  
phone: (916) 628-5334  
fax: (916) 628-4212  
email: aaw@tcoe.trinity.k12.ca.us

c) *Type of Organization:* 501(c)(3)

d) *Tax Identification Number:* 68-0365504

e) *Financial Contact:*

Priscilla Henson, Administrative Director  
Adopt-A-Watershed  
P.O. Box 1850, 98B Clinic Avenue  
Hayfork, CA 96041  
phone: (916) 628-5334  
fax: (916) 628-4212  
email: aaw@tcoe.trinity.k12.ca.us

f) *Participants/Collaborators in Implementation*

A select list of collaborators include:

Friends of the Estuary  
Steve Cochrane  
2101 Webster St., Suite 500  
Oakland, CA 94611  
(510) 286-0769

Sonoma Co. Water Agency  
Brad Olsen  
2150 West College Avenue  
Santa Rosa, CA 95401  
(707) 526-5370

Arroyo Mocho  
Karen Duncan  
685 East Jack London  
Livermore, CA 94550  
(510) 449-8011

Mariposa Junior High  
Debbie Freitas  
P.O. Box 8  
Mariposa, CA 95338  
(209) 742-0320

Grass Valley R.C.D.  
Tricia Johnson  
113 Presley Way, Suite 1  
Grass Valley, CA 95945  
(916) 272-3417

Wiskeytown Env. Sch  
Stina Low  
1644 Magnolia Av  
Redding, CA 96001  
(916) 225-0116

Adelante High School  
Katie Palatinus  
350 Atlantic Street  
Roseville, CA 95678  
(916) 782-3155

Los Molinos High School  
Todd Hammer  
P.O. Box 609  
Los Molinos, CA 96055  
(916) 384-7906

g) *RFP Project Group Type:* Group 3: Services

### III. Project Description:

#### a) *Project Description and Approach*

A major problem facing natural resource managers is that communities have little understanding of the value and vulnerability of these resources. In the area of water resources, common land use practices undertaken by local government, businesses, and individuals undermine water quality. In many communities, the cumulative effect of discharging pollutants into storm-waters, encroaching on flood plains, and building obstructions to aquatic animal migrations is devastating for the health of the Bay-Delta ecosystem. For watershed management efforts to be sustainable, they must be built upon a base of community education and commitment.

One underlying cause of the problem is the weakness and irrelevance of science education in most elementary and secondary schools. Throughout California, there is a lack of K-12 educational opportunities that integrate with local watershed management efforts. There is a need to link science education to the local community and watershed. Children, their parents, and the rest of the community need to learn about the ecological dynamics of watersheds and how they are impacted by human actions.

Adopt-A-Watershed(AAW) is effective in meeting this need because it combines an engaging science curriculum, with an implementation model based on collaboration with the community. Students adopt a local watershed and use it as a focal point for their science education all the way from kindergarten through twelfth grade. The watershed becomes a living laboratory in which the students participate in hands-on activities, making science directly applicable and relevant to their lives. They work with natural resource professionals, other adult volunteers, and older students, creating a powerful mentoring experience. Each unit addresses grade-level-appropriate science concepts and allows students to undertake monitoring, restoration, and community education projects in which they apply these concepts. The community becomes part of the education process and the material learned is linked to "real world" application. Students have the opportunity to practice community involvement and community capacity building.

AAW is unique in that it is an integrated, articulated K-12 program. AAW addresses not just water, but all aspects of natural resources including geology, ecosystems, wildlife, and botany. It consists of sequential activities, providing continuity and exposing students to the long-term commitment needed for effective resource management. AAW takes a constructivist approach to learning, dealing with increasingly complex scientific concepts as students progress through the grade levels. Each curriculum unit culminates with a monitoring, restoration, and community education project. AAW offers students a chance to undertake long-term monitoring projects, some for as long as thirteen years, and prescribe restoration remedies.

AAW integrates material from several other environmental education programs. These include Project Learning Tree, Project WILD, FOSS, the Illinois Rivers Project, Wings for Learning, Creative Publications, Botany for All Ages, the California CLASS Project, Outdoor Biological Instructional Strategies, and Great Explorations in Math and Science. Materials from these programs are incorporated into AAW so that no wheels are reinvented. This approach extends a welcoming hand to teachers that may not be using the AAW curriculum.

The AAW: Communities for Healthy Watersheds project is designed to provide Professional Development Workshops, AAW curriculum units, regional network training and support, and the AAW telecommunication network.

- > Professional Development Workshops are presented by an AAW facilitator who introduces teachers to the AAW strategy, draws correlation between AAW and the school district's science matrix, leads teachers through a series of hands-on classroom lessons, and finally ends the day by engaging teachers in a field study and restoration project. Each teacher will enhance their scientific literacy and develop the ability to successfully implement the AAW

program. A total of 40 Professional Development Workshops, an average of five Workshops per region, will be strategically positioned to attract the most amount of teachers from each region. Please refer to section *Project Location and Geographic Boundaries* for region definitions.

- > A total of 17 separate AAW curriculum units cover grades K-12. Each curriculum unit offers a nine week course, contains hands-on classroom lessons, and describes how to conduct long-term monitoring and restoration projects. This grant will provide 163 curriculum units to those schools that have shown a commitment to providing an articulated K-12 watershed education program. Please refer to attachment A, Adopt-A-Watershed Unit matrix.
- > Regional network training and support consists of training for Regional Coordinators and ongoing support throughout the year. Regional Coordinators are responsible for forming partnerships with natural resource agencies, establishing Advisory Committees, organizing Professional Development Workshops, and providing ongoing support to AAW teachers. The regional network training will cover curriculum integration tools, curriculum training, program evaluation tools, networking opportunities, models of sustainability, models of implementation, partnership development, peer coaching, data filing systems, telecommunication training, process for Advisory Committee development, and grant writing. The AAW staff has proven to be extremely effective in providing communities with the tools to build a sustainable watershed education program that connects science curriculum to local watershed management efforts.
- > The AAW telecommunication network serves many functions. People interested in AAW can download information about the program, learn about specific curriculum units, order curriculum units, and find out where regional contacts are located. Students also use the telecommunications network to exchange scientific data and watershed experiences with other students across America. This grant will support a Technology Coordinator who is responsible for maintenance of the Network. The AAW telecommunication network and web site can be reviewed at, (<http://www.tcoe.trinity.k12.ca.us/aaw>).

*b) Project Location and Geographic Boundaries*

Regional Coordinators, working in collaboration with AAW, are positioned in eight regions as identified in the geographic scope of the Bay-Delta Program. Regional Coordinators are responsible for forming partnerships with natural resource agencies, establishing Advisory Committees, organizing Professional Development Workshops, and providing ongoing support to AAW teachers. Regional Coordinators will play an instrumental role in guiding products and services from AAW to students, teachers, schools, and communities. The following list identifies Regional Coordinators located within the geographic scope of the Bay-Delta Program.

San Francisco Bay Region

Fort Funston Env. Scie. Cent.  
 Marcia Trouton  
 2550 25th Avenue  
 San Francisco, CA 94116

Friends of the Estuary  
 Steve Cochrane  
 2101 Webster St., Suite 500  
 Oakland, CA 94611

Pioneer High School  
 Bob Vasconcellos  
 1290 Blossom Hill Rd.  
 San Jose, CA 95118

Suisun Marsh and San Francisco Bay

Bahia Vista School  
 Leah Marks  
 125 Bahia Way  
 San Rafael, CA 95338

Napa County R.C.D.  
 Sheila Adams  
 1303 Jefferson St, 500B  
 Napa, CA 94559

Sonoma Co. Water Agency  
 Brad Olsen  
 2150 West College Avenue  
 Santa Rosa, CA 95401

**Delta Basin**

Arroyo Mocho  
Karen Duncan  
685 East Jack London Blvd.  
Livermore, CA 94550

**San Joaquin River Watershed Region**

Mariposa Junior High  
Debbie Freitas  
P.O. Box 8  
Mariposa, CA 95338

N.R.C.S  
Gerry Progner  
P.O. Box 746  
Mariposa, CA 95338

**Sacramento River Watershed Region**

The Watershed Project  
Sue Rae Ireland  
P.O. Box 1096  
Homewood, CA 96141

UC Cooperative Extension  
Mike Delasaux  
208 Fairground Road  
Quincy, CA 95971

Grass Valley R.C.D  
Trica Johnson  
113 Presley Way, Suite 1  
Grass Valley, CA 95945

**Northern Sacramento Valley**

Shasta County Office of Ed.  
Terri Lhuillier  
1644 Magnolia Avenue  
Redding, CA 96001

Wiskeytown Environ. School  
Stina Low  
1644 Magnolia Avenue  
Redding, CA 96001

**American River Basin**

Adelante High School  
Katie Palatinus  
350 Atlantic Street  
Roseville, CA 95678

**Bute Basin**

Chico Creek Nature Center  
Roberta Walker  
P.O. Box 63  
Forest Ranch, CA 95942

Los Molinos High School  
Todd Hammer  
P.O. Box 609  
Los Molinos, CA 96055

*c) Project Benefits*

Goals:

- > Contribute to the health of watersheds in the Bay-Delta system.
- > Provide a model of collaboration for solving complex natural resource issues.
- > Strengthen linkages between schools and their communities.
- > Teach students skills for making responsible resource management choices.
- > Provide an articulated, thematic, integrated science curriculum.
- > Make science relevant and applicable to students' lives.
- > Help students and communities develop a sense of stewardship toward the environment.
- > Encourage students and communities to develop ethic of service.

Objectives:

The primary objectives fall into four distinct categories including watersheds, students, teachers, schools, and regional network training and support. The act of providing Professional Development Workshops, AAW curriculum units, regional network training and support, and the AAW telecommunication network, will result in benefits to stressors, species, and habitats of the Bay-Delta system.

- > In at least 50 watersheds, students and communities will learn about local watersheds through monitoring, restoration, and community education projects. These projects will have a positive impact on the health of watersheds located within the geographic scope of the Bay-Delta program.

- > More than 5,000 students will participate in monitoring, restoration, and community education projects that are significant to their community. Secondly, students will find new challenges and enjoyment in learning, increase their scientific and environmental literacy, practice collaboration with each other and the community, develop an ethic of service and sense of stewardship toward the environment, and be exposed to new career options in natural resource management. Finally, students will share scientific data and watershed experiences via the AAW telecommunication network.
- > At least 400 teachers will attend an AAW Professional Development Workshop. Each teacher will develop the ability to successfully implement the AAW curriculum, increased scientific and environmental literacy, and the skills to apply science concepts to the local environment. In addition, teachers will receive an AAW curriculum unit of their choice.
- > More than 50 schools will participate in the project and receive the benefits of regional network support. This support will provide schools with the tools to build an articulated and sustainable science education program.
- > The regional network training and support throughout the year will provide 17 Regional Coordinators with the tools to create 50 new partnerships, establishment of 15 new Advisory Committees and produce 4 AAW newsletters that showcase community involvement in the Bay-Delta Program

*d) Background and Biological/Technical Justification*

Throughout the Bay-Delta system there is a need for: (1) improved science and environmental education in K-12 schools, and (2) a new generation with an ethic of service and stewardship toward the environment, and (3) collaboration in dealing with complex natural resource issues.

In recent international competitions, American students placed 16th out of 18 industrialized nations in science. A major reason for the weakness of American K-12 science education is the fragmented, overly theoretical curricula that are predominant. Fragmentation of lessons and reliance on rote testing has made much of science dull, regurgitative and non-creative for students. The average science class spends only 15% of its time on hands-on activities (as opposed to 40% recommended in the new California Science Framework). There is a strong need for sequenced, integrated, articulated curricula which give children ample opportunity to directly apply the concepts they are learning in hands-on activities.

Strong science-based environmental education curricula are needed to prepare today's students to be responsible decision-makers on natural resource issues. When students grasp the core scientific concepts behind environmental issues and understand the human factors involved as well, they are able to make better-informed choices and to apply their understanding to constantly evolving circumstances. Unfortunately, when environmental education has been introduced into California schools, it has generally been as a supplemental collection of activities rather than as a core, science-based program. There is a great need for a curriculum such as Adopt-A-Watershed which allows students to use the local environment as a living laboratory in which to apply the scientific theories they are learning.

*e) Proposed Scope of Work, August 1997 through July 1998*

August:

- (1) AAW hires Technology Coordinator.
- (2) AAW begins organizing and recruiting for Regional Network Training.

September:

- (1) AAW staff provides Regional Network Training. The elements of the training include:
  - > Curriculum Planning- AAW staff introduce Regional Coordinators to curriculum planning tools that illustrates next steps for developing a sustainable science education program that is connected to local watershed management efforts.

- > Program Evaluation- AAW staff introduce Regional Coordinators to program evaluation tools used to assess the achievement of local objectives and objectives outlined in this proposal.
- > Sustainability- AAW staff work with Regional Coordinators to develop a model of sustainability that explores partnerships, volunteers, grant writing, etc...
- > Data Filing- AAW staff work with Regional Coordinators to establish a permanent data filing system that will document all monitoring and restoration work.
- > Advisory Committee- AAW staff work with Regional Coordinators to develop local Advisory Committees that identify needed monitoring and restoration projects and assist in building a sustainable program.
- > Telecommunication Network- Regional Coordinators are trained how to use the AAW telecommunication network.
- > Peer Coaching- AAW staff works with Regional Coordinators to plan Professional Development Workshops.

**October:**

- (1) Telecommunication Network- Technology Coordinator maintains input of monitoring data and watershed experiences from students.
- (2) Monitoring, Restoration, and Community Education Projects- AAW staff works with Regional Coordinators to support the application of science concepts to local watersheds.
- (3) Newsletter- AAW staff produce a quarterly newsletter to showcase and link efforts of the Bay-Delta system.
- (4) Funding- AAW work with Regional Coordinators to identify potential funding to support further development of the AAW program in their region.

**November:**

- (1) Telecommunication Network- Technology Coordinator maintains input of monitoring data and watershed experiences from students.
- (2) Monitoring, Restoration, and Community Education Projects- AAW staff works with Regional Coordinators to support the application of science concepts to local watersheds.

**December:**

- (1) Professional Development Workshops- AAW staff work with Regional Coordinators to organize and host Workshops in their region.
- (2) Curriculum- Teachers receive AAW curriculum units of their choice.

**January:**

- (1) Professional Development Workshops- AAW staff work with Regional Coordinators to organize and host Workshops in their region.
- (2) Curriculum- Teachers receive AAW curriculum units of their choice.
- (3) Newsletter- AAW staff produce a quarterly newsletter to showcase and link efforts of the Bay-Delta system.
- (4) Funding- AAW work with Regional Coordinators to identify potential funding to support further development of the AAW program in their region.

**February:**

- (1) Professional Development Workshops- AAW staff work with Regional Coordinators to organize and host Workshops in their region.
- (2) Curriculum- Teachers receive AAW curriculum units of their choice.
- (3) Telecommunication Network- Technology Coordinator prepares Network for input of monitoring data and watershed experiences from students.

**March:**

- (1) same as November

**April:**

- (1) same as October

May:

- (1) same as November

June:

- (1) Telecommunication Network- Technology Coordinator processes monitoring data collected during the 1997/98 school year and packages it in usable form for students, teachers, and natural resource agencies.
- (2) Peer Coaching- AAW staff work with Regional Coordinators to evaluate the year and plan next steps for building a sustainable science education program that is connected to local watershed management efforts.

July:

- (1) Telecommunication Network- Technology Coordinator processes monitoring data collected during the 1997/98 school year and packages it in usable form for students, teachers, and natural resource agencies.
- (2) Peer Coaching- AAW staff work with Regional Coordinators to write final report for Bay-Delta Program
- (3) Newsletter- AAW staff produce a quarterly newsletter to showcase and link efforts of the Bay-Delta system.
- (4) Funding- AAW work with Regional Coordinators to identify potential funding to support further development of the AAW program in their region.

*f) Monitoring and Evaluation*

Environmental monitoring is a critical component of AAW's strategy. Students and the community have the opportunity to participate in long-term monitoring projects. Some of these monitoring projects include amphibian studies, plant surveys, riparian corridor studies, bird populations studies, wildlife population studies, forest succession, water quality tests, fish population studies, and aquatic insect studies. This data is collected at a permanent study-site and brought back to the classroom for further analysis. The data is used in other academic areas such as mathematics and language arts, students work closely with natural resource professionals to determine the relevance of the data, and students compare data with other students across America via the internet.

This AAW program contains a strong evaluation component, which is integral to the success of the program. Evaluation is not seen merely as measurements taken at the beginning and end of the project to assess the progress made. It is an ongoing process which serves as a navigational device through all phases of the project, allowing for course corrections and continuous program improvement. The evaluation process involves the continuous collection, analysis and use of all relevant data.

All AAW participants, including students, teachers, and volunteers will participate fully in the evaluation process. Rubrics, questionnaires, portfolios and other assessment tools will be used to measure progress toward the project objectives. The variables assessed will include students' attitudes toward school, science, the environment, and the community, the effectiveness and ease of use of the curriculum materials, and community involvement. All results will be compiled and used in the revision and continuous improvement of the program.

*g) Implementability*

The purpose of this project is to insure that local K-12 educational systems are involved in monitoring and restoration projects that are part of a comprehensive watershed management effort. Advisory Committees in each region will oversee compliance with laws and regulations, attain required permits, and coordinate with other projects.

Based upon its experience of working with more than 250 schools over the past five years, AAW has developed a model to sustain watershed education. The model addresses sustaining each major player including the teachers, Regional Coordinators, community partners, and schools.

#### IV. Cost and Schedule to Implement Proposed Project:

a) *Budget Costs*

Please refer to attachment B, Cost Breakdown Table.

b) *Schedule Milestones*

This proposal outlines each milestone or task in the section titled, *Scope of Work*. Payments of the grant should be proportional to the percentage of that task that is completed during that time period.

c) *Third Party Impacts*

The AAW program was created in response community polarization around natural resource issues. AAW proposes to resolve these issues citizens must understand basic science concepts, learn how a watershed functions as an ecosystem, acquire skills to work collaboratively, and possess a commitment to serving their community. AAW aims to be a guiding light for communities throughout the Bay-Delta system to focus attention on the environment and challenge citizens to work collaboratively to solve complex natural resource issues.

#### V. Applicant Qualifications:

Adopt-A-Watershed was started in 1989 by Kim Stokely, an elementary school science teacher in Hayfork, California. She had a dream of a developing a science-based environmental education curriculum which would be a catalyst for school-wide education reform. The integrated, relevant curriculum she envisioned would help students develop both scientific literacy and a sense of stewardship toward the environment. With the support of a \$300,000 grant from the Trinity River Task Force, a partnership of 14 Federal, state, local, and tribal organizations, she began the development of the first curriculum units. Over the past eight years, Adopt-A-Watershed has developed 17 of the 26 planned units and trained more than 2,500 teachers and 200 community coordinators. It has managed more than \$1.8 million in federal, state, and local grants. These accomplishments have been made possible through a collaborative approach which has brought together a broad range of groups in support of this unique program.

Since 1994, the WATERSHED project, a partnership lead by the California Conservation Corps and AAW, has received approximately \$4 million in grants from AmeriCorps. Currently, 150 AmeriCorps members are part of the project. Most of them fill the critical role of Community Coordinator, providing ongoing support to teachers and helping link schools with the community. They identify and plan service-learning field projects, connect appropriate professionals to enhance the units, and assist on field trips.

The implementation of AAW has been and continues to be supported by federal resource management agencies, including the Natural Resource Conservation Service, the Bureau of Reclamation, the U.S. Fish and Wildlife Service, and the U.S. Forest Service; state agencies such as California Conservation Corps, the California Department of Forestry and Fire Prevention, and the California Department of Fish and Game; Indian tribes such as the Hoopa; and many local agencies, businesses, and nonprofit organizations.

Kim Stokely, the founder and director of the AAW program, will serve as Project Director. She formerly served as Field Studies Director at the Yosemite Institute and Science Coordinator for the Mountain Valley Unified School District. She has extensive experience in developing and implementing successful science and environmental education programs and teacher training workshops.

Dr. Victoria Bernhardt, executive director of Education for the Future (EFF), will coordinate the evaluation process. Ms. Bernhardt, a professional evaluator, has designed and

innovative assessment model for EFF, a school restructuring program sponsored by Pacific Telesis. She has developed and implemented successful evaluation plans for the AAW program over the past two years.

Jesse Miller, Associate Director, brings four years of experience working in the field of environmental education. Jesse's skills ranges from coordinating service-learning projects to working with communities to build community supported science education programs.

Nancy Jones will fill the position of Workshop Facilitator. Ms. Jones specializes in delivering high quality in-service training to elementary school teachers. She draws upon her many years of classroom experience, along with and extensive background in leadership training.

Joanne Seastruck, Projects Director, has worked for AAW for one year. Her prior experience includes clerical, office management, and sales. She has been an employed by Bank of America, U.S. Forest Service, Trinity County Mental Health, and Trinity County Human Response Network.

Charla Johnson, Program Assistant, has worked for AAW for three years. She has worked for thirty years as a typist, executive secretary, and office manager.

The position of Technology Coordinator will be a new addition to the AAW staff. The requirements for the job include experience developing/maintaining a telecommunication network, the skills to interpret scientific data, and the ability to direct others in the use of the telecommunication network.

#### VI. Compliance With Standard Terms and Conditions

Please refer to attachment C, Standard Clause Non-Discrimination Compliance.

**Attachment B  
CalFed Bay-Delta  
FY 1997/1998**

	Task 1: Professional Development Workshops	Task 2: Curriculum Units	Task 3: Regional Network Training and Support	Task 4: Telecom- munications Network	Total Request from Bay- Delta Prog.	Cost Sharing	Total Cost
<b>DIRECT SALARY AND BENEFITS:</b>							
Executive Director	10,408	-	10,408	10,408	31,224	10,407	41,631
Associate Director	-	-	27,121	-	27,121	9,040	36,161
Projects Director	11,250	-	11,250	-	22,500	7,500	30,000
Workshop Facilitator	15,000	-	-	-	15,000	15,000	30,000
Technology Coordinator	-	-	-	22,500	22,500	7,500	30,000
Program Assistant	5,616	-	5,616	5,616	16,848	5,613	22,461
Benefits (18%)	7,609	-	9,791	6,934	24,335	9,911	34,246
<b>MATERIALS:</b>							
Curriculum Units (136 units @ \$60./unit)	-	8,160	-	-	8,160	3,840	12,000
<b>MISCELLANEOUS AND OTHER DIRECT COSTS:</b>							
Postage	3,210	3,210	3,210	-	9,630	3,210	12,840
Copying	2,664	2,664	2,664	-	7,992	2,664	10,656
Office Supplies	1,566	-	1,566	1,566	4,698	1,566	6,264
Evaluation	-	-	5,967	-	5,967	1,989	7,956
Travel/Meals/Lodging	3,018	-	3,018	3,018	9,054	3,018	12,072
Insurance/Taxes/Licenses	376	376	376	376	1,504	500	2,004
Utilities	394	394	394	394	1,576	524	2,100
Telephone/Communication	2,491	2,491	2,491	2,491	9,964	3,320	13,284
Audit	563	563	563	563	2,252	748	3,000
Rent/Storage	2,250	2,250	2,250	2,250	9,000	3,000	12,000
Equipment	750	-	750	750	2,250	750	3,000
<b>SUBTOTAL</b>	<b>67,165</b>	<b>20,108</b>	<b>87,435</b>	<b>56,866</b>	<b>231,575</b>	<b>90,100</b>	<b>321,675</b>
<b>ADMINISTRATION (9%)</b>	<b>6,045</b>	<b>1,810</b>	<b>7,869</b>	<b>5,118</b>	<b>20,842</b>	<b>8,109</b>	<b>28,951</b>
<b>TOTAL</b>	<b>\$73,210</b>	<b>\$21,918</b>	<b>\$95,304</b>	<b>\$61,984</b>	<b>\$252,417</b>	<b>\$98,209</b>	<b>\$350,626</b>

# Adopt-A-Watershed Curriculum

Suggested Grade	Unit Title	Concept	Long-Term Field Study	Restoration Project	Community Action
K	What is a Watershed?	The earth contains objects which are observably different and that change.	Tree height and diameter/succession study.	Tree planting.	Field trip booklet for family and community and children explain to family what a watershed is.
	Creature Features	Living and non-living things have observable characteristics.	Butterflies of watershed.	Plant native flower seeds that butterflies use; i.e., milkweed.	Building a butterfly garden on the school grounds.
1	An Apartment in the Woods	There is great diversity in living things and their habitats.	Mass production study.	Acorn planting or habitat enhancement.	Mural or puppet show depicting living things that depend on trees.
	Significance of Soil	Different forces reshape the earth.	Soil erosion study.	Erosion control.	Significance of Soil brochure.
	Fish in Schools I	Living things have predictable and continuous life cycles.	Stream temperature.	Release fish raised in classroom.	Life cycle display-open house, science or watershed fair.
2	Trees	Living things have characteristics and structures enabling them to live and interact in different environments.	Tree height and diameter/succession study and/or trees changing color and budding out.	Growing and planting willows.	"Build a Tree" mural displayed for community at open house, science fair or watershed fair.
	Animals	Same as for Tree Unit with an emphasis on animals.	Deer population study.		"Animals of Our Watershed" display-open house, science fair or watershed fair.
3	The Streamside Community	Same as for Population Unit with an emphasis on plants as indicator species.	Amphibian study.	Riparian ecosystem restoration.	Display of leaves and seeds from indicator plant species found in a riparian ecosystem.
4	Landforms and Geology	Natural forces are at work causing the earth to change.	Soil erosion study.	Erosion control.	Share watershed relief map and aerial photos at open house, science fair or watershed fair.
	Fish in Schools II	Organisms successfully adapted to their environment are more likely to live and pass on their traits.	Aquatic insect population study. Stream temperature. Photo station.	Fish habitat enhancement or erosion control.	Newspaper articles written by students about field trip activities in watershed Puppet show and poster on stream care.

Bold units have been completed.

# Adopt-A-Watershed Curriculum Unit Matrix

Suggested Grade	Unit Title	Concept	Long-Term Field Study	Restoration Project	Community Action
8	<b>Ecosystems and the Physical Environment</b>	The physical environment affects living things.	Tree height/diameter and succession study, pH study on rain, soils, streams and/or comparative ecosystem study.	Restore an ecosystem where a physical change is impacting the success of that ecosystem, such as providing shade for a stream channel that has lost its canopy cover.	Play production on acid rain.
	<b>Water Cycle</b>	The water cycle is a dynamic system which interacts with the land causing change.	Stream flow.	Help irrigators conserve water.	Attend public meetings on water use and/or help 4th grade complete brochure on water quantity problems and solutions.
	<b>Aquatic Ecosystems</b>	Species are maintained and changed through cellular structures and processes. A population's survival depends upon its adaptations to the environment.	Stream survey and water quality monitoring. Photo station.	Stream restoration.	Slideshow on the water quality of the adopted creek and examples of ways that we can provide a quality habitat for people and wildlife.
High School	<b>Matter and Energy</b>	Matter and energy cycles through ecological systems.	Productivity studies Tree height and diameter/succession study.	Restoration to increase productivity of an impacted system.	Research and presentation to community on best management practices for a specific ecosystem.
	<b>Fisheries and Watersheds</b>	Population survival and human dependence on watershed resources.	Aquatic insect population study, stream flow, stream temp., photo station and charting changing fish populations.	Job shadowing with people working in watershed.	Watershed congress for community and public officials with "State of the Watershed: Problems and Solutions" as subject.
	<b>Water Quality</b>	Environmental chemistry: pollution and solutions.	Water quality monitoring.	Search for solutions to water quality problems.	Watershed congress for community and public officials with "State of the Watershed: Problems and Solutions" as subject.

Bold units have been completed.

## NONDISCRIMINATION COMPLIANCE STATEMENT

*Adopt-A-Watershed*

COMPANY NAME

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

## CERTIFICATION

*I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.*

OFFICIAL'S NAME

DATE EXECUTED

EXECUTED IN THE COUNTY OF

PROSPECTIVE CONTRACTOR'S SIGNATURE

PROSPECTIVE CONTRACTOR'S TITLE

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME