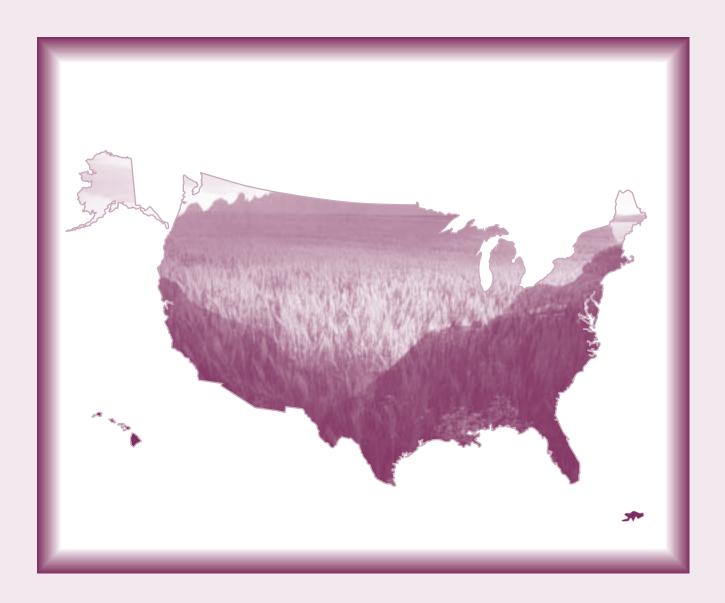


## 1999 Environmental Education Grant Profiles



U.S. Environmental Protection Agency
Office of Environmental Education
Office of Communications, Education, and Media Relations
401 M Street, SW (1704)
Washington, DC 20460

### **Table of Contents**

Summary Statement	1	
Using the Grant Profiles	2	
Grants Awarded by EPA Headquarters	3	
Grants Awarded by EPA Regional Offices	7	
Chart: Ratio of Applications to Awards	57	
EPA Regional Environmental Education Coordinators	58	



### Notes



Annual Award Under Section 6 of the National Environmental Education Act (Public Law 101-619)

This report summarizes 206 environmental education grants awarded by the U.S. Environmental Protection Agency (EPA) during fiscal year (FY) 1999. The Environmental Education Grants Program was created under Section 6 of the National Environmental Education Act, and the first grants were awarded in 1992. EPA's Office of Environmental Education (OEE) manages the program. Grants of Federal funds over \$25,000 are awarded annually by EPA Headquarters and smaller grants by the 10 regional offices, as described below.

The grants are awarded to stimulate environmental education by supporting projects that address EPA educational priorities such as: education reform and capacity building, human health, teacher training, career development, and community environmental issues, including those related to environmental justice. The goal of the program is to support projects that enhance the public's awareness and knowledge of environmental issues and the skills they need to make informed and responsible decisions that affect environmental quality. Any college or university, tribal or local education agency, state education or environmental agency, nonprofit 501(c)(3) organization, or noncommercial educational broadcasting entity is eligible for grants under the program.

In FY 1999, Congress appropriated approximately \$2.5 million for the grants program. Federal funds may not exceed 75 percent of the total funding for a project. Dollar amounts reported in this document are the EPA funds awarded to the project only. Each project listed also has secured matching funds from sources other than federal programs. Such matching funds, often exceeding 25 percent of total funds for a project, are not reported in this document.

Headquarters awarded nine large grants, for a total of \$870,498. Grants awarded averaged \$96,722; the smallest grant awarded was \$33,470; four grants exceeded \$100,000; and the largest awarded was \$150,000. Each regional office awarded approximately \$160,000 for an average of 20 grants each. The competition for grants is intense, especially as the amount of funding requested increases. For example, in 1999, Headquarters funded less than 5 percent of the 270 grant applications received. Because Congress mandates that 25 percent of the grant funds be awarded to small grants of \$5,000 or less, EPA is much more likely to award funding for small grants. On page 57 is a chart that illustrates the ratio of applications received to awards made in all regions nationwide.

EPA's annual Environmental Education Grants Solicitation Notice describes the solicitation, evaluation, and award process through which EPA arrives at final decisions about grant winners. The solicitation notice is published and available for review in the Federal Register, which can be obtained at most libraries, and can be viewed on the Internet at <a href="http://www.epa.gov/enviroed">http://www.epa.gov/enviroed</a>. The most recent solicitation notice also can be obtained by contacting EPA Headquarters or an EPA regional office. A list of EPA contacts is provided on pages 58 and 59 of this document.



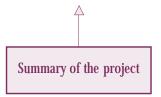
### **USING THE GRANT PROFILES**

The main section of this document provides profiles of environmental education grants awarded annually. Profiles are listed in alphabetical order by the state or United States (U.S.) territory in which the project was conducted. Each profile identifies the organization that received the award, the amount of the award, and a point of contact for the project and presents a summary of the project. Illustrated below is a sample profile:



Point of contact

This project provides training through a two-day workshop for 10 high school students and 24 teachers from three elementary schools. The training equips participants to implement compost projects at school sites. Joint workshops for the teachers and students employ inquiry models to teach waste reduction, pollution prevention, and health in the context of urban organic gardening. After training, the high school students serve as mentors to elementary school students to guide the younger students in understanding the relationships among waste, pollution, and nutrition issues. The University of California Cooperative Extension Service in Alameda County and the Alameda County Waste Management Authority collaborate with the East Bay Asian Youth Center in the sustainable urban agriculture project.





# GRANTS AWARDED BY EPA HEADQUARTERS

#### **CALIFORNIA**

Contra Costa County Health Services Department - \$97,150 Mary Foran, 20 Allen Street, Martinez, CA 94553

Center for Health Environmental Education Program

The Contra Costa County Health Services Department has won national recognition for innovative programs that solicit the participation of residents in designing and implementing improvements in environmental health. In 1993, a major spill of a toxic substance occurred in the area. Recently, to support response to similar situations should they occur, the Center for Health in North Richmond was created. This project trains local environmental health educators to teach residents to develop and carry out neighborhood environmental action plans. Partner organizations include the West County Toxics Coalition, East Bay Regional Parks, the Bucket Brigade, and the city of Richmond. Interactive learning resources provided through a formal Environmental Resource Center teach residents to interpret and disseminate accurate environmental information, define community issues, select action strategies, and conduct neighborhood education projects. Having been trained, residents then train their neighbors, who train others in a continuing process of community enlightenment. The population to be served is predominantly members of minority groups who have moderate to low incomes.

REGENTS OF THE UNIVERSITY OF CALIFORNIA - \$113,493
JOYCE GUSTEIN, 410 MRAK HALL, ONE SHIELDS AVENUE, DAVIS, CA 95616

Return of the Salmon

This project addresses uses and diversions of creek water and the resulting ecological effects on the Putah Creek watershed. Middle school students participate in activities in school and on field trips that help them explore how salmon can be studied as an indicator of the ecological health of the creek. Teachers facilitate the students' entry into the watershed, first through in-school activities and later through field trips. Subsequently, the students will use a guidebook and a World Wide Web site developed through the project to pursue educational activities with their families. The project also provides teachers with in-service training and skills in Internet development. An advisory committee of university and regional specialists in science and education assists the project.

#### **MISSISSIPPI**

Starkville School District - \$91,200

Janet Henderson, 401 Greensboro, Starkville, MS 39759

Environment Education Center and Program at Noxubee National Wildlife Refuge

The Starkville School District serves more than 4,000 students in an area of more than 100 square miles. In cooperation with the United States Fish and Wildlife Service, U.S. Department of the Interior and Mississippi State University, the school district has established an environmental education center and program in the wildlife refuge. The essentially rural program emphasizes sustainable use of diminishing resources, fish and wildlife ecology, and the historical significance of natural assets in creating the culture of the South. Students in kindergarten through 12th grade, and at the college level, as well, in Mississippi and Alabama benefit from learning in the environment, where theories can be tested against empirical reality. Very few of such opportunities are available in the impoverished area that the project serves. The program is coordinated with Project WILD,



Project WET, Aquatic Wild, and Project Learning Tree. The ultimate target is 69 school districts within a 140-mile radius of the refuge that serve a population of primarily limited-income families. The project also serves the Choctaw Tribal School System and several private schools.

#### **NEW JERSEY**

Farmworker Health and Safety Institute, Inc. - \$40,000 Teresa Niedda, 4 South Delsea Drive, Glassboro, NJ 08028

Farm Worker Training and Development Program

The Farm Worker Health and Safety Institute, Inc. is a consortium of three community-based farm worker organizations that will replicate an innovative curriculum and model training program for farm workers. The institute conducts a unique educational program that trains farm workers to teach their peers and their families; the program takes advantage of the workers' capacity to be effective teachers and bridge the "cultural gap" that might occur between students and conventional teachers. Using the Popular Education Methodology, the institute has created materials and workshops that teach farm workers how to: 1) analyze their work and community for environmental hazards (mapping), such as pesticides and unsafe drinking water; 2) train their fellow farm workers; and 3) evaluate the program and the comprehension of those they train through follow-up training and community visits. The institute's specialized Master Training Program also teaches experienced farm worker trainers how to conduct train-the-trainer workshops. The institute is conducting three train-thetrainer workshops (four days each) and one session for master trainers (three or four days). Three follow-up training sessions (two days each) are conducted approximately two months after the initial training. Follow-up evaluations also are conducted throughout the duration of the project to evaluate the program, as well as to ensure that the methodology and tools are being used and the training conducted in a consistent manner. Farm workers in New Jersey, Puerto Rico, Pennsylvania, Florida, Texas, New Mexico, and the state of Chihuahua in Mexico receive training. The project could serve as a model for similar programs in other states.

#### **NEW YORK**

SENECA PARK ZOO SOCIETY - \$33,470

JOHN SCOTT FOSTER, 2222 St. Paul Street, Rochester, NY 14621

Amphibian Alert!

Extensive research over the past decade has documented some cases of catastrophic extinction of amphibian species or populations around the world. Many of those population declines are associated with non-point-source pollution, an issue that also affects the quality of human life. This project trains informal educators in zoos, museums, and nature centers and classroom teachers around the country to address the topic of declining amphibian populations and provide community members with problem-solving skills and knowledge of the steps to be taken on behalf of amphibian populations. With its partners, the Seneca Park Zoo Society is developing Amphibian Alert!, a curriculum package that provides a concise summary of the causes of declines in amphibian populations, as well as teaching strategies, activities, population assessment tools, and audiovisual materials to be used in presenting the issues to school-age children. The primary audience of the package is the 184 educators at zoos throughout the country that are accredited by the American Zoo and Aquarium Association (AZAA). Zoo educators have the potential to reach millions of people who visit zoos each year. Amphibian Alert! also will be made available to all informal and classroom educators who wish to incorporate the information into their educational activities.



Educational Broadcasting Corporation - \$145,500 Caroline Crumpacker, 450 West 33<sup>RD</sup> Street, New York, NY 10001

Wild TV

Wild TV is a television series of 13 half-hour segments designed to engage children 8 to 12 years old in the exploration of nature in the world around them. Wild TV takes the students straight to the environs they know best -- city streets, suburban ponds, rooftops, parking lots, and back yards -- to learn about the ecology of those environs. The process is facilitated by a teachers' guide, a docents' guide for outdoor settings, a World Wide Web component, and workshops for educators. The series explores community issues related to terrain, air, water, flora, and fauna. It will be broadcast in every state in the fall of 2000 and will be accessible to more than 95 percent of households that have television sets. It is estimated that 3.2 million children and adults will choose to watch each week, and numerous repeat broadcasts are anticipated. Outreach materials also will be distributed to thousands of young people. The entire series ultimately may be packaged for distribution to libraries, community centers, schools, and other institutions. The National Science Foundation and various nonprofit groups also are funding the project.

#### OHIO

Environmental Education Council of Ohio - \$125,685 Deb Wandala, 397 West Myrtle Avenue, Newark, Ohio 43055

Ohio Infrastructure for Success

This project implements Ohio's strategic plan for environmental education. The goal of the project is to build capacity in the state for environmental education by expanding upon existing collaborative efforts to create both a leadership network and a programmatic infrastructure that will foster long-term grassroots initiatives. That goal will be achieved by meeting six objectives: 1) to expand and coordinate leadership by establishing a statewide steering committee and interagency government council, 2) to establish an environmental education center to develop programmatic infrastructure, 3) to use marketing strategies to increase awareness of environmental education, 4) to develop and adopt guidelines for best practices, 5) to establish an environmental education research consortium to coordinate research efforts, and 6) to assess the availability of environmental education to pre-service and in-service educators. The target audience of the initial implementation efforts is those people who provide environmental education to young people and adults, including formal and informal educators who teach children of all ages, as well as colleges, universities, agencies, and other organizations.

#### **UTAH**

National Energy Foundation - \$74,000 Christian Scheder, 5225 Wiley Post Way, Suite 170, Salt Lake City, UT 84116

Living Wise

The National Energy Foundation was created to develop educational materials that teach about the links between energy, water, technology, and conservation and distribute those materials to schools and other institutions. The Living Wise project, through a partnership of public and private agencies, reaches students and their parents in Denver, Colorado and the nearby region. The project demonstrates the virtues of ecological management in supporting sustainable living and long-term prosperity. Living Wise combines carefully designed classroom instruction and debate with a variety of hands-on projects that families can undertake at home. Hands-on experience is highly reinforcing and, because it elicits new attitudes and behavior, can generate lifelong commitment to the responsible stewardship of natural resources. The target group of the project is



fifth- and sixth-grade students of all ethnic and racial groups, many from low-income areas. In addition to classroom activities, students enter contests, use an interactive World Wide Web site, and play a three-dimensional game provided on CD-ROM.

#### **VERMONT**

State of Vermont Department of Public Service - \$150,000 Tom Franks, 112 State Street, Drawer 20, Montpelier, VT 05620-2601

Vermont Multiagency Environmental Education Project

The Building Education for Sustainable Society (BESS) project is developing an environmental education project that is fully integrated with traditional academic programs in Vermont. Drawing upon and further developing a rich array of existing informal initiatives, the project uses the entire state as a classroom and laboratory. Students learn how natural systems function and how human activities affect ecosystems. They develop the powers of observation and analysis required of responsible citizens in a global environment. Environmental educators work with teachers to create a core ecological curriculum that embraces basic concepts in mathematics, science, technology, and sustainability. During the next two years, only a small portion of the 6,200 teachers and 105,000 students in Vermont can be reached, but the grant can become a catalyst for broader systemic innovation in succeeding years. The program could become a model for other states.



# GRANTS AWARDED BY EPA REGIONAL OFFICES

#### **ALABAMA**

CAHABA RIVER SOCIETY - \$25,000

RACHEL REINHART, 2717 7th Avenue South, Suite 205, Birmingham, AL 35233

CAHABA/BLACK WARRIOR CLEAN

The CLEAN program of the Cahaba River Society expands its innovative environmental education programs, teacher training workshops, and interdisciplinary classroom curriculum activities to serve rural and low-income students (4th through 12th grades) and teachers in the underserved lower Cahaba watershed. The program offers 1,000 students hands-on environmental education activities during field trips on the water. In addition, the program trains 200 teachers to lead the field trips and encourage students to undertake waterway restoration projects with partners in the community.

CITIZENS' LEAD EDUCATION AND ELIMINATION PROJECT - \$4,700 WHITLYNN T. BATTLE, 325 CENTER STREET SOUTH, BIRMINGHAM, AL 35205-3031

#### Lead Umbrella Workshop

A one-day lead information and education workshop is held for parents, representatives of local governments, policy makers, health providers, representatives of tenants' interests, members of religious communities, and education and childcare providers. The workshop addresses the issue of lead poisoning in children. Experts in lead education conduct the workshop, reinforcing their efforts with printed materials. As a follow-up to the workshop, a coalition (the Lead Umbrella) is created to develop a comprehensive plan to educate members of communities affected by the issue and work to eliminate childhood lead poisoning in the community of Birmingham.

#### **ALASKA**

University of Alaska Museum Fairbanks - \$20,717 Terry Dickey, Box 757880, Fairbanks, AK 99775-7880

Northern Forests - A Hands-On, Museum-Based School Tour Program

This hands-on, museum-based school tour program focuses on the boreal forest ecosystem. The goal of the program is to help middle school students expand their knowledge of the forest and develop a deeper appreciation of its contributions to their lives. The program reaches 700 middle school students in Fairbanks and 150 students from rural villages in the interior of the state. Through a combination of classroom teaching, hands-on tours of the museum's exhibits and collections, and case study activities in the arboretum led by Alaska Native elders, students refine their understanding of boreal forest systems. An in-service workshop for teachers facilitates the integration of the Northern Forests curriculum into their classroom curricula. The curriculum includes inquiry-based activities that emphasize use of the museum's hands-on and research collections and the university's arboretum. In the Fairbanks school district, 11 percent of students are Alaska Natives, and almost 80 percent of students in the rural schools are Alaska Natives.



University of Alaska SE - Sitka - \$25,000 Dr. John W. Carnegie, 1332 Seward Avenue, Sitka, AK 99835

Environmental Activities, Kits, and Teacher Training

Under this project, 10 instructional kits are created that draw on the Rural Alaska Sanitation Education Program (RASE) developed by the university. A program for grades 11 to 14, RASE is intended to increase the students' knowledge and skills related to disposal of wastewater and solid waste. The kits include equipment, instruments, and supplies, along with fully developed lesson guides for experiments the students can perform. The program also trains 50 teachers in five rural school districts in the effective use of the kits. The kits provide activity-based units on water quality in streams and lakes, water pollution, disposal of solid waste, water and wastewater treatment techniques, transmission of waterborne diseases, and the interrelationships among those topics. Students gain an appreciation for the value of well-operated and well-maintained water and wastewater facilities, as well as a greater awareness of how personal hygiene, the quality of drinking water, and practices in the handling of human waste affect human health.

#### **ARIZONA**

Arizona 4-H Youth Foundation - \$5,000 Jolie Ogg Graybill, 4341 East Broadway Road, Phoenix, AZ 85628

4-H Project S.T.O.P. (Stop Trashing Our Planet)

4-H Project S.T.O.P. (Stop Trashing Our Planet) trains 10 middle school and junior high school groups, a total of some 200 students, to become peer teachers for their own age group and teachers for elementary school children to increase environmental awareness, with emphasis on recycling. The program, begun in Little Rock, Arkansas in 1990, was introduced to the Phoenix area in 1996. Under the grant, the project is being expanded to other areas of the state. At introductory school assemblies, a life-sized walking globe (Earth Person) uses songs, dances, and skits to convey the awareness message. The assembly is followed by hands-on workshops in paper-making, recycling art projects, and similar activities that reflect the recycling theme.

Douglas Unified School District #27- \$5,000 Hans Bodenhamer, Douglas High School, 1132 12th Street, Douglas, AZ 85607

Viva la Rana: Dissemination of Curricula on Ponds and Wetlands and Teacher Training

In the summer of 1998, ponds were dug at one high school and four elementary schools to provide habitats for the Chiricahua leopard frog. This project brings staff of the Nimon S. Hopkins Conservation Education Center together with staff of the Douglas Unified School District to produce environmental science lessons for teachers at the schools at which the ponds are located, train teachers to use the lessons, and provide high school students with opportunities to teach elementary school children. During the workshops, participating teachers (and high school students) take part in model lessons and use supplies provided to each school through the project.

THE HOPI TRIBE - \$5,000

STEVE BLODGETT, P.O. BOX 123, KYKOTSMOVI, AZ 86039

Educate Teachers and Students About Environmental Issues on the Hopi Reservation

This project establishes a partnership among the Hopi Environmental Protection Office, the Institute for Tribal Professionals at Northern Arizona University, and the school communities of the Hopi Tribe to develop and deliver a culturally sensitive curriculum of environmental education lessons for elementary school children living on the Hopi reservation. Teaching staffs are trained through workshops that focus on recognized environmental materials (Project WET, A Child's Place in the Environment, and Native American Lands) that



have been adapted to Hopi culture and the environment of the reservation, with portions of the curriculum to be taught in the Hopi language. The materials are augmented by field trips, demonstrations by tribal elders, videos, and hands-on projects that deal with both local and global environmental issues.

#### **ARKANSAS**

Calico Rock Public Schools - \$12,000 Claudia Trahan, P.O. Box 220, Calico Rock, AR 72519

Outdoors at Calico Rock

The project creates a systematic, ongoing environmental program that exposes the audience to various environmental topics and hands-on activities through a work station for instruction, hands-on learning exercises, a pond and wetland area, a vegetable garden, a weather station, a nature trail, a traveling library, and an on-line communication system that connects students and teachers with partners and other schools that are involved in similar projects. Each grade level conducts a portion of the overall project, and upperclassmen serve as mentors to students in kindergarten through sixth grade. The project encourages students to consider careers as meteorologists, landscape artists, agricultural economists, agronomists, foresters, fish and game experts, or specialists in environmental technology.

LAKESIDE SCHOOL DISTRICT - \$21,500 SHARON TACKETT, 2871 MALVERN AVENUE, HOT SPRINGS, AR 71901

Habitat-Based Learning Project

The project establishes environmental research opportunities to provide at-risk students with learning activities that incorporate career-related skills into their curriculum to encourage the students to choose environmental careers. Teachers and partners in the project are trained in workshops held during the summer. The target audience is 625 students in the 10th through 12th grades who are enrolled in various science and mathematics classes. The objective of the project is to illustrate the relevance of the scientific and mathematical concepts students are learning in school to the environment and the working world.

#### **CALIFORNIA**

Please see page 3 for profiles of grants awarded to Contra Costa County Health Services Department and the Regents of the University of California by EPA Headquarters.

BAY AREA ACTION - \$5,000

DIANE CHOPLIN, 715 COLORADO AVENUE, SUITE 1, PALO ALTO, CA 94303

YEA TEAM: Student-Directed Projects to Implement Recycling and Composting

The Youth Environmental Action (YEA) program unites Bay Area Action with the Ravenswood School District, the Stanford University Haas Center for Community Service, and Students for Environmental Education. The program, which involves 120 fifth- through eighth-grade students, six teachers, and a staff of interns, consists of five interactive classroom lessons that cover issues related to water, waste, energy, and the natural environment and the community. Over the course of the year, interns meet with each class twice a month to guide students in their research and experiential projects, help them articulate goals, and plan field trips. Guest speakers also take part in the classroom sessions. Student-directed projects include establishment of a school garden, initiation of a composting program, launching of a schoolwide recycling program, and similar activities.



LT

California State University, Chico - \$5,000
Paul Maslin, Kendall Hall, Room 114, Chico, CA 95929-0870

Streaminders: Salmon and Steelhead Eggs to Fry in the Classroom

This project expands the current program of raising salmon and steelhead eggs to releasable mature fish in elementary and secondary classroom aquariums. The project includes educating university students to act as mentors for the field study portions of the project. After receiving training in the various aspects of the program, university students and their professors lead the younger students on field trips to explore creeks. The trips include hands-on experience with riparian ecosystems, water quality testing, and discovery of creek biota.

CITY OF SANTA CRUZ - \$2,550 Christopher Berry, Water Department, 715 Graham Hill Road, Santa Cruz, CA 95060

Watershed Monitoring and Management and Drinking-Water Production Workshop

A joint effort of the Santa Cruz Water Department, San Lorenzo Valley High School, and the Coastal Watershed Council, this project establishes and conducts a watershed academy for 10 to 12 high school juniors and seniors and two teachers. The training is conducted by environmental professionals with the water department and includes interpretive lectures, water quality monitoring, dialogue, and role playing. Students learn about land use and management in the watershed, monitor supplies at the city's reservoir for turbidity and sedimentation, tour the water treatment plant, and role-play town meetings to establish the connection between policy-making and the health of both human populations and the ecosystem.

Community Environmental Council - \$5,000 Cay Sanchez, 930 Miramonte Drive, Santa Barbara, CA 93109

Comprehensive School Recycling and Composting Pilot Project

The Community Environmental Council works in partnership with the Youth Gardening Coalition to introduce recycling and composting of lunch scraps at three local elementary schools. The project begins with school assemblies during which the students are introduced to the project. At each school involved in the pilot project, workshops are held for teachers to help them integrate environmental learning projects into the required curriculum. A Green Team composed of fifth and sixth graders implements the lunchtime composting project at each site.

Math/Science Nucleus - \$15,500 Joyce Blueford, 4074 Eggers Drive, Fremont, CA 94536

Developing Environmental Benchmarks

This project establishes a partnership among Math/Science Nucleus, the city of Fremont, and the Fremont School District to implement a ninth-grade course of environmental education based on watershed management at Laguna Creek. Local scientists join with faculty of Irvington High School to develop a laboratory course for monitoring environmental parameters to test the health of creeks. The environmental benchmarks curriculum envisions a project grounded in science and service that encourages students to work together in teams to bring about positive environmental change in their community. At the conclusion of the project, a community conference is held to disseminate the students' findings.



People's Community Organization for Reform and Empowerment (CORE) - \$5,000 Joe Natividad, 300 West Cesar Chavez, Los Angeles, CA 90012

Air Pollution and Prevention Project for Students and Residents in the Carson Area

This project establishes a partnership among the Community Organization for Reform and Empowerment (CORE), the Philippine Action Group for the Environment (PAGE), and the Environmental Club at Carson High School to implement an air pollution study in the Carson community. The partnership trains 30 students to use simple devices to collect air samples and to analyze the results of laboratory tests conducted on the samples. The project allows high school students to sample air pollutants, have the opportunity to develop an understanding of the effects of the chemicals identified on their health, and learn ways to reduce or prevent such pollution. Community forums and a meeting with the city council are held at the end of the project to discuss its findings.

RESOURCE CONSERVATION DISTRICT OF GREATER SAN DIEGO COUNTY - \$18,410 PENNY DOCKRY, 332 SOUTH JUNIPER STREET, SUITE 110, ESCONDIDO, CA 92025

A Garden in Every School Regional Support Center

The Resource Conservation District (RCD) of Greater San Diego has joined in partnership with the California Department of Education, the University of California Cooperative Extension Service, and Discovery School to establish a regional support center for educators of kindergarten through high school students who are interested in educational programs that draw on gardening. The center provides workshops and a resource library for teachers, newsletters, opportunities for networking, and a demonstration garden. The center also is developing a plan to sustain and expand outreach to a potential audience in 43 public school districts, private schools, and informal education programs.

Save San Francisco Bay Association - \$5,000 Marcia Slackman, 1736 Franklin Street, Fourth Floor, Oakland, CA 94612

Watershed Education Teacher Training Program

Joining in partnership with the United States Fish and Wildlife Service, U.S. Department of the Interior, the Save San Francisco Bay Association (SSFBA) offers training in watershed management to 200 teachers in the Bay Area. The training includes 10 workshops, held on the water and ranging in length from one day to two weeks. Teachers have the opportunity to take part in field trips to conduct water quality testing and mapping and to study the components and value of wetlands. A number of guest speakers introduce teachers to issues that affect the health of a watershed. They learn how to encourage their students to undertake service learning projects that enhance the students' understanding of and appreciation for a healthy bay.

SEQUOIA FOUNDATION - \$19,005

JOHN S. PETERSON, Ph.D., 2166 AVENIDA DE LA PLAYA, SUITE D, LA JOLLA, CA 92037

New River Environmental Education Symposium

The Sequoia Foundation has entered into a partnership with the State of California Department of Health Services and the Imperial County Office of Education to offer a workshop on the use of an environmental curriculum that examines health issues that affect communities in the New River area. The workshop is offered to 75 to 100 teachers of high school science and social studies courses. The workshop provides teachers with relevant materials to use in teaching about the health risks associated with the New River, as well as contacts with national and regional resources related to environmental health education, including environmental justice, exposure and assessment of health risks, epidemiology, risk communication, and mitigation measures.



THE TIDES CENTER - \$4,300

Leslie Crawford, P.O. Box 29907, San Francisco, CA 94129-0907

Environmental ACTION: Teacher Training Workshop

In partnership with the Oakland Unified School District, the Tides Center offers a training workshop for 20 teachers of 6th through 12th grades in the use of the curriculum, Environmental ACTION, which is designed to increase environmental awareness, critical-thinking skills, and scientific learning. The curriculum offers six modules on auditing consumption of resources: energy use, water conservation, waste reduction, chemicals, wise food choices, and habitat and biodiversity. In addition to the workshop, staff of the Tides Center provide follow-up support to teachers who use the curriculum to help ensure their success in teaching it.

TRINIDAD RANCHERIA - \$3,790

Greg Nesty, P.O. Box 630, Trinidad, CA 95570

Environmental Education by Cascade Learning

Trinidad Rancheria, through a partnership with Humboldt State University, the Trinidad School District, and North Coast Children's Services, offers an environmental education program that uses cascade learning. Junior high school students are trained in environmental lessons related to their Native American culture. They in turn teach the lessons to younger elementary school children in a manner appropriate to the elementary level. The elementary school students then teach the lessons to children enrolled in the Arcata Head Start program.

WESTED - \$20,996

HELEN KOTA, 730 HARRISON STREET, SAN FRANCISCO, CA 94107

One-Week Summer Adopt-a-Watershed Institute

Scope, Sequence, and Coordination at California State University Sacramento have joined in partnership with the Office of Environmental Health Hazard Assessment of the California Environmental Protection Agency (CalEPA), the state Department of Forestry and Fire Protection, the California Department of Education, and the University of California at Davis to create a one-week workshop on watershed issues for 30 high school science teachers. The workshop gives participants the opportunity to conduct a comprehensive investigation of scientific information, science policy, and issues related to risk and to carry out experiments related to degradation and contamination of a watershed. The program also offers a partnership fair to support sustained interaction with environmental professionals, as well as opportunities to develop service-learning projects with those professionals.

YOSEMITE NATIONAL INSTITUTE - \$5,000

Julia Chitwood, Golden Gate National Recreation Area, Building 1055, Sausalito, CA 94965

TEAM (Teen Environmental Action Mentorship)

This project provides a 10-day, residential field science training program for 22 high school students from low-income, culturally diverse communities in the San Francisco Bay Area. The training exposes TEAM (Teen Environmental Action Mentorship) members to ecological concepts that can be applied to urban ecosystems, provide communication and leadership skills to enable them to work with peers and younger students in environmental learning, and introduce them to potential environmental careers. During the school year, each TEAM member works in partnership with a school or organization to present classroom lessons on a regular schedule and to design stewardship projects.



#### **COLORADO**

ASPEN GLOBAL CHANGE INSTITUTE - \$4,994 SUSAN HASSOL, 100 EAST FRANCIS STREET, ASPEN, CO 81611

Students Investigate Transportation Options

Students investigate transportation options by acquiring, analyzing, and synthesizing data to create their own assessment of existing conditions and to develop plans and identify alternatives. Once the pilot phase to be conducted in the Roaring Fork Valley has been completed and a teacher workshop has been held to refine the program, a teachers' guide will be produced and published on the Internet, so that other communities can replicate the program. The teachers' guide will include sets of activities, references to national education standards, information about data sources, a glossary, and a suggested course plan. Audiences for the project include middle school teachers and students, as well as policy makers and the general public in each participating community.

Boulder Creek Watershed Initiative - \$9,760

Jeffrey Writer, 607 North Street, Boulder, CO 80304

WatershED: Summer Science Camp and Research

The Boulder Creek Watershed Initiative, the City of Boulder, and the Thorne Ecological Institute have joined in a partnership to develop environmental research camps for middle and high school students in the Boulder Creek watershed. Interacting with local scientists through tangible environmental projects, students participating in the project will become WatershED ambassadors to their schools and help continue the learning experience throughout the school year. Several teachers and citizens receive training, curriculum, and equipment to implement Stream Teams at their schools or in their neighborhoods. Water quality, riparian habitat, and environmental issues are evaluated at a local body of water. The Stream Teams share data with students in other schools and the community through Internet communication, newsletters, and community watershed forums. Eventually, the Stream Teams become involved with the River Watch program sponsored by the Colorado Division of Wildlife and develop databases of reliable baseline water quality data.

COLORADO ALLIANCE FOR ENVIRONMENTAL EDUCATION - \$22,850 MIKE WAY, 15260 SOUTH GOLDEN ROAD, GOLDEN, CO 80401

Colorado EE (Environmental Education) Correlations Project

This is the second phase of a project that builds state, local, and tribal capacity in environmental education (EE) by supporting enhancement of the Colorado EE Correlations Project. The current proposal reaches a new group of program providers, including the target audience of teachers as users of the correlations database who were not reached during the first phase of the project. The round of training in 1998 reached 190 EE program providers. Many more EE program providers in the state must be trained in standards-based education. Because response to the workshop was positive, with many participants commenting that they would have liked to have other members of their organizations attend, it was determined that another round of workshops was needed. The project is directed at Colorado's community of 2,000 EE providers with whom the Colorado Alliance for Environmental Education maintains contact through a variety of channels, including direct mail, a monthly information bulletin, telephone calls, facsimile messages, and various conferences. Also targeted is a key segment (15,000) of the state's 30,000 classroom teachers.



Durango Nature Studies - \$5,000 Ann Rilling, P.O. Box 3808, Durango, CO 81302

Volunteer Naturalist Training Program

The in-depth, comprehensive Volunteer Naturalist training program ensures a quality experience for students, teachers, and informal educators participating in the program, Children Discovering Nature. Potential volunteers are reached through the efforts of past and current volunteers, staff, and board members and at outreach meetings conducted by the community coordinator. Volunteers are taught how to assist children in developing skills in scientific observation, so that volunteers and children discover nature together, learn to think about what they observe, and come to understand the complex relationships between humans and the environment. To date, 150 people have attended the training program, and three walks have been conducted with the Children Discovering Nature program. Since 1994, almost 6,000 school children have gained knowledge, inspiration, and problem-solving skills through their participation in Children Discovering Nature.

Environmental Learning For Kids - \$5,000 Stacie Gilmore, 1960 Verbena Street, Denver, CO 80220

Denver Youth Naturally: Sand Creek Project

Through this project, the public, primarily urban youth, are educated about environmental issues in their communities. They apply field methods used by government agencies, universities, and biological professionals to conduct water quality analysis of Sand Creek, both upstream and downstream of Stapleton Airport. They also assess environmental and ecological conditions in that area of Northeast Denver. The program gives culturally diverse urban youth experience in applying scientific techniques and environmental practices and encourages them to explore careers in science, thereby enhancing their ability both to pursue higher education and become informed about the environment. The program also fosters mentoring relationships between students and professionals in natural resources fields through field activities designed for small groups. Students learn about environmental issues, educational and career goals, and the advancement of issues related to environmental justice.

FRONT RANGE EARTH FORCE - \$5,000 LISA BARDWELL, 2555 WEST 34TH AVENUE, DENVER, CO 80211

Earth Force Community Action and Problem-Solving (CAPS) Program

The Community Action and Problem-Solving (CAPS) Program is an environmental education program that emphasizes environmental problem-solving, with a strong civic education component. Educators and young people acquire environmental and civic knowledge, skills, and experience by identifying, choosing, and addressing an existing environmental problem in their communities. The CAPS framework guides educators and their students through a problem-solving process that encourages a balanced investigation and consideration of long- and short-term effects, as the young people seek a responsible, sustainable solution to the problems they have selected. The program achieves success through sustained, quality training and local support for the educators who implement the program in school or community settings. The target audience for the project is the 40 formal and informal educators involved in Earth Force. Currently, 75 percent of the sites those educators serve are inner-city, low-income, or minority neighborhoods in metropolitan Denver. Approximately 25 percent of the students involved in Earth Force attend suburban or high-performing urban schools, with the remaining 75 percent from predominantly African-American or Latino neighborhoods. At least four of the sites reached through this funding are located in low-income communities in metropolitan Denver.



Green City Data Project of Colorado - \$3,700

LINDA BAGGUS, 3000 SOUTH JAMAICA COURT, SUITE 100, AURORA, CO 80014

Green City/Oberon Project: Outdoor Exploration in a Local Ecosystem

Green City works with a team of students from Oberon Middle School to investigate habitat to create an outdoor, environmental classroom at their new high school, Ralston Valley, which will open in 2000. The Green City team, members of the Environmental Club at Oberon, are planning the outdoor learning center, which they will present to the district architect. Information is shared with others interested in creating outdoor classrooms. Green City also involves physically and mentally challenged students from the Cherry Creek transition program, who copy and assemble training guides.

Montezuma-Cortez School District (RE-1) - \$5,000 George Schumpelt, P.O. Drawer R, Cortez, CO 81321

A One-Week Unit on Water and Land Use in the West for the Ute Mountain Discovery Camp

Discovery Camp is taught by teams of public school teachers and tribal educators and has developed a successful elementary school program over the past three years. With the help of an environmental education grant from EPA, the elementary component was completed in fiscal year 1998. A series of professional development courses for teachers was launched, and a pilot middle school session has been conducted. The goal of the project is to encourage public school teachers to use their own backyard teaching resources to engage youngsters in science and to create articulated lessons across grade boundaries. Students are offered an alternative science experience, rooted in local culture and connected earth systems. The project introduces both students and adult learners to environmental issues relevant to their communities and to the age-appropriate science content and social perspectives necessary to comprehend and address those issues. Beginning in the summer of 1999, the neighboring Southern Ute Tribe joins Ignacio School District 11 to launch a camp modeled after this project.

#### CONNECTICUT

Connecticut Business & Industry Association Education Foundation - \$5,000 Lauren Kaufman, 350 Church Street, Hartford, CT 06103

Environmental Learning Games for High School Students

This project is an education reform initiative under which both teachers and students are educated about real-world environmental problems and develop strategies to solve those problems. The project also exposes students to environmental careers. The purpose of the project is to increase the number of school districts in which students are exploring the environmental cluster by developing real-world, industry-based, problem-solving games that teachers easily can incorporate into their curricula.

SoundWaters, Inc. - \$5,000

LEE ANN BEAUCHAMP, 69 DYKE LANE, #13, STAMFORD, CT 06902

Teacher Training Workshop: from the Sound to the Schoolyard

This project provides teachers with a unique multidisciplinary, five-day watershed ecology workshop at river sites in the Long Island Sound watershed, aboard the schooner SoundWaters, and at other field sites. The workshop offers a new approach to watershed education by demonstrating how teachers can integrate hands-on teaching methods, as practiced by outdoor educators, into traditional classroom curricula.



#### **DELAWARE**

University of Delaware - \$13,195

Susan Whitney, Townsend Hall, Newark, DE 19717-1303

Pesticide Safety Workshops

This project is intended to increase the effectiveness of training in pesticide safety provided to homeowners through an active learning technique. The project motivates individuals to adopt new pesticide safety practices at home that protect the environment. Members of the Master Gardeners Speakers Bureau conduct workshops based on a train-the-trainer manual developed for their use. The manual will be made available on the Internet.

#### DISTRICT OF COLUMBIA

KALORAMA CITIZENS ASSOCIATION - \$10,500 Michael Gould, P.O. Box 21311, Kalorama Station, Washington, DC 20009

The Marie Reed GLOBE Project

At Marie Reed Community Learning Center, a public school, 30 students in fourth through sixth grade are benefiting from Project GLOBE (Global Learning and Observations to Benefit the Environment). Project GLOBE is an international environmental research and education program that teaches elementary and high school students to conduct environmental investigations based on a systematic method of collecting data about the earth's environment and to learn how the global environment functions. Students attend a new, after-school and summer program at Marie Reed that provides classroom instruction and field work at the Project GLOBE site in nearby Rock Creek Park.

#### **FLORIDA**

Broward Estates Elementary School, Broward County - \$5,000 Frank Mandley, 600 SE Third Avenue, 4th Floor, Ft. Lauderdale, FL 33301

SUNsational Hands-on Environmental Field Trip

SUNsational is an enrichment program that has two components: three workshops for parents and teachers on environmental issues and activities and a hands-on environmental field trip to Snyder Park for students in prekindergarten through fifth grade. Broward Estates Elementary School serves a culturally diverse and lowincome population of 874 students. Each student completes a service activity that will benefit the park.

CITY OF NAPLES UTILITIES DEPARTMENT - \$4,724 Dan Mercer, 275 13th Street North, Naples, FL 34102

Naples Virtual Recycling Center

The Naples Utilities Department, in partnership with the Florida Office of Environmental Education, is creating a World Wide Web site called the Naples Virtual Recycling Center. The Web site provides access to quality waste reduction curricula to 700 teachers and 12,000 students in kindergarten through 12th grade. The Web site also serves as a local information clearinghouse through which approximately 13,000 utilities customers can learn more about reducing, reusing, and recycling solid waste.



Dania Elementary School, Broward County, FL - \$4,054 Frank Mandley, 600 SE Third Avenue, 4th Floor, Ft. Lauderdale, FL 33301

Saving South Florida's Ecosystem

This project educates Dania Elementary School's culturally diverse population of fourth- and fifth-grade students about South Florida's fragile ecosystem and the role they play in preserving it. At the conclusion of the unit, the project provides hands-on learning experiences in a national park for 25 students. In addition to the hands-on learning, a number of other teaching strategies are used, including lecture and audiovisual presentations.

University of North Florida - \$5,000 Becky Purser, 4567 St. John's Bluff Road South, Jacksonville, FL 32224

Wild Neighborhoods for Inner-City Children

The Wild Neighborhoods project provides more than 1,000 minority, low-income school children in prekindergarten through fifth grade an opportunity to participate in educational programs guided by park rangers at two contrasting natural areas. The experiences help inner-city children increase their knowledge of natural systems and their environment. The project is intended to enhance the children's understanding of environmental issues and the role they play in protecting the environment.

#### **GEORGIA**

Camp Fire Boys and Girls, Inc. - Georgia Council - \$5,000 Marian S. Long, 100 Edgewood Avenue, N.E., Suite 528, Atlanta, GA 30303

Camp Toccoa: Tawasi Wetland Project

Camp Toccoa, the resident camp and environmental education center for Camp Fire Boys and Girls - Georgia Council, offers a natural wetlands area and nature center that have been enhanced for educational purposes. The Tawasi Wetland Project brings 1,000 students and teachers from Stephens County to the site by providing scholarships for the students and teaching modules for the teachers. Using a specially developed curriculum, Camp Toccoa's staff teach students and educators the importance of wetland areas to the environment and the crucial link between wetlands and the greater watershed.

GEORGIA ENVIRONMENTAL ORGANIZATION (GEO) - \$5,000 GLENN DELFISH, 3185 CENTER STREET, SMYRNA, GA 30080

Urban Environmental Outreach Experience for High School Students and Teachers

This project for 96 high school students and teachers in the metropolitan Atlanta area offers participants the opportunity to learn about point- and non-point-source pollution and other water quality issues through experimentation and problem-solving activities. Each of four outings takes 24 students, teachers, and staff of the Georgia Environmental Organization (GEO) on raft trips on the Chattahoochee River, departing from the camp site at the GEO. During the raft trips, the participants learn and practice environmental stewardship techniques. Funding by the U.S. Environmental Protection Agency (EPA) will provide scholarships and support the purchase of equipment for the raft trips.

Greater Atlanta Community Corps, Inc. - \$5,343 J. D. Ferguson, 250 Georgia Avenue, Suite 205, Atlanta, GA 30312

Young Atlantans for the Environment (YAE!)

This program allows 60 middle and high school students living in the west Atlanta watershed the opportunity to learn about water quality through hands-on activities and research. The partners supporting the project are the city of Atlanta, Georgia Adopt-a-Stream, and the Georgia Department of Natural Resources. Through the



research they perform, which necessitates interaction with the community and subsequent publication and presentation of the findings, it is expected that water quality issues will be addressed and will influence local policy.

#### **HAWAII**

MILILANI COMPLEX - \$20,440

KATHY KAWAGUCHI, 300 KAHELU AVENUE, SUITE 50, MILILANI, HI 96789

Mililani 2000 + : Establishing Environmental Quality Standards for Mililani

This project establishes a partnership between the schools in Mililani with the State of Hawaii Department of Health, the city and county of Honolulu, and the Mililani Town Association. The partners are developing and implementing a program of water quality monitoring by students enrolled in first- through third-grade gifted and talented programs at four elementary schools, one middle school, and one high school. The students collect samples at each school and at selected homes in the community to establish a baseline of data for a multiyear study. They simultaneously compile a history of the Mililani water system by performing on-line and library research and interviewing residents. High school students work with students in lower grades to help in organizing, analyzing, and interpreting the data collected. Progress on the project is shared with the community through print and electronic media. The culminating activity during the first year is an environmental summit open to students, parents, other residents of the community, and staff of government agencies, at which the findings and conclusions of the research project are shared.

#### **ILLINOIS**

AMERICAN LUNG ASSOCIATION (ALA) OF ILLINOIS - \$4,900 KAREN LANTER, 1600 GOLFVIEW, SUITE 260, COLLINSVILLE, IL 62234

Managing Asthma in the Daycare Setting

The American Lung Association (ALA) of Illinois conducts train-the-trainer sessions for daycare providers in the East St. Louis metropolitan area. Using the Children's Television Workshop's "A is for Asthma" video, the ALA educates the providers about the environmental factors that trigger asthma attacks in young children. The preschoolers then learn from their daycare providers how to prevent or manage their asthma attacks.

BI-STATE REGIONAL COMMISSION - \$10,000 GENA McCullough, 1504 Third Avenue, Rock Island, IL 61204

Illinois-Iowa Quad-Cities Air Quality Project for Teachers

The goal of the project is to improve public education in the Quad-Cities metropolitan area in issues related to air quality and air pollution. The project focuses on health risks related to air pollution. A workshop for teachers, for which an existing curriculum is used, is reinforced by the pursuit of air quality issues on a World Wide Web site. The teacher education project is the first of a number of public education projects developed through the efforts of the Quad Cities Air Quality Task Force.

Edgar County Public Health Department - \$16,209 Jeff Murphy, 502 Shaw Avenue, Paris, IL 61944

Environmental Education in the Paris School District

The Edgar County Public Health Department and Southeast Missouri State University work with teachers and students in the Paris School District to provide training and resources for the implementation of an environmental



education program that features the investigation of an ecosystem adjacent to the city's drinking-water source. The program establishes and implements an innovative multidisciplinary science education and research program that includes both classroom and field components for 1,000 students in grades 6 through 12.

Environmental Education Association of Illinois (EEAI) - \$5,000 Mary Rice, Spring Valley Nature Center, 111 East Schaumburg Road, Schaumburg, IL 60194

Implementing the State Strategic Plan for Environmental Education

The Illinois Environmental Education Advancement Consortium (IEEAC) sponsors a one-and-one-half-day workshop immediately preceding the state environmental education conference. Using the Open Space process, participants further the state's environmental education (EE) master plan, strengthen newly formed regional EE teams, and enhance support for EE and coordination of EE programs in the state. The Open Space format allows both the Environmental Education Association of Illinois (EEAI) and IEEAC to identify and train new leaders, while at the same time energizing the environmental education community.

Friends of the Chicago River - \$4,999 Chris Parson, 407 South Dearborn, Suite 1580, Chicago, IL 60605

Rivers in the Classroom

Friends of the Chicago River is conducting a one-week teacher training program in the summer of 1999. More than 30 teachers are trained to implement the Rivers in the Classroom curriculum and receive graduate credit for their participation. After five full days of classroom instruction and hands-on field work, participants are ready to implement a unit on rivers in their classrooms. Friends of the Chicago River provides postworkshop support through that organization's Chicago River Schools Network program.

LAKE COUNTY FOREST PRESERVE - \$24,330 LYNN HEPLER, RYERSON WOODS, 21950 NORTH RIVERWOODS ROAD, DEERFIELD, IL 60015

Youth Stewardship Education Project

The Youth Stewardship Education Project provides students with the opportunity to help restore the natural qualities of the forest preserve lands in Lake County. The program is presented as part of the curriculum in participating classes and includes presentations by staff of the forest preserves in the classrooms. Teachers participate in hands-on workshops, and students visit the forest preserves to assess, evaluate, and remediate the habitats.

#### **INDIANA**

Indiana Department of Environmental Management - \$6,828

Mark Amick, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, IN 46206-6015

Learning and Environmental Awareness Partnership (Project LEAP) Educator Workshops

During the 1999-00 school year, the Indiana Department of Environmental Management (IDEM) conducts six workshops to educate teachers about the agency's Learning and Environmental Awareness Partnership (Project LEAP). The project provides free environmental education materials to students and educators in the state, with the goal of increasing environmental awareness and stewardship. Participants in the workshops receive classroom materials, hands-on field investigation activities, and ideas related to the study of environmental indicators.



#### **IOWA**

CERRO GORDO COUNTY DEPARTMENT OF PUBLIC HEALTH - \$5,000 RONALD OSTERHOLM, 22 NORTH GEORGIA AVENUE, #300, MASON CITY, IA 50401

Local Lead Awareness Campaign

The project is intended to raise awareness of the hazards of lead poisoning and the necessity of screening children age six and under. The project changes the approach to the management of cases of exposure to implement intervention at the community level. It targets the population of children at risk through prevention, rather than confining itself to the care of the individual child suffering from lead poisoning. Key partnerships with KLSS Radio and KIMT-TV increase the number of people the program can reach. The objectives of the project are to educate families of children six and under and to build in the community awareness of lead poisoning and the services available to address that problem.

Conservation Districts of Iowa - \$4,935 JILL KNAPP, P.O. Box 649, Johnston, IA 50131

Workshop on Environmental Science Field Study for Teachers

The Envirothon is a comprehensive high school environmental education program that culminates in a competition among teams. The object of the program is to give 30 Iowa science teachers the knowledge and skills they need to provide guidance for the Envirothon program. The workshop provides 30 hours of instruction over a four-day period; continuing education and graduate credits are available through an accredited university.

KIRKWOOD COMMUNITY COLLEGE - \$5,000 CYNTHIA ROOT, P.O. BOX 2068, CEDAR RAPIDS, IA 52406

Workshop to Train High School Teachers in Microscale Chemistry

The project trains 20 high school teachers in techniques of microscale chemistry that reduce the amounts of chemicals used and therefore the generation of waste without compromising instruction in standard laboratory skills. The workshop, which is free to the teachers, addresses various experimental concepts that are applied at various educational levels. For the endeavor, Kirkwood Community College is working in partnership with the Grant Wood Area Education Agency.

United Nations Association - USA - \$5,000 Dorothy Paul, 20 East Market Street, Iowa City, IA 52245

Taking on the Challenge of Global Change

Taking on the Challenge of Global Change uses public forums to explore the risks posed by climate change, the challenges those risks present, and solutions to the problem. A public hearing is held at Iowa's Capitol to continue helping citizens learn about issues and processes and to present to the public positive and innovative proposals for solutions to problems related to climate change. The overall goal of the project is to make Iowa a safe and environmentally healthy and sustainable state.

University of Northern Iowa - \$5,000

Susan Salterberg, Center for Energy and Environmental Education, Cedar Falls, IA 50614

Simplifying for Wellness

The purpose of this project is to reduce the use of natural resources and the creation of waste. The project uses an existing environmental education curriculum, Simplifying for Wellness. Recycling coordinators are trained to use the curriculum and then conduct train-the-trainer sessions for the public. Workshop evaluations and



postworkshop follow-up ensure that the goals and objectives of the project are met. The Center for Energy and Environmental Education, the Iowa Recycling Association, the Nebraska State Recycling Association, and Biocycle/InBusiness are partners in the project.

#### **KANSAS**

EMPORIA STATE UNIVERSITY - \$5,000

JOHN RICHARD SCHROCK, DIVISION OF BIOLOGICAL SCIENCES, EMPORIA, KS 66801

Water Treatment Plant

The publication *Kansas School Naturalist* is developing an issue that will examine how a water treatment plant works, providing information about the most advanced ozone disinfectant process. The publication is distributed free to teachers in the Great Plains region and is used by many teachers to enrich the lessons they teach in their classrooms.

Friends of the Great Plains Nature Center - \$5,000 Joyce Lent, 6232 East 29th Street North, Wichita, KS 67220

Earth Wellness Program

This project is designed to make seventh-grade students aware of environmental issues and give them the tools they need to identify, prevent, and solve environmental problems. The project provides 30 schools in Sedgwick County with activity kits to be used by 1,000 teachers and students. Partners in the program are the Sedgwick County Extension Service, the Wichita/Sedgwick County Health Department, and Wichita State University.

Kansas Association for Conservation and Environmental Education (KACEE) - \$20,200 Laura Downey, 2610 Claflin Road, Manhattan, KS 66502

Development and Dissemination of Environmental Education Materials

This project integrates environmental education into the educational program in Kansas. Efforts focus on demonstrating the power of environmental education to help achieve standards mandated by the state and facilitating the use of the materials by providing teachers with appropriate tools. The target audience is teachers of kindergarten through 12th-grade programs. Teachers in Kansas are made aware of the environmental education standards and the correlations of the materials with those standards through a cooperative effort with the Kansas Department of Education. Further efforts will be carried out through contacts and presentations at workshops and conferences.

Southeast Kansas Education Service Center - \$4,355 Mike Bodensteiner, 947 West Highway 57, Girard, KS 66743

Development of the Leopold Education Project in Kansas

This program informs teachers about the Leopold Education Project, which creates an awareness of issues related to the environment and conservation. Teachers gain an understanding of Leopold's classic "land ethic" and translate it into hands-on activities that provide direct experiences in the natural world. Four full-day, in-service workshops are offered during the year.



WICHITA/SEDGWICK COUNTY DEPARTMENT OF COMMUNITY HEALTH - \$4,895 NANCY LARSON, 1900 EAST NINTH STREET, WICHITA, KS 67214

Environmental Education for Owners of Dry-Cleaning Businesses

The project, which provides workshops for owners of dry-cleaning and related businesses, focuses on improving the quality of groundwater in Sedgwick County and reducing the occupational health risks associated with the dry-cleaning chemical perchloroethylene. Outreach activities include workshops, videos, and technical assistance to dry cleaners and related businesses. Partners in the project include Tristate Chemicals, The Center for Neighborhood Technology, the University of Kansas School of Medicine, and the Kansas Small Business Environmental Assistance Program.

#### **KENTUCKY**

JEFFERSON COUNTY PUBLIC SCHOOLS - \$15,172

LARRY D. HAMFELDT, P.O. Box 34020, Louisville, KY 40232

The Air We Breathe: A Study of Air Quality in an Industrial Community

Under a project supported by a partnership between the Rubbertown Community Advisory Council and the University of Louisville, 225 students at three schools in the Jefferson County Public School District actively engage in studying and researching air quality in the Rubbertown community. Located in the community are 10 chemical industrial facilities at which air quality is considered poor. The results of the research will be provided to the community during the celebration of Earth Day 2000.

Watterson Accelerated Elementary School Parent Teacher Association - \$4,743 Kathy Lowrey, 3900 Breckenridge Lane, Louisville, KY 40218

Urban Wildlife Habitat Garden: Look What Lives in Your Back Yard

Watterson elementary school students, specifically 576 students in prekindergarten through fifth grade, and 21 classroom teachers learn about and experience the complexity of small-scale ecosystems at the school's outdoor classroom, the Urban Wildlife Habitat Garden. The Jefferson County Public Schools' Center for Environmental Education offers teachers professional development through in-service days at the outdoor classroom. Both students and teachers examine first hand the topics of biodiversity, habitat requirements, and environmental interdependency.

#### **LOUISIANA**

CENLA PRIDE - \$7,500

BETTYE JONES, 802 THIRD STREET, ALEXANDRIA, LA 71301

Environmental Action Center

The environmental action center educates students, their families, and neighborhood and civic organizations about facts related to local environmental issues, possible causes of and solutions to environmental problems, and ways in which individuals can work to keep their community clean and healthy. Participants learn through hands-on exercises, interactive activities that build motivation, and field trips.

Cenla Pride - \$4,054

BETTYE JONES, 802 THIRD STREET, ALEXANDRIA, LA 71301

Water Festival for Students and the Public

Students and the public are being educated about the effects of runoff from urban storm drains on groundwater and the relationship of that issue to issues that affect other natural resources. The effort thereby instills awareness



#### **MAINE**

Aroostook Literacy Coalition - \$5,000 Ervin T. MacDonald, P.O. Box 190, Houlton, ME 04730

Bridging The Two Maines

This regional telecommunications project educates the general public in Aroostook County and key community leaders about environmental issues and on-line networking to improve their access to key environmental data. By providing that training, the project uses technology to educate members of the adult community, including low-income audiences, in Aroostook County, the largest and northernmost county in the state.

University of Maine, Water Research Institute - \$5,000 Mary Ann McGarry, 5717 Corbett Hall, Orono, ME 04469-5717

Testing The Waters (TTW): Building A Maine Watershed Alliance

This project extends the reach of the earlier pilot Testing The Water (TTW) programs by expanding their geographic base into the Kennebec River watershed, located in central Maine. The TTW program now provides a hands-on, minds-on, water quality monitoring and educational experience for more than 800 school children and teachers in the Kennebec watershed.

#### **MARYLAND**

The Academy of Natural Sciences - \$4,096 Erin Strickland, 10545 Mackall Road, St. Leonard, MD 20685

Adopt an Oyster Bar

This pilot program is designed to expose 1,200 school children in two elementary schools to the importance of the oyster reef communities of the Chesapeake Bay. The project builds on an existing program in which every fourth grader in the school district studies the ecology of oyster reef communities. The goals of the program are to teach all students about the life cycles of oysters and similar animals and to provide to all fourth graders a greater breadth and depth of knowledge about Chesapeake Bay ecology.

ALLEGANY COUNTY BOARD OF EDUCATION - \$5,000 KEN BAXTER, 108 WASHINGTON STREET, CUMBERLAND, MD 21502

The Beall High Environmental Education Project

This project is enriching the study of environmental science by providing 75 science students at Beall Junior-Senior High School with rich field experiences in the area of water quality investigations relevant to their community. Students are learning laboratory techniques for water testing and management of data sets, as well as exploring the implications of measurements that differ and learning to interpret the results. A World Wide Web site displays data and information about the project and its participants.



#### MD-MA

BATTLE CREEK NATURE EDUCATION SOCIETY - \$4,916 LINDA FADELY, P.O. BOX 122, PORT REPUBLIC, MD 20676

Oyster Monitoring Program for Fourth Graders

In Calvert County public schools, 27 fourth-grade classes participate in the Oyster Monitoring Program. Students are helping to forward research and are participating in a public awareness effort related to recovery of oyster colonies in the Chesapeake Bay. Under the program, students examine the significance of the decline of the oyster colonies and assist scientists in identifying possible cause of the decline. The program provides students with a remarkable opportunity to contribute to restoration of the bay and discover for themselves the importance of protecting the ecosystem.

CALVERT COUNTY PUBLIC SCHOOLS - \$5,000

JoAnn Roberts, 1305 Dares Beach Road, Prince Frederick, MD 20678

Making the Classroom Connection: Real World to Real Science

Local and state environmental research scientists worked on the development of this mentorship program for teachers of grades one through five. The program provides an opportunity for teachers to work side by side with scientists searching for solutions to Maryland's key environmental problems. Teachers use the mentorship experience to connect learning about real environmental problems with real science and mathematics skills in the classroom. Under the program, 10 elementary teachers (two from each grade) work in a mentorship relationship with a scientist for one week to write a classroom performance task that connects what they have learned as the result of the mentorship with classroom instruction. The teachers then share their experience and learning activities with other teachers countywide.

Wicomico County Department of Recreation and Parks - \$5,000 David Perry, 500 Glen Avenue, Salisbury, MD 21804

Pemberton Historical Park Summer Camp

This project is a six-week summer day camp program for school children ages 5 through 14. The camp, located on 247 acres on the Delmarva Peninsula, provides a program that addresses local and global environmental concerns. The camp program helps students, especially those from low-income or minority households, identify community issues through studies of historical land use, field studies, examination of resources, canoe trips, and other methods. A second priority is identifying how human interaction with the environment of the Eastern Shore has changed since the colonial period.

#### **MASSACHUSETTS**

Alternatives for Community and Environment - \$10,000 Warren Goldstein-Gelb, 2343 Washington Street, Roxbury, MA 02119

The Air We Share: From Classroom to Community in Roxbury

The Roxbury Environmental Empowerment Project (REEP) focuses on the issues of poor indoor and outdoor air quality as a primary public health concern among school-age young people and adults in Roxbury. REEP targets youth and informal leaders in public housing, neighborhood associations, and small businesses.



EARTHWORKS PROJECTS, INC. - \$5,000

Maurice Loiselle, 46 Chestnut Street, 3rd Floor, Jamaica Plain, MA 02130

Outdoor Classroom's Adopt a Tree and High School Mentors Program

This project increases the use of the Schoolyard Orchard Outdoor Classrooms for hands-on environmental education by training 10 or more volunteers who live in the communities in which the schools are located. The project also trains five high school students as classroom specialists for their schools and three to five teachers in the use of the orchards.

ISLAND ALLIANCE - \$25,000

KATHY ABBOTT, 408 ATLANTIC AVENUE, BOSTON, MA 02210

Interdisciplinary Environmental Middle School Curriculum Based on Islands in Boston Harbor

The project's middle school curriculum is designed to meet the needs of students in Boston and other minority neighborhoods in Massachusetts. It also delivers instruction and learning materials to teachers on site. The curriculum is based on the geological, historical, cultural, social, economic, political, and marine and terrestrial ecology resources of the islands of Boston Harbor.

Lynn Public Schools Environmental School - \$4,995 Charles P. Wilkinson, 14 Central Avenue, Lynn, MA 01901

A Teaching Tool for the Development of Critical-Thinking and Problem-Solving Skills

This project provides interdisciplinary real-world training in ecological principles and environmental education to teams of primary and secondary teachers at the Lynn Woods Reservation, a unique 2,200-acre urban forest. Workshops provide field training based on the geology, hydrology, flora, and fauna of local ecosystems.

New England Aquarium Corporation, Education Department - \$5,000 William Spitzer, Ph.D., Central Wharf, Boston, MA 02110

Community Environmental Career Development

Community organizations recruit young adults, age 18 to 30, from Roxbury, Dorchester, Jamaica Plain, and Chelsea to participate in a series of eight environmental career workshops. Professionals who work in environmental careers participate as guest presenters, with the workshops organized by staff of the New England Aquarium and hosted by a number of community organizations in Roxbury, Dorchester, and Jamaica Plain.

NEWTON PUBLIC SCHOOLS - \$5.000

GEORGE WILLWERTH, 100 WALNUT STREET, NEWTON, MA 02460

From Cheesecake Brook to Stellwagen Bank

This project takes an integrated, thematic approach to helping students develop concern for their environment by demonstrating the neglect that has occurred in their own community and that has had an adverse effect on Cheesecake Brook, a brook that flows through property of the school. The project demonstrates how the effects of that neglect have reached the Charles River and extended as far as Stellwagen Bank.

Northeast Sustainable Energy Association - \$7,269 Nancy Hazard, 50 Miles Street, Greenfield, MA 01301

Teacher Workshops on Transportation

The Northeast Sustainable Energy Association enhances the skills of middle school teachers in environmental education by offering a new teacher training workshop that provides them a unique set of interdisciplinary environmental education materials called Future Wheels for a Sustainable America. The materials are designed



#### MA-MI

to raise the awareness of teachers, students, and parents of environmental and health hazards associated with transportation choices. The workshops, held in EPA Region 3 (Pennsylvania, Maryland, Virginia, and Delaware) during the 1999-2000 school year, offer resources to 5,000 middle school teachers. The teachers present the lessons to approximately 3,000 students from a wide range of ethnic and economic backgrounds in urban, suburban, and rural areas.

University of Massachusetts Lowell Research Foundation - \$19,159
Dr. Linda Silka, 600 Suffolk Street, 2nd Floor South, Lowell, MA 01854

Regional Economic and Social Development

The River Ambassadors, 30 Southeast Asian young people previously trained in urban environmental issues, are creating six 15-minute videotape programs designed to consolidate their learning and give them increased visibility for their environmental work. The project provides a model for the development of community-based approaches that can be successful in areas that are home to immigrants new to the United States.

#### **MICHIGAN**

ECOLOGY CENTER OF ANN ARBOR - \$4,000 RUTH KRAUT, 117 NORTH DIVISION STREET, ANN ARBOR, MI 48104

Kids Can Make a Difference

The Ecology Center of Ann Arbor incorporates environmental education into a community center's programming at a local public housing site. The hands-on educational program educates participants about environmental health and community issues. Using the information they learn through the program, participants then educate the general public about environmental threats to human health.

Fairview Area Schools - \$23,500 Philip Moerdyk, 1879 East Miller Road, Fairview, MI 48621

Great Lakes Authentic Science Studies (GLASS)

During the 1999-2000 school year, Fairview Area Schools is implementing the pilot program of Great Lakes Authentic Science Studies. GLASS coordinates existing curricula and community resources into an instructional framework of community-based authentic learning activities, based on state and national standards for environmental studies. Students and teachers who participate in the GLASS program are more knowledgeable about environmental concepts and issues and have a better understanding of environmental vocations than those who do not participate in the program.

Intermediate School District of St. Clair County - \$5,000 Carl Arko, 499 Range Road, P.O. Box 5001, Port Huron, MI 48061-5001

Pine River Environmental Education Trail

Through the creation and development of a nature trail, the Intermediate School District of St. Clair County incorporates environmental education into the core curriculum. Hands-on activities at the nature trail reinforce lessons learned in the classroom. Field trips allow students to develop their critical-thinking skills and enhance their interest in, and exposure to, environmental issues.



MICHIGAN RECYCLING COALITION - \$5,000 KERRIN O'BRIEN, P.O. BOX 10240, LANSING, MI 48901-0240

Master Recycler Program

After revising and adapting a recycling curriculum developed by the Oregon State University Extension Service, the Michigan Recycling Coalition conducts two training programs in the community. The first pilot program seeks to educate community members about recycling, and the second pilot program seeks to educate business leaders about that subject. After completing the pilot programs, participants are identified as Master Recyclers. The Michigan Recycling Coalition then conducts a train-the-trainer workshop during which potential facilitators are trained to conduct the community-based program.

Muskegon Area Intermediate School District - \$3,465 Gregg Zulauf, 1001 East Wesley Avenue, Muskegon, MI 49442

Water: It Needs to Be in Your Curriculum!

The Water: It Needs to Be in Your Curriculum! program trains middle and high school teachers to lead student investigations of water quality in local watersheds. Teachers participate in training workshops during which they tour the subwatersheds and learn why local involvement is crucial to healthy watersheds. A self-interpretive guide, Water Quality - Land Use, allows students to make connections between land use and the water quality data collected.

#### **MINNESOTA**

Eco-Education - \$4,990

KATHY KINZIG, 275 EAST 4TH STREET, #821, St. Paul, MN 55101

Environmental Education Workshops for Teachers

The Eco-Education program trains teachers in urban environmental education and service learning by providing two workshops, two technical planning sessions, and year-long classroom support. Through the workshops, teachers examine current urban environmental issues and learn how to facilitate environmental service-learning projects that allow their students to use their knowledge to exert a positive influence on their communities and their environment. The year-long support provided allows teachers to seek the advice of environmental education professionals and refine their ideas and activities.

HARRIET BEECHER STOWE ELEMENTARY SCHOOL - \$4,588 LARRY JOHNSON, 715 101st Avenue, West Duluth, MN 55808

Community Garden Plots

In collaboration with the Valley Youth Center, Harriet Beecher Stowe Elementary School develops community garden plots that allow students to integrate classroom lessons and hands-on field activities. Material composted at the school is used to fertilize the gardens and build the plots. While students work in the gardens, graduate students conduct activities that educate students about waste reduction and life-cycle processes. The gardening program is conducted after school in a youth center attended by 50 to 100 students each day.

Initiative Foundation - \$24,102 Kathy Gaalswyk, 70 SE 1st Avenue, Little Falls, MN 56345

Training for Lake Associations Teams

During three day-long training workshops, members of Minnesota's Lake Associations teams are trained to provide leadership to their respective groups. Leaders are expected to return to their lakes and educate fellow



#### **MN-MS**

owners of lakeshore properties about crucial environmental issues that affect water quality, shoreland, wildlife, and fisheries. The participants in the leadership training also are expected to lead the development of lake management plans for their particular lakes.

Washington County - \$5,000

CINDY WECKWERTH, 14949 62ND STREET, NORTH, P.O. BOX 3803, STILLWATER, MN 55082

Children's Water Festival

The Children's Water Festival provides a hands-on water education program for fifth graders in the Minneapolis-St. Paul metropolitan area. At the festival, students visit more than 30 learning stations to learn about such topics as the water cycle, groundwater and surface water, ecology, wetlands, and other natural resources. Participating teachers receive a curriculum enhancement workbook they can use after the festival to continue water education in their classrooms.

#### **MISSISSIPPI**

Please see page 3 for a profile of a grant awarded to Starkville School District by EPA Headquarters.

Mississippi Association of Conservation Districts - \$5,000 Gail Spears, P.O. Box 23005, Jackson, MS 39225

I'm a Conservation Grandparent Workshop

In partnership with local soil and water conservation districts and organizations, the Mississippi Association of Conservation Districts offers a limited number of workshops to train grandparents and other senior adults interested in educating children about conservation. In addition to communicating their knowledge to preschool and elementary-age children, Conservation Grandparents engage in speaking opportunities, assist in conducting conservation programs at the local level, and train other grandparents to become Conservation Grandparents. The workshops involve 150 participants, who in turn reach more than 500 children.

POPLARVILLE SCHOOL DISTRICT - \$5,000

Louise Smith, 804 South Julia Street, Poplarville, MS 39470

Outdoor Classroom: An Interpretive Environmental Learning Center

This program enhances the Outdoor Classroom at Poplarville Upper Elementary School with learning stations that provide 500 students and their teachers opportunities for hands-on environmental education and research, in a program based on an interdisciplinary approach.

UNIVERSITY OF MISSISSIPPI - \$5,000

Dr. M. M. Holland, 125 Old Chemistry, University, MS 38677

Institute for Environmental Education at the University of Mississippi Field Station

In partnership with the university's Department of Biology and the university's School of Education, staff of the University of Mississippi Field Station train teachers to develop ecological principles and incorporate them into the science curriculum of the elementary schools in northern Mississippi. The program includes a week-long summer institute and two workshops held after the institute.



University of Mississippi University Museums - \$5,000 Bonnie J. Krause, Office of Research, University, MS 38677

Renewed Environmental Education: Traveling Trunks

This project renews and redesigns three environmental education traveling trunks (originally funded through EPA) that circulate among schools, libraries, and other facilities in the upper 20 counties of Mississippi. The trunks enhance the science curriculum in elementary schools, as well as the teaching skills of teachers. This year, 40 elementary school classrooms and 15 teachers are benefiting from the presentations and demonstrations, with additional schools to be reached through the continuing program.

#### **MISSOURI**

Cooperating School Districts - \$23,870 Glenda Abney, 7525 Sussex Avenue, St. Louis, MO 63143

Integration of Environmental Education Programs into Statewide Education Standards

The project promotes integration of environmental education in state-mandated, performance-based curricula. Two in-service sessions are being offered in three school districts in the St. Louis area: one urban, one suburban, and one rural. Follow-up consultations are offered to individual teachers. Approximately 5,250 students are using the materials. Partners in the project are MidAmerica Energy & Resource Partners, the Regional Professional Development Center of the Missouri Department of Elementary and Secondary Education, and the Missouri Environmental Education Association.

Missouri Environmental Education Association - \$5,000 Virginia Wallace, P.O. Box 104505, Jefferson City, MO 65110

Leadership Clinic to Implement Environmental Education Programs in Communities

The project builds capacity to implement environmental education programs in the state by offering a four-day leadership clinic modeled after the National Environmental Education Advancement Project (NEEAP). The target audience is 30 participants in 10 teams of three each from throughout the state. The teams receive training in environmental education issues that equips them to implement projects in their communities.

Scenic Rivers Stream Team Association - \$4,602 Carol Childress, P.O. Box 1262, Mountain View, MO 65548

Getting into Water

The project is a three-day, college-credit course that provides training and education materials to 20 middle-school teachers in 45 school districts in the watershed of the Current and Eleven Point rivers. The teachers can provide water education to approximately 600 students each year. Partners in the program with the Scenic Rivers Stream Team Association are Lincoln University, the State of Missouri Department of Natural Resources, the Missouri Department of Conservation, and the National Park Service of the U.S. Department of the Interior.

Southwest Missouri State University - \$4,855 Janice Greene, 901 South National Avenue, Springfield, MO 65804

Increasing Environmental Education in Preparation of Pre-Service Teachers

Under the project, pre-service teachers are offered a workshop designed to improve their environmental education skills. The target audience is pre-service teachers enrolled in college courses for teaching methods in science,



#### MO-MT

social studies, and language arts. Through the workshop, they become certified as facilitators for Project WET, Project WILD, and Missouri's Project Learning Tree. The project is an extension of a partnership of the university with the Missouri Department of Natural Resources and the Missouri Department of Conservation.

Wyman Center, Inc. - \$5,000 Bridget Lenhardt, 600 Eureka Road, Eureka, MO 63025

Wyman Adventures Program

The project is an extracurricular science education program for 30 students in grades five through eight at Toussaint L'Ouverture Middle School. Activities include after-school adventures, day trips, and overnight trips. The objectives of the program include development of an awareness and understanding of the environment and improvement in both school attendance and grades in science among the students who participate.

#### **MONTANA**

Bridger Outdoor Science School - \$4,981 Bobbi J. Geise, P.O. Box 502, Bozeman, MT 59771

The Gallatin Journey

This project establishes and integrates an interdisciplinary schoolwide environmental education component into the mandated curriculum at Emily Dickenson Elementary School. The project is a collaborative effort of the school and the Bridger Outdoor Science School. It uses the natural resources in the vicinity of the school - a stream, town parks, agricultural fields, and federal lands -- to teach about ecological concepts and related issues. The age-appropriate Gallatin Journey lessons provide a "real world" application of each of the required classroom science kits and other curriculum requirements. The Gallatin Journey serves 19 teachers, 25 parents, and 490 students in kindergarten through fifth grade at Emily Dickenson.

MISSOULA FAMILY YMCA - \$5,000

J. Porter Hammitt, 3000 South Russell, Missoula, MT 59802

Outdoor Environmental Education Program

The project has established a year-round program that offers quality environmental education learning experiences for sixth graders in the Missoula area. The program has expanded to reach 450 students, 20 teachers, and 15 college students, who serve as volunteer instructors. The objective of the project is to develop in participants an awareness of the unique ecosystems of western Montana and the environmental issues that affect the area. Its purpose is to introduce participants to ecological concepts and environmental principles, to provide insight into the implications of personal and societal decisions about the use of natural resources, and to foster in students an attitude of stewardship for the local environment. The audience is reached through lessons and activities adapted from established sources and programs, with classes conducted at an outdoor recreation area by trained volunteer instructors.

Montana Environmental Education Association - \$4,887 Carolyn Duckworth, Box 8065, Bozeman, MT 59773

Delivering Quality Environmental Education On-Line

The Montana Environmental Education Association (MEEA) maintains a World Wide Web site to expand the educational capability of its newsletter by providing information about its activities, cover stories, and resource information on-line; to provide searchable directories and bibliographies of environmental education materials; and to connect members of the association with other educators. The primary audience is the 200 members of MEEA, along with the 700 members of the Montana Geographic Alliance, who include teachers of science,



social studies, and language arts in kindergarten through 12th-grade programs; educators working in informal settings; and personnel of state and federal agencies. The secondary audience is the entire educational community of Montana and on the Web.

School District 87 J-L - \$22,400

SANDRA MURIE, ROCKY BOY PUBLIC SCHOOLS, RURAL ROUTE 1, BOX 620, BOX ELDER, MT 59521

Mother Earth First 1999

Rocky Boy Public Schools are providing a summer environmental program to educate students in nontraditional settings and encourage them to pursue environmental careers. The program includes both classroom instruction and actual field experiments and experiences in the three predominant zones of Rocky Boy's Indian reservation, the plains, the hills, and the mountains. Students study the plant species, the water, and the geography of the three zones, as well as the effects of farming and ranching on the zones. Students present the results of their experiments to the Chippewa Cree tribal government to demonstrate to that body the harmful effects of certain ranching and farming practices that are carried out on the reservation. The purpose of the effort is to encourage the formulation of new regulations governing the management of natural resources to ensure that future generations enjoy a thriving homeland. Currently, the school district serves 574 students in kindergarten through grade 12, of whom 96 percent are American Indian, while the total population of the reservation is approximately 2,800 residents. All benefit directly or indirectly from activities conducted under the project.

Teller Wildlife Refuge - \$3,540 Amy Monteith, 1292 Chaffin Road, Corvallis, MT 59828

Teller Wildlife Refuge Naturalist Education Project

The goal of the education program of the Teller Wildlife Refuge is to support the mission of the refuge by providing an outdoor classroom and resources through which students and members of the community can engage in hands-on learning about the natural world. Each year, outdoor education field trips are offered to more than 3,000 teachers and students in kindergarten through grade 12. Field sites, assistance in planning and carrying out field trips, and equipment for use in the field also are offered. Because of the success of the model, and in response to many requests from throughout the community, plans are being made to expand the program to include a pilot education program for adults and families in the community. The goals of the program are to give members of the community the opportunity to learn about the ecology of their local environment to foster understanding of the remaining natural areas in the area and support the potential for sustaining those areas.

#### **NEBRASKA**

CENTRAL COMMUNITY COLLEGE - \$8,770

Nancy Bjorkland, P. O. Box 4903, Grand Island, NE 68802-4903

Teacher Training in Issues Related to the Quality of Air, Water, and Land

Under the project, 20 four-hour workshops are being held at public schools in the Central Community College and Education Service Unit #9 areas for educators, students, parents, and community members. After the workshops, a one-week course provides further in-service training to 20 educators. The goal of the project is to improve teaching skills and to meet the state's standards for science education. Central Community College, Education Service Unit #9, and Hastings College are partners supporting the project.



#### NE-NH

IMPERIAL GRADE SCHOOL - \$23,558
PAUL EKBERG, 520 EAST 9TH, IMPERIAL, NE 69033

Light Dam Environmental Education Project

This project establishes a six-member environmental research team representing six schools in Kansas and Nebraska. The team gathers baseline data from a selected study area, researching the effects of confined livestock operations on Enders Reservoir, to which runoff eventually flows. Using multimedia capabilities, participants develop an environmental enhancement plan for the area. The partners that support the project include the game and parks authorities of the two states; the city of Imperial, Nebraska Environmental Trust; the University of Nebraska; the Upper Republican Natural Resources District; and the Nebraska Resource and Conservation Service.

Nebraska State 4-H Camp - \$4,960 Bernie Lorkovic, P. O. Box 87, Halsey, NE 69124

NatureLink, an Outdoor Education Weekend for Families

NatureLink provides an outdoor educational experience to urban and suburban families from culturally diverse backgrounds. The weekend program includes workshops during which parents experience the outdoors with their children. Intergenerational participation reinforces the message that natural resources must be protected for future generations. Partners in the project include the Big Brothers and Big Sisters organizations.

Thurston County Cooperative Extension - \$5,000

Janet Nielsen, 303 Administration, Lincoln, NE 68683

Environmental Education Workshops for Native American Students

Under this project, three day-long workshops teach students in fourth and fifth grades and their teachers from Umonhon Public School how to identify pollution and give them the opportunity to work on solutions. The educational priority is to communicate the principles of environmental justice, while increasing in the students an awareness of their historical connection to the earth. Partners in the project include the Omaha Tribe, the Omaha Boys and Girls Club Youth Center, and the Carl T. Curtis Health Center Education Program.

#### **NEVADA**

CLARK COUNTY CONSERVATION DISTRICT - \$5,000 SUSAN SELBY, 2357A RENAISSANCE DRIVE, LAS VEGAS, NV 89119

Wasden Elementary School Schoolyard Wildlife Habitat Project

This project establishes an outdoor science laboratory to be used in studying wildlife habitats. Fifth- and sixth-grade students research, design, install, and use six habitat sites. Parents and staff take part in the planning and construction phases of the project. Other schools in the district and in the desert southwest are reached through the production of a videotape during and after the construction of the habitats.

#### **NEW HAMPSHIRE**

ANTIOCH NEW ENGLAND GRADUATE SCHOOL - \$5,000 BO HOPPIN, 40 AVON STREET, KEENE, NH 03431

Building Community Investment Through Environmental Education

This project funds internship positions for graduate students in which the students design and implement community-based service-learning projects at the Rachel Marshall Outdoor Learning Laboratory. The projects help students in Keene take responsibility for the long-term management, care, and maintenance of Keene's Ashuelot River Park.



KEENE STATE COLLEGE, DEPARTMENT OF GEOGRAPHY - \$10,000 AL RYDANT, 229 Main Street, Keene, NH 03435-2001

The Wild World of Worms: A Vermicomposting Geographic Curriculum Guide

This project introduces and establishes vermicomposting in elementary school settings by creating a core curriculum for grades one through six by combining vermicomposting with the national geography standards. Maintaining a worm bin provides hands-on experience in management of an ecosystem, integrating disciplines that bring together the physical and human dimensions of the world.

### **NEW JERSEY**

Please see page 4 for a profile of a grant awarded to the Farmworker Health and Safety Institute, Inc. by EPA Headquarters.

ALLIANCE FOR NEW JERSEY ENVIRONMENTAL EDUCATION (ANJEE) - \$5,000
FRANK GALLAGHER, C/O NEW JERSEY DIVISION OF PARKS AND RECREATION, P.O. BOX 404, 501 EAST STATE STREET,
TRENTON, NJ 08625

Establishment of a Resource Information Center

The Alliance for New Jersey Environmental Education (ANJEE) is developing a World Wide Web site to encourage and enhance communication among environmental educators in New Jersey. The Web site provides a means of unifying environmental education programs in the state and improving New Jersey's capacity to deliver effective environmental education. Grant funds support the development of an on-line resource information center and a directory that links formal educators, informal educators, and resource professionals. The Web site and center also provide a platform for sharing information.

CITIZEN POLICY AND EDUCATION FUND OF NEW JERSEY - \$5,000 ANTHONY WRIGHT, 400 MAIN STREET, HACKENSACK, NJ 07601

Statewide Train-the-Trainer Program

This program leverages the resources of community groups and social service agencies in New Jersey's cities, including Elizabeth, Camden, and Jersey City, to educate the public about lead poisoning. In those urban centers, where lead-based paint often is found in housing, lack of education about lead poisoning and its prevention puts thousands of children at risk. Grant funds support a statewide program of day-long seminars and follow-up outreach through which community leaders and agency staff teach parents how to prevent and respond to lead poisoning. The program empowers a highly motivated group of agency and organization staff who interact regularly with at-risk families.

HACKENSACK MEADOWLANDS DEVELOPMENT COMMISSION - \$5,000 ANNE GALLI, 2 DEKORTE PLAZA, LYNDHURST, NJ 07072-3707

Urban Watershed Education

This project teaches 150 teachers of grades 6 through 12 about the Hackensack River watershed. The content of the workshop and resource packages for participants includes several environmental curricula, including Project Wet and WOW!, as well as state and regional curricula that focus on watershed science, map skills, regional history, and management issues. Participants in the workshop develop a deeper understanding of the effects on the environment and human health of human activity in watersheds, leadership skills for student stewardship projects, and training for faculty in incorporating environmental education into classroom programs.



### NJ-NM

International Youth Organization (IYO) - \$13,391
Derek Winans, 703 South 12th Street, Newark, NJ 07103

Newark Asthma and Lead Poisoning Education and Risk Reduction Project

This project reaches 1,000 parents and caregivers of young children, teaching them about risk reduction and better management of chronic conditions related to asthma and lead poisoning. Through the program, 12 participants in the Youth Corps/School-to-Work program and 16 Volunteers In Service to America (VISTA) are being trained to work with the parents and caregivers to adopt practices in the home that can help reduce the risks of asthma and lead poisoning. The International Youth Organization (IYO) uses its network of daycare centers, elementary schools, block clubs, tenant associations, and community centers in Newark's Enterprise Community target area to reach its intended audience and educate people about important indoor air quality issues that affect children's health.

### **NEW MEXICO**

Border Environmental Health Coalition - \$6,360 Victoria Simons, P.O. Box 134, Mesilla Park, NM 88047

Community-Based Solutions to Illegal Dumping

This project involves middle school students in addressing the effects on environmental health of illegal dumping of trash. Students document the trash problem and present their findings to parents and community members who, in turn, present the findings to officials of the county government. The expected outcome of the educational process is the development of solutions to the trash problem and the creation by the community of a sustainable model to be used in addressing environmental problems in the future.

Earth Day Coalition of New Mexico - \$5,000

JILL Von Osten, P.O. Box 30583, Albuquerque, NM 87190

Student Education and Rural Outreach Program

The Student Education and Rural Outreach Program is expanding its student educational and outreach efforts to rural communities throughout New Mexico through an in-classroom speakers bureau, informational fairs, field trips, local environmental projects, public events, educational forums, and a statewide environmental conference. Numerous partnerships statewide, including all rural school districts, support the program. The specific target of the effort is 1,000 students in 9th through 12th grades.

FRIENDS OF THE BOSQUE DEL APACHE NATIONAL WILDLIFE REFUGE - \$10,340 P.O. Box 340, San Antonio, NM 87832

Conservation Through the Arts

Conservation Through the Arts introduces an interactive, interdisciplinary study unit into the classroom. The unit augments existing curricula, programs, and educational resources, while integrating experiences in wetlands conservation science and the fine arts. Presentations include an interactive photograph and slide show, cooperative learning "think-tank" discussion forums, a hands-on art workshop, field trips, and tours of the refuge during which students take part in hands-on activities related to wetlands science.



FRIENDS OF THE RIO GRANDE NATURE CENTER - \$5,600 KAREN BROWN, 2901 CANDELARIA N.W., ALBUQUERQUE, NM 87107

Rio Grande Ecology Institute for Teens

The Rio Grande Ecology Institute is an extensive summer program for teenagers. The institute focuses on water studies, field trips, interactive presentations by experts, benefit work projects along the Rio Grande River, interaction between native plants and animals on the bosque ecosystem, the effects of exotic species on native plants and animals, hydrogeological features, aquatic organism dynamics, and more.

### **NEW YORK**

Please see pages 4 and 5 for profiles of grants awarded to the Seneca Park Zoo Society and the Educational Broadcasting Corporation by EPA Headquarters.

BOQUET RIVER ASSOCIATION - \$18,400 ROBIN ULMER, P.O. BOX 217, GOVERNMENT CENTER, ELIZABETHTOWN, NY 12932

Leaping with Salmon and Trout

This project introduces an interdisciplinary curriculum, Adopt-A-Salmon Family (AASF), in five schools in Essex County and the Lake Champlain basin. Through AASF, students study watershed issues and participate in the rearing and releasing of salmon. More than 300 students in grades 6 through 9, 11 teachers, and the general public, are the audience for student presentations. The program includes a workshop for teachers, field trips for students, electronic information packages, and Internet bulletin boards that link the schools involved in the program. The AASF curriculum is being examined to identify its correlations with standards established by the New York State Department of Education.

Brockport Central School District - \$4,849 Rosemary Catlin, 40 Allen Street, Brockport, NY 14420

Great Lakes Ecosystem Discovery

The Brockport Central School District is designing a high school science module to engage students in a study of Lake Erie and Lake Ontario. The module provides students with opportunities to use scientific methods of inquiry to increase their understanding of environmental issues related to the two Great Lakes. The module includes a component to involve parents and provide educators with a program that uses technology to advance students' learning and achievement, in accordance with national and state standards for secondary science, mathematics, and technology education programs.

Brooklyn Botanic Garden - \$5,000 Leslie Findlen, 1000 Washington Avenue, Brooklyn, NY 11225

Science Apprenticeship Program for High School Students

This program provides high school students in New York City with an intensive, hands-on experience working directly with scientists at the Brooklyn Botanic Garden on an urban biodiversity research project, New York Metropolitan Flora. The project targets students in public schools in Brooklyn who are members of groups in the society that traditionally are underrepresented in the sciences. Students receive an in-depth introduction to careers in the sciences; develop and implement their own plant science research projects; experience first-hand learning in taxonomy, ecology, biodiversity, and conservation biology; and collect and analyze data and test computer applications.



CITY OF NEW YORK PARKS AND RECREATION - \$4,715

LINDA P. DOCKERAY, VAN CORTLAND/PELHAM BAY ADMINISTRATION, ONE BRONX RIVER PARKWAY, BRONX, NY 10462

Birds of the Bronx

A group of seventh- and eighth-grade residents of the Bronx are exploring local environments to develop an understanding of the complexities of local ecosystems and the environmental challenges that confront both humans and wildlife. Visits to natural ecosystems, as well as to those that are built, including a shopping center in a large development built on a wetland, provide an understanding of the needs of wildlife and the effects human activity can have on wild creatures. Community-based experiential education emphasizes the habitat requirements of wildlife, the effects of loss of habitat, and the complex processes involved in environmental decision making. Students apply what they have learned in the field to a research miniproject and present the results at a mock town meeting.

City Parks Foundation - \$5,000 Danielle Hartman, 830 Fifth Avenue, New York, NY 10021

Growing Gardens Handbook

This project takes the successful Growing Gardens program into its next phase of hands-on interdisciplinary learning based on gardening. Elementary and middle school teachers from public schools in underserved areas of the Chancellor's District of New York City participate in the program, which integrates lessons in the classroom with field experiences in gardening. The goal of the program is to improve learning and achievement among underachieving students. The program provides resources to participating teachers, helps them adapt and expand existing curricula to meet the needs of gardening programs in urban schools, and conforms to national standards for science education.

CORNELL COOPERATIVE EXTENSION OF ST. LAWRENCE COUNTY - \$4,500
FRANK FLAVIN, 125 EAST MAIN STREET, UNIVERSITY SHOPPING CENTER, CANTON, NY 13617

Radio Farm

This program addresses improper disposal of agricultural waste and the environmental, economic, and health concerns that result from such disposal. Cornell Cooperative Extension of St. Lawrence County is producing 12 radio segments on environmental management in agriculture, each five minutes in length. The programs, produced for public service radio broadcasts, are available on CD-ROM and cassette for use in classrooms and during seminars. The programs, which target an audience of farmers in six northern counties of New York, address burning of plastic agricultural waste and other issues related to disposal practices.

INSTITUTE FOR ECONOMIC GROWTH - \$4,995 NICK D'ALTO, 94 COVE ROAD, NORTHPORT, NY 11768

Project RE-create

Visitors to the Project RE-create exhibit at the Long Island Children's Museum are challenged to develop strategies to reduce the effects of solid waste on Long Island, where it remains a pressing issue. Through the project, teachers and students are developing a museum exhibit program that involves exhibit visitors in handson experiences related to the flow of materials. Activities included in the exhibit explore the manufacture, distribution, and disposal of familiar products. As part of a professional development program, 15 teachers are involved in the development of the project. The project includes "thinking stations" that introduce participants to a variety of decision-making strategies as they work to solve problems in product design, recycling, and reuse.



MAHOPAC CENTRAL SCHOOL DISTRICT - \$5,000

Dr. Edgar Richards, 179 East Lake Boulevard, Mahopac, NY 10541

The Mahopac Middle School Nature Trail Project

This project provides professional development opportunities to enhance the scientific knowledge of teachers at Mahopac Middle School. Participants improve their ability to create instructional materials that challenge students and conform to learning standards established by New York. Development of the nature trail is one aspect of a professional development program that engages teachers in the development and assessment of curricula and projects. Students are involved in the production of a trail guide, design of a World Wide Web site, collection of species, entry of information into a database, and trail design. The partners in the project provide resources to ensure that education programs for teachers are effective and expertise in designing a site that is educational and accessible to visually impaired visitors.

MOHONK PRESERVE - \$5,000

GLENN D. HOAGLAND, P.O. BOX 715, NEW PALTZ, NY 12561-0715

Water Quality Awareness Program

This project, which includes studies of watershed and water table models and sampling of the Hudson River and one its tributaries, is designed to engage young people in urban centers in upstate New York in examining issues related to water quality. Students whose experience with issues related to water quality in the state's rivers has been limited, their teachers, and their parents are examining watershed and water quality issues that affect the Hudson River. Participants learn about how water moves within a watershed and through water tables and about the ways in which human activity affects water quality. Students develop hypotheses about water quality and analyze and compare monitoring data from a number of test sites to identify sources of contamination.

Pace University - \$4,950

Angelo Spillo, Pace University Environmental Center, 861 Bedford Road, Pleasantville, NY 10570

Watershed Awareness

The Watershed Awareness project increases participating teachers' understanding of key environmental issues, enables them to incorporate environmental education materials into their classroom programs, and improves their ability to analyze environmental issues and make informed decisions. Participants focus on water issues in a location in the Croton Reservoir watershed in which urban sprawl and heavy development have put stress on the system. The project emphasizes the development of skills that enable teachers and students to assess problems, develop solutions, and become effective environmental stewards of the watershed.

St. Regis Mohawk Tribe - \$5,000

KEN JOCK, RURAL ROUTE 1, BOX 8A, COMMUNITY BUILDING, HOGANSBURG, NY 13655

Environmental Education/Solid Waste and the Pace University Energy Project

The St. Regis Mohawk Tribe, in partnership with the Pace University Energy Project, is implementing a solid waste and energy education program. Building upon previous work, the project increases the community's knowledge of proper practices in the management of solid waste and energy-efficient measures for preserving natural resources. Telecommunications, fact sheets, radio broadcasts, and 10 cartoon strips to be distributed to local newspapers form the core of the multimedia program. The project targets the Native American community of approximately 5,200 who live on the St. Regis Mohawk Indian Reserve.



### **NY-NC**

WILDLIFE CONSERVATION SOCIETY OF NEW YORK /THE NEW YORK AQUARIUM - \$22,500 LEE LIVNEY, 2300 SOUTHERN BOULEVARD, BRONX, NY 10460

Upriver, Downriver Education Program

Two New York school communities, the Dover Union Free School District and Community School District 22 in Brooklyn, join with The New York Aquarium to study two vital wetlands: the Great Swamp (upstate in Dutchess County) and Jamaica Bay (downstate in Kings County/Brooklyn). In both communities, teachers of grades four through six participate in workshops on conservation of wetlands and peer training (which extends the program to an additional 20 to 30 teachers). Through the program, 260 students engage in field investigations and interschool exchanges, share scientific data and stories, and participate in a mentoring program with kindergarten and first-grade students. By participating in the program, students in two communities improve their understanding of their common need to practice wetland conservation.

### **NORTH CAROLINA**

Allison Woods Foundation - \$5,000 Laura Webb, 437 Walnut Street, Statesville, NC 28677

Children of the Watershed Education Project

This project creates and implements a watershed education program to increase awareness among members of the public of how a watershed functions, to teach about the use of water as a natural resource from historical and environmental perspectives, and to promote stewardship of water resources. It provides hands-on programs for students in kindergarten through grade 12 that are conducted in an outdoor setting. A watershed education manual has been developed for use in the programs. In addition, the project sponsors an environmental club for gifted students, facilitates teacher training workshops, and provides environmental education programs for children of low-income families.

HAYWOOD COUNTY 4-H CLUB - \$5,000 WALLACE SIMMONS, P.O. BOX 308, WAYNESVILLE, NC 28786

Environmental Awareness and Water Quality

Through partnerships with several natural resource agencies, older members of the Haywood County 4-H program receive training through such interactive programs as workshops, tours, and field trips focused on environmental issues. Members of that team of 300 informed young people conduct hands-on programs and activities for other young people in scout, school, 4-H, and church groups. They have the potential to reach 10,000 people. The program focuses on water quality and its effect on human life and wildlife. Students participate in North Carolina's Big Sweep (an annual waterway cleanup campaign) and storm drain stenciling activities.

The Natural Resource Education Council - \$5,000 Amy Latham, 635 Roby Conley Road, Marion, NC 28752

Bringing Environmental Education to Western North Carolina

This program brings opportunities for continuing environmental education to 200 teachers of kindergarten through 12th-grade programs in western North Carolina. The Natural Resource Education Council makes structured workshops available through the community college system, The workshops focus on natural resources and provide hands-on approaches to learning. The high-quality educational materials on natural resources that are used in the workshops remain in each participating school when the program has ended.



North Carolina Association of Soil and Water Conservation Districts - \$4,600 Steve Bennett, 3800 Barrett Drive, Raleigh, NC 27609

North Carolina Envirothon Program

The North Carolina Envirothon is a hands-on environmental education competition among teams of high school students. Most of the natural resources agencies in the state, numerous environmental organizations, and some private partners are involved in the program. The Envirothon combines the benefits of environmental education with the benefits of career exploration, provides environmental resources for teachers and students to use, and trains students to work as a team. Envirothon, which is an expansion of an existing program, reaches a minimum of 350 students and 65 teachers statewide.

UNIVERSITY OF NORTH CAROLINA AT WILMINGTON - \$3,530

PAMELA B. WHITLOCK, 601 SOUTH COLLEGE ROAD, WILMINGTON, NC 28403

Forensic Environmental Science: A New Approach to Environmental Studies

Under this project, a new college-level course in forensic environmental science is being developed. The course is intended to bridge the disciplines of environmental science and environmental law for undergraduate and graduate students in the traditional sciences and in the Environmental Studies program of the University of North Carolina at Wilmington, as well as for citizens who have an interest in issues related to and techniques of environmental enforcement. The course emphasizes a group-learning approach, use of scientific methods, and digital technology.

Wake County Public School System - \$4,948 William Carruthers, 3600 Wake Forest Road, Raleigh, NC 27609

Student Investigations of Air Pollution Caused by Automobiles

Assisted by teachers and an industrial chemist, approximately 300 students in chemistry classes collect samples of automotive exhaust and analyze the samples to determine the concentration of air pollutants in the exhaust. Working in small groups, students design their own experiments, monitoring exposure levels and comparing them with levels that comply with federal guidelines that are protective of health. Students in other high schools and members of the community can access the results of the experiments through the school system's World Wide Web site.

### **NORTH DAKOTA**

North Dakota Solid Waste Management Association - \$5,000 Mary Aldrich, P.O. Box 3241, Fargo, ND 58108-3241

Three Waste Reduction Workshops in the State

The waste reduction workshops provided under this project are geared to meeting the goal of reducing waste by 40 percent by 2000. The workshops are publicized in a newsletter published by the North Dakota Solid Waste Management Association, and invitations are sent to members of the association. Through a mass mailing, invitations also are sent to more than 900 teachers, professionals in the waste management industry, officials of cities and counties, recyclers, and other interested parties in the state. Each workshop accommodates 30 participants. The target audience includes elementary and high school teachers, as well as college professors throughout the state; college students who have an interest in geology, sociology, biology, the humanities, government, industrial technology, or engineering; professionals in the waste management industry; officials of cities and counties; recyclers; waster haulers; owners and operators of landfills; and concerned citizens.



### OHIO

Please see page 5 for a profile of a grant awarded to the Environmental Education Council of Ohio by EPA Headquarters.

Hamilton County - \$4,405

Suzanne Magness, 250 William Howard Taft Road, Cincinnati, OH 45219

Teacher Workshop: Exploring the Environment and Decision Making

Through two teacher workshops, Hamilton County seeks to educate middle school teachers about waste reduction and issues related to air quality. The teacher workshops incorporate hands-on lessons from both the Exploring the Environment curriculum and the Decision-Aiding Tools curriculum. In addition, professionals in the solid waste and air quality areas work in partnership to make presentations about local community health, solid waste, and air quality issues.

MIAMI VALLEY EARTH CENTRAL, INC. - \$4,125 Bonnie Bazill-Davis, 81 Halifax Drive, Vandalia, OH 45377

ScienceWorks

The goal of the ScienceWorks program is to sustain the interest of girls in the field of environmental science. To achieve that goal, women in a variety of careers in the environmental sciences visit the classrooms of sixth grade girls and engage them in environmental activities and experiments. Teachers participate in a miniworkshop that helps them understand the program and assist in accomplishing its goals. As the final project of the program, participating students design an experiment for the Children's Water Festival.

### **OKLAHOMA**

LATTA PUBLIC SCHOOL - \$3,100 Nancy Jeter, 1851 West 32nd Street, Ada, OK 74820

Environmental Awareness for Elementary School Students

The project informs students about the health threats posed by environmental pollution of water, soil, and air. Students develop their awareness of career opportunities available in both health and the environmental sciences by exploring scientific information through computer software and the Internet, conducting hands-on exercises, and experiencing field trips to laboratories and water treatment plants, as well as other related activities.

OKLAHOMA STATE UNIVERSITY - \$24,950 Marley Beem, 136 Agriculture Hall, Stillwater, OK 74078

Trailer-Mounted Stream Hydrology Models for Youth and Adult Education

County Cooperative Extension educators, 4-H student leaders, classroom teachers, extension specialists, professors, and professionals in the natural resources field use stream hydrology models to teach the concepts and processes of stream hydrology to young people in Oklahoma. The models, through which long-term processes can be demonstrated in a short period of time, use granulated plastic to simulate particles of soil or sand. The visual project improves the capability to teach stream hydraulics.



Multnomah School District Turnaround School - \$19,639

RHONDA KJARGAARD, 5135 N.E. COLUMBIA BOULEVARD, PORTLAND, OR 97218

Whitaker Ponds Wetlands Area Project and Restoration and Renewal of Natural Habitats

This project connects expelled and at-risk students to their community and environment as they participate in cleanup, restoration, and maintenance of the Whitaker Ponds Wetlands Area, which is located behind their school. The students plant trees, monitor wildlife, implement salmon recovery, remove blackberry bushes, plant native willows, build nature paths, implement water quality testing, and create a larger pond. The students develop a personal stake in their environment, have a positive experience in their community, and have opportunities to demonstrate what they have learned.

OREGON WATERSHEDS - \$1,828 AL WHITE, P.O. BOX 18321, SALEM, OR 97305

Water Quality Monitoring and Stream Enhancement Partnership

With the grant, Oregon Watersheds is expanding its water quality monitoring program to another middle school. Under the project, teachers are given new educational tools, equipment, and training, as well as field support, to help them, their students, and members of the community understand the relationship between water quality and human health. Data generated by students are provided to the Oregon Department of Environmental Quality for use throughout the state to support decision making about issues related to water quality. Students use the data to learn more about the ecosystem, water quality, and the effects of water quality on human health. They then share the information with the community through public events and displays.

Portland State University - \$8,978 Alex Welsch, P.O. Box 751, Portland, OR 97207-0751

Sustainable Business Practice Project

Portland State University is conducting a 10-week, three-credit course on product cycles, design assessment, production processes, sustainable human resource and investment practices, environmental accounting, and corporate social responsibility. The 20 to 30 students and business practitioners in the community who are taking the course also are involved in cooperative service learning projects in the community and a one-day workshop. The workshop includes a public forum on sustainable production goals and methods.

ROGUE VALLEY COUNCIL OF GOVERNMENTS - \$14,600
DAVID JACOB, P.O. BOX 3275, 155 SOUTH SECOND STREET, CENTRAL POINT, OR 97502

Bear Creek Watershed Community Service Project

The goal of this project is to provide approximately 1,000 students, 40 educators, and staff of the natural resources agencies that are partners in the project opportunities to work together to develop and implement enhancement and education projects related to the watershed. During the project, the Rogue Valley Council of Governments conducts two forums on watershed community service projects, sponsors two training sessions for educators, and develops study kits and programs designed to assist in the development and implementation of community service projects. The council also sponsors a student symposium during which students make presentations about their community service projects. In addition, the council coordinates a watershed congress that brings together high school students from throughout the Rogue River basin to discuss issues related to water quality.



THINK LINK DISCOVERY MUSEUM- \$5,000 LANI SCHROEDER, 906 WASHINGTON STREET, LAGRANDE, OR 97850

Activity-Based Exploration of Natural Resources Management Through an Outdoor School

Teachers and parents accompany 250 fourth- and fifth-grade students on field trips to a privately-owned, 2,500-acre property near LaGrande. The landowners, in cooperation with several federal, state, and tribal agencies, are involved in numerous stewardship activities, including projects related to forest health, restoration of wetlands, and enhancement of wildlife and salmon habitats. They have formed a partnership to provide hands-on, outdoor classroom experiences to enhance the students' studies of ecosystems and resource management.

### **PENNSYLVANIA**

CITY OF PHILADELPHIA DEPARTMENT OF PUBLIC HEALTH - \$5,000 RICHARD TOBIN, 1101 MARKET STREET, 8TH FLOOR, PHILADELPHIA, PA 19107

Environmental Education Project

This project is coordinated by the Childhood Lead Poisoning Prevention Program (CLPPP) of the City of Philadelphia Department of Public Health. CLPPP has lengthy experience in identifying, monitoring, reducing, and preventing lead poisoning in Philadelphia. CLPPP provides free public workshops on safe methods of reducing lead hazards at various sites throughout the city, such as home repair supply stores. Workshops held at paint and hardware stores teach both staff and customers how to abate lead hazards in their own homes, in a manner that ensures the safety of the residents. All program materials are designed to be understood easily by the "average person."

Downingtown Area School District (DASD) - \$4,945 Holly M. Maddams, 122 Wallace Avenue, Downingtown, PA 19335

A Butterfly Exhibit at Springton Manor Farm

The Downingtown Area School District and Springton Manor Farm is developing an interactive butterfly exhibit at the farm in Glenmoore. The exhibit includes a butterfly house and garden that provide residents of Chester County and neighboring areas with an interactive environment in which they can learn about butterflies. They also learn to create their own backyard butterfly gardens. Students at Downingtown High School work collaboratively with park staff to develop and operate the butterfly exhibit and a corresponding World Wide Web site.

DREXEL UNIVERSITY - \$22,828

Frank T. Robinson, 3141 Chestnut Street, Philadelphia, PA 19104

The Urban Environment Project (UEP)

The goal of the Urban Environment Project (UEP) is to give urban students in grades seven and eight from public, private, and parochial schools in Philadelphia a better understanding of their environment as an interconnected system. The project includes learning by hands-on gathering and analysis of data and use of inquiry-based instruction to teach about the environment in a manner consistent with state and federal guidelines for education in the sciences and mathematics. The UEP is developing a diverse set of learning activities and experiments that address issues pertinent to the urban environment, such as air quality, lead in paint present in residences, and urban land use.



Face to Face - \$5,000 Eileen Smith, 109 East Price Street, Philadelphia, PA 19144

Camp St. Vincent Pond and Habitat Project

Face to Face is a nonprofit organization that provides outreach services to economically disadvantaged people in the Germantown section of Philadelphia. The project addresses education reform and improvement by incorporating an environmental education curriculum into the existing format of the summer camp program. The goal of the Camp St. Vincent Pond and Habitat Project is to create a pond and butterfly garden and habitat to be used as a teaching tool to educate neighborhood children between the ages of 5 and 12. The project provides a hands-on learning experience for the students that places an emphasis on the basics of biology, chemistry, and physics and introduces the students to the interdisciplinary nature of environmental science. The program is designed to encourage group decision making and make science accessible, interesting, and challenging for children who attend the camp through activities that strengthen inquiry and problem-solving skills.

FRIENDS OF SALT SPRINGS PARK, INC. - \$5,000 Susan D. Chance, P.O. Box 541, Montrose, PA 18801

Earth Keepers, an Earth Education Program

This program is a three-day curriculum sponsored by Earth Keepers that is offered to students in the fourth, fifth, and sixth grades in six school districts in a rural county. Children are bused to Salt Springs State Park to participate in outdoor learning activities. As many as 150 students are participating in the program during each school year. The priority of the program is educational reform; the goal is to improve the skills of students in critical thinking about environmental issues, with an emphasis on inquiry, problem-solving, participatory decision making, and leadership.

GIRLS' CLUB OF ALLENTOWN, INC. - \$5,000
DEBORAH FRIES, 1302 TURNER STREET, ALLENTOWN, PA 18102

We CARE (Children Acting Responsibly Toward the Environment) Program

The goal of the five-year We CARE (Children Acting Responsibly Toward the Environment) program is to provide participants from the Girls' Club of Allentown -- low-income girls, age 5 through 18 -- with an environmental program designed to increase their awareness of individual responsibility and to promote their involvement in environmental activities. The second year of the We CARE program emphasizes pollution prevention. Under that effort, 40 girls, ages 11 through 18, participate in an Environmental Explorers Club; the members of the club take part in classroom activities and hands-on field trips coordinated with partners of the organization and work with younger girls. The grant funds age-appropriate environmental education classes and pollution prevention activities for 125 girls.

Group Against Smog and Pollution, Inc. - \$4,850 Suzanne Seppi, P.O. Box 5165, Pittsburgh, PA 15206

Education and Community Air Monitoring and Air Quality Program

This program is primarily an air quality education project based on the use of a sophisticated educational air monitoring and software program brought into the schools on a rotating basis for use in air investigations. The monitor, software components, and resource books, along with training for teachers and students, are made available to each school. The program works primarily with 15 middle and high schools in the Allegheny County region. The monitor and software used in the program also are used in the community for demonstrations and in addressing local problems related to air quality.



Pennsylvania Center for Environmental Education - \$5,000 Dr. Paulette Johnson, Slippery Rock University, Slippery Rock, PA 16053

Essentials of Environmental Education for Pennsylvania

The eight-hour Essentials of Environmental Education for Pennsylvania workshop is accompanied by a printed manual and a companion primer. Both publications are collections of basic information about environmental issues, with an emphasis on topics specific to Pennsylvania. Pilot workshops are offered in both the western and the eastern regions of the state. After the pilot efforts have been completed, the workshops will be made available throughout the state. The target audience for the workshops is classroom teachers in kindergarten through 12th-grade programs and informal educators who have little prior background or training in environmental education. Informal educators include staff of such agencies as wildlife conservation offices, nature centers, parks, zoos, and other organizations that carry on educational missions.

The Pennsylvania School for the Deaf - \$4,000

Joseph E. Fischgrund, 100 West School House Lane, Philadelphia, PA 19144

Adventures in Learning Program

The Adventures in Learning Program combines the physical resources and staff expertise of the Mont Alto Campus of the Pennsylvania State University and the Pennsylvania School for the Deaf (PSD), exposing minority students, ages 13 through 15, who have severe to profound hearing loss to a university experience. The unique collaborative project brings students from PSD to the Mont Alto Campus for a four-day experience in environmental learning and college living. The program emphasizes success-oriented, experiential learning activities that enhance self-esteem.

The Pennsylvania State University - The Dickinson School of Law - \$5,000 Christine Kellett, 110 Technology Center Building, University Park, PA 16802

Training in Environmental Law and Regulations for Vocational Agriculture Teachers

The Agricultural Law Research and Education Center and its partners are organizing and presenting a problem-based learning workshop for teachers of secondary school vocational agriculture, a group that traditional environmental education programs ordinarily do not reach. The project is being delivered in a one- or two-day workshop held at the Dickinson School of Law in Carlisle in June 2000. Secondary school teachers of vocational agriculture from the northeast and middle-Atlantic states are the primary target audience; however, other groups, such as staff of the Cooperative Extension System and teachers of high school science and government programs, also are encouraged to attend the workshop.

Pocono Environmental Education Center (PEEC) - \$2,465 John Padalino, Rural Route 2, Box 1010, Dingmans Ferry, PA 18328

Much Ado About Water

The Pocono Environmental Education Center (PEEC) expands upon an existing environmental education program, the School Water Quality Monitoring Program, by involving parents with their children in an active team-learning experience. Along with students from Pocono Elementary School, parents and guardians come to the PEEC to study water quality and environmental issues with their children. The program involves 35 fifth-grade students, their parents, and two teachers from Pocono Elementary School. The program is intended to strengthen the family unit and empower families by providing them an opportunity to develop the knowledge and skills necessary to protect water quality in their communities.



SCHOOL DISTRICT OF PHILADELPHIA - \$4,280

JOANNE MAULE-SCHMIDT, J. S. JENKS ELEMENTARY SCHOOL, ROOM 408, 21st Street, South of Parkway, Philadelphia, PA 19103

Water, Our Link to the Schuylkill, Downhill to the Estuary

This program involves 600 students in kindergarten through eighth grade, parents, and the community of J.S. Jenks Elementary School. It consists of two main parts that link the study of water with its relationship to the Delaware Estuary. One part of the program is the scientific study of the natural environment; the other is the artistic study of the natural environment. The students take field trips to study their historical, geographical, environmental, cultural, and ecological relationship to the water.

### **PUERTO RICO**

Technological College of the Municipality of San Juan - \$24,700

Olga A. Benitez, Chancellor's Office, 180 Jose Oliver Avenue, Urb. Industrial Tres Monjitas, San Juan, PR 00918

Getting a Head Start on Environmental Education

This project provides education in environmental health for teachers and parents of preschool children who live in the vicinity of the highly contaminated San Jose lagoon in the San Juan Bay Estuary. Two eight-part workshops target teachers, health professionals, and parents. Participants develop educational materials suitable for a tropical environment that teach children how pollution, environmental health, and human behavior are connected. Activities include identification of specific risk factors and behaviors in the participants' immediate communities and development of a guide that focuses on health issues relevant to nearby communities and Head Start centers. Staff of Head Start programs develop activities to help children form healthy habits.

### **RHODE ISLAND**

Brown University, Swearer Center for Public Service - \$24,492 Kris Hermanns, Box 1974, Providence, RI 02912

Environmental Health Action Project

This project involves families in a coordinated effort to improve the health and quality of life of asthmatics. The work supplements existing clinic services with home visits and educational outreach tailored to the language, level of literacy, and health needs of individual families. Workers identify and eliminate environmental factors in the home that trigger asthma attacks.

NARRAGANSETT INDIAN TRIBE, NATURAL RESOURCE DEPARTMENT - \$4,046 DINALYN SPEARS AUDETTE, P.O. Box 268, CHARLESTOWN, RI 02813

Active Watershed Management

The Narragansett Indian Tribe developed a plan to protect the environment and the health of its members. The tribe hosts a workshop that is a coordinated effort of the tribe, the Southern Rhode Island Conservation District, and the University of Rhode Island. The Active Watershed Management program also includes eight classroom units, three field trips, and a culminating event. The project also includes distribution of a newsletter that highlights environmental hazards.



University of Rhode Island (URI) Cooperative Extension Education Center - \$4,938 June Kinigstein, East Alumni Avenue, Kingston, RI 02881-0804

What's a Wetland?

Classes of children in third through sixth grades participate in the Guiding Education in Mathematics and Science Network (GEMSNET) program. Students from a wide range of socioeconomic and ethnic backgrounds participate in the program. Children and teachers explore the wetlands with a trained student from the University of Rhode Island (URI) or a URI master gardener as a facilitator.

Woonsocket High School Education Department - \$5,000 Linda Jzyk, 108 High Street, Woonsocket, RI 02895

Cass Park Conservation Coalition

This project establishes a collaborative effort that involves students, teachers, state and municipal officials, and representatives of community groups in evaluating, monitoring, and restoring Cass Park. A group of students who have been identified as at risk of dropping out of school are implementing the program. The ultimate goal is to reduce pollution of Cass Pond by storm-water runoff, improve the landscape of Cass Park, and develop the area into an ecoclassroom.

### **SOUTH CAROLINA**

AIRPORT HIGH SCHOOL, LEXINGTON COUNTY SCHOOL DISTRICT 2 - \$4,936 LATOYA GLOVER, 1315 BOSTON AVENUE, WEST COLUMBIA, SC 29170

Macroinvertebrate Biological Assessment of Streams

This project provides a stream monitoring program for approximately 50 minority biology students at Airport High School. Biologists with the South Carolina Department of Health and Environmental Control (SCDHEC) work with the students to demonstrate collection techniques and help the students identify the invertebrates collected. Macroinvertebrate assessments conducted by SCDHEC provide data for comparison, and the project provides biologists the opportunity to evaluate the effectiveness of monitoring programs conducted by volunteers.

CITY OF NORTH CHARLESTON - \$5,000 SHANNON B. PRAETE, 4900 LACROSS ROAD, P.O. BOX 190016, NORTH CHARLESTON, SC 29419

SOS: Summer of the Sea Program

The SOS: Summer of the Sea Program works with 50 to 75 young people between the ages of 8 and 11 to increase their understanding of marine life, communities, and processes. The six-week project is a magnet program that involves primarily minority and low-income children in the North Charleston area who attend camp programs at community centers throughout the area. South Carolina's marshes play a prominent role in the hands-on program, which actively engages participants in learning to solve problems and think critically about the marine environment and its sustainability.

University of South Carolina - \$4,918

Debra Wingard, Aiken Campus, Sponsored Programs, Columbia, SC 29208

Chemical Analysis of Rainwater Runoff from an Urban Wetlands Setting

Through a partnership with the city of Aiken, the University of South Carolina seeks to explore the chemical nature of wetland pond runoff by training middle and high school teachers in handling environmental samples, analyzing such samples, and managing data. The teachers take the experience they gain through the project back to the classroom. Teachers are trained through a special topics course at the university.



Youth Service Charleston, Inc. - \$5,000 Jennifer Rezeli, P.O. Box 22085, Charleston, SC 29413

Earth Force Community Action and Problem Solving (CAPS)

Youth Service Charleston, Inc., an organization that builds stronger citizens and communities through youth service, and Earth Force, a national environmental organization for youth, are partners in the implementation of the Earth Force Community Action and Problem Solving (CAPS) program. CAPS is an environmental problem-solving program through which middle-school students and their adult leaders identify local environmental issues and create sustainable solutions to those problems. The action projects they create benefit the environment by bringing about change in local policies or in the practices of citizens. The project expands the program from 16 sites to 24 sites; 1,000 students and 60 educators are involved in the program.

### **SOUTH DAKOTA**

South Dakota Discovery Center and Aquarium - \$3,700 Terry Lewis, 805 West Sioux Avenue, Pierre, SD 57501

WOW! Adventures in a Wetland!

This project consists of two four-day workshops for teachers. The objectives of the program are to improve teachers' understanding of the science related to wetlands, to provide quality curriculum materials that engage students in wetland studies, and to prepare teachers to involve their classes in field experiences related to local environmental issues. The program conforms to EPA's regional priority of educating teachers about environmental issues to improve their teaching skills in the area of environmental education. The program targets teachers of kindergarten to eighth-grade classes in school districts located in the vicinity of the wetlands. A total of 50 teachers are receiving benefits from the two workshops.

### **TENNESSEE**

FOUNTAIN CITY ELEMENTARY SCHOOL - \$3,332 CATHY L. SUMMA, 2910 MONTBELLE DRIVE, KNOXVILLE, TN 37918

Beyond the Basics

This program trains 25 classroom teachers, 2 classroom aides, 2 resource teachers, 3 administrative personnel, and 12 teaching interns in a series of five, day-long intensive workshops. Participants explore environmental problems and issues; learn about and practice the use of new tools, resources and activities; and develop contacts with other teachers involved in environmental education. A World Wide Web site that documents the experiences of the group provides much of the content of the program to a larger audience.

Global Village Institute - \$5,000 Albert Bates, P.O. Box 90, 560 Farm Road, Summertown, TN 38483

Ecovillage Children's Program

The Ecovillage Children's Program is designed to immerse 50 to 70 children of low-income families living in shelters for the homeless in the benefits of cultivating sustainable lifestyles. Six four-day sessions provide housing and instruction for 8 to 12 children. To develop knowledge of and hands-on experience in practices that contribute to sustainable life styles, the children conduct experiments in monitoring the generation of waste and the use of energy and water.



### **TEXAS**

THE BOTANICAL RESEARCH INSTITUTE OF TEXAS - \$7,600
PATRICIA HARRISON, 509 PECAN STREET, FORT WORTH, TX 76102

Practical Steps Toward Texas Schoolyard Habitats

The Botanical Research Institute of Texas, in partnership with the Texas Society for Ecological Restoration, is developing and conducting a three-part workshop for teachers that focuses on the creation and use of an outdoor classroom or schoolyard habitat. Teachers are learning how to plan, design, construct, and maintain such an outdoor schoolyard habitat.

Chance, Inc. - \$5,900

JOE LADD, 681 7th S.W., PARIS, TEXAS 75460

Educating Parents about Environmental Dangers to Children

Chance, Inc. reaches an underserved segment of ethnically diverse, low-income families participating in traditional financial service needs programs. As part of their home visit program, Chance is educating their clients about environmental health issues, including pest control, pesticide use, lead poisoning, poisoning from gas heaters, radon, mercury, asbestos, secondhand smoke, and poisonous plants.

Council for Environmental Education - \$21,400

Donna Asbury, 5555 Morningside Drive, Suite 212, Houston, TX 77005

Training Program for Spanish-Speaking Audiences

Through Project WILD, the Council for Environmental Education provides Spanish-language versions of activities to persons whose primary language is Spanish. Workshops focus on hands-on environmental programs in the community and in schools for teachers, preservice teachers, informal educators, and volunteers from the community. A core group of facilitators is identified to become trainers, so that the program can be replicated in Spanish to serve communities along the border of the United States and Mexico.

THE LEAF ALLIANCE - \$4,998

Susan Alexander, Route 1, Box 335, Pineland, TX 75968

Tools for Teachers: Sharing the Discovering Watersheds Trunk Kits

Materials for three Discovering Watersheds Trunk Kits are being assembled to be distributed to three regional offices of the Texas Education Agency for use by teachers in their service areas. The trunk kits focus on students' choices and responsibilities for their health and the health of their communities. The unique, activity-based, hands-on kits are designed to teach middle school students about their watersheds, the environmental problems of those watersheds, and potential solutions to those problems in a motivating manner suitable for use in both indoor and outdoor classrooms.

NATIONAL WILDLIFE FEDERATION - \$9,724

SHAWN STANLEY, 4505 SPICEWOOD SPRINGS, SUITE 300, AUSTIN, TX 78759

Tracks to Wetlands: Teacher Training

The National Wildlife Federation, through its Gulf States Natural Resource Center, provides a variety of inservice educational opportunities and hands-on skill development for students, all of which use wetlands as a living laboratory. Animal Tracks educational materials teach concepts related to wildlife and the environment in a manner that is sensitive to cultural diversity. Many of the materials are available in Spanish.



South Texas Youth Ranch - \$4,978 Nancy Singler, 200 South Jackson Road, Pharr, TX 78577

Nature Trail and Native Plant Identification Project

The South Texas Youth Ranch is a residential and working facility for at-risk youth, age 11 through 17, from diverse and low socioeconomic backgrounds. The young people are developing a quarter-mile nature trail and plant identification project that will provide interactive, hands-on instruction. The nature trail focuses on native plants and their maintenance and protection of natural resources. Students provide instructional tours to visitors, while teaching respect and appreciation for nature and the environment to the residents.

Stephen F. Austin State University - \$4,996 Jim Isleib, P.O. Box 6109, SFA Station, Nacogdoches, TX 75962

Investigating and Evaluating Environmental Issues and Action

Instructors of sixth- through eighth-grade classes acquire knowledge and skills associated with analysis of environmental issues, investigation of such issues, and collection and processing of information through attendance at a week-long in-service training workshop. Within one year of completing the workshop, teachers or their students present the program at least once at a national, state, or local event.

### **UTAH**

Please see page 5 for a profile of a grant awarded to the National Energy Foundation by EPA Headquarters.

Four Corners School of Outdoor Education - \$5,000

Janet Ross, P.O. Box 1029, Monticello, UT 84535

(Project activity will take place in Arizona, Colorado, New Mexico, and Utah)

The Colorado Plateau, a Roving Teacher Education and Mentoring Program

A two-week field-based summer institute for elementary school teachers teaches concepts of bioregion. Participants in the institute serve as mentors to their colleagues and science resource centers are provided to each school. During the summer institute and throughout the school year, teachers are introduced to existing environmental education curricula, and modeling and mentoring helps build their confidence in using the curricula.

FOUR CORNERS SCHOOL OF OUTDOOR EDUCATION - \$12,000 JANET ROSS, P.O. BOX 1029, MONTICELLO, UT 84535

The Colorado Plateau: Our Pilot Program, a Roving Teacher Education and Mentoring Program

This program establishes and tests the effectiveness of the Roving Teacher Education and Mentoring program, a delivery system for taking environmental education, and specifically teacher training in environmental education curricula and techniques, to rural school districts throughout a large geographic area. A summer institute begins the process by giving teachers an intensive two-week introduction to their own bioregion and to environmental education curricula and techniques. Teachers are introduced to existing environmental education curricula, such as Project WILD and Project Learning Tree. The long-term goal of the program is to build sustainable environmental education programs in participating schools through a combination of teacher training, mentoring, and development of resources. The pilot program takes the two-year program into 12 schools, three in each of the states in the Four Corners area. Over time, the project will serve more than 200 primarily rural, conservative, culturally diverse elementary schools on the Colorado Plateau, in clusters of 28 schools at a



time, for two years per cluster. The plateau consists of an area of 130,000 square miles that includes portions of Arizona, Colorado, New Mexico, and Utah. It is expected that the program will serve a total of 74,572 students in 54 school districts.

North Fork Preservation Alliance - \$5,000 Julie Mack, Rural Route 3, Box 624-A, Sundance, UT 84604

Four Seasons Nature Program: Experiential Environmental Education

The focus of the program is educational reform – educating students 12 to 15 years old in the North Fork of Provo Canyon and Wasatch County about environmental issues as a catalyst to advance social change. The students have been determined by licensed school counselors to be potentially at risk of participating in criminal activities, such as involvement in gangs or drug abuse. The program serves four classes of 10 students each per year. The secondary goal of the program is to include protection of the ecosystem and community issues – to educate the public about environmental issues specific to the North Fork community.

STOKES NATURE CENTER - \$5,000 JEN LEVY, P.O. BOX 4204, LOGAN, UT 84323

Bear River Watershed Educational Program

The purpose of this project is to develop an educational program on the Bear River watershed for educators and their students. The main objectives of the effort are to create a citizenry that is informed about how a watershed functions; to develop in students skills in assessing and monitoring the health of the Bear River watershed and involve them in carrying out those tasks; to inform students about actions they can take to maintain a healthy watershed by applying science and becoming involved in the political process; and to create an understanding of and involvement in ecological restoration of the watershed. Under the project, a curriculum and an activity trunk are being developed. An interactive World Wide Web site on the Bear River watershed links users to existing Web sites on the same topic, and teachers are trained to use the materials developed. The primary audience is sixth-grade students and teachers in the Bear River watershed, which includes northern Utah, southeastern Idaho, and southwestern Wyoming. Scouts and members of 4-H clubs are made aware of the program through promotional flyers, a curriculum library, and the Web site.

Utah Society for Environmental Education - \$25,000 Tim Brown, 300 South 400 East, Suite G4, Salt Lake City, UT 84111

Tools for Informal Environmental Educators in Utah

This project provides knowledge, training, and materials to 120 in-service providers of environmental education. Among the subjects to be covered are pedagogy and education reform. Information about environmental education resources and materials also are provided. The purpose of the project is to improve coordination among efforts in environmental education and build a network of informal providers of environmental education. The providers are responsible for training teachers. Four workshops are being offered: two in the Salt Lake area, one in St. George, and one in Logan. The primary audience for the project is informal environmental educators, including facilitators of such programs as Project WET, Project WILD, and Ag in the Classroom, as well as state coordinators. Also included are such providers as nature centers and museums. The secondary audience is the thousands of teachers trained each year by the providers described above. Facilitators are trained in state-of-the-art environmental education resources, such as the Guidelines for Excellence in Environmental Education.



### **VERMONT**

Please see page 6 for a profile of a grant awarded to the State of Vermont Department of Public Service by EPA Headquarters.

SHELBURNE FARMS - \$14,550

JUDY ELSON, 1611 HARBOR ROAD, SHELBURNE, VT 05482

People and The Northern Forest: A Sustainable Relationship

This project designs and delivers a series of workshops for teachers of fourth- through eighth-grade classes, providing them with the skills and knowledge they need to develop a curriculum that inspires students to become active stewards of the forest. The program provides ongoing professional support to participating teachers, assisting them in integrating issues related to the northern forest into their curricula, while meeting the objectives outlined in the Vermont Framework of Standards and Learning Opportunities. The workshops accommodate 120 educators, who in turn will reach 3,000 students each year.

State of Vermont Department of Health - \$3,820 Karen Garbarino, 108 Cherry Street, Burlington, VT 05402

Indoor Air Quality Education in Schools

Under this project, staff of the State of Vermont Department of Health train a representative teaching professional from the pilot supervisory union in basic issues related to indoor air quality and ventilation. After the training, initial concerns are addressed by the school at the local level, and an indoor air quality management plan is developed. The indoor air quality coordinator also is responsible for incorporating the new knowledge into the supervisory union's health education curriculum.

Winooski Valley Park District - \$4,000 Jennifer Ely, Ethan Allen Homestead, Burlington, VT 05401

State of the Winooski Basin Environmental Education Program and Youth Conference

This project elevates students' awareness of the many values of wetlands, including their role in trapping phosphorus. It complements and builds upon existing educational resources, teaching students a variety of hands-on skills that they can apply to real-life issues, such as how land use affects environmental quality, mapping, and quantitative monitoring of water, as well as professional letter-writing, public speaking, and how the political process works.

### **U.S. VIRGIN ISLANDS**

St. Croix Aquarium and Marine Education Center - \$5,000 Longin Kaczmarsky, P.O. Box 1217, Frederiksted, St. Croix, VI 00841

Education Program: Marine Ecosystem Protection Video

This program educates the public about the marine ecosystem by training staff of the Marine Education Center to teach educators, students, and the general public about protecting local marine ecosystems. Participants learn how to engage center visitors in activities that help them better understand local environments. They also learn how activities such as discharge of untreated sewage, damage to coral reefs caused by commercial activities, and non-point-source pollution affect the island's priceless ecosystems. Among the goals of the project is the fostering of effective education about marine ecosystems in local public schools. A video is being produced to facilitate the training of current and future staff.



St. Croix Environmental Association. Inc. - \$12,014 Robin Freeman, Arawak Building, Suite 3, Gallows Bay, Christiansted, St. Croix, VI 00820

My Environment

The St. Croix Environmental Association, Inc. is doubling the current offerings of its My Environment program, which emphasizes the development of an understanding of the special characteristics of St. Croix's land and sea ecosystems and the effects of human activity on those ecosystems. The program reaches more than 2,000 children through in-school, after-school, and Saturday programs and an Earth Day Eco-Fair. The program includes study of a Caribbean seafood web; identification of mangroves and study of their importance; field trips; and hands-on activities that teach the importance of reduction of solid waste, reforestation, and community involvement.

### **VIRGINIA**

Buchanan County Public Schools - \$5,000 Franklin Jones, P.O. Box 833, Grundy, VA 24614

Save Our Streams Teacher Training

The purpose of this project is to improve environmental education and awareness of stream and water quality in Buchanan County by providing workshops based on the Save Our Streams curriculum developed by the Izaak Walton League of America. The goals and objectives of the project encourage participating faculty to become competent in using and implementing the curriculum, increase environmental knowledge, enhance critical-thinking skills, and promote awareness of water quality. The program is being implemented in classrooms and science seminar groups, and a network of stream monitoring teams are being established throughout the county. The project serves 20 teachers of students in kindergarten through 12th grade in Buchanan County, who incorporate into their lesson plans the ideas they have developed through their participation in the project.

CHARLOTTE COUNTY PUBLIC SCHOOLS, RANDOLPH-HENRY HIGH SCHOOL - \$5,000 CAROLYN M. BAKER, P.O. BOX 668, CHARLOTTE COURT HOUSE, VA 23923

A High School Land Laboratory

The Land Laboratory at Randolph Henry High School is a demonstration site for good practices in farming, whether for pleasure or for profit, that also offers alternatives to tobacco farming. Students in the high school agriculture class become mentors to preschool students, enhancing and improving student achievement by establishing an innovative learning environment that incorporates curriculum objectives and an awareness of the environment. The most exciting component of the project is the merging of the Agricultural Department with the prekindergarten program. The agriculture students work with the preschool students to plant fall and spring crops and watch them grow in their natural environment and help them learn the names of farm animals and their offspring. Each preschooler adopts a calf to feed and care for and studies the growth of the catfish that are raised at the facility.

ESSEX COUNTY PUBLIC SCHOOLS - \$14,600 ELISSA F. BROWN, P.O. BOX 756, TAPPAHANNOCK, VA 22560

R.E.A.C.H. (Recognizing Environmental Activities Creating Health Hazards)

The Chesapeake Bay Governor's School for Marine and Environmental Science is a public secondary program that serves 11th and 12th grade students through a half-day learning experience. The participants are 81 students from 12 school systems in the Middle Peninsula and Northern Neck regions of Virginia. Through a rigorous and enriching curriculum that consists of college-level mathematics and science courses, students have



the opportunity to foster an appreciation and respect for the environment by integrating science, technology, community service, and research. The 12 school districts participating in the program share a common concern for the well-being and preservation of the Chesapeake Bay and its tributaries.

Montgomery County Public Schools - \$4,800 Catherine R. Ney, 200 Junkin Street, Christiansburg, VA 24073

Designing and Implementing a Wildlife Program

The goal of this project is to design and implement a community-based project at Christiansburg Elementary School (CES), in cooperation with the Virginia Polytechnic Institute and State University's Institute for Connecting Science Research to the Classroom (Virginia Tech-ICSRC). The project is a model for efforts to educate the public about the importance of the preservation of wildlife habitat in their communities. Students at CES use on-line media resources at the school to design, build, and link CES Wildlife Web sites to the Internet. They also use the Teaching Inquiry with the Latest Technology (TILT) Conference to build public awareness and concern for wildlife in their communities. The target audience is two-fold: the partners and the public. The partners -- 80 students at CES and their teachers and parents and Virginia Tech's ICSRC and its student volunteers -- are reached through direct interaction with the project. The public is informed about the project through the media, the CES Wildlife Web sites, the TILT Conference, and workshops.

### **WASHINGTON**

CITY OF RICHLAND - \$5,000 GAIL BAASCH, P.O. BOX 190, RICHLAND, WA 99352

Shopping Smarter for Our Home: An Environmental Workshop

A workshop is being held to teach environmentally conscious shopping in an interactive manner that is fun for participants. Packaging alternatives, durable products, bulk purchasing, purchasing of products made from recycled materials, and reuse of grocery bags are among the subjects discussed. Employees of city and county agencies work in teams to showcase local issues related to solid waste, recycling opportunities, and the importance of using safer alternatives. From ingredients generally found in the home, such safer alternatives are made and demonstrated, and the proper disposal of household hazardous waste is discussed. The workshop includes a hands-on tour of a local grocery store, and a comparison of packaging waste and prices is carried out. Each participant receives handouts, a 22-page book of recipes for safer alternatives, and a canvas "Earth" shopping bag.

Port Gamble S'Klallam Tribe - \$3,000 Headstart Program Sharon Purser, 31912 Little Boston Road NE, Kingston, WA 98346

Port Gamble S'Klallam Tribe Environmental Day 1999

The Port Gamble S'Klallam Tribe hosts an annual forum for tribal members of all ages and school teachers in the local community to gather together to learn more about the environmental concerns that confront the reservation, northern Kitsap Peninsula, and the county. This year, the Environmental Day focuses on methods of reducing, reusing, and recycling refuse. Information booths, presentations by guest speakers, small group discussions, and experiential demonstrations are offered.



St. Martin's College - \$5,000

HUABIN CHEN, 5300 PACIFIC AVENUE SE, LACEY, WA 98503

Integrating Telecommunication and Computer Technologies into Environmental Education

St. Martin's College and the Hoquiam School District are collaborating on an effort to enhance environmental education in the school district through in-service teacher training in the application of technology to environmental education. The project fosters global awareness and international cooperation by addressing environmental issues through telecommunications. Under the project, 20 rural teachers (who will train 30 additional teachers) are trained in how to use E-mail, the Internet, CD-ROMs, videodiscs, probeware, and other technology as learning tools for environmental education. The school district is located in a economically depressed rural community.

THURSTON CONSERVATION DISTRICT - \$25,000

KATHY JACOBSON, 2400 BRISTOL COURT, SW, SUITE 100, OLYMPIA, WA 98502

Teacher Training in Using Biological Assessment

Thurston Conservation District is conducting a year-long project to educate 40 teachers and 1,500 students about biological assessment methods based on research that can be used to determine the health of salmon habitats in the South Sound. The goals of the project are to introduce teachers and students to salmon biology, stream ecology, and such recent developments in watershed science as biological assessment; to gather data useful to the monitoring and restoration programs of tribes and the county; and to address local initiatives and the state of Washington's salmon recovery goals by preparing and supporting the students to work in teams to undertake projects focused on the community. At the end of the year, a student congress convenes to share and analyze water quality data and biological assessment surveys.

Washington State University Center of Environmental Education - \$20,000

Darin Saul, Director, Washington State University Center of Environmental Education Pullman, WA 99164-1025

Organizing Environmental Education in North-Central Washington

This grant expands and organizes environmental education in north-central Washington by linking resources of the Colville Confederated Tribes with local teachers and schools and by providing training workshops and resources to teachers. Under the expanded effort, 60 teachers in five rural school districts are reached. A planning and training retreat, a needs assessment of the tribe's staff and programs, and an assessment of the local schools' and teachers' needs are being offered. The project also establishes links with other environmental education programs, conducts teacher training workshops that integrates themes highlighted in the assessments, and integrates Native American perspectives into local curricula.

Washington State University Spokane - \$6,238

Dr. Sylvia Adams Oliver, 601 West First Avenue, Spokane, WA 99201

CityLab After-School Environmental Science Camps

Washington State University (WSU) Spokane CityLab is working in partnership with Shaw and Glover middle schools in Spokane and with the Health Improvement Partnership to provide students and teachers with the technology and resources necessary for hands-on experience in science. The environmental curriculum focuses on the quality of water and soil and contamination with heavy metals of water systems in the Silver Valley near Spokane. At each school, the camps run for six weeks in the fall and are offered two days per week (one and one-half or two hours a day) after regular school hours. Teachers attend a one-day intensive training workshop to receive instruction in the environmental curriculum and laboratory modules and training in instructional strategies. The students' findings are disseminated to members of the community through posters, letters, and coverage by local media.



### **WEST VIRGINIA**

Little Eagle Childcare Center - \$5,000
Paula Marrone-Reese, P.O. Box 1208/STOP 900, Martinsburg, WV 25401

Beginning Bee's - Bugs, Birds, and Bushes

This project provides preschool children with exposure to their environment. Under the project, the Little Eagle Childcare Center is developing an environmental education site that includes native plants designed to attract butterflies and other insects. A water site is being installed for water plants and aquatic animals (tadpoles, goldfish, and others), and regular observation sites are being erected. The site includes two self-pollinating fruit trees. Local teachers trained in preschool education assist in the project. The goal of the program is to create an atmosphere in which children at an early age can become aware of and be challenged by their environment.

### **WISCONSIN**

MILWAUKEE COMMUNITY SERVICE CORPS - \$4,559

JOANNE SCIGLIANO, 1150 E. BRADY STREET, MILWAUKEE, WI 53202

Mobile Recycling and Waste Reduction Education Program

Members of the Milwaukee Community Service Corps and Volunteers In Service To America (VISTA) are trained to educate third and fourth graders about recycling and waste reduction. After training, a team of two volunteers visits classrooms throughout the Milwaukee area. Activities are sent to the participating classes before the visits, so that the students can prepare for the visit. During the presentations, students are engaged in hands-on learning activities to help them understand concepts and issues related to recycling.

Polk County - \$5,000 Jacob Bellinsky, 215 Main Street, P.O. Box 460, Balsam Lake, WI 54810

Riparian Education and Stewardship

The Riparian Education and Stewardship Project seeks to engage stakeholders in a comprehensive program designed to retain and restore vegetative buffers, improve shoreline habitat, and reduce pollution caused by runoff. Through a slide show, an exhibit, and promotional materials, which are being developed under the project, members of the community are given information about riparian buffer zones. In addition, workshops, tours, and demonstrations are offered to educate the community about water quality and habitat issues related to riparian zones.



# Notes



# Chart: Ratio of Applications Received to Awards Made

												_	
Total Awards Made	20	19	2.5	2.7	20	15	2.0	19	19	13	197	9	206
Total Applications Received	120	139	76	116	143	72	65	53	96	78	958	270	1,228
Awards Made	9	5	5	3	9	8	5	5	5	8	56	HEADQUARTERS	TOTAL
Applications Received \$5,001 to \$25,000	55	84	31	67	69	40	30	28	59	09	523		
Awards Made	14	14	20	24	14	7	15	14	14	5	141		
Applications Received \$5,000 or Less	65	55	45	49	7.4	32	35	2.5	37	18	435		
Region	1	2	3	4	5	9	7	8	6	10	All		



## **EPA REGIONAL ENVIRONMENTAL EDUCATION COORDINATORS**

Region 1 - CT, ME, MA, NH, RI, VT

### KRISTEN CONROY

U.S. EPA, Region 1

One Congress Street, Suite 1100 (RAA)

Boston, MA 02114-2023 Phone: 617-918-1069 Fax: 617-918-1029

E-mail: conroy.kristen@epa.gov

Region 2 - NJ, NY, Puerto Rico, Virgin Islands

### TERRY IPPOLITO

U.S. EPA, Region 2 290 Broadway, 26th Floor New York, NY 10007 Phone: 212-637-3671 Fax: 212-637-4445

E-mail: ippolito.teresa@epa.gov

Region 3 - DE, DC, MD, PA, VA, WV

### LARRY BROWN

U.S. EPA, Region 3 1650 Arch (3CG00) Philadelphia, PA 19107 Phone: 215-814-5527 Fax: 215-814-5104 E-mail: brown.larry@epa.gov

Region 4 - AL, FL, GA, KY, MS, NC, SC, TN

### JANIE FOY

U.S. EPA, Region 4 61 Forsyth Street, SW Atlanta, GA 30303 Phone: 404-562-8432 Fax: 404-562-8335

E-mail: nawyn.richard@epa.gov

Region 5 - IL, IN, MI, MN, OH, WI

### SUZANNE SARIC

U.S. EPA, Region 5 77 West Jackson Boulevard (PI-19J)

Chicago, IL 60604 Phone: 312-353-3209 Fax: 312-353-1155

E-mail: saric.suzanne@epa.gov

Region 6 - AR, LA, NM, OK, TX

### Jo Taylor

U.S. EPA, Region 6 1445 Ross Avenue (6XA) Dallas, TX 75202 Phone: 214-665-2200 Fax: 214-665-2204 E-mail: taylor.jo@epa.gov

Region 7 - IA, KS, MO, NE

### **ROWENA MICHAELS**

U.S. EPA, Region 7 901 North 5th Street Kansas City, KS 66101 Phone: 913-551-7003 Fax: 913-551-7066

E-mail: michaels.rowena@epa.gov

Region 8 - CO, MT, ND, SD, UT, WY

### **CECE FORGET**

U.S. EPA, Region 8
Denver Place (OC)
999 18th Street, Suite 500
Denver, CO 80202-2405
Phone: 303-312-6605
Fax: 303-312-6961
E-mail: forget.cece@epa.gov



Region 9 – AZ, CA, HI, NV, American Samoa, Guam, N. Marianas, Palau

### STACEY BENFER

U.S. EPA, Region 9 75 Hawthorne Street (E2) San Francisco, CA 94105 Phone: 415-744-1161 Fax: 415-744-1072

E-mail: benfer.stacey@epa.gov

Region 10 - AK, ID, OR, WA

### SALLY HANFT

U.S. EPA, Region 10 1200 Sixth Avenue (EXA-142)

Seattle, WA 98101 Phone: 206-553-1207 Fax: 206-553-0149 E-mail: hanft.sally@epa.gov

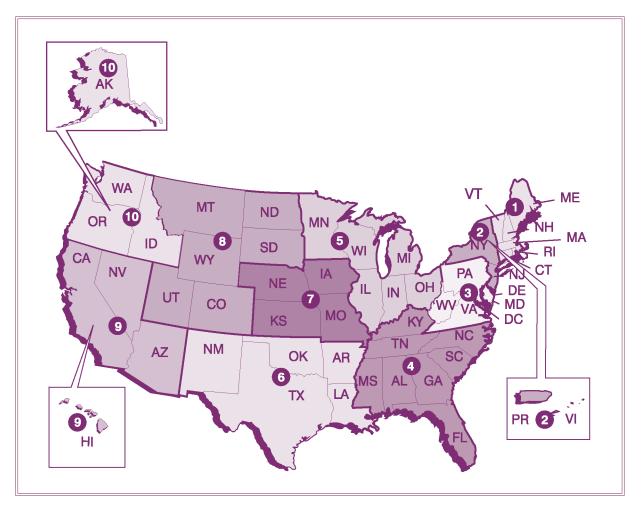
### Headquarters

### U.S. EPA

Office of Environmental Education 401 M Street, SW (1704) Washington, DC 20460 Phone: 202-260-8619

Fax: 202-260-4095

E-mail: enviroed.group@epa.gov







U.S. Environmental Protection Agency Office of Communications, Education, and Media Relations (1704) Washington, DC 20460

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