2005 **Environmental** Education Grant Profiles

# 2005 Environmental Education Grant Profiles



U.S. Environmental Protection Agency
Office of Environmental Education
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Washington, DC 20460

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## **SUMMARY STATEMENT**

Annual grants awarded under the National Environmental Education Act (Public Law 101-619)

This report summarizes 134 environmental education grants awarded by the U.S. Environmental Protection Agency (EPA) during fiscal year (FY) 2005. 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. EPA Headquarters awards grants larger than \$50,000 and the regional offices award smaller grants.

The grants are awarded to stimulate environmental education and support projects that address EPA educational priorities such as: state education reform and capacity building, human health, teacher training, career development, and community environmental issues. 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 improve environmental quality through increased stewardship. Organizations eligible for grants under the program are: a college or university, tribal or local education agency, state education or environmental agency, nonprofit 501(c)(3) organization, or non-commercial educational broadcasting entity.

In FY 2005, Congress appropriated almost \$3 million for the grants program which leveraged nearly \$2.8 million in matching funds provided by grant recipients. Because federal funds may not exceed 75 percent of the total funding for a project, each grant recipient is required to provide from their own organization or a partner organization a matching contribution with a value of at least \$1 for every \$3 provided by EPA. The total matching funds leveraged nationwide often exceed the required amount and surpass the total funding provided by EPA. The dollar amounts reported in this document identify the EPA funds awarded to the grantee and do not reflect the matching funds provided by the grant recipients.

Congress directed EPA to focus on small grants to seed community projects; therefore, the EPA regional offices make small local grants their first funding priority. In total, EPA's 10 regional offices awarded \$1,898,491 for an average of 12 grants per region. In FY 2005, Headquarters funded 7 percent of the 137 grant applications received. Headquarters awarded 10 grants, for a total of \$791,312. Headquarters grants averaged approximately \$79,000; the smallest grant awarded was \$55,000; and the largest awarded was for \$100,000.

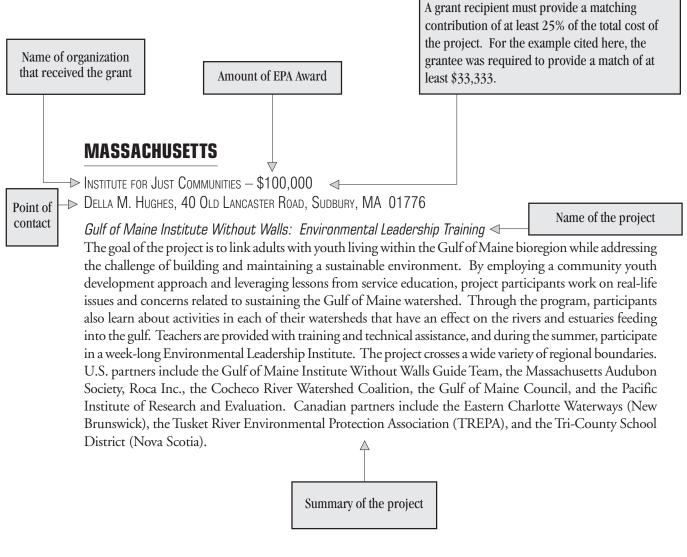
EPA's annual Environmental Education Grants Solicitation Notice describes the solicitation, evaluation, and award process through which EPA arrives at final decisions about grant winners. The solicitation notice is published and available for review in the Federal Register. The solicitation notice and application forms may also be viewed online or downloaded from EPA's Web site listed below. 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 page 46 of this document.

www.epa.gov/enviroed/grants



# **USING THE GRANT PROFILES**

The main section of this document provides profiles of environmental education grants awarded during FY 2005. Profiles are listed in alphabetical order by the state or United States (U.S.) territory in which the grant recipient is located. 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. Presented below is an actual profile of a grant awarded by EPA Headquarters during FY 2002. This example illustrates the content and format of the profiles contained on the following pages.





# **Grants Awarded by EPA Headquarters**

## **Arizona**

PIMA VOCATIONAL HIGH SCHOOL — \$85,163
GLORIA PROO, 97 EAST CONGRESS STREET, TUCSON, AZ 85701

## The Green Careers Program

Through the Green Careers Program, at-risk young people learn about environmental careers and the value of environmental stewardship. This program is a new environmental education and training initiative at Pima Vocational High School in Arizona and is designed to help unemployed, out-of-school young people obtain their high school diplomas and sustainable jobs. Building on existing curricula, the program provides its high school-age participants with a broad understanding of environmental issues and principles through the new Conservation Leadership course, which is an introductory environmental science course, as well as field investigation activities. The participants are also provided with job counseling, on-the-job training, mentoring, and on-site technical training. Following their completion of the course, the participants are provided with job-shadowing opportunities and paid internships with environmental professionals at the key partner organizations. The young people, who live in a low-income, minority community, gain marketable skills, job training, and practical experience while being introduced to career opportunities in the environmental science and technology fields. The key project partners are the Tucson Audubon Society; Pima County One-Stop Employment Center; Pima County Department of Natural Resources, Parks, and Recreation; and City of Tucson Water Department.

## **California**

California Integrated Waste Management Board — \$91,276

Joanne Vorhies, 1001 I Street, P.O. Box 4025, Sacramento, CA 95812-4025

#### Education and the Environment Initiative

In an effort to improve implementation of the Education and the Environment Initiative (EEI), the California Integrated Waste Management Board (CIWMB) provides environmental non-governmental organizations (NGO) in the state with professional development opportunities and technical assistance. Established by a state law in 2003, the EEI requires CIWMB, the California Environmental Protection Agency (Cal/EPA), and the California State Department of Education to develop principles and approaches for incorporating environmental education into elementary and secondary school curriculums. The EEI also requires the agencies to create a model environmental education curriculum based on California's academic content standards. As part of the EEI Implementation Project, representatives of environmental NGOs attend professional development workshops conducted in six regions across the state followed by a series of technical assistance workshops. These workshops are intended to help the NGO community revise existing environmental education materials in order to better align them with California's model curriculum. The workshops also provide increased opportunities for the NGOs to collaborate with schools on environmental education reform. As a result, environmental concepts are being further integrated into the education of California's elementary and secondary school students. Each environmental NGO works with California teachers to help them integrate the revised materials into their curriculums, a process that also builds the capacity of the NGOs. As another element of the project, CIWMB is creating a Web-based environmental education provider database that gives teachers and organizations the ability to communicate and exchange expertise. Key CIWMB partners in the project include Cal/EPA, the California Resources Agency, the California State Department of Education, the Office of the Secretary for Education, and the State Board of Education. The project is also supported by a large number of associated partners.



## Colorado

Denver Zoological Foundation, Inc. — \$62,545 Sharon Schonhaut, 2300 Steele Street, Denver, CO 80205

#### Community Leadership Project

Under this grant, the Community Leadership Project (CLP) provides formal and nonformal educators in the Denver area with the skills to utilize service-learning as a teaching and learning tool in their classrooms and programs. Service-learning combines community service with academic study. Pre-kindergarten through grade 8 educators (formal and nonformal), who teach in highly diverse neighborhoods, participate in an 8-hour training course at the Denver Zoo to learn how to incorporate the CLP service-learning model. The participants are provided revised training manuals that explain the service-learning model and topic-specific loan boxes. Participants gain an enhanced understanding of local environmental issues and learn how to implement activities identified in the loan boxes, which include an educator project manual, community involvement suggestions for environmental service projects, and resource opportunities including volunteer assistance and additional Web sites and guidance. During the academic year, CLP staff provides 40 in-class lessons that focus on specific loan box topics, such as building of bird houses, habitat gardens, and recycling. Key partners include the Adams County Public Works Department, the Adams County School District 14 Afterschool Program, the Front Range Earth Force, the Audubon Society, the National Wildlife Federation, the Mile High Girl Scout Council, and the Colorado Division of Wildlife.

## Georgia

GEORGIA DEPARTMENT OF NATURAL RESOURCES — \$55,000 KIMBERLEE BAILEY, 4244 INTERNATIONAL PARKWAY, SUITE 104, ATLANTA, GA 30354

## Building Capacity for Environmental Education in the Southeastern States

Through this project, the Georgia Department of Natural Resources (GDNR) is creating a Web-based environmental education clearinghouse for each of seven states and is developing an integrated environmental education Web site for the southeastern United States. The project builds on an effort initiated in 2000 to develop a Web site intended to disseminate information about environmental education activities, opportunities, and resources in Georgia. Using the Web site developed for Georgia as a model, GDNR is developing state-specific environmental education Web sites for Alabama, Florida, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. The Web sites provide environmental education lesson plans and curriculum guides; information about grants, awards, outreach programs, field studies, and conferences; and news about professional learning courses for formal and nonformal educators. Each site also contains a directory that provides educators with access to a searchable database of environmental education organizations, schools, and resources. The sharing of quality resources on the sites and the exchange of information among the sites' users increase educators' ability to provide effective environmental education programs and reduce duplication of effort across states. GDNR's Web site development effort could be replicated in other regions. Key GDNR partners in the project are the Environmental Education Alliance of Georgia, the Georgia Department of Education, the Georgia Department of Community Affairs, and the Georgia Parent Teacher Association.



## Nebraska

THE GROUNDWATER FOUNDATION — \$62,318
CINDY KREIFELS, P.O. Box 22558, LINCOLN, NE 68542-2558

Awesome Aquifers for the Science Olympiad

The goal of this project is to encourage and challenge middle school students to learn about the nature and value of aquifers and groundwater. In 2003, The Groundwater Foundation (TGF) introduced Awesome Aquifers into the Science Olympiad as a pilot competition. The Science Olympiad is a program for middle and high school students that consists of science-oriented tournaments held at the local, state, and national levels. The project builds on the success of the Awesome Aquifers pilot effort by expanding the competition to the national level to provide hands-on, experience-based groundwater education to a larger audience. During their preparation for the Awesome Aquifers competition, middle school students conduct groundwater research, design and build model aquifers, and identify possible groundwater remediation techniques. The students then present their findings at local, state, and national Science Olympiad tournaments. While the students conduct research, they learn about the importance of groundwater systems and are exposed to career opportunities in the environmental science field. To promote Awesome Aquifers and support its long-term sustainability, TGF produces Awesome Aquifers kits for students who are interested in competing. These "starter kits" include a demonstration video, written instructions, basic groundwater information, and materials for constructing model aquifers. Key TGF partners in the project include the U.S. Geological Survey, individual Science Olympiad organizations, the American Water Works Association, the Water Systems Council, and the Groundwater Resources Association of California.

## **New York**

WILDLIFE CONSERVATION SOCIETY — \$90,771
LEE LIVNEY, 2300 SOUTHERN BOULEVARD, BRONX, NY 10460

Project POWER (Protecting Our Wetlands with Educators and Regulators)

Building on a successful program developed by the Wildlife Conservation Society (WCS) and the New York Aquarium in cooperation with the New York State Department of Environmental Conservation (NYSDEC), Project Protecting Our Wetlands with Educators and Regulators (POWER) expands the delivery of courses focusing on conservation regulations and wetland ecology. The 1-day Tidal Wetland course is targeted at violators of New York State's tidal wetland laws. The goal of the course is to foster an understanding of the importance of wetlands and the laws that protect them as well as to prevent repeat violations. Penalties for participating violators from the New York City area are reduced upon their completion of the Tidal Wetland course. Another goal of the project is to assist the participating state regulatory agencies and environmental education centers such as zoos, nature preserves, and aquariums in replicating the training for their organizations. Representatives of participating organizations attend a 2-day Project POWER Leadership Seminar that focuses on workshop development logistics, course content, and teaching strategies. WCS and its partners also provide technical support for the organizations that implement the internal training, including making resources available online. Key WCS partners in Project POWER include the New York Aquarium and NYSDEC.



## Ohio

MILL CREEK RESTORATION PROJECT — \$89,750
ROBIN CORATHERS, 1617 ELMORE COURT, CINCINNATI, OH 45223

Mill Creek Watershed Environmental Education Programs

One goal of the Mill Creek Restoration Project (MCRP) is to strengthen and enrich learning opportunities for students and members of the local community in the Mill Creek watershed. Mill Creek is a polluted and degraded river that flows through economically depressed inner-city neighborhoods of Cincinnati, Ohio. Members of MCRP, a nonprofit organization, are working together to improve both the environmental conditions and educational opportunities at Laughing Brook, a new environmental education facility located in the Mill Creek watershed. For example, MCRP is installing sculptures covered with moss and wetland plants that help to cleanse storm water runoff, building a boardwalk for observation purposes, and creating a butterfly garden that serves as habitat for local species. Both students and adult volunteers are engaged in planting native species in the butterfly garden and in monitoring water chemistry within the watershed. In another MCRP educational program, students learn firsthand about habitat restoration and reforestation by planting shrubs and trees on the Queen City Freedom Trees site, a blighted property located in a heavily commercialized area within the Mill Creek watershed. In addition, students in local middle and high schools participate in a special problem-solving project that focuses on reducing the volume of solid waste and construction debris that must be disposed of in landfills. The students conduct research to determine whether potential waste materials could be reused or recycled at the Laughing Brook and Queen City sites and develop reuse and recycling prototypes that could be replicated in the future. In conjunction with the National Underground Railroad Freedom Center, MCRP also produces educational materials that illustrate the important role of Mill Creek during the time of the Underground Railroad. Key MCRP partners include ArtWorks, the National Underground Railroad Freedom Center, and Hamilton County Environmental Services.

## **South Carolina**

South Carolina Department of Education — \$84,629 Edward Falco, 1429 Senate Street, Suite 1005, Columbia, SC 29201

South Carolina Environment as an Integrating Context School Network

Through this project, the South Carolina Department of Education (SCDE) is expanding its successful Environment as an Integrating Context (EIC) program to 12 middle schools. Based on the concept of using the local environment as a classroom, EIC improves student achievement, behavior, and attitudes and helps students contribute to their communities. Teachers from 12 South Carolina middle schools participate in a 4-day summer institute that provides the educators with instructional strategies, curriculum content, environmental education techniques, and supporting resources. During the academic year, the teachers develop and implement lesson plans based on the techniques learned at the institute. The teachers then engage their students in environmental investigation projects involving field studies and research. The students at each school collect and analyze field data and interview local residents to supplement their research. Based on their investigation, the students then choose a service learning project that benefits their community. After completing this project, the students present their findings to members of their community. Key SCDE partners in the EIC program include Clemson University Landscapes for Learning; SC Maps and Aerial Photographic Systems/SC Life; the South Carolina Department of Health and Environmental Control; the South Carolina Wildlife Federation; the South Carolina Coastal Conservation League; the South Carolina Department of Natural Resources; the SouthEast Center for Ocean Sciences Education Excellence; South Carolina Parks, Recreation, and Tourism; the South Carolina Forestry Commission; the Lexington, Beaufort, and Richland County Soil and Water; the U.S. Fish and Wildlife Service; the Environmental Education Association of South Carolina; the U.S. Department of Agriculture Forest Service; and the Society of American Foresters.



## **Texas**

A Nurtured World, Inc. — \$69,860 Susan Roothaan, 6404 Wilbur Drive, Austin, TX 78757

#### Environmental Education for Secondary School Students

Designed for middle and high school teachers in Texas, this project provides educators with the skills and techniques they need to teach their students how to make informed decisions about their personal behavior in order to reduce associated impacts on the environment. The teachers participate in pilot workshops to enhance their understanding of consumer conservation and to learn about the Consumer Environmental Education curriculum developed by A Nurtured World, Inc. The curriculum, which is an innovative, inquiry-based course of study that links environmental impacts to issues of concern to individuals, helps teachers engage students by connecting environmental and earth sciences to real-world experiences. An advisory team composed of representatives of the key project partners and several secondary school teachers provides assistance and guidance for the pilot workshop participants. One purpose of the pilot workshops is to obtain feedback from the participants in order to appropriately customize the curriculum for secondary school students. Following the pilot workshops, the teachers participate in two 1-day train-the-trainer workshops at which they receive teacher kits that include lesson plans, homework assignments, and descriptions of field activities. Online resources are also made available to the teachers. The key project partners are the Texas Commission on Environmental Quality's Environmental Education Team and the Texas Education Agency.

## Wisconsin

University of Wisconsin-Madison Arboretum — \$100,000 Elizabeth McCann, Research and Sponsored Programs, 750 University Avenue, Madison, WI 53706-1490

## Restoration-Education and Science Training for Outreach to Regional Educators

This project extends the University of Wisconsin – Madison Arboretum's nationally recognized Earth Partnership for Schools (EPS) Program model for professional development of teachers to a broader audience. Through this project, EPS is promoting and replicating ecology-based education in other states by establishing EPS Program Facilitating Centers at four nonformal educational sites. Teachers and nonformal educators at the four sites participate in a Restoration-Education and Science Training for Outreach to Regional Educators (RESTORE) Train-the-Trainer Summer Institute to learn how to provide restoration-based education. The RESTORE initiative is an interdisciplinary approach to providing education on biodiversity loss and ecological restoration that involves restoring native ecosystems on school grounds. Teams of instructors create, implement, and evaluate high-quality professional development training programs for each center. These instructors also attend an annual Winter Meeting to discuss successes and lessons learned and to network with their fellow participants; this forum helps to create a national learning community of professionals who are well versed in schoolyard habitat restoration. EPS staff members provide support and resources to the teams of instructors throughout the process. Each center is expected to train approximately 40 to 60 local nonformal educators and teachers of kindergarten through grade 12. Key project partners include Dyck Arboretum of the Plains, the Minnesota Landscape Arboretum, the Louisiana Sea Grant College Program, the University of Wisconsin – Madison Department of Curriculum and Instruction, and Wisconsin-based EPS Program Facilitating Centers.



# **Grants Awarded by EPA Regional Offices**

## Alabama

ALABAMA COASTAL FOUNDATION, INC. — \$12,310
CATHY BARNETTE, 122 FAIRHOPE AVENUE, UNIT 3, FAIRHOPE, AL 36533

Alabama Coastal Kids Quiz Conservation Scholarship Competition

The Alabama Coastal Kids Quiz Conservation Scholarship Competition is an educational contest for all fifth grade students in coastal Alabama. The contest is designed to emphasize, introduce, and test their knowledge in coastal resources, conservation, and the environment. Teams of five students from public and private schools in Mobile and Baldwin Counties participate. Questions are based on concepts and relationships developed through the Project Conservation Action through Education (CATE) CD-ROM and teacher tool kit. The major objective of the Coastal Kids Quiz is to teach issues in water quality and conservation to the students. The competition provides an outlet for promoting dialogue about social, economic, and environmental interests. It further introduces conservation principles to children in Alabama's coastal area who have not had the opportunity to express their knowledge and understanding outside the classroom. Elementary school teachers tutor the students and assist in hosting the contest. The competition also provides an important and useful resource for fifth grade teachers.

Dauphin Island Sea Lab Mobile Bay National Estuary Program — \$10,051 Roberta Swann, 101 Bienville Boulevard, Dauphin Island, AL 36528

#### Mobile Bay National Estuary Program (MBNEP)

Education for land use professionals about the economic feasibility of altering land use practices to reduce storm water runoff and nonpoint source pollution, in the process hoping that they become better environmental stewards, is the goal of this project. The expected outcome is the adoption, use, and promotion of environmentally sensitive development practices by land use professionals. Participants are recruited through networking with the Mobile Area Association of Realtors, the Baldwin County Association of Realtors, the Montgomery Association of Realtors, and Barkerville Donovan, Inc., a Mobile-based engineering firm. The Mobile Bay National Estuary Program (MBNEP) advertises the program on the "grassroots, inc." and MBNEP Web sites. In addition, MBNEP develops letters, flyers, and emails to each real estate board for distribution to its members. Land use professionals participate in an online course and two live workshops, receive an e-newsletter, and are exposed to networking opportunities.

## Alaska

Homer Soil and Water Conservation District — \$9,000 Bridget Paule, 4014 Lake Street, Suite 201, Homer, AK 99603

## Alaska's Natural Resource Career Program

An environmental and natural resource field career development curriculum module is designed and implemented through this project to be tested in the Kenai Peninsula Borough School District high schools' natural resources technology class. Rural, Native Alaskan, and Russian students in grades 9 through 12 are involved in the project, which includes outreach to additional students at two nearby schools. The curriculum is specific to Alaska's unique career needs in the environment and natural resources. It can be offered as a model program that other school districts and education organizations could implement across Alaska. The project is targeted at encouraging students to choose careers in natural resource and remain in Alaska after they graduate from college. The curriculum includes classroom instruction, guest speakers, field trips, statewide conferences, internships, community service, and individual projects.



Takshanuk Watershed Council — \$9,325 Tim Shields, P.O. Box 1029, Haines, AK 99827

## Nature Studies Outdoor Education Expansion for Haines Borough

Under this project, students in grades 3 through 8 from the Haines Borough School District receive education about local environmental issues and individual choices and their effect on the watershed. It provides educators with an existing environmental education curriculum expanded from nine study units to 20, with a focus on increasing activities for middle school grades. It also introduces students to the work of professional and technical scientists to encourage environmental careers. Each "nature studies" unit consists of a pre-lesson in the classroom, an in-depth field lesson or series of lessons, and at least one follow-up analysis back in the classroom. Topics of the lessons include juvenile fish trapping, identification, and mapping; trash collection and revegetation; and distribution of plants and animals in the watershed.

## **Arizona**

See page 3 for a profile of a grant awarded to Pima Vocational High School by EPA Headquarters. Arizona Board of Regents, University of Arizona — \$19,971 Marti Lindsey, P.O. Box 210207, Tucson, AZ 85721

## TCE Contamination and Clean-up Curriculum (TCE CCC)

Under this project, the environmental and environmental health teaching skills of high school teachers are improved by focusing on the trichloroethylene (TCE) contamination that occurred in the 1950s at the airport in Tucson, Arizona. The area is now a Superfund Site. High school science and social studies teachers who use the project's curriculum in the Sunnyside Unified School District are trained during a conference. The trained educators in turn teach the interdisciplinary curriculum to students. The curriculum focuses on hard sciences and social studies and advances student comprehension of the science associated with contamination and cleanup, as well as the social and governmental processes involved.

CIBECUE COMMUNITY SCHOOL — \$11,160

JUAN ARAGON, P.O. BOX 80068, CIBECUE, AZ 85911

#### Repeat Photography Project

This project engages Cibecue high school and college students and teachers to observe and interpret ecological change through repeat photography of wetlands in the community. This community's watershed and forestlands were severely damaged by wildfire in 2002. The most important environmental issue in this community is restoration of the lands and water, as its economic development depends completely on natural resources and it's culture depends on a strong understanding of springs and other traditional places. This interdisciplinary project develops skills in ecological assessment, scientific reasoning, geography, social science, and visual arts. Through this project, the students and the community at large develop active, collective visions of how the land and waters have changed in recent decades and how to make decisions about restoration.



## **Arkansas**

University of Arkansas Board of Trustees (AR UABT) — \$27,550 Lynne Hehr, 120 Ozark Hall, Fayetteville, AR 72701-1201

Waste Not, Want Not

This program targets Arkansas environmental science educators, particularly those working with middle and high school science teachers, and trains them in an integrated approach to environmental science teaching. This approach, designed for middle and secondary grade level students, consists of hands-on activities and decision-making scenarios that allow teachers, students, and the public to work through problems that clearly relate to solid and electronic waste (E-waste) issues in Arkansas. The project takes place on the University of Arkansas campus and specifically addresses state-wide E-waste issues through regional problems and concerns as examples. The Waste Not, Want Not institute combines 1 day of regional and state-wide concerns in both lecture presentation and hands-on session format; 2 days of field trips to area waste management sites, recycling centers, and geologic areas pertinent to waste disposal issues in the area; and 1 day of potential answers and solutions to state-wide concerns.

## **California**

See page 3 for a profile of a grant awarded to the California Integrated Waste Management Board by EPA Headquarters.

Ballona Wetlands Foundation - \$7,812

ABBY FOX, 1 LMU DRIVE, NORTH HALL, MS 8160, Los ANGELES, CA 90045

The WOW Team

The Wonders of Wetlands (WOW) Team teaches students about the diverse habitats, biology, cultural history, and functions of the Ballona Wetlands. Students first encounter the WOW Team program during an interactive presentation that features illustrations, experiments, and activities in the classroom. The students then experience the Ballona Wetlands on a guided field trip through the wetlands' unique habitats, where they observe a wide variety of wildlife. Hands-on activities, such as exploration and observation, experiments, and restoration work at the wetlands, also reinforce key ecological concepts. This educational program reaches kindergarten through grade 5 children across the Los Angeles region each year.

Central Modoc Resource Conservation District — \$17,675 Abby Kingdon, 804 West 12th Street, Alturas, CA 96101

The Pit River Watershed Adoption Project

The Pit River Watershed Adoption Project is a cooperative effort to offer students in Modoc County a handson opportunity to learn more about the watershed where they live and what it takes to maintain a healthy watershed for the wildlife and people who depend on it. The strategy is for students at each grade level to be responsible for a minimum of one service-learning project each year. Goals are to increase awareness of the Pit River and its watershed and to afford students and the community a sense of ownership and pride in its natural resources. The program also is intended to promote good land use decisions and choices among emerging leaders, promote cooperation among competing interests, and create a shared vision of watershed enhancement in the region. Instructors include biologists from the Modoc National Wildlife Refuge, Modoc National Forest nature resource specialists, Bureau of Land Management specialists, and parents and volunteers from the community.



COMMUNITY ENVIRONMENTAL COUNCIL - \$8,410 CAY SANCHEZ, 930 MIRAMONTE DRIVE, SANTA BARBARA, CA 93101

## CEC Teacher Training Series

The Community Environmental Council's (CEC) Teacher Training Series addresses the inter-connectedness of environmental systems with a focus on waste reduction and water quality issues, which are of specific importance to the Santa Barbara community. CEC will conduct nine teacher training workshops and field trips and will train teachers, student teachers, and nonformal educators. These educators will transmit the knowledge gained in the workshops and field trips to students over the course of their teaching careers. The series provides information, curriculum, methodologies, and resources for teaching environmental education in subjects such as service learning, waste reduction, water quality, school gardens, and composting techniques.

CORAL REEF ALLIANCE — \$20,000 Brian Huse, 417 Montgomery Street, Suite 205, San Francisco, CA 94104

#### Improving the Teaching Skills of Marine Recreation Providers

The Coral Reef Alliance (CORAL) organizes and leads workshops on the islands of Hawaii, Lanai, Maui, and Oahu. The first section of the workshop provides an overview of reef ecology, threats to the reef, and reef conservation strategies. The second section focuses on sustainable tourism for marine recreation. The third section focuses on public speaking and communication skills and on how to give an effective pre-dive and snorkel briefing. Participants practice in front of each other and are taped for feedback. The workshops are interactive and incorporate a range of group exercises, such as threat ranking, solution trees, and group evaluation. The goal of the workshops is to promote critical thinking among the participants so that they make an informed decision to educate their clients.

FRIENDS OF DEER CREEK — \$10,000 JOANNE HILD, 132 MAIN STREET, NEVADA CITY, CA 95959

## The Bug Book

The goal of this project is to develop and distribute a supplemental benthic macroinvertebrate identification manual for volunteer water quality monitors. Friends of Deer Creek (FODC) science staff work with volunteers from the Deer Creek Water Quality Monitoring Program who have been involved in identifying aquatic insects over the last 4 years. FODC is developing an easy-to-use publication to assist citizens with the classification of biological data collected in their watersheds using the lessons learned from this program and the knowledge of two expert entomology experts and a state-approved technical advisory committee. The outcome is a cost-effective, supplemental method for identifying benthic macroinvertebrates in the Sierra Nevada to provide viable data to state and federal water regulatory agencies. The manual includes "lessons learned" from FODC and is used to train other watershed groups through its distribution as well as workshops and training days.



GOLDEN GATE AUDUBON SOCIETY — \$10,000 ELIZABETH MURDOCK, 2530 SAN PABLO AVENUE, SUITE G, BERKELEY, CA 94702

#### Eco-Oakland Project

The Eco-Oakland Project targets East Oakland elementary students and their teachers and families. The project involves students in hands-on, watershed-wide experiences in environmental education and restoration. Both inclass presentations and field-based activities are included in this program. Cleanup and native plant restoration take place at several points in the local watershed. The goals are to provide opportunities for East Oakland residents to invest in local resources, address the severe shortage of environmental education programs in the East Oakland community, foster community-based environmental stewardship within the community through hands-on activities, and improve academic achievement in science, math, and literacy through place-based education.

Los Angeles County Education Foundation -\$9,000Roberta Gerarde, 9300 Imperial Highway, Room 106, Downey, CA 90242

#### EarthWorks - Careers that Serve the Earth

EarthWorks – Careers that Serve the Earth is a new program that educates students in grades 10 and 11 about environmental careers such as forestry and the atmospheric, space, and earth sciences. EarthWorks addresses crosscutting topics using presentations by career professionals and small group work through use of the property known as Blue Sky Meadow in the San Bernardino Mountains. These presentations emphasize local environmental issues, field study, and service learning projects, such as habitat improvement and modification or native plant restoration. Through interactive discussions, written materials, and guided activities, students learn how to identify and achieve their academic and vocational goals. The students learn about the steps that lead to careers in geology, meteorology, astronomy, teaching, environmental engineering, and forest management.

Mono County Office of Education — \$5,500 Margina Rhyne, 1651 Merdian Boulevard, P.O. Box 130, Mammoth Lakes, CA 93546

#### Eastern Sierra Environmental Video Project

Middle and high school students working in groups examine different views and investigate various solutions to an environmental issue of local concern under this grant. The students then use this information to plan and script a brief videotape project. In planning the videotape, students enhance critical thinking skills by deciding how to present an informative, appealing message to a community of diverse interests. The project promotes environmental stewardship by educating the participating students and the local community in recycling, conservation, and pollution reduction practices.

Trinity County Resource Conservation District — \$35,773 Pat Frost, 1 Horseshoe Lane, Weaverville, CA 96093

#### Trinity County Environmental Education Project

This environmental education project focuses on teaching about the role of wetlands and riparian zones as critical components of healthy watersheds. Students take part in an actual wetland restoration project as a living laboratory. Objectives of the project include building a mentoring relationship between high school and elementary school students for the salmonid education program; providing students with natural resources professionals as role models; and involving more teachers and parents in restoration and water quality education, thus broadening community buy-in for watershed restoration. The project also provides opportunities in environmental education and sponsors the Salmon Festival. In addition, high school students provide environmental education activities for elementary school children at the summer day camp.



See page 4 for a profile of a grant awarded to the Denver Zoological Foundation, Inc. by EPA Headquarters.

COLORADO ENERGY SCIENCE CENTER - \$24,300

Patrick Keegan, 1626 Colorado Boulevard, Suite 375, Lakewood, CO 80401

Community-Based Energy Education in Urban Schools

Colorado Energy Science Center's (CESC) mission is to increase the public's understanding of energy science and technology. CESC, in partnership with Denver Public Schools, Energy Outreach Colorado, and Colorado MESA (Mathematics, Engineering, Science Achievement), conducts community-based environmental education programs related to energy science to middle and high school students in lower-income and underserved communities. In addition, parents attend community-related presentations. CESC also conducts two teacher training programs at the Colorado School of Mines for teachers in underserved communities. Through activities that discuss basic principles of energy science and hands-on education, teachers and students learn how to analyze data on energy usage and decide whether the data provide any economic or community benefits.

Colorado State University — \$10,339 Carmen Morales, 2002 Sponsored Programs, Fort Collins, CO 80523

Issue Investigation and Action Training for Middle Schools

The action training project facilitates an investigative process for middle school students to research, analyze, and evaluate land use decisions in relation to ecosystems protection. Based on principles established by the State Educational Standards for science and civics, students acquire fundamental knowledge about ecosystems, biological cycles, and wildlife habitat. They also assess the social and political contexts of land use decisions and assess alternatives, including articulating recommendations based on their analysis. In addition, middle school teachers are trained on methods of investigative teaching through Colorado State University (CSU) that encourage problem-solving, critical thinking, and decision-making skills. The Environmental Learning Center (ELC) collaborates with the Poudre School District, the Turning Point Center for Youth and Family Development, the Pioneer School for Expeditionary Learning, and the CSU Student Leadership and Civic Engineering Office.

Environmental Learning for Kids — \$25,000 Stacie Gilmore, 14460 East 50th Avenue, Denver, CO 80239

Learning Environmental Activities for Families (LEAF)

Learning Environmental Activities for Families (LEAF) educates lower-income and underserved families of students who participate in Environmental Learning for Kids (ELK) about environmental issues that affect their communities. LEAF also introduces families and students to science-related careers. Through group field activities facilitated by natural resource professionals, LEAF uses urban environments as classrooms to teach about weighing the various sides to environmental issues. Families also learn how they affect the health of urban communities and to work together to make decisions and tangible improvements in the communities. The program provides a strong support network for parents who wish to encourage their children to pursue careers in science.



REGENTS OF THE UNIVERSITY OF COLORADO — \$29,070

RALPH L. Brown, 3100 Marine Street, Campus Box 572, Room 481, Boulder, CO 80309-0572

Teacher's Guide: My Water Comes From the Mountains

In partnership with the National Science Foundation, this program provides educator training and development of an Educator's Guide for formal and nonformal educators in grades 2 through 5. Included in the training is a corresponding materials pack based on the award-winning book, My Water Comes from the Mountains. The educator training provides investigative learning techniques through water quality analysis and interactive activities that describe various water uses for ecosystems, community consumption, and recreation. The guide supplements the training and is used as a resource for formal and nonformal classroom activities.

THORNE ECOLOGICAL INSTITUTE — \$30,000

JESSICA FELD, P.O. BOX 19107, BOULDER, CO 80308

## Connecting Students to Nature and Environmental Careers

The Sombrero Marsh Environmental Education Center was established through collaborative partnerships among the Thorne Ecological Institute, the Boulder Valley School District, and the City of Boulder Open Space and Mountain Parks Department. The center provides a multitude of ways to educate elementary school students and teaching assistants about how they affect their environment and about opportunities in environmental careers. This project provides inquiry-based education about wetlands ecology, conservation, and land stewardship to elementary and middle school students in formal and nonformal settings. Various career professionals conduct classroom presentations and discussions on environmental careers.

## **Connecticut**

New Haven Ecology Project, Inc. -\$5,000Betsy Sneeth, 358 Spring Side Avenue, New Haven, CT 06515

## Earth Day at Common Ground

Building on two successful Earth Day events held previously by the New Haven Ecology Project (NHEP), students in grades 1 through 4 from New Haven, Connecticut, and surrounding areas participate in an Earth-centered education and celebratory event. Participants at the Earth Day event learn about ecosystem protection, air and water pollution, hazardous waste recycling, natural resources, and stewardship for their own neighborhoods.

YALE UNIVERSITY - \$34,945

Jamie Alonzo, 155 Whitney Avenue, P.O. Box 208337, New Haven, CT 06520-8337

#### Environmental After School Program

Yale University is partnering with Gaining Early Awareness & Readiness for Undergraduate Programs, New Haven Public Schools, the National Marine Fisheries Service, and the Connecticut Department of Environmental Protection to provide middle and high school students an after-school and summer program to explore the natural and environmental sciences while they learn about associated majors and careers. Although it directly serves students in the local community, the program also includes an outreach component where students work with local environmental organizations as well as use the final exhibit projects to engage the general public in environmental education. The following issues of local importance are discussed: air pollution, asthma triggers, lead paint, and radon.



## **Delaware**

DELAWARE CENTER FOR HORTICULTURE, INC. — \$9,267
PAM SAPKO, 1810 NORTH DUPONT STREET, WILMINGTON, DE 19806-3308

#### Strong Roots to Strong Shoots Program

Strong Roots to Strong Shoots is an 8-week intergenerational garden pilot program with an organized curriculum for children ages 10 through 13 that is centered around a community garden. The program explores gardening, environmental issues, and community stories. It also provides opportunities for adults and youth to engage in environmental and ecological activities in an urban setting through efforts that involve edible landscapes, soils and compost, and building raised beds and window boxes. This program will be used as a model for current and future community gardens in Wilmington, especially for the Boys and Girls Club in Hedgeville and for the Latin American Community Center in Hilltop.

## **District of Columbia**

NATIONAL ENVIRONMENTAL EDUCATION AND TRAINING FOUNDATION — \$22,700 SUSAN CARLSON, 1707 H. STREET, N.W. SUITE 900, WASHINGTON, DC 20006

## Washington, DC EnvironMentors Academic Preparation Program

The District of Columbia EnvironMentors Academic Preparation Program project establishes a sustained investigative- and experience-based academic framework within the district public school system to help build an environmental workforce and public who are more knowledgeable about and representative of the full diversity of the Chesapeake Bay watershed. EnvironMentors meets these goals through a new 2-year program that exposes urban high school students to environmental science and careers through rigorous science projects. Students achieve this through skills workshops, mentor participation, classroom presentations, Chesapeake Bay Watershed field trips for experiments and study, workplace internships, and college and career guidance. The DC EnvironMentors Academic Preparation Program supports the DC Public Schools (DCPS) academic reform initiatives. The DCPS Office of Career and Technical Education has adopted the model of inner school precareer academies to focus students academics in specific career areas and provides students with smaller learning environments. Inner School Pre-Career Academies have proven a successful school reform model in other large urban school districts and are strongly recommended by the Council for Great Urban Schools.

THE EARTH CONSERVATION CORPS — \$19,560

JILL SMITH, FIRST AND POTOMAC AVENUES, WASHINGTON, DC 20003

#### The Saturday Environmental Academy

Using classroom and field experiences on the Anacostia River, the Earth Conservation Corps (Saturday Environmental Academy) helps middle school students gain an appreciation for the natural world and their place in it. The academy also helps students understand the interaction between the environment and their communities and provides an integrated educational experience that supports school studies in math, science, writing, English, geography, and social studies. The project encourages environmental stewardship practices that will help clean up the Anacostia River and the surrounding communities and exposes students to a number of environmental careers.



## **Florida**

FLORIDA ATLANTIC UNIVERSITY — \$12,000 PAT WELCH, 777 GLADES ROAD, ADM 236, BOCA RATON, FL 33431-0991

#### Sustainability and Ecosystem Education

The Pine Jog Environmental Education Center, a division of Florida Atlantic University's College of Education, hopes to be recognized as the center of choice for ecosystem and sustainable living education in Palm Beach County. The educational program provides start-up or first-year financial support to establish a model multi-year program. The project targets adults, with emphasis on life-long learning associations, homeowners groups, and civic organizations. Pine Jog Environmental Education Center offers a series of six workshops that focus on ecosystems, native plants, and sustainable living. This project increases Pine Jog's long-term capacity to engage the community, collaborate with numerous local organizations, and create interdisciplinary academic programs.

Mote Marine Laboratory — \$12,771 Lorienne White, 1600 Ken Thompson Parkway, Sarasota, FL 34236

## Patching Up Florida's Coral Reefs

Developed by Mote Marine Laboratory, this program teaches Gulf Coast Girl Scouts about coral reefs, current research in marine science, conservation, and how to "patch up the reefs." The program partners with the Girl Scouts and its troop leaders from grades 1 through 12. Three full-day events are offered during which the Girl Scouts and troop leaders rotate through discovery stations at Mote Laboratory, including activities, laboratory experiments, and Mote's new Immersion Cinema National Marine Sanctuary: Florida's Coral Reefs tele-presence. Troop leaders receive World Wildlife Fund's Oceans of Life curriculum as well as training by Mote educators. The girls develop a sense of stewardship toward the reefs, as well as skills in critical thinking for making informed decisions in the future. After the girls complete the program, they earn a Mote-specific patch.

## Georgia

See page 4 for a profile of a grant awarded to the Georgia Department of Natural Resources by EPA Headquarters.

Southeastern Natural Sciences Academy – \$7,728 Lauren Lott, 540 B Telfair Street, Augusta, GA 30901-2301

#### Environmental Education Loan Box Program

This project extends the success of the "loan box" program to the Southeastern Natural Sciences Academy Nature Park's new field trips and revamps the materials and supplies of existing loan boxes. The loan boxes provide kindergarten through grade 12 teachers with introductory information about nature park field trips and classroom activities to use both before and after the trips. The academy's education programs at the nature park offer students hands-on, engaging activities that inspire curiosity and facilitate learning. The academy assembles 14 new loan boxes that correlate to seven new field trips and revises 21 loan boxes that correlate to seven existing field trips. The goal of this program is to intensify environmental stewardship throughout the educational system.



Upper Chattahoochee Riverkeeper, Inc. — \$25,000
Page Gleason, 3 Puritan Mill, 916 Joseph E. Lowery Boulevard, Atlanta, GA 30318

Partners for Clean Water After-School Program for Hispanic Youth

The outreach program, Partners for Clean Water, focuses on developing environmental stewardship in Hispanic students in grades 5 and 6 and their parents in Hall County. Stewardship is developed through a series of eight field trips and a variety of environmental lessons. Partners for Clean Water exposes participants to various aspects of the watershed, including creeks, the Chattahoochee River, and Lake Lanier.

## Hawaii

HAWAII NATURE CENTER, INC. — \$20,000 GREGORY DUNN, 2131 MAKIKI HEIGHTS DRIVE, HONOLULU, HI 96822

Hawaiian Watersheds from the Mountains to the Sea

Hawaiian Watersheds from the Mountains to the Sea allows teachers and students to participate in Hawaii Nature Center, Inc.'s (HNC) watershed curriculum. A three-part program consisting of project-oriented, hands-on, and investigative wetland, forest, and coastal experiences, the curriculum follows a detailed action plan created by environmental educators and classroom teachers. The plan is to teach science and instill an environmental ethic in the participants. A cornerstone of this program is the belief that making a personal connection with nature and becoming well informed about Hawaii's natural environment are among the first steps to becoming wise stewards.

## Idaho

Bonneville County Historical Society — \$9,800 Bonnie Jacobsen, 200 North Eastern Avenue, Idaho Falls, ID 83402

#### Rocky Mountain Adventure

This project expands a summer youth camp, which serves children from the Fort Hall Indian Reservation and migrant Hispanics, to include a week dedicated to teachers. The camp offers field trips to the diverse ecosystems of eastern Idaho, classroom instruction at the Museum of Idaho, role-playing, and other interactive studies. These activities emphasize how teachers can use the local environment to teach principles of environmental education to their students. This for-credit camp fosters an appreciation of the social, economic, and environmental concerns that must be considered when regulatory agencies make environmental decisions. The teachers learn how organisms are affected by factors that are essential to their survival. They gain the ability to identify and explain causes of species endangerment and the effects of species extinction on an ecosystem. They also learn about the habitats and coping techniques of animals and plants in harsh environments and how unique natural resources affect the biodiversity and ecology of the local flora and fauna.



IDAHO DEPARTMENT OF HEALTH AND WELFARE — \$30,000 KARA STEVENS, 450 WEST STATE STREET, 6TH FLOOR, BOISE, ID 83720

## Environmental Education Curriculum Workshops

Under this project, an environmental health teacher training program designs, tests, and implements 10 "Teach the Teacher" workshops for middle and high school health and science teachers across the State of Idaho. The focus of the training is on specific environmental health concerns in the state, such as exposure to arsenic, nitrates in groundwater, hazardous waste disposal, exposure to diesel exhaust, and others. Existing environmental health curricula used in the workshops align with Idaho state learning requirements. Teachers receive credit offered by Boise State University. Partners in this project include the Boise School District, Partnerships in Education, the Boise State University College of Health Sciences, and the Idaho Department of Environmental Quality.

## Illinois

Grand Boulevard Federation — \$45,515 Greg Washington, 715 East 47th Street, Chicago, IL 60653

#### Reducing Air Pollution Impacts

The Dan Ryan Expressway reconstruction project is under way in an area of Chicago where asthma rates are among the highest in the city. The Grant Boulevard Federation issues Community Air Alerts, which are based on air quality data provided by the Illinois Department of Transportation. These alerts are issued in an effort to improve community awareness of the impact of air quality on lung health and to promote residents' understanding of available air quality data related to the Dan Ryan project. Federation community educators also deliver workshops on air quality and asthma. The workshops raise awareness of air pollutants, health impacts, and government health standards for air and prevention tools. Community health educators increase awareness about and knowledge of asthma management in the community by offering "Asthma 101" and "Open Airways for Schools" programs to area schools, centers, and churches. The project empowers the community to apply asthma management techniques in home and school environments, thereby reducing the number of people especially children, the elderly, and those with lung disease - exposed to asthma triggers from a large-scale construction project. Community educators provide both door-to-door community education and education at senior and recreational centers, parks, libraries, and day care centers and nurseries.

Prairie Grove Consolidated School District — \$9,996 Kathy Wolfe, 3223 Illinois Route 176, Crystal Lake, IL 60014

#### Prairie Grove's Green Lab

The Prairie Grove Consolidated School District works with kindergarten through grade 5 students and staff, and the community in and around McHenry County. The students learn about seeds, soils, and plants in the classroom before they travel to the school's land laboratory to experience hands-on activities. Classes also study conservation by taking trips to the McHenry County Conservation District's Education Center. The school is located in McHenry County, which is one of the fastest-growing counties in Illinois. Prairie Grove was once a strong, agricultural, rural community, but has quickly become a suburban community fighting hard to keep its green space.



## Indiana

Springs Valley Community Schools — \$8,840 Roger Fisher, 498 South Larry Bird Boulevard, French Lick, IN 47432

#### Is Our Drinking Water Safe?

In this project, Springs Valley Junior and Senior High School students conduct water quality studies of Lost River both upstream and downstream of French Lick and West Baden to find out the effect of human activities on Lost River. The studies measure dissolved oxygen, nitrate levels, and turbidity, and then compare the results with Patoka Lake, another local source of drinking water. Students present the results of the studies to the town boards of French Lick and West Baden.

THE JACK AND SHIRLEY CENTER FOR THE ARTS — \$9,990 EDWIN SHELTON, 101 WEST 2ND STREET, MICHIGAN CITY, IN 46360

#### Great Lakes Summer Eco-Art Camp

The Great Lakes Summer Eco-Art Camp is a collaborative venture between the Lubeznik Center and LaPorte County Youth Serving Agencies Coalition. The art project is integrated into the coalition's ongoing summer camp program, which reaches children and youth in the Lake Michigan and Great Lakes communities. The participants study a major issue related to lakeshore ecology and develop eco-artwork and reflection statements as they investigate the manner in which personal and community decisions affect the lakeshore.

## Iowa

Iowa Conservation Education Council — \$9,781 Craig A. Meyers, 6500 Corporate Drive, Johnston, IA 50131

#### Midwest Environmental Education Conference

The Iowa Conservation Education Council partners with the North Iowa Area Community College to host a Midwest Environmental Education Conference. Educators and natural resource professionals from across the Midwest attend the conference. The goal of the conference is to offer participants workshop sessions in environmental, economic, and cultural changes that have occurred during the past several decades. Educators learn about new directions in environmental research and education. Participants also gain new skills and techniques in environmental management.

IOWA DEPARTMENT OF NATURAL RESOURCES — \$31,605 BRIAN TORMEY, 502 EAST 9TH STREET, DES MOINES, IA 50319

#### Sustainable Systems Class

Students participate in a 12-week internship program on pollution prevention under this project. The program teaches undergraduate and graduate students about sustainability concepts. Students learn about pollution prevention, energy efficiency, renewable energy, environmental compliance, environmental management systems, and environmental design. The goal of this project is to serve as a catalyst for students to learn how to create sustainable and pollution-free communities and to apply these concepts to class projects. Knowledge gained from this course empowers Iowa students, making them a more valued commodity in the workforce and in the communities.



## Kansas

CHENEY LAKE WATERSHED, INC. — \$8,023 LISA FRENCH, 18 EAST 7TH, SOUTH HUTCHINSON, KS 67505

#### Nutrient Cycling Decisions for Clean Water

Watershed farmers develop and practice decision-making skills for nutrient management and protection of soil and water quality during the Nutrient Cycling Decisions for Clean Water trainings. There are three trainings: a 1-day workshop and watershed tour for a group of farmers, a series of workshops on nutrient management planning for dairy farmers, and training for one farmer through an environmental leadership program. All trainings connect the conditions of water quality in the watershed to the daily decision making process on watershed farms.

Kansas Rural Center — \$31,096 Kirck Randall, 304 Pratt, Whitting, KS 66552

## Educational Center for Children and Young Adults

This project addresses career development and involves children ages 5 through 12 and young adults ages 13 through 19 who work on a farm. The farm reconnects children to nature by exposing them to vegetable and fruit crop production, with an emphasis on health, nutrition, and the environmental impact of these crops on our food supply. Students learn how sound environmental management choices are applied to a farm and a surrounding ecosystem, about the links between pollution and the long-term stability and preservation of agricultural production, and about human health and nutrition in relation to the environment.

KICKAPOO TRIBE IN KANSAS — \$5,090 ANNIE FRIETAG, P.O. BOX 271, HORTON, KS 66439-0271

## Community and School Environmental Education

Under this project, teachers are trained through workshops on environmental issues such as water quantity and quality, solid waste issues, and indoor air quality. The teachers then deliver outreach presentations to community members and students about the importance of these environmental issues to the Kickapoo Tribe. In addition, they incorporate the material into the classroom curriculum and develop lessons and activities for students.

## **Kentucky**

University of Kentucky Research Foundation – \$10,962 Carol Hanley, 201 Kinkead Hall, Lexington, KY 40506-0057

#### Translating Air Quality Regulations for Extension Professionals

The University of Kentucky Research Foundation hosts an air quality focus group and charges it with identifying and adapting educational materials on ambient air quality issues and regulations for use in workshops. As a result, Cooperative Extension Service professionals are programmed and educated in all programmatic areas, along with other interested professionals, on ambient air quality issues and regulations, accomplished through two workshops and follow-up communication.



Western Kentucky University Research Foundation — \$30,000 Karen Powell, 1 Big Red Way, Bowling Green, KY 42101

## Enhancing Environmental Discovery within Rural Communities

Under this project, participating teachers and students are offered a focused study of the environment through three interactive environmental education experiences at Brigadoon State Nature Preserve. The project reaches its audience through a professional development workshop and interactive programs held in informal settings. The goal is to involve middle school teachers and students at schools near Brigadoon and Mammoth Cave. Teachers are provided with activities and a teaching kit that contains all the necessary resource materials and background information to educate the students about local natural resources. The program at Mammoth Cave focuses on endangered species and the unique cave and karst landscape, while the program at Brigadoon focuses on the importance and conservation of mature growth, mesophyllic forests. This program encourages teachers to include environmentally focused reading and writing assignments in the curriculums. Students are involved in an investigative water quality laboratory and become more informed about local resources, the environmental issues related to the resources, and how they can protect these resources. They are exposed to professionals in the environmental field, including educators with the Regional Science Resource Center, a field officer with the Kentucky State Nature Preserves Commission, and a park ranger with the National Park Service. Students also engage in reading and writing assignments that have an environmental theme. The writing assignments are reprinted in local publications to educate the public about important environmental issues in the area.

## Louisiana

Lake Pontchartrain Basin Museum & Research Center — \$30,000 Nixon Adams, 133 Mabel Drive, Madisonville, LA 70447

#### Monitoring Underwater Aquatic Environments

This project employs underwater robots and their Internet-based operations to bring children close to the underwater environment to educate them about local freshwater ecosystems, interior wetlands, marine habitats and organisms, and techniques for water quality monitoring. The goal of this project is to develop an educational program for upper elementary, middle, and high school students, their teachers, and the public of the local community centered on the environmental issues of the Tchefuncte River and Lake Pontchartrain using underwater robotics. Key issues studied include water quality and pollution levels of the river and lake. The project is innovative because it combines environmental education with high-tech robotics in a manner that appeals to children. Students of engineering and environmental science at Tulane University mentor the children on environmental education and high-tech equipment such as robotics and computers. In addition to raising environmental awareness, the handson active learning approach encourages children's interest in mathematics, science, and engineering. By nurturing this interest, students become motivated to study emerging areas of advanced science and engineering, such as life sciences, energy, and environmental technologies.



## Maine

MDI Water Quality Coalition — \$32,426 Jane E. Disney, P.O. Box 911, Mt. Desert, ME 04660

#### Environmental Stewardship Through Service Learning

The Mount Desert Island (MDI) Water Quality Coalition is expanding the current service learning environmental education projects. Third graders stencil drains, sixth and seventh graders monitor red tide organisms, eighth graders monitor water quality in streams and ponds, and tenth graders participate in swim beach monitoring as part of these projects. MDI enriches these programs with teacher training and fuller discussions with the students to develop greater stewardship. A Youth Watershed Forum Convener's Handbook containing case studies of the service learning projects is published and later presented at the Youth Watershed Forum. MDI is partnering with School Union 98 of the Mount Desert Schools and the Union River Watershed Coalition at the College of the Atlantic.

Washington County Soil and Water Conservation District — \$9,991
Tamara Lee Pinard, 51 Court Street, P.O. Box 121, Machias, ME 04654-0121

#### Conservation Ed Web

The Washington County Soil and Water Conservation District is one of 16 districts working to promote the conservation and stewardship of soil, water, and related natural resources. The goal of this project is to identify, assess, and prioritize statewide natural resource education needs, evaluate conservation districts' programs that address the statewide needs, and prepare an implementation plan for achieving coordinated education programming. Facilitated stakeholder meetings provide the basis for developing the implementation plan.

## Maryland

National Aquarium in Baltimore — \$40,000 Laura Bankey, 501 East Pratt Street, Baltimore, MD 21202

#### Student Conservation Work-Study Program

The initiative encourages underserved college students to experience hands-on coastal ocean and conservation sciences that will lead to future career development in those fields. The Student Conservation Work-Study Program focuses on underserved undergraduate students because of their historical under-representation in the field of conservation sciences. College students from 15 regional underserved institutions are influenced through the recruitment process, where career participation in the conservation sciences is encouraged and promoted. Underserved undergraduate students participate in an 8-week work-study program consisting of two tracks: Wetland Ecology and Marine Mammal Conservation. The Wetland Ecology track (Chesapeake Bay) provides students with hands-on experience in planting, monitoring, and identifying typical wetland species in the Chesapeake Bay area. Through the Marine Mammal Conservation track (Ocean Health), students study and experience the human impact on healthy oceans by working with the most affected species in that environment. The impact of marine debris, pollution, and increased boat traffic, and their effects on ocean health, along with the resulting consequence to marine mammals and their habitats, are studied. This initiative will be presented as a model to other conservation, education and scientific organizations. The initiative also includes visits to local area high schools to introduce students to careers in coastal ocean and marine science before they enter college.



## **Massachusetts**

EARTHWORKS - \$20,000

LAURA DOTY, 34 LINWOOD STREET, BOSTON, MA 02119

## Model Outdoor Teacher-in-training Program

Earthworks is expanding its Outdoor Classroom Program to include a teacher-in-training component. The Outdoor Classroom Program enables students in a limited number of second and third grade classes in three Boston schools to receive weekly hands-on lessons from Earthworks staff on nature, ecology, and stewardship for schoolyard and neighborhood orchards. Additional staff teams teach with classroom teachers on the Outdoor Classroom Program to include every grade and every class (K-5) in the three Boston schools Earthworks is now assisting. The "teacher-in-training" pilot program significantly expands the successful Outdoor Classroom Program.

GLOUCESTER MARITIME HERITAGE CENTER — \$9,772 HARRIET WEBSTER, 23 HARBOR LOOP, GLOUCESTER, MA 01930

## Rockport High School Eelgrass Cultivation Program

The Gloucester Maritime Heritage Center (GMHC) is implementing a program that enables two teachers from Rockport High School to attend a 5-day workshop on the ecology and biology of eelgrass. GMHC is partnering with Rockport High School, the Massachusetts Institute of Technology Sea Grant Hatchery, and the Massachusetts Office of Coastal Zone Management. The teachers instruct students in aquaculture classes about how to grow eelgrass from seed and replant it in designated local waters. Students learn about the various forms of eelgrass, how it grows, how it creates a critical marine habitat, how it filters out pollutants, and how it prevents erosion. At the end of the school year, teachers will gather at a symposium to discuss the successes and challenges of the first year of the eelgrass cultivation project.

Society for the Conservation and Study of Caribbean Birds — \$40,000 Lisa Sorenson, Department of Biology, 5 Cummington Street, Boston, MA 02215

#### Community Education for the Wise Use of Wetlands

A significant environmental concern in the Caribbean — threats to and destruction of wetlands — is addressed under this project. The Society for the Conservation and Study of Caribbean Birds is partnering with the Puerto Rican Ornithological Society to conduct workshops in Arecibo for educators and public information sessions for the community. A goal is forming a local wetlands support group. The workshops provide educators, students, and the community with an understanding of how stewardship for wetlands can reduce pollution.

Tellus Institute - \$12,200

ERIKA SPANGER-SIEGFRIED, 11 ARLINGTON STREET, BOSTON, MA 02116

## Climate Change Vulnerability and Adaptation in the New England States

Stakeholders are educated about creating the most cost-effective solutions to adapting to climate change as part of this project. Coastal zone, forestry, and agriculture sectors tend to be vulnerable to changes in climate. By targeting educators in these sectors, a greater awareness is fostered to find solutions to reduce current and future impacts. This project delivers education through direct outreach, informational meetings, and train-the-trainer workshops. Stakeholder groups in each community are provided with the background and means to use new outreach materials and information to educate their constituents and the broader public on reducing the effects of climate change.



## Michigan

Creative Change Educational Solutions — \$15,274 Susan Santone, 229 Miles Street, Ypsilanti, MI 48198

#### Land Use Education for Youth

Under this grant, high school teachers from across southeast Michigan attend a 2-day workshop to learn about local land issues. The teachers then integrate lessons learned into the classrooms. The culmination of the project is a youth leadership forum where students share what they have learned, identify priorities, and create action plans that address land-use issues, specifically urban sprawl. One important feature of "Lessons in Leadership" is the content flexibility of its model (teacher education plus classroom instruction plus youth leadership). The flexibility offers the potential for other regions to adapt the model to pertinent environmental issues.

Inland Seas Education Association — \$11,640
Tom Kelly, 100 Dame Street, P.O. Box 218, Suttons Bay, MI 49682

## Critical Great Lakes Issues Workshops

Under this grant, Michigan high school teachers participate in a 2-day workshop aboard the Inland Seas Education Association's 77-foot schooner. The teachers attend seminars and discussions with Great Lakes experts and participate in hands-on classroom activities and research projects. The workshop gives teachers an understanding of critical issues in the Great Lakes and provides them with the resources they need to relay this information to their students.

Michigan Family Resources — \$9,990 Mary Hockwalt, 2626 Walker Avenue NW, Walker, MI 49544

#### UNited LEAD EDucation (UNLEADED)

As the primary provider for Head Start services in Kent County, Michigan Family Resources serves more than 1,600 children and their families. The UNLEADED program educates service providers, community leaders, and decision makers about childhood lead poisoning and its causes, and suggests intervention and prevention strategies. Outreach materials for parents, caregivers, and members of the public are produced and distributed throughout Kent County.

RIVER RAISIN INSTITUTE — \$8,790
MICHAEL NEUMANN, 610 WEST ELM AVENUE, MONROE, MI 48162

#### River Raisin Watershed High School Monitoring Project

The River Raisin Institute works with high school teachers and high school students to conduct field sampling and analysis of River Raisin. The results are shared at a student watershed congress, and a videotape that documents the project is broadcast on local public access cable television to promote stewardship of the river. Benefits to the students include increased understanding about the hydrologic processes and environmental health issues related to the watershed.



The Greening of Detroit — \$10,000 Rebecca Salminen Witt, 1418 Michigan Avenue, Detroit, MI 48216

## Green Heroes Program

The Green Heroes Program increases environmental awareness among Detroit's youth by providing elementary school students and adult partners with out-of-school training, guidance, and materials to create cleaner and greener spaces in their own neighborhoods. The program partners with two groups to promote a better understanding of the environment to children and adults. It provides resources to participants for areas selected for revitalization. Additionally, community groups and youth investigate their neighborhoods by creating maps of areas that need to be cleaned up and planted with vegetation to create a healthier ecosystem. All participants are recognized for their efforts in protecting their environment and creating a cleaner and healthier Detroit.

## Minnesota

ALLIANCE FOR SUSTAINABILITY — \$10,000 SEAN GOSIEWSKI, 1521 UNIVERSITY AVENUE SE, MINNEAPOLIS, MN 55414

## Congregations Caring for Creation

The Alliance for Sustainability supports 15 congregations in the Twin Cities metropolitan area to become "energy star" congregations. Participants at various workshops prioritize, implement, and report on energy conservation actions taken by the congregation. Volunteers from the congregations form environmental stewardship committees to engage their members to make informed choices to save energy, support renewable energy, reduce waste, prevent pollution, and improve environmental health.

Minnesota Council on Economic Education — \$10,000 Claudia Parliament, 1994 Buford Avenue, St. Paul, MN 55108

## Environmental Decision Making for Grades 4 Through 6

The Minnesota Council on Economic Education is conducting two national train the trainer workshops in St. Louis and Atlanta for middle school and college teachers. The newly trained teachers then serve as trainers for other teachers for the curriculum "Seas, Trees and Economies." The lessons in "Seas, Trees and Economies" provide students with the tools they need to recognize fundamental trade-offs, to explain how and why choices are made, and to explain how people can make better choices about the use of natural resources and disposal of wastes that production and consumption unavoidably create.

North Shore Community School -\$9,900Barbara Kohlstedt, 5226 Ryan Road, Duluth, MN 55804

## Solar Energy Education Project (SEEP)

Sixth graders at North Shore Community School gain first-hand environmental experience by assisting in installing solar photovoltaic panels that generate a portion of electricity at the school. This project pilots a national "best practice" education reform model called the Environment as an Integrating Context (EIC). EIC incorporates the teaching strategies of local community focus, team teaching, and cooperative learning and student-centered investigation of local issues. The project, combined with classroom lessons, activities, and field trips, enables students to expand their technological literacy and environmental awareness. The students also create educational displays about the photovoltaic panels for the rest of the school.



## Mississippi

St. Catherine Creek Refuge Association, Inc. - \$5,000 Charman Cupit, P.O. Box 1027, Natchez, MS 39121

Wetland Wonders - A Study of Water Quality and the Effects of Pollutants

Under this project, students in grades 7 through 9 visit the St. Catherine Creek National Wildlife Refuge and use test kits to analyze nearby stream and pond water for pollutants and overall water quality. Through hands-on activities, students learn the importance of water quality and the effects of pollutants on not only wildlife and their habitat, but on humans as well. Students investigate the source of pollutants and develop plans to drastically reduce or eliminate them from the environment.

## Missouri

Area Resources for Community & Human Services — \$50,000 Laura Lambrix, 539 Grand Boulevard, 6th Floor, St. Louis, MO 63103

## Natural Intelligence Project

Classroom presentations, field trips, and after-school workshops at six public schools are part of the Natural Intelligence Project. These educational experiences focus on environmental issues that include air and water quality, recycling, conservation of natural resources, and pollution prevention. Students participate in recycling, water quality monitoring, and pollution prevention. In addition, teachers learn how to incorporate environmental excellence standards into classroom curriculums. This environmental curriculum is integrated into classroom lessons to improve students' knowledge and skills in math and science. Students acquire the knowledge and skills to help them make informed decisions, to recognize and solve problems, and to gather, analyze, and apply information and ideas. Environmental education services are provided to students to increase academic achievement and raise Missouri Assessment Program (MAP) test scores at target schools in math and science.

CENTER MIDDLE SCHOOL — \$7,915
RONALD E. SCOTT, 326 EAST 103RD STREET, KANSAS CITY, MO 64114

#### Restoration Education Service Project

Middle school teachers gain new skills to teach environmental science to students under the Restoration Education Service Project by participating in trail construction and habitat restoration. Teachers incorporate these new skills and materials into classroom curricula and field instruction. Students attend field trips that address environmental issues such as trail construction, habitat restoration, water quality, and identification of nonnative species.

## Montana

Institutes for Journalism and Natural Resources — \$10,000 Frank Allen, 121 Hickory Street, Suite 2, Missoula, MT 59801

#### Great Waters Institute

Institutes for Journalism and Natural Resources (IJNR) conducts the Great Waters Institute for journalists. The Great Waters Institute is a 9-day expedition into rural parts of Wisconsin and Michigan that provides practical learning experiences in relevant outdoor settings. Journalists explore the conditions of forests, farms, fisheries, rivers, and lakes. They examine logging practices, watershed restoration projects, shoreline developments, and mining and Superfund sites. Along the way, they will meet and talk with expert speakers. IJNR mentors the journalists after the expedition is over.



Institutes for Journalism and Natural Resources — \$10,000 Frank Allen, 121 Hickory Street, Suite 2, Missoula, MT 59801

## 2005 Salmon Country Institute

Education for journalists about agriculture, forestry, and water quality under this project is intended to enable them to report more accurately and with more depth. Participants study logging practices, watershed restoration projects, dams, and agricultural operations during several field trips in coastal parts of Oregon, Washington, and Canada. They talk with more than 40 experts from federal and state agencies; representatives from local timber, energy, mining, and seafood companies; family farms; and grassroots environmental groups. These experts offer knowledge on all aspects of environmental issues. After the training, the institute follows up with individualized professional coaching and mentoring that lasts for at least 1 year. The goal of the project is to improve reporting on environmental issues to expand and reinforce public understanding.

MISSOULA COUNTY WATERSHED EDUCATION NETWORK — \$16,200
DEBBIE FASSHECHT, THE SWIFT BUILDING, 315 SOUTH 4TH STREET EAST, MISSOULA, MT 59801

## Missoula County Watershed Education Network Program

The Missoula County Watershed Education Network (WEN) conducts hands-on educational programs to elementary, middle, and high school students about water quality and non-point source pollution issues. Through several community outreach events, classroom activities, and field experiments, WEN empowers citizens to make decisions about local water quality and community land use practices. In addition, parents attend the special events and field experiments.

## Nebraska

See page 5 for a profile of a grant awarded to The Groundwater Foundation by EPA Headquarters.

Nebraska Rural Water Association — \$6,939

Barney Whatley, 3390 Ponderosa, Wahoo, NE 68066

#### Watering the Grass

Watering the Grass raises the awareness and involvement of the public in protecting drinking water supplies. After they complete a survey on water use and knowledge, residents receive free water testing from the Future Farmers of America. The water is tested for nitrates and other parameters. High school students map potential contaminants on the wellhead protection area map and help water operators complete contaminant source inventories. Older students mentor elementary students by providing water education using groundwater models and the "test your well" program.

THE NATIONAL ARBOR DAY FOUNDATION — \$48,380 Susan H. Wirth, 211 North 12th Street, Lincoln, NE 56808

#### Conservation Education Pathway

A tram trail for a conservation education pathway at Arbor Day Farm that connects many conservation demonstrations into a one-of-a-kind environmental education experience is under construction as part of the Conservation Education Pathway. The National Arbor Day Foundation creates interactive environmental education learning stations at key points along the pathway. This project serves as an outdoor campus for middle and high school students, for Future Farmers of America and 4-H groups, and for University of Nebraska students in agriculture, forestry, and urban planning. Students explore sustainable agriculture practices at the learning stations. The stations are equipped with audio-active interpretive panels and environmental education kits that contain professional equipment and supplies for hands-on environmental education. This project serves as a model to educate current and future farmers, landowners, and community planners about alternative agricultural practices that are more sustainable and have less environmental impact on soil and water than current methods.



## Nevada

Nevada Division of Environmental Protection — \$10,000 Kathy Sertic, 333 West Nye Lane, Suite 138, Carson City, NV 89706-0851

## Nevada Project Water Education for Teachers (WET)

The Nevada Project Water Education for Teachers (Project WET) is intended to create informed, environmentally aware citizens who will promote and incorporate water protection and conservation into their daily lives. These educator workshops and educational events enhance teaching competence in the field of natural resource education and make it possible to reach students with a message about environmental stewardship. Project WET, which includes the WET Curriculum Guide and sponsorship of successful water festivals, is an accredited international water science program. This program increases awareness, appreciation, knowledge, and stewardship among teachers and students.

Tahoe Rim Trail Association — \$4,670 Erin Casey, 948 Incline Way, Incline Village, NV 89451

## Lake Tahoe Property Owner Welcome Packet

Lake Tahoe's water quality is threatened by nonpoint source water pollution and improper land management techniques. Additionally, fire suppression and the existing forest health make a devastating wildfire possible. Many first-time property owners in the Tahoe Basin are unfamiliar with the rules and regulations required to live in this delicate and regulated environment. Under this grant, the collaborative community information Lake Tahoe Property Owner Welcome Packet is developed, and an educational workshop series for residents is conducted. Workshops for property owners explain best management practices, defensible space, and integration of landscape and property management to protect the environment.

## New Hampshire

Appalachian Mountain Club — \$10,575 Gary Gresh, P.O. Box 298, Gorham, NH 03581

#### Mountain Watch Program

The Appalachian Mountain Club (AMC) is expanding its current Mountain Watch Program, an effort that involves volunteers who help monitor air quality on mountains and ridgelines from 16 fire towers and other key vista locations. Partnering with the New Hampshire Department of Environmental Services and the New Hampshire Department of Resources and Economic Development, AMC educates the public on fine particulate pollution (regional haze) and air quality and its causes, potential health effects, and steps the public can take to improve the situation.



HOPEWORKS 'N CAMDEN - \$10,000

MANTHU TEKHNA, 543 STATE STATE, CAMDEN, NJ 08102

#### Hopeworks GIS Summer 2005 City Green Survey

Career and educational experiences are provided to youth of Camden, New Jersey, through their participation in the Hopeworks GIS Summer 2005 City Green Survey project. High school students learn about the environment and develop the skills to perform surveys and environmental analysis using ArcGIS and City Green software. Classroom instruction and field work give students from traditionally under-served communities experience in transferable career skills and an opportunity to earn free college credits.

Marine Mammal Stranding Center – \$5,000

SHEILA DEAN, 3625 BRIGANTINE BOULEVARD, BRIGANTINE, NJ 08203

#### Future Coast Keepers

Under this project, residents of Brigantine, New Jersey, and vacationers receive education about marine ecosystems through hands-on activities. The activities include seining, beach cleanups, training for stranded marine mammal response, and beach walks. Experts from outside organizations provide presentations about various environmental issues that affect marine ecosystems. The project promotes environmental stewardship through first-hand experience, with a goal of establishing life-long respect for the environment and inspiring participants to pursue environmental careers.

New Jersey Marine Sciences Consortium — \$9,306 Claire Antonucci, Building 22, Fort Hancock, Highlands, NJ 07732

## Biology of the Hudson Raritan Estuary

Under this project, high school teachers from New Jersey and New York receive training and professional development on the biology of the Hudson Raritan Estuary, two significant estuarine zones in the region. Educators acquire knowledge and skills on sustainability and its application to the coastal zone. Participants in this project receive 24 hours of professional development training during the 2005-2006 school year. The goal is to reach teachers who will use the strategies in the classroom. Additional teachers receive 6 hours of professional development in sustainable coastal zone science.

SETON HALL UNIVERSITY - \$7,000

MIRIAM LYONS-FROLOW, 400 SOUTH ORANGE AVENUE, SOUTH ORANGE, NJ 07079

#### Teachers Institute for Environmental Studies

The Teachers Institute for Environmental Studies delivers four workshops on environmental topics that affect northern New Jersey to build ecological and scientific literacy for kindergarten through grade 12 teachers and Seton Hall University students. Experts present workshops on an environmental or community health issue. A breakout session follows, when participants develop strategies to incorporate the topic into curricula. Participants share results, strategies, and resources, which are posted on Blackboard.



## **New Mexico**

HERITAGE RANCH INSTITUTE (NM HRI) — \$12,533 JIM WINDER, 231 WEST HALL STREET, HATCH, NM 87937

Young Environmental Stewards (YES), Corona, NM

Young Environmental Stewards (YES) teaches skills in forest management, forest ecology, and fire ecology, which are important environmental issues facing the Corona community, to kindergarten through grade 12 students in Corona, New Mexico. Teachers provide instruction about forest management to the students using Project Learning Tree's curriculum modules for Forest Ecology and Fire Ecology and Forest Issues. The teachers lead students on field studies to illustrate the concepts of the curriculum and evaluate the impact of the project on the students' understanding of healthy forests. Teachers also integrate YES projects with related Forest Service actions, such as replanting trees, shrubs, and grasses in areas destroyed by catastrophic wildfires.

New Mexico — The Volunteer Center of Grant County (NM TVCGC) — \$10,000 Lisa Grinnell, 915 Santa Rita, Silver City, NM 88062

The Gila Volunteer Educator Project

The Volunteer Center of Grant County (TVGCC), New Mexico, recruits, mobilizes, and trains volunteer educators from area conservation agencies. These volunteers assist the Gila Conservation Education Center (GCEC) in Silver City, New Mexico, in implementing the Gila Volunteer Educator Project. The project, targeted at students in kindergarten through grade 12, includes 20 educational trunks that provide materials that help educators teach classes about community environmental issues. The GCEC establishes a retired educator volunteer program to supplement its education programs. The program also links two interns from colleges and universities with GCEC programs, which provides the students valuable pre-service teacher training in environmental education.

## **New York**

See page 5 for a profile of a grant awarded to the Wildlife Conservation Society by EPA Headquarters.

Capitol District YMCA Camp Chingachgook Outdoor Center — \$5,000

Brian Leibacher, 1872 Pilot Knob Road, Kattskill Bay, NY 12844

Food Source Reduction and Composting

The goal of this project is to reduce Chingachgook's food waste, create a useful compost product, and educate participants in the annual program on the ease and benefits of Food Source Reduction and Composting. The target audiences for this project are school children, summer campers, and adults and family members from diverse backgrounds. These participants are taught about the value of waste reduction and the amount of energy that is required to produce a meal from "grow to throw." Students and campers weigh food waste and learn to separate out composting materials. Source reduction and composting is also incorporated into Chingachgook's free semiannual teacher training day and camp food and maintenance conferences.



FRIENDS OF CROTONA PARK — \$9,878
ROSEMARY ORDONEZ, C/O PHILIPPS CDC, 1591 FULTON AVENUE, BRONX, NY 10457

## Crotona Park Intern Opportunity

The Crotona Park Intern Opportunity program provides college-aged participants with useful training that prepares them for careers in the environmental field. As interns, these participants assist with education programs designed to increase environmental stewardship and appreciation of the Crotona Park in South Bronx. They achieve this goal through community environmental programs and through hands-on, inquiry-driven methods to teach park visitors, youth, and children in after-school and camp programs about freshwater lake ecology and wildlife. These programs also address other issues, such as urban ecological restoration, energy conservation, park protection, and water pollution.

Friends of Van Cortlandt Park - \$10,000 Christina Francis, c/o Van Cortlandt Park Golf House, Bronx, NY 10471

## Environmental Internship Program

The Environmental Internship Program is intended to educate high school student interns about human health, the environment, and potential environmental careers. The interns learn through use of the local environment and ecology, hands-on activities, workshops, field trips, and guest speakers from environmental organizations. The interns then teach younger children from the Riverdale Neighborhood House after-school program and the broader community about both local and global environmental issues. This project promotes environmental stewardship by teaching students about ways they can protect human health and environment.

NATIONAL AUDUBON SOCIETY — \$15,230 ANDREW MACKIE, 200 TRILLIUM LANE, ALBANY, NY 12203

#### Aububon New York's For The Birds!

Audubon New York's For The Birds! Program is offered to elementary school students in New York (Utica, Syracuse, and Queens). Trained community volunteers and graduate students provide participants with handson studies in the surrounding natural environment, focusing on bird habitats. The goal of this program is to promote environmental stewardship by forging a connection between elementary school students and the local environment. Bird habitats are used to facilitate an understanding of how humans can improve and preserve habitats, especially in the natural environment near their homes.

Onondaga Lake Cleanup Corp — \$9,995 Edward M. Michaelenko, 102 West Division Street, Third Floor, Syracuse, NY 13204

#### Testing the Water

Testing the Water is a pilot project that incorporates basic water quality testing of local creeks as a platform for enhancing teaching skills while providing students in grades 5 and 6 an outdoor experience that integrates environmental education with New York State Intermediate Science Core Curriculum Standards in area schools. The project develops in-class teaching skills during student activities on water quality testing, aquatic food webs, and an introduction to the local watershed. School groups visit area streams during 12 field trips and learn through classroom activities. Students learn to test water quality, collect and analyze scientific data, and exercise critical thinking and problem-solving skills.



QUEENS COLLEGE (CUNY) AND RESEARCH FOUNDATION — \$25,000 Dr. ALLEN LUDMAN, 65-30 KISSENA BOULEVARD, FLUSHING, NY 11367-1597

## Queens College Research

The primary focus of this project is to improve the teaching abilities of kindergarten through grade 12 teachers by training them in the content and pedagogic skills needed to make the schools centers for authentic environmental research. Teachers who represent 10 Queens and 10 Bronx schools attend 5 days of workshop training, where they learn to carry out rigorous scientific protocols appropriate for their students' developmental levels. Teachers learn to use GPS receivers, various scientific instruments and the Internet, and stimulate and maintain student inquiry.

## **North Carolina**

Forest History Society — \$10,000 Tom Marshall, 701 William Vickers Avenue, Durham, NC 27701

#### "If Trees Could Talk" Curriculum

The grant offers a two-part Teacher Institute for middle school teachers. The first part is a 3-day non-residential institute where teachers meet with noted environmental historians and forest managers for presentations, discussions, and readings on selected concepts in forest and environmental history. The teachers are introduced to primary archival materials and classroom activities they can use. The second part is a classroom application of one of the historical topics by each participant during the 2005-2006 school year. The Forest History Society's curriculum specialist will provide assistance for each classroom.

State Institution of Higher Learning, NC State University — \$15,596 Richard Venditti, Box 7514, Raleigh, NC 27695

Workshop: Analysis of Environmental Issues Through New and Renewable Plant Sources

High school teachers' skills to weigh various sides of environmental issues and to make informed, objective, science-based decisions using critical thinking and problem solving are strengthened through this project. High school science teachers from the southeast attend a 3-day intensive workshop at North Carolina State University (NCSU), where they are taught how to use environmental impact and life cycle analysis models as tools to evaluate petroleum and plant-based processes. Experimental kits are given to the teachers so that they can conduct the experiments executed during the workshop in their high school classes.

Wake County — \$4,492 Angeline McInerny, P.O. Box 550, Raleigh, NC 27602

#### Access Nature Program

Blue Jay Point County Park hosts a 10-hour, 2-day workshop so participants, classroom teachers, and environmental educators can discover the "Access Nature" curriculum developed and taught by the National Wildlife Federation. The participants develop the skills necessary to tailor environmental education exercises to incorporate all students. Participants likewise gain an increased awareness of the need to adapt lesson plans so that all students are included, regardless of any motor, cognitive, hearing, and visual disabilities. The focus is to provide educators the tools to ensure all students have access to nature.



## **North Dakota**

NORTH DAKOTA STATE UNIVERSITY — \$14,620 VALREY KETTNER, BOX 5756 NDSU STATION, FARGO, ND 58105-5756

Educating University Students About Environmental Issues in Architecture

Under this grant, North Dakota State University (NDSU) conducts a pilot educational project that educates third-year architecture students about environmental issues in architecture. This project expands the students' existing knowledge and skills related to environmental performance analysis of new buildings. These educational classes help ensure an adequate supply of well-trained architects who can analyze complex environmental challenges. Students become familiar with analytical techniques in environmental performance, solve environmental design issues, compete in competitions, quantify the environmental benefits of energy efficient designs, and make informed decisions about energy science in relation to architectural design.

## Ohio

See page 6 for a profile of a grant awarded to the Mill Creek Restoration Project by EPA Headquarters. Ohio Environmental Council -\$10,000 Micah Vieux, 1207 Grandview Avenue, Suite 201, Columbus, OH 43212

Black River Watershed Safe Fish Consumption Project

In its effort to educate people about the dangers of contaminant exposure via fish consumption, the Ohio Environmental Council provides educational workshops for conservation and public health groups, conducts seminars in hospitals and clinics, and partners with a group that offers health education and parenting skills for teenage mothers. The Ohio Environmental Council trains community supporters, healthcare providers, and high school teachers on the best ways to communicate Ohio's sport fish consumption advisory and how to minimize exposure to contaminants to preserve good health.

## **O**klahoma

Tulsa County Independent School District #1-\$38,847 Judy Fessenden, 3027 South New Haven, Tulsa, OK 74114

#### Nose to Knows with Nature

Nose to Knows with Nature provides a "being there" learning experience for fifth graders in Tulsa Public Schools. This project provides transportation, supplies, and a part-time assistant for Remington Elementary's Center for Environmental Studies, located in the Mooser Creek Watershed of Southwest Tulsa, to become an environmental center serving the Tulsa School District. This project's goal is to raise the level of understanding and appreciation among students and the community for the interaction of different populations of organisms in an environmental community. Students work as a team to further the environmental education experience. They receive support from classroom teachers and parents. The program emphasizes the interdependence of organisms for food, shelter, and reproduction, and how changes in environmental conditions that result from natural causes and human interaction can affect the livelihood or survival of a population or species.



# Oregon

Beaverton School District — \$43,325 Steve Day, 16550 SW Merlo Road, Beaverton, OR 97006

Marmot Dam Removal Environmental Education Project

Students and teachers representing kindergarten through grade 12 from across the Beaverton School District are involved in a comprehensive watershed monitoring program in the surrounding area to evaluate the effects when the Marmot Dam is removed in 2007. The district is sponsoring a student study of the changes in the ecosystem pre- and post-dam removal. This project takes advantage of a dramatic, one-time event in the Beaverton community to inspire environmental study and stewardship. The 3-year project also includes building a database of watershed ecology parameters before, during, and after dam removal that will be accessible to the public. The teachers and students have access to sophisticated equipment and training to implement advanced field ecology protocols at the middle and high school levels, conduct basic watershed ecology monitoring at the elementary level, and facilitate individual student inquiry projects for students in grades 4 through 12.

Cascadia Region Green Building Council — \$20,000 Glen Gilbert, 721 NE Ninth Avenue, Suite 300, Portland, OR 97209

High Performance Green Building: Weighing the Options

The Cascadia Region Green Building Council is coordinating a series of 12 workshops, "High Performance Green Building: Weighing the Options," to teach professionals in commercial and residential building design and construction how to evaluate the costs and benefits of high performance buildings. This grant extends the Portland program to Seattle; the City of Seattle is a partner in the project. Participants learn how to evaluate and make informed decisions about adopting green building practices and learn how to measure potential premiums in construction cost against savings generated over a building's life cycle. As a result of the workshops, the participants are better able to evaluate choices in materials, equipment, and building techniques to build in a manner that is both environmentally sustainable and economically profitable. The series of workshops also offers public tours of existing commercial and residential green buildings.

Environmental Education Association of Oregon — \$30,000 Linda Rhoads, 133 SW 2nd Avenue, Suite 307, Portland, OR 97204

#### Environmental Education Certification Program

A state-approved certification program for teachers, college and university faculty, and nonformal educators developed by the Environmental Education Association of Oregon (EEAO) formalizes the environmental education profession. EEAO considers certification programs other states have adopted. The project improves the quality of environmental education by defining the critical skills and knowledge in natural resources and teaching methodologies necessary to deliver effective environmental education, clarifies key competencies, programs a mechanism for evaluating performance, and establishes a process for improvement. EEAO researches existing curricula and aligns them with certification program requirements, carries out administrative requirements for a state-approved program, and establishes EEAO as the accrediting body for the state-approved EE certification program. EEAO holds forums around the state to continue developing stakeholder commitment and support. Key partners of this project, identified as a need by the State Department of Education, include the Oregon Department of Education, Clackamas Community College, Portland State University, Pacific University, Oregon State University, the U.S. Forest Service, the Oregon Department of Parks and Recreation, Metro Regional Services, the Oregon Zoo, the Jackson Bottom Wetlands Preserve, and Weyerhaeuser.



FRIENDS OF ZENGER FARM — \$9,800 WISTERIA LOEFFLER, 11741 SE FOSTER ROAD, PORTLAND, OR 97266

#### Grow Wise Youth Education Program

This program takes kindergarten through grade 12 students in disadvantaged South Portland neighborhoods to a working urban farm and wetland for hands-on experience in wetland delineation, water quality testing, insect monitoring, garden planning and maintenance, science inquiry projects, seed exploration, and composting. The students learn about the ecological impacts of agriculture, the importance of species diversity and watershed health, and how choices in food and energy affect the environment. The farm staff participate in pre- and post-program visits to the classroom to prepare for or follow-up on farm programming. Staff from the Oregon State University Extension Service and the City of Portland's Bureau of Environmental Services provide teaching assistance to the students about wetland ecology and insect lifecycle and monitoring.

Portland State University — \$9,550 Dr. Julie Smith, P.O. Box 751, Portland, OR 97207

#### Walking Softly

A 4-day summer teacher workshop in the Portland area is offered under this project. The workshop introduces kindergarten through grade 12 teachers in the metropolitan Portland area who use a field-based curriculum to incorporate low-impact protocols, thereby reducing potential damage to fragile urban ecosystems from high-density usage. Before the workshop, Portland State University staff design an in-class activity to increase student awareness of their impact on the environment during field trips. The workshop introduces teachers to the inclass activity and shows them how to model low-impact use through field trips to four different ecosystems. Teachers on the field trips learn about an ecosystem and site-specific techniques to reduce impacts. The teachers see accessible natural spaces available for field trips near their schools, share field-based curricula, and provide follow-up assessment of the impact of the workshop. The project encourages teachers to discuss ways to raise student capacity to be successful in environmentally sensitive ways. Partner organizations with this project include the City of Portland Environmental Services, the U. S. Bureau of Land Management, the Columbia Slough Watershed Council, Oregon Trout, Portland Parks and Recreation, Friends of Tryon Creek State Park, Jackson Bottom Wetlands, and the Student Watershed Research Project.

# **Pennsylvania**

Doylestown Township Environmental Advisory Council -\$30,742 Kate McGovern, 425 Wells Road, Doylestown, PA 18901

#### Environmental Workshops for Elementary School Teachers

Greater interest in environmental science is stimulated under this project through environmental education workshops for elementary school teachers in the Central Bucks County School District. Elementary school teachers of grades 2, 4, and 5 benefit from the program as it instills a basic understanding of environmental principles and facilitates more effective use of existing educational tool kits and teaching aids across all environmental media. The teachers encourage scientific discovery and problem solving at an early age and provide a foundation for future secondary instruction in environmental issues and careers. The project serves as a model and example for other school districts in the Commonwealth of Pennsylvania.



GreenTreks Network, Inc. - \$15,000

Amanda Bailey, 1420 Walnut Street, Suite 1304, Philadelphia, PA 19102

Protecting Our Children's Health in Philadelphia Campaign

Protecting our Children's Health in Philadelphia Campaign is a comprehensive communication resource package created to reduce the number of children affected by lead poisoning and pollution-related asthma in the Philadelphia area. Working in partnership with the National Nursing Centers Consortium (NNCC), GreenTreks Network develops, creates, and distributes during home visits interactive DVDs (both in English and Spanish) that connect parents with the stories of others who have been in the same situation. The DVDs provide an indepth resource that enables people to take action in their own homes and communities. NNCC uses the DVDs as an outreach tool to reach urban families. GreenTreks Network and NNCC reach households with this vital information and improve their home environments.

Pennsylvania State University Penn State Institutes of the Environment — \$9,671 Dennis Decoteau, 110 Technology Center Building, University Park, PA 16802

Enhancing Teacher Knowledge of Air Pollution Effects on Plant Health

Teacher Knowledge of Air Pollution Effects on Plant Health enhances the knowledge of teachers in kindergarten through grade 12 on the effects of air pollution on plant health through a 1-day, hands-on workshop. The onsite workshop provides background information on air pollution and its effects on plants, demonstrates air pollution-induced injury on plants, and enhances critical thinking on environmental variables and subsequent plant responses through data analysis of recorded ozone levels and the occurrence of plant injury symptoms to sensitive plants.

THE PENNSYLVANIA STATE UNIVERSITY - \$9.535

Dr. Laura Guertin, 110 Technology Center Building, University Park, PA 16802

Science, Programming, HERE, Scouts! (SPHERES)

Created to encourage Brownies and Girl Scouts to earn science and technology badges, "Science, Programming, HERE, Scouts!" (SPHERES) allows elementary and middle-school age girls to "learn and earn" by participating in planned environmental science programs. SPHERES includes hands-on, authentic field and laboratory science experiments conducted on campus by the Brownies and Junior Girl Scouts troops during two Saturday badge events and two 1-week themed day camps. The use of hand-held science equipment and computers allows the girls to become active environmental scientists by conducting daily experiments, experiencing hypothesis formation, data collection and processing, and analyzing and communicating results. Undergraduate students conduct the Saturday program as part of the required service learning component in the earth and geoscience courses. Service learning components for undergraduate students provide an opportunity to further their environmental education and conduct environmental education outreach.



THE VILLAGE OF ARTS AND HUMANITIES, INC. — \$8,240 KELLY TANNEN, 2544 GERMANTOWN AVENUE, PHILADELPHIA, PA 19133

#### Plot-to-Planet Environmental Footprint Project

This project uses gardening and other hands-on agriculture to educate urban community youth about local and global environmental issues and the connections between them. Participants learn about the impact of litter, water and air pollution, soil erosion, and habitat loss by cultivating an inner-city garden through all phases of the growth cycle, from seed to harvest. Elementary school children who live in the Fairhill Apartment complex adjacent to the Fairhill Community Center participate in weekly environmental workshops where the following topics are discussed: pollution prevention, reducing solid waste, basic science related to gardening, stabilizing polluted soils, improving ground filtration, and providing fresh local vegetables to the community. Activities include composting, plant pressings, field trips to state parks and orchards, harvesting, and pollution prevention puppet shows.

### **Rhode Island**

CHILDHOOD LEAD ACTION PROJECT — \$15,594
ROBERTA HAZEN AARONSON, 1192 WESTMINISTER STREET, PROVIDENCE, RI 02909

#### Creation of a Lead Video

Owners of rental property in Rhode Island are required by law to take a lead awareness course that provides the information and resources they need to work with lead-based paint safely and to avoid poisoning children during maintenance. The Childhood Lead Action Project is creating and developing a videotape on safe work practices with lead for use in a 3-hour Lead Hazard Mitigation course and is educating course instructors. The videotape complements the existing educational materials while educating owners on safe lead work practices.

Groundwork Providence — \$9,497
SALLY TURNER, 69 WASHINGTON STREET, PROVIDENCE, RI 02903

#### Education Team Tree Task Force

The Groundwork Providence's (GWP) Education Team Tree Task Force (E-team) is developing activities and hands-on service projects to teach the importance of clean, safe, and beautified neighborhoods to elementary and middle school children and neighborhood groups. The E-team consists of underserved high school-age youth and partners with the Providence Neighborhood Planting Program and Rhode Island Tree Council. The E-team youth and elementary and middle school children work throughout the summer and academic year on the environmental stewardship tree program. The goals of this project are to create, develop, and implement a tree stewardship program through weekly meetings with the students, create a similar program for neighborhood groups that receive street tree grants, develop plans for sustainable tree plantings around the schools where they teach, and lead tree plantings in school yards and neighborhoods where they work.



### **South Carolina**

See page 6 for a profile of a grant awarded to the South Carolina Department of Education by EPA Headquarters.

Heritage Elementary – \$9,850

Martha Kinard, 1592 Greer Highway, Travelers Rest, SC 29690

Integrated Environmental Science Education Project for Heritage Elementary

Under this project, Heritage Elementary integrates existing education modules with established environmental education programs at parks and reserves in South Carolina through field trips. The program highlights local environmental issues and implements laboratory exercises with studies from local streams to show older students how science can support decision making in the community. The audience includes students, parents, extended families, and teachers from Heritage Elementary. Heritage Elementary students gain environmental knowledge through Greenville County environmental science modules in the classrooms, presentations from local environmental professionals, field trips, laboratory experiments, and an environmental science fair.

### **Tennessee**

Tennessee Aquarium — \$14,240 Heather Degartano, One Broad Street, Chattanooga, TN 37491

#### Smart Cart

The Tennessee Aquarium is developing a highly interactive, technology-based mobile education program that focuses on local environmental conservation issues. The Smart Cart Program annually offers 20,000 guests and community members access to more in-depth and accurate environmental issues that affect their local area and surrounding region. Smart Cart consists of a cart, computer, document camera, and speakers. This program provides a fun learning opportunity to families visiting the city park that surrounds the aquarium. The Tennessee Aquarium is advancing its current gallery program to capture the interest of an ever-evolving audience, presenting the most current environmental data through an advanced technology venue. The program is intended to create passion and depth of interest on aquatic ecosystems and their inhabitants and to connect personal actions with environmental health and stewardship.

Tennessee Environmental Education Association — \$10,000 Mary Ball, 9275 Tremont Road, Townsend, TN 37882

#### Tennessee Environmental Education Summit Conference

The groups involved in the Tennessee Environmental Education Summit Conference meet to consider issues that affect environmental education programs in Tennessee, set common priorities, and engage in statewide strategic planning about environmental education. The summit is intended to gather these groups together to maximize impact and minimize duplication of effort. The 2-day summit conference includes state coordinators and supporting agencies and organizations of Project Learning Tree, Project WILD, and Project WET, as well as representatives from the Tennessee Department of Education, state natural resource agencies, and non-profit groups that provide environmental education.



### **Texas**

See page 7 for a profile of a grant awarded to A Nurtured World, Inc. by EPA Headquarters.

BOTANICAL RESEARCH INSTITUTE OF TEXAS - \$8,543

Patricia Harrison, 509 Pecan Street, Fort Worth, TX 76102

#### Environmental Science Youth Mentoring Program

The Environmental Science Youth Mentoring Program provides unique opportunities for middle and high school students to work with professionals in environmental fields and gain experience that will build on their classroom learning. The goal is to provide young people, who may not perceive themselves as college bound, with opportunities to learn about careers in the environment. The program audience is students in grades 8 through 12 who have an interest in science, along with sponsoring teachers. The students work with professionals in various community agencies to identify relevant environmental issues. These agencies include the U.S. Army Corps of Engineers, the Lewisville Aquatic Ecosystem Research Facility, the City of Fort Worth Environmental Management Department, the City of Fort Worth Forestry Department, the City of Arlington Garbage and Recycling Department, the Village Creek Wastewater Treatment Plant, and the Fort Worth Nature Center and Refuge.

Del Valle Independent School District — \$10,800 Sandra Aguilar, 5301 Ross Road, Del Valle, TX 78617

#### Project Plantasia

Project Plantasia provides pre-kindergarten through grade 6 inner-city students, parents, and community volunteers a hands-on and inquiry based outdoor environment. The Plantasia Committee consists of one staff member from each grade level who manages and oversees the project and its activities. The objectives of the program are to establish an ecosystem using flowers, shrubs, grasses and trees native to Texas; provide a designated area for demonstrations, experiments, workshops, observation, and classroom activities; and prepare a garden and plant sustainable food crops using non-polluting and environmentally safe practices. Through creating, maintaining, and studying the ecosystem, the students increase their understanding of and respect for the environment and environmental issues that will confront them in their current and future world.

Mothers for Clean Air (MFCA) — \$9,967 Jane L. Laping, 3100 Richmond, Suite 309, Houston, TX 77098

#### Ozone Theatre

Mothers for Clean Air (MfCA) trains leaders (college students, young adults, parents, and educators) to present "Ozone Theatre" in classroom-type settings to kindergarten through grade 5 students in the Houston-Galveston area. "Ozone Theatre" helps children gain a better understanding of pollution and empowers them to make decisions that protect their health. The objective is to teach children about specific sources of air pollution and how to apply EPA's colored-coded Air Quality Index of health precautions to daily activities.



Texas Discovery Gardens — \$10,000 Mary C. Schoeffel, P.O. Box 152537, Dallas, TX 75315

#### Terrarium World Elementary-Aged Environmental Education

The Texas Discovery Gardens Terrarium World project targets students in grades 2 through 6 and educates them about terrariums. Students learn about the life-sustaining characteristics of terrariums, habitats and their application to terrariums, and the physical cycles that exist on earth: carbon, oxygen, nitrogen, and water, and how they operate in terrariums. Terrarium World animates the natural world, providing students with a first-hand experience of their impact on the environment.

Texas State University - San Marcos — \$15,412 Eric Mendelman, 601 University Avenue, San Marcos, TX 78666

#### Learning Urban Watersheds

Under this grant, high school teachers from the Houston and Dallas/Fort Worth areas participate in two 2-day workshops to learn how to integrate intellectual and practical experience in watershed monitoring. The teachers then return to their classrooms, conduct field investigations, and collect water quality data with the students during the remainder of the school year. The program also includes an Earth Day event for middle school students in the Austin area that concludes with a 1-day Splash into Learning Event. High school students present information at this event about their collection efforts and findings in water quality data.

University of Texas Health Center at Tyler — \$11,914 Dr. Larry K. Lowry, 11937 U.S. Highway 271, Tyler, TX 75708-3154

#### Seniors to Middle School Students

The Seniors to Middle School Students project uses volunteers from the Southwest Center for Pediatric Environmental Health at the University of Texas Health Center at Tyler to recruit and train senior citizens from the Environmental Alliance for Senior Involvement (EASI). These senior citizens teach elementary and middle school children about health issues associated with air, water, and toxins. The presentations take place during Earth Day and are delivered at a WeatherNet Symposium and are provided to student campers at Sky Ranch.



### Utah

Center for Green Space Design — \$20,000 Christie Oostema, 311 South 900 East, Suite 201, Salt Lake City, UT 84102

West Capitol Hill Environmental Education (EE) Project: A Community-Based EE Effort

The Center for Green Space Design (CGSD) conducts environmental education programs related to green space design and development in the West Capitol Hill subdivision of Salt Lake City to adult community members. Working in partnership with the City of Salt Lake and Utah Division of Water Resources, CGSD delivers classes through community meetings and training classes so that local residents learn about the various environmental impacts they may face during the West Capitol Hill Development Project. These impacts may be environmental- and health-related, such as resource management, water quality, and sewage. CGSD also trains residents to understand the city's process on open space design and resource management. This training allows residents to articulate and prioritize their vision of the community during the development's planning phase, while teaching them how to become better stewards of the local environment.

National Energy Foundation — \$10,000 Robert Poulson, 3676 California Avenue, Suite A117, Salt Lake City, UT 84104

Energy Efficiency and Clean Fuels for Utah Driver Education Program

The National Energy Foundation (NEF) is partnering with the Utah Department of Air Quality, Salt Lake Clean Cities, and the Utah Society for Environmental Education to conduct a pilot program to educate students in driver education classes on issues related to air quality and transportation. Teacher training is provided to high school driver education teachers. Teachers are instructed to conduct inquiry-based educational programs related to air quality and transportation. Students evaluate issues in community and personal transportation, including maintenance and usage, as well as regional economy, public health, the environment, and homeland security.

ZION NATURAL HISTORY ASSOCIATION — \$10,000 EILEEN SMITH, ZION NATIONAL PARK, SPRINGDALE, UT 84767

Diversity in Environmental Education and Protection (DEEP)

Project DEEP (Diversity in Environmental Education and Protection) is a partnership between the Zion Natural History Association and the Zion Canyon Field Institute. Under the grant, Project DEEP conducts English as a Second Language (ESL) environmental education programs in local schools and at local adult literacy programs. Project DEEP also provides community training programs. Training uses an inquiry-based education curriculum and discussions of multi-faceted environmental issues that affect the participants' community. Students and participants learn how to develop various solutions to complex environmental issues and take steps to complete environmental projects.



### Vermont

Strafford Historical Society — \$10,000

John Kent Freitag, P.O. Box 100, Strafford, VT 05072

Mining's Long Shadow: An Environmental Lesson

Under this grant, the Strafford Historical Society produces and distributes three educational documentaries about Vermont's copper mining industry. One 1-hour documentary targets the public, and two 20-minute documentaries target school-age youth. The documentaries educate adults and students about the complexity of land use issues and raise awareness of mining's potential effects on the environment. More than 30 viewings of the documentaries will be held in Vermont and New Hampshire. In addition, local schools incorporate the films into their science classes.

Vermont Association of Conservation Districts — \$10,000 Ken Hafner, 487 Rowell Hill Road, Berlin, VT 05602

#### Vermont Envirothon Program

The Vermont Envirothon allows students to gain knowledge and skills and demonstrate a willingness to participate in natural resource problem-solving issues. Students learn about aquatics, forestry, soils, wildlife, and a fifth topic, "Water Stewardship in a Changing Climate." Five high school students and a teacher advisor form a team to compete. Activities include development of curriculum from in-class and hands-on field experiences.

Vermont Institute of Natural Science, Inc. — \$10,000 Lisa M. Purcell, 2723 Church Hill Road, Woodstock, VT 05091

#### Urban ELF

More than 30 years ago, the Vermont Institute of Natural Science (VINS) developed the Environmental Learning for the Future (ELF) curriculum to bring students in kindergarten through grade 6 out of the classroom to learn about and explore nature in schoolyards and neighborhoods. Specially trained parents and other community volunteers teach the ELF program. This initial year of a 3-year project expands the ELF curriculum by developing supplemental activities and materials for urban and suburban elementary students who participate. Schools in Lebanon, New Hampshire, and Rutland, Vermont, participate in this expansion. ELF encompasses five concepts: cycles, habitats, adaptations, designs of nature, and earth and sky.



# **Virginia**

EARTH FORCE, INC. - \$23,200

VINCE DAVID MELDRUM, 1908 Mt. VERNON AVENUE, 2ND FLOOR, ALEXANDRIA, VA 22301

Virginia GREEN: A Watershed Studies Program for Science Educators

Virginia Global Rivers Environmental Education Network (GREEN) focuses on training science educators in grades 4 through 8 in Northern Virginia. Educators participate in Virginia GREEN workshops to develop new skills, gain a deeper understanding of watershed and water monitoring issues, diversify teaching strategies, and form lasting relationships with community environmental partners. Each area of development contributes to a teacher's ability to instill critical thinking and leadership skills, which are necessary for the future care of natural resources. The middle-school students participate in stewardship projects that involve the Lower Potomac watershed by applying their knowledge and understanding of environmental science concepts.

Newton Marasco Foundation -\$9,443 Debi McGhee, 9302 Lee Highway, Suite 500, Fairfax, VA 22031

Bringing Environmental Science from the Classroom to the Field

The Newton Marasco Foundation, in Partnership with Central High School, St. Croix, U.S. Virgin Islands, conducts an environmental education program for students in grades 11 and 12. The grant supports projects to educate students about the wetlands of St. Croix and develops their commitment to environmental stewardship. Students conduct field studies and study the impacts of land use decisions. Experts teach students how to study wetlands and act as mentors. The foundation provides guidance, curricular materials, leadership, naturalist experts, and incentives (including course credit) to enable students to complete and continue this study of the environment.

Newton Marasco Foundation — \$9,854 Debi McGhee, 9302 Lee Highway, Suite 500, Fairfax, VA 22031

Field It: Bringing Environmental Science from the Classroom to the Field

The Newton Marasco Foundation augments existing environmental curriculum for students in grades 11 and 12 by providing hands-on, real-life workshops, field trips, guest speaker programs, and three college scholarship opportunities. Students of Loudoun Valley High School in Virginia learn about water quality issues, critical ecosystems and wetlands management, forestry, plant studies, land use, and land revitalization. The classroom activities and field studies encourage critical-thinking skills and environmental stewardship practices. The program raises awareness, passion, and interest in environmental issues, which encourages students to pursue environmental studies and careers.

Rockbridge County Public School -\$10,000 Alice Moore Waddell, 1972 Big Spring Drive, Lexington, VA 24450

Sustainable Living for All Times

Sixth-graders at Maury River Middle School are trained as student leaders who are grouped in learning teams. Together, the teams develop a model for a sustainable living community, illustrating sustainable living practices. The students share the model with participating students in grades 1 through 6 and the public to raise awareness of the human impact on natural resources. Students investigate and understand their own impact on natural resources to become citizens who practice sustainable living as well as life-long environmental stewardship. Before the project is in the schools, all teachers involved attend a 1-day workshop at Boxerwood Nature Center to acquire the science content they can use in their classrooms to reinforce environmental education.



# **Washington**

Puget Sound Action Team, Port Townsend Marine Science Society — \$10,000 Anne Murphy, 532 Battery Way, Port Townsend, WA 98368

Port Townsend Marine Science Center Discovery Lab Monitoring Program

Under this project, additional laboratory equipment is provided for a hands-on sea water research and science laboratory project conducted by the Port Townsend Marine Science Society (PTMSS). The project is a collaborative effort with the Olympia Region Harmful Algal Bloom Partnership and the Hood Canal Dissolved Oxygen Program. This additional equipment allows the laboratory to participate in two local research projects to collect data on harmful algal blooms and dissolved oxygen in Hood Canal. Members of PTMSS train teachers, students, and local volunteers to use the monitoring equipment. The monitoring that is undertaken is grade appropriate at all levels and includes inquiry projects initiated by individual students. Other activities funded under the grant are teacher training on monitoring and remote sensing techniques, site visits for students, and pre- and post-field trip classroom activities.

# **West Virginia**

Friends of the Cheat, Inc. -\$5,175 Danielle Adams, 119 South Price Street, Suite 206, Kingwood, WV 26537

Structuring Friends of the Cheat's Education Initiatives

The Friends of the Cheat's (FOC) current educational initiatives that involve acid mine drainage (AMD) are structured under this project. AMD is a result of mining practices by the coal mining industry that occurred from the early 1900s and polluted streams in north-central West Virginia. FOC works with educational professionals to promote and implement initiatives that raise awareness about AMD. Awareness is raised by development of a flyer and Web site that describe the educational opportunities FOC offers as well as school instruction and outdoor educational activities, including interpretive watershed tours. These initiatives are shared with elementary, middle, and high school children (including home-schooled children); Girl Scout and 4-H groups; and civic groups. This project leads to concerned, educated citizens who become active and involved in community watersheds and the quality of the water.



### Wisconsin

See page 7 for a profile of a grant awarded to the University of Wisconsin-Madison Arboretum by EPA Headquarters.

ROCK RIVER COALITION - \$5,090

SUZANNE WADE, P.O. Box 141, WATERTOWN, WI 53094

#### A Rain Garden in Every Community

The Rock River Coalition installs rain gardens at schools and other community locations. A rain garden is a native plant garden that receives rain from a roof or paved area, allowing the water to soak in instead of flooding off. With these gardens, the coalition educates youth, adults, and community leaders about the concerns of storm water runoff and groundwater recharge. Teachers are trained on storm water concerns and educate students both in the classroom and at demonstration sites.

WISCONSIN CENTER FOR ENVIRONMENTAL EDUCATION — \$9,975 SUSAN ERMER, 403 LRC, WCEE, WE-SP, STEVENS POINT, WI 54481

#### Wisconsin Puerto Rico Environmental Exchange Project

Teachers from Puerto Rico and Wisconsin participate in an exchange program to expand their knowledge about environmental education. Through the Global Environmental Teachings program, teachers participate in workshops, tours, and lectures about island ecology in Puerto Rico and temperate ecological communities in Wisconsin. Puerto Rican teachers visit several Wisconsin sites, including the Northern Great Lakes Visitor Center in Ashland, take a natural history interpretive hike at Copper Falls State Park in Melon, and take a boat tour of the Apostle Islands National Lakeshore that begins in Bayfield.



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