

2006 Environmental Education Grant Profiles

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www.epa.gov/enviroed

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SUMMARY STATEMENT

ANNUAL GRANTS AWARDED UNDER THE NATIONAL ENVIRONMENTAL EDUCATION ACT (PUBLIC LAW 101-619)

This report summarizes 138 environmental education grants awarded by the U.S. Environmental Protection Agency (EPA) during fiscal year (FY) 2006. 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 Environmental Education Division (EED) manages the program. EPA Headquarters awards grants larger than \$50,000 and the regional offices award smaller grants. Since inception of the program, more than 3,100 environmental education grants have been awarded.

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 2006, Congress appropriated almost \$3 million for the grants program which leveraged more than \$3.0 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 frequently surpass the total funding provided by EPA. The dollar amounts reported in this document identify the EPA funds awarded to the grantee and do <u>not</u> 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 \$1,868,751 for an average of 13 grants per region. In FY 2006, Headquarters funded about 11 percent of the 94 grant applications received. Headquarters awarded 10 grants, for a total of \$816,716. Headquarters grants averaged approximately \$82,000; the smallest grant awarded was \$61,780; and the largest awarded was for \$125,903.

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 50 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 2006. 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

Alabama

Alabama PALS (People Against a Littered State) – \$75,000 Spencer Ryan, 340 North Hull Street, Montgomery, AL 36104

Clean Campus Program

The Clean Campus Program promotes environmental stewardship through education about litter, thereby creating a cleaner, healthier, and less polluted environment for all Alabama school systems, colleges, and universities. The program, which is focused on a variety of hands-on projects, provides students, faculty, and staff in kindergarten through grade 12 with all the tools and educational support needed to transform campuses into cleaner, safer places. These tools are supplied through seminars, educational materials, projects, and leadership and community building activities. By learning how to minimize pollution and litter at its source, the students are becoming environmentally aware and are learning how their behavior affects the environment. The faculty and staff are, in turn, learning how to build a foundation for future adult behavior and advance the concept of personal responsibility in caring for the environment. Participating schools receive, free of cost, on-site seminars, an environmental education as part of the curriculum and are also required to support an ongoing recycling program at the school. The program partners with the Alabama Education Association and more than 400 schools throughout the State of Alabama.

California

ICLEI-LOCAL GOVERNMENTS FOR SUSTAINABILITY, USA – \$75,000 Abby Young, 436 14th Street, Suite 1520, Oakland, CA 94612

Climate Protection Decision-Making Tool Development and Training Project

The International Council for Local Environmental Initiatives (ICLEI)-Local Governments for Sustainability is developing a climate protection decision-making tool that enables mayors and other local officials to consider the impacts of policy decisions on local air pollution. Developed in response to the need for better tools to enhance climate protection, ICLEI based the design of the tool on greenhouse gas quantification protocols established for local governments. The tool, targeted for use by mayors throughout the U.S., provides local government staff with the analytical framework necessary to determine the impact of specific decisions on increasing or decreasing emissions of greenhouse gas and regulated air pollutants. Developed in close consultation with the extensive network of local government staff and elected officials who participate in ICLEI's Cities for Climate Protection campaign, the tool is a stand-alone electronic survey. The survey guides the user through a series of questions that lead to an estimate of the quantity of emissions of greenhouse gases and criteria air pollutants that will be increased or decreased by appropriate policy recommendations. By using the tool, mayors and other local government officials gain decision-making skills that result in improved local air quality, reduced greenhouse gas emissions, and a better understanding of the long-term ramifications of policy decisions. Training on the use of the tool is provided at ICLEI's annual Sundance Summit: A Gathering of Mayors for Climate Protection. The key partner in the project is the Rockefeller Brothers Fund.



San Diego County Office of Education – \$77,936 Brian Swagerty, 6401 Linda Vista Road, Outdoor Education, Room 410, San Diego, CA 92111

San Diego Environmental Literacy in Action

The San Diego Environmental Literacy in Action (SanDELA) project increases opportunities for professional learning in environmental literacy for educators in kindergarten through grade 12 and engages students in opportunities that build awareness of environmental issues. This program also promotes access to and participation in activities that foster environmental stewardship. To implement the project, teachers in kindergarten through grade 12 work together to develop a guidebook based on the California Science Standards and the California Education and the Environment Initiative. The guidebook, which identifies an environmental literacy issue at each grade level, describes a grade-specific stewardship project or field-based learning experience that supports the targeted environmental issue. Teachers who use the guidebook will gain hands-on, science-based examples of how to implement an environmental education program that aligns with state education standards. The guidebook is being drafted during SanDELA Academy workshops and will be tested in the field by participants. The final guidebook is being disseminated to kindergarten through grade 12 schools in 42 school districts in San Diego County and will also be available online. Four teacher workshops will be conducted on use of the guidebook. The key partners on this project are the San Diego Science Alliance.

Colorado

UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH – \$75,144 TIMOTHY SPANGLER, P.O. BOX 3000, BOULDER, CO 80301

Protecting Watersheds by Educating Broadcast Meteorologists about Smart Growth

This grant is directed at broadcast meteorologists who deliver local weather reports. It enhances ongoing training efforts to provide meteorologists with core environmental knowledge that can be easily conveyed to their viewers. The Cooperative Program for Operational Meteorology, Education, and Training (COMET), part of the University Corporation for Atmospheric Research, is developing two units to train meteorologists on how to report on land use, transportation, sprawl issues, related environmental and health consequences, and the impact of these issues on local watersheds. The two new units will be incorporated into an existing online curriculum on watersheds administered by the American Meteorological Society (AMS) and the National Environmental Education Training Foundation (NEETF). The online curriculum, available on the COMET Web site, is accessed by broadcast meteorologists, as well as forecasters, colleges and universities, and the kindergarten through grade 12 community. The curriculum will also be available through AMS' Continuing Education Program, which is required for all certified broadcast meteorologists. By learning how to incorporate environmental knowledge in daily weather reports, the meteorologists help to educate communities about the relationship between the health of watersheds and the principles and practices of smart growth. In turn, communities become better educated about local watersheds and their role in protecting them. NEETF is the partner on this project.



Maine

 $\label{eq:constraint} \begin{array}{l} \text{University of Maine - \$61,780} \\ \text{Kathryn Carson, 5717 Corbett Hall, Office of Research and Sponsored Programs, Orono, ME \ 04469} \end{array}$

Aquatic Invaders in Maine (AIM): Education, Exploration, and Stewardship

Seeking to improve literacy on the aquatic environment and to promote environmental stewardship, this project involves the development of an education program for 12 Maine middle schools on aquatic invasive species and related concepts in biodiversity. This program augments science education in middle schools by integrating information on aquatic invasive species and biodiversity into the curriculum and empowering students to analyze valuable and useful scientific data. Under the grant, students learn how to use Vital Signs, a monitoring technology that engages and teaches them about aquatic environments. Using hand-held computers, the students identify invasive species and report their observations on an Internet mapping site used by scientists who are tracking the spread and location of these species. These hands-on experiences provide the students a unique opportunity to learn and practice scientific skills and methods and to learn first-hand about local ecosystems and ecology. Participating teachers and volunteers attend a 5-day institute at the Darling Marine Center, followed by monthly in-school visits or field activities by project staff and volunteers. The teachers receive a toolbox to help them teach and learn about aquatic invasive species and their environmental impact, along with guidance on how to integrate lesson plans with the existing curricula. Participants in the program learn about the need to collect meaningful data on aquatic invasive species. These participants also learn about the importance of their role in preserving aquatic biodiversity, thus promoting environmental awareness and stewardship. The program focuses on empowering students and members of the local community to utilize "real-world" data that are also useful to scientists who track the spread of aquatic invasive species within the State of Maine. Partners in this project include the Maine Shore Stewards Program and 12 middle schools in Maine.

Massachusetts

New England Wildlife Center – \$85,000 Katrina Banagis, 19 Fort Hill Street, Hingham, MA 02043

New England's Wild Legacy

This project is geared toward students and teachers in low-income communities in and south of Boston, many of whom have never had the opportunity to learn in outdoor classrooms. The New England Wild Legacy project is expanding its programming so that schools that receive the Sevens curriculum also obtain the As Clear As Mud curriculum. Sevens promotes awareness and understanding of natural objects, and As Clear As Mud enables students to use this new understanding to assess habitat quality and create individual action plans. The goal of this project is to develop a model that can be replicated, working with teacher teams and students to provide a continuum in environmental education from elementary to middle school. The project provides teachers and undergraduate students with scientific skills and a knowledge base so that they can pass environmental stewardship on to their students and peers. Staff from the New England Wildlife Center (NEWC) conduct nature walks around schools and neighborhoods with teachers so that they can become knowledgeable about plants, animals, and habitats near the classrooms. NEWC co-teaches Sevens and As Clear As Mud with teachers in the classrooms, and all of NEWC's resources and materials are available to participating teachers and classrooms. In addition, college students who participate in NEWC's internship program assist teachers and students in the classroom, on field trips, and at the NEWC facility. Key project partners include the teachers and principals from Raymond, East Junior High, and North Junior High in Brockton, Massachusetts; Murphy, Shaw and Uphams Corner Charter Schools in Dorchester, Massachusetts; Haggerty School in Cambridge, Massachusetts; Hale School in Roxbury, Massachusetts; McKay School in East Boston, Massachusetts; and South Shore Public Charter School in Norwell, Massachusetts.



Michigan

Eastern Michigan University – \$125,903 Rebecca Martusewicz, Starkweather Hall, 2nd Floor, Ypsilanti, MI 48197

Building Leadership Capacity for Sustainability Education

This project targets kindergarten through grade 12 teachers, administrators, and community partners to strengthen the capacity of four public school districts in New Hampshire, New York, Michigan, and Minnesota to re-orient themselves around sustainability and become models for other schools. The goals of this project are to develop a network of effective school leaders who can demonstrate and advance education in sustainability as a critical reform approach and to disseminate a model process for building this leadership capacity. To achieve these goals, four leadership teams are completing status reports to outline the strengths, weaknesses, and needs in student achievement, opportunities for involving students in environmental stewardship, existing reform efforts in sustainability education, and internal capacity. Based on these data, a 2-day retreat is designed where the teams are provided with training in strategic planning, planning assistance, and existing resources in sustainability education. After the retreat, the teams develop a strategic plan that outlines 1-, 3-, and 5-year goals and budgets for: (1) implementing programming to meet the needs identified, (2) involving students in stewardship, (3) evaluating the impacts of their efforts on student achievement and environmental stewardship, (4) sustaining their work through funding, and (5) promoting the reform work to other educators. Teams are provided with a rigorous framework in strategic planning, technical assistance, evaluation methods, and networking to achieve the objectives. Creative Change Educational Solutions and four public school districts in New Hampshire, New York, Michigan, and Minnesota are the partners on this project.

OAKLAND UNIVERSITY - \$85,473

DYANNE TRACY, 2000 N. SQUIRREL ROAD, ROCHESTER, MI 48309

Michigan Teachers' and Students' Honey Bee Apiary Project for Ecology

The Michigan Teachers' and Students' Honey Bee Apiary Project for Ecology (MITSHAPE) increases public awareness and knowledge about the needs of the common honey bee (Apis mellifera). MITSHAPE, designed for kindergarten through grade 12 and college undergraduate students, instructs teachers about the skills necessary to become beekeepers. Using these skills, they can build one or more beehives at the local school district's environmental center or school property, thus engaging students in the study of entomology, beehive management, honey and beeswax production, and the impact of honey bees on the local ecology and agriculture. Through participation in this project, teachers and students engage in environmental stewardship within their communities and implement actions necessary to address the decline of honey bees that began in 1986. Selected teachers participate in a three credit-hour course and build an apiary after they complete the coursework. Partners on this project include the Michigan Beekeepers Association and the National Honey Board.



Virginia

Earth Force, Inc. - \$80,480

VINCE MELDRUM, 1908 MOUNT VERNON AVENUE, 2ND FLOOR, ALEXANDRIA, VA 22301

Earth Force Teacher Professional Development Initiative

This initiative incorporates teaching strategies and techniques that are linked to improved student performance into watershed education to assist environmental education professionals and educators. This project brings together leading researchers in teacher effectiveness with the award-winning Global Rivers Environmental Education Network's (GREEN) watershed curriculum to train a cadre of local environmental educators. The Earth Force Teacher Professional Development Initiative trains environmental education professionals, who are expected to work with educators in six states. The goals are to provide the tools needed to assist students as they perform a watershed assessment, conduct balanced research, discover water quality issues from a variety of perspectives, and take action to implement a long-term solution. Earth Force teachers lead real-world stewardship projects that enhance student understanding of crucial concepts in environmental science, work alongside watershed experts to use advanced water analysis, and empower students to identify and address a water quality problem in each designated watershed. This initiative builds on national and local academic standards for teaching essential skills to elementary-, middle-, and high school-aged youth, including critical thinking, problem solving, and the application of science to real-world problems. Partners on this project are Western Kentucky University's Center for Mathematics, Science, and Environmental Education; the Rocky Mountain Watersheds Volunteer Monitoring Network; Pickering and Associates; RMC Research; and the North American Association for Environmental Education.

Washington

INDOCHINESE CULTURAL & SERVICE CENTER – \$75,000 Donna Woskow, 1724 East 44th Street, Tacoma, WA 98404

Asian/Pacific Islander (API) Youth Environmental Education Program

Under this project, Asian/Pacific Islander youth in middle and high school are educated about environmental pollution, risks, and related prevention strategies that affect the surrounding marine environment in Puget Sound. The youth participate in 48 after-school meetings and attend 20 after-school classes using the curriculum Connections: Guide to a Healthy Environment, and Investigating & Evaluating Environmental Issues & Actions Skills Development Program. During the meetings and classes, the youth learn how to collect samples and conduct laboratory analysis with the assistance of representatives of several non-profit organizations, federal, state, and local agencies, and universities. After the meetings and classes, the teenagers then reach out to their peers, parents, families, and senior citizens to share information about local environmental health risks. They prepare, present, and disseminate information, including public service announcements, to the Asian/Pacific community using methods that are culturally appropriate. They also make presentations to public school classes and to adults attending English as a Second Language, citizenship, and other workshops and classes. By participating in this project, the youth are learning how to take actions to protect the marine environment of Puget Sound and to promote prevention of pollution in the sound. Members of the local community are, in turn, more aware of existing environmental risks in the community. The Korean Women's Association of Tacoma/ Pierce County is the partner on this project.



Grants Awarded by EPA Regional Offices

Alabama

See page 3 for a profile of a grant awarded to Alabama PALS (People Against a Littered State) by EPA Headquarters.

CAMP FIRE USA CENTRAL ALABAMA COUNCIL – \$14,295 GEN WILLIAMSON, 3600 8TH AVENUE, SOUTH, SUITE 502, BIRMINGHAM, AL 35222

Camp Fletcher: Spring Environmental Field Trip Program

Outdoor environmental education field trips are provided to low-income kindergarten and elementary school students at no cost to schools under this grant. Students are taught the health implications of air pollution; the connections among lakes, rivers, and streams and the drinking water that comes from their taps; and learn about animal habitats, urban development, and the importance of establishing national forests, parks, and wildlife preserves. Environmental stewardship is therefore easily understood and the knowledge retained at a higher level. The method of instruction is based on Project WILD and Project Learning Tree, and is provided by volunteer teachers.

Alaska

Calypso Farm and Ecology Center – \$10,000 Susan Willsrud, P.O. Box 106, Ester, AK 99725

Schoolyard Garden Initiative

The Schoolyard Garden Initiative is a coordinated effort to create a network of school gardens across the Fairbanks-North Star Borough School District to be used for hands-on learning and environmental education. The project funds a series of teacher trainings at pilot elementary schools and a comprehensive garden-based resources guide adapted for conditions in Alaska. The gardens respond to a need for hands-on, environmentally based education in the public schools in conjunction with the desire for fresh, locally grown food. The goal of the project is to integrate garden-based environmental education into teaching the core subjects: math, English and language arts, science, and social studies. Calypso Farm and Ecology Center provides educators with a comprehensive garden-based lesson and resource guide correlated to state and local grade-specific learning standards. The manual is a collection of quality educational resources specifically adapted for garden-based teaching in the unique conditions in interior Alaska. The teacher training series focuses on improving the environmental education skills of educators to support the core subjects.

Yukon River Inter-Tribal Watershed Council – \$17,682 Robert Rosenfeld, 815 2nd Avenue, Suite 201, Fairbanks, AK 99701

Reduce the Use - A Youth Initiative

Students in grades 10 through 12 work in four villages to eliminate plastic grocery bags and Styrofoam cups. In addition, this initiative provides education about solid waste accumulation in landfills and introduces re-usable "potlatch bags." Youth from each of the four communities work with mentors in each community to initiate the campaign. They work with the tribal council and the city for support to eliminate the products identified and to educate the community through media and classroom presentations. The youth and their mentors attend a 2-day retreat to develop the campaign and a community outreach education plan. Participants also implement alternative practices by distributing potlatch bags (small canvas bags with a dish, bowl, cup, and flatware) to community members to use at every gathering. They assess the amount of waste collected from community dinners by counting the number of garbage bags and comparing the amount with the dinners that have taken place previously.



American Samoa

American Samoa Resource Conservation and Development Council, Inc. - \$13,197 Paul Van Ryzin, P.O. Box 5169, Pago Pago, AS $\,$ 96799

Nu'uuli Polytech High School Conservation Club

A combination of classroom presentations, hands-on plant propagation, and public outreach is used to educate high school students and the public about the issue of nonpoint source pollution. Field day events, greenhouse instruction, and communication to the public through newspapers and local public access television are also included. High school students are recruited and trained to educate village residents on topics such as stewardship, water quality, nonpoint source water pollution, and basic conservation bioengineering. Additional residents of the territory are exposed to the stewardship message through signs and local television coverage. Students learn about careers in conservation through their participation in the project. Guest instructors also discuss career options in the environmental sciences. Because local knowledge and expertise in environmental areas are low, it is planned that the student training may lead to long-term careers in the environmental sciences, which will benefit the community. The partnerships of the project fulfill a need for improving access to educational tools and curricula for teachers in the areas of conservation and plant propagation.

Arizona

Scottsdale Community College – \$12,000 Roy Barnes, 9000 East Chaparral Road, Scottsdale, AZ 85256

Sonoran Desert Biodiversity Educational Outreach Program

The Center for Native and Urban Wildlife (CNUW), a conservation biology organization based out of Scottsdale Community College (SCC), anticipates reaching students in grade 4 over the next two years. The short-term goal is to instill an appreciation and understanding of biodiversity in desert ecosystems; the long-term goal is to be an additional point of reference during a student's education, culminating in greater environmental literacy. Teachers are provided with a CNUW learning packet that contains educational materials that meet the Arizona state science standards. After they work with these materials, the fourth graders come to SCC, where they tour CNUW's living biodiversity exhibits in Toad Hall, wildlife demonstration gardens, and a greenhouse and amphibian vivarium, and receive a presentation from the Liberty Wildlife Foundation. At these facilities, students learn about endangered species, reintroduction, restoration, the scientific method, and how all of these concepts relate to biodiversity and science.

The Arboretum at Flagstaff — \$19,555 Rachel Edelstein, 4001 South Woody Mountain Road, Flagstaff, AZ 86001

Navajo Uses of Native Plants

The goal of "Navajo Uses of Native Plants" is to educate northern Arizona youth about the traditional uses of native plants and to encourage stewardship on their part. By teaching school groups to appreciate the traditional uses of native plants, local children can see that the plants are not only beautiful, but can also be part of their cultural heritage. The Arboretum plans to recruit and train contract educators from the Indigenous Studies Program at Northern Arizona University and the Navajo language program at Coconino Community College. By training Navajo educators to lead field trips, the Arboretum can offer curricula about native plants that meet the national and state standards for all area schools.



Arkansas

University of Arkansas – \$20,763 Lynne Hehr, 12 Ozark Hall, Fayetteville, AR 72701

WATERS: Wonder About Teaching Enviornmentally Relevant Science

Under this grant, Arkansas environmental science educators participate in a summer environmental education institute through the University of Arkansas Center for Math and Science Education. The workshops take place on campus and at the stream site located in Fayetteville, Arkansas. During the week-long institute, teachers spend the first part of the week learning to incorporate the biological, chemical, and physical characteristics of stream quality into hands-on and minds-on activities suitable for the classroom. The remainder of the week involves an inquiry-based field trip where streamside sampling, on-site analysis, and discussions about outdoor classroom management are experienced.

California

See page 3 for a profile of a grant awarded to ICLEI-Local Governments for Sustainability, USA and page 4 for a profile of a grant awarded to San Diego County Office of Education by EPA Headquarters.

Aquatic Adventures Science Education Foundation – \$18,542 Shara Fisler, 2211 Pacific Beach Drive, San Diego, CA 92109

SEA Series Initiative

The SEA Series Initiative, a hands-on science classroom program, is provided to students in grades 3 through 6 in the San Diego region. The program at each grade level includes professional development provided to classroom teachers, experiential classroom learning, field trips, and thematic units (incorporating language arts, math, and social studies lessons that build off the environmental science theme). In addition, the program encompasses lending libraries and a community service component that enables students to translate environmental awareness into action. Through the community service component, students, families and others are engaged in environmental stewardship activities such as urban canyon restoration, street cleanups, and on-campus recycling campaigns. The program fosters education on environmental issues, demonstrates how students and families can take responsibility for the health of their community's environment, and builds a lifetime stewardship ethic.

CATHOLIC CHARITIES CYO - \$5,000

DEIDRE RETTENMAIER, 180 HOWARD STREET, SUITE 100, SAN FRANCISCO, CA 94105

Developing Youth as Environmental Leaders and Stewards

This project, "Developing Youth as Environmental Leaders and Stewards," addresses challenges to the riparian corridor of two discrete stretches of Salmon Creek and one of its tributaries that run through 220 acres of coastal redwood forest in Sonoma County. The program will serve students and teachers during 5-day retreats offered 24 times throughout the year. A new creek and watershed curriculum has been introduced, emphasizing on-theground restoration activities that are the direct result of student field study, observation, evaluation, decision making, and problem solving. The goal is to develop the environmental leadership and stewardship skills of the students through direct exposure to local environmental challenges.



Coyote Point Museum Association – \$6,900 Carl Oosterman, 1651 Coyote Point Drive, San Mateo, CA 94401

Youth Environmental Stewards (Y.E.S.) Club

This organization has launched the Youth Environmental Stewards (Y.E.S.) Club for middle school students and their families, with emphasis on weekend marine cleanup and recycling projects. The Y.E.S. Club is intended to inspire each young person to protect and preserve the local Shoreline Park by involving them in hands-on, place-based environmental works that will assist them in learning about the park's coastal and marine ecosystems. Participants in the Y.E.S. Club learn, among many other things, the value of a healthy environment, as well as principles of scientific inquiry and how they can make a difference in the community. It is believed these rewards will encourage youth to consider environmental careers. Projects include soil and water quality monitoring; wildlife population monitoring; and marine and debris recycling. Through these activities, students are able to develop a deeper connection to the environment and begin to understand how the choices they make in their daily lives affect the natural treasures around them.

Friends of the Sea Otter – \$6,000 D'Anne Albers, 125 Ocean View Boulevard, Suite 204, Pacific Grove, CA 93933

In-School Sea Otter Education Program

The In-School Sea Otter Education Program is a tool for local schools to increase the breadth of academic disciplines their students experience, emphasizing key issues such as endangered keystone species, conservation, and ecosystems. Friends of the Sea Otter plans to reach students with their in-class instruction, which includes PowerPoint presentations and hands-on stations. The objectives are to increase students' understanding of sea otter biology and the adaptations and impediments to species recovery, thereby giving students the tools they need to protect sea otters and their habitat. Protection of this valuable species depends on the continuing education of youth by fostering awareness and introducing the concept of stewardship to younger members of the community.

Generation Green – \$4,900 R.C. Ferris, 2066 Donald Drive, Moraga, CA 94556

Traveling Trash Transformations

Generation Green will provide at least 20 hands-on workshops on recycled art at libraries and farmer's markets throughout Contra Costa County. The objective is to inspire people, through creative endeavors, to see the potential value of the raw materials that are recycled. The organization hopes to attract participants at the farmer's markets and students at county and school libraries, who will take part in "eco art" activities that generate enthusiasm and fun, while teaching folks to use unused, recycled materials, and to think before it is thrown away. Generation Green wants to enable people to create, make, and make do; to inspire people to experiment with junk. The organization wants to help create a generation of recyclers so that it will be second nature to look at something discarded and wonder, "What else can this be?" or "What can I make with this?"



Mono Lake Committee – \$9,261 Bartshe Miller, P.O. Box 29, Lee Vining, CA 93541

Mono County Eastern Sierra Watershed Program

Field trips to local creeks and classroom activities combine to educate grade 6 students in the towns of Mammoth Lakes and Lee Vining, California. The program trains volunteer docents from the Stand By Me Mentor Program and teachers at a workshop to increase staff capacity to provide an appropriate ratio of students to supervisors in the field. The idea of the program is to educate students about the importance of scientific research in land stewardship. Students are introduced to field monitoring techniques and the specific topics employed in monitoring. They also learn fish surveying, stream flow measurement, and greenline transect. The results of their activities are gathered into a database that future classes can use and expand. The work that the students engage in is similar to a range of activities that local area professionals conduct in the field. These professionals, who lead the programs, have an opportunity to explain their jobs to students before they demonstrate the monitoring techniques so that students see how these activities can be part of a career in the environmental field.

Northern California Society of American Foresters – \$10,000 Heather Morrison, P.O. Box 339, Camptonville, CA 95922

Forestry Institute for Teachers

The Forestry Institute for Teachers will reach teachers in kindergarten through grade 12, using the forest ecosystem as a tool to provide them the skills and knowledge needed to teach their students about the intricate relationship between forest ecology and sustainable forestry, and to use the ecosystem to teach universal concepts. The institute offers three workshop sessions per year in forested areas in various Northern California settings. Each session is a 6-day, hands-on field workshop. Participants are trained and encouraged to use existing materials such as Project Learning Tree, Project WILD, and Project Aquatic WILD. Field trips include a tour to spotted owl habitat, a lumber mill, an actively managed forest, a salmon-bearing stream, and a meadow restoration site.

Rising Sun Energy Center – \$15,000

ORI SKLOOT, 2033 CENTER STREET, BERKELEY, CA 94704

Solar Education Workshop

Rising Sun Energy Center sponsors 1-day Solar Education workshops four times a year for the professional development of teachers in grades 4 through 12 to teach them how to lead conservation and renewable energy projects for their students. The workshops cover energy-efficient home design, home energy conservation, solar electricity, and solar water pumping. The teachers receive a guidebook with grade-specific curriculum and projects. Furthermore, the teachers have on-going access to an online library of solar energy and energy conservation technologies, which they can borrow to use in their classrooms. They also learn how to use solar energy technology and receive background information on the global, national, and state energy situation. This effort brings students a hands-on experience of energy education through projects such as solar race car building, passive solar home model building, solar electric wiring and circuits, and home energy efficiency retrofitting.



STAR, Inc. – \$9,938 Katya Bozzi, 10117 West Jefferson Boulevard, Culver City, CA 90232

STAR Kids Lead L.A.

This program explores environmental issues pertaining to the Santa Monica Bay Watershed through hands-on watershed classes, field trips to Santa Monica Bay habitats, and real-world stewardship projects, all through daily after-school programming. The idea is to develop a model program that educates students about local environmental issues surrounding the watershed. Nine-week after-school courses are delivered centered on laboratory activities and encounters with wildlife rescues. Field trips are included to various living habitats in the Santa Monica Bay Watershed. The program culminates in a community action project, where students test their newly acquired knowledge in the real world by undertaking a service learning action project that manifests their personal concerns and visions for their own health and of the community. Examples of action projects are local beach, school, or neighborhood cleanups, wetland restorations, recycling projects, and educational murals.

The Watershed Project – \$6,000 Wendy Strickland, 1327 South 46th Street, #155, Richmond, CA 94804

Healthy Schools Inside and Out

The Watershed Project is offering its "Healthy Schools Inside and Out" program in a new location: Contra Costa County. "Healthy Schools Inside and Out" is a program that builds on California's Healthy Schools Act of 2000, which established requirements for notification on pesticide use in school buildings and on school grounds. Its 1-day workshop for teachers offers activities that will dramatically and effectively illustrate the impact of toxins on the environment and human health in ways that excite participants and stimulate them to learn and think critically. It also gives them both the tools and support to implement what they have learned with their students and communities.

Yolo Basin Foundation – \$10,000 Donald Morrill, P.O. Box 943, Davis, CA 95617

Discover the Flyway Educators' Workshops

The Yolo Basin Foundation's "Discover the Flyway" educational program is intended to make wetlands and their stewardship, in the context of the Yolo Basin, a consistent educational component of the schools of Sacramento. This project's goal is to train teachers, volunteers, and interns so they become skilled educators for the program. Seven workshops will be delivered throughout the year. The workshops focus on many of the ecosystem processes and beneficial aspects of the Yolo Wildlife Area and nearby City of Davis Wetlands. The program seeks to expand educators' awareness of local conservation efforts, the compatibility of urban life and agriculture, flood control, effective wildlife management, and how all these factors contribute to a healthy delta ecosystem.



YOUTH EMPLOYMENT PARTNERSHIP - \$13,550 MICHELE CLARK, 2300 INTERNATIONAL BOULEVARD, OAKLAND, CA 94601

Team Oakland Environmental Stewardship Program

Youth are engaged in hands-on, nontraditional environmental education, as well as introduced to careers in the environmental field through the Team Oakland Environmental Stewardship Program. It provides a comprehensive environmental and science educational program to youth enrolled in Youth Employment Partnership's (YEP) Team Oakland program and to students in the YEP Charter School. These youth take part in 25 hours of classroom-based education on the local marine and coastal environment, 25 hours of in-field education on coastal and marine resources and ecology, and 50 hours of cleanup at Lake Merritt and sites along the Oakland Estuary. In addition, they participate in a public awareness campaign to educate local merchants and businesses about how they can help prevent drainage of toxins to the San Francisco Bay. Educational programming is delivered by graduate students from the University of California, Berkeley's, College of Natural Resources, and from a credentialed science teacher from the YEP Charter School.

Colorado

See page 4 for a profile of a grant awarded to the University Corporation for Atmospheric Research by EPA Headquarters.

COLORADO ALLERGY & ASTHMA CENTERS - \$10,000 ROBIN LYNN WILSON, 125 RAMPART WAY, SUITE 200, DENVER, CO 80230

Breathe Right Better Bus Colorado Air Project

The non-profit Breathe Better Foundation (BBF) was founded in 1993 by staff and volunteers of the Colorado Allergy and Asthma Centers. Its mission is "improving the quality of life of children and adults with asthma and allergies." The Breathe Right Better Bus is a direct service program of the BBF and promotes lung health, knowledge of asthma, and indoor and outdoor air quality issues, and reinforces youth tobacco prevention messages. The project uses existing and newly enhanced environmental education curricula to public and private schools (kindergarten through grade 8), along with local community health fairs. The program is also conducted at six sites, including several elementary and middle schools, along with local health fairs. Outcomes expected are increased student and teacher awareness of air quality and pollution issues and increased decision-making skills on how to improve air quality in their local community. The Breathe Right Better Bus has a proven 4-year record with more than 85 site visits per year.

Environmental Learning for Kids – \$48,100 STACIE GILMORE, 14460 EAST 50TH AVENUE, DENVER, CO 80239

Youth in Natural Resources - Science and Environmental Career Development

Environmental Learning for Kids (ELK) is a non-profit, community-based environmental education organization with programs that give participants the opportunity to experience Colorado's natural world. The program also enables participants to increase their science skills, participate in stewardship projects, and be exposed to careers in the field of natural resources. Youth in Natural Resources introduces youth in northeast Denver and Commerce City to environmental issues, science, natural resources, and environmental-related careers while building skills in critical thinking and providing new opportunities for youth to experience Colorado's outdoors. ELK staff provide interactive, academically based environmental education programs and mentoring programs to students from the neighborhoods of Park Hill, Montclair, Green Valley Ranch, Montbello, and Commerce City. The delivery methods include career exploration through monthly environmental activities, college campus visits, college preparation, and summer work experience. Expected outputs include stewardship, such as pollution prevention, watershed protection, water quality monitoring, and wildlife habitat improvement, which will help the target audience become stewards in their communities while developing an informed, active constituency.



Freshwaters Illustrated – \$24,200 Jeremy Monroe, P.O. Box 2252, Fort Collins, CO 80522

Riverwebs: An Educational Documentary on Stream Ecosystems and Aquatic Conservation

Freshwaters Illustrated (FI) is a non-profit organization that works to raise public awareness about freshwater biodiversity, science, and conservation. Colorado State University (CSU) is the primary project partner, helping to facilitate production and promotion of Riverwebs. Riverwebs and its accompanying DVD, along with online resources, contributes to EPA's environmental education priority of community issues. It provides an educational resource that can help introduce a general audience, which includes classrooms and community groups, to river ecosystems, water pollution issues, and their conservation needs. The students are introduced in both formal and informal settings to the field of aquatic ecology and are provided resources and references for exploring this discipline. The educational DVD package is distributed to students in grades 6 through 12, college teachers, conservation groups, and educators through promotions with national societies and organizations. The expected output is that the DVD package and online resources will increase public awareness of freshwater ecosystems, habitat restoration and destruction, along with the continuing growth of invasive species.

FRONTRANGE EARTH FORCE – \$15,000 LISA BARDWELL, 2120 WEST 33RD AVENUE, DENVER, CO 80211

Greenways Project: Using Greenways to Help Educators Integrate Science, the Environment, and Service Learning

The non-profit FrontRange Earth Force (FR Earth Force) was established in 1997 as part of an initiative sponsored by the Pew Charitable Trust, designed to encourage disadvantaged youth to become active in community service. Today, this independent organization is one of eight Earth Force field offices operating across the country. The purpose of the Greenways Project is to increase the environmental literacy of science teachers and their students and encourage participants to increase their stewardship commitment to improving and protecting the environment. The project offers professional development training on how to teach content material using effective inquiry-based strategies. Outputs include training courses, intensive workshops, and on-going coaching and technical assistance. In addition, field excursions provide hands-on instruction for teachers and their students, promote student development of a service-learning project designed to address an environmental concern, and enhance student exposure to a range of environmental careers. Students gain hands-on experience as they study native and non-native plants and wildlife, water quality, biodiversity, ecosystem dynamics, and the effects of urban growth on the system.

Connecticut

Connecticut Coalition for Environmental Justice – \$10,755 Mark Mitchell, P.O. Box 2002, Hartford, CT 06145

Bridgeport Asthma Speakers' Bureau

The target audience of the Bridgeport Asthma Speakers' Bureau is the residents in Bridgeport's low-income neighborhoods. The speakers are drawn from neighborhood residents who are trained to educate their peers on asthma and on taking control of the indoor and outdoor environments. The first effort is focused on recruiting low-income residents who have the cultural and linguistic competency for four train-the-trainer workshops of about two hours each. Community residents and families are then invited to attend community asthma and air quality talks and strategy sessions for resolving problems. These residents are recruited through local community partners. The incentives offered to the residents attending the meetings include transportation, refreshments, and childcare.



New Haven Ecology Project – \$10,022 Betsy Sneath, 358 Springside Avenue, New Haven, CT 06515

Earth Day At Common Ground

This organization holds an annual Earth Day festival for students in grades 1 through 6 and adults. During this day-long festival, participants are educated on food systems and on local, sustainable food, ecosystem protection, pollution, recycling, and organic farming. The festival raises the awareness of participants on their role in environmental protection and their connection to the natural world. These goals are achieved through interactive lessons and tours by trained Common Ground High School student and adult staff volunteers.

New Haven Urban Resources Initiative – \$10,750 Colleen Murphy-Dunning, 205 Prospect Street, New Haven, CT 06511

Open Spaces as Learning Places

This project reaches students in grades 4 through 6 in an urban setting on the ecological systems around them. Open Spaces as Learning Places focuses on six types of urban open space in New Haven: school grounds, reclaimed abandoned lots that are now community-managed, city parks, rivers and wetlands, pond life, and historical cemeteries. Through these open spaces, students are educated on water cycles, nutrient cycling, wildlife biodiversity, forest structure, the connection between species and habitat diversity, and adaptation, and the impact of the urban environment on its natural counterpart. Teachers are trained to both educate the students about these open spaces and to continue the open space curriculum.

Delaware

Partnership for the Delaware Estuary, Inc. – \$15,000 Kathy Klein, One Riverwalk Plaza, 110 South Poplar Street, Suite 202, New Castle, DE 19801

Teachers & Trees

Teachers & Trees is a pilot program to help teachers in kindergarten through grade 12 understand the importance of native tree restoration and the critical environmental role they play in the Delaware Estuary ecosystem. The program provides participants of the Delaware Estuary Teachers Watershed workshops the opportunity to work with scientists to learn research methods. Teachers learn about available educational resources and work toward including what they have learned into the school districts' curriculum. The program increases awareness and develops environmental stewardship in students, parents, community landowners, and elementary, middle, and high school teachers in the estuary.

District of Columbia

Environmental Literacy Council – \$15,000 Kenneth Green, 1625 K Street, NW, Suite 1020, Washington, DC 20006

A Critical Review of Energy Literacy in K-12 Environmental Education Materials

The Environmental Literacy Council has reinvigorated its review of environmental education materials and science textbooks by launching a review of materials related to energy literacy. Areas where current educational materials are considered to be falling short on teaching the fundamental scientific and economic concepts are identified to help students develop a deeper understanding of environmental issues related to energy literacy. A report generated through the review process will form the basis for the Energy Literacy Resource Guide. Middle school science teachers, curriculum coordinators, and science supervisors in school districts across the country are the target audience for this grant.



William James Foundation – \$15,440 Ian Fisk, 1400 16th Street, NW, Suite 101, Washington, DC 20036

Smart Fuel Project

The William James Foundation Smart Fuel project engages middle school teachers and students of the Wissahickon Charter School located in Philadelphia, Pennsylvania. Students learn to create biodiesel, a climate-friendly, vegetable oil-based fuel that reduces almost all criteria pollutants and can be used in any diesel vehicle. This program includes three major components: (1) biodiesel processor design and development, (2) on-site processing, and (3) community outreach. The main audience is middle school teachers and students, who will also provide community outreach and education on the creation and effects of biodiesel. Based on safety and other design features outlined by Smart Fuel and a system designer, students participate in the actual design of the system. The students also participate in construction and processing. Finally, the students host an evening "view and brew," where they open the processor to the community to explain how biodiesel is created and its environmental benefits. Particular attention is paid to include other middle school students in field trips to the processor.

Florida

DUVAL COUNTY HEALTH DEPARTMENT ENVIRONMENTAL HEALTH & SAFETY DIVISION – \$9,881 ANTOINETTE JACKSON, 900 UNIVERSITY BOULEVARD, NORTH SUITE 300, JACKSONVILLE, FL 32211

Duval County Integrated Pest Management (IPM) Practices

The Duval County Cooperative Extension Service is providing four modules on household Improved Pest Management (IPM) train-the-trainer workshops. These modules include: (1) general IPM; (2) lawn: insect pests, disease, and weeds; (3) garden; and (4) home: ants, cockroaches, and termites. This certificate-based training is delivered to health department staff and community volunteers. The certified trainers are provided with train-the-trainer kits to deliver workshops in home improvement and hardware stores, and to neighborhood associations and community organizations. The Duval County Cooperative Extension Service uses public service announcements, health fairs sponsored by community organizations, brochures and flyers for healthcare partners, and informational resources to obtain participants once trainers have been certified.

FLORIDA STATE UNIVERSITY - \$7,450

GANG CHEN, 97 SOUTH WOODWARD AVENUE, TALLAHASSEE, FL 32306

Incorporation of Ecology and Biology Education in Environmental Engineering

Florida State University (FSU) incorporates ecological and biological sciences into its existing environmental engineering program. A curriculum on Environmental Ecology, Wetland and Environmental Restoration, and Applied Environmental Microbiology has been established to provide specialized study in environmental ecology and environmental biology. FSU uses research field facilities for teaching and provides practical experience for students to gather first-hand information on environmental restoration. This course fulfills a need since the original program offered only traditional water and air quality engineering education without specializing in the ecological and biological aspects of the environment. The project trains the students to obtain knowledge on natural sciences relevant to environmental engineering and increases their ability to understand the impact of engineering solutions in a contemporary interdisciplinary environmental issue. Their ability to work on multi-disciplinary teams will therefore be enhanced.



Resource Depot, Inc. – \$4,258 Deb Romanelli, 3560 Investment Lane, #103, Rivera Beach, FL 33404

Assisting Communities to Thrive (ACT)

Resource Depot, Inc. presents a program called Assisting Communities to Thrive (ACT). This project increases awareness of the economic and lifelong environmental advantage of using free reusable materials derived from landfills. High school science teachers participate in workshops to learn how to teach environmental education with ease and to share environmental information with the community using student-led teams. The teachers also learn how to obtain free reusable materials for education projects. In turn, the students learn how to gather discarded materials and create fliers and brochures to distribute to business owners about how to reduce waste.

UNIVERSITY OF CENTRAL FLORIDA - \$12,012

Richard Paradise, 12443 Research Parkway, Suite 207, Orlando, FL 32826-3252

Energy Conservation and Sustainability

This project addresses the community issue of energy conservation. Energy and environmental awareness workshops are conducted for students living in the university residences and building managers who administer all educational and general buildings on campus. This project is intended to change cultural thinking about energy conservation and sustainability in their community. The long-term goal is to develop an Energy Conservation and Sustainability initiative to reduce energy consumption. The medium-term goal is to reduce energy consumption along with greenhouse gas emissions by at least 10 percent. The project also provides volunteer opportunities and involves the development and distribution of a newsletter, and the conduct of energy project demonstrations.

Georgia

BIBB COUNTY BOARD OF EDUCATION KEEP MACON BIBB BEAUTIFUL, INC. (KMBB) – \$10,000 KARL JOHNSTON, 601 MULBERRY STREET, MACON, GA 31201

Waste In Place

The Keep Macon Bibb Beautiful program hosts workshops for teachers in grade 3 in the Bibb County Board of Education (BOE) system. Bibb County has committed to implement an environmental education program throughout the school system that teaches children how to make personal and informed choices that will positively affect the environment around them. The curriculum, Waste in Place, uses an integrated approach to manage municipal solid waste. It includes a multitude of hands-on projects to teach environmental stewardship as well as responsible solid waste management practices that may be implemented in schools and homes. Students enrolled in grade 3 in the 31 elementary schools in Bibb County receive instruction from teachers who participate in the workshops.



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MEDLOCK ELEMENTARY SCHOOL – \$4,000 PAIGE STANFIELD, 2418 WOOD TRAIL LANE, DECATUR, GA 30033

Georgia Native Plants: Teaching Skills and Stewardship Through Gardening

The Medlock PTA sponsors the Georgia Native Plants Initiative at Medlock Elementary School, which supports and enhances an already established gardening program. By working directly with soil, seeds, and plants, students learn about the life cycles of plants and flowers, the animals these plants support, and the importance of habitat and environmental stewardship. Pre-kindergarten through grade 5 students participate in this endeavor. Benefits of the project include an improved community garden and butterfly habitat, which not only teaches and serves the teachers and students, but also senior citizens, providing a location for environmental learning, community activities, and community environmental stewardship. Special needs students are included in the target audience. Teachers participate in 2-day Project WILD workshops, which focus on teaching skills, strategies, and proven instructional tactics that help motivate student learning and participation.

Hawaii

Hanalei Watershed Hui – \$17,357 Barbara Kaaumoana, P.O. Box 1285, Hanalei, HI 96714

Sediment Pollution and Erosion Control in the Watershed

This environmental education program reaches students in grades 5 and 6 on the North Shore of Kauai. Its focus is on sediment pollution in the Hawaiian watershed, how it is caused, its effects on fresh water and coral reef ecosystems, and how the pollution can be controlled. The program provides a hands-on stewardship experience that combines classroom learning with outdoor experiences. Students work together in cooperative groups to conduct field research on a local trail to assess the sediment and erosion problem. They then design and implement a community-based traditional restoration project that will reduce erosion on the trail. In a final reflective phase, the students analyze and synthesize their findings into reports and presentations that they will share locally and on their Web site.

Idaho

FRIENDS OF THE TETON RIVER – \$10,584 LYN BENJAMIN, 36 EAST LITTLE AVENUE, P.O. BOX 768, DRIGGS, ID 83422

Blackfoot Farms Outdoor Classroom Project

The Teton Watershed Curriculum is implemented via the Blackfoot Farms Outdoor Classroom on the Blackfoot Farms Property. This curriculum was developed by Friends of the Teton River under a previous EPA grant. This curriculum is preparatory, in-field, and provides follow-up resources for learning about watershed science. Friends of the Teton River has collaborated with Blackfoot Farms on this outdoor classroom and watershed rehabilitation project for students in kindergarten through grade 12. The outdoor classroom provides two teacher workshops and teaches the existing curriculum to local students on site. In addition, two wetland ponds and Kid's Creek are rehabilitated and monitored for native Yellowstone cutthroat trout habitat. The projects include creating interpretive signs for rehabilitating sites and the outdoor pavilion and facilitating a student-made portfolio of all activities over the length of the project. Friends of the Teton River will work with teachers in kindergarten through grade 12 and students from elementary, middle, and high schools.



Palouse-Clearwater Environmental Institute – \$14,805 Greg Fizzell, P.O. Box 8596, Moscow, ID 83843

Building a Water-Conscious Moscow

Palouse-Clearwater Environmental Institute delivers locally developed, age-appropriate water-conscious curricula to teachers and students in kindergarten through grade 12. Classrooms participate in educational programs, and then the students are assigned to assess water use at their homes. The results are discussed in the classroom, and the students are given the opportunity to sign a pledge to be a "water-conscious citizen." In addition, a Water-Conscious Business Program provides training and consultation to businesses in Moscow about ways to conserve; businesses that participate in the training receive recognition for their role as a regional leader in conservation.

UNIVERSITY OF IDAHO - \$26,708

STEVE HOLLENHORST, P.O. Box 443020, Moscow, ID 83844-3020

Growing What Works: A Graduate Residency and Outreach Program

The University of Idaho implements a cross-disciplinary graduate course of study in environmental education that includes a one-semester teaching residency at McCall Outdoor Science School (MOSS). Graduate students from across the country and Americorps members in the community participate in the training on community ecology, environmental education testing methods, low-impact outdoor travel, and Global Learning and Observations to Benefit the Environment (GLOBE) program protocols. The graduate students subsequently serve as environmental education field instructors in a 10-week teaching residence at MOSS. Concurrently, they take three graduate-level courses and earn 15 credits over the course of the semester. Students in grades 5 and 6 participate in a 5-day ecosystem monitoring study using scientific protocols. Students spend six hours a day in the field collecting data and two hours in a laboratory setting analyzing, comparing, and synthesizing data across several different ecosystem types. Classroom teachers participate in all aspects of the field and laboratory studies. In the spring after the MOSS teaching residency, the graduate students will deliver MOSS outreach programs to additional students in grades 5 and 6 across the state.

Illinois

City of Chicago, Department of Environment, Community Programming and Outreach – \$43,345 Juri Jones Moore, 30 North LaSalle Street, Suite 2500, Chicago, IL 60602

Becoming an Environmental Steward

Local university interns educate students in 24 Chicago public schools about environmental issues in the urban community. The project is an outgrowth of activities used to promote America Recycles Day and incorporates the Growing Green environmental education curriculum developed by the state Department of Environment. The project is divided into two phases. The first phase focuses on recycling. Students explore issues related to recycling and its environmental implications, such as resource depletion and finite landfilling capacity; and barriers to recycling in urban environments. They also study efforts the city is undertaking to encourage recycling; the benefits of recycling, both economic and environmental; steps students and individuals can take to increase recycling at school, home, and play; and ways to make recycling a factor in daily decisions and choices. They capture the information on video. Interns are trained to work with students in developing creative videos that focus on the environmental issue of the students' choice. In the second phase, the students select another issue as a focus for Earth Day. The issue concentrates on plants, natural resources, energy, and recycling. The second issue also is captured on video as a class project.



CSA Learning Center – \$10,000 Tom Spaulding, 1547 Rockton Road, Caledonia, IL 61011

Roots and Wings

The Roots and Wings program increases the capacity of at-risk youth in the Rockford, Illinois, area to serve as environmental stewards in their community through hands-on farm- and garden-based education and community service. Youth learn about the environmental and health impacts on the food system and serve as peer leaders to help design and lead activities. Parents, community members, and civic leaders are engaged with environmental and health issues through the expansion of a youth-led farmers market business and production of the area's first youth-generated arts performance about food, health, and the environment.

Lewis and Clark Community College – \$35,521 Jessica Pascoe, 5800 Godfrey Road, Godfrey, IL 62035

Environmental Conflict Resolution

In an effort to develop a best practice in environmental stewardship, the National Great Rivers Research and Education Center (NGRREC) established a program of participative experiences in conflict management on environmental policy issues. NGRREC is a partnership of three primary parties: the University of Illinois at Urbana-Champaign, Lewis and Clark Community College, and the Illinois Natural History Survey. High school teachers and their students are targeted from southwest Illinois. A teacher professional development workshop is created to cover the following issues: techniques of conflict resolution, background on environmental issues such as management of wetlands in the Mississippi and Illinois River watersheds, building levees for economic development, conservation, environmental protection, protection of agricultural areas and tourist areas, and identification of the primary interests of all parties involved in these issues. These parties include promoters of economic development, tourism, transportation, recreation, and agriculture. Teachers are provided with a curriculum to integrate into their lesson plans.

Indiana

Improving Kids' Environment Inc. – \$15,729 Janet McCabe, 1201 North Central Avenue, #9, Indianapolis, IN 46202

Smart Schools Don't Idle

"Smart Schools Don't Idle" educates students, teachers, staff, administrators and parents at Indianapolis elementary schools about the environmental and health effects of unnecessary vehicle idling. The goal of the project is to provide a prototype that educates the entire Marion County elementary school community on the health effects of motor vehicle idling and to dispel myths about motor vehicle idling. As a result, students, parents, school administrators, and teachers have the necessary tools to make informed decisions about how their personal behavior affects air quality. Workshops are presented to teachers and school staff so they can learn about the project. By adapting existing materials, as needed, the project provides teachers with classroom activities and information that will help children understand how pollution is emitted by idling vehicles and how the emissions affect their health and the environment.



lowa

Eastern Iowa Community College – \$12,782 Ellen Kabat Lensch, 306 West River Drive, Davenport, IA 52801

The PEER Project: Protecting the Environment and Earth's Resources

Advanced Technology Environmental Education Center (ATECC), in partnership with United Neighbors, Inc. (UNI), and Eastern Iowa Community College, has developed a 1-year Protecting the Environment and Earth's Resources (PEER) project to educate inner-city youth about natural resources, conservation, and environmental issues. Elementary school students study life forms and habitat on a river, the role of wetlands, sources of pollution and their effects on the river, and the impact of man-made structures on the river. ATECC staff train UNI staff to use the Connected by a River educational CD-ROM and to use local environmental programs in the community for education. Educators implement the CD-ROM guidance and conduct field trips with a group of inner-city children during the UNI after school and summer program. Students learn about environmental issues and environmental careers and see first-hand professionals working in environmental fields during the field trips. ATECC will evaluate the pilot program and develop a PEER guide to assist additional instructors in replicating the PEER project based on the evaluation.

IOWA DEPARTMENT OF NATURAL RESOURCES – \$13,199 BRIAN SOENEN, 502 EAST NINTH STREET, DES MOINES, IA 50319

A Watershed Awareness River Expedition (AWARE)

Project AWARE is coordinated by the Iowa Department of Natural Resources and Keepers of the Land volunteer programs. This project focuses on watershed education and environmental stewardship. The goal of this project is to involve students, adults, and members of the community in analysis of water quality data to see how water quality changes throughout the watershed. IOWATER, a volunteer water quality program, is used to analyze water quality. Participants study habitat change, stream flow, and land use.

Iowa Department of Public Health – \$30,376

SARA COLBOTH, LUCAS STATE OFFICE BUILDING, 321 EAST 12TH STREET, DES MOINES, IA 50319

Pesticides and Chemicals in Child Care

A childcare workgroup consisting of six agencies educates teachers, students, parents, and community leaders about threats to human health from environmental pollution, especially as it affects children, and how to minimize human exposure to preserve good health. These agencies include the Department of Public Health; Department of Human Services; Department of Agriculture and Land Stewardship; Department of Education; Iowa Poison Control Center; and Iowa State University Extension. The target audience is licensed childcare providers. This project protects children enrolled in childcare centers throughout Iowa from injury and illness caused by exposures from misuse of hazardous chemicals that are used in childcare centers. The Iowa Department of Public Health has developed and distributed educational materials through this project that explain the EPA labeling system, the importance of reading product labels, whether there is a need to use some chemicals to correct a problem, and Integrated Pest Management. Educational seminars are held throughout the state. In addition, educational materials are distributed, and the importance of safe and proper use of pesticides in the presence of children is discussed.



Kansas

American Lung Association of Kansas – \$44,740 Lynn Crabtree, 4300 SW Drury Lane, Topeka, KS 66604

Rehab the Lab - Removing Hazardous Chemicals from Classrooms

The American Lung Association of Kansas, in partnership with Kansas State University, coordinates and conducts four workshops that target high school chemistry teachers in Kansas. This project educates high school, college, and university science teachers about the potential respiratory and other health risks to students and others when they are exposed to hazardous chemicals. This project helps high school science teachers acquire the skills and some of the supplies needed to return to their classrooms and begin using "green science" and micro-scale chemistry experiments. One workshop for college and university faculty is held in conjunction with the Kansas College Chemistry Teachers conference. All four workshops offer lectures about rehabilitating the laboratory and laboratory safety, followed by two simultaneous hands-on laboratory tracks using green science experiments and principles of teaching and demonstrations with micro-scale chemistry kits.

K-State Research & Extension Wyandotte County – \$2,948 Lynn Loughary, 9400 State Avenue, Kansas City, KS 66112

Backyard Composting Educational Program

K-State Research & Extension and Wyandotte County Extension Master Gardeners created four compositing demonstration sites that educate elementary school students and adults on a variety of different backyard composting techniques and how to recycle yard and garden waste. Master gardeners provide and maintain the demonstration sites and teach the composting workshops throughout the year.

Kentucky

LINCOLN RESOURCE CONSERVATION & DEVELOPMENT AREA, INC. – \$7,760 JILL BUTLER, 589 WESTPORT ROAD, ELIZABETHTOWN, KY 42701

Sinking Creek Watershed Education Outreach Initiative

This environmental educational outreach initiative enhances the awareness of local residents on environmental issues that involve pathogens and sedimentation, which are threats to the water quality of Sinking Creek. The target audience includes local residents, loggers, and farmers in the watershed area, teachers in kindergarten through grade 12 at schools in Breckinridge and Meade Counties, and students in the science classes in kindergarten through grade 8. This project is accomplished by disseminating educational tools and materials to local residents through community events, public forums, an agricultural field day, and workshops for local educators.

Mason County School System – \$9,303 Tim Moore, 2nd & Limestone Street, P.O. Box 130, Maysville, KY 41056

TRAILWAYS Nature Trail on School Grounds

The TRAILWAYS project established an outdoor classroom and nature trail on school grounds that brings highquality environmental education to students in kindergarten through grade 12, school personnel, and the community. The nature trail teaches students the species of trees that are native to the area while preserving a natural history for the community. In the outdoor classroom, students learn genus and species along with care and maintenance of the trees planted.



WESTERN KENTUCKY UNIVERSITY RESEARCH FOUNDATION - \$41,714

Karen Powell, Office of Sponsored Programs, 1906 College Heights Boulevard #11016, Bowling Green, KY 42101-1016

Expanding Environmental Discovery Within Rural Communities

Environmental education and community issues – with emphases on clean water and ecosystem protection – are promoted through the Expanding Environmental Discovery within Rural Communities program. Under this grant, teachers representing schools located near Mammoth Cave and Brigadoon State Nature Preserve participate in workshops to learn how to develop and facilitate effective environmental learning experiences. By focusing on the ecosystem in which they live, the teachers are educating rural youth about their role in protecting the environment. The participating students, who write about environmental issues local to the area, are in turn helping to educate members of the community about topics such as clean water and protection of the ecosystem.

Maine

See page 5 for a profile of a grant awarded to the University of Maine System acting for University of Maine by EPA Headquarters.

Cultivating Community – \$33,200 Craig Lapine, P.O. Box 3792, Portland, ME 04104

Earth Steward Garden Initiative

The Earth Steward Garden Initiative educates middle school and high school students on environmental stewardship through food-based issues. The project includes gardening programs at area schools. Teachers and students explore the environmental impacts they cause as consumers and producers of food so that they may assess the ecological consequences of food choices, value local foods as a way to minimize resource use and preserve open space, and learn techniques to minimize waste streams and conserve soil fertility. This organization implements the program through school partnerships and youth programs. It expects to partner with at least three schools and train several teachers in Cumberland County on food- and garden-based programs. This organization's Compost Corps program also expects to enroll high school students to participate in this program.

Maryland

Anne Arundel Community College – \$9,440 Martha Smith, 101 College Parkway, Arnold, MD 21202-1895

StreamWaders Program

Students investigate the relationship between land cover and water quality in the Chesapeake Bay watershed. The activity is integrated into the existing Environmental Science curriculum at the community college, which includes segments on bay ecology and threats to water quality. The project provides a hands-on, field-based approach to learning the importance of tributary management and land use planning in protecting the bay. Students participating in the project are given a broad overview of the Chesapeake Bay and learn what they can do to improve the quality of the Bay. By learning first-hand how their individual actions can positively affect the water quality, the students are on their way to becoming environmental stewards in protecting the health of the Chesapeake Bay and its tributaries.



Audubon Society – \$6,388 Rick Leader, 23000 Wells Point Road, Bozman, MD 21612

Women in Science Institute

The Women in Science Institute addresses career development by introducing girls ages 11 through 14 to the various careers in science. Students are exposed to various scientific disciplines and participate in three days of intensive science exploration through investigations, such as exploring the tributaries by canoe, conducting water quality experiments, using nets and fishing rods to identify the type of organisms that live in the Chesapeake Bay, and attending lectures by marine biologists and ornithologists on conservation and ecological issues. Students investigate various environmental issues on the health of the bay, from restoration of wetlands to chemical waste removal. In addition, students participate in a field visit to the Shehan Audubon Sanctuary to develop an understanding of the process that leads to environmental stewardship. The program culminates in an annual gathering of participants, mentors, and the public in celebration of student achievement. Graduates are tracked for 10 years to follow academic and professional choices and successes.

Maryland Zoological Society, Inc. – \$4,800 Elizabeth Grieb, Druid Hill Park, Baltimore, MD 21217

Conservation Interpretation in the Maryland Wilderness

The Conservation Interpretation in the Maryland Wilderness project, sponsored by the Maryland Zoological Society, Inc., provides a conservation-themed "outpost" education program for students and the public at the Zoo's Maryland Wilderness exhibit. Volunteers, using a variety of interpretive tools that include "biofacts," playing environmental games, or conversing through questions, encourage guests to think critically and problem solve environmental issues that lead to good environmental stewardship on local Maryland topics.

Massachusetts

See page 5 for a profile of a grant awarded to the New England Wildlife Center by EPA Headquarters.

HITCHCOCK CENTER FOR THE ENVIRONMENT – \$9,468 JULIE JOHNSON, 525 SOUTH PLEASANT STREET, AMHERST, MA 01002

Riverview: A Current Look at the Sawmill River

The Riverview project brings elementary school students into contact with a local habitat, the Sawmill River, and its watershed. Students, teachers, and school administrators learn through direct contact about local habitat, causes of and solutions to pollution, resource conservation, and plant and wildlife habitat protection in the watershed. Students deliver presentations throughout the project. They wrap up the program with student-led presentations and demonstrations (science projects, journals, maps, and storybooks), which are showcased in public buildings throughout the town for the public.

Trips for Kids New Bedford, Inc. - \$9,938 Joann Clarke, 224 Brock Avenue, New Bedford, MA 02744

Explore Your Environment

Explore Your Environment (EYE) educates inner-city youth, ages 9 through 15, on a variety of environmental issues, including air and water quality, litter reduction, healthy natural habitats, and vernal pools. It also provides education on industrial waste and pollution, because there is a hazardous waste site in the community. Students and staff visit New Bedford Harbor as an introduction to the significant local issues of industrial waste and pollution. They also identify many varieties of seaweed and their uses in food and medicine. The students visit the Bioreserve to explore vernal pools and learn about ecology and habitats. This program is offered through a summer camp program, where students and staff use the local environment as the classroom. Professional teachers and naturalists lead all the exercises.



MD-MA

Michigan

See page 6 for a profile of a grant awarded to Eastern Michigan University and a grant awarded to Oklahoma University by EPA Headquarters.

BIG BAY DE NOC SCHOOL DISTRICT – \$9,375 LOIS THIBAULT, 8928 0.025 ROAD, COOKS, MI 49817

Hands-On, Minds-On Science Learning for Life

The Big Bay de Noc School District and Garden Township own a combined 18 acres of wooded wetland with 1,500 feet of shoreline on Big Bay de Noc, Lake Michigan. The entire acreage is designed and developed into an outdoor environment-based learning laboratory featuring the Hands-On, Minds-On Science-Learning for Life program. A landscape architect and environmental planner evaluated the site and designed a handicap-accessible development plan. The plan includes observation stations, raised boardwalks over environmentally sensitive areas, an outdoor classroom, parking, public picnic areas, and more. The district has reformed its curriculum by adopting an environment-based curriculum that is aligned with Michigan Science Standards. Pre-kindergarten through grade 12 outdoor investigations, guided tour materials, and information packets are developed. The target audience is pre-kindergarten through grade 12 students from Big Bay de Noc School District and its staff. Additional target audiences include citizens and community groups from the Big Bay de Noc School District and from surrounding school districts.

CALVIN COLLEGE - \$14,996

KENNETH BERGWERFF, 3201 BURTON STREET SE, GRAND RAPIDS, MI 49546

An Inquiry-Based Approach to Education with the Plaster Creek Watershed

High school teachers are introduced to existing curricula, activity books, and tools in a workshop that carries graduate credit to learn about watershed issues. The workshop is followed by a year of in-class implementation and a 1-day session to assess and modify materials. High school teachers then develop teaching units about the Plaster Creek watershed that meet state benchmarks. Within the educational units, students use scientific inquiry to formulate, design, gather, analyze, and present information on the physical, biological, and chemical water quality of the creek. Teacher pedagogy and student learning emphasize open-ended and inquiry-based investigation. Grade 9 students are involved in regular monitoring of the flow and stream profile characteristics, including macroinvertebrate inventories of Plaster Creek. The surveys provide a context for successful projects to be developed for upper-level environmental science courses.



Minnesota

Eco Education — \$15,000 Kathy Kinzig, 509 Sibley Street, #375, St. Paul, MN 55101

High School Urban Environmental Education Initiative

The project builds on a successful 2001 grant that focused on workshops for teachers in grades 5 through 8 to build their knowledge of current urban environmental issues and apply it to environmental service-learning and issue investigation in the classroom. The model is expanded to local high schools and provides teachers the opportunity to learn, practice, and teach the skills and components of service-learning, issue investigation, making and keeping community contacts, and facilitating youth leadership in environmental issues, thus acquiring proficiency to eventually conduct projects on their own. The goal is to assist teachers in exposing students to and involving them in addressing current environmental issues that face their communities and the State of Minnesota. The primary audience is teachers in grades 9 through 12 from Minneapolis and St. Paul schools. Eco Education's program coordinators and community resource partners work with individual teachers and their classrooms during the school year to model and facilitate the issue investigation process. Partners are community and regional organizations and agencies that provide experts to teachers and students and who share their knowledge on the most pertinent environmental issues facing the Twin Cities community. Each teacher involved works with three to four partners. Partners already established include the Minnesota Pollution Control Agency, Minnesotans for an Energy Efficient Economy, the University of Minnesota Extension Service, Friends of the Mississippi River, and the Minnesota Department of Natural Resources.

The Patricia L. and Wendell W. Maltby Foundation - \$6,285 Jeff Maltby, 789 Sciota Trail East, Randolph, MN 55065

Connecting Communities to the Cannon River

Teachers are recruited to the program via a summer institute that is taught, in part, on the Cannon River. This institute is presented in partnership with the National Center for Earth Surface Dynamics and the Science Museum of Minnesota, with funding from the National Science Foundation. After a week of intensive river study, participants are required to develop an action plan to implement what they have learned into the classroom curricula. The Maltby Nature Preserve contains more than 90 acres of woodlands, prairie, open grasslands, ponds, and almost one mile of Cannon River shoreline. Watershed education is a major focus for the center's outreach program. Scientific inquiry and the nature of science are benchmarks at every level under the recently adopted Minnesota academic standards. A model is designed and implemented to involve students in grades 7 and 8 in an authentic inquiry of the health of the Cannon River. The activities used build a sense of connection to the river as students investigate water quality, explore the concept of watersheds, and recognize that their daily actions and choices have effects on water quality. Students make repeated trips to the river to collect and analyze information.



Mississippi

MISSISSIPPI'S LOWER DELTA PARTNERSHIP – \$9,360 Meg Cooper, P.O. Box 214, Rolling Fork, MS 39159

Great Delta Bear Affair Youth Education Day

A field trip for area fourth graders introduces the students to a variety of conservation-related topics and careers, all of which affect the black bear habitat and population in the Mississippi River delta. Students learn about bear habitat, population, protection, monitoring, and efforts to return the black bear to Mississippi by rotating through a series of presentations, hands-on demonstrations, and interactive activities presented by natural resource professionals. The students can become good environmental stewards and make more informed decisions about the environment.

Missouri

BLUE RIVER WATERSHED ASSOCIATION – \$13,937 GINEVERA MOORE, P.O. BOX 22395, KANSAS CITY, MO 64113

KC Clean Streams

The Blue River Watershed Association organizes a water quality project designed to provide students, teachers, and adult volunteers in the Kansas City metropolitan community an opportunity to learn about and address an important community issue: the adverse impact of litter and trash on water quality in Kansas City. They observe the effect of trash on waterways and participate in an environmental stewardship experience. This project consists of a 1-day cleanup event that involves students and teachers in grades 4 and 5, as well as adult volunteers from the community. They learn about water quality issues with standards-based curriculum materials. Students participate in an environmental stewardship experience that demonstrates how individuals can make a positive difference in the environmental health of the community.

MIGRANT FARMWORKERS PROJECT – \$18,599 SUZANNE GLADNEY, 920 SOUTHWEST BOULEVARD, KANSAS CITY, MO 64108

Proyecto Verde: Growing a Healthy Community

The Migrant Farmworkers Project addresses lead poisoning, pesticide exposure, and polluted waterways both by providing education on lead poisoning and by testing migrant children for lead. Migrant farmworkers and seasonal workers receive education vital to the health of migrant families about the dangers of exposure to agricultural and household pesticides. Migrant youth also learn how clean waterways are important to creating and preserving healthy plant and fish habitats. Elementary, middle, and high school-age children and adults learn about the dangers of lead poisoning and prevention strategies. In addition, Migrant Farmworkers provides information on recycling to migrants and encourages land stewardship by collecting and reusing recyclable materials. Migrant Farmworkers teaches migrants about agricultural and household pesticides safety, and migrants learn about clean waterways, water ecosystems, and fish that are safe to eat. Migrant Farmworkers encourages stewardship of the land through safe gardening techniques and beautification of the environment. Information is provided about native plants and organic gardening.



Top of the Ozarks Resource Conservation & Development – \$11,217 Richard Stricklin, 6726 Highway 63, Houston, MO 65483

Jacks Fork Rivers Users

Top of the Ozarks Resource Conservation & Development conducts educational workshops for students and the public to educate them about the environmental concerns and issues that affect the Jacks Fork River. Students in grades 4 and 5 learn about clean water. A watershed Web site has been developed to update the community about educational activities within the watershed and about the Jacks Fork River.

Montana

Institutes for Journalism & Natural Resources – \$12,000 Frank Edward Allen, 121 Hickory Street, Suite 2, Missoula, MT 59801

A Field-Based Learning Expedition for Reporters and Editors

The Institute for Journalism and Natural Resources (IJNR) is an independent, non-profit educational group that conducts expedition-style programs for selected representatives in the field of journalism. To date, IJNR has conducted 31 learning expeditions and a year-around mentoring program serving journalists in 37 states. The institute works with the U.S. Forest Service, National Park Service, U.S. Fish & Wildlife Service, EPA, the National Oceanic and Atmospheric Administration (NOAA), along with representatives in the timber, energy, and food services industries, grass roots organizations, and family-owned farms. For nine consecutive days in September, a diverse group of journalists, serving rural and urban communities in Colorado, Wyoming, Montana, Idaho, Utah, Nevada, New Mexico, Arizona, and the Dakotas, will be visiting various ecosystems. There, they learn about drilling sites, logging and grazing operations, watershed restoration projects, power plants, and wind farms. Journalists are required to improve their competence as critical thinkers and as investigators of trends. They interact with 50 expert speakers and site hosts and visiting communities such as Pinedale, Big Piney, Rock Springs, Evanston, Green River, Rifle, and Salt Lake City.

RIM COUNTRY LAND INSTITUTE - \$10,000

CAROL SCHMID MCEVOY, 70 HANGING TREE GULCH, CLANCY, MT 59634

Revitalizing Communities Through Place-Based Education and Stewardship

The non-profit Rim Country Land Institute (RCLI) offers educational workshops, teacher training, and community service projects in the Yellowstone County and Billings area. Education programs focus on initiatives in environmental stewardship, impacts to the prairie ecosystem, urban sprawl, and conservation easements and Smart Growth policies. This project offers teacher training sessions for state and tribal teachers in the local area; monthly student activities including community service projects; and environmental workshops to increase environmental literacy; and school field trips for local schools. Partnerships have been established with Montana State University, Project WET, the Prairie Alliance, the Montana Natural History Association, the Montana Audubon Society, The Nature Conservancy – Helena Office, along with tribal representatives from the Crow Nation and Northern Cheyenne. Partnerships also have been established with federal agencies, including the Bureau of Land Management (BLM), EPA, Natural Resource Conservation Service (NRCS), and the U.S. Department of Agriculture (USDA).



Sun River Watershed Group – \$9,990 Alan Rollo, 808 52nd Street South, Great Falls, MT 59405

Montana Watershed and Stewardship Program

The non-profit Sun River Watershed Group is dedicated to increasing environmental literacy and stewardship in the Great Falls School District for middle and high school students. This program is a joint venture of the Sun River Watershed Group, Cascade County Conservation District, and Sun River Science Club. Students learn about rivers and watersheds, and in particular issues surrounding the Missouri River and the Sun River and Teton watersheds using hands-on activities related to ecological issues in the area. Teacher seminars involve collecting and interpreting data, improving creativity, as well as developing and applying logical processes in science and environmental issues. The program also demonstrates environmental projects using the Mobile Environmental Science Lab (MESL). This small school bus has been remodeled into a mobile laboratory where demonstration kits and equipment can be transported to the students and teachers. Project curricula and materials used come from several sources, including The Montana Watercourse, Healthy Water Healthy People, Water Quality Educators Guide, and the Air & Waste Management Association's Environmental Resource Guide on Nonpoint Source Pollution Prevention.

Nebraska

Chadron State College – \$9,067 Chadron State College, 1000 Main Street, Chadron, NE 69337

Environmental Stewardship of Streams in Northwestern Nebraska

Chadron State College faculty and students organize and participate in a stream monitoring program for secondary school teachers and students. This project promotes environmental stewardship of streams in northwestern Nebraska. Teachers and students participate in field trips to study sites and to Project WET workshops. In addition, secondary school teachers participate in biology courses that consist of trips to study sites and Project WET workshops. These activities improve their teaching skills in science education. A biological assessment course is taught on how to conduct volunteer stream assessments. Students create digital maps of study sites, a database of all results, and a Web page for participants to use and share data as they work through the project. Additionally, they learn about environmental careers while assisting secondary school teachers in stream monitoring.

KEEP NORTH PLATTE & LINCOLN COUNTY BEAUTIFUL – \$13,577 ANGELA KING, 715 SOUTH JEFFERS, P.O. BOX 313, NORTH PLATTE, NE 69103

Storm Water Protection Education

Keep North Platte & Lincoln County Beautiful educates the public on the causes and effects of storm water pollution and on behaviors to prevent and reduce storm water pollution. Keep North Platte & Lincoln County Beautiful also educates and provides opportunities for members of North Platte and Lincoln County to address community issues on storm water management and protection. The organization works with the city's storm water protection programs by educating the public on how storm water systems work and how proper household hazardous waste options can help protect local water systems. Presentations are also given to service organizations and at business association meetings. Furthermore, educational materials on preventing storm water pollution are provided to participants. Finally, community members participate in local events such as home shows to give presentations on storm water pollution.



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The Groundwater Foundation – \$14,439 Cindy Kriefels, P.O. Box 22558, Lincoln, NE 68542

H20 on the Go Train-the-Trainer

The Groundwater Foundation provides on-the-go education in ground water to elementary and middle school students where they are, rather than bringing children to ground water education events. The foundation works in partnership with the Westside Boys & Girls Club of Omaha, U.S. Geological Survey's Iowa Water Science Center, the Kansas Association for Conservation & Environmental Education, and the Missouri Department of Natural Resources. Educators learn how to adapt existing ground water education lesson plans and hands-on activities into their programs. Educators then deliver these programs to elementary and middle school students in informal educational settings for children, such as camps, summer day programs, after-school programs, and boys and girls clubs. The Groundwater Foundation trains nonformal educators throughout EPA Region 7 (Iowa, Kansas, Missouri, and Nebraska) to use the H20 on the Go Train-the-Trainer model in programming. The training sessions begin with basics of ground water and then teach educators how to incorporate fun, hands-on ground water education into existing programs. Educators offer a 4- to 6-hour training that includes basic information on ground water, lesson plans with ideas for hands-on activities, and tools for adapting lessons and activities to fit differing settings and audiences.

Nevada

WINNEMUCCA RECYCLING CENTER – \$10,000 ANGELA METCALF, 655 ANDERSON STREET, WINNEMUCCA, NV 89445

Winnemucca Recycling Center

The Winnemucca Recycling Center's mission is to establish a sustainable recycling program in this Nevada community, a state with a goal of a 25 percent recycling rate but that remains at 10 percent or less. The center's Recycling Education Team develops and presents environmental education programs and materials to local schools and residents. These programs include tours of landfills and recycling centers, slide presentations, information on composting, and existing cross-curricula lesson plans on recycling. The goals and plans are to use five existing integrated thematic units in preparing and teaching lessons throughout the community and in the schools, arranging community meetings on recycling, and to teach classes based in artistic crafts that can be constructed with recycled materials. The audience encompasses all of Humboldt County, but in particular local businesses, schools, and the surrounding rural community.

New Hampshire

AUDUBON SOCIETY OF NEW HAMPSHIRE – \$39,000 HELEN DALBECK, 3 SILK FARM ROAD, CONCORD, NH 03301

The Merrimack River Stewardship Program

The Merrimack River Stewardship Program is a school-year-long, interdisciplinary place-based science education program, introducing elementary and middle school students to a wide variety of watershed topics. These topics include nonpoint source pollution, water quality, hydrology, habitats, wetlands, aquatic ecology, cultural use of rivers, and the study of migratory fish as models to a healthy watershed. The program develops and delivers three teaching workshops to new teachers who deliver the watershed curriculum to the students. The teachers use lessons from existing and enhanced curricula and teach in different classrooms with Fishways staff and volunteer facilitators.



New Jersey

Collier Services, Inc. – \$7,174 Ellen Kelly, 160 Conover Road, P.O. Box 300, Wickatunk, NJ 07765

Environmental Career Odyssey

The Environmental Career Odyssey is a program focused on fostering environmental stewardship among middle school students from traditionally underserved communities in Monmouth County. The youth, ages 11 to 14, participate in a 1-week program where they increase their knowledge about environmental topics, such as marine science, forestry, water pollution, and habitat destruction, and learn how to take responsible actions to protect the environment. During the week, the students also participate in field trips that enhance the traditional classroom experiences by providing hands-on access to environmental activities. The students also learn about careers in the environmental field.

Georgian Court University – \$10,600 Louise Wootton, 900 Lakewood Avenue, Lakewood, NJ 08701

Curricular Unit on Invasive Species with Focus on Phragmites Australis

Georgian Court University has developed an integrated curriculum unit on invasive species for use by middle school teachers. The unit, consisting of a series of lesson plans and links to other related sites, is posted on the university's Web site and deals with Phragmites australis, the common reed. "Learning trunks" with materials for educators using the unit, are available for loan by teachers to integrate the unit into classroom programming. By focusing on a highly visible invasive species, teachers and students are developing a better awareness of how human activities alter the environment and are increasing their ability to act as environmental stewards.

PEQUANNOCK RIVER COALITION - \$7,390

MICHELLE BROOK, P.O. BOX 392, NEWFOUNDLAND, NJ 07435

River in the Classroom and Watershed Detectives

The Pequannock River Coalition conducts classroom programs with students in grades 4 thorough 6 in Morris, Sussex, and Passaic Counties in New Jersey to teach them about the Pequannock River and its watershed. Students learn about nonpoint source pollution, watershed dynamics, and pollution prevention strategies for the Pequannock. Students identify areas where temperature has changed and participate in native planting restorations at sites as a hands-on stewardship project.

SETON HALL UNIVERSITY - \$14,218

MICHAEL TAYLOR, 400 SOUTH ORANGE AVENUE, SOUTH ORANGE, NJ 07079

Environmental Quality Monitoring and Public Education

Seton Hall University has developed a volunteer environmental quality monitoring and public education program for the East Branch of the Rahway River. University students learn about surface water issues and collecting monitoring data. They share their knowledge and skills with community volunteers and organizations to promote environmental stewardship. This project supports establishing and collecting data at water monitoring stations, training community volunteers in water quality monitoring, developing educational brochures and a Web site on surface water issues and water pollution prevention, and programs in classrooms and at local events on watershed ecology protection.



New Mexico

Chihuahuan Desert Nature Park — \$10,000 Stephanie Bestelmeyer, P.O. Box 891, Las Cruces, NM 88004-0891

Desert Teachers and Learners Project

The Desert Teachers and Learners Project enhances knowledge about complex environmental systems and issues in southern New Mexico and west Texas. Delivered to elementary through high school teachers and the public, the project is three parts, consisting of: (1) two 1-day teacher workshops (water conservation and desertification, erosion, and air pollution), (2) follow-up support for teachers through the Chihuahuan Desert Nature Park's successful Schoolyard Desert Discovery Project of 30 hands-on, inquiry-based activities for use by students in kindergarten through grade 12, and (3) two Saturday morning public education events coordinated by teacher workshop participants and scientists. The teachers use their teaching expertise and new knowledge about environmental science to design the public programs. Scientists provide content information and learn from the teachers about how to teach non-scientists. All participants serve as both a teacher and a learner in the Desert Teachers and Learners Project. The project produces trained teachers who present public education events on relevant community environmental issues. These teachers later help their students eliminate stereotypes about who can become a scientist and educate them about environmental issues to encourage environmental careers.

Hawks Aloft, Inc. – \$15,212 Sarah Young, 6715 Eagle Rock Road, Albuquerque, NM 87113

Living with the Landscape

Living with the Landscape is an innovative environmental education program developed by Hawks Aloft. The goals of this program are to teach elementary school students about the importance of environmental stewardship and to encourage critical thinking and problem-solving through a hands-on, project-based curriculum. It aims to increase motivation for students to become environmentally responsible citizens and to encourage empowerment, enabling students to "make a difference" in their communities. The main strategy is to use live non-releasable birds of prey (raptors) to interest and excite students and to illustrate important ecological concepts. The target audience is eight classrooms in New Mexico that are on Tribal lands or that have a high percentage of Native American students. The project consists of three classroom visits, two field trips, and one conservation project per classroom. The student-led conservation project is implemented in the local community and is designed to provide a measurable environmental benefit. During all events, students are encouraged to think about environmental careers and discuss how to achieve this goal. This population has not traditionally received funding for non-traditional education programs. Teachers are provided with a hands-on interactive curriculum that can be used without the presence of the raptors. Teachers also gain an enhanced awareness of the importance of and tools to teach and promote environmental stewardship with their students. The indirect audience is other students and faculty members in participating schools and members of the local community.



New Mexico Museum of Natural History & Science – \$16,665 Selena Connealy, 1801 Mountain Road NW, Albuquerque, NM 87104

Student Ecology Project

The Student Ecology Project (SEP) engages high school students in basic field research through 6-week-long, student-centered projects. Working with teachers as partners, the SEP guides students through the process of experiment design, data collection and analysis, and communicating the results of the work at a final congress that is based on the model of a scientific meeting. Four communities are targeted and teachers will be recruited to mentor the students. The New Mexico Math Engineering and Science Achievement (NM MESA) partners with the museum to provide summer enrichment courses for students that build skills in math and science while engaging them in ecology research. Three graduate interns from regional universities are recruited and trained to provide student training and technical assistance to teachers as they work with the students in carrying out their ecology research projects. Components of the project include: (1) training teachers to design and teach a successful 6-week field ecology course to high school students; (2) providing equipment, study design, and technical assistance to each of the four sites; (3) supporting teachers during the duration of their courses; and (4) convening a final congress to allow students to communicate the findings of their research through poster and PowerPoint presentations. This approach, while staff intensive, has proven to be a successful way to provide teachers with the tools to teach effective courses, while at the same time exciting students about environmental science and numerous environmental career choices they can pursue.

Santa Fe Children's Museum – \$9,960 Jason Scott, 1050 Old Pecos Trail, Santa Fe, NM 87501

Teen Teachers in Earthworks

The Teen Teachers in Earthworks project seeks to hire teens from the Santa Fe area who will participate in a mentorship program, attend biweekly training sessions, lead daily environmental programs, and facilitate a series of environmental service projects in the spring of 2007. The target audience is school-age children who are scheduled to visit the museum. The Teen Teachers in Earthworks presents – free to the public and without a registration requirement during regular museum hours – environmental programs for families and school groups. These environmental programs encourage critical thinking, problem solving, and decision making. In addition, each of these teens will lead public community service projects at the museum in the spring of 2007. The overall goal of this project is to increase the environmental literacy in the Santa Fe community by building environmental education into the overall museum experience. Short-term goals to be achieved are to enhance the quality of public environmental knowledge through an outstanding mentorship program for teen educators; and to increase the self-confidence of these teenagers, their teaching skills, and their work ethic, as well as their concern and passion for the environment. Long-term goals are to increase environmental stewardship among the participating teenagers, as well as the museum's visitors, and to empower the teen teachers to become environmentally conscious citizens and future leaders in science, education, and the environment.

New York

City of Kingston – \$10,356 Kevin Gilfeather, 467 Broadway, Kingston, NY 12401

Kingston Parks: An Outdoor Classroom

The Outdoor Classroom project provides teachers and students with a hands-on interactive approach to environmental studies by using local parks as the location for field experiences. These experiences involve local land uses, water quality of the Hudson River, and the role of communities and nature centers in protection of endangered species. The program is correlated with state core curricula. Teacher workshops prepare educators for the programs at the parks and will include pre- and post-trip materials. Students take part in field trips to the parks and participate in activities that help them understand the history and ecology of the site. This grant provides fee-free stewardship to build educational experiences to Kingston students in kindergarten through grade 12.



Long Island Regional Envirothon, Ltd. – \$8,801 Sharon Frost, 423 Griffing Avenue, Riverhead, NY 11901

Long Island Regional Envirothon

Participation of high school students in New York's Nassau and Suffolk Counties in an annual environmental education competition is supported through this grant. Students prepare by studying various topics and issues, such as aquatics, forestry, soils, wildlife, and current environmental issues. They then compete by responding to questions and challenges on these environmental topics, demonstrating what they have learned. Their involvement in the program fosters interest in environmental careers and develops environmental stewardship.

Rochester Institute of Technology - \$13,614

KATHERINE CLARK, 141 LOMB MEMORIAL DRIVE, ROCHESTER, NY 14623

Sustainable Product Design and Development: Initiation of a Minor Program

Rochester Institute of Technology offers a minor in sustainable product development (SPD). The SPD program teaches students to consider the complete lifecycle in product development. The program involves technically oriented students interested in the relationship among engineering, technology, and sustainability. Traditional classroom instruction, Web site development, student participation in a speaker series on environmental themes, and site visits to natural and industrial sites are included in the course. As these students learn about SPD, they understand the importance of minimizing the environmental impacts of products they will develop during their careers. They also understand how to be more responsive to human impacts on the environment, find ways to mitigate those impacts, and develop the habit of environmental stewardship.

ROCKING THE BOAT, INC. – \$35,000 Adam Green, 60 East 174th Street, Bronx, NY 10452

Rocking the Boat Education Program

Two programs focusing on the Bronx and East Rivers are conducted for high school-age students in New York City. Students in the Out-Of-School-On-Water program meet twice a week after school for a 13-week semester, and four days a week for seven weeks during the summer. Using wooden boats built by their peers, they conduct river water quality studies, including data collection, research, and physical restoration of the Bronx River. Students who participate in the Community Environmental Program also take part in a similar program during the school day. Rocking the Boat educators work with classroom teachers in the community education program to develop projects where students combine classroom learning with field experiences on the rivers. Both projects promote environmental stewardship, as students are involved in implementing conservation and restoration projects.

TROUT UNLIMITED – \$15,000 Rochelle Gandour, c/o NYDEP, 59-17 Junction Boulevard, 19th Floor, Flushing, NY 11373

New York Trout in the Classroom Teacher Conferences

By raising trout and managing their in-classroom water environment, teachers and students who participate in Trout in the Classroom (TIC) learn about the importance of clean, fresh water. They also learn about the human impacts on watersheds, how water conditions affect living things and human drinking water supplies, and how to care for this vital ecosystem. This grant agreement supports three teacher conferences where educators gain the knowledge and skills necessary to integrate TIC fully into the classes. Kindergarten through grade 12 teachers are the target audience, but their students also learn how to care for the environment and develop environmental stewardship attitudes and skills.



North Carolina

Clean Air Community Trust Inc. – \$6,500 Margie Meares, P.O. Box 2824, Asheville, NC 28802

CAST - Clean Air Student Training

Under this grant, basic lessons in air quality are delivered to local high school and middle school students through Clean Air Student Training, known as CAST. The lessons include basic information on specific air quality issues in western North Carolina, a program in electricity conservation, and a class in transportation fuels. By participating in the class, students can recognize air pollution problems and consider specific concrete actions that can be taken to reduce air pollution emissions. The lessons also serve as hands-on introductions to contests run at both the middle- and high-school levels.

North Carolina Association of Soil & Water Conservation Districts – \$10,000 Steve Bennett, 3800 Barrett Drive, Raleigh, NC 27609

North Carolina Envirothon Program

This hands-on Envirothon for high school and middle school students and teachers from across North Carolina gives students an opportunity to work together to find the answers to potential environmental problems. During the competition, the students make their own observations, run tests, and solve problems as a team to increase environmental knowledge and critical thinking skills used in the competition. The students work together to study natural resources and current environmental issues. This competition helps to foster interest of the students in pursuing careers in the environment.

Wake County Government – \$4,800 Angeline McInerny, P.O. Box 550, Raleigh, NC 27602

Wake County "Feed the Bin" Teacher Training Workshops

"Feed the Bin" is a recycling program that consists of interactive demonstrations, discussions, presentations, hands-on activities, and site visits to an operating solid waste management facility. This workshop is for high school teachers who learn about recycling issues and return to the classroom with the tools necessary to incorporate solid waste environmental education into the curriculum. It is important that the school teachers understand and embrace the "Feed the Bin" program so they can promote environmental stewardship in the classroom to ensure the success of this recycling program. The Wake County Solid Waste Management Division offers teacher trainings in the form of 10-hour workshops to educate staff on the recycling program and to provide them with the tools and lesson plans needed to promote recycling habits in a classroom setting.



North Dakota

Solid Waste & Recycling Association – \$13,375 Angela Boeshans, P.O. Box 235, Carrington, ND 58421

Alternative Disposal for Construction and Demolition Materials

The North Dakota Solid Waste and Recycling Association (NDSWRA) is a non-profit organization that was formed to educate, train, and promote environmentally sound waste management practices. This project increases public knowledge about issues related to backyard burning of household garbage and alternative disposal of construction and demolition materials. Five training sessions are conducted in various regional locations in the communities of Devils Lake, Valley City, Bismarck, Dickinson, and New Town, as well as at the Fort Berthold Indian Reservation, Spirit Lake Indian Reservation, and Standing Rock Indian Reservation. These training sessions are promoted to a public audience that includes regional and tribal health district units, local and tribal governments, and teachers and students from state and tribal schools. These training sessions and related conferences discuss the environmental and health impacts of backyard burning and improper disposal of construction and demolition material. In addition, alternatives for destruction or disposal of solid waste are discussed.

Ohio

Cuyahoga Community College Metro Campus – \$13,949 Kimberly Royal, 700 Carnegie Avenue, Cleveland, OH 44115

The Euclid Creek Watershed: Community Stewardship Through Environmental Education

The Euclid Creek Watershed project develops a multi-disciplinary course about the watershed for local teachers and community group leaders to educate and increase environmental stewardship. The course involves both classroom instruction at Cuyahoga Community College and hands-on field instruction at the watershed. The project produces an educational water quality assessment DVD that details the physical, chemical, and biological sampling techniques used by teachers, students, and other stakeholders. The DVD is disseminated to teachers at middle schools, high schools, and environmental organizations, and through the Cuyahoga Community College Web site and Smart TV community cable channel. The project primarily reaches middle and high school teachers and students. An additional target audience of other informal educators affiliated with organizations that promote conservation and stewardship is reached. The project increases stewardship through a better understanding of the integrated cultural and ecological history of the watershed, which helps educators and students appreciate the quality of the watershed.



Ohio River Basin Consortium – \$5,700

TIAO CHANG, OHIO UNIVERSITY, 147 STOCKER CENTER, ATHENS, OH 45701

Workshop for Secondary School Teachers: Current Status of Ohio River Waters

The goal of the Ohio River Basin Consortium for Research and Education is to promote inter-institutional research and education in water-related concerns and other environmental issues in the Ohio River Basin. The consortium, a group of universities, colleges, governmental agencies, industries, and individuals, has organized a special workshop on the river-wide status of the Ohio River waters based on the River Run 2005. The Ohio River Run 2005 was a 981-mile snapshot of the Ohio River at low flow. During this time, scientists and students monitored the physical, chemical, and algal responses to the river from inputs from its tributaries and from point source effluents, such as wastewater from Cincinnati, Louisville, and Pittsburgh. The workshop is conducted based on the data collected from the 981-mile Ohio River. Secondary-school teachers, especially from economically disadvantaged areas, are recruited and selected for participation.

Oklahoma

University of Oklahoma – \$30,951 J. Scott Greene, 731 Elm Avenue, Room 134, Norman, OK 73019

Teacher Training in Wind Energy

The Renewable Energies Educational Development (REED) program uses the three Ws – workshop, workbook, and Web site – to provide a comprehensive and cohesive renewable energy curriculum at no cost to the teacher or school district. The workshop strengthens environmental stewardship in Oklahoma by educating middle and high school teachers who will take back to their classrooms new skill sets, teaching strategies, free education materials – including an easily reproducible workbook – and classroom activities related to renewable energies. The outputs of the REED program result in a more scientifically and technologically proficient population who are better able to make decisions on the environmental welfare of Oklahoma. The workshop, workbook, and Web site incorporate concepts from the Oklahoma Priority Academic Student Skills (PASS), enabling teachers to apply and design lesson content for their classrooms and instruction. The target audience is Oklahoma teachers in grades 7 through 12.

Oregon

Institute for Applied Ecology – \$11,000 Jennie Cramer, 563 SW Jefferson Avenue, Corvallis, OR 97333

Native Comeback Initiative

Local schools are paired with local native prairies, where students plan and participate in restoration and reintroduction of endangered plant species and habitat for the endangered butterfly, the Fender's blue. The middle and high school students are taught about the ecology, botany, and horticulture of the Willamette Valley, giving them the skills and tools needed to understand, restore, and re-introduce endangered species to Willamette Valley prairies. Students collect, plant, and monitor native seeds and work in the classroom, greenhouse, and field. The Institute for Applied Ecology works closely with teachers and land managers to ensure the efficient coordination and scientific integrity of the restoration. The project involves local school children as stewards in habitat restoration using inquiry-based science and addresses one of the most highly endangered ecosystems in the United States.



Opal Creek Ancient Forest Center – \$13,840 Brian Windrope, 917 SW Oak Street, Suite 412, Portland, OR 97205

Opal Creek Native Youth Careers Project

The Opal Creek Native Youth Careers Project conducts a week-long intensive training for Native American high-school age youth in forest and watershed management skills. The project partners with natural resource professionals, regional Native leaders, and Opal Creek Ancient Forest Center staff to lead hands-on field exercises in forest ecology, aquatic ecology, and biomonitoring using the Opal Creek ecosystem as a classroom. Tribal organizations in the Pacific Northwest are increasingly asked to manage extensive forest and riparian areas. This project introduces Native youth to a range of skills that will qualify them to work in natural resource management and contribute to improved stewardship of Tribal forests and watersheds.

Oregon State University – \$11,000 Melissa Feldberg, P.O. Box 1086, Corvallis, OR 97339

Climate Change Workshops for Teachers: Moving from Information to Action

Oregon State University holds two on-site climate change workshops for middle and high school science teachers. The project develops a cadre of teachers in Oregon who are equipped with the latest research-based information and teaching materials on climate change to be shared with their students and other teachers in their area. The project is designed to focus on "information to action" – to encourage teachers and students to develop specific projects and changes in personal lifestyles to reduce their contribution to climate change. The project is further designed to emphasize the importance of informing students and the public on current environmental research and stimulate critical thinking and problem solving skills; and improve teaching skills in environmental problem solving using the topic of climate change.

WOLFTREE, INC. - \$10,000

JAY HOPP, 516 SE MORRISON STREET, SUITE 710, PORTLAND, OR 97214

Madras High School Research and Stewardship Project

Wolftree, Inc., engages highly motivated Madras High School students from a high-risk rural community to undertake research and stewardship projects in the community. The program provides 10 field days and 10 classroom sessions (90 minutes each) for high school students. The focus is on ecological monitoring and restoration with mentor scientists, "real life" questions, state-of-the-art equipment training, and inquiry. The Haystack Reservoir in the Crooked River National Grasslands, just outside Madras, is used as the outdoor classroom. The students focus on three major management and restoration issues: (1) Western juniper expansion, (2) non-native weed invasion, and (3) wildlife habitat restoration. Science professionals, including Wolftree, Inc., staff and mentors from the Confederated Tribes of Warm Springs, Crooked River National Grasslands, Deschutes and Ochoco National Forest, Portland General Electric, and Raven Research guide the students in small research teams. This project serves a community that has limited access to quality programs in science.



Awbury Arboretum – \$10,000 Gerald Kaufman, 1 Awbury Road, Philadelphia, PA 19138

The Tacony-Frankford Watershed Teacher Education Project

Awbury Arboretum provides a series of professional development sessions to local kindergarten through grade 8 teachers in the Tacony-Frankford watershed. The sessions demonstrate new activities and methods for teachers and motivate them to use local wetlands as "outdoor classrooms" for teaching about the watershed. The participants are taught to think about the watershed in three ways: scientifically; as a community resource affected by local pollutants and usage; and as a natural resource. Participating teachers are from the local public, charter, or private schools, and a few represent the homeschool community.

Earth Force, Inc. - \$10,000

JANET WYNN STARWOOD, 100 GREENWOOD AVENUE, WYNCOTE, PA 19095

Green City Youth Program

Earth Force develops environmental literacy and stewardship skills of inner-city youth through service learning projects focused on urban greening. Underserved elementary, middle, and high school students from low-income communities in the School District of Philadelphia and their educators benefit. The program encourages environmental stewardship and works in partnership with the Pennsylvania Horticultural Society (PHS). Student projects are presented to the public at the PHS Kids Grow Expo and Earth Forth Youth Summits.

Group Against Smog and Pollution, Inc. - \$10,150

RACHEL FILIPPINI, WIGHTMAN SCHOOL, COMMUNITY BUILDING, 5604 SOLWAY STREET, ROOM 204, PITTSBURGH, PA 15217

Fueling the Future

The Group Against Smog and Pollution (GASP) aims to educate middle and high school teachers and community members about the human health and environmental hazards of diesel exhaust and pollution from vehicles. Teachers learn about alternative fuels, vehicles, and other strategies to reduce exposure that is summarized in lesson plan format with hands-on activities for classrooms. GASP targets teachers in Allegheny and surrounding counties for the hands-on workshop and in-school trainings.

NORTHAMPTON COUNTY AREA COMMUNITY COLLEGE – \$17,054 ARTHUR SCOTT, 3835 GREEN POND ROAD, BETHLEHEM, PA 18020

For the Birds: Invasive Species and Environmental Stewardship

Northampton Community College (NCC) students participate in the invasive species and environmental stewardship project "For the Birds." Students on the Monroe campus of NCC study the effects of human development and invasive species in stream corridors within the Pocono Mountains. The goal of the program is two-fold: (1) teach students to think critically about environmental issues, analyze information, and design realistic environmental plans, while encouraging students to pursue environmental careers; and (2) educate the local community on the importance of balancing population growth with the natural environment, and encouraging environmental stewardship. The project involves students in introductory biology in service-learning projects and students in field ecology in interactive field laboratory experiments.



Pennsylvania Resources Council – \$10,000 David Mazza, 64 South 14th Street, Pittsburgh, PA 15203

African-American Cultural Heritage Garden and Living Laboratory

The Pennsylvania Resources Council (PRC) has designed and developed an African-American Cultural Heritage Garden and Living Laboratory Project on two abandoned lots. PRC, in partnership with the Helen S. Faison Arts Academy (HSFAA) and the Rosedale Block Cluster, Inc., offers its expertise to help restore the site and create a Living Laboratory that will instill environmental stewardship. The living laboratory consists of healthy soil, handicapped-accessible garden paths and elevated beds, composting bins, a rail barrel, African-American gardening traditions, educational garden signage, and a school and community gathering area. The target audience is predominantly underserved elementary school students (including some who participate in a full-day HSFAA summer program), students in pre-kindergarten through grade 5, teachers and HSFAA faculty members, and the greater Homewood community.

Saint Vincent College – \$11,228 Norman Hipps, 300 Fraser Purchase Road, Latrobe, PA 15650

Field Institute for Environmental Learning

Saint Vincent College conducts a 5-day Field Institute for Environmental Learning for students in kindergarten through grade 6 and pre-service teachers in the graduate program. The project is field-based and focuses on curricula that address the Pennsylvania academic standards for Watersheds and Wetlands; Ecosystems and their Interactions; and Humans and the Environment. Through increased content knowledge on freshwater ecosystems, teachers gain the ability to effectively use field-based techniques with their students, increasing the students' capacity to investigate the natural world, and gain a sense of appreciation for the water ecosystems within the community. Field-based activities include studying and identifying aquatic and terrestrial organisms, developing visual observation equipment for elementary school students, water quality testing, tracking and barefoot mapping, and practicing identification techniques using field guides.

STRAWBERRY HILL FOUNDATION, INC. - \$9,877

YVONNE WERZINSKY, 1537 MOUNT HOPE ROAD, FAIRFIELD, PA 17320

Watershed Ambassadors Program of Adams County

Strawberry Hill Foundation, Inc. has designed a Watershed Ambassadors Program geared toward teachers and underserved middle school students (grades 5 through 7) with an interest in the sciences and the environment. In collaboration with "El Centro" (the Center), a local non-profit institution, students learn about the Monocacy River watershed, its connection to the Chesapeake Bay watershed, and its impact on the area. Students participate in a series of experiential field trips to reinforce lessons, which include stream water quality testing as an indicator of water health, a visit to a bald eagle nesting site, and a community service project. Students also visit a sustainable organic farm to compare its farming methods with farming methods that use pesticides and other chemical applications – and the subsequent impact on the environment, hike through a nature preserve, and culminate with an educational environmental display designed by the students at the Adams County Community Fest. The project instills environmental stewardship through critical thinking skills and serves as a model that will be adapted to other areas throughout Pennsylvania and Maryland.



Puerto Rico

Inter American University of Puerto Rico – \$25,507 Amaury Boscio-Vargas, P.O. Box 363255, San Juan, PR 00936

Environmental Programming and Career Development for College Students

College and high school students and community members are educated about the environment, especially as it relates to protection of Laguna Tortuguero Natural Reserve, an ecosystem with the largest freshwater lagoon in Puerto Rico. College students, in seminars, learn about the ecosystem, conduct scientific field work at the reserve, and teach high school students – also on field trips – about the reserve ecosystem. They also conduct workshops, partnering with the Ecotourism Office in Vega Baja, for science teachers and community volunteers. The field experiences include extensive microbiological analysis of water quality in the reserve. All involved will learn how they can be environmental stewards.

Universidad del Turabo, Ana G. Mendez University System – \$39,297 Eddie Laboy, State Road 189m Km.3.3, P.O. Box 3030, Gurabo, PR 00778-3030

Saturday Environmental Academy

The Universidad del Turabo works with educators from southeast Puerto Rico. Elementary school teachers participate in workshops, field trips, hands-on activities, and brainstorming sessions as they explore the ecology of southeast Puerto Rico and learn about current environmental impact issues. Teachers, in addition to participating in a simulated public hearing on a current environmental concern in the ecosystem, employ the same interactive model in the classrooms. Students explore their local ecology and the ways pollution can affect it. This process is designed to foster a sense of environmental stewardship and, in turn, enable teachers to share their care for local ecosystems with their students.

Rhode Island

Childhood Lead Action Project – \$23,311 Roberta Hazen Aaronson, 1192 Westminister Street, Providence, RI 02909

Rhode Island Lead Hazard Mitigation DVD (Spanish)

Owners of rental property in Rhode Island are required by law to take an awareness course about lead. This organization is creating and developing a DVD in Spanish to illustrate lead-safe practices that can be carried out by owners of rental properties. The DVD complements the other materials used in the 3-hour Lead Hazard Mitigation Course to educate participants on lead-safe work practices. This project includes three phases: creating a workshop to design and film the DVD, training instructors on use of the DVD, and alerting the target audience that the DVD is available.

SAVE THE BAY - \$10,756

PATRICIA A. DEMARCO, 100 SAVE THE BAY DRIVE, PROVIDENCE, RI 02905

Girls in Science Bay Camp: Pilot Program

This project educates middle school-age girls in a 2-week summer camp that provides instruction on degradation of water quality, destruction versus restoration of critical habitats, and the health of various watersheds. There are two camps: one at Bay Center in Providence, and the other at Fort Adams in Newport. Included in the program is exploration of careers in science, and particularly marine science. Students have an in-classroom session with discussion, laboratory work, group work, compiling and analyzing data, a lunchtime career seminar with speakers, and an "on-the-water session" (kayaking, snorkeling, water quality studies, and trawling for critters).



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South Carolina

University of South Carolina Research Foundation – \$17,017 Jeffrey Tipton, 901 Sumter Street, Columbia, SC 29208

Watershed Ecology Center Program at University of South Carolina

This project is design to implement a watershed education and pollution prevention program for Lake Lyman residents and students in kindergarten through grade 12. The project has developed and implemented a long-range adult education and outreach program and administers a watershed curriculum in school districts in the Lake Lyman watershed. The audience is reached through public school education programs, a summer children's pontoon classroom on Lake Lyman, regularly scheduled town meetings, a water education festival, volunteer educators, and presentations and printed material at local events.

South Dakota

Lower Brule Sioux Tribe – \$21,035 Shary Lynn Fire Cloud, 187 Oyate Circle, Lower Brule, SD 57548

Summer School/Work Environmental Science Program

The Lower Brule Sioux Tribe (LBST) Environmental Protection Office (EPO) has been in existence since 1994 with the purpose of developing technical capability and management of the reservation's natural resources. The focus of this project is preserving the reservation's ecosystems in partnership with the Brule Sioux High School, LBST's Wildlife Department, LBST's Cultural Resource Office, and the South Dakota Game, Fish and Parks fishery crew. Project outputs include conducting programs in environmental education and field experience to high school students. These students learn to identify the various ecosystems and their locations and identify the land-use practices that could affect these ecosystems and tools to preserve the areas. The students also maintain and irrigate trees planted earlier in the spring, analyze water quality, create simulations of possible Brownfields projects and develop future uses, and develop creative ideas on how to preserve the wildlife while balancing human needs. The students also increase their knowledge of stewardship and the responsibility for managing these ecosystems. Students participate in classroom activities and interactive work experiences and field trips.

Tennessee

TENNESSEE AQUARIUM — \$13,150 Heather DeGaetano, 201 Broad Street, Suite 200, Chattanooga, TN 37402-1010

Sturgeon Reintroduction and Education Program

The Tennessee Aquarium partners with a grade 5 class from Gap Creek Elementary School to raise awareness about the lake sturgeon and the cause of its declining numbers. The children are exposed to hands-on conservation efforts and critical thinking about the local environment. The public that uses the river for recreation is educated about the lake sturgeon and its role in protecting it. The project uses well-planned activities, classroom lectures, and information cards.



Texas

Austin College – \$9,880

PETER SCHULZE, 900 NORTH GRAND AVENUE, SUITE 6P, SHERMAN, TX 75090

Expanding Community Awareness: Benefits of Native and Restored Blackland Prairie

Austin College graduate students hone their teaching skills by developing and giving presentations to elementary school children and their teachers about the Blackland Prairie. They also present to the children a myriad of careers that they can pursue that will benefit the environment. The ecology of Blackland Prairie, the history of land use, the potential for restoration of the prairie, and the benefits of native and restored tallgrass prairies are taught through a series of field trips. Target audience is Grayson, Collin, Cooke, and Fannin County students in grade 4 from public and private schools, scout troops, and home school organizations and their teachers or sponsors. While they are at the prairie, students plant seeds, compete to find the most varieties of plants in a hoop placed on the ground, and observe a demonstration on the effects of ground cover on runoff and erosion. In addition, they observe animals in their natural habitats, imitate individual animals in a bison herd, and learn to appreciate the delicate balance of the Blackland Prairie ecosystem. The field trips are supplemented with a video and an extensive set of classroom lessons. The video and lesson plans reinforce and expand on the lessons of the field trip. Collectively, these activities foster a sense of responsibility for stewardship.

Guadalupe-Blanco River Authority – \$8,900

CYNTHIA THOMAS-JIMENEZ, 933 EAST COURT STREET, SEGUIN, TX 78155

Nonpoint Source Pollution Public Outreach

The population of the Guadalupe-Blanco River Basin is projected to double in the next 30 years. This growth and subsequent development could impair water quality within rivers and streams in the basin, which are the source of the majority of drinking water systems basin-wide. Outreach is conducted, including a demonstration of a Guadalupe River Basin Watershed model that educates both school-age children and the public about nonpoint source pollution and the impact their actions can have on water quality. The Guadalupe River Basin Watershed model is a replica of the Guadalupe River Basin that can be used to demonstrate the impact of nonpoint source pollution on the river basin. Educating these citizens, both young and old, will assist them in developing proactive attitudes and actions for waste, disposal, and proper use of hazardous substances. The Guadalupe River Watershed model is used primarily in school settings at the fifth-grade level. A series of demonstrations has been developed for interactive learning of the impacts of nonpoint pollution on water sources. There are seven large school districts in this region. During the first year, the campaign seeks to reach 50 percent of these schools. The campaign plans to reach adult citizens through a variety of meetings that target homeowners and business owners. These meetings present opportunities to participate in discussions about watershed management and nonpoint source pollution. Reference booklets that are specific to each county are provided. In addition, adult groups have the opportunity to experience the model.



Texas A&M University - Corpus Christi - \$43,794 James Needham, 6300 Ocean Drive, Corpus Christi, TX 78412

Redefining Environmental Education

The Corpus Christi region is a diverse and sensitive environment that supports an abundance of living resources, including several endangered species. Unfortunately, social and economic conditions contribute to a general lack of environmental consciousness. The goal of this project therefore is to raise environmental awareness and create environmental stewards. The project consists of five components: summer camps for youth, environmental education training for teachers, field trips for rural teachers and their students, environmental expeditions for senior citizens, and environmental education at community events. Participants gain a science-based understanding of environmental issues relevant to the Corpus Christi region. Learning objectives include the science of the local environment, awareness of specific environmental issues, objectivity, and teamwork achieved through experiential learning. This project provides a unique experience in environmental education to an audience of underserved individuals. The target audience includes people with physical and mental disabilities, blind children and adults, rural students and teachers, disadvantaged youth, abused women and children, and senior citizens.

Texas Comptroller of Public Accounts, Texas State Energy Conservation Office – \$8,000 Juline Gurasich, 111 East 17th Street, Room 1114, LBJ State Office Building, Austin, TX 78774

Energy Education

The goal of the State Energy Conservation Office (SECO) Energy Education curriculum program is to improve Texas teachers' understanding of the nature and extent of energy and its resources, energy conservation and efficiency, the economic and environmental effects of energy use, and alternative energy technologies. The goal also is to increase their awareness of alternative energy in their communities. The program strives to lay the foundation for environmental stewardship in teachers and students through critical-thinking and problem-solving investigations in workshops approved by the Texas Education Agency. SECO offers a series of statewide educator workshops that will be held in Regional Education Service Centers, universities, conference centers, and museums. In addition, the curriculum is linked on multiple Web sites, and free curriculum CDs are made available to teachers and groups or organizations that sponsor workshops. The program provides classroom-ready material for teachers of general, physical, biological, environmental science, and integrated physics and chemistry. Lesson plans are correlated to state educational standards for grades 6 through 12 and district-level curriculum specialists.

Texas Tech University – \$6,124 Eileen Johnson, Box 41035, Lubbock, TX 79409-1035

Lubbock Lake Landmark Educators Academy

Lubbock Lake is a National Historic Landmark, a State Archeological Landmark, and is listed on the National Register of Historic Places. The landmark's 315-acre preserve, located at the northwestern edge of the city of Lubbock, Texas, serves as a natural laboratory for the study of the shortgrass prairie ecosystem of the Southern High Plains. Workshop series are designed to introduce educators to the fundamentals of environmental education (EE) and to demonstrate how EE can be integrated into classroom curricula across disciplinary boundaries to address the state standards. The workshop series includes training in five nationally recognized environmental education programs (Project Learning Tree, WILD, WET, Food, Land and People, and River of Words), and a workshop on the fundamentals of environmental education. The framework of each of the programs provides the teachers the tools needed to immediately implement EE in the classroom. The target audience is elementary and middle school classroom teachers; home school educators also have the opportunity to participate in this series as the landmark works to build an environmentally literate citizenry by offering professional education for educators. This education will be used in classrooms and non-formal settings to further student understanding of environmental issues.



Upper Texas Coast Waterborne Education Center – \$6,634 Amy Hill, 810 Miller Street, P.O. Box 9, Anahuac, TX 77514

Public Wetland Education Project

The Waterborne Education Center (WEC) conducts six full-day field laboratories and workshops open to the public. Participants spend a 1-hour class on shore, where they learn wetlands vocabulary and take part in guided hands-on activities to demonstrate runoff pollution sources and solutions. The group then boards an educational boat for a field laboratory in the Trinity River delta. A ranger discusses the project, its history, and ecological impacts to the area of the Wallisville Lake Project saltwater barrier. Participants don hip waders and disembark for hands-on, feet-in learning, such as seining for organisms and water quality testing. The return trip consists of a discussion about the relationship between the marsh and the economy, ecology, and health of the local area. These field laboratories immerse participants in the local coastal wetlands and educate them on the importance of conserving these valuable locations.

Utah

Plateau Restoration, Inc. – \$13,500 Tamsin McCormick, 3170 Rimrock Road, Moab, UT 84532

Habitat Restoration and Education in Southeastern Utah

Plateau Restoration, Inc. (PRI), is a non-profit organization that has conducted service-learning programs for college students in southeast Utah since 1995. The goal of the project is to improve wildlife habitats by increasing public awareness of issues surrounding habitat loss caused by development and overuse and to improve environmental stewardship. Middle school, high school, and college students, along with teachers, are targeted for this program. The program includes habitat restoration projects in riparian and upland areas. It provides effective hands-on learning opportunities that educate students about local environmental issues and encourage them to increase stewardship initiatives that involve habitat protection and restoration. The primary focus is on native vegetation, soil erosion, weed invasion and weed control, along with air and water quality issues. Educational materials come from existing resources, such as ecosystem curricula and lesson plans from EPA, the Natural Resources Conservation Service, Center for Global Environmental Education, Wildlife Habitat Council, National Wildlife Federation (Backyard Wildlife Habitat), and Royal Horticultural Society (U.K.). Canyonlands Field Institute's (CFI) existing educational materials and handouts for PRI are also used, along with additional material from Utah State University Department of Forest, Range, and Wildlife Sciences.

SALT LAKE CITY CORPORATION - \$10,000

LISA ROMNEY, 451 SOUTH STATE STREET, ROOM 306, SALT LAKE CITY, UT 84111

Environmentally and Economically Sustainable Business Education Program

The Salt Lake City Corporation (SLCC) is a municipal government agency that initiated the Salt Lake City Environmentally and Economically Sustainable (e2) Business Education Program. This innovative, model program educates local small business owners on best management practices that lead to pollution prevention and promote a business culture of environmental stewardship. The objective is to educate small business owners on improving public health and sustainability through conservation strategies and environmental policies. The e2 Business program conducts educational programs for local small business owners using the environmental assessment tool (e2 Environmental Baseline Report and Improvement Plan) that will help them identify ongoing environmental improvements. This tool also helps to evaluate environmental impacts of their business operations. Long-term program outcomes are reductions in or alternative uses of toxic materials, such as cleaners, solvents and caustics, and the reductions in or proper disposal of hazardous and solid waste materials, along with the conservation of water, energy, and other natural resources through sustainable practices.



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Vermont

Association of Vermont Recyclers - \$30,000 Karin McNeill, P.O. Box 428, Plainfield, VT 05667

Youth Environmental Coalition

Youth Environmental Coalition (YEC) fosters teen leadership in conservation and waste reduction through recycling, composting, and conducting waste audits. The program educates teens, adults, and school clubs and home school groups on waste reduction and the world-wide environmental, health, and social consequences of wasteful consumption. Students develop and complete 15 to 20 service projects on waste reduction in the schools and make others aware of how they can reduce waste. Participants are reached through in-school and after-school meetings, training workshops, school-wide assemblies, online communication tools, YEC newsletters, and teen peer mentoring programs. In addition, all participants attend the Annual Environmental Summit, highlighting these and other environmental topics.

Virginia

See page 7 for a profile of a grant awarded to Earth Force, Inc. by EPA Headquarters.

Blue Ridge Center for Environmental Stewardship – \$15,000 Shawna DeWitt, 11661 Harpers Ferry Road, Purcellville, VA 20132-1944

Birds of a Feather Environmental Education and Awareness Program

Birds of a Feather establishes an ongoing outdoor environmental education program year-round to educate participants and raise awareness about the importance of avian diversity and habitat conservation. Activities include teacher training, development of a self-guided, 1-mile route that traverses three distinct avian habitats, and installation of two chimney swift towers. In addition, activities include docent recruitment and training, development of learning and teaching training aids, community outreach, and hosting groups and independent visitors. The audience includes teachers and school children in kindergarten through grade 5.

Piedmont Environmental Council – \$4,800 Melissa Wiley, P.O. Box 460, Warrenton, VA 20188

Cultivating Watershed Stewardship

The Piedmont Environmental Council's project educates teachers, students, residents, and local decision-makers about water quality and local watershed issues in Loudoun County, Virginia. Field trips for high school students and teachers are conducted in the fall and spring to carry out a plant survivability protocol in the field and to plant trees based on the results from the fall field work. The program results in long-term increased watershed awareness and stewardship and a reduction in nonpoint source pollution.



See page 7 for a profile of a grant awarded to Indochinese Cultural & Service Center by EPA Headquarters.

Pacific Science Center – \$16,500 Apryl Brinkley, 200 Second Avenue North, Seattle, WA 98109

Lake Washington Watershed Internship Program

High school students from southeast Seattle, Renton, and Bellevue are recruited for a 12-month internship. The interns attend weekly after-school meetings, quarterly creek monitoring and surveying sessions, professional development field trips, and restoration projects. They also prepare lessons to present to fourth-grade classrooms and work with mentors to develop Watershed Discovery Carts on the Lake Washington watershed to reach the visitors of the Pacific Science Center. The carts include hands-on, interactive demonstrations that allow staff and volunteers to interact with visitors on a more personal level by providing presentations that can accommodate groups at the Pacific Science Center. The goal is to promote critical thinking for the interns, students, and the public about the effects of pollution on an important source of water in the community.

Seattle Audubon Society – \$13,882 Susan Tallarico, 8050 35th Avenue NE, Seattle, WA 98115

Finding Urban Nature (FUN) for School Grades 2-5

Finding Urban Nature (FUN) delivers inquiry-based, hands-on science and environmental education experiences in zoology, botany and ecology at public schools, mostly in central and south Seattle, for children in grades 2 through 5 right in their schoolyards and classrooms. Volunteers are trained to assist FUN staff to provide 1-hour lessons 8 to 10 times over the course of the school year. The FUN curriculum meets both the Environmental Education Standards of Washington State and the Essential Academic Learning Requirements (EALRs) of the Seattle Public School District's Life Science Framework for students in kindergarten through grade 5. Volunteers and participating teachers receive two intensive training sessions during the year to apply this curriculum. The goal of the project is to equip students with research skills in natural science and a basis for understanding urban nature.

Washington State University – \$31,899 Lynda Paznokas, P.O. Box 643140, 423 Neil Hall, Pullman, WA 99164-3140

Pre-Service Environmental Education Project (PEEP)

The Pre-Service Environmental Education Project (PEEP) incorporates environmental education into the majority of pre-service teacher preparation programs throughout the state, thus readying future teachers to effectively teach these concepts and skills in Washington classrooms. Seventy-five percent of Washington's teacher preparation programs are expected to participate. Teachers are trained to deliver experiential, field-based, effective, accurate, and age-appropriate environmental education skills and content to students within the framework of Washington's Environmental Education Guidelines for Washington Schools. Training programs at each university differ according to the unique student population and the missions of the university; however, they all include common elements such as field trips with children, curriculum training, field investigations, problem-based learning, and case studies.



West Virginia

Oglebay Institute – \$9,910 Mark Williams, 1330 National Road, Wheeling, WV 26003

Mission Ground Truth: Enhancing Teaching Through Technology and Field Experiences

The Olgeby Institute: Mission Ground Truth is an integrated, interdisciplinary, and inquiry-based ecosystem assessment program that incorporates field studies and innovative technologies for middle school teachers. Teachers explore environmental education concepts and methods, complete freshwater stream and deciduous forest ecosystems testing, and equipment usage that assist in integrating the program into the classroom curriculum. The project is designed and developed for grade 7 and 8 teachers in West Virginia and southwestern Pennsylvania.

TUCKER COUNTY FAMILY RESOURCE NETWORK – \$12,043 April Miller, 501 Chestnut Street, Parsons, WV 26287

Organizational County Connections

The Tucker County Family Resource Network – Tucker County Connections (TCC) community education initiative in West Virginia assists young people in developing a relationship with the natural environment. TCC teaches elementary through high school-age children to treat the local streams and woodlands responsibly. Students and teachers from Tucker County elementary, middle, and high school, Boy and Girl Scouts, and 4-H groups participate in educational field trips to local public land preserves, providing students with a model of environmental, experiential teaching and learning practices. A Natural and Cultural History Field Trip Series and Resource Guide also have been developed.

Wisconsin

RIVER COUNTRY RC&D COUNCIL INC. – \$23,000 BRIAN BREZINSKI, 1304 NORTH HILLCREST PARKWAY, SUITE B, ALTOONA, WI 54720

Partnership for Prairie Education and Restoration

The Partnership for Prairie Education and Restoration project encourages stewardship of prairie remnants in the Eau Claire area. The project focuses on measures to protect remnants of the prairie near Xcel Energy's gas and electric lines as well as other spots in the area. Local organizations, schools, community groups, and the public are asked to volunteer to work on the sites. Participants volunteer their time and commitment to restoring the prairie through the project's educational demonstrations, classroom instruction, and community gatherings. In addition to awareness, a collaborative education effort is pursued that consists of creating or modifying educational curriculum and materials. A Web site has been created to showcase efforts made with the prairie. The Prairie Partnership consists of community members who represent the University of Wisconsin-Stout, the University of Wisconsin-Extension, Northstar Middle School, and Prairie Enthusiasts.



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