

## Ohio Environmental Education Fund Adult Education Grants Awarded, Fall 2004

**The Western Reserve Resource Conservation and Development Council**, Entrepreneurial Farming and Environmental Sustainability in Northeast Ohio, \$30,488, Contact: Amalie Lipstreu, [alipstreu@earthlink.net](mailto:alipstreu@earthlink.net)

Adapts a successful approach from the Michigan Land Use Institute to educate 5,000 people about sustainable agriculture as an economic development tool that emphasizes innovation, conservation, and profitable outcomes for farmers and communities. A report will showcase examples of entrepreneurial farming in northeast Ohio that



are keeping land productive and profitable, preserving farmland and keeping families on their farms. Targeted mailings, workshops, conferences, field tours and Web sites will be used to disseminate the report to developers, agricultural producers and consumers.

**The Grail/Grailville**, *Grailville Wastewater Environmental Treatment Project*, \$38,020, Contact: Linda Martin or Suellyn Shupe, [grailvillewet@fuse.net](mailto:grailvillewet@fuse.net)

Project educates 8,000 visitors from southwestern Ohio about water conservation and innovative wastewater treatment options such as a constructed wetland system for on-site sewage treatment, a native prairie leach field planted in native prairie plants, and water-saving devices. Includes tours, educational workshops, hands-on demonstrations, and open house events targeting youth groups, community organizations, developers and local government officials.

**Little Miami Inc.**, *Little Miami Scenic River and Trail Center*, \$49,993, Contact: Eric Partee, [partee@littlemiami.com](mailto:partee@littlemiami.com)



Provides interactive displays in a bicycle trailside center to educate approximately 16,000 watershed residents per year about water quality issues facing the Little Miami River, the importance of the riparian corridor, and actions they can take to protect and restore the River.

**Ohio Council of Churches**, *Faithful Care for Ohio's Environment*, \$49,988, Contact: Sr. Leanne Jablonski, [jablonski@udayton.edu](mailto:jablonski@udayton.edu)



Develops Ohio-specific environmental resource guide of information from unbiased sources for adult education programs in 250 different religious congregations, in settings such as Sunday school classes, weekly discussion groups, and retreat weekends. Topics include climate change and energy conservation; air quality; land and food; and water. Five regional workshops will train at least 150 congregational liaisons to use the materials in their own churches. Another 350 copies will be distributed

through electronic and print media networks and at regional denominational meetings.

### For more information, contact:

Ohio EPA, Office of Environmental Education  
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Web site: [www.epa.state.oh.us/oeef](http://www.epa.state.oh.us/oeef)

# Ohio Environmental Education Fund K-12 Grants Awarded, Fall 2004

For more information about OEEF grant opportunities, see [www.epa.state.oh.us/oeef](http://www.epa.state.oh.us/oeef) or call (614) 644-2873.

**Keep Franklin County Beautiful, Envirocourt: From Violation to Justice**, \$36,361, Contact: Lindsey Christ, [lindsey@kfc.org](mailto:lindsey@kfc.org)

Uses a mock trial format to teach 160 juniors and seniors at six high schools about environmental laws related to litter and illegal dumping, how these laws are broken, and how the judicial system manages offenders. Project incorporates an online inter-school forum, presentations by the County Sheriff's Office, participation in an environmental investigative workshop with the Ohio EPA, a field trip to the Franklin County Environmental Court, and mentoring by Otterbein College students.



**Lourdes College, Four-Season Natural Science Exploration: Ohio Bio-Region**, \$49,890, Contact: Sr. Rosine Sobczak, [rsobczak@lourdes.edu](mailto:rsobczak@lourdes.edu)

Provides training for 24 northwest Ohio elementary and middle school teachers on integrating hands-on natural science field and classroom activities related to Ohio's Biome Communities and changing seasons. Half the teachers will be from Toledo urban schools, and half from 10 surrounding counties. Includes field trips for the teachers to Magee Marsh, Campbell Prairie, and Oak Openings, as well as two seasonal Life Lab field trips for each teacher's students.

**Elgin Local School District, Elgin High School, Sandusky Plains Environmental Education Center**, \$46,070, Contact: David Beaver, [beaver\\_d@treca.org](mailto:beaver_d@treca.org)

The School District is constructing a classroom and 4-acre wetland on its campus adjacent to the Big Island Wildlife Area managed by the Ohio Department of Natural Resources. The OEEF grant will provide scientific and field supplies, classroom and audio-visual equipment for the new environmental education center, and training to help Elgin teachers supplement existing curricula with activities from three national environmental education curricula (*Project Wild Aquatic*; *Healthy Water, Healthy People*; and *Wonders of Wetlands*). The project includes specific activities to involve community residents and other schools in using the Center.

**Pickerington Local School District, Tussing Elementary, Changing Places: Coming Home**, \$50,000, Contact: [Mary\\_Sheridan@fc.pickerington.k12.oh.us](mailto:Mary_Sheridan@fc.pickerington.k12.oh.us)

Builds on two previous award-winning projects funded by OEEF and the Ohio Arts Council, where artists-in-residence have helped Tussing students and teachers explore the history and use of the land around their school and its wetland and prairie ecosystems. Students have communicated their findings to the local community through student-made films, storybooks, quilts, murals, papier mache puppets, ceramic artistic tiles now installed in a local metropark, and a 40-foot whale sculpture that has "traveled" to the school from a



whale listening station in Alaska. The station has partnered with the students in their efforts to record sounds in the school's wetland area. To help satisfy a rapidly growing statewide and national demand for information about these projects, and an implementation manual for incoming teachers at Tussing and other schools to use, the new grant will support a film documentary featuring student interviews of the past artists-in-residence; a children's book; a bilingual calendar in collaboration with two schools in Alaska; and a field guide with a letterboxing component that encourages students to explore their community.

**Cincinnati State Technical & Community College, Environmental Issue-Oriented Science Program**, \$49,412, Contact: [martha.brosz@cincinnatiastate.edu](mailto:martha.brosz@cincinnatiastate.edu)

Provides 8 training sessions and academic-year follow-up for 160 southwest Ohio teachers, in the use of 8 new interdisciplinary environmental science modules developed by the award-winning Science Education for Public Understanding Program (SEPUP). Students conduct research to investigate topics such as wastewater treatment, groundwater contamination, disposal of computers and plastics, transport of hazardous materials, risk assessments involving consumer products, and the environmental impact of various industries.

**America's River Communities, Inc., The Return of the Cuyahoga Online Curriculum**, \$49,776, Contact: Len Materman, [len@RiverCommunities.org](mailto:len@RiverCommunities.org)



45 Master Teachers in Cleveland's middle schools will design and produce a new online environmental education curriculum focused on the Cuyahoga River. The OEEF grant will supplement funding from the National Science Foundation to help develop a science-based curriculum with a local environmental focus, for 4,000 students in the District, and a wider audience of nearly half a million students and 34,000 educators in northeast Ohio through collaboration with the local public television station.

For More Information, Contact  
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Web site: [www.epa.state.oh.us/oeef](http://www.epa.state.oh.us/oeef)

# New Law Governs Water Quality Data Collected by Amateurs and Professionals

*By Carolyn Watkins, Ohio EPA*

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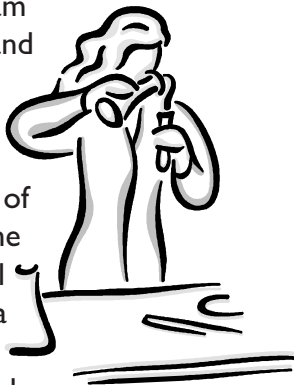
In recent years, many school classes and citizen groups have begun sampling the water chemistry of local streams, observing physical characteristics such as streambank vegetation, and kick-seining to measure the health and diversity of stream biota by studying fish, mussels, and macro-invertebrates.

As we struggle as a nation to meet the Clean Water Act goal of “fishable, swimmable” waters, the focus has shifted from individual (point) sources of pollution to a watershed-wide approach.

States are required to prepare plans (called TMDLs, for Total Maximum Daily Load) to reduce the amount of pollution loading to any stream segment that does not currently meet water quality standards. Local watershed organizations are helping to identify problems and educate community residents about water quality in local streams.

Because billions of dollars have already been spent by industry and municipal wastewater treatment plants to clean their effluent, the cost of additional controls that may be needed to improve water quality is of great concern. They seek assurance that regulatory decisions that carry expensive consequences are not based on data collected by amateurs who may not follow stringent quality assurance requirements. Other issues involve how to conveniently store and compare sampling data collected at many different locations, often using different methods.

A number of states have passed laws governing “credible data” to be used in developing their TMDL plans. Ohio passed a new law in 2003 that also covers the use of volunteer-collected data. House Bill 43 defines “credible data” as scientifically valid chemical, physical, or biological water quality monitoring data concerning surface waters, including qualitative scoring of



physical habitat characteristics and the sampling of fish, macro-invertebrates and water quality that have been collected by or submitted to Ohio EPA. The law requires the Ohio EPA director to adopt rules governing three levels of credible data, and the purposes for which each level of credible data can be used. The rules for each level will establish requirements for data assessment, sample collection, analytical methods, and quality assurance and quality control procedures.

The rules specify training and experience requirements for qualified data collectors. Sampling protocols and field methods will be described so that the data collection and interpretation are reproducible, scientifically defensible, and free from pre-conceived bias. Finally, the rules require Ohio EPA to establish and maintain a computerized database of all credible water quality data submitted to the Agency.

Level three data will be collected by the most stringent methods, and are the only data to be used for regulatory purposes such as setting use designations for stream segments, developing statewide water quality inventories, or establishing a total maximum daily load (TMDL) for a water of the state. Level two and three data may be used to evaluate the effectiveness of pollution controls, and for initial screening of water quality problems to determine if additional study is needed. Level one data is the least stringent. All three levels of data may be used for public awareness and education.

Ohio EPA expects to publish draft rules and seek comments from interested parties in early 2005. Watch for further information on the Ohio Watershed Network Web page at <http://ohiowatersheds.osu.edu/> or Ohio EPA's Web page, [www.epa.state.oh.us/dsw/](http://www.epa.state.oh.us/dsw/), or contact the Division of Surface Water at (614) 644-2001 for more information.

# OEEF Announces New Funding Priorities

The Ohio Environmental Education Fund (OEEF) has announced new funding priorities that include greater emphasis on meeting the Academic Content Standards for K-12 science, math, social studies, language arts and technology education. Projects that introduce students to environmental careers also are emphasized.

OEEF is administered by the Ohio Environmental Protection Agency (Ohio EPA), and provides mini grants of \$500 - \$5,000 and general grants up to \$50,000 for environmental education projects targeting pre-school through university students and teachers, the general public and regulated entities. Funding comes from one-half the civil penalties collected by Ohio EPA for violations of Ohio's air and water pollution control laws. Application deadlines are January 15 and July 15 each year, and applications are available online at [www.epa.state.oh.us/oeeef/](http://www.epa.state.oh.us/oeeef/).

All proposals should satisfy one of the following educational priorities:

- **Compliance Assistance:** helping regulated entities, and particularly small business, understand and comply with Ohio's environmental laws and regulations;
- **Community Issues:** designing and implementing model projects to educate the public about technical aspects of environmental issues or environmental health issues in their communities through community-based organizations or through print, film, broadcast or other media. Issues of current priority to Ohio EPA include storm water management, source water protection, brownfields cleanup and redevelopment and education efforts related to endorsed watershed plans;
- **Environmental Health:** educating students, teachers, parents, community leaders, or the public about human health threats from environmental pollution, and how to minimize human exposure to preserve good health. Current issues of priority to Ohio EPA include reduction of ozone precursors, airborne particulates and toxic chemicals such as mercury in the environment;
- **Education Reform:** utilizing environmental education to improve student academic achievement, specifically through alignment with the Ohio Department of Education's Academic Content Standards, published at [www.ode.state.oh.us/Academic\\_Content\\_Standards/](http://www.ode.state.oh.us/Academic_Content_Standards/);
- **Teaching Skills:** educating teachers, faculty or nonformal educators about environmental issues to improve their teaching skills, for example through workshops; or
- **Career Development:** educating students in formal or nonformal settings about environmental issues to encourage them to enter careers in environmental science and engineering or related fields.

Proposals may address more than one educational priority. However, OEEF cautions against losing focus. OEEF prefers to fund projects with a clearly defined purpose, rather than projects that attempt to address multiple priorities at the expense of a quality outcome.

OEEF supports projects that increase public awareness and knowledge about environmental issues and provide the skills to make informed decisions and take responsible actions. Environmental education (EE) is based on objective and scientifically sound information and does not advocate a particular viewpoint or course of action. It teaches individuals how to weigh various sides of an issue through critical thinking and it enhances their problem-solving and decision-making skills. Proposals that simply disseminate information will not be funded. OEEF strongly encourages applicants to use and adapt existing EE materials rather than designing new materials, because experts indicate that a significant amount of quality educational materials have already been developed and are not fully utilized. OEEF will consider funding curriculum development or new materials only where the applicant demonstrates that existing materials cannot be adapted well to a particular local environmental concern or audience.

Further, OEEF recommends that applicants consider the *Guidelines for Excellence* series developed by the North American Association for Environmental Education with U.S. EPA funding. These materials are available at [www.naaee.org](http://www.naaee.org). Ohio's *Best Practices for Environmental Education: Guidelines for Success* are also available from OEEF at [www.epa.state.oh.us/oeeef/](http://www.epa.state.oh.us/oeeef/) under "publications."

*OEEF staff are happy to pre-review applications and offer suggestions to applicants.*

*Contact OEEF at (614) 644-2873.*

## Ohio EPA-Environmental Education Council of Ohio Partnership Regional Priorities



Urban/Minority  
Early Childhood  
Social Studies  
High School  
Language Arts

### Partnership Steering Committee

Carolyn Watkins  
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