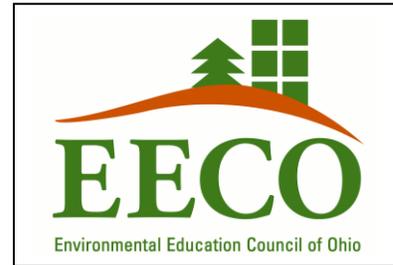


Ohio Environmental Education Fund Statewide Partnerships in SFY 2012

Environmental Education Council of Ohio, \$99,370



In 1995, Ohio EPA's Office of Environmental Education initiated a long-term partnership with EECO to build statewide capacity for environmental education in ways that could not be accomplished within the confines of a short-term general grant. Through this eighteen-year partnership, OEEF and EECO are able to provide professional development opportunities for teachers and non-formal environmental educators, as well as quality curriculum resources aligned with the Ohio Department of Education's Academic Content Standards and Common Core. For K-12 education, the partnership continues to focus on the STEM disciplines (science, technology, engineering and mathematics), with some additional outreach initiatives in social studies, language arts, music and visual arts. Since 2006, the partnership has also strengthened its initiatives for adult environmental education in the state.

Structure

A six-member **partnership steering committee** sets partnership goals in consultation with the EECO Board of Directors and the OEEF Advisory Council. The committee includes the EECO Executive Director and the Chief of Ohio EPA's Office of Environmental Education, and the chairmanship alternates between OEE and EECO representatives. The partnership supports part-time **regional directors** in each of the state's 12 education regions, who work closely with teachers and environmental educators at the local level to offer workshops and share teaching resources. A network of **contacts in more than 2,000 school buildings** helps to publicize and distribute the partnership's materials statewide. A **partnership insert** in the EECO newsletter goes out three times each academic year to educators statewide, promoting cross-pollination between the OEEF grant programs, the products resulting from outstanding environmental education grant projects, and EECO conference and workshop opportunities.

Workshops and Programs

Partnership funds made it possible to offer **75 regional professional development workshops and school presentations in SFY 2012 to 2,440 participants**, offering teachers certification in nationally recognized curricula such as *Healthy Water, Healthy People*, www.healthywater.org; The Leopold Education Project, www.lep.org; Project Learning Tree, www.plt.org; Project WET (Water Education for Teachers), www.projectwet.org; Project WILD, Project WILD Aquatic, Flying WILD, WILD School Sites, and *Science and Civics: Sustaining Wildlife*, all at www.projectwild.org; and Wow! The Wonders of

Wetlands, http://www.wetland.org/education_wow.htm. This year the partners continued to promote new early childhood modules from Project WILD and Project Learning Tree to Head Start educators and pre-school programs. Other teacher workshops offered training in programs developed specifically for Ohio, such as Master Composting, Vermi-composting, Dig in Soils, Insects, Science Through Stories, Geology Rocks, Taking Care of Nature's Resources, and Animal Adaptations. School presentations included demonstrations of water quality monitoring techniques, the EnviroScape® watershed model and Ohio Wildlife History model.. EECO and OEE presenters also frequently demonstrate other hands-on models such as the EnviroScape® drinking water and wastewater treatment models, storm drain models, soil tunnels, and the EnVision 3100® ground water flow model, at teacher conferences and school or career day events.



EnviroScape® watershed model



Ohio Wildlife History Model



EnviroScape® drinking water model



ground water flow simulator

To most effectively reach a wider audience and avoid duplication of effort, the partners work closely with local environmental educator collaboratives such as the Earth Day Coalition in Cleveland, the Delaware Environmental Education Partnership (DEEP), Greater Cincinnati Environmental Educators (GCEE), Terrific Resources for Environmental Education (TREE) in central Ohio, and the Tri-County Environmental Educators in the Youngstown area. These collaboratives offered **regional resource fairs** for teachers, afterschool care providers and home schoolers. The partners also exhibited or presented at **12 special events and conferences with 16,325 participants**, including the

Cincinnati Paddlefest, Children’s Water Festivals in Dayton and Columbus, Ohio Wildlife Diversity Conference, and local Earth Day events. Local collaborators include soil and water conservation districts, solid waste management districts, county extension offices, health departments, zoos, nature centers, botanical gardens, and recycling and litter prevention offices.



Children’s Water Festival Columbus



Resource fair for Cincinnati teachers

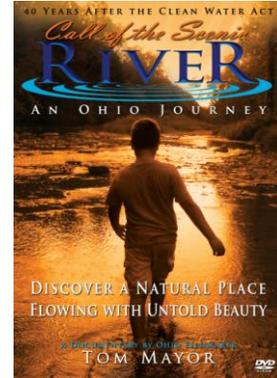
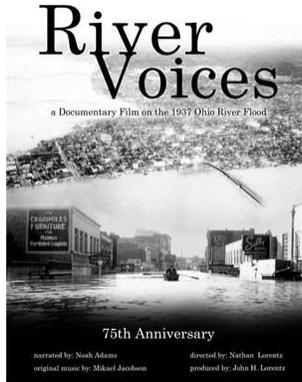
Adult education opportunities also included **11 OEEF grant writing workshops** offered around the state last year, reaching a total of 396 participants. EECO’s assistance in hosting and publicizing these workshops has been instrumental in helping the OEEF increase the number of grants awarded in under-served counties.

Conferences

EECO’s April, 2012 **annual conference** at Shawnee State Park near Portsmouth featured strands on Ohio’s Rivers, Native Americans in Nature, Native Flora and Fauna, and Reconnecting Kids with Nature.



Keynote speakers, workshops, field trips and concurrent sessions helped participants learn to tailor education programs to most effectively engage audiences of different ages, backgrounds, and interests. A forum on “**Ohio River Currents and Current Issues**” featured topics such as flood prevention and response, fish consumption advisories, invasive species, and impacts of dredging on water quality. The Ohio River Valley Water Sanitation Commission (ORSANCO) provided expert presenters and a 2,200 gallon mobile aquarium showing Life Below the Water Line for species caught locally in the Ohio River. Conference activities included screenings of two films, *River Voices*, an award-winning oral history featuring interviews with Portsmouth residents about their experiences in the 1937 Ohio River flood, and *Call of the Scenic River*, a 2012 documentary celebrating the state’s Wild and Scenic Rivers program.



ORSANCO Life Below the Waterline



Corps of Engineers' Greenup Locks & Dam



Panels from Portsmouth Flood Wall Murals



2012 EE Certification Class poster session



Arc of Appalachia Preserve wildflower hike

The annual conference also highlighted the national **No Child Left Inside** movement, promoting outdoor learning and increased environmental education content and funding in teacher preparation. EECO is working with local Leave No Child Inside collaboratives in many Ohio cities, and drafting a **state environmental literacy plan** with their assistance.

Ohio EPA and the Ohio Departments of Education, Health, Natural Resources and Transportation are supporting this effort as a way getting students outdoors, inspiring them to explore STEM (science, technology, engineering and mathematics) careers, building their interest in environmental concerns, and exposing them to field investigation techniques.



Regional Conferences

The partnership also provides financial support for three regional conferences for teachers and non-formal educators: the “**Winter Snow, Out We Go**” conference in northeast Ohio in February; the “**Black Swamp Educators’ Extravaganza**” in northwest Ohio in June, sponsored by a number of soil and water conservation districts; and the “**101 Alternatives to the Chalkboard**” conference in southwest Ohio in October.

Targeting Outreach to Specific Audiences

While environmental education continues to be most closely associated with science, in 2001, EECO identified five under-served audiences for K-12 environmental education: **urban/multicultural, language arts, social studies, and the high school, and early childhood** age groups. In 2006, **environmental careers** and **adult education** were added, and in 2010, **pre-service teacher preparation** was also added as an area of focus. Partnership funds support regional directors working with local teams in each of the state's 12 education regions, to offer special initiatives to reach these audiences. Partnership funds helped EECO leverage an additional \$52,000 over the past five years in federally-funded EETAP (Environmental Education and Training Partnership) grants from US EPA.



Scenes from EECO Regional Conferences

Ohio EPA-Environmental Education Council of Ohio Partnership Regional Priorities



Region 1: urban/multicultural, language arts
 Region 2: high school, environmental careers
 Region 3: social studies, environmental careers
 Region 4: urban/multicultural, environmental careers
 Region 5: pre-service teachers
 Region 6: language arts

Region 7: adult education
 Region 8: urban/multicultural, environmental careers
 Region 9: pre-service teachers, high school
 Region 10: high school, environmental careers
 Region 11: adult education, environmental careers
 Region 12: early childhood, urban/multicultural

EECO-OEEF Partnership Regional Directors

Region 1 - Linda Pettit
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Region 5 - Sue Magness
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Errin Howard
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Region 6 – Janet Ellsworth
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Region 6 - Joanne Mudra
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Region 7- Bill Wickerham
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Phone: (937) 217-1906
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Region 8- Dawn Wrench
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Tel: 330/823-7487; Fax: 330/823-8531
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Region 10- Bonnie Dailey
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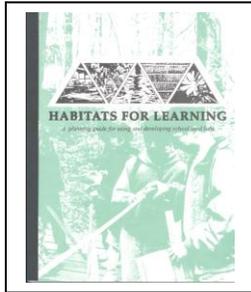
Region 11- Vicki Kohli
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Region 12- Cheryl Mattevi
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c.mattevi@att.net

Target Audience: Urban/Multicultural

In Region 1, the partnership sponsors an Urban Environmental Learning Collaborative (UELC) of local EE provider organizations working with after-school programs serving Columbus Public Schools students. The team developed 20 travelling trunks of supplies and trained after-care educators to provide activities from Projects WET, WILD, and Learning Tree and OSU Extension.

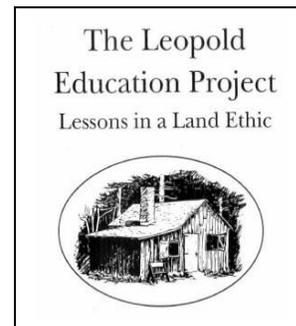
The Region 8 team identified as its primary stakeholders the teachers and students of the Cleveland Metropolitan School District. They have been training teachers in a number of standards- and inquiry-based activities that can take place outdoors, such as bird banding, water quality monitoring, and biological surveys. The team is working closely with the Earth Day Coalition's Student Environmental Congress, the Nature Center and Shaker Lakes, and local community organizations to create a new outdoor learning area and environmental education center at the East Cleveland location of the U.S. Army Corps of Engineers Dike 14 dredge spoils disposal site along Lake Erie.



The Tri-County Environmental Educators network in the Youngstown/Warren area (Region 12) has been supporting the development of outdoor learning areas in several urban schools, utilizing *Habitats for Learning: A Planning Guide for Developing and Using School Land Labs* that EECO developed with an OEEF grant that was selected as an Outstanding Project.

Target Audience: Language Arts

"The Language of Nature," a summer writing institute for language arts teachers, is offered at Cuyahoga Valley National Park, with sessions on nature writing and photography, naturalist interpretation, and teaching activities from the Leopold Education Project, which features journaling and environmental ethics components. Sessions included fiction, nonfiction, poetry and journaling. Funding from the partnership has helped to leverage additional support from the Ohio Arts Council for this institute.



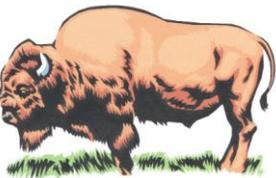
Target Audience: Early Childhood

EECO's regional directors are helping introduce two exciting new curricula, "Growing Up WILD" from Project WILD, and "Environmental Experiences for Early Childhood" from Project Learning Tree. A number of educator workshops were offered to teachers and Head Start educators around the state. The partnership also promotes and distributes copies of *Fostering a Sense of Wonder During the Early Childhood Years*, developed by Dr. Ruth Wilson at Bowling Green State University with OEEF funding, and selected as an OEEF Outstanding Project resource for educators.



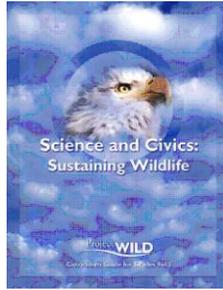
Target Audiences: Social Studies and High School

An "Environmental Education and the Social Studies" slideshow is featured at conferences and posted on the OEE, EECO and Project WILD Facilitator Web sites, to showcase activities from well-known curricula that can be used to meet Ohio social studies content standards. The partners also demonstrate ODNR Division of Wildlife's tabletop model and poster timeline of "Wildlife in Ohio History" at teacher workshops, school career days and various public events. The timeline helps elementary students learn how animal and plant species have flourished or been extirpated in Ohio.

<p>"Water Court" <i>Project WET</i></p> <ul style="list-style-type: none">Students participate in a mock court to settle water quality and quantity disputes.Demonstrates how disputes can be settled through mediation or litigation.Evaluate arguments presented by opposing sides(Middle and high school) 	<p>Geography using migratory birds and butterflies</p>  <ul style="list-style-type: none">Journey North www.learner.org/inorth/current.htmlMonarch Watch www.monarchwatch.org"Back from the Argentine" Leopold Education Project, www.lep.org	<p>Wildlife in Ohio History</p> 
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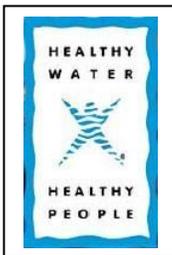
At the high school level, the partners are helping the ODNR Division of Wildlife promote **Project WILD's Science and Civics: Sustaining Wildlife** curriculum where high school biology, history, economics and government classes collaborate on service learning projects to benefit wildlife in the local community.

Learning activities are aligned with the state academic content standards for science and social studies.

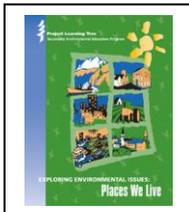


Target Audiences: Environmental Careers

The partnership is intensifying its efforts to introduce Ohio students and teachers to **careers in environmental science and engineering**, in tune with the state's current priority on STEM (science, technology, engineering and mathematics) disciplines and preparing students to meet the needs of employers. Careers education is also an important theme throughout the Ohio Department of Education's academic content standards. The partnership works with businesses and with the 21 state and 9 federal agencies participating in the Ohio Inter-Agency Council for Environmental Education (OICEE) to help schools recruit environmental professionals as collaborating partners and career role models. Partnership funded workshops show teachers how to use authentic science data and technical methods in the classroom.



For example, Project WET and *Healthy Water, Healthy People* activities have students test their drinking water or local streams for various parameters and compare their results with official sampling data from Ohio EPA and local water purveyors.



Activities from Project Learning Tree's secondary education modules on forest ecology, risk assessment, energy, and local environmental issues also include significant career components.

The Ohio Environmental Education Fund has made environmental careers one of its six priority areas for awarding grants. Six of the twelve EECO regional directors added careers education as a focus for their local outreach committees. The Ohio Department of Natural Resources "Real World Learning" Web pages at <http://ohiodnr.com/tabid/18945/Default.aspx> feature profiles of conservation professionals, their training and current projects.

Target Audience: Pre-Service Teachers

EECO and Ohio EPA joined the North American Association for Environmental Education in supporting stronger environmental education components in the accreditation standards of colleges of education, which have now been adopted by the National Council for Accreditation of Teacher Education (NCATE). The partners are working to certify education faculty members from different Ohio colleges and universities in Project Learning Tree, Project WET, Project WILD, and *Healthy Water, Healthy People*, so that a new generation of teachers will become familiar with these excellent teaching resources. The OEEF has funded alignment of all these curricula with the Ohio Department of Education's academic content standards for science and social studies education. These correlations are posted at <http://www.ohiodnr.com/education/correlations/>

The screenshot shows a web browser window displaying the "Correlations - Home" page on the Ohio.gov website. The browser's address bar shows the URL <http://www.ohiodnr.com/education/correlations/>. The page content includes:

- Navigation Menu:** Workshops, About Correlations, Contacts, Search For Correlations.
- Header:** "CORRELATIONS" with a globe icon, "Welcome", and "Projects Correlated to Ohio Content Standards".
- Introduction:** "...to the interactive website for **Project Learning Tree, Project WET, Project WILD and Healthy Water Healthy People** activity correlations. Use the form at the right to search the database. The results will show how the environmental education program activities relate to Ohio's academic content standards."
- Logos:** Project Learning Tree Ohio, PROJECT WET Water Education for Teachers, OHIO Project WILD, and HEALTHY WATER HEALTHY PEOPLE.
- Search Form:** "How to Search for Correlations" with dropdown menus for Activity Guide, Activity Title, Subject, Grade Level Band, Grade Level, Standard, Benchmark, Organizer, and Grade Level Indicator, plus a "Search for Correlations" button.
- Other Education Guides:** "Other Education Guides Correlated to Ohio's Standards" section featuring:
 - WWF:** "Wonders on the Wild (WOW) is a World Wildlife Fund education program whose goal is to teach people of all ages about biodiversity issues. WOW uses biodiversity as a 'window' to explore the incredible web of life and how all-living things are interconnected."
 - Biodiversity Basics:** "Biodiversity Basics: An Educator's Guide to Exploring the Web of Life is the core module of the WOW curriculum."
- Footer:** "Check out the [Workshops](#) section to find out how to obtain WET, WILD, PLT, HWHP and WOW Activity Guides."