

Ohio Environmental Education Fund Statewide Partnerships in SFY 2015

Environmental Education Council of Ohio, \$87,550

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 20 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 Model Curriculum.

Environmental Career Ambassadors

For K-12 education, the partnership continues to focus on the STEM disciplines (science, technology, engineering and mathematics). In 2013 OEEF and EECO joined forces with The Ohio State University School of Environment and Natural Resources to launch a new statewide network of volunteer **career ambassadors in environmental science and engineering**.

More than 350 professionals in 62 Ohio counties have volunteered, indicating their willingness to:

- *Make classroom presentations
- *Participate in school Career Days
- *Host field trips
- *Offer internships
- *Offer job shadowing opportunities
- *Mentor young professionals, and
- *Recruit additional career ambassadors

EECO, Ohio EPA and OSU are continuing to recruit more professionals to the online database, at <http://epn.osu.edu>. Now that we have a fully populated database of Ambassadors we are offering K-12 Teachers and Higher Education Professionals lists by county to identify local environmental scientists and engineers interested in working with their local schools.

To aid in recruiting of Career Ambassadors, the partners **published 19 articles** in various professional association newsletters.

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Partnership 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 Chief of Ohio EPA's Office of Environmental Education, and the chairmanship alternates between OEE and EECO representatives. The EECO Executive Director sits on the committee in an ex-officio capacity. 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 **more than 10,000 educators state wide** helps to publicize and distribute the partnership's materials. 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.

Ohio EPA—Environmental Education Council of Ohio Partnership Regions



Workshops, Programs and School Presentations

Partnership funds made it possible to offer **68 regional professional development workshops, school presentations and displays by EECO staff in SFY 2015 to 15,728 participants**, offering teachers STEM Career information as well as certification in nationally recognized curricula such as *Healthy Water, Healthy People*, www.healthywater.org, The Leopold Education Project, <http://www.aldoleopold.org/Programs/lep.shtml>, Project Learning Tree, www.plt.org; Project WET (Water Education for Teachers), www.projectwet.org, Project WILD, Project WILD Aquatic, Flying WILD, and WILD School Sites, 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® drinking and wastewater treatment model and Ohio Wildlife History model. EECO and OEE presenters also frequently demonstrate other hands-on models such as the EnviroScape® watershed model, storm drain models, soil tunnels and the EnVision 3100® ground water flow model at schools and teacher conferences. In SFY 15 the partners focused more on STEM career programs. A number of school presentations and displays were provided. **Ohio EPA provided outreach for 37 recruiting events to 4,842 professionals, and 45 educational opportunities to 921 teachers and 3,359 students.**

The volunteer Environmental Career Ambassadors reported providing:

Career Classroom Presentations:

Three presentations for 82 Middle School Students

Career Fairs: Two fairs for 130 middle school students

Career Days: One for 35 high school seniors

Shadowing: One high school shadowed an education specialist for a waste reduction and recycling program

Mentoring: Eight college students were mentored by employees at American Electric Power



STEM Environmental Career Fair

Conferences

EECO's April, 2015 **annual conference** at Maumee State Park featured a day of interactive forums discussing Lake Erie issues, alternative energy and green building technologies. The second day of the conference included workshops on curricula aligned to Ohio's New Learning Standards and field trips to area locations to see excellent environmental education in action. The third day of the conference showcased concurrent sessions on cutting edge topics and programs for environmental and STEM education. Keynote speakers from the Ohio State University's Stone Laboratory included Dr. Kristin Stanford, who has been actively involved in Lake Erie watersnake conservation for 15 years, and Dr. Jeff Reutter, an aquatic biologist and limnologist, the author more than 150 technical reports and journal articles, and a frequent lecturer on issues related to the changing Lake Erie ecosystem, harmful algal blooms, nutrient loading, aquatic invasive species, linking environmental health and coastal economic development. Exhibits and presentations also highlighted the accomplishments of the 20-year partnership between EECO and Ohio EPA, and the new STEM Environmental Career Ambassador Program.



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.



The 2015 Winter Snow Conference focused on creative ways to teach STEM using winter or Arctic concepts. Keynote speaker Jason Cervenec from the Byrd Polar and Climate Research Center at OSU taught a session on simulating ice cores in the classroom for students to investigate.

Local Programs

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, 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 **special events and conferences with 4,736 participants**, including the Cincinnati Paddlefest, Children's Water Festivals in Dayton and Columbus, the 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. Adult education opportunities also included **nine OEEF grant writing workshops** offered around the state last year, reaching a total of **201 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.