

Great Lakes B-WET FY12 Competition Awardees

Superior Rivers2Lake Program

The University of Wisconsin-Superior

The Lake Superior Rivers2Lake program uses year-long in-depth mentoring in inquiry-based and outdoor learning to provide meaningful watershed experiences based on the St. Louis River, a Great Lakes Restoration Initiative Area of Concern, and the Lake Superior watershed. The program provides comprehensive training to 15 teachers in 6 regional schools (most which have free and reduced lunch rates of at least 50%) and 300 students in their classrooms. We anticipate strong indirect benefits to Great Lakes literacy through community interactions with Rivers2Lake teachers and students.

Contact: Deanna Erickson, Lake Superior National Estuarine Research Reserve,
Deanna.erickson@ces.uwex.edu

Great Lakes 'F-EX' (Field Experiences) for Watershed Educators: Providing Meaningful Teacher Experiences to Promote NOAA's Great Lakes Education Discoveries for Students

The University of Illinois (Illinois-Indiana, New York, and Pennsylvania Sea Grant Collaboration)

This project will provide 105 teachers with the expertise and inspiration to involve 6,000 students around the Lower Great Lakes basin in meaningful watershed educational experiences to promote the stewardship, protection, and restoration of coastal areas in their watershed. The teacher training components are designed around best-practice professional development programs and five NOAA curriculum focused on Great Lakes watersheds developed by COSEE Great Lakes a NOAA- and NSF-funded project to increase Great Lakes Literacy around the basin, while fostering student interest in science, technology, engineering, and math (STEM).

Contact: Terri Hallesy, Illinois-Indiana Sea Grant, thallesy@illinois.edu

Groundswell FORCES

Grand Valley State University

Two secondary schools in Kent County, Michigan with training from Groundswell, a Great Lakes Stewardship Initiative Hub, will be recognized as "FORCES" schools. The Groundswell FORCES program will provide professional development to one administrator and four teachers in each FORCES school to integrate Great Lakes Literacy principles into school-wide curriculum as an effort to create and sustain systemic curriculum changes. Additionally, each school will be assisted in implementing a school-wide, place-based service learning project developed by the students. Projects will serve as school-wide meaningful watershed educational experiences creating a culture of stewardship. These projects will engage a minimum of two school administrators, eight teachers, and 250 to 500 students.

Contact: Michael Posthumus, Grand Valley State University College of Education: Center for Educational Partnerships, posthumi@gvsu.edu

Developing Great Lakes Literacy and Stewardship in Urban Southeast Michigan through the Great Lakes Education Program

Michigan State University

This B-WET project will fund the implementation of Michigan Sea Grant's successful Great Lakes Education Program (GLEP) for 50 different urban K-12 classes in southeast Michigan (50 teachers, 200

adult chaperones, 1400 students/year). GLEP has provided award-winning, research-based education to more than 85,000 learners using a three-phase Preparation/Action/Reflection approach involving classroom lessons aligned to Michigan Grade Level Content Expectations and Great Lakes Literacy Principles and vessel-based experiential learning. Each class will also engage in watershed stewardship using storm water pollution reduction best practices. GLEP outcomes, documented through university research and seasonal evaluations, show significant gains in participant knowledge, behavioral intentions, and stewardship actions. GLEP education directly addresses three GLRI Action Plan focus areas, is correlated with the Great Lakes Literacy Principles, and advances Goals 1 and 2 of the NOAA Education Strategic Plan.

Contact: Steve Stewart, Michigan Sea Grant, stew@msu.edu

CIMBY Gets WET

Chicago Public Schools, District #299

CIMBY (Calumet Is My Back Yard) seeks to develop the next generation of environmental leaders by connecting the study of science with environmental stewardship and action. CIMBY students at 15 Chicago Public High Schools study ecological systems, biodiversity and its threats, and the Lake Michigan watershed then provide ecological restoration and stewardship at 13 natural sites in the Lake Calumet region of Chicago's south side.

Contact: Jon Schmidt, Chicago Public Schools, jjschmidt@cps.k12.il.us

Great Lakes – Great Stewards Environmental Education Project

The Pennsylvania State University (Pennsylvania Sea Grant)

“Great Lakes - Great Stewards” combines Earth Action service learning with Pennsylvania Sea Grant, NOAA and GLRI-funded resources to provide 600 middle and high school students and 25 teachers from low-income schools in Northwest Pennsylvania with science-based experiential learning on multiple watershed water quality issues. This one-year project, which focuses on emerging contaminants; storm water management; invasive species; and wetland and habitat restoration, includes a variety of teacher/student trainings, classroom learning, shipboard and field activities. These experiences will culminate in the development of service learning projects. Thousands more students and community members will learn about these issues through the PA Sea Grant/Erie Times-NIE weekly newspaper page, student press conferences, assemblies, and public presentations

Contact: Marti Martz, Pennsylvania Sea Grant, mam60@psu.edu

Lake Superior Stewardship Initiative

Copper County Intermediate School District

The Lake Superior Stewardship Initiative (LSSI) will involve 15 school-community teams composed of 85 teachers, 50 community partners, and 2500 students from Houghton, Baraga, and Keweenaw counties of Michigan in environmental stewardship activities in the Lake Superior watershed. The major goal of LSSI is to prepare K-12 students to become knowledgeable citizens, concerned about the Great Lakes, and actively engaged in stewardship activities that will contribute to the health, conservation, and future protection of the Great Lakes and their watersheds. Four over-arching themes guide the implementation of the LSSI: developing a connection to place, responsibility to community, partnerships between teachers, students and community members to address community needs, and active stewardship of the Lake Superior watershed.

Contact: Shawn Oppliger, Western UP Center for Science, Mathematics and Environmental Education, shawn@copperisd.org

Our River, Our Future – Transforming a Community through the Rediscovery of its Local Watershed

The Community Foundation for Northeast Michigan

Our River, Our Future will establish a partnership among more than fifteen City, State, Federal and not for profit organizations committed to the betterment of Northeast Michigan through Great Lakes Literacy, school improvement and ecologically conscious economic development. Working through a Leadership Team, the partnership will engage K-12 teachers and students in meaningful watershed experiences that bring them together with community organizations to learn about and steward the Thunder Bay River and Lake Huron as part of their school-supported curriculum. A graduate student will be brought in to support students and community partners in gathering, interpreting and disseminating data in support of an ongoing management plan for several Thunder Bay River hydroelectric dams, slated for potential retirement in 2040. Public outreach events at the Thunder Bay National Marine Sanctuary and elsewhere will allow students to practice communications skills and build a network of like-minded peers from across the watershed. Our River, Our Future will utilize an outcomes-based, formative and summative evaluation model to assess gains in Great Lakes Literacy, student achievement, and self-efficacy with respect to stewardship attitudes and behaviors.

Contact: Nick Meyer, Northeast Michigan – Great Lakes Stewardship Initiative, nmyers@msu.edu

Lake Michigan Watershed Field Experience Course

Wisconsin Department of Natural Resources

Wisconsin Department of Natural Resources educators will conduct week-long professional development watershed field courses for twenty-five middle and high school teachers living within the Lake Michigan watershed in each of three locations: Milwaukee, Green Bay, and Kenosha, Wisconsin. The field courses will introduce teachers to the Lake Michigan watershed using field trips to local agriculture and industry, streams, beaches, hatcheries, and restoration sites. Teachers will be trained to use the Project WET Curriculum and Activity Guide, Great Lakes in My World Activity Guide and Wisconsin's Water Action Volunteers stream monitoring program. Teachers will use the field experiences and curriculum materials from the course to educate peers, to bring watershed education into their classrooms and to design and conduct a watershed-based field trip for their students

Contact: Carrie Morgan, Wisconsin DNR, carrie.morgan@wisconsin.gov

Explore and Restore Our Waters in Manitowoc County

Wisconsin Maritime Museum

This project provides meaningful watershed experiences in regional watersheds, including Lake Michigan, to 30 local junior high and high school students during a two-week summer camp. Students will become watershed ambassadors following investigation of each watershed via canoe, pontoon, schooner, submarine, and on foot. Students will interact with people whose careers are related to water health. Students will also conduct service projects that directly impact the health of the local waterways and will create their own methods of community outreach. In addition, approximately 370 sixth grade students will also focus on aquatic invasive species issues during their fall school forest experience.

Contact: Wendy Lutzke, [wlutzke@wisconsinmaritime.org](mailto:wlutke@wisconsinmaritime.org)

Urban Field Observations in Science UFO-S

Detroit Zoological Society

URBAN FIELD OBSERVATIONS IN SCIENCE (UFO-S) will engage, inspire and prepare urban teachers to provide students with Meaningful Watershed Educational Experiences (MWEE) that align with Michigan educational and environmental priorities. The project targets upper elementary and middle school teachers in Detroit, Pontiac and other metropolitan Detroit school districts serving student populations underrepresented in science, technology, engineering and math (STEM) higher education and careers, especially African American and Hispanic students. UFO-S will leverage existing partnerships of the

Detroit Zoological Society (DZS), the lead organization, with Michigan Sea Grant, Michigan Alliance for Environmental and Outdoor Education (MAEOE), Alliance for the Great Lakes, the Association of Zoos and Aquariums (AZA) and the Forest Service Urban Connections program. The project will engage 100 urban teachers with a rich menu of resources, including professional development, teacher/student field experiences, high quality environmental education curricula, curriculum support, supplies and outreach/mentorship to support classroom application. UFO-S will empower urban teachers to develop and sustain a Great Lakes environmental education practice that helps students meet academic benchmarks and become aware of and committed to Great Lakes stewardship.

Contact: JoAnn Neal, Detroit Zoological Society, jneal@dzs.org

Chicago River Schools Network

Friends of the Chicago River

The CRSN introduces K-12 students to the turbulent history, evolving ecology, improving health and the interdependence of the Chicago River with the greater Lake Michigan and Mississippi River watersheds. Students investigate real world issues, work to solve everyday problems facing our local waterways, and are encouraged to take action that will result in real environmental improvements. Through the CRSN, teachers are provided the training and tools they need to meet local and state learning standards while students gain a deeper understanding of their local community and develop citizenship skills. The CRSN is the cornerstone of Friends' education programs and supports hundreds of teachers and impacts thousands of young people in the Chicago area each year.

Contact: Margaret Frisbie, Friends of the Chicago River, mfrisbie@chicagoriver.org