



## **Great Lakes B-WET Grants Funded in FY17**

### **Using Place-Based Education to Create Stewards of the Great Lakes**

#### ***[Muskegon Area Intermediate School District]***

“Using Place-Based Education to Create Stewards of the Great Lakes” is an Exemplary Program that addresses preventing and controlling invasive species, reducing nutrient runoff, restoring habitat to protect native species, and other local environmental issues. A minimum of 30 teachers will be involved. The project involves K-12 teachers and students across multiple disciplines, in Muskegon, Oceana, Newaygo, and northern Ottawa counties, reaching a minimum 2,000 students, 30 teachers and 14 schools in the region. The project involves four main parts: 1. Meaningful Watershed Educational Experiences (MWEEs) for students using place-based education (PBE). 2. Sustained professional development for teachers around place-based pedagogy, inquiry and problem-based learning, natural resources and stewardship content related to our local environment, establishing and utilizing community partnerships, and best practices related to curriculum//lesson/assessment development. 3. Lay the foundation with local districts to institutionalize place-based education and environmental service learning into their respective schools. 4. Develop an awareness of NOAA assets, both as an organization and for teacher/classroom use by providing adequate time during professional development, including one day at the NOAA Great Lakes Environmental Research Laboratory Lake Michigan Field Station to allow teachers to explore and make a plan for using NOAA assets in their classrooms.

Location: Western Michigan (Muskegon and surrounding counties)

### **Great Lakes Literacy in Action: Connecting Students to their Watersheds in SE Michigan through Place-Based Education**

#### ***[Eastern Michigan University]***

The Southeast Michigan Stewardship Coalition’s (SEMIS) four overall objectives for project are to: 1) to increase the number of students who can participate in MWEEs, 2) help students develop a deeper understanding of the Great Lakes Literacy Principles and put these principles into practice, 3) sharpen students’ abilities to articulate local watershed and Great Lakes challenges and share their knowledge and ideas with the public in informed ways, and 4)

provide the kind of holistic educator support system needed for teachers to learn the content, ground their understandings in Great Lakes Literacy Principles, and work with their students in the field.

This project will engage approximately 500, K-12 students from the Huron River, Rouge River, Detroit River, and Clinton River watersheds. At least 60 percent of students will be African-American or Latino and qualify for free and reduced lunch. The majority of students served will be from the City of Detroit. Fifteen to twenty teachers will receive intensive support through nine days of intensive and sustained professional development programming, curriculum guides aligned to state standards and Great Lakes Literacy Principles, funded community partnerships, SEMIS curriculum coaching, and assistance with bus costs for student field experiences. We approximate an equal number of elementary, middle, and high school teachers and students. Forty to fifty teachers will receive nine days of professional development and curriculum materials.

Location: Southeast Michigan

### **Inland Seas Great Lakes Watershed Field Course for K-12 teachers to learn and implement MWEEs in their classroom**

#### ***Inland Seas Education Association***

The Great Lakes Watershed Field Course is a 4-day professional development (PD) opportunity combined with on-going support, resources, and encouragement during the following school year. Thirty (30) K-12 teachers within the Great Lakes Watershed will be selected from a pool of applicants to participate in the project, with priority given to teachers who live or work in a Great Lakes Area of Concern. During the 4-day PD, participants will gain knowledge on meaningful watershed educational experiences (MWEE) and experience them first-hand; increase their knowledge and awareness of environmental issues; and prepare at least one curriculum plan that incorporates MWEEs and a student stewardship action project. These MWEEs will be implemented with their classrooms, impacting at least 750 students. Throughout the school year, Inland Seas Education Association will support teachers as they implement MWEEs with their students.

Location: Traverse City, Michigan

### **Promoting Healthy Watersheds and Communities by Integrating Ecosystem Science, Transportation Networks, and Stewardship**

#### ***[Michigan State University]***

This project will pilot a place-based classroom and field-investigation program for teachers and their middle and high school students that will help them better understand significant wetland ecosystems in their local watersheds, how transportation networks may impact watersheds, and stewardship activities they can engage in to help address these impacts. The project was inspired by the recent collaboration between the Michigan Department of Transportation, Michigan Natural Features Inventory, and Southeast Michigan Council of Governments to apply a new planning framework to the multi-billion dollar I-75 corridor reconstruction in Monroe County in southeast Michigan. Teachers and students will learn about these wetlands in a watershed context, develop and investigate questions about impacts of transportation corridors, gather and synthesize their data, design and implement stewardship actions (e.g. mapping and monitoring of invasive species or vernal pools), and share their results with relevant audiences. They will experience “Meaningful Watershed Educational Experiences” while addressing a real-

world, local watershed issue of immediate concern—how to minimize impacts to vulnerable wetlands from the I-75 corridor reconstruction.

Location: Southeast Michigan

### **Buffalo State's Our Living Watershed B-WET Program**

#### **[Research Foundation for SUNY/Buffalo]**

This project, Our Living Watershed (OLW), will be coordinated by Buffalo State's Master Teacher Coordinator and led at the implementation level by three highly qualified and talented environmental studies teachers - two from a rural school and one from an urban one. It will combine classroom preparation, analysis, and reflection with hands-on field investigations and other related activities within each of the schools' watershed environments. In this design, the students from each school will work with their teachers to develop an action plan for conducting field studies; will conduct sampling and analysis; observe and document macroinvertebrates and native and invasive plant species; engage in habitat restoration; utilize geographic information systems technology (GIS) to map their collected data; and reflect on project outcomes – and on the ways in which human activity can and does influence our shared environment. Students will use classroom time to prepare for their field work, analyze and map gathered data upon completion of field investigations, and reflect on their work. They will subsequently present their findings and shared experiences to community stakeholders and educators.

Location: Buffalo, NY

### **Great Lakes Model Schools: Where Cleveland Students Learn to Care for their Watershed**

#### **[Alliance for the Great Lakes]**

The Alliance for the Great Lakes will partner with Cleveland Metropolitan School District (CMSD) on an exemplary project that includes training and supporting 5-7 “Great Lakes Certified” Educators who will lead Model School integration in five “Model Schools”, as well as help build grade level integration (3, 5, 7 and 10th) at the district level. For this project, Model School is defined as teachers integrating Great Lakes in My World curriculum and stewardship activities at multiple grade levels. “Great Lakes Certified” Educators will be teachers that the Alliance has previously worked with using our Great Lakes in My world curriculum and Adopt-a-Beach™ program. Through this project, the Alliance and CMSD will leverage the power of these change agents to recruit strong cohorts in the Model Schools and across schools at targeted grade levels (3, 5, 7 and 10).

Location: Cleveland, Ohio

### **Rivers2Lake South: Meaningful Watershed Education along Lake Superior's Coast**

#### **[University of Wisconsin System/UW-Superior]**

The Rivers2Lake education program integrates Lake Superior into education as a foundation for engaging place-based learning, Great Lakes literacy, stewardship and watershed restoration. Based at the Lake Superior National Estuarine Research Reserve (“Reserve”) with a community of many partners including the National Park Service, Great Lakes Aquarium and Bad River Watershed Association, the program provides teacher professional development through life changing field experiences and bi-monthly year-long mentoring. Rivers2Lake engages students through outdoor and inquiry-based learning, and provides extended resources, opportunities,

and year-long support to Rivers2Lake classrooms. Through this proposal, Rivers2Lake will expand its reach along the Wisconsin coast, work with a minimum of 18 teachers and their 432 students in the Lake Superior watershed in Wisconsin and Minnesota, and continue to support a community of 42 alumni teachers.

Location: Wisconsin's south shore of Lake Superior

**Watershed Alive III: A Place to Call Our Own**  
***[Milwaukee Metropolitan Sewerage District]***

"Watershed Alive: A Place to Call Our Own" will provide professional development and a treasure trove of inquiry-based teaching resources for 20 teachers which will equip them with interdisciplinary curriculum tools that assimilate long-term integration of watershed studies. As many as 700 students, grades 4 through 8, will be led through field experiences that engage them in using their local watershed as an outdoor laboratory.

Location: Milwaukee, Wisconsin