

West Michigan Currents

West Michigan Currents is a publication of the West Michigan Great Lakes Stewardship Initiative

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Connecting Schools & Communities for Authentic Learning



Whitehall students perform a stream survey, as part of their stewardship project.

The West Michigan Great Lakes Stewardship Initiative (WMGLSI) connects schools with their communities to create needs-based learning experiences for students that have a lasting impact on the environment. The goal of the stewardship initiative is to make students active and effective stewards of the Great Lakes and advocates for strategies that support their long-term sustainability.

This goal will be achieved by implementing three strategies: place-based education, sustained professional development for teachers and school-community partnerships.

Place-based education is an educational philosophy that uses the students' local environment and community as a springboard for learning. Students become a resource for solving real community problems and in the process become valued and active citizens with a stronger connection to their communities.

The second strategy, sustained professional development, provides participating teachers with environmental content and pedagogy. This year the professional development began with a weeklong summer institute. Twenty-two teachers attended this program, which featured nationally recognized place-based education proponent Jon Yoder from the Northwest Center for Sustainable Resources. Following two days with Yoder, the teachers heard presentations from many local environmental organizations and participated in hands-on activities to aid their

incorporation of local natural resources problem-solving into their curriculum.

Further professional development is provided through dinner and dialogue sessions, learning communities with the individual teams and topic specific workshops. The topics of these workshops have included macroinvertebrate training, water quality testing, Project Wild, Project Fish and the Michigan Environmental Education Curriculum Support (MEECS) workshops including water quality, biodiversity and ecosystems.

The school-community partnership is at the heart of place-based education. Community partners are the link between teachers and students and community needs. They provide access to community projects and the expertise to bring them to completion.

Projects undertaken by WMGLSI participating teams, over the last two years, include water quality testing, macroinvertebrate studies, stream bank restorations, stream assessments and clean-ups, community storm water education, growing and planting native species, restoring shorelines, creating rain gardens, and invasive species removal.

Student participation in this year's program wrapped up on May 25th with the WMGLSI Youth Symposium. During the Youth Symposium students presented their projects to environmentalists, educators, community partners, the general public and other students.



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A Teacher's Perspective

By Sara Busken
Ecology & Chemistry Teacher
Mona Shores High School

Over the past two years I have been able to give my ecology students (more than 150 in all) a wide variety of place-based education and hands-on learning experiences through the West Michigan Great Lakes Stewardship Initiative. They have been involved in exploring, designing, and completing environmental projects with community partners from the West Michigan area.

My students have worked with representatives from the Mona Lake Watershed Council, the Muskegon Conservation District, the Alliance for the Great Lakes, P.J. Hoffmaster State Park, and the Annis Water Resources Institute of GVSU. These representatives have presented local environmental issues to my classes and involved the students in every aspect of the project, including any corrective action. Our projects have included controlling invasive species, mitigating storm water runoff by creating rain gardens, and stream bank restorations to reduce erosion and sedimentation.

Most importantly, I have seen an overall increase in my students' academic performance and found the students more engaged in the learning process when they see a purpose to their work.

In addition to learning the state standards in ecology and engaging in critical thinking skills, partnering with different



Mona Shores High School students prepare their rain garden for planting.

groups within our community allows the students to find ways to become life long stewards of their community and of the Great Lakes. The WMGLSI has also provided me with valuable summer professional development, a support system and a deeper insight into place-based education. Through the WMGLSI I have made connections with community partners which have given my students real life ecological experiences that could not have been provided in the classroom. Our community partners have included the Mona Lake Watershed Council, the Alliance for the Great Lakes, Lowes, the Muskegon Area Storm Water Committee, and the City of Norton Shores.

School-Community Partnership to Educate & Restore

By Gary Noble
Executive Director
Muskegon River Watershed Assembly

Educating citizens to be stewards of the environment is a major part of the Muskegon River Watershed Assembly's (MRWA) mission. An integral component of the West Michigan Great Lakes Stewardship Initiative (WMGLSI) is to help students become lifelong stewards of the Great Lakes. So a partnership between 75 Newaygo Middle School students participating in the WMGLSI and our organization to conduct a shoreline restoration project was a perfect fit.

This spring we held a voluntary shoreline restoration program for home owners on Brooks & Hess Lakes in Newaygo County. We provided 3,000 native plants for residents to transform shoreline turf to native plant buffer zones to help protect the lake from runoff and increase riparian habitat.



Students from Newaygo Middle School prepare a shoreline turf area for transformation to a native plant buffer zone.

As part of their WMGLSI project, the Newaygo Middle School students worked with us to provide assistance in preparing, planting, and mulching some of the restoration sites. The

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Rain Garden Becomes An Attractive Solution

Librarian Deb Bose's office in the new Grant Area District Library looks out on Grant Middle School's soccer field and an unfenced, basketball court-sized rainwater containment basin. Not only is this basin something of an eyesore, when it is filled with water it constitutes a safety hazard. She didn't realize it at the time, but the solution to this problem would be a school-community partnership with students participating in West Michigan Great Lakes Stewardship Initiative (WMGLSI).

"I was concerned that deep water and kids just don't mix safely, and since the retention pond is on the library's land, the possibility of an accident was worrisome," said Bose. "At the same time, I knew we needed the basin, because it fills up after every heavy rain or snowmelt."

As a Certified Master Naturalist, Deb recognized that a rain garden might be the answer to the problem. Using native plant species in a rain garden provides optimum rainwater filtration and a habitat for birds, bees and butterflies. And so began her mission to turn an eyesore into an attractive and beneficial solution.

The rain garden project became part of the library's strategic plan, but progress was slow. That is, until she mentioned her idea to several local Master Naturalists, one of whom turned out to be a Grant Middle School teacher involved in the WMGLSI. Through this connection, a partnership developed between the library and the Grant Middle School students participating in the WMGLSI. The students adopted the rain garden as one of their WMGLSI stewardship projects.

"Partners just began to jump out of the bushes," Deb stated, "The City of Grant had already grated the drainage pipes, and students helped make a grant proposal presentation to the Ice Mountain Corporation." Ice Mountain felt strongly about



Brian Majka (far left) of JFNew discusses the rain garden with (right to left) Sara Simon; Grant Public Schools, Deb Bose; Grant Area District Library and Dawn Stickney; Grant Public Schools.

funding this project, but the site was just outside the watershed they support. They did, however, recommend the project to the Fremont Area Community Foundation, which generously agreed to provide funding. JFNew, a leading natural resource and ecological consulting firm, and frequent participant in WMGLSI projects, came on board to help in planning the layout and provide plant materials. Patricia Pennell of the West Michigan Environmental Action Council came to the school to give the students a rain garden orientation.

More than 300 sixth and seventh grade students, 90 Grant High School students and two teachers were involved in the project. The students' involvement included raising some of the plants, working with JFNew in creating the planting layouts and playing a major role in site preparation and planting.

Community partnerships like this one address local environmental and educational needs, making classroom work tangible in the students' real world.

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focus of much of their work was on the property of homeowners who had difficulty doing the work themselves, which increased the effectiveness and reach of the project. In addition, the students who are from Deb Iwema's sixth grade classes and middle school science club, learned about native plants, water quality and riparian ecosystems connecting their classroom experience with a real world environmental issue.

The students will also be undertaking a community education project in conjunction with their work at the lakes. They will

be providing lakeside homeowners with ideas about the action they can take to protect the water quality of the lakes. The students are considering several methods for disseminating this information; door hangers, township billing statement stuffers or an article in the lake association newsletter.

This partnership with students is important to the MRWA and the local community as a means to demonstrate and implement effective stewardship practices through hands-on education of students and adults to improve water quality in our watershed.

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Great Lakes Stewardship Initiative (GLSI)

The GLSI was established and is funded by the Great Lakes Fishery Trust, with additional support from the Wege Foundation. Other funders include Charles Stewart Mott Foundation, Community Foundation for Muskegon County, Fremont Area Community Foundation, and Frey Foundation.

The goal of the GLSI is to develop knowledgeable and active stewards of the Great Lakes. The GLSI funds eight regional hubs that provide leadership, expertise, materials, and financial resources to support the collaborative, community-based work of K–12 teachers, their students, and local organizations.



www.glstewardship.org