

Go with the flow



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ARENAC COUNTY – Lake Huron is a valuable water asset for northeast Michigan communities - with nearly 3,830 miles of shoreline and 23,000 square miles, it is the third largest freshwater lake in the world.

At the heart of Lake Huron is Saginaw Bay. Fed by an impressive network of rivers and streams, the Saginaw Bay Watershed drains water from nearly 15 percent of Michigan's total land area into Lake Huron.

A treasured and important resource, Saginaw Bay supports a wide diversity of fish and wildlife and may be best known as a walleye and waterfowl wonderland. These fish and wildlife resources depend on the Bay's vast coastal wetland – a unique habitat that represents the largest continuing system of freshwater coastal wetlands in the nation.

The scale of the Great Lakes resource and its connecting watershed is not lost on the elementary students of Au Gres-Sims School who study Saginaw Bay. Neither is the opportunity to provide a leadership role focused on monitoring and increasing awareness about these important water resources.

From its upper stretches to where the Au Gres River meets Lake Huron, elementary students from Au Gres-Sims Schools explore water quality across their watershed, inspiring community awareness and building partnerships.

Some of the youngest citizens within the Saginaw Bay Watershed, the elementary students are stepping up – and getting their feet wet – in hopes of making important contributions to the environment and their community. With an understanding of watersheds, the resource-minded students are looking inland and to the rivers that feed Saginaw Bay.

And this school year the students embarked on an ambitious water quality monitoring project and study focusing on the Au-Gres River.

The AuGres-Sims Watershed Project, led by teacher Michael Fields, involves nearly 50 students coordinated with resource experts and community partners. Lending a hand to the professionals, students-turned-scientists monitor and study the AuGres River from its upper stretches to where it eventually drains into Saginaw Bay.

In this first year students looked at three different sites along the east branch of the Au Gres River including Vaughn Creek, the Alabaster

road crossing, and the river's mouth. Partner to the Northeast Michigan Great Lakes Stewardship Initiative,

More than 40 Au Gres-Sims Elementary students hike along the East Branch of the Au Gres River preparing to set up six data collection stations. The information they collect will be uploaded to FieldScope, an online database where other regional schools in Northeast Michigan also store information on local river health.

the project connected AuGres-Sims students with conservation partners including U.S. Fish and Wildlife Service, Michigan Sea Grant, Huron Pines, NOAA B-WET program, Saginaw Bay Watershed Initiative Network, Saginaw Chippewa Indian Tribe of Michigan, 4-H Youth Programs and local township officials, among many others.

These partners contribute environmental expertise, volunteers, and resources to the project and in trade benefit from the accomplishments of this student led project.

In the river, students became the water resource experts.

Separating into teams, they measured the river's width, depth, type of river bottom and flow rates. Applying chemistry, they tested stretches of the river to describe levels of ammonia, nitrate and dissolved oxygen in the water. Connecting biology to their study, students

surveyed and documented biodiversity by counting aquatic macro-invertebrates, some of the smallest organisms inhabiting the river. Applying math, they use the numbers of organisms as biological

indicators in calculating water quality. As a writing project back in class, students summarized their data and findings.

Through their combined assessment,



Using a homemade depth detector, this student is measuring river depth across the width of the river while recording the size and type of river bottom substrate.



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tudents apply classroom lessons to gain a better picture of the river's health.

Yet, the Au Gres River water study project expands beyond their local river.

Au Gres-Sims students are the first school in the Great Lakes region to contribute data to a new water-

focused citizen science website, Great Lakes FieldScope. Created by a partnership that includes the National Geographic Society, Michigan Sea Grant and U.S. Geological Survey, the Internet site allows students to map and share their



A student measures the width of the East Branch of the Au Gres River to set up a transect and collect data as part of a class project monitoring river health.

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findings with other schools, their local community and environmental experts. Together they contribute to a web of interconnected schools, all working to promote environmental research and awareness.

Their hands-on commitment to science had Michael Fields and his team of students back in the water this spring. And next fall he will introduce a new group of students to water quality monitoring and the environmental stewardship effort.

With a goal to expand the number of test sites, explore new community partnerships, use technology to share results and add more innovative technology such as underwater remote controlled vehicles to their studies, Au Gres-Sims schools, teachers and students contribute as long-term partners towards the stewardship of Saginaw Bay and Lake Huron.

These bright young students are not just our future – they're our environmental stewardship partners of today. ♣



Using a standard form, the student group-leader records data on the macro-invertebrates, chemical makeup and physical attributes of the river as fellow classmates perform different tests in the background.



The Northeast Michigan Great Lakes Stewardship Initiative

www.NEMIGLSI.org

The Northeast Michigan Great Lakes Stewardship Initiative is a regional partnership of schools and community partners working to promote place-based, community-based learning experiences. This network serves to engage youth as partners in protecting our Great Lakes and natural resources of Northeast Michigan through hands-on, feet-wet learning in (and with) the community.

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The NE MI GLSI supports:

- **Place-based education programs with youth:** Hands-on, place-based education is a proven method for developing knowledgeable and active stewards of the environment.
- **Educators and school improvement:** Through training and professional development for teachers, NEMI GLSI supports the use of best practices that maximize the effectiveness of PBE.
- **Strong school-community partnerships:** Schools and communities working together producing powerful partnerships that are beneficial to all.

Help NE MI GLSI support youth development and environmental stewardship in our communities!

To donate contact:
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