

2013 Youth Watershed Summit Report

Review of B-WET and NE MI GLSI Student Watershed Projects

August 2013

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with Brad Jensen and Brandon Schroeder



Introduction

This document will provide a review of the [NOAA Great Lakes B-WET \(Bay-Watershed Education and Training\)](#) funded program *Our River, Our Future* student projects from the 2012-2013 academic year, with a focus on the first ever Northeast Michigan Youth Watershed Summit. The goals of this document are to showcase the partnerships, the importance of place-based learning experiences, and the meaningful contributions of students to watershed conservation.

Our River, Our Future is 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. Originally designed to reach students within the 1200 mile Thunder Bay River Watershed, *Our River, Our Future* was funded through the NOAA B-WET grant to explore the ecologically, economically and historically significant river that spans five counties in Northern Michigan. Responding to broader interest in the program, *Our River, Our Future* was also extended to teachers operating in Northeast Michigan, but outside of the Thunder Bay River Watershed. The lead organizations involved in the creation of *Our River, Our Future* include the [Community Foundation for Northeast Michigan](#), the [Thunder Bay National Marine Sanctuary \(TBNMS\)](#), the [Northeast Michigan Great Lake Stewardship Initiative \(NE MI GLSI\)](#), and [Michigan Sea Grant](#). The unique, broad-based, and diversified nature of *Our River, Our Future* partnership provides for a wide dissemination and application of watershed education and conservation.

The purpose of *Our River, Our Future* is to engage K-12 teachers, students, and ultimately the community in meaningful watershed experiences in an effort to raise the level of watershed conservation awareness and action. Guided by their students' interests, participating teachers were asked to create a watershed-related project to be worked on throughout the year. These projects ranged from watershed monitoring to studying the history and cultural heritage of the region. The students' projects culminated in the first annual Youth Watershed Summit held in May of 2013. The summit was made possible through additional funding from [Michigan Department of Environmental Quality \(DEQ\)](#) and [Northeast Michigan Council of Governments \(NEMCOG\)](#). The Youth Watershed Summit provided students with an opportunity to share their yearlong projects with their peers and to engage in meaningful discussions on the future of their respective watersheds.

Partner Perspective from Brad Jensen, Executive Director of Huron Pines

Huron Pines is a not-for-profit conservation organization that serves Northeast Michigan conserving land, water and wildlife. See more at: <http://www.huronpines.org>



As a not-for-profit conservation company serving all of Northeast Michigan, Huron Pines is in a unique position to see firsthand the impact of youth environmental stewardship within the NE MI GLSI. Huron Pines pulls together stakeholders interested in conservation in this region to restore, enhance and sustain natural resources. With the type of on-the-ground habitat restoration and improvement projects that Huron Pines coordinates, it takes the involvement of citizen scientists to help lay the groundwork for these activities. Thankfully, students in Northeast Michigan, through the Northeast Michigan Great Lakes Stewardship Initiative and NOAA's Great Lakes B-WET, are doing the type of real world research and studies that help provide that foundation.

The land area that drains to our lakes and rivers, known as the watershed, is what in large part drives the quality of waters. Land uses within that zone, along with soils, vegetation and climate, give us the type of watershed we have. Generally, throughout most of northern Michigan, these river resources are considered very high quality. Much of the efforts surrounding watershed conservation projects in this region are focused on preserving what's there and enhancing it.

In a few instances, there are signs of water quality problems. This might be observed by noticing such things as a loss of native habitat, increased levels of algae in our waters, the spread of invasive species, erosion, and so forth. Addressing these problems, through a comprehensive watershed restoration program, is important both for the environment and the economy of northern Michigan.

Huron Pines works with partners, such as Thunder Bay National Marine Sanctuary (TBNMS), Michigan Sea Grant, the [US Fish and Wildlife Service](#), and the schools involved with the NE MI GLSI, to identify these types of problems and implement solutions. On a watershed-by-watershed basis, sites have been identified and prioritized for future work. As partners move toward solutions, Best Management Practices are identified. These are the structural, vegetative and/or managerial solutions that are science-based and shown to result in improved water quality and wildlife habitat.

Recently, representatives from Huron Pines attending the Northeast Michigan Youth Watershed Summit noticed that, as one looked around the room at the schools present and just a few of the projects they had worked on, the impact was huge. Their work is helping to make our real world projects more successful.

At Trout River, students in Rogers City have been doing some stream studies. Nearby, Huron Pines has worked with the community of Rogers City to start thinking about how to handle their stormwater runoff. And, just to the west, the Ocqueoc River Watershed has been part of a large-scale river improvement program. Most recently, this has been the effort at

Silver Creek, a high quality tributary to the Ocqueoc, where 10 road/stream crossing projects have been completed, streambank erosion work has been done, and invasive plants controlled – all in just the last two years. The efforts of students in Rogers City are laying the foundation for more great projects to come.

Over at the Black River in Alcona County, stream inventory work by the students helped identify some of the more major problems impacting the river. One of these was [Sucker Creek Road](#), where it crossed Black River. The long, steep, sandy road approaches created a storm water runoff problem every time there was a major rain. The excess sand would wash down the road and into the river. In addition to covering spawning habitat, the sand contributed to problems in other ways -- making the river shallower, warmer, and causing the wider river to erode downstream. The old culverts at this site were also too small, forcing the water through at such a velocity that fish couldn't move upstream.

Huron Pines took this identified problem and worked closely with the Alcona County Road Commission and agencies like the US Fish and Wildlife Service and US Forest Service to improve the road and replace the culverts with a timber bridge, allowing the river to move freely. In the next couple of years, the next three highest priorities on this river will also be addressed and lead to real water quality improvement and more fish habitat. Students will continue to monitor the health of the river, providing future stewards valuable data and observation of the site.

One of the new schools to GLSI is from the Au Gres area and as they get ready to start a program on the AuGres River, Huron Pines is excited to work with them on projects that make a difference. The Au Gres flows into [Saginaw Bay, which suffers from a number of issues](#). One of these is too much Phosphorous making its way into the bay from runoff, which leads to the excessive algal blooms that show up each summer in the bay. This is the type of problem where



With help from a volunteer, 7th grade students from Rogers City Middle School dip for macroinvertebrate samples in the Trout River.



Far Left: Hillman Elementary students use a dichotomous key to identify which aquatic organisms are living in the Thunder Bay River near their school. Left: Using spoons, Atlanta Middle School students separate and count different macroinvertebrates.

local partners, such as schools, landowners and civic groups, really can make a difference by working together.

Many students are involved with the Thunder Bay River and their studies are important. In the years to come, water quality should improve in this watershed as many of the problem sites, typically road/stream crossings, are fixed by Huron Pines working closely with county road commissions and partners like the US Fish & Wildlife Service and the [National Fish & Wildlife Foundation](#). And, recently, a [dam removal project on Miller Creek](#), a stream that flows into the Thunder Bay, was successfully completed, allowing fish to move from one section of the river to the other and dramatically improving water quality.

Coastal invasive species are one of the major environmental problems in this region and [Huron Pines is coordinating a public-private partnership to eradicate many of the major problem plants such as Phragmites](#). Student efforts through NE MI GLSI have been important to that program – helping to educate others, identify and monitor invasives, and even help with the removal of invasive plants.

People in Northeast Michigan are looking with much optimism and pride at the work being done through the Northeast Michigan hub of the [Great Lakes Stewardship Initiative](#), as well they should. Students can continue to have a positive impact in their home area by continuing to work hard and learn, talking more to others about the innovative projects they are doing, and volunteering on other conservation efforts. With the work they are doing, these are not the leaders of tomorrow – they are leaders of today!



Huron Pines Ecologist, Jennifer Muladore, introduces 6th-grade Alpena students to a patch of Phragmites along Mich-e-kewis Beach in Thunder Bay.

Student-led water studies and stewardship projects are showcased at Northeast Michigan Youth Watershed Summit.

On Tuesday, May 21st, 2013 nearly 200 students from across Northeast Michigan assembled in Alpena, MI to showcase and share their water science studies and stewardship projects to one another through displays and presentations. These students, who had spent the year studying water quality and water-related human impact within their respective watershed, gathered to celebrate the diverse attention that our rich Great Lakes and freshwater resources are receiving through place based education in Northeast Michigan. Each class gave a presentation on the methods and contribution of their individual stewardship project, shedding light on how the issues of water quality extend to all schools and communities across the state.



Atlanta students and teachers gather in the hall following their presentation on water quality monitoring near the headwaters of the Thunder Bay River.

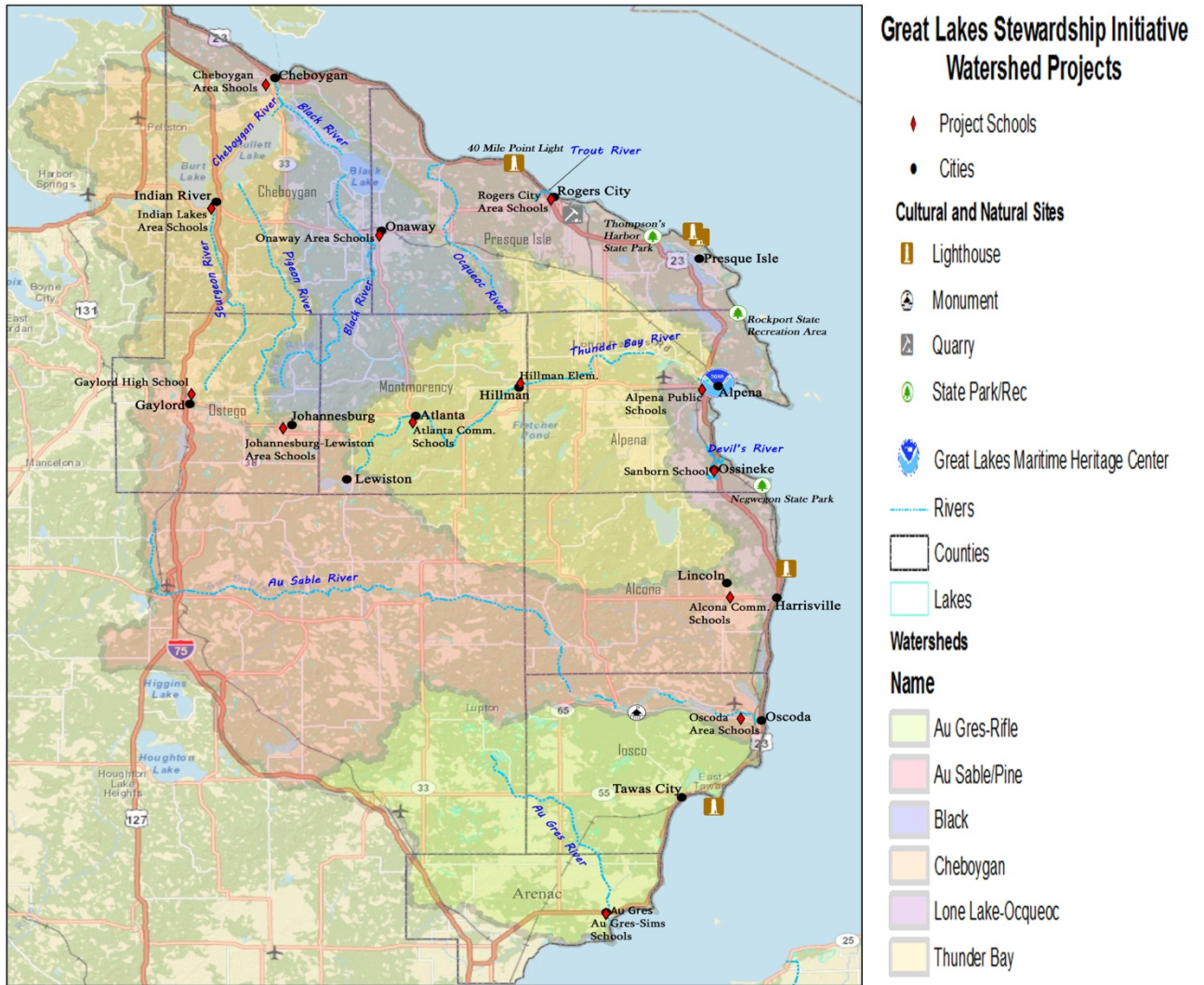


4th graders from Au-Gres Sims present on their plan to use remotely operated vehicles (ROVs) to study their watershed.

The value of this event was providing students a stage to present their work, thereby introducing them to the community as valid partners capable of addressing important environmental stewardship issues. Through their projects, students are fostering a better understanding on the social, economic, and environmental importance of Michigan's water resources, and also realizing how the Great Lakes and people are inextricably interconnected.

During the day, students were the contributing presenters and also the primary audience to the message of water stewardship; but during the school year the students were not doing the work alone. They operated in important partnerships with community organizations such as: the US Fish & Wildlife Service, Michigan Sea Grant, NOAA's Thunder Bay National Marine Sanctuary, [Michigan's Department of Natural Resources](#), Huron Pines, [Michigan 4-H Youth Programs](#) and the NE MI Great Lakes Stewardship Initiative. Also in attendance were local government officials and representatives from the [Alpena Wildlife Sanctuary Board](#) and NEMCOG. Brad Jensen, Executive Director for Huron Pines, gave the keynote address commending the students (4th to 12th grade) for the invaluable work

accomplished within their watersheds, noting the complimentary work of Huron Pines' priority projects.



Funded by the Great Lakes Restoration Initiative through a grant secured by the Northeast Michigan Council of Governments and NOAA's Great Lakes B-WET Program, a total of eleven schools across seven counties attended the summit, all representing the growing network of watershed education efforts connected regionally through the Northeast Michigan Great Lakes Stewardship Initiative.



Joined by their teacher Mr. Matt Barsen, Rogers City Middle School students take the stage in ACC's Granum Theater using video and photos to present data collected from monitoring the Trout River.

Overview of Summit Activities and Presentations

Hosted at [Alpena Community College](#), the summit featured three presentation rooms, each with a moderator who facilitated the student teams through 10-minute presentations. Community partner representatives involved in water quality management were also invited to attend and came to support the presenters. Project presentations were given by students using video, power point, display boards, or by an activity or demonstration. One presentation even included a water “taste-test!” Students who were not presenting became the audience and were able to learn how other students in the region of Northeast Michigan are involved in various watershed projects. Those in the audience were given opportunity to ask questions after each presentation, which challenged the presenters to expound on their thoughts and truly take to heart what the projects had taught them. After two 40-minute sessions, lunch was provided for all attendants. Following lunch, the final student presentations continued for the last session. Presentations included:

- [Adopt-a-Beach](#): Sixth graders monitor five local beaches in Alpena through the volunteer program of [Alliance for the Great Lakes](#). ([Thunder Bay Jr. High](#))
- [Thunder Bay River Watershed Project](#): numerous river monitoring biological, chemical and physical conditions (Sanborn Elementary, Atlanta Middle School, Rogers City Middle School, Bingham Arts Academy)
- [Aquatic Invasive Species: Problems and Solutions for the rusty crayfish invasion](#). (Sanborn Elementary)
- Drinking water: Filtered Tap vs. Plastic Bottled. A taste test showed filtered water tastes better and plastic bottled water is wasteful. (Alcona High School)

- [Oral history collection of Lake Huron commercial fishermen](#): Students use history as a means to create an educational exhibit showcasing and preserving the locally-built fish tug, *Katherine V.* (Alpena High School)
- Watershed Exploration: Fourth graders use engineering skills to build underwater robots further research and study in their watershed. (Au Gres-Sims Elementary)
- Nutrient Discovery: How Healthy is Our River? [Students test and monitor the nutrient levels of the Pine River.](#) (Oscoda Area Schools)
- Water Runoff: The path of surface water is followed and documented by students in Indian River. ([Inland Lakes Schools](#))
- River erosion study: students built and filmed their own river model and shared their findings on how sediment is carried by moving water. (Thunder Bay Jr. High)

Summit Soundbite:

“Some of the problems associated with stream bank erosion are it reduces fish spawning areas, reduces aquatic insect populations, creates safety hazards for humans and it can lead to possible falling in of the river.”

6th grade student, Thunder Bay Jr. High



6th grade students from Thunder Bay Jr. High joined a Huron Pines effort to survey of erosion sites along the Thunder Bay River in Alpena.

Project Highlights by Watershed:

Thunder Bay River Watershed



Alpena High School - Oral History of Lake Huron Fishery

Students in the class Shipwreck Alley: *Shipwrecks, Science, and the Marine Sanctuary*, receive a unique look at the maritime heritage of northeast Michigan while in school. As part of this Earth Science class, students learn firsthand from field professionals about archaeology, ecology and history. These students presented on their collection of oral histories given by local

fisherman and demonstrated a shipwreck site mapping activity.

Sanborn Elementary Fifth Grade

- Aquatic Invasive Species: Rusty Crayfish



These 5th graders speak like experts of major aquatic invasive species in northeast Michigan, confident in themselves and what they have learned through participation the Thunder Bay River Watershed Project. Students presented the [problem of rusty crayfish](#) populations and gave characteristics and methods of control to address the ecological impact of this non-native crayfish.

Watershed Info - Heavily influenced by glaciation, the landscape of the Thunder Bay River Watershed is made up of rolling hills, gentle streams and abundant forests. With over 500 miles of rivers and streams, nearly 90 lakes and expansive wetlands throughout, the region is truly a gem of Northeast Michigan.

The Thunder Bay River Watershed, which covers parts of Presque Isle, Montmorency, Oscoda, Alcona and Alpena counties, provides homes to a vast array of aquatic invertebrates as well as reptiles, birds, mammals and amphibians. Many water bodies within the watershed can be accessed via publicly- and



state-owned land. While recreational opportunities abound, habitat fragmentation caused by a number of dams limits some of the fishing and canoeing possibilities in the central regions of the watershed. (courtesy Huron Pines)

Trout River Watershed (Coastal Lake Huron)



[Rogers City Middle School - Water Quality Monitoring the Trout River](#)

Students presented the data collected by visiting and testing the river's chemical makeup, identifying macro-invertebrates, and physical components of the river such as temperature and turbidity. The trout river is home to a diverse and healthy population of macro invertebrates indicating excellent water quality.

Watershed Info - The Lake Huron Coastal Watershed is a transition zone between terrestrial and lake ecosystems. This zone is characterized by numerous small streams and watersheds that flow directly into Lake Huron, of which the Trout River is one. Although each of these component watersheds is relatively small, these streams provide important spawning habitat for Lake Huron fishes, and the wetland areas provide habitat for waterfowl and other wildlife species.

Coastal features such as wetlands and dunes are extremely fragile and can easily be impacted by land use activities and invasive species, such as Phragmites. These areas require special attention because they provide habitat for unique species, buffer shorelines from erosion and are sensitive to alterations. (courtesy Huron Pines)

Au Gres River Watershed

[Au Gres-Sims Elementary School - Building ROVs to Explore Watershed](#)

Fourth Graders presented a PowerPoint slideshow of their recent experience building underwater Remotely Operated Vehicles (ROVs). Although engineering these ROVs is sometimes difficult, students were excited to use the technology to explore their local rivers and lakes as a part of class work!

Watershed Info - The Au Gres River originates in the forests of eastern Ogemaw County and flows 45 miles in a generally southeasterly direction before reaching the City of Au Gres, where the river drains to



northern Saginaw Bay. As the Au Gres flows into Iosco County and through Arenac County agricultural activities become more prevalent. In total, the Au Gres and East Branch Au Gres watersheds drain an area of 392 square miles.

A portion of the East Branch Au Gres River is designated a Blue Ribbon Trout Stream by the Michigan DNR. The stretch is characterized by excellent insect hatches, wild resident trout stocks, and water quality, making it a great spot to try some fly-casting. (courtesy Huron Pines)

Sturgeon River Watershed

Inland Lakes Area Schools - The Path that Water Takes



grounds, using it as a site to monitor water quality.

Watershed Info - The Sturgeon River is one of the most pristine and high-gradient streams in Lower Michigan. It is one of Michigan's top cold-water streams and a notable blue ribbon trout stream. Flowing through the heart of Pigeon River Country, it is a sought-after destination for the outdoor enthusiast.

The Sturgeon River is influenced by high groundwater inflow due to the presence of permeable soils and large changes in topography. In its headwaters, it is born from a set of groundwater springs and swamps and flows over sand and limestone bedrock. Dotted with lakes, the watershed is mostly forested. This coldwater fishery supports brown trout, steelhead, brook trout, walleye, bluegill and white suckers. The Sturgeon River swiftly surges into Burt Lake, since being redirected from its original course to the Indian River due to the navigational difficulties caused by large sand deposits it left there. (courtesy Huron Pines)

Seventh and Eighth graders used school grounds as the genesis to their project - investigating any surface water near their school and analyzing its direction of flow. They presented this surface water runoff study through video footage taken at school, following the path that the water takes to eventually spill into Burt Lake. Students also showed a video featuring a vernal pond on school

Summit Soundbite:

"Runoff was going downhill toward the Sturgeon River."

"As it was running off some of it would seep into the ground. We actually did soil quality testing and there were more nitrates and phosphates in the soil than are supposed to be which isn't good."

-Student Presenters, ILAS

Pine River/Van Etten Lake Watershed

Oscoda Middle School - Sampling the Pine River

Students presented on water quality sampling in their community through a partnership with the Pine River/Van Etten Lake Coalition. The students sampled multiple times this spring to monitor the health of the water through biological and chemical methods of testing. They used nets and buckets to gather and identify macro-invertebrates and use test nutrient levels to determine water health.



Watershed Info - Although the Pine River-Van Etten Lake Watershed feeds into the Au Sable River, it clearly has unique features and resource

opportunities. Due to differences in soil types, hydrology and agricultural opportunities, the Pine River-Van Etten Lake area warrants its own Management Plan to address its unique resource concerns. The Pine River-Van Etten Lake Watershed drains 187,000 acres in Alcona and Iosco counties. The 372 miles of streams in the Pine River Watershed flow through agricultural, wetland and forested areas before entering Van Etten Lake, a 1,409-acre reservoir impounded by Van Etten Dam.

The Pine River-Van Etten Lake Watershed is a scenic and popular place to hunt, fish, boat and snowmobile. One third of the watershed lies within the Huron National Forest and the watershed is home to the endangered Kirtland's warbler and the threatened bald eagle and common loon. However, the watershed faces environmental challenges. Excess sedimentation, elevated levels of phosphorous in Van Etten Lake and invasive species like zebra mussels and Eurasian watermilfoil are problems Huron Pines and partners are working to solve. (courtesy Huron Pines)

Alcona Black River Watershed



Alcona High School - Rethinking Drinking Water - Quality Monitoring

Involvement in watershed activities is becoming commonplace for students at Alcona High. Agri-science classes and biology classes, along with others, are getting their feet wet through [monitoring the water quality of the Black River](#) and a site on Hubbard Lake.

Student representatives to the Watershed Summit spoke on a different topic: drinking water. Students were surprised at how wasteful and resource-intensive (including petroleum) it is to create plastic bottled water. In response, their class vowed to fill personal reusable bottles through a purchased tap water filter. The final message was clear; filtered tap water tastes better and plastic bottled water is wasteful.

Watershed Info - This small watershed consists of the Black River, which flows north for just over 15 miles from its origin between the small cities of Lincoln and Harrisville to its outlet to Lake Huron in the unincorporated community of Black River. The North Branch of the Black River originates in Black River Swamp and flows through a wetland area south to join the mainstem Black River 1.5 miles from the mouth to Lake Huron.

Tourism, farming, forestry and resource extraction are the main activities in this rural area. The Black River in Alcona County is known for its coaster brook trout and steelhead runs. This is one of the last systems in Lower Michigan still supporting a lake-run brook trout population, making it a conservation priority. (courtesy Huron Pines)

Students respond to "What did you think about the Youth Watershed Summit?"

-I enjoyed listening to all the experiments and what the other schools did to learn about the lakes. I wish more people would ask questions like that.

-I thought it was really great, but some adults asked questions that were confusing.

-More schools should do presentations and there should be more in the theater with auditorium seating - that was cool.

-I thought it was pretty cool. There should be more 7th and 8th grade schools presenting.

-I thought it was perfect, but lunch should have been tacos.

Media

The success of the Watershed Summit received press in four counties (Alpena, Alcona, Iosco and Presque Isle) through a release from Northeast Michigan GLSI that mentioned partners in funding, coordination and execution of the first ever summit. See attached links on the last page of this document for news clippings.

Conclusion:

The 2013 Youth Watershed Summit was a great success. The event provided students and teachers the important opportunity to engage with fellow stewards of the Northern Michigan watersheds and served as a way to reflect on all of the important achievements of the past year. The Youth Watershed Summit not only provided an excellent networking opportunity for teachers, students, and environmental organizations, but is also part of a broader effort to create sustainable Great Lakes stewardship programs and awareness. The majority of the teachers that participated in the 2012-2013 *Our River, Our Future* have signed on for the second year of the program and many of the projects that the students discussed at the Youth Watershed Summit will be taken up by a new batch of students this fall. This growing network of teachers, students, and community partners will be essential to the continued development of watershed-focused education. Engaging schools with the watershed in which they live will prepare the community to tackle tough management issues such as invasive species, habitat restoration, and water quality in the future. In the second year of funding *Our Rivers, Our Future* will seek to build on the successes of the first year of programming and expand its focus to include not only the Thunder Bay Watershed, but also six counties in the Northern Lake Huron watershed. The Youth Watershed Summit will continue to be a focal point of *Our Rivers, Our Future*. In the years to come, students will again be given the opportunity to learn from each other and to further build a network of peers from across the watersheds.

The purpose of *Our River, Our Future* is to not only cultivate the next generation of Great Lakes watershed advocates but also provide students with the tools and knowledge to translate small-scale stewardship projects into a meaningful, long-term stewardship ethic. Through events such as the Youth Watershed Summit students are educating one another on regional watershed issues and ways to address these growing challenges. By engaging students in meaningful explorations of their local watersheds, and empowering them with the tools and confidence to engage their community, *Our River, Our Future* is creating future leaders in the field of environmental conservation.



Cheboygan Middle School students get their feet wet by learning about the importance of water quality and conservation during a trip to the Cheboygan River.

Student-led water studies and stewardship projects shine at Northeast Michigan Youth Watershed Summit

Nearly 200 students from across northeast Michigan convened in Alpena on Tuesday to showcase and share their water science studies and stewardship projects to one another through displays and presentations. These students, who have spent the year studying water quality and water-related human impact within their respective watershed, gathered to celebrate the diverse attention that our rich Great Lakes and freshwater resources are receiving through place-based education in northeast Michigan. Each class gave a presentation on the methods and contribution of their individual stewardship project, shedding light on how the issue of water quality extends to all schools and communities.

Students at Alcona High School created a poster displaying the benefits of using filtered tap water instead of bottled water. The class raised funds for a water filter system which was installed in school and they committed to drinking their tap water instead of purchasing bottled water. Their message was "clean water tastes better" and plastic bottled water is wasteful.

"The value of events like the Youth Watershed Summit," says Daniel Moffat, school liaison with the Northeast Michigan GLSI, "is that these experiences provide real-world learning opportunities for students and introduce them to the community as valid partners who address important environmental stewardship issues." Through their projects, students are fostering a better understanding on the social, economic, and environmental importance of Michigan's water resources, and also realizing how the Great Lakes and people are inextricably interconnected.

Throughout the day, the students were the primary audience and also the key contributors to the message of water stewardship, but during the year they had worked in important community partnerships with organizations such as US Fish & Wildlife Service, Michigan Sea Grant, NOAA's Thunder Bay National Marine Sanctuary, Michigan's Department of Natural Resources, Huron Pines 4-H Youth programs and the Great Lakes Stewardship Initiative.

Funded by the Great Lakes Restoration Initiative through a grant secured by the Northeast Michigan Council of Governments and the Great Lakes region of NOAA Education's B-WET Program, eleven schools across seven counties attended the summit, all representing the growing network of watershed education efforts connected regionally through the Northeast Michigan Great Lakes Stewardship Initiative. See more about the initiative at www.nemglsl.org.

SEVENTH-GRADERS from Rogers City Middle School presented their findings about the Trout River Watershed last week at the Northeast Michigan Youth Watershed Summit in Alpena. From left are Phil Grambau, Sydney Purgiel, Hannah Fleming, Zane Grzesikowski and teacher Mall Barsen with the students presentation material. (Courtesy Photo)

RCMS students present at youth watershed summit

by Angie Asam
Staff Writer

Rogers City Middle School students traveled to Alpena last week to present information on their studies of Trout River. Nearly 200 students from across northeast Michigan gathered at the Northeast Michigan Youth Watershed Summit to showcase and share their water science studies and stewardship projects with one another.

Seventh-graders from Rogers City discussed the differences in macro-invertebrates above and below the Trout River dam and found the quality of the river to be very good.

The sixth-graders from the school also recently released hundreds of classroom-raised salmon in the river in hopes that they will spawn and maintain a healthy fishery in the area.

Students across northeast Michigan having spent the past year studying water quality and water-related human impact within their res-

spective watershed, gathered to celebrate the diverse attention that our rich Great Lakes and freshwater resources are receiving through place-based education in northeast Michigan. Each class gave a presentation on the methods and contribution of their individual stewardship project, shedding light on how the issue of water quality extends to all schools and communities.

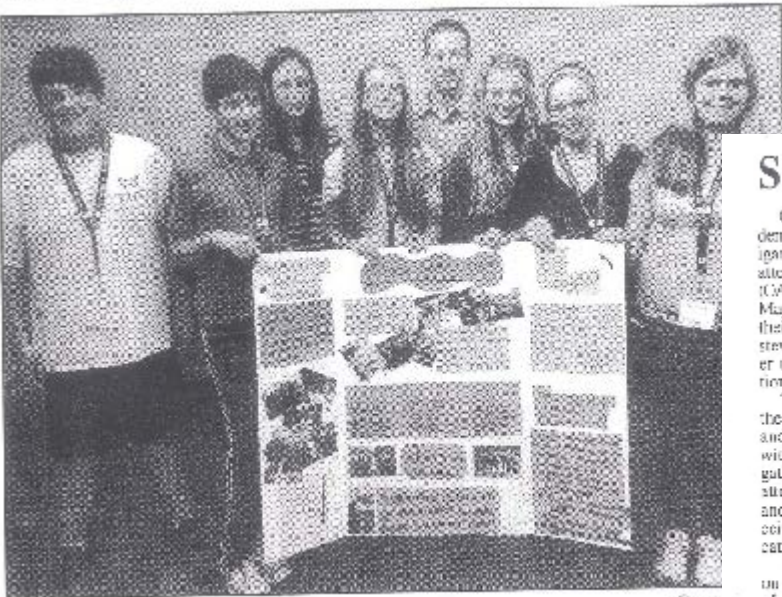
The programs at the various schools are studying watersheds through a partnership with the Great Lakes Stewardship Initiative (GLSI). They also work with organizations such as U.S. Fish and Wildlife Service, Michigan Sea Grant, Thunder Bay National Marine Sanctuary, the Michigan Department of Natural Resources, Huron Pines, 4-H and others.

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provide real-world learning opportunities for students and introduce them to the community as valid partners who address important environmental stewardship issues." Through their projects, students are fostering a better understanding on the social, economic, and environmental importance of Michigan's water resources, and also realizing how the Great Lakes and people are inextricably interconnected.

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LOCAL NEWS



SUMMIT PARTICIPANTS - Seven Oscoda Area Schools' eighth grade students, with teacher Zane Grzesikowski, display their presentation graphic at the youth watershed summit in Alpena.

Students take part in watershed summit

OSCODA — Nearly 200 students from across northeast Michigan, including eighth graders attending Oscoda Area Schools (OAS), convened in Alpena on May 21 to showcase and share their water science studies and stewardship projects to one another through displays and presentations.

The students, who have spent the year studying water quality and water-related human impact within their respective watershed, gathered to celebrate the diverse attention that our rich Great Lakes and freshwater resources are receiving through place-based education in northeast Michigan.

Each class gave a presentation on the methods and contribution of their individual stewardship project, shedding light on how the issue of water quality extends to all schools and communities.

OAS students presented on water quality sampling in their community through partnership with

the Pine River/Van Etten Lake Coalition. The students went out multiple times this spring to help monitor the health of the water at these sites through biological and chemical methods or testing. They identify macro-invertebrates and nutrient levels to determine water health.

"The value of events like the Youth Watershed Summit," says Daniel Moffat, school liaison with the Northeast Michigan GLSI, "is that these experiences provide real-world learning opportunities for students and introduce them to the community as valid partners who address important environmental stewardship issues."

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List of Youth Watershed Summit Partners (Alphabetical Order):

- [Alpena Community College](#)
- [Alpena Wildlife Sanctuary Board – River Center](#)
- [AMA/Iosco Math and Science Center](#)
- Civic Research Services, Inc.
- [Community Foundation for Northeast Michigan](#)
- [Friends of Negwegon State Park](#)
- [Great Lakes Restoration Initiative](#)
- [Huron Pines AmeriCorps](#)
- [Huron Pines](#)
- [NOAA Thunder Bay National Marine Sanctuary](#)
- [Northeast Michigan Council of Governments](#)
- [Northeast Michigan Great Lakes Stewardship Initiative](#)
- [Michigan Sea Grant](#)
- [Michigan State University Extension \(MSUE\)](#)
- [MSUE 4-H Youth Programs](#)
- [US Fish & Wildlife Service](#)

Participating Schools:

- See pages 7 and 8.

Supporting News Media Documents:

-[Oscoda students take part in Summit – The Oscoda Press – May 2013](#)

-[RCMS students present at youth watershed summit – Presque Isle County Advance – Thursday, June 6th, 2013](#)

-[Students present data at Frist Watershed Summit – The Alpena News – May 21, 2013](#)

-[Student-led water studies and stewardship projects shine at Northeast Michigan youth Watershed Summit – The Alcona County Review – May 29, 2013](#)

*Special thanks to parents and community members at large who volunteered at the Summit

For more information on additional B-WET / NE MI GLSI Watershed Projects in Northeast Michigan, visit www.nemiglsi.org