



Saginaw Bay Watershed Initiative Network

2012 ANNUAL REPORT

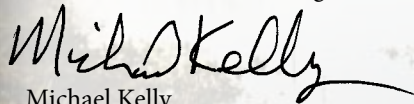
Dear Friends:

At the Saginaw Bay Watershed Initiative Network (WIN), we believe in the power of connecting people, ideas and resources to improve the lives of those who live here. With a special focus on the concept of “sustainability” – that relationship between the economy, our communities, and the environment – WIN builds partnerships between organizations, donors, corporations, and those people that are passionate about creating solutions to some of the challenges we face in the Saginaw Bay Watershed. WIN, as the leading organization promoting sustainability in the region, stands at the nexus of ideas and action.

During 2012, WIN took the opportunity to invest in a broad portfolio of projects across our region. Staying true to our mission of “connecting,” WIN was able to bring more than \$200,000 to a variety of unique ideas that build our watershed’s identity, provide opportunities for public access to natural areas, and support education. Further, we looked at new ways to build energy efficiency, save money, and have a little fun at the same time.

In this annual report, you’ll read in detail about a few of the projects that we supported this year. You’ll learn about the region’s first nature kindergarten, a unique way to conserve water, a great new opportunity for public access and community development, and how we can use natural resources for both education – and energy savings. Other projects that we supported in 2012 are further described on our website at www.saginawbaywin.org.

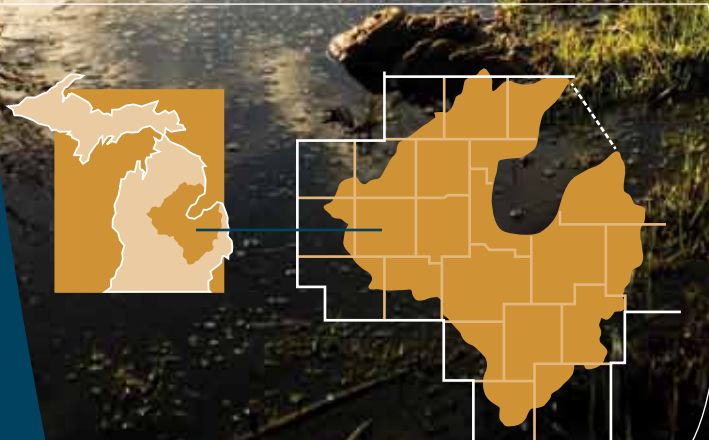
Thanks to the WIN effort and through the support of our funders, supporters, and volunteers, our connections grow stronger. We are proud to report to you on the work that we continue to do in the region, and look forward to your ongoing engagement as we move forward – building a more sustainable Saginaw Bay Watershed.



Michael Kelly
The Conservation Fund

Where Is the Saginaw Bay Watershed?

The Saginaw Bay Watershed region contains rich resources in agriculture, forestry, industry, and recreation. As the state’s largest watershed, it encompasses nearly 8,700 square miles in all or part of 22 counties in central Michigan. Approximately, 15 percent of the state’s waterways drain into the Saginaw Bay.



A Wealth of Water Ways to Success

Here in the Saginaw Bay region, we are so rich in water that we often take it for granted. But the realization that one billion people around the world have to walk an average of 3.72 miles to usable water puts our abundant resource into perspective. At the same time, it emphasizes the need to protect the watershed and all of our amazing natural resources in the Saginaw Bay region.

WIN grants are a way to transform ideas and commitment into viable projects. The projects WIN supports are diverse, yet they all value the need to involve caring individuals, committed experts, and private and governmental organizations.

The projects WIN sponsors often need special attention and a nurturing start before a flood of support becomes available. The truth is that larger sources of funding look at the time and hard work already invested in a project before making decisions. And early funding is viewed as an indication of commitment and project feasibility. WIN is honored to be the first to support a spring of ideas that make a difference.

Our 2012 grants focus on unique community-based efforts that create opportunities for environmental, economic, and social impacts throughout our watershed. WIN is proud to support the innovation and dedication that our partners endow

in their projects, which will ultimately become successful examples of sustainability in the Saginaw Bay Watershed.

The projects – and champions – that received WIN funding in 2012:

- Bluebird Nesting Box with Webcam – Chippewa Nature Center*
- Community Tree Project – Village of Sebewaing*
- Flint River Cleanup – Lapeer County Family Court*
- Hartley Solar Array – Hartley Outdoor Education Center*
- Hopping Through the Wetlands Education Project – Bullock Creek Schools*
- Invasive Plant Extermination Project – The Little Forks Conservancy*
- Michigan Waterfowl Legacy Implementation in Saginaw Bay Region – Ducks Unlimited
- Nature Kindergarten Pilot Program – Bullock Creek Schools
- Rainwater Harvesting System for Health Professions Building Renovation – Delta College Foundation
- Rose City Stormwater Management and Rifle River Access – Huron Pines
- Smith Park Improvement Project – City of Essexville
- Vassar Dam Removal – City of Vassar
- Sensible Farming School Program – Gladwin Conservation District*

**Saginaw Bay WIN Community Action Mini-Grant*

WIN Partners

A committed group of 11 foundations support WIN with financial contributions and technical support. They are:

- Bay Area Community Foundation
- Consumers Energy Foundation
- Cook Family Foundation
- C.S. Mott Foundation
- The Dow Chemical Company Foundation
- Harry A. and Margaret D. Towsley Foundation
- Herbert H. and Grace A. Dow Foundation
- Midland Area Community Foundation
- Rollin M. Gerstacker Foundation
- S.C. Johnson Fund
- Saginaw Community Foundation

WIN Funding Process

WIN follows a unique, interactive process for awarding grant funding to projects and initiatives. Throughout the community-based review process, individuals from many organizations take part by reviewing project applications and offering their expertise on a variety of topics.

WIN awards grant funding twice each year; there are no grant deadlines. If you have a project to submit for funding consideration, contact WIN at (989) 892-9171 for an application.

About the Saginaw Bay Watershed

- Home to more than 130 endangered or threatened species, and 1.4 million people
- Includes more than 175 inland lakes
- Contains about 7,000 miles of rivers and streams
- Path for migrating song birds and waterfowl on the Mississippi Flyway
- Significant agricultural and industrial resources supporting Michigan's economy





A Natural Fit for the Classroom

Nature Kindergarten Pilot Program

If five-year-olds could design the perfect kindergarten classroom, it might look like the parks where they play or the mud puddles just begging to be jumped in. At first, those ideas may seem silly, but in reality, five-year-olds intuitively know an important fact: learning is instinctive when it's a natural part of life.

The Bullock Creek School District, in collaboration with the Chippewa Nature Center (CNC) and with the help of a WIN grant for supplies, brought that educational wisdom to the classroom in 2012 through its Nature Kindergarten Pilot Program. Inspired by the success and popularity of the CNC's preschool, the Nature Kindergarten is a unique curriculum designed to integrate nature – beyond science – into all aspects of the classroom, from reading to math to social studies.

“Our teachers believed in the idea. They wanted the challenge of integrating nature into learning, even though they didn't have an existing model to use as reference,” says Charlie Schwedler, superintendent, Bullock Creek School District. “As a result, they have created an innovative kindergarten curriculum from the ground up that meets district and state standards while infusing the classroom with nature and activity.”



The Dirt on Nature Kindergarten

Kids get excited about being outside and getting dirty, which adds to their engagement and ownership in learning. But Nature Kindergarten is more than taking students outdoors.

Teachers present strategic, project-based lessons involving nature that offer opportunities for hands-on learning, while supporting reading and math growth. By encouraging kids to ask questions, experiment, and share answers, the teachers make lessons more relevant and easier to absorb.

“Our students are taking what they are learning in the classroom to the playground activities all on their own,” says Rachel Hucul, Nature Kindergarten teacher. “They play migrating games, pretend to be animals in the pond, create tracks in the snow, and incorporate more natural materials into their games. We can see that their learning expands with every discovery they make.”

Beyond integrating nature into regular lesson plans, the Nature Kindergarten difference includes...

- Outdoor space specially enhanced for use as an extension of the classroom



One of the inspirations for the Nature Kindergarten Pilot Program was the book, *The Last Child in the Woods*, by Richard Louv. In the book, he discusses a challenge faced by today's children: Nature-Deficit Disorder.

“Reducing that deficit – healing the broken bond between our young and nature – is in our self-interest, not only because aesthetics or justice demands it, but also because our mental, physical, and spiritual health depends upon it. The health of the earth is at stake as well.”



- Regular visits from a Chippewa Nature Center naturalist to support classroom lessons
- Shared reading and read-alouds that focus on nature topics
- Hands-on work stations that offer additional work with nature and science concepts
- Daily time outside to see and practice science concepts
- Appropriate outdoor clothing used every day, provided by the school if needed

“At Nature Kindergarten, learning happens in a more fluid way. It’s real, hands-on discovery that comes with combining lessons, play, and being outside,” says Rachel Larimore, director of education, Chippewa Nature Center. “We’ve found that children involved with nature-based learning often have improved problem-solving skills, are more aware of what’s happening around them, and become better at transitioning during the day.”

Report Card

As a unique and successful educational program, Nature Kindergarten can support the community by...

- Attracting families interested in this type of learning to the school district and area



- Providing added health, social, and emotional benefits that exposure to nature brings children
- Becoming a resource for excellence for other grades, schools, and districts in the area and beyond
- Creating adults who can become knowledgeable stewards of our natural resources

“Our biggest indicator of success is how deeply Nature Kindergarten resonates with the students, their parents, and our teachers. Everyone loves the program. We definitely want to extend it past the pilot,” says Schwedler. “And we are proud to provide experiences in nature that give students memorable and useful lessons appropriate for their development.”

“WIN looks for projects that focus on the future for long-term environmental solutions. And what better ‘future’ to invest in than kindergartners who naturally love both the outdoors and learning? Together we are encouraging the next generation of environmental stewards through a rich and full educational program.”

— Charlie Schwedler,
Bullock Creek School District

LOCAL CHAMPION:
Bullock Creek School District

PARTNERS:
Chippewa Nature Center,
Dow Corning Foundation

WIN GRANT AWARD:
\$5,000



A New Harvest at Delta College

Rainwater Harvesting System

Think back to what college was like in the “old days” ... computers had 16KB of RAM and were stuck in a computer lab (good luck finding lab time before midnight!). Telephones were connected to the wall and only made phone calls. And rainwater drained into the ground or a wastewater treatment plant, and was transported off campus.

Times have certainly changed. And Delta College is keeping up with the explosion of technology and connectivity that permeates its students’ lives.

In 2013, a \$20 million renovation to its Health Professions Building will support new instructional methodologies and technologies by updating the facility that was built in the late 1970s. A unique part of the renovation, funded by WIN, will revolutionize how rainwater around the building is handled.

“The new rainwater harvesting system is an exciting and distinctive part of the renovation. We are not aware of any other systems like this in our area,” says Pam Clark, executive director, Delta College Foundation. “This system – along with the new hydroponic green wall – supports Delta College’s long-term initiative to focus our culture and facilities on sustainability.”

Harvesting Reason

Rainwater harvesting systems for commercial buildings are relatively new to Michigan because of our ample water supply. But the idea to capture



and use rainwater has been around forever – think rain barrels or cisterns – and has grown into an important business in arid and drought-susceptible areas of the country and world.

“The rainwater harvesting system will help us hit the next target of our resource conservation effort: reduced water usage. We estimate we will save 169,000 gallons of water each year,” says Larry Ramseyer, director, Delta College Facilities Management. “The system will benefit our facility by conserving water, saving money, protecting our watershed, and even feeding our hydroponic green wall.”

“We are confident we’ll achieve LEED (Leadership in Energy and Environmental Design) Silver certification for the Health Professions Building renovation. But we’re still striving for the higher LEED Gold certification. WIN’s funding and support for our rainwater harvesting system will help us as we reach for that goal.”

— Larry Ramseyer, Delta College



Growing Up

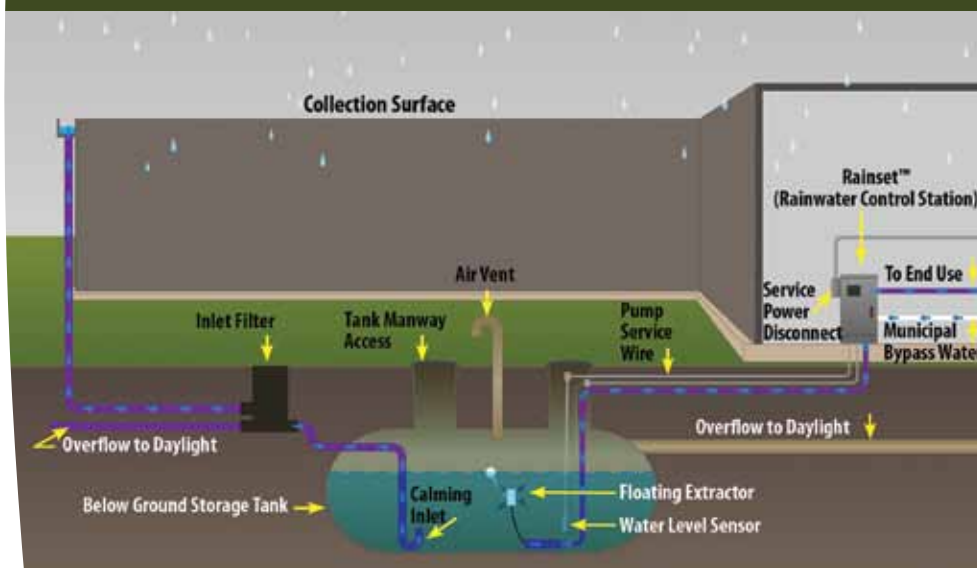
The idea of using captured and filtered rainwater to flush toilets is a clever and resourceful idea. But not a particularly picturesque one. However, the three-story hydroponic green wall installed inside the renovated Health Professions Building will be both resourceful and beautiful.

Using moist media, standard indoor plants, and harvested rainwater, the hydroponic green wall will add an aesthetically pleasing architectural feature with a powerful bonus. The living plants and their roots act as a biofilter, removing common indoor air contaminants and improving air quality. The design offers a sustainable, energy-efficient way to control and remove impurities from the air.

“One of the opportunities of being a college is interacting daily with our savvy students,” says Clark. “Installing the rainwater harvesting system and hydroponic green wall as part of our renovation clearly shows our students that we not only talk about making a difference, we are also committed to improving our – and their – world.”

DELTA COLLEGE'S RAINWATER HARVESTING SYSTEM will employ an effective approach once it is installed:

1. Rooftop drains collect rainwater, subsurface foundation drains capture groundwater, and air-conditioner condensate is piped into the system.
2. The underground storage cistern, or storage tank, holds up to 15,000 gallons of water.
3. Swirl filters clean solids, dirt, and particulate out of water pumped from the cistern.
4. Well pumps deliver filtered water through a separate, dedicated piping system to toilets and a hydroponic green wall.



LOCAL CHAMPION:

Delta College Foundation

PARTNERS:

Delta College Facilities Management, State of Michigan, MacMillan Associates Inc. (mechanical, electrical and structural engineers), SmithGroupJJR (site/civil engineers), Wigen Tincknell Meyer & Associates (architects), Spence Brothers (construction)

WIN GRANT AWARD:

\$40,000

Sun Powers Outdoor Education

Hartley Solar Array

The power behind the Hartley Outdoor Education Center's solar array project includes:

- **BRAIN POWER** – Saginaw Valley State University seniors Tyler Meitz, Michael Sprinkles, and Matthew Johnson offered their knowledge, design, and management skills as part of their senior project
- **EQUIPMENT POWER** – Hemlock Semiconductor Group donated the 16-panel solar array it used to demonstrate the raw material solar products from its Hemlock, Mich., site. It will also donate a solar inverter
- **TRACKING POWER** – Nexteer Automotive will donate the SunSteer™ solar tracking actuator, the first product in its alternative energy portfolio
- **INSTALLATION POWER** – Area companies are donating time and materials for the solar array installation:
 - Northern Concrete Pipe Inc. – precast concrete foundation
 - C&R Electric LLC – electrical materials and labor
 - Eric Construction Inc. – installation of foundation and solar array pole
- **ADDITIONAL POWER** – SVSU helped fund the project through a Herbert H. and Grace A. Dow Student Research & Creativity Institute grant

Energy production has a long history in Michigan, from the high-volume lumber years to the busy coal mines of yesterday. Students visiting the Saginaw Intermediate School District (ISD) Hartley Outdoor Education Center have learned about our energy-rich past. With a newly installed 16-panel solar array, students will look to the future as they learn about this powerful and renewable energy source. A new Community Action Mini-Grant Program started in 2012 by WIN, also supported the project (see related story).

Interest in adding solar power to the Hartley Outdoor Education Center has been active for many years. In 2012, several opportunities dovetailed, allowing the Center to finally meet its goal of integrating alternative energy into its curriculum.

The completed project will introduce a hands-on alternative energy learning component. While the Center's staff is excitedly developing new lessons that



employ the solar array, their focus on alternative energy will help students make intellectual and experiential connections between the sun, its energy, and how humans and plants effectively use that energy.

“The solar array will be a working ‘classroom’ since it will be interconnected to our main building. This is an extensive project for us,” says Jim Blaschka, director, Hartley Outdoor Education Center. “We calculate that 10 percent of our electrical usage will be met by the power generated onsite. That’s a significant savings.”



LOCAL CHAMPION:

Hartley Outdoor Education Center

PARTNERS:

Hemlock Semiconductor Group, Nexteer Automotive, Herbert H. and Grace A. Dow Student Research & Creativity Institute Grant/SVSU, Northern Concrete Pipe Inc., C&R Electric LLC, Eric Construction Inc.

WIN GRANT AWARD:

\$1,000



Bringing the Project to Light

As their senior project, three Saginaw Valley State University (SVSU) students majoring in electrical engineering proposed the idea of installing and managing a solar array at the Hartley Outdoor Education Center. Their internship at Hemlock Semiconductor Group helped the project's progress too. It gave them a natural source for the solar equipment: the company's working, but soon-to-be-disconnected, solar array.

"My team and I are very excited to have taken part in such a great project," says Tyler Mietz, senior electrical engineering student, SVSU. "Not only will it be used to educate local students about alternative energy, it also introduces some of the materials and products that are manufactured here in the Saginaw Bay region."

Adding fuel to the project, several area companies, such as Nexteer Automotive, offered to donate needed equipment, materials and labor amounting to \$30,128. Once the initial effort of installing and connecting the solar array is completed, any oversight and mechanical maintenance needed will be minimal.

"As the outdoor education component of the Saginaw ISD located on Beaver Creek, we feel a special connection to the community and the Saginaw Bay Watershed. The generous donations from our neighbor companies and organizations demonstrate the strength of our connection," says Blaschka. "We are excited to offer educational experiences that honor our environmental past and present while preparing students for their futures."

"We felt our solar array project was a great fit for WIN and its vision. The project benefits both our educational and energy goals with a focus on sustainability. And the possibilities it offers are endless."

— Jim Blaschka,
Hartley Outdoor Education Center



COMMUNITY ACTION MINI-GRANT PROGRAM

New to the WIN grant program in 2012, the Community Action Mini-Grant Program offered funding opportunities to organizations making improvements in their neighborhoods, communities, and watersheds. The chosen projects were determined to have economic, environmental, and community impacts within the framework of "sustainability." WIN awarded grants of up to \$1,000 to projects that showed creativity, addressed an important and confirmed need, and supported WIN's vision. The mini-grants also required organizations to match funding dollar-for-dollar with cash or donated material.

The 2012 recipients of WIN's Community Action Mini-Grants are:

- **BULLOCK CREEK SCHOOL DISTRICT** – Hopping Through the Wetlands Education Project
- **CHIPPEWA NATURE CENTER** – Bluebird Nesting Box with Webcam
- **GLADWIN CONSERVATION DISTRICT** – Sensible Farming School Program
- **HARTLEY OUTDOOR EDUCATION CENTER** – Hartley Solar Array
- **LAPEER COUNTY FAMILY COURT** – Flint River Cleanup
- **THE LITTLE FORKS CONSERVANCY** – Invasive Plant Extermination Project
- **VILLAGE OF SEBEWAING** – Sebewaing Community Tree Project



Re-Create River Recreation

Smith Park Improvement Project

One look at the Saginaw River or Bay and you may hear the invitation: Come enjoy our beauty and bounty; be refreshed and renewed by the recreation unique to our waters.

It's usually not a question of "how" or "when" to enjoy the River and Bay, because there are so many choices for recreation. The question for many people is simply "where." And that's what the City of Essexville, with the help of a WIN grant, is answering with expansion and improvements to Smith Park.

"Smith Park is the last public park on the Saginaw River's east side adjacent to the Saginaw Bay," says Daniel J. Hansford, city manager and public works director, City of Essexville. "This location offers an easy ingress to the Saginaw Bay. And with this first-ever renovation of Smith Park, we will greatly improve access to the River and the Bay for everyone."

What's New?

Smith Park features about 800 feet of river frontage with a double boat launch. With the additional space gained from the decommissioning of the former wastewater treatment plant, the park will expand to occupy nearly four acres of land. This gives visitors to the park more room for fun, fishing, boating, and other water sports.

The Smith Park renovation will increase access to the river, improving the approach to the riverfront and river with the following Americans with Disabilities Act (ADA)-compliant enhancements:

- Reconstructed seawall
- Fishing platform extending into the river
- Dock with a new boat launch and ramp
- Pavilion with permanent bathrooms
- Interpretative signage
- Sidewalks
- Lighting
- Benches





LOCAL CHAMPION:

City of Essexville

PARTNERS:

Great Lakes Fisheries Trust, Bay Area Community Foundation, Essexville Downtown Development Authority

WIN GRANT AWARD:

\$40,000



“The renovations will give community residents, our neighbors in Hampton Township and Bay City, and visitors to the area a larger, easily accessible park area that’s safe, well-lit, and close,” says Hansford.

A Powerful Launch

The exceptional setting of the Saginaw River made a focus on environmental issues key to the Smith Park improvements. The design is “green,” intended to provide permanent protection for the shoreline from further erosion and sedimentation intrusion into the Saginaw River.

In addition to being a unique environmental asset, Smith Park is an economic resource for Essexville. The popular park will provide an even greater boost to local businesses as its

increased accessibility to the River attracts more visitors to its fishing pier, pavilion, and dock.

“As previous grant recipients have discovered, WIN’s support serves as a catalyst for other supporters. WIN opened the door to serious funding for the Smith Park renovation,” says Hansford. “Even our own Downtown Development Association pledged money to the Park Improvement Fund because of WIN’s generosity. We are thankful for WIN’s pledge of support that helped launch this significant project.”

“WIN uses the resources at its disposal to make solid, lasting improvements that benefit the greatest number of people possible. WIN’s generosity to the Smith Park Improvement Project will ensure that many Essexville citizens, neighbors, and visitors can enjoy the benefits of Smith Park, the Saginaw River, and the Saginaw Bay.”

— Dan Hansford, City of Essexville



WIN’S GUIDING PRINCIPLES

- Provide a pleasant and healthy environment
- Conserve historic, cultural, and natural resources
- Integrate economic prosperity, ecology, and aesthetics
- Use land and infrastructure effectively
- Continually evaluate and refine shared vision and goals

OUR VISION

As stewards of the Saginaw Bay Watershed, we value our shared, unique resources, and together we will balance economic, environmental, and social priorities to enhance the quality of life for this and future generations.





Contact Us

For more information about WIN,
visit www.saginawbaywin.org or contact:

Saginaw Bay WIN

P.O. Box 734

Bay City, MI 48707

(989) 892-9171

Fax: (989) 892-9172

E-mail: info@saginawbaywin.org

The Saginaw Bay Watershed Initiative Network is facilitated through a partnership of The Dow Chemical Company Foundation, The Conservation Fund, and local and regional organizations dedicated to promoting the concepts of sustainability in the Saginaw Bay region.



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