

Part 3 of a series celebrating 50 years of history, growth and achievement

The previous newsletter article recounted HRWC's first 25 years from 1965-1990. This issue reviews highlights of HRWC's most recent quarter century from 1990 to 2015. During this time period, HRWC's financial and staff resources increased significantly, as did its program activities and successes.

Stream Monitoring

Volunteers were instrumental in establishing HRWC, and volunteers have continued to be the lifeblood of the organization. In 1992, the Adopt-A-Stream program began to recruit volunteers to monitor the quality of the Huron River. The first Adopt river study event saw 11 volunteers travel to Island Park in Ann Arbor for training and then to 6 sites for monitoring. At the first Stonefly Day in January 1993, just one volunteer showed up. Since those early days, 2001 Adopt-A-Stream Event. Volunteers are the backbone of HRWC's water quality studies, and MDEQ readily uses the data collected thanks to careful quality control measures. credit: HRWC



the program's ranks have swelled to over 400 volunteers who measure 75 stream and river sites throughout the watershed. These individuals assess habitat, aquatic invertebrates, water quality, flow, and channel shape, making the Huron the best-studied river in Michigan. The Adopt-A-Stream program is now the premier citizenmonitoring network in the state, and the DEQ has contracted with HRWC to provide development assistance to creek and lake monitoring groups throughout Michigan.

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Woody Debris · Friend or foe?

All ecosystems consist of many parts that interact to produce a complex web of dynamic relationships. For example, in a forest ecosystem, the trees, fungi, insects, mammals, and birds all interact with each other and the soil, water, and sunlight to cycle energy and nutrients through the system. In a stream ecosystem, the major players include dissolved materials in the water, algae, microbes, macroinvertebrates, and fish. Many people do not realize that the surrounding terrestrial system is also a major player in stream ecosystems. A stream can never stand by itself, but relies on the plants and land around it for food, filtration and habitat resources.

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Woody debris provides a complex habitat system; providing shade, cover, and food for stream inhabitants. credit: G. Battersby

INSIDE: UPCOMING EVENTS AND WORKSHOPS DIA's Inside|Out Art on the Huron Huron River Appreciation Day | National Water Trails Forum | Preparing for Climate Change



DIA Inside Out on the Huron River

15 masterpieces on exhibit along the Water Trail, now through October

Over the last five years, the Detroit Institute of Arts Inside|Out project has enjoyed rave reviews. Every summer since 2010, the DIA infiltrates Southeast Michigan parks and main streets by installing popup exhibitions of artwork from the museum's collection. These high-quality reproductions inspire communities to reimagine their public spaces as a grand, open-air gallery where art is placed in surprising locations that are accessible to everyone.

The Unexpected

Imagine walking to your favorite local café to grab a coffee before work and stumbling upon Vincent van Gogh's Self-Portrait outside the shop. Suddenly, a space that you've visited time and time again has changed, and you take a moment to enjoy the image.

These random acts of art have made such an impression on Southeast Michigan residents that every year new communities request to participate in Inside|Out. Because of its success, the John S. and James L. Knight Foundation has enthusiastically funded the project for the past four years and has launched Inside|Out nationally in eight other cities.

"An awesome way to bring the beauty of art to all communities. A nice connection between DIA & surrounding communities."

Through Inside|Out, community leaders highlight and activate their public spaces while connecting to the local art and culture scene. Public art is a fantastic placemaking tool that engages local residents in the spaces where they feel most comfortable while enhancing their quality of life.

HRWC approached the DIA for a new kind of regional Inside|Out exhibition for the Huron River Water Trail (see article on page 11). While Inside|Out connects communities to

The Fisherman's Wedding installed along the Huron



the DIA, the Huron River Water Trail connects communities in Oakland, Livingston, Washtenaw, and Wayne counties with each other and the river. Five Trail Towns—Milford, Dexter, Ann Arbor, Ypsilanti, and Flat Rock-are part of one large Inside|Out exhibition using the Huron River as a "main street." Fifteen pieces have been placed along the Huron River Water Trail in these communities for the pleasure of people enjoying the river's many recreational amenities.

Art Along the Huron River

So what do art and the Huron River have in common? Since the beginning of time, artists have looked to capture their environment through art. Wander through the museum's galleries and you will find hundreds of scenes of waterways in their various roles—as economic generators, transportation corridors, and recreational destinations. Cultural exchange between different nations has always followed aquatic trade routes.

View of Le Crotoy from Upstream by Georges Seurat, scheduled for installation in Dexter, is a landscape scene that Seurat painted after moving to the small French village of Le Crotoy, located where the Somme River meets the English Channel. The Somme River has played an important

role in France's military and economic history, and today Le Crotoy is a popular travel destination. In View of Le Crotoy, Seurat captures Le Crotoy's sandy beaches at the moment of low tide using bright primary colors to bring attention to the river's beauty and tranquility.

"I was surprised by it... didn't know about it... did a U-turn to check it out. Awesome."

Finding Art in Your Community

Fifteen Inside|Out reproductions from the DIA collection have been installed along the Huron River Water Trail through October, 2015. Follow the river and find all of the pieces by using an Inside|Out Art Finder map, available at www.huronriverwatertrail. org or www.dia.org. Check the DIA Inside|Out and Huron River Water Trail Facebook pages for tours and art walks in each community. After you've enjoyed the pieces along the Huron River, be sure to visit the DIA to see the originals along with the over 60,000 treasures on display! General admission is always free for residents of Wayne, Oakland, and Macomb counties.

> DIA Community Relations Specialist

HRWC's Second 25 Years continued from cover

Pollution Reduction

In the late 1990s Phase II of the EPA's stormwater management program affected approximately 40 communities in the watershed. HRWC worked (and continues to work) with these communities to help them follow the regulations, including the development of watershed management plans targeted at stormwater controls.

In 1995 HRWC implemented the State's first pollution reduction strategy to reduce phosphorus in Ford and Belleville lakes. Since then, HRWC has implemented five additional pollution reduction strategies for phosphorus, sediments/hydrology, and bacteria. These initiatives to reduce pollution in the middle and upper sections of the Huron produced numerous ordinances to protect natural features like streams and wetlands; and green infrastructure projects to protect natural areas and control stormwater runoff.

As a result, phosphorus levels in Ford Lake have dropped substantially, as have the size and duration of algal blooms. Since 1995, there has been a decrease of 6.3 tons of phosphorus entering Ford Lake each year, due to better industry controls, improvements to waste water treatment plants, and stormwater runoff controls.

Policy and Advocacy

HRWC has played an important role in the development and passage of statewide legislation aimed at protecting water resources. After working with local governments to pass local phosphorus ordinances from 2000-2010 (six communities passed ordinances), HRWC worked with the State to enact a statewide phosphorus ban in 2012.

HRWC has continued to advocate for the strengthening of policies and enforcement of wetlands, stormwater, and natural features laws. In 2000, HRWC developed a model wetland ordinance for local governments. Combined with an educational campaign on the importance of local wetland protection, three more local



communities adopted the ordinance, making a total of 16 local wetlands ordinances in the watershed.

Since the early 1990s HRWC staff have reviewed permit applications for surface water discharges in the Huron basin. Changes to the permits and even outright denial were sometimes the outcome of HRWC comments on applications. The denial of additional wastewater treatment plants have benefitted from HRWC's expertise and involvement.

In 2009 HRWC focused on the implications of a changing climate on the watershed. Through targeted residential education on saving water and saving energy, more citizens are aware of the carbon footprint of water and of how much energy is used in treating, transporting, heating, and re-treating water. Additional work with sectors affected by climate change — such as natural lands managers, and drinking water, stormwater, wastewater and dam operators — has equipped participants with the information they need to make good decisions about adapting to climate change impacts.

River and Stream Restoration

In 1995 HRWC responded to a MDNR Huron River Report calling for strategic dam removal. The Huron River is one of the most dammed rivers in the State. Dam removal can dramatically improve flow and habitat and reduce soil erosion and sedimentation. In 2008, after nine years of working with the Village of Dexter, HRWC saw the removal of the Mill Pond Dam, opening up the 200 stream miles to free-flowing habitat (see page 13 for details).

In 2011 HRWC launched RiverUp!, which has sparked a river renaissance, with clean-up of contaminated properties along the waterfront, a National Water Trail designation, a

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HRWC's Second 25 Years continued from page 3

waterproof map book for paddlers, signage along the Water Trail, 2 dozen parks improvements, improved portages and paddling launches, a fish habitat improvement project, and a resurgence of businesses and activities along the river.

Land Use

HRWC works with communities to protect their natural resources as well as the ground and surface waters that supply municipal drinking water. HRWC has become a recognized and respected source of technical information and coordination among local officials throughout the watershed and the State. HRWC's computer modeling, award-winning "Community Guide to Wellhead Protection" and "How Much Development is Too Much" guidebooks and trainings have helped hundreds of communities in the State



Ads like this one aimed to reduce stormwater runoff pollution. credit: HRWC protect their water, natural resources, and drinking water.

The Bioreserve project, launched in 2000 in response to the conversion of natural areas and farmland to development, provides ecological assessments of the watershed's last remaining natural areas and has prioritized high quality lands for protection. At the same time, HRWC worked to pass local government millages to protect natural areas and farmland in Washtenaw County and to develop Strategic Conservation Priorities for each of the five land conservancies in the watershed. Thanks to HRWC and its partners, over 9,000 acres of natural area and farmland now enjoy protection in the watershed.

Technical Expertise

HRWC has produced a significant number of scientific reports that individuals, agencies, and governments use to guide their decision-making. The studies covered a broad range of topics including coliform bacteria monitoring, fisheries improvement, septic system influences on lakes, groundwater vulnerability, benthic macroinvertebrate communities. influences of various land uses on water quality, rapid wetland assessments, and existing and lost native ecosystems. HRWC's watershed management planning efforts have brought together landowners, builders, elected officials, interest groups, and scientists from 56 different communities to develop and implement community-based roadmaps to guide future protection and restoration efforts.

Educating and Engaging the Public

From the beginning, HRWC has sought to inform the public about problems and opportunities presented in the watershed. In 2000, HRWC began implementing an awardwinning mass media campaign aimed at changing behaviors to keep our water safe and clean. The campaign's



Creek Fest, 2002, with volunteers demonstrating use of a stormwater runoff model. credit: HRWC

advertisements, direct mail, and calendar are recognizable throughout the watershed and have been proven to be effective at changing individual behaviors to protect the watershed. Workshops helped make the materials and techniques available for use by agencies nation-wide.

In addition, HRWC developed a course for citizens, businesses, and planners on how to effectively engage themselves in the land use planning process to protect water quality. HRWC's course "Working with Your Planning Commission" received statewide press with the lead story in the Michigan Planning Association's journal Michigan Planner. The eight-session course provided an introduction to the local planning process, land use impacts on water quality, the site preview process, accessing data and technical resources, and public speaking.

Organizational Growth

As HRWC's programs and activities grew, so too did the organization itself. Beginning in 1965 with 16 member governments, HRWC now has 41 member governments. The first annual budget of about \$17,000 is now \$1.3 million; and while HRWC began with funding strictly from member governments, it now leverages those membership dues to create program funding at a 20:1 ratio.

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Woody Debris continued from cover

Trees falling into streams from the banks are an important piece of stream ecology. Tree branches and trunks (generally referred to as "woody debris") can persist in a stream for years, changing water flow patterns and causing erosion. HRWC often receives complaints about "unruly" woody debris causing any number of concerns. Yet woody debris is a major and essential part of a healthy stream and river ecosystem. Recommendations for managing woody debris can vary widely.With that in mind, this article explores some of the concepts of woody debris ecosystem management.

Leave it in!

Woody debris causes erosion which, despite its negative connotations, is not always a bad thing. Stream systems are built by erosion in the first place, created by water carving and transporting sediments, like sand and gravel, to form a streambed. Even high quality streams are constantly shifting, eroding banks and streambeds in areas with faster moving water while dropping sediment in areas with slower moving water. Woody debris plays a role in facilitating erosion in a stream by constricting water flow in the channel and creating areas of higher velocities that scour the streambed and undercut the banks.

Depending on its position in the stream, woody debris can also slow water down and create deep pools and backwater shallows.A diversity of water speed and depth supports a diversity of life as different types of creatures require different types of environments. Woody

debris is also an important food source. Fish and aquatic insects do not directly benefit from eating wood, but wood is colonized by microbes which are the primary source of food for many aquatic insects and crustaceans. This is often referred to as "peanut butter and crackers." Insects eat pieces of wood and leaves (the cracker) in order to get the real nutritious bacteria and fungi (the peanut butter). Of course, fish rely on a plentiful insect supply to fill their stomachs.



Ethan Cramer, Bill Phillips, and Chris Galicki removing a paddling hazard in Mill Creek Not pictured: Dave Early credit: HRWC

HRWC is actively working to put woody debris back into the Huron River. For the past two years, HRWC has been working with environmental engineers to figure out the best way to install woody debris into the Huron River along Ypsilanti's city parks. The Huron River in Ypsilanti greatly lacks woody debris, habitat, and flow variation. Few places exist for living

continued on next page

HRWC's Second 25 Years continued from previous page



In 2007, Liz Elling swam the length of the Huron to raise awareness for fresh water resources. HRWC's annual Baseline Lake Swim continues to honor Liz's acheivement. credit: J.Wolf

25 Years of Great Events

HRWC events have blossomed in the last 25 years, building a community of volunteers, stewards, members, donors, scientists, and stakeholders committed to protecting and restoring the Huron River watershed.

Here are some highlights:

Creek Festivals at Kensington MetroPark; Tour De Wetlands; Library Exhibit on Gardner Williams photos and field books; Dinner on the River; Liz Swims; Art on the River; Suds on the River; River Days; and RiverFest.

Summary

The Huron River is considered to be the cleanest urban river in Michigan. Much of the credit for this status goes to HRWC and the people who foresaw the need for its protection. Even though it has no enforcement powers, HRWC has accomplished many goals through the use of technical data, factual information and citizen stewardship to influence decisions made by various local agencies, bring about change on the ground, and create a vibrant and healthy river.

—Laura Rubin

Woody Debris continued from previous page

creatures to get out of the current and find rest. As a result, fish expend too much energy swimming and the average fish size is much smaller than would be expected after accounting for fish age. In adding woody debris, HRWC will be providing breaks in the water current where fish can rest. hide from predators, and find food. Breaks are designed to have minimal impact on recreational activities. This work is expected to be completed in October.

Take it Out!

HRWC is also removing woody debris. Woody debris is predominantly good for a stream, but there are times when it needs to be removed. Most of the reasons for woody debris removal are related to human use or need. Excessive instream erosion, sometimes caused by woody debris, can threaten human infrastructure such as roads and bridges. Log jams can cause flooding in localized areas that harm personal property or put humans in danger. Also, log jams can infringe on paddling and fishing excursions. It is possible to pull a kayak over an occasional log, but doing so every thirty feet isn't

most people's idea of a nice paddle. Log jams can become large enough that portaging around them can be onerous for recreational paddlers. The Friends of the Rouge, who initially taught HRWC staff and volunteers about woody debris management, has reported log jams the length of football fields.

Log jams typically begin when a tree falls into the river, sometimes fully traversing a creek. This log then traps other logs and debris, creating a woven mess of branches, logs, and trash. Log jam removal teams assess each potential removal by evaluating if any of the material needs to be removed, and if so, how to do it so as to leave as much woody debris as possible while simultaneously keeping the team safe. Typically most debris can be removed by hand with occasional use of a hand saw or chainsaw. The ultimate aim is to open just enough of the waterway for passage while leaving as much woody debris as possible.





Woody debris can slow water down and create pools, or cause fast water and stream-bed scour. Either way, it changes water flow patterns in a stream and creates

partners and volunteers to make sure most or all woody debris is left in place in these creeks. However, there is a need for woody debris management in other places. Volunteers are working in Mill Creek, which is a fabulous fishing and kayaking stream, as well as Portage Creek, which was historically a portion of the water route from Lake Erie to Lake Michigan. HRWC also helps manage log jams in the main stem of the Huron.

-Paul Steen and Jason Frenzel

We are excited to continue our woody debris maintenance programs. If you would like to help with these projects or know of locations that could use the addition or removal of woody debris please let us know! psteen@hrwc.org or jfrenzel@hrwc.org

Finding a **Healthy Balance HRWC** wants

both nature and people to enjoy the Huron and its tributaries, and that means removing woody debris when the jams are in locations where human use and natural systems need to be balanced. Many creeks aren't large enough for paddling, don't have historic recreational use, or have sensitive species. HRWC works with

Preparing for a Safer Future

How emergency managers can help communities adapt to climate change

On August 2nd, 2014 the American Red Cross in southeast Michigan was asked to supply water to residents unable to drink tap water due to a toxic outbreak of microcystin in Lake Erie – the result of heavy rains, warmer water temperatures and high levels of phosphorus. They spent the next eight days distributing water to vulnerable populations in Monroe and the surrounding areas that receive their drinking water from Toledo's contaminated drinking water supply.

Then, on August 11th, between 4 $\frac{1}{2}$ and 5 inches of water fell on metropolitan Detroit, flooding countless homes, businesses and many critical roadways. The flooding was so severe that the State of Michigan had to shut down initial response to the disaster until conditions were safer a full day later. Flooding kept relief volunteers from offices and service buildings. One thousand cars were abandoned on highways, further blocking passage for relief workers. In all, the Red Cross deployed 120 case workers to distribute clean up kits and received 700 requests for direct assistance to help replace furnaces, water heaters and other vital infrastructure. An estimated 14.000 homes were impacted. In the weeks following, six additional smaller flood events occurred that required some support from first responders and relief workers.

Scenarios like these are expected to become more common as global climate change continues to affect the weather. Climate change impacts should be incorporated into how emergency managers plan for and

| Risk | By Mid-Century | By End of Century | Summary | | |
|--|-------------------|----------------------|--|--|--|
| Convective Weather (Severe Winds, Lightning, Tornadoes, Hail) | ? | ? | While extreme precipitation has increased dramatically in the region, specific severe weather types, such as tornadoes and hail, have remained relatively stable over time. | | |
| Severe Winter Weather Hazards Ice/Sleet Storms and Snow Storms) | ? | ٠ | Warmer, shorter winters will reduce the period of the year in which winter impacts are likely to happen, but some areas may see more ice, sleet, freezing rain, and wet snow with slightly warmer winter temperatures. | | |
| Extreme Temperatures | + | ++ | The number of extremely hot days, over 95°F, 100°F will likely increase, though not as fast as in areas farther south. Overnight lows have warmed faster than daytime highs, which may lessen opportunities for relief during heat waves. | | |
| Flood Hazards: Dam Failures | • | ** | Stronger and more extreme precipitation events coupled with aging dam infrastructure will increase the probability of dam failure, if appropriate measures are not taken. | | |
| Flood Hazards | + | *** | Stronger and more extreme precipitation events coupled will be more likely to overwhelm stormwater infrastructure without appropriate adaptation efforts. | | |
| Fire Hazards: Wildfires | ? | + | Summer drought and the number of consecutive dry days may increase in the future, despite more precipitation annually, increasing the risk of wildfires. | | |
| Drought | ? | + | Summer drought and the number of consecutive dry days may increase in the future, despite more precipitation annually. | | |
| Infestation | + | + | With shorter winters and longer growing seasons, the climate may become more suitable to invasive species and pests currently found elsewhere. | | |

Natural Hazards and Climate Change Table produced by Great Lakes Integrated Science and Assessments as part of HRWC's Climate Resilient Communities Project

respond to natural hazards like flooding, drought, fire and severe storms and prioritize what actions they take to lessen the potential impact before an event occurs. For example, rainfall trends are changing to yield bigger and more frequent storms, increasing flooding. This new paradigm may require new evacuation paths or relocation of relief shelters.

Climate projections for Michigan illustrate that preparation based on historic knowledge may not be sufficient for the future. HRWC is facilitating discussions between climate scientists and emergency managers to explore how to protect people and property from more severe and frequent hazardous weather events. Tools like the one shown above are being developed during the collaboration to support climate informed decision making designed to create more climate resilient communities.

-Rebecca Esselman

\$20,000 and counting. That's how much we've raised through Books by Chance with your support!

Proceeds from the internet sale of old and unwanted books, CDs and DVDs helps HRWC. Please donate! We like the slightly esoteric, academic, scholarly and especially university presses. To put your "treasures" to work for HRWC bring your donation to the HRWC office, 9am-5pm weekdays. We will handle the rest. QUESTIONS: Rebecca Foster (734) 769-5123 x 610 or rfoster@hrwc.org. Founded in 1965, the Huron River Watershed Council (HRWC) protects and restores the river for healthy, vibrant communities.

HRWC coordinates programs and volunteer efforts that include pollution prevention, hands-on river monitoring, wetland and floodplain protection, public outreach and education, and natural resources planning.

Individuals, local businesses and more than 40 communities support HRWC's work through voluntary membership.



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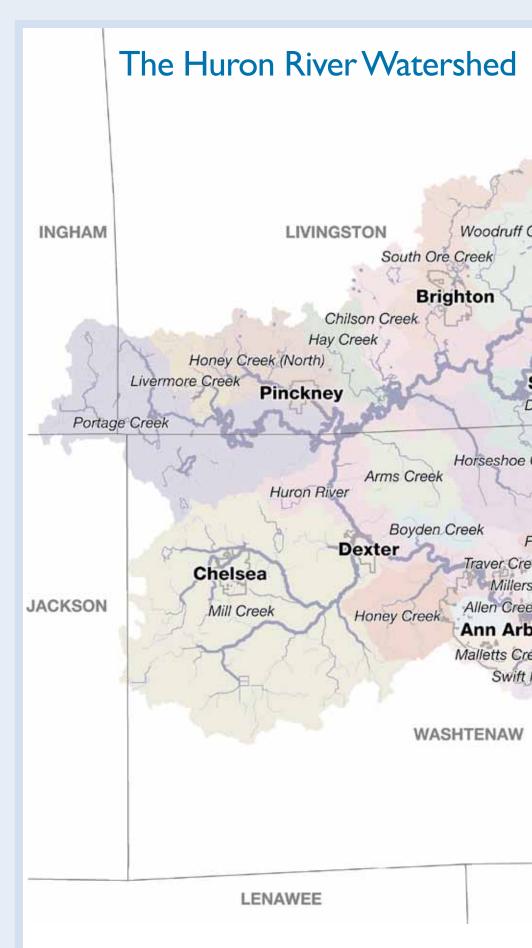


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Huron River Report © 2015





Milford OAKLAND Creek Huron River-North Norton Creek Wixom avis Creek

Upper Huron

Front row: Rebecca Foster, Rebecca Esselman, Jennifer,



Pettibone Creek

Creek leming Creek ek

Creek k

or **Ypsilanti** ek Ford Lake Rún

Belleville Lake Belleville Woods Creek

WAYNE

Huron River

Silver Creek

Flat Rock

Lake Erie

MONROE

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of events

HRWC Events and Workshops

SEPTEMBER • OCTOBER • NOVEMBER • 2015

River Roundup

Saturday, October 3, 9 am - 3:30 pm or 10:30 am - 5 pm, start at NEW Center

Join a small team with your friends and family for a unique activity in the River Roundup. Collect a sample of the bugs and other creatures (benthic macroinvertebrates) that live in our streams. Like canaries in a coal mine, these creatures tell us the health of the river.

Details and registration (required): www.hrwc.org/roundup

ID Day

Sunday, October 11, noon or 2 pm start

Discover what kinds of bugs were found at the River Roundup. Separate them into look-alike groups and then an expert will identify them with you. You will record the data and compare the results to last year. Details and registration: www.hrwc.org/id-day

Ypsilanti Fall River Day

Sunday, October 11, 11am - 3pm, Riverside Park (north end), Ypsilanti

Educational talks (including "History On The Huron" by local historian James Mann), family-friendly activities and exhibits, canoe trips, fly fishing lessons, and more. Hosted by the Ypsilanti Parks & Recreation Commission and featuring HRWC and the Huron River Water Trail, Schultz Outfitters, Leslie Science & Nature Center, City of Ann Arbor Canoe Liveries, Washtenaw County Parks & Recreation Commission and others. View the DIA Inside Out works of art at Riverside, Frog Island and Peninsular parks.

Canoe trip participants will be transported by shuttle to the Dixboro Bridge for put in and paddle back to Riverside Park (approximately 5 miles). Volunteers will assist with portages around the Superior and Peninsular dams. Trips are first come first served, on-site registration only, cost TBD. Information: www.ypsiparks.org

Board Meeting

Thursday, October 22, 5:30 pm, NEW Center Details and registration: lrubin@hrwc.org

Michigan Aquatic Restoration Conference

October 21 – 23, Tustin, Michigan Details and registration: michiganstreams.org

Huron River Water Trail DIA Inside Out Exhibition

August through October, Milford, Dexter, Ann Arbor, Ypsilanti and Flat Rock

Tour high-quality reproductions of works of art from the DIA's collection. See the article on page 2 of this issue. Information: www.huronriverwatertrail.org



HRWC had a record breaking number of interns and summer help this year. Pictured above, from left to right, top row: Chris Svinicki, Kim Kellman, Angel Squalls, Callie Chappell, Greg Ewing, Alex Sitner; bottom row: Gianna Petito, Kate Chapel, Angela Miracle, and Eliana Ginis. Not pictured: Tony Fastiggi, Austin Jackson, Jessica Resnick, Sean Talamonti, Sam Wallace, and Nani Wolf. credit: HRWC



Building a Community of Practice

HRWC Hosts Inaugural National Water Trails Forum

Nearly 100 water trail leaders from around the country gathered at the Michigan League in Ann Arbor from June 24-26 for the Inaugural National Water Trails Forum, hosted locally by HRWC.The 2 ¹/₂ day forum provided an opportunity to bring the National Water Trails community together, offer learning on best practices for managers and leaders, and build the water trails network. HRWC showcased the Huron River Water Trail, the newest National Water Trail, with a guided paddle at Ann Arbor's Argo livery and catered picnic dinner on the river for attendees and local sponsors. Attendees were impressed by Ann Arbor and the Huron River Water Trail.

> "It's impressive what the Huron River Water Trail has become in such a short time."

The Blue Ecomomy

John Austin, Director of the Michigan Economic Center, opened the Forum on the right note with his presentation about the Blue Economy and how water stewardship, enjoyment, and innovation create jobs and economic opportunity. His remarks resonated with the attendees who leverage water recreation assets for local economic development. Water Trails represented included the Willamette, Hudson, Rock, Mississippi, Potomac, Waccamaw, Bayou Teche, and Kansas Rivers, as well as the Florida Circumnavigation Saltwater Paddling Trail, and Captain John Smith National Historic Trail, among others.

Highlighting Local Rivers

Southeast Michigan water trails partners showcased local trails with field visits to the Island Loop National Water Trail at Port Huron, Belle Isle, and Detroit's riverfront. The group saw demonstrations about adaptive paddling launches, equipment, and programming.

Everyone was excited about how to better incorporate universal access elements to their trails. The great vibe, learning, and new connections made at the Forum energized attendees to continue building community, sharing expertise, and solving problems together.

In addition to contributions from HRWC and the Huron River Water Trail partners, the Forum was made possible by the National Park



Some of the nearly 100 river and water trail managers who attended the inaugural Forum in Ann Arbor credit: D. Banta, National Park Service



Water Trail managers learn about adaptive paddling equipment during a visit to Port Huron. credit: HRWC

Service, River Management Society, Michigan Office of the Great Lakes, Michigan Sea Grant, Riverside Kayak Connection, and the Southeast Michigan Water Trail Network.

"What a beautiful river!"

National, State and Local Partners

As HRWC looks ahead to sustained funding and maintenance of the Huron River Water Trail, the National Water Trails System will be an important component to creating a winning strategy. At the state level, Michigan's 30-Year Water Strategy, released by the Michigan Office of the Great Lakes, highlights water trails as a priority. For more information:

> Huron River Water Trail interactive planning resource: huronriverwatertrail.org

> National Water Trails System: nps.gov/watertrails

> Michigan Blue Economy: michiganblueeconomy.org

> > -Elizabeth Riggs

Huron River Appreciation Day

Tweet or post your photos and updates about the Huron! #huronriver50

Thank you for helping us celebrate HRWC's 50 years of river protection work. On July 12, over 500 people joined us to learn about and enjoy the river.

We are continuing to collect your photos and stories about the river. Connect with us on Facebook, Twitter and Instagram (details on page 8). Use #huronriver50 to mark your posts.



Special thanks to Comerica Bank for sponsoring Huron River Appreciation Day.

> Clockwise from top left: enjoying an evening paddle at Proud Lake with Heavner Canoe Rental; booth at Huron River Day; raft dancing by AuxWerks Dance; swimming with HRWC Executive Director Laura Rubin through the river channel at Baseline Lake; learning to fly fish with Schultz Outfitters in Ypsilanti; touring the Lower Huron on a paddle with

Simpler Times Downtown General Store and Riverside Kayak Connection; boating in Gallup Pond; Skip's Huron River Canoe Livery transportation paddle in Dexter; and using the interactive stream table earn how water flows and changes - with help from the Natural History Museum. credits: HRWC

Huron River Watershed Council



Success! HRWC continues to make waves with a slew of recent projects

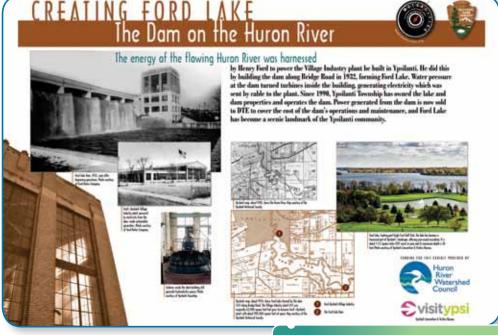
After completing summer vacations, HRWC staff have had some time to reflect on a few significant recent successes. Each of the below projects or achievements has helped to bring the Huron one step closer to HRWC's vision of a healthy, vibrant river ecosystem.

Green Infrastructure Planning in Lyndon and Webster Townships

Lyndon Township utilizes their Green Infrastructure map (produced under the HRWC Green Infrastructure Planning for Local Governments project) by showcasing it in the township's meeting room, giving the public opportunities to view it. Recently, when a gravel mining company applied for a special use permit to dig a sand mine on heavily wooded property in the township, Planning Commissioners took a 3-hour hike on the property. Afterwards they went back to examine the green infrastructure map."It was extremely helpful for us to understand the location of the proposed sand mine in relation to the green infrastructure map," said Sally Rutzky, Lyndon Township Planning Commissioner. The green infrastructure map helped the township defend their master plan to keep the land natural. Eventually, the MDNR stepped in and is now negotiating to purchase the property and add it to the Waterloo recreation area.

Recovery of Mill Creek Biology

Mill Creek is the largest tributary to the Huron River, draining 143 square miles of land, 68 of which are farmland. Agricultural impacts have certainly taken their toll on Mill Creek, with some of Mill Creek's tributaries managed as straightened ditches. The creek also suffers from high levels of phosphorus and E. coli, likely originating from fertilizers and



animals, respectively. However, great things are happening in Mill Creek, including the removal of Mill Pond Dam in Dexter, stream stabilization projects, landowner education, and a renewed interest in bringing residents to the waterfront.

As a part of regular monitoring, HRWC volunteers visit nine sites on Mill Creek (the main branch and several tributaries). Four of these sites are showing significant improvements in the macroinvertebrate populations, indicating improving water quality and habitat. These four sites are Shield Road (near the mouth), Manchester Road and Klinger Road (both in the headwaters), and Fletcher Road (on the north branch). The Shield Road site in particular is doing quite well with several highly diverse samples taken since the removal of the downstream dam. Samples in the early 2000s were particularly poor with only two or three pollution-sensitive families found, and now six or seven are regularly found.

Automotive Heritage Trailside exhibit sign credit: HRWC

RiverUp! Automotive Heritage Trail District

Upon completing the Master Plan and Vision Map for the Ypsilanti stretch of the river, HRWC and partners have been ticking off action items to make the plan and vision a reality. Wayside exhibits, at Ann Arbor Brewing Company on Forest, Ford Lake Dam and Powerhouse, and the Rawsonville Ford Plant, highlight the auto and labor influence of this area. An audio tour of all wayside exhibits is in the works, as well. Improving the canoe and kayak portage around Ford Lake Dam is underway now that all local, state, and federal permits are in place (a two-year process!). When completed later this year, the portage will be on river left, connect with North Hydro Park, and provide a gently sloped marked access point in guieter waters downstream of the dam gates.

> —Edited by Ric Lawson Contributors include Kris Olsson, Paul Steen, and Elizabeth Riggs

HRWC would like to extend our gratitude to everyone who helped protect the Huron River by giving of their time, talent, in-kind contributions, and financial resources.

Thank you to our generous supporters. May through July, 2015

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