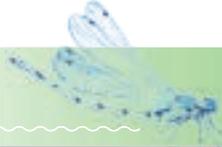




Huron River Report

Published quarterly by the Huron River Watershed Council

SUMMER 2016



feature story

Aquatic Hitchhikers

Invasive species change and destroy ecosystems

Rock snot. Round gobies. Mudsnails. These don't sound like very pleasant things to have in one's living room, and for the Huron River watershed's native wildlife and plants, these and other aquatic invasive species are mucking up native fish and other creatures' habitats. In addition to the better-known invaders, like Asian carp (which has not yet entered the Huron River watershed but may in the future), zebra mussels, and phragmites, a host of other creatures and plants are hijacking Michigan's lakes, streams, and wetlands from their native inhabitants.

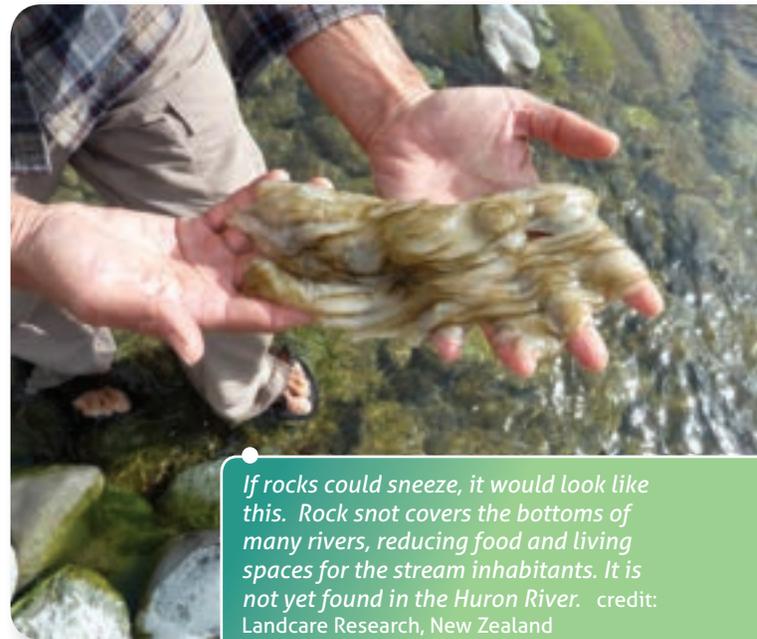
An ongoing threat

Invasive species are often nicknamed "hitchhikers" because the primary way they spread is by hitching a ride on humans and their gear. Once in a new location, these animal, plant

and fungi species reproduce very rapidly and damage ecosystems, even to the extent of endangering human economies or health. Invasive species can outcompete native ones for food and habitat, leading to excessive plant growth, loss of ecosystem diversity and function, and, in some cases, causing algal blooms and fish die-offs.

Unfortunately, aquatic invasive species are common in the Huron River

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If rocks could sneeze, it would look like this. Rock snot covers the bottoms of many rivers, reducing food and living spaces for the stream inhabitants. It is not yet found in the Huron River. credit: Landcare Research, New Zealand

Shared Resource • Shared Responsibility

How several communities are using water wisely

Efficient use and conservation of water has multiple benefits even in places like Michigan where fresh water is plentiful. It prolongs the life of water infrastructure such as pipes and treatment plants. It allows water utilities to meet demand for longer periods, putting off expensive capital improvements. It saves utilities money in energy costs and treatment

costs. It reduces carbon emissions associated with water production and wastewater treatment. It keeps water in aquifers and river channels during dry times when demand for limited water is high.

Efficiency and conservation strategies can look very different from place to place. Here in the

Huron River watershed there are examples of a wide variety of measures that provide situation-specific solutions to unique problems.

The City of Dexter

City drinking water comes from

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● **INSIDE: UPCOMING EVENTS AND WORKSHOPS** *Stewardship awards | Tour your river
Local communities reduce non-point source pollution and adapt to new MDEQ regulations*





Laura's Stream of Consciousness

As I write, spring is bursting upon us. At HRWC, we are gearing up for our monitoring season, planning events and recreational outings, and finalizing construction projects. Staff is running with dozens of projects knowing that a few get stalled, a few move ahead swiftly, and new projects get added. The excitement level in the office is high as many projects get their legs, and success is just around the corner.

We are still moving the idea of a restaurant on the river along. In Ann Arbor, we are waiting for decisions on the site of the future transit center, as well as the final clean-up and transition of the DTE Broadway property. In Ypsilanti, we are working with city planners and private businesses on a river revitalization and redevelopment concept. The energy and optimism about future scenarios for river re-activation and use is so inspiring.

Upriver, in the Wixom area and Norton Creek, we have digested large amounts of data collected last year by staff and volunteers. A careful analysis will help us understand the problems of this small creek. The Michigan DEQ designated Norton Creek as impaired due to low dissolved oxygen (DO) from excess sediments. In 2009, they issued a pollution budget that requires an 84% reduction in sediment loading! Yet, as we look closely at the data,

this creek is unlike most of the other Huron creeks. As the creekshed has developed, the creek channel has straightened and become overly wide. This results in slackened flow, low DO, and homogenous substrate. This creek requires some very different and unique practices, such as narrowing the channel, connecting it to the ample available floodplain, and encouraging greater sinuosity and habitat diversity. Diversifying the creek structure will improve sediment transport and create riffles to re-oxygenate the water.

Our efforts to ban coal tar pavement sealants are picking up steam and interest. With Van Buren Township's ban last December, we now have six additional municipalities pursuing a local ban. Representative Kristy Pagan introduced a bill banning the toxin in the Michigan House. In addition, a strong public education campaign is underway throughout the 'shed, with HRWC partnering with local municipalities and utilities. Applicators and distributors have expressed interest in changing to cleaner products, resulting in better alternatives becoming available throughout the watershed. A statewide ban is looking more promising!

The Michigan DEQ finally issued stronger draft clean-up criteria for the pollutant 1,4 dioxane to address the plume under the City of Ann Arbor. While the new standard is still

not as stringent as the federal standard, the improvement will result in additional clean-up strategies that are yet to be determined. After so little progress on the plume, this is a step in the right direction.

Finally, with the announcements of the Huron River as a National Water Trail and the Governor's Iron Belle Trail in the last year, growth of water and land trails are really taking off in our watershed. Existing canoe livery owners tell us that they've seen a clear uptick in business. Portage improvements, new launches, and new landings are being constructed throughout the river corridor. River-related businesses are opening up from Milford to Flat Rock, including two new liveries serving Downriver. Even one of the toughest stretches of land trails along Huron River Drive near Dexter is making progress. Washtenaw County's Border-to-Border trail got a boost this spring with strong partners, some initial funding, and public support. These projects will improve the ecologic and economic well-being of the watershed, giving you more reason to get out and enjoy the watershed.

— Laura Rubin
HRWC Executive Director



HRWC volunteers sample Norton Creek in 2015. credit: HRWC



watershed. Along the banks of the Huron River, widespread occurrences of purple loosestrife and flowering rush occur. Phragmites, a very tall perennial reed, is also pervasive, especially closer to the mouth of the river near Lake Erie. River and lake bottoms in the watershed are dominated by zebra mussels. Thankfully, zebra mussels have not made it into many of the Huron's tributaries to date.

Round gobies are an invasive fish that eat small native species and fish eggs. Gobies also aggressively

take bait from anglers trying to catch a prize walleye. They are known to be living in Belleville Lake and downstream. Gobies might have spread upstream from there due to human introduction, but more surveying needs to be done. Rusty crayfish and Asiatic clams are also plentiful in the Huron River and tributaries. While these two invasive species are not considered as troublesome as the others listed above, they are still common in the Huron and outcompete native species for food and habitat.

Eurasian water milfoil, starry stonewort, and curly leaf pondweed are all found in the Huron River watershed's lakes. These three are among the most common invasive lake plants in Michigan.



Hydrilla forms thick mats that leave lakes unusable by animals or humans.
credit: Louisiana Sea Grant

You Can HELP!

One of the most important ways to prevent the spread of aquatic invasive species is to report sightings.

The Midwest Invasive Species Information Network (MISIN) is devoted to training people how to identify and report invasive species. Learn more at www.misin.msu.edu/report/. A map displays what invasive species others have found. There is also an MISIN app available that locates a device's position and allows people to report invasive species with just a few taps on their phone. It is a great tool for people who are often out in the woods or on a river.

If you see or suspect European water clover, rock snot, the New Zealand mudsnail, or hydrilla this summer, please take a picture, get a specific location, and report the sighting to MISIN and HRWC.

Additionally, inland lake residents can help monitor conditions and keep out invasive plants out by joining the Exotic Aquatic Plant Watch (<https://micorps.net/lake-monitoring/>). Please keep a special eye out for Eurasian water milfoil, starry stonewort, and curly leaf pondweed.

A new player: water clover

Starting in 2014, reports surfaced of a new invasive plant species in Barton Pond on the Huron River, the European water clover. In 2015, this plant had become common in Barton and Argo ponds. It is not yet known if it has spread beyond these areas. Anyone on the Huron River this summer should keep an eye out for water clover; it is an aquatic plant that looks like a four-leaf clover. It is an emergent plant, which means the clover is going to be sticking out of the water slightly or, possibly, floating on the surface. Little is known about this plant at this time, but it is considered potentially invasive, meaning it may be able to spread rapidly.



European water clover is now found in the Huron River.
credit: MiCorps; Angela De Palma-Dow, MDNR -Wildlife Division

Looming threats

Two more invasive species to be on the look-out for this summer are rock snot and the New Zealand mudsnail. Neither have been found yet in the Huron River watershed, but the Michigan DNR first reported them in Michigan in 2015. Rock snot, or "didymo", is an algae that forms mucus-like mats on the bottom of streams, choking out other life. Western states have banned felt-soled waders because they spread this algae easily, which is something for consideration in this area. The New Zealand mudsnail is a tiny snail at about one eighth of an inch, but it can reproduce rapidly and outcompete native snails and other macroinvertebrates. Since they are so small, they are easily overlooked on waders and fishing gear, and they are able to live up to 50 days on a damp surface and tolerate a huge range of water conditions.

One more species to keep an eye out for is Hydrilla. Hydrilla is an aquatic plant that has not yet been found in Michigan, but is found in all neighboring states, so it is only a matter of time before it pops up here.

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New Zealand mudsnails can reach densities greater than 28,000 individuals per square foot of suitable habitat, crowding out most other macroinvertebrates and eating all available food. credit: USGS

Hydrilla has stems that can extend 25 feet, and the plant forms dense mats that seem thick enough to walk on. Of all the invasive species that threaten Michigan and the Huron River watershed, this is the scariest one because of its ability to take over entire ecosystems. It can grow in almost any freshwater system, in low or high nutrient conditions, and

in cold or warm water. Hydrilla has five leaflets in a whorl pattern around a central stem, unlike native Elodea which have three.

New tools to combat invasives

In cooperation with the Michigan DEQ, HRWC is developing an invasive species prevention training program for those who work on or study lakes and streams, such as volunteer monitoring groups, lake associations, wetland and ecological consultants, aquatic herbicide applicators, researchers, etc. The program will include a web site with training modules. It teaches participants to:

- inspect and remove mud, plants, or animals from boats, waders, meters, nets, and other equipment before leaving the water body;
- drain water from boats and other equipment, and let it dry at least 5 days before using it in a different lake or stream;
- when drying isn't an option, disinfect (procedures are covered in training) all

equipment before moving on to another location;

- use high pressure washes, hot water washes, or chemical disinfection following visits to sites known to be infected by invasive species of concern; and
- throw unused live bait away – never dump it on land or into any water body.

These steps are not just a good idea for the environment; in fact, Michigan laws prohibit placing a boat, trailer, or other equipment into lakes or streams with plant material attached. Possessing or transporting many specific invasive fish and plants (including fragments and seeds) is also illegal.

Everyone needs to help in these efforts. Tell friends, family, and coworkers about how to stop invasive species and don't forget to report these plants and animals to MISIN and HRWC when you find them!

— Paul Steen and Kris Olsson

104 miles of river, plus Trail Towns to welcome you...
Milford, Dexter, Ann Arbor, Ypsilanti, Flat Rock

Huron River WATER TRAIL

Plan your trip at huronriverwatertrail.org.

several wells, and the wastewater treatment plant was built to handle the demands of Dexter residents and businesses alike. When rain is scarce, water demand increases, mostly for lawn maintenance. In the dry summer of 2012, the city needed to pump from deeper in their wells, adding costs and greater wear and tear on pumps. To counteract the demand, the city decided to activate an existing ordinance requiring alternate day water restrictions. High compliance among residents lifted the strain on the supply wells. The ordinance remains in effect, keeping demand on the water system lower and the city prepared for the next drought.

Northern United Brewing Company (NUBC)

When NUBC saw their projections for growth, they knew they were going to be producing a lot more wastewater, requiring a level of treatment the City of Dexter's treatment plant was not prepared to handle. The city and NUBC worked together to find a solution. With help from the city, the Michigan Department of Agriculture and Rural Development (MDARD), Michigan Economic Development Corporation MEDC, and Ann Arbor SPARK, NUBC applied for a Strategic Growth Initiative Grant to pilot an innovative onsite wastewater treatment system. The Cambrian Innovation's EcoVolt Mini not only pretreats wastewater before sending it to the municipal plant, but it also captures energy from the process to use at the brewery. Piloting this system has state and national implications. Food manufacturing requires a lot of water, and these companies are often located in smaller towns and cities. Innovations such as this can help small towns keep these kinds of businesses without taxing the capacity of their water systems.

Lyon and Commerce Townships

These townships took part in the Greater Lakes project conducted by the Great Lakes Commission (www.glc.org). An analysis of their entire water systems, including drinking water, stormwater, and wastewater, was completed to find places where efficiencies or conservation could be maximized.

Coined "Integrated Water Management," this approach takes water out of silos, identifies where a system is strained, and determines where that strain can be lessened for the least cost. In Lyon Township, outdoor water use stresses the water system during peak demand hours (generally morning and late afternoon/early evening). The stress costs the community more money to meet demand. The township reaches out to residents to teach them about the implications of high peak demand and how to reduce water use during those times. Distributing the demand more evenly throughout the day means the township can provide water to residents while reducing the amount of infrastructure improvements needed and related costs. Commerce Township is implementing a few green infrastructure projects to manage stormwater, keeping some



Northern United Brewing Company, located in Dexter, is installing an innovative onsite wastewater treatment system allowing the company to grow without burdening the municipal wastewater treatment plant.

credit: Irene Tomoko Sugiura

volume of water from rainfall out of the stormwater system and infiltrating into the ground instead.

City of Ann Arbor

In 2004, Ann Arbor shifted to a new water rate structure after completing a study on the cost of providing water and wastewater treatment. Residents of the city see rates increase as their consumption increases and pay a lower price per unit when they use less water. This incentivizes water conservation and more equitably recovers costs. The city has seen considerable reductions in water consumption, from 7 million units (cfs) in 2006 to 5.8 million units in 2015.

Working together

These communities are finding custom solutions to challenges with water production, use and treatment—solutions that share the responsibility for water supply and management among municipalities, businesses, and residents.

— Rebecca Esselman

Books by Chance raises funds for HRWC

Turn your unwanted books, CDs and DVDs into cash for HRWC.

Please donate! **Contact** Rebecca Foster
(734) 769-5123 x 610 or rfoster@hrwc.org



RiverUp!

RiverUp! is a campaign to restore and revitalize the Huron River. It is the Huron's signature place-making initiative that seeks to transform the river corridor into a premier destination in Michigan and the Great Lakes. HRWC leads this public-private partnership and executes projects that improve river health, recreation access, and water-based investments in local economies. www.riveruphuron.org



Tackling Ford Lake's tough portage

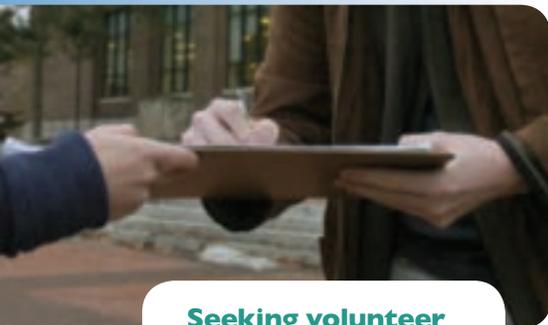
River recreation users will be greeted this year by an improved portage of Ford Lake Dam in Ypsilanti Township. In the past, kayakers and canoeists faced a difficult and dangerous landing, steep climb, unmarked road crossing over guardrails, and an undeveloped launch below the dam. The new portage, located north (river left) of the dam, features an easy take-out with way-finding signage, a marked pedestrian road crossing that connects with North Hydro Park's trail system, and a future extension of the Border-to-Border Trail. The path leads to the new launch in quieter waters far from the influence of dam releases. Financial support from the Austin Memorial Foundation and the Iva and Walt Weber Foundation made the new portage possible.

While in North Hydro Park, seek out the new Automotive Heritage interpretative sign near the picnic shelter that ties the Huron River to the fortunes of Henry Ford and to the community around Ford Lake. The vision for a new portage came from the Automotive Heritage Trail District Master Plan (2014), developed by HRWC and RiverUp! with additional support from MotorCities National Heritage Area, Ypsilanti Convention & Visitors Bureau, and UAW Local 1976 Eastern Michigan University. The Automotive Heritage Trail District is a joint effort of stakeholders with an interest in the cultural aspects of automotive history, public health and outdoor activity, and in enhancing economic vitality and recreational tourism.

Visit the interactive Community Remarks Map at huronriverwatertrail.org for Huron River Water Trail updates and experiences from other users.



*Improved portage at Ford Lake makes paddling easier and safer; riverside signage features local history.
credit: HRWC*



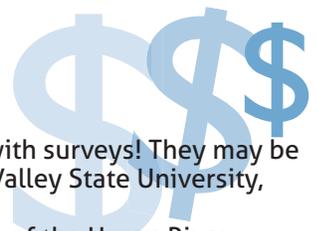
Measuring the worth of a river

This summer, be kind to people holding clipboards with surveys! They may be part of a new study conducted by HRWC and Grand Valley State University, with support from the Austin Memorial Foundation.

The nine-month study seeks to quantify the value of the Huron River corridor based on a suite of uses as well as the services provided by the natural environment. The end product will help HRWC and RiverUp! partners understand the return on investment of river corridor projects like water trail infrastructure, fishery restoration, and Trail Town development.

In 2013, Washtenaw County completed a simple analysis that showed a healthy, if conservative, contribution of \$33 million in annual revenue generated by the river recreation economy in that county alone. HRWC and its partners knew immediately that a more robust impact analysis covering all 104 river miles and five counties through which the river flows was needed to establish a baseline for the entire water trail. Better information on visitor spending and use on the water trail and in the five Trail Towns will allow for more targeted investment, prioritization of projects, and will serve as a tool for engaging new partners.

The study will be beneficial for Huron River partners as well as for similar placemaking efforts and water trails around the country. A 2015 survey of impact studies for water trails by the National Park Service found only three reference studies, one of which was the Washtenaw County analysis. Water trails in Michigan and around the country through the National Water Trails System are ready to learn from findings on the Huron River.



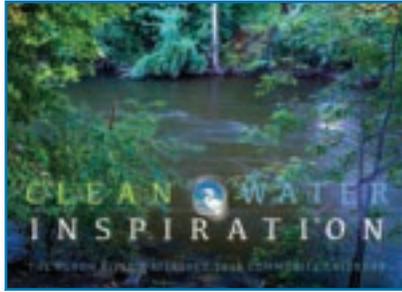
Seeking volunteer surveyors!
If you enjoy meeting new people, please contact Elizabeth (x 608 or eriggs@hrwc.org) to discuss market surveying opportunities.



— Elizabeth Riggs

Communities Reduce NPS Pollution

New regulations push further improvements on stormwater control



A wide variety of positive efforts have resulted from stormwater policies leading to measured improvements in water quality in the Huron River watershed. credit: HRWC

This year, many local governments throughout the watershed are facing updated – and improved – regulatory permits from the Michigan DEQ. HRWC works with most of these community agencies to help them comply with existing regulations through collaborative projects and programs, allowing them to meet the requirements efficiently while providing the best protection for the Huron River and its tributaries.

Current regulations have been in place since 2003. Together, HRWC and its partner governments have made a lot of progress. Following are highlights of some of the ways stormwater impacts and non-point source (NPS) pollution have been reduced or controlled.

- Several local governments passed ordinances banning phosphorus in fertilizers and worked with HRWC to pass a statewide law.
- Public education on issues such as stormdrain connections to waterways, fertilizer, pet waste and best practices for shoreline properties through workshops, stormdrain labeling, the Watershed Community Calendar, watershed signs, festival booths and exhibits have encouraged residents to reduce non-point source pollution.
- Washtenaw County programs such as River Safe Homes, the Community Partners for Clean Streams and Environmental

Excellence Awards, the Rain Garden Program, and Home Toxic Take-Backs provide residents with additional ways to prevent runoff pollution.

- HRWC developed management plans for eight different sub-watershed areas. Several of these address specific water quality issues, prioritize restoration strategies, and provide costs that allow for identification and implementation in capital improvement plans and grant proposals.
- Priority stormwater capture, storage and treatment projects reduce the impact from some of the worse areas in the watershed. The City of Ann Arbor in particular has invested over \$10 million in stormwater infrastructure projects such as Mary Beth Doyle Park, Pioneer High underground storage, numerous green streets, West Park, etc.
- Numerous Green Infrastructure projects, such as rain gardens in Washtenaw County, Grow Zones in Wayne County, and natural shorelines in Livingston County capture and infiltrate runoff.
- Community partners have inspected hundreds of stormwater outfalls, finding and removing accidental and illegal connections that direct wastewater pollution to storm systems and waterways.

- All counties established stormwater control standards for preventing runoff from new construction and reconstruction, and local governments require compliance. Washtenaw County took the statewide lead by requiring techniques that capture and infiltrate runoff.
- All counties in the watershed established erosion control requirements and permit programs (which include inspections) for construction sites throughout the watershed. The result has been a significant decrease in runoff erosion from construction sites.
- Many communities pool resources to fund HRWC's Water Quality Monitoring Program to measure chemical and physical parameters in rivers and tributaries. Results are used to evaluate progress and identify needs.

In all, these efforts and more measurably improved runoff hydrology while reducing sediment and phosphorus pollution, as well as bacteria contamination. New permit requirements offer the hope of continued improvement. HRWC thanks the many government partners for the progress to date – especially those who have gone above and beyond the existing permit requirements and anticipated watershed needs.

— Ric Lawson and Pam Labadie

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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J. Wolf, Laughing Goat Arts © 2016

Huron River Report © 2016

The Huron River Watershed



For additional, detailed maps please go to: www.hrwc.org/the-watershed/maps



Anne Savage Photography

Front row: Rebecca F., Rebecca E., Jennifer, Elizabeth and Margaret.
 Middle row: Pam, Laura, Kris, Paul, Anita and Stevi.
 Back Row: Jason and Ric.

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HRWC Events and Workshops

JUNE • JULY • AUGUST • 2016

Stormdrain Art at the Ann Arbor Mayor's Green Fair

Friday, June 10, 6-9pm, Main Street, Downtown Ann Arbor

Come try your hand at decorating one of these curbside connections to the Huron or volunteer to help others!

Details: hrwc.org/adoptastormdrain

Water Quality Monitoring Mid-Season Training

Saturday, June 25, 1 - 2:30pm, NEW Center

Did you miss our introductory classroom training on March 19? Attend on June 25 and you can join us mid-season to help measure the quality of local rivers and streams this summer! Collect water samples, measure stream flow and sample runoff from rain storms. Stream sites are in Washtenaw, Livingston and Wayne counties. We have a strong need for volunteers to work downriver and upstream of Ann Arbor. Additional hands-on training will occur in the field during the first week of sampling.

Registration: hrwc.org/volunteer/water-sampling

Measuring and Mapping Training

Sunday, July 12, Noon - 4pm, NEW Center

Learn to read the river by characterizing the bed, banks, and other indicators of stream health. Then, you and a team of three to four people will conduct the study at a creek or river sometime during the month of August.

Details: hrwc.org/volunteer/measure-and-map

HRWC Board Meeting

Thursday, July 21, 5:30pm

Contact: Laura at lrubin@hrwc.org

River Cleanup

Sunday, August 20, 7am, Milford and Hudson Mills

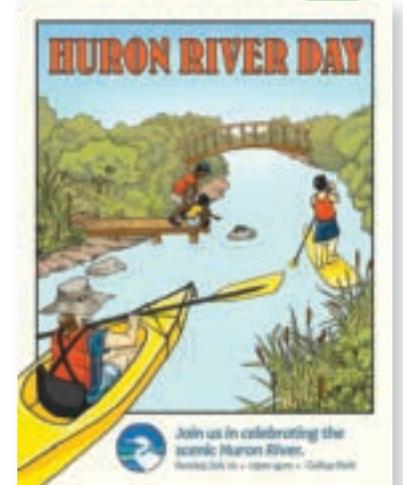
Help us collect and remove tons (literally!) of trash from the river.

Details: hrwc.org/volunteer/river-cleanups



Sound advice!
credit: HRWC

Capture your appreciation for the Huron by connecting and sharing it with us on Facebook, Twitter and Instagram—use #huronriver to mark your posts!



River Appreciation Day Sunday, July 10

Get out and enjoy the river! Activities include paddling safety talks and free life jackets, a guided paddle trip, a birding walk, fly fishing lessons, swimming and celebrating!

Special Events:

The City of Ann Arbor's Huron River Day Celebration
Noon to 4pm at Gallup Park

HRWC's Baseline Lake Swim (1 or 2 miles)
8:30am from the UM Sailing Club in Dexter

Paddling Safety Talks and Free Lifejackets
Noon-4pm at spots on the Huron River Water Trail

Details: hrwc.org/events/river-appreciation-day

River Appreciation Day 2015 participants get ready to try out kayaks. credit: HRWC; Huron River Day poster by Megan Gizzi, student of the UM Penny Stamps School of Art and Design.

River Appreciation Day sponsored by



Tour Your River • Plan a Huron River Water Trail adventure!

With summer here, paddlers will take to the Huron River for trips both short and long. Whether considering a three-hour tour or a through paddle of the 104-mile trail, this list provides ideas and references for river-based getaways. To get the most out of the Huron River Water Trail (HRWT) and its Trail Towns, consider the following.

1. Study the Trip Planner

HRWT's Trip Planner is an online resource that shows the entire trail through five counties in southeast Michigan. Interactive maps allow for zooming into each section and studying the services along the route. There are several recommended trips for upper, middle and lower sections of the river under the "Trips" tab. Look at the whole river under "Explore." huronriverwatertrail.org

2. Get guidebooks and maps

The waterproof Paddler's Companion is a flip book containing rich, full-color maps of the trail with 3-5 river miles per page. The book is loaded with details including boat rental locations, safety tips, and amenities in the five largest Trail Towns. Purchase one for \$15 at huronriverwatertrail.org or at one of the participating retailers and communities. Also, the Huron-Clinton Metroparks produces a free paper Canoeing & Kayaking Map.

3. Seek advice from other paddlers

HRWT's online "Comments Map" under the "Explore" tab on the website provides a place to chat with others who have paddled part or all of the trail. Post specific questions and read past conversations. HRWC monitors the site and also posts trail updates here.

4. Hone those paddling and route-finding skills

To be ready for a longer paddle you need to be physically fit, gain experience and comfort paddling

a canoe or kayak in a variety of water and weather conditions, and gain navigation skills. Paddling instruction is offered throughout Southeast Michigan; local clubs offer both on-the-water and pool sessions depending on the time of year. Teach yourself how to use a map and compass, or attend a workshop through a hiking club, scout group, or outdoor recreational store.

5. Review trail updates

River conditions from USGS, weather forecasts, and trail updates all can be found at huronriverwatertrail.org. This online resource provides the most current information available to anyone navigating the trail.

6. Contact the HRWC office

Reach out to staff at HRWC with any questions that haven't been answered by the resources listed above. Send your detailed questions by email to info@huronriverwatertrail.org.

— Elizabeth Riggs and Pam Labadie

Natalie Warren profiled some HRWT itinerary options in the January issue of *Canoe & Kayak Magazine*. See more (with distances and float times) by county under "Trips" at huronriverwatertrail.org or read Natalie's article at <http://www.canoekayak.com/author/nataliewarren>



2016 Annual Stewardship Awards

It takes hundreds of people to accomplish HRWC's mission of "protecting and restoring the river for healthy and vibrant communities." These individuals have worked tirelessly on specific projects or contributed to multiple programs. Thanks to each of them for their dedication to the Huron!

Larry Scheer, Volunteer of the Year

Larry Scheer began working with HRWC in 2014, just after his retirement. In the first year he volunteered with Stonefly Search, River Roundups, Bug ID Days, Creek Walking, Measuring and Mapping, Water Quality Monitoring, and Streamside Education. He became a Leader and Collector for River Roundups and, utilizing his professional skills, evaluated all of HRWC's volunteer trainings to help improve programming.

In 2015, Larry attended the Michigan Lakes and Streams Leadership Institute where he redeveloped the Michigan Road Stream Crossing Inventory for HRWC and then piloted its use for the Norton Creek study. He safely and astutely led a team of volunteers collecting roughly 5,000 points of data for 40 crossings – all of them in the Norton creekshed. Larry's passion for water quality and interest in "seeing the results of all our work, the goals and reasons behind the programs," serve not only the Huron but HRWC's programs directly.

Ray Pittman, Munzel Award

Like Herb Munzel, Ray Pittman is an individual who sees what needs to be done and does it. He is a hard-working advocate for river revitalization and HRWC's RiverUp! project.

Ray started working with HRWC in 2011. He has helped build relationships in Ypsilanti with Angstrom, using his connections with Ford to help HRWC identify the owner of the site at I-94 and Ford Lake, and getting a meeting to explore how to redevelop it for the benefit of the Huron. From this effort Ray's interests blossomed—he currently leads the RiverUp! Hunt team, hunting down the most stubborn river revitalization and restoration problems. In that



This year's Stewardship Award honorees left to right: Ron Fadoir, Ray Pittman, Christine Knight and Larry Scheer on the porch of the historic Ladies' Literary Club in Ypsilanti.
credit: HRWC

role, Ray visits sites, learns the details and logistics needed for solutions, meets and gets to know the people involved, and then fosters steady communication. His dogged determination keeps these projects moving along.

Christine Knight, Big Splash

Christine Knight made a "big splash" when she started volunteering with HRWC in 2015 for Water Quality Monitoring, Bioreserve Natural Areas Assessment, River Roundup, and Measuring and Mapping. Out in the field, her positive attitude, attention to detail, problem-solving and dependability result in high quality sampling and complete data sheets. Christine's flexibility and willingness to work in the more urban areas of the watershed improved HRWC's monitoring in Wayne County, where the drives between sites are longer and the creeks are not always pretty.

Her background as a UM Master's student in the School of Natural Resources and Environment and her plans to become a top researcher in water quality issues have served the Huron River well. She is now a leader in the Water Quality Monitoring

Program, teaching and guiding other volunteers.

Ron Fadoir, Bridge Builder

Ron Fadoir's work with HRWC started in 2003 on the Upper Huron (Kent Lake) Advisory Team. Since then, he has contributed over 170 hours, volunteering as a leader in River Roundups, Measuring and Mapping, Water Quality Monitoring, and as a member of HRWC's Norton Creek Advisory Team. His consistent effort to conduct water quality sampling at underserved sites in Wayne County and his initiative to sample on his own has ensured that HRWC captures important data for the entire Huron River.

Ron has dedicated his professional and personal life to improving water quality across Southeastern Michigan, bringing his skills and passion to the Rouge, Detroit, and Clinton Rivers as well as Lake St. Clair. Ron uses his connections with all the watersheds in the region to help bridge the gaps between them, providing ways for all the groups to share resources and learn from each other.

—Jason Frenzel, Laura Rubin, Stevi Kosloskey, and Ric Lawson



Creating Climate Resilient Communities

Changing rainfall has implications for stormwater management

HRWC has brought together stormwater managers from throughout the watershed and climate scientists to create a resource that provides a very usable quantification of how patterns in precipitation are changing in the Huron and what the implications of these changes are for managing stormwater.

Through this work, participants learned:

- annual precipitation has increased by 15% across Southeast Michigan and 44% in Ann Arbor;
- heavy storms have become stronger and more frequent throughout the region; and
- the data stormwater managers have used to design systems is underestimating the size of storms – for example, the “100-year storm” is 17% larger than what was originally planned for at the outset.

This means current stormwater infrastructure like pipes, pumps, detention ponds and other storage systems may reach capacity more frequently than expected, which can result in more flooding, more polluted runoff, and potentially costly damage.

In response, the group produced the report: *Stormwater Management and Climate Change. Implications of precipitation changes in Southeast Michigan and options for response: A guide for municipalities.*

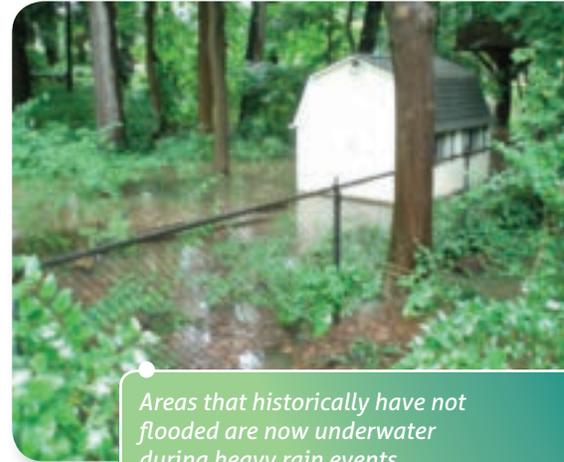
Some of the key solutions the team put forward include:

- use newly available rainfall data for sizing new stormwater infrastructure to adequately handle larger storms;
- revisit floodplain management, detention and conveyance systems and look for weaknesses in light of changing rainfall patterns; and

- utilize multiple strategies to protect people and infrastructure from harm, including revised standards, improved design, green infrastructure, and appropriately sized grey infrastructure.

HRWC will continue to work with communities to understand how climate change impacts stormwater and make recommendations to build systems that can handle these changes.

— Rebecca Esselman



Areas that historically have not flooded are now underwater during heavy rain events.

credit: J. Wolf

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Huron River Watershed Council

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If your name is misspelled, incorrectly listed, or omitted, please accept our sincere apologies and bring the error to our attention so that we may correct our records.

Contact Margaret Smith at msmith@hrwc.org or (734) 769-5123 x 605.



HRWC would like to extend our gratitude to everyone who helped protect the Huron River by giving of their time and talent. HRWC volunteers are making a difference every day!

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Lake sturgeon are a threatened species, with populations believed to be just one percent of their original size (Michigan Natural Features Inventory). Historically, the Huron River would be used for spawning by the Lake Erie populations, but there are no confirmed sightings since the mid-1950s (MDNR). Restoration efforts are hampered by invasive species; round gobies gobble up sturgeon eggs, and zebra mussels fill sturgeon stomachs with non-nutritive shells (University of Wisconsin Sea Grant). credit: J. Wolf



Huron River Watershed Council

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