

Published quarterly by the Huron River Watershed Council 1100 North Main St., Ann Arbor, MI 48104

Jellyfish in the Huron?

Freshwater jellyfish thrive in local waters

Even if you've spent a lot of time on the lakes in the Huron River Watershed, you may never have noticed them – tiny, delicate forms no larger than a quarter, almost entirely transparent, floating and slowly swimming through the water – freshwater jellyfish!

IS THERE REALLY SUCH A THING AS FRESHWATER JELLYFISH?

Yes! Scientifically speaking, freshwater "jellyfish" (*Craspedacusta sowerbyi*) are not true jellyfish like their marine relatives. They have some structural differences, but because they look like jellyfish, we call them jellyfish! They are members of the phylum Cnidaria, which includes true marine jellyfish, hydra, coral, and sea anemones.

WHAT DO FRESHWATER JELLYFISH LOOK LIKE?

Freshwater jellyfish look very much like their more familiar marine cousins, but are

relatively tiny. They can grow to about the size of a quarter. They are shaped like a dome with a fringe of string-like tentacles around the edge. The jellyfish are quite translucent, sometimes with a tinge of white or green.

THE JELLY LIFE CYCLE

The freshwater jellyfish begins life in a form that very few of us would recognize as a jellyfish at all. Like many of its cnidarian relatives, the jelly has a "polyp" form that resembles a tiny sea anemone. These polyps are nearly microscopic and actually far more common in our lakes and streams than the more familiar jellyfish form, or "medusa", but are so tiny and nondescript that they rarely are noticed in nature except by Middle Huron Monitoring...pg 5 River Friendly Lawn Carepg 7 Favorite Spring Spots.......pg 10

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Freshwater jellyfish medusa photo: Mike Dunn, NC Museum of Natural Sciences

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Transfer of Development Rights

HRWC studies innovative planning tool

Transfer of development rights (TDR) is recognized nationwide as a vital planning tool in promoting smart growth. TDR is perhaps the only tool that specifically links increased densities in appropriate areas with actual, permanent protection of open space and farmland in rural areas. TDR takes advantage of real estate market forces to fund land protection. However, communities



in Michigan have been reluctant to take the step of actually enacting a program due to uncertainty about how to implement the program, economic and political feasibility, and community acceptance. At the same time, interest in TDR within the Huron River Watershed has increased recently.

Development rights transfer to protect wetlands in this example. graphic: Michigan Department of Environmental Quality

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Jellyfish in the Huron?

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biologists who look for them specifically. The polyps live in colonies attached to stable surfaces underwater such as logs, rocks, or plants. They can reproduce by budding into new polyps, producing small crawling larvae that produce more polyps, or by producing the swimming medusae that we recognize as jellyfish. The jellyfish medusae, being male or female, can produce fertilized eggs that hatch into larvae that eventually settle onto the lake bottom and develop into yet more polyps.

WHAT DO FRESHWATER JELLYFISH EAT?

Jellies hunt by swimming upward toward the water's surface and then drifting slowly downward, encountering prey by chance. The string-like tentacles of freshwater jellyfish contain hundreds of special cells called "cnidocytes," which are stinging cells with microscopic barbs used to paralyze prey. The paralyzed prey become tangled among the tentacles, which sway about to move the prey up to the mouth in the middle of the jelly's underside. The jelly then contracts several times to work the prey up through the mouth and into its digestive cavity. Their main prey are zooplankton, microscopic animals that float in the water column. They can even paralyze and kill very small fish. The jellyfish themselves can fall prey to other aquatic residents; crayfish and turtles have been observed eating freshwater jellyfish.

WILL FRESHWATER JELLYFISH STING ME?

They have stinging cells for capturing prey, but because they are so small, they likely are unable to penetrate human skin. Some people report experiencing mild irritation after having come in contact with the jellyfish. Some people are more sensitive to the toxin released by the stinging cells, just as some people are more or less sensitive to poison ivy.

WHERE DO FRESHWATER JELLYFISH LIVE?

Freshwater jellyfish prefer calm water to flowing water, and so are most often found in lakes and ponds. They are sometimes found in large rivers or backwater areas where the current is not strong. Headlines were made last September when a few Livingston County youths collected some tiny jellyfish from Hamburg Lake. Their fascinating find was reported in the Daily Press & Argus. However, as the article reported, these freshwater jellyfish are actually guite common in our lakes – just rarely seen. Freshwater jellyfish have been reported from over 150 lakes, ponds, and other waterbodies in Michigan, including: Briggs and Hamburg Lakes in Livingston County; Barton Pond and Crooked, Four Mile, and Joslin Lakes in Washtenaw County; Whitmore



Freshwater jellyfish medusa photo: Mike Moblo and Tyler McCarl



Freshwater jellyfish medusa photo: Mike Dunn, NC Museum of Natural Sciences

ARE FRESHWATER JELLYFISH A SIGN OF GOOD (OR POOR) WATER QUALITY?

Very little is known about jellyfish preferences for water quality. They have been observed in crystal clear lakes and soupy green ponds. Research suggests they cannot tolerate high levels of chlorine in the water.

WHEN SHOULD I LOOK FOR FRESHWATER JELLYFISH?

Sunny days in late summer, like August and September in Michigan, tend to be the best for spotting freshwater jellyfish, when the water is warm and food is abundant. However, jellyfish will not appear every year, even in a lake where they have been seen before. Very little is known about what causes a "good jellyfish year." Look for jellyfish floating or swimming gently just below the water's surface. Sometimes they will surface in large groups, or "blooms."

— Jo Latimore

Much of the information in this article was adapted from the Freshwater Jellyfish web page maintained by Dr. Terry Peard's research group at Indiana University of Pennsylvania (www.jellyfish.iup.edu). We encourage you to visit to learn more about this mysterious resident of the watershed!

Transfer of Development Rights

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SCOPE OF HRWC'S PROJECT

Using three actual developments in the watershed, HRWC examined the impacts of the developments as planned, and then examined the impacts of the developments had they been planned as part of a TDR program. The goal of the investigation was to examine the relative impacts of TDR among different communities.



Location of TDR study communities in the Huron River Watershed of southeastern Michigan. graphic: HRWC

PROJECT FINDINGS

Overall, HRWC found:

- Environmental impacts were reduced significantly and consistently when a TDR program was employed. The reductions in environmental impacts ranged from 9% to 93% across the three developments. In addition, many acres of farmlands, woodlands and wetlands were preserved with a TDR program in place.
- A clear cost advantage was realized for the developer engaged in a transfer of development rights.

Across all of the developments, the costs associated with developing the sites decreased substantially with the TDR alternative.

 In general, the TDR alternative was advantageous for most of the indicators measured for each of the three developments. The four areas measured – fiscal, environmental,

societal, and transportation – showed a reduced impact when TDR was employed in most situations.

• The results were affected by the locations of the sending and receiving areas because the impacts were spatially dependent. In general, TDR generated the greatest benefits for the development in Ann Arbor because it was so close to the amenities of urban living and less dependent on car travel. Impacts with TDR were not uniformly positive in more suburban townships when the receiving sites were located away from existing infrastructure or when service areas were spread out.

FUTURE WORK

HRWC views TDR as an underutilized land preservation tool to protect natural areas and agricultural

land in the Huron River Watershed and throughout Michigan. HRWC will continue to share the results of this study with key audiences throughout the watershed and Michigan to increase familiarity with this land preservation tool. Further, HRWC will seek out partnerships with local governments that demonstrate an interest in TDR to further understanding of how TDR can benefit watershed communities. Finally, the experience gained by HRWC from this project and the interest generated in TDR by this study will aid us in working to influence statewide enabling legislation.

WHAT IS TDR?

Transfer of Development Rights is the sale of a parcel's development rights to the owner of another parcel, which allows more development on the second parcel while reducing or preventing development on the originating parcel. Under a TDR program, development rights are severed from a lot designated for protection (sending site), and the severed rights are transferred to a lot in a site where additional development is permitted (receiving site).

From "Landmarks to landscapes: a review of current practices in the transfer of development rights" by Johnston, R. and M. Madison, 1997, Journal of the APA 63(3): 365-378.

PROJECT REPORT

"Potential Impacts of TDR for Michigan Communities: The Huron River Watershed Scenarios" is available in digital format at www.hrwc.org/program/land_tdr.htm. Paper copies have been printed in a limited quantity and may be requested by contacting Elizabeth Riggs at eriggs@hrwc.org. Project funding came from People and Land (PAL), a program of the W. K. Kellogg Foundation and the Land Policy Institute at the Michigan State University.

The dedicated project team was Patricia Machemer (Michigan State University), Dick Carlisle (Carlisle / Wortman Associates, Inc.), Rick Pruetz, Terri Blackmore (Washtenaw Area Transportation Study), Jennifer Evans (SEMCOG), Lisa Marckini-Polk, Dick Norton (University of Michigan), Peter Allen, Scott Munzel, Terry Brinkman and Patricia Denig (Washtenaw County), and Kris Olsson, Laura Rubin and Elizabeth Riggs (HRWC).

— Elizabeth Riggs

Monitoring Results Encouraging for Middle Huron

Report on five-year study

Soon-to-be-released results from the Middle Huron Nutrient Monitoring Program show progress toward the reduction of phosphorus in the middle section of the

Huron River. Since the first full year of the program in 2003, average total phosphorus concentrations across nine tributary sites and one main river site have decreased from 0.10 mg/l in 2003 to 0.06 mg/l in 2005 and 2006, the most recent years of complete data. "These are very encouraging results," commented Molly Wade with the City of Ann Arbor. "The city and other Middle Huron Partners have invested significant time and resources into programs and

dissolved oxygen in the water, and, in turn, adversely affect aquatic animal populations and cause fish kills. This algal and plant growth also interferes with recre-



projects aimed to reduce phosphorous inputs to the river. I would like to think that these efforts have contributed to this reduction."

RESPONSE TO PHOSPHORUS REGULATION

The middle Huron is under a statemandated Total Maximum Daily Load (TMDL) regulation that sets a target total phosphorus concentration in Ford Lake at 0.05 mg/l. The TMDL further targets concentrations in Belleville Lake at 0.03 mg/l. The TMDL regulation requires communities and dischargers in the middle Huron Watershed to implement policies and practices to reduce phosphorus inputs from direct or point sources, like waste water treatment plants, and indirect or nonpoint sources from stormwater runoff.

Phosphorus is the main pollutant of concern in nutrient-rich lake and stream systems like the middle Huron. Excessive phosphorus concentrations can quickly cause extensive growth of aquatic plants and algae and is well known for producing blue green algae. Abundant algae and plant growth can lead to depletion of ation and aesthetic enjoyment by reducing water clarity, tangling boats, and creating unpleasant swimming conditions, foul odors, and blooms of toxic and nontoxic organisms.

The Ford and Belleville Lakes TMDL was established in 1996 - the first nutrient TMDL in the state. The affected communities and other partner agencies formed the voluntary Middle Huron Partnership Initiative (Partners) following the TMDL publication to coordinate and report on activities to reduce phosphorus in the middle Huron Watershed. These activities include a range of approaches including public education strategies, policy changes such as phosphorus fertilizer restriction ordinances, physical improvements and upgrades to treatment plants, and largescale stormwater treatment projects like the system at Mary Beth Doyle Park in Ann Arbor. Improvements at wastewater treatment plants within the middle Huron Watershed have reduced phosphorus loads (i.e., the total amount of phosphorus in the river at a given point) from those sources by an estimated 41% from 1996 levels and 29% from 2003 estimates. The remaining

phosphorus sources are diffuse and enter the river system primarily through stormwater runoff. These indirect or non-point sources include phosphorus fertilizers,

> erosion and other sources that enter waterways quickly in stormwater runoff from impervious surfaces. Loading from these sources is difficult to estimate.

MONITORING PROGRAM AND REPORT

While impacts on phosphorus loading reduction are estimated for all the Partners' activities, environmental measures are still the most direct measure of progress toward the TMDL goals.

Following development of the TMDL, MDEQ continued to monitor Ford and Belleville Lakes and two sites upstream on the Huron River. The results of this monitoring show an initial decrease in total phosphorus concentrations between 1994 and 1997, but no distinct trend since 1997. Phosphorus levels measured at Bandemer Park in Ann Arbor have been below the 0.05 mg/l target since 1998, but concentrations have exceeded targets at all other downstream stations each year. Unfortunately, MDEQ monitoring was not conducted in 2007, and it is uncertain if they will re-establish monitoring in 2008 due to agency budget cutbacks.

In 2002, the Partners initiated a monitoring program conducted by HRWC to document the nutrients and other environmental parameters at all major middle Huron tributaries (nine sites) and the Huron River upstream at North Territorial Road. While the decrease in total phosphorus concentrations since 2003 is encouraging, the individual sample concentrations still exceed the target level at all sites and the phosphorus concentration reductions

Come, Enjoy and Help Out!

HRWC events and projects offer opportunties for learning more about your watershed

MILLERS CREEK FILM FESTIVAL FRIDAY, MARCH 14, 4:30 PM

A great way to end the week! We hope you will come to the Michigan Theater (603 E. Liberty, Ann Arbor) for the third year of the Millers Creek Film Festival, and we would love it if you could bring a batch of homemade cookies to share. After the films, audience members join filmmakers for a festival reception following the screening and awards. Interested in volunteering? Contact Joan at jmartin@ hrwc.org if you can help prepare the lobby before the festival, usher and hand out programs, or clean up the lobby at 6 PM.

HRWC COMMUNITY OPEN HOUSE THURSDAY, MARCH 20, 5:30 – 7 PM

Join us at the Indian Springs Metropark Environmental Discovery Center to learn about HRWC and enjoy refreshments. All ages are welcome.

HRWC ANNUAL MEETING THURSDAY, APRIL 24, 5:30 PM

The tradition continues as we meet at the Matthaei Botanical Gardens in Ann Arbor Township. Come hear our speaker, help us appreciate our award-winning volunteers, and enjoy good food and company.

RIVER ROUNDUP SATURDAY, APRIL 26 9 AM – 3:30 PM OR 10:30 AM – 5 PM

We need your help on a long-term study of the Huron River system. Teams look for aquatic macroinvertebrates (bugs) that are sensitive to environmental conditions and



Beverly Manko, Denny Burr and Michele Eickholt prepare to study a stream. photo: A. Wooll

tell us about problems in the river and its streams. This is a great outing! A Searcher trained in the ways of the river will lead you and your friends to find rare river macroinvertebrates. The Searcher handles the stream work, so you stay dry. Register with jmartin@hrwc.org by April 14th to be placed on a team in HRWC's annual River RoundUp.

BIORESERVE PROJECT TRAINING SATURDAY, MAY 10, 10 AM – 4 PM PLUS ON-GOING PROJECTS

We need volunteers to conduct a roadside/driving survey, a field assessment, and plant identification. For the roadside survey, you drive to natural areas in the watershed and answer very general questions about the site. The field assessments will begin in May and continue through September 2008. For those of you who have not yet had the training, the next training session for the rapid field assessment will be May 10, 10 am - 4 pm, at the Matthaei Botanical Gardens in Ann Arbor

Monitoring Results continued from page 5

have not been matched with similar results from DEQ monitoring at the Huron River at Ford Lake.

The monitoring program also examined levels and trends in total phosphorus loading, suspended sediment concentrations and loads, nitrogen (nitrate-nitrite) concentrations and loads, *E. coli* counts, and pH, conductivity, and dissolved oxygen levels at each of the ten sites. Mill Creek, the largest creekshed in the watershed, contributes the largest phosphorus load to the middle Huron, with Malletts, Fleming and Honey Creeks also contributing significant phosphorus loads.

A complete report on these monitoring results and all the activities of the Middle Huron Partnership Initiative since 2004 will be released soon to the HRWC website at http://www.hrwc.org/program/mid.htm.

- Ric Lawson

Township. An indoor training presentation will be followed by a field trip to practice doing assessments at the Botanical Gardens' beautiful natural areas. Following the training, volunteers will team up to perform field surveys on natural areas throughout the watershed. Finally, if you are experienced in plant identification, we especially need your help! Every team will need at least one "expert" (someone who has some experience with identifying plants). If you have had a plant identification class, or have become familiar with wildflowers, grasses, and trees over time spent hiking this beautiful watershed, we'd love your help! Contact Kris at 734/769-5123 x16 or kolsson@hrwc.org if you are interested. Also check out the project website at: www.hrwc.org/text/bioreserve.htm

HRWC SUMMER OUTINGS

This summer HRWC will host a series of Huron River activities including canoe races on the Huron River at Gallup Park in Ann Arbor, a community swim of Baseline Lake near Pinckney with Liz Elling, geocaching by canoe and more. All events are designed to get people out on the river. Visit www.hrwc.org for details.



REMINDER:

 Clean out clutter at home
Take extra, old and unwanted books, CDs, and DVDs to HRWC
Feel good about clean home and raising funds for HRWC
Tell friends and neighbors about Books by Chance

Bring your goods to HRWC between 9:00 AM and 5:00 PM weekdays. Books by Chance will sell them over the internet and donate the proceeds to HRWC. Books that sell very well are non-fiction, scholarly, technical, current medical and science, quilting/sewing, engineering, law, political, very current fiction, and textbooks.

River Friendly Lawn Care

It's easy!

The snow has melted, the gardening catalogs have arrived in your mail box, the temperature has warmed up to a balmy 50 degrees (at least for today), and March Madness has begun. If you are feeling the urge to go outside and apply fertilizer to your lawn, go back inside and lay down on your couch until that feeling is gone. soil. Your county MSU Extension agent can help with that. Barring a soil test, you should look for slow-release nitrogen, non-phosphorus, pesticide-free fertilizers. Since nitrogen is easily dissolved in water, using a fertilizer with 50% or more of the nitrogen in slow release form, listed as "water insoluble" on the label, helps re-

we know for sure, Michigan springs are unpredictable. It could snow tomorrow. If you simply are gathering your thoughts for the even warmer weather ahead. like May, consider this: your yard care practices can help protect the Huron River Watershed. **Recent EPA studies** confirm that over 70% of the water pollution in our rivers, lakes and

If there's one thing

LOCAL ORDINANCES

Several communities in the Huron River Watershed have enacted ordinances banning the use of manufactured phosphorus fertilizer on turf grass unless a soil test confirms it is needed:

- West Bloomfield
- Commerce Township
- Hamburg Township
- Charter Township of Pittsfield
- City of Ann Arbor
- City of Orchard Lake Village

streams is the result of nonpoint source pollution. This is the type of pollution that occurs when water from heavy rains or snowmelt -- called runoff -- washes over the land, carrying contaminants into the nearest storm drains, ditches or waterways. Fertilizers and pesticides are examples of nonpoint source pollutants. In the Huron River Watershed, 75% of the pollutant loads entering the Huron River are from home sites – indicating that individual actions make a big difference.

5 BASIC STEPS TO RIVER FRIENDLY LAWN CARE

(1) Don't Guess . . . Soil Test

Your goal should be to find the fertilizer that is suited to the condition of your

COUNTY MSU EXTENSION AGENTS

Livingston 517-546-3950 Monroe 734-240-3170 Oakland 248-858-0902 Washtenaw 734-997-1819 Wayne 313-833-3412

being carried off-site in runoff. Phosphorus content in fertilizer is indicated by the middle number of the three number series on the fertilizer bag, such as 11-2-2. Most SE Michigan soils already have adequate phosphorus levels, so look for the middle number 0. Weedand-feed and garden products add unnecessary herbicides and excessive phosphorus to the landscape, posing a threat to animals,

duce its potential for

plants and insects beyond the intended pests. Spot-treatment or hand-digging are better, more targeted river-friendly approaches.

(2) Keep fertilizer away . . . until early May.

Spreading fertilizer when the ground is still frozen results in it being carried offsite in runoff. Additionally, research has shown that fertilizing in the fall does not pose an elevated risk to water quality and enhances grass root growth and nutrient storage, providing for a spring green up and delaying the need for early spring fertilizing. Try this tip: fertilize just once in the fall and you may not need any other fertilizer applications the following spring and summer!

(3) Make a clean sweep.

Use a broom, not your hose, to sweep spills on sidewalks and driveways back onto the lawn. Minimize the risk of water carrying the fertilizer right down your driveway and into to the nearest storm drain.



photo: Larime Photographic © HRWC 2000

(4) Cut it high . . . let it lie.

Tall grass promotes healthy root growth and shades out weeds. Leave the grass blades 3 inches tall after cutting. Let short clippings fall back into the lawn as a natural source of nitrogen which can reduce the need for additional fertilizer by 25% or more.

(5) Consider how you use water.

Water your lawn and garden early in the morning to reduce evaporation. Water sparingly. Over-watering can damage plants, stimulate fungus, and leach nutrients out of the soil. Put rainwater to work for you. Border your lawn with deep-rooted flowers and shrubs to prevent water runoff. Direct down spouts into garden areas, or install rain barrels to collect water for use during dry weather. Watch where you use water to avoid sidewalks, driveways and other paved surfaces. Direct hoses and sprinklers onto lawns and gardens.

Keeping these simple practices in mind when you finally are able to get out there and start your spring lawn care can help protect the Huron River. If you use a lawn service for your home or business, consider a company that follows river friendly options. And please share this article with your neighbors and colleagues!

— Pam Labadie

Know Your Board Representative

Deeda Stanczak, Huron Township

Deeda Stanczak is the Huron River Watershed Council Board representative from Huron Township, one of the jurisdictions closest to Lake Erie. Having lived and played along the river as a child and owning the same property since her marriage, she is well acquainted with the changes that have occurred over the years.

Deeda earned a degree in Art and Design from the University of Michigan. She worked at the University for several years, finishing as managing director for the Japan Center for Michigan Universities in Hikone, Japan. Her interests and hobbies reflect her educational choice. She likes design, architecture, painting, drawing, jazz, travel, glass, creating miniature rooms, gardening and wildlife. She is married to Robert Stanczak, who is the alternate representative from Huron Township. Her son, Rex, is the head varsity basketball coach at Pioneer High School, and his two daughters love to visit their grandparents.

The Stanczak property is bordered on the east, west and north sides by the Huron River, and Deeda has seen the effects of problems occurring in the upper reaches of the river over time. To quote her, "Thankfully, HRWC sprang into being at an extremely critical juncture, and now protects the river I have always treasured, doing remarkable work in restoring and monitoring its health." She jumped at the chance to represent her community on the HRWC Board and is helping to protect the river "So that those who come after us will be able to enjoy the river as much as I always have. I can't imagine a better goal or legacy."



A Great Blue Heron stands in for Deeda at Willow Metropark, highlighting the natural beauty of Huron Township. photo: HRWC

For those of you who want to ask questions, make comments or be more involved, call Deeda at (734) 753-4734 or HRWC at (734) 769-5123.

— Eunice Burns

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Laura's "Stream" of Consciousness

An update on HRWC projects and activities

The Dexter dam removal is moving ahead. After a decade of advocating dam removal, we finally have a dam that will be removed! And it is going to happen this summer! Working with the Village of Dexter, the Washtenaw County Road Commission – as it rebuilds the Main Street bridge in Dexter – will remove the the Mill Pond Dam that sits beneath the bridge.

The dam, along with the bridge, is crumbling and poses a hazard to the river because a sudden, unplanned failure could release thousands of cubic yards of sediment. Not only does this massive amount of sediment require careful management, but it harbors raised levels of cadmium and arsenic from decades of farming, industry, and residential runoff. A sediment management plan will ensure that while the dam is slowly being taken apart (over a six-week period), the 5,450 cubic yards of contaminated sediment will be captured and moved upland to be stabilized with fill and plants. Due to the sediment problems, numerous grade control structures made of rock will be placed in the river, saving the apron (the concrete "step" below the dam), and sediment traps will help capture and stabilize the sediments. While ideally we want to restore the stream bank to its original bed with no impediments in the river, we have to balance the need to protect the creek and river ecology and drinking water users downstream with restoration goals.

After the dam is removed, the river level in the former impoundment will have dropped seven feet. The Village of Dexter plans to develop a Village Park on the reclaimed land, complete with trails and public amenities.

We hope to see the number of fish species more than double upstream of the former impoundment, sensitive species return to Mill Creek, and water quality improve. We have good data on macroinvertebrates, habitat, flow, channel shape, and fish above and below the dam thanks to our monitoring programs, hundreds of volunteers, and Dr. Dan Hayes with MSU and his fisheries students.

Stay tuned this summer when the dam removal starts and we host a big community celebration.

— Laura Rubin

HRWC Member Spotlight

Adopt-A-Stream volunteer Dianne C. Martin

Dianne C. Martin is Director of Resource Assessment & Management at ASTI Environmental in Ann Arbor. She is a professional Wetlands Specialist who has been wading in the waters of the Huron River as an Adopt-A-Stream Volunteer for 15 years. In the following interview with Margaret Smith, Dianne tells us why she returns year after year.

MS: Why did you sign up?

DM: I've been volunteering with HRWC's Adopt-A-Stream program since fall of 1993. I had just moved to the Ann Arbor area and was looking for something interesting to do before I started graduate school in 1994. Joan [Martin] put me to good use right away doing some stream assessments and some office work, too. I have attended most spring, fall, and winter bug hunts since that time, with the exception of 1997 when I spent a year working for the Missouri Department of Conservation.

MS: What do you remember from your 1993 volunteering experience? DM: I can hardly remember that far back. The events have always been well



Dianne heading out to measure streams.

MS: Why have you done it over and over for so many years?

DM: Joan won't let me quit! Just kidding, although honestly, Joan is a big part of the reason why I stay involved. She helped me out many times throughout the years, from helping me get connected to the area when I first moved here to writing a letter of recommendation for me for a scholarship application. I want to keep helping her and the program, like she has

organized. However, as to be expected, sampling days during the first few years were not as seamless as they are today. HRWC staff always are improving the program to make it better, both scientifically and operationally. helped me so many times. And, I also just simply think she is a wonderful person. One winter stonefly collection day just happened to be on my birthday, and Joan had a birthday cake waiting for me at the NEW Center. Now, that is someone who makes her volunteers feel appreciated! I also enjoy getting out to different river sites that I wouldn't normally have a chance to see and meeting new and fun people at each collection day.

MS: From your perspective, what is the value?

DM: The Adopt-A-Stream program has made the Huron River the most studied river in Michigan. Given that this is largely done through volunteers' efforts makes it very exciting and unique.

HRWC is thankful to have volunteers who return to our programs year after year and help us learn about and protect the Huron.

— Margaret Smith

HRWC Member Shares Favorite Spring Spots

Gems in the Mill Creek watershed that make for perfect outdoor recreation destinations

Often, when I am out wandering the trails and waters of the Pinckney and Waterloo State Recreation Areas, the thought strikes me that these hillsides, these wetlands, these tiny first-order streams are some of the uppermost reaches of the Huron River watershed. When I see the clear, cold water, the high-quality marshes and the landscape covered with native vegetation, I get a renewed appreciation of the gem that is the Huron and why it is the state's cleanest urban river.

There are an abundance of places to engage in quiet, water-based activities in the upper 'shed. This article will cover some of my favorite spots, how to get there, where to access the water and what to do.

The first area is in Sylvan Township in Washtenaw County, west of the City of Chelsea. The area is west of Michigan Highway 52 and north of Interstate 94. If coming from the east, the Pierce Road exit off I-94 is the best entry. Pierce Road heading north takes one to all these spots.

CEDAR AND DOYLE LAKES

A mile north of I-94 is Cavanaugh Lake Road. Turn left there and head west about a mile to the access road for Cedar Lake, on the north side of the road. This narrow way will fork, right to Cedar and left to Doyle Lake. Both are worth visiting. Cedar Lake is 73 acres in size with a maximum depth of 27 feet. There is a boat ramp on the southwest side with a sizable parking area. A smattering of houses run along the south shore but the majority of the shoreline is in public ownership. The north shore features a set of wooden cab-



ins that can be rented from the Michigan Department of Natural Resources (DNR), along with a small swimming beach. A channel in the northwest corner leads to Little Cedar Lake, which has a maximum depth of 16 feet; it lies adjacent to the unique floating bog that many people know. Cedar is a fishing lake with terrific views of the surrounding hills, fair for sailing with west or northwest winds and good swimming from watercraft (also



Cedar and Crooked Lakes photo: D. Cappaer

known as "Bahama" swimming).

Doyle Lake is much smaller at 18 acres (max depth 14 feet) and is accessible via a short carry from its parking area. It, too, has great views of the landscape and is surrounded completely by public land. Fishing is probably decent and Bahama swimming is excellent.

CROOKED LAKE

Heading further west a couple miles on Cavanaugh Lake Rd. past the namesake lake (which has a small Washtenaw County park on its south side), turn right and head north on Loveland Road. In about a mile on the east is the long, winding access road to Crooked Lake. Toward the end there is a large but usually empty parking area for the boat ramp and a bit farther down a fine picnic spot next to the water.

Most of the west side of Crooked Lake is in public ownership, as is the northern and southern portions and some of the east side. The surrounding terrain is steep and wooded, and the houses are older and either perched atop the bluff or tastefully integrated. It is also more of a fishing lake (maximum depth is 20 feet) and does not tend to get much motor traffic. At 113 acres in size it has lots of places to explore on the water and good swimming at a small beachy area just north of the boat ramp.

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Spring 2008

Favorite Spotscontinued from previous page

MILL LAKE

A little further north on Loveland Road is the intersection with McLure Road, a winding scenic route through public land. A couple miles east on the south side is the access road for Mill Lake. At 142 acres, Mill is probably the largest lake in the recreation areas surrounded by public land. There are a couple of holes on the west side at 21 and 25 feet, but much of it, especially the east side, is quite shallow. Consequently Mill Lake is only fair for sailing and swimming but unparalleled for quiet paddling on good size water.

There are two more sets of DNR cabins on the east shore of Mill, which sadly have fallen into disrepair in recent years. However, they are scheduled to be restored thanks to a foundation established by NASCAR driver Ryan Newman. In the midst of those cabins are the headwaters of the north branch of Mill Creek, the largest subwatershed in the Huron River basin. Several small streams flow into Mill Lake, but it is unique to see a sizable stream begin right from open water.

WALSH LAKE

McLure Road heading east runs into Bush Road. A short distance east on Bush Road on the north side is the access road to Walsh Lake, another small (10 acre) lake with a maximum depth of 21 feet that is a fine Bahama spot. It, too, is surrounded by public land and features a number of Northern White Cedar (Thuja occidentalis), unusual for our area, and indicative of cold water and neutral or basic organic matter.

If you are making the circuit, Bush Road headed east passes the access road to the Eddy Discovery Center (a fine place to hike or ski, view Mill Lake from an observation deck, have a picnic, and see exhibits and programs) and then eventually intersects Pierce Road for a return home.

- Barry Lonik

Barry Lonik is a land protection consultant working to save natural and agricultural lands throughout Washtenaw County.

HRWC Wish List

Looking to clear out some old equipment? Consider making a donation to HRWC. Call 734-769-5123, extensions listed with each item. Thank you!

PORTABLE GPS UNITS

For use in our Bioreserve Project's field assessments. We want to keep track of the routes we take on our field assessments and enter them into our GIS computer map. Kris – x16 or kolsson@hrwc.org

DIGITAL SCALE OR BALANCE

For weighing small sediment samples sensitive to 0.1 mg for weighing suspended sediment samples.

Jo – x14 or jlatimore@hrwc.org

SQUIRT BOTTLES

For our RoundUps/Stonefly Searches. The bike-bottle style with the push-pull cap for drinking and a screw-on top. Jo – x14 or jlatimore@hrwc.org

PLASTIC STORAGE TUBS

of all sizes, with snug-fitting lids, for storing Adopt-A-Stream monitoring equipment. Jo – x14 or jlatimore@hrwc.org

MEMBER LEVELS

□ \$250 Soft Shell Turtle

□ \$1,000 Smallmouth Bass

□ \$2,500 Great Blue Heron

□ \$30 Mayfly □ \$50 Crayfish

□ \$100 Dragonfly

□ \$5,000 Mink

□ \$500 Salamander

YOU Make The Difference

Every individual has a role to play. Every individual makes a difference.

Our most valuable world resource in the 21st century is not oil, not natural gas, not even some type of renewable energy. It is water-clean, safe, fresh water.

Your membership supports HRWC programs. Send us this membership form with your check made out to "HRWC" or join on-line at www.hrwc.org and click on Join Now! Your contribution is tax-deductible.

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Thanks to Our Supporters!

Protecting the Huron is a big job and we would be lost without the donations of time, talents, and resources from our dedicated volunteers and supporters. **We extend Special Thanks to:**

Dave Brooks, Graham Lewis, John Lillie, Cynthia Radcliffe, and Don Rottiers for helping staff move all of our monitoring equipment to its new home.

Dave Brooks and **Tom Chettleburgh** for doing the heavy lifting as HRWC staff offices received new furniture.

Sheila Schueler, Emily Springfield, Kris Kaul, Amy Beltemacchi, and Janice Selberg for searching the web for photos to include in our Field Guide for the Rapid Ecological Assessment of Natural Areas.

Over 26 people who are driving around the watershed, performing roadside surveys of natural areas for the Bioreserve Project.

Scott Wade and Limnotech for printing our HRWC program displays, Busch's for the cheese and fruit trays and Doug Wanty and O&W Inc. for the IBC Root Beer for the Jan. 28 Open House.

Debi Weiker for help with the Middle Huron data analysis and reporting.

Ben Kraft for helpful review of the Middle Huron Watershed Management Plan.

Dave Wilson for continuing leadership with Woods Creek Friends.

Chris Benedict for help planning the March 20 HRWC Open House at Indian Springs Metropark. **Over 160 wonderful people** who searched 54 Adopt-A-Stream sites in the watershed for stoneflies on January 26, plus the **14 additional people** who prepared and staffed the event.

Keith Jeffries and **Russ Collins** for advising us on the technical aspects of the Millers Creek Film Festival.

Lindsay Mishler, Edward and **Marilyn Couture,** and **Brigit McGowan** for creating and distributing the Millers Creek Film Festival posters.

Steve Kepeller for ongoing leadership of the Millers Creek Action Team.

Susan Thompson for taking community college students out to discover stoneflies in Fleming Creek.