



Huron River Report

The Newsletter of the Huron River Watershed Council

Winter 2006

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The Huron: “Wild Boar” or “Lout”?

The two Huron Rivers of southeastern Michigan

Members of HRWC do not need to be told about the many practical benefits and recreational opportunities afforded by the Huron River. But how many of you are aware that there was once a second Huron River in southeastern Michigan? This article explores how there came to be two rivers with the same name and what historical events brought that confusing situation to an end.

ORIGINS OF A NAME

Our Huron River was “discovered” by the famous French explorer Robert Cavalier, Sieur de LaSalle when he, four companions and an Indian guide came upon the river somewhere near Portage Lake in Livingston County while traveling overland from Lake Michigan to the Detroit River. After constructing canoes, he and his party floated down the river until they reached the vicinity of present-day Belleville, then crossed over to the Detroit River on foot.

Of course LaSalle didn't really discover the river; it was well known by the Native Americans, who called it Cos-scut-e-nong-sebee, meaning Burnt District River, referring to the practice of setting fires to maintain openings in the forests.

The French named the river after the Huron Indians, who had established settlements near its mouth. The oldest map on which the Riviere Aux Hurons appears is one drawn by Joseph Gaspard de Lery in 1749. The Hurons were a confederation of four Iroquoian tribes, originally from southern Ontario, but the tribal members didn't call themselves Hurons. The Hurons in Michigan referred to themselves by a name that has

been rendered variously as Wendots, Wy-andots, Oendats, or Guyandots. “Huron” is a French word.

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Voyageur Canoes were the original “working vehicles” for commerce along the Huron River. Today, Huron-Clinton Metroparks offer Voyageur Canoe rides at select locations. — photo: HCMA

Mill Creek Revealed

Results of a monitoring “blitz” on the Huron's largest tributary

HRWC is wrapping up over two years of an intensive MDEQ-funded effort to understand and protect the Mill Creek sub-watershed. The “Mill Creek Blitz” included scientific, volunteer-operated studies of 15 stream sites throughout the sub-watershed, as well as a number of activities to increase resident involvement in protecting the creek. These efforts included citizen roundtables, training residents to be the “eyes and ears” of the sub-watershed, several informative articles published in local newspapers, and educational brochures and a calendar that introduce residents to Mill Creek and suggest simple

actions to reduce creek degradation (see the Fall 2005 Huron River Report for more information).

This article reviews the results of an intensive study of Mill Creek in relationship to the four major challenges identified by the Mill Creek Subwatershed Management Plan: heavy nutrient loads (especially phosphorus), “flashy” flow rates, soil erosion and sedimentation, and other contaminants. These four challenges will be reviewed in terms of macroinvertebrate populations, habitat quality, stream flow and water quality.



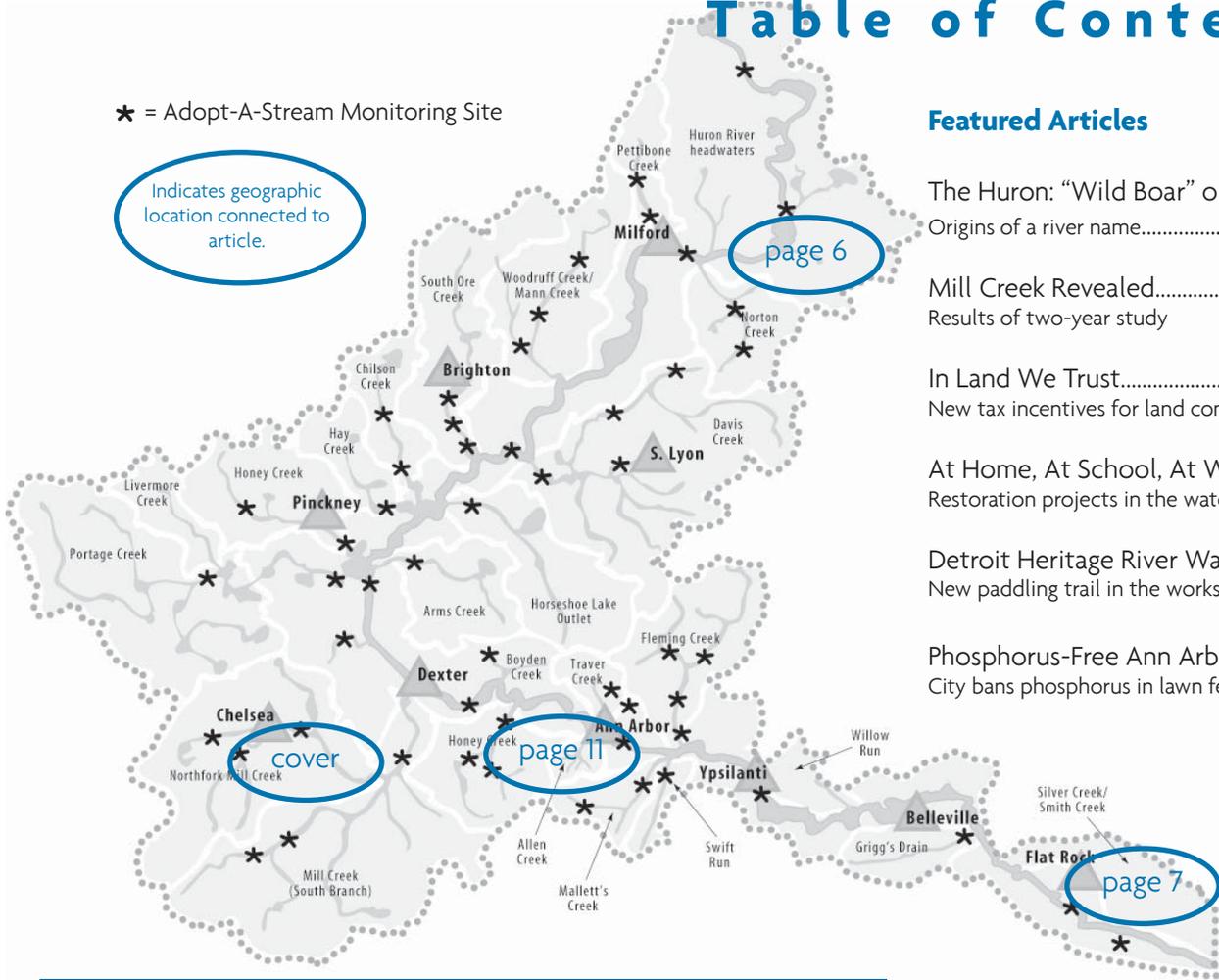
Mill Creek downstream of Waldo Road — photo: HRWC

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★ = Adopt-A-Stream Monitoring Site

Indicates geographic location connected to article.



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EVENTS

Monday, Dec. 11, 7 – 8:30 PM

Mill Creek Revealed

Sylvan Township Hall

Thursday, Dec. 14, 5:30 PM

HRWC Executive Committee

NEW Center

Email lrubin@hrwc.org

Thursday, Jan. 11, 9 AM – 9 PM

Whole Food Community

Support Day - 5% to HRWC!

Details on page 9

Thursday, Jan. 25, 5:30 PM

HRWC Board Meeting

NEW Center

Email lrubin@hrwc.org

Saturday, Jan. 27, 11:30 AM – 4:30 PM

or 1– 6 PM

Stonefly Search

Entire Watershed

Email jmartin@hrwc.org by Jan. 17

Tuesday, Feb. 20

Deadline to submit a film to the

Millers Creek Film Festival

Info from jmartin@hrwc.org

Tuesday, Mar. 27, 4:30 PM

Millers Creek Film Festival

Michigan Theater

603 E. Liberty

Ann Arbor, MI

Saturday, Mar. 31, 12 – 5 PM

Bug Show &

Leadership Training

Email jmartin@hrwc.org

More events and updates on the web at: www.hrwc.org

HRWC offices are located at the NEW Center

1100 N. Main Street in Ann Arbor

Call (734) 769-5123 or visit the HRWC website for directions

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The Huron: “Wild Boar” or “Lout”?

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Two origins of the word “Huron” have been suggested. The more colorful is that it is derived from the Old French “hure,” meaning the rough hair on the head of a man or a beast or, specifically, a wild boar. According to this explanation, the French referred to Wyandot braves as Hurons, because their Mohawk-style haircuts reminded them of wild boars. The other explanation notes that the word “Huron” was used in France as early as 1358 as a name expressive of contempt for an unkempt person, a ruffian, a lout, or a peasant or savage. Whichever is the correct explanation, it is clear that “Huron” was not an appellation of respect.

THE OTHER HURON

The other river that was destined for a while to bear the name “Huron” is the present-day Clinton River. DeWitt Clinton, the river’s namesake, was an American. He had been the Mayor of New York City, the Governor of New York, a United States Senator, the last Federalist candidate for President, and one of the most popular public figures in America at the time. There are probably more cities, counties, townships, and rivers named after DeWitt

Clinton than any other American, other than some of our more famous presidents. Despite being an Easterner, DeWitt Clinton does have a connection to the state of Michigan. He was the prime mover behind the construction of the Erie Canal, along which most of the early settlers of the state made their way from New England, New York, and other eastern states.

The Native American name for the Clinton was Not-a-was-sippe. “Not-a-wa” is a Native American word meaning “rattlesnake,” but it was also used as a pejorative term for an enemy. “Sippe” or “seppe” means river (as in “Mississippi”). So “Not-a-was-sippe” could have meant “Rattlesnake River” or “River of the Enemy.” I like the way the word tumbles off of the tongue, and apparently so did the French, because they continued to use it rather than giving the river a French name. However, when the British took over control of Canada, including the land surrounding the Great Lakes, after the French-Indian War in 1763 – using a logic that only the English would understand – they renamed the Not-a-was-sippe the Huron River, despite the fact that there was already another Huron River close by. Then, to undo the

unnecessary confusion they had introduced, they resorted to a quaintly English solution, referring to one of the Hurons (our Huron) as the “Huron River from Lake Erie” and the other as the “Huron River from Lake St. Clair.” These names were not merely nicknames used by locals during informal conversations that demanded that there be no ambiguity about which river was being discussed; they were the “official” names enshrined on maps of the area.

Following the War of 1812, when the United States finally displaced the British from the Northwest Territory and redesignated part of it as the Michigan Territory, one of the first acts of the Territorial Legislative Council of 1824 was to clean up this silly mess by changing the name of the Huron River from Lake St. Clair to the Clinton River and letting the Huron River from Lake Erie just be the good old Huron River. Good job, guys!

— Michael M. Martin

Dr. Martin is a retired U-M biologist and chemist who takes pleasure in history and paddling the Huron River.

In Land We Trust

New tax incentives for land conservation

New federal tax incentives for land conservation were signed into law recently. The new law will help family farmers and other moderate-income landowners obtain a significant tax benefit for donation of a conservation easement and for the bargain sale of development rights.

The enacted law provides:

- the maximum deduction a donor may declare is now 50% of his or her adjusted gross income (AGI) in any year, an increase from the previous 30%;
- qualifying farmers may deduct up to 100% of AGI; and
- the carry-forward period for a donor to declare tax deductions is now 15 years, an increase from the previous period of five years.

These provisions are effective for donations and bargain sales made from January

1, 2006 through December 31, 2007. After that time, the law will revert to the previous provisions unless Congress acts to extend the new provisions.

HRWC encourages you to consider these conservation options for your land. You help protect the Huron River watershed by permanently conserving your land whether that land is riverfront property or not. Contact your local land trust for more information.

Livingston Land Conservancy:
(810) 229-3290
North Oakland Headwaters Land
Conservancy: (248) 846-6547
Oakland Land Conservancy: (248) 601-2816
Southeast Michigan Land Conservancy:
(734) 484-6565
Washtenaw Land Trust: (734) 302-5263

BOOKS
BY CHANCE

REMINDER:

1. Clean out clutter at home
2. Take extra, old and unwanted books, CDs, and DVDs to HRWC
3. Feel good about clean home and raising funds for HRWC
4. 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.

Mill Creek Revealed

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AQUATIC MACROINVERTEBRATES

Aquatic macroinvertebrates (animals without backbones that can be seen with the naked eye, including juvenile insects, clams, and crayfish) are very useful indicators of stream quality because their ability to tolerate pollution and habitat degradation varies from one group to another. HRWC's Adopt-A-Stream program focuses on monitoring stream quality throughout the Huron River watershed by making seasonal collections of aquatic macroinvertebrates from permanent study sites. These collections are identified to family – a useful taxonomic level for calculating stream quality scores for each monitoring site.

For the past two years Adopt-A-Stream volunteers have collected aquatic macroinvertebrates during spring and fall River RoundUps at eight sites in the Mill Creek system. Six of the Mill Creek monitoring sites support stable aquatic insect communities, showing no statistically significant changes over the past five years. However, other indicators of stream quality such as the number of “EPT” families [mayflies (Ephemeroptera), stoneflies (Plecoptera) and caddisflies (Trichoptera) are particularly sensitive to water quality and habitat degradation]. The number of sensitive families (as determined by research on insect tolerance to pollution) at the Jackson Road site on the mainstem seem to be declining, as are the EPT families in Letts Creek, a tributary to the North Fork. Further, only the most upstream monitoring sites – Ivey Road on the North Fork and Manchester Road on the South Fork – consistently support a rich fauna of EPT and sensitive families.

Volunteers also sought sensitive stonefly nymphs (juveniles) during the Stonefly Search that takes place each January. Winter stonefly nymphs require cold, clean, oxygen-rich water. In the winter, an absence of stoneflies suggests that toxic pollutants may be present in the stream. While winter stoneflies are not always found in every Mill Creek monitoring site, they are quite common here; in fact winter stoneflies were found at all eight monitoring sites in January 2006.

BY THE NUMBERS...

Since 2004, HRWC volunteers have been working with staff on an intensive study of Mill Creek. Now, 102 aquatic invertebrate samples, 193 streamflow measurements, 245 water samples, 6 habitat assessments, and 24 stream level logger downloads later, we have developed a strong understanding of the state of the creek.

HABITAT QUALITY

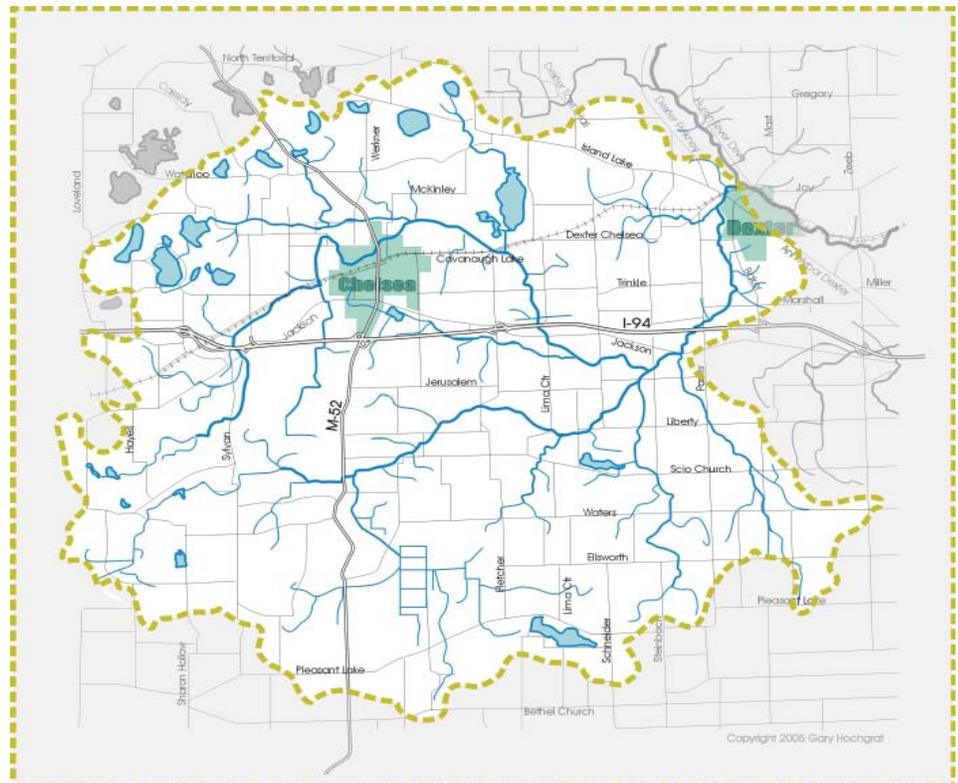
The quality of habitat that streams and the river provide for aquatic life, like invertebrates and fish, is assessed every five years at all Adopt-A-Stream monitoring sites. Trained volunteers “read the river” by recording the conditions of the banks and bottom, making depth and width measurements, and noting surrounding land use and in-stream habitat features. The overall habitat quality in Mill Creek averages a score of about 65 out of 100, with sites ranging from fair to good. For those sites where monitoring exceeds five

years, habitat quality appears to be stable generally. Several sites show improvements in streamside vegetation conditions, but channel erosion is occurring at three or more sites.

STREAM FLOW

Another component of the Mill Creek study was to understand the dynamics of the amount of water flowing through Mill Creek and its variability. HRWC installed electronic sensors at Dancer Road on the North Fork and at Jerusalem Road on the South Fork. Both locations are slightly upstream of the juncture that forms the mainstem of Mill Creek, so they monitor the flow from each fork in its entirety. The US Geological Survey maintains an electronic stream level gage at Parker Road on the mainstem (real-time stream flow data from this gage is available online, at waterdata.usgs.gov/nwis/rt).

One of the challenges facing Mill Creek is flashy flow due to storm events, as described above. While Mill Creek may not



The Mill Creek subwatershed is the largest in the Huron River Watershed at 145 square miles. It includes portions of nine townships, the Village of Dexter and the City of Chelsea. The stream network runs 226 miles and contains hundreds of lakes and thousands of wetlands. Mill Creek flows into the Huron River just north of the Village of Dexter. — graphic: Gary Hochgraf

Mill Creek Revealed

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have flow fluctuations from storm events that are as extreme as the most urbanized streams, relatively rapid change is common here. For example, the sensor at Jerusalem Road recorded a tenfold increase in stream flow over a 24-hour period this spring – from about 225 gallons per second to over 2,250 gallons per second.

WATER QUALITY

Monitoring of water quality focused on two parameters – conductivity and phosphorus. Conductivity is an indication of the amount of dissolved ions (such as salt or metals) present in the water. High conductivity (for the Huron River Watershed, 800 microSiemens (uS) or higher) may indicate the presence of certain types of pollutants. Water samples are taken for conductivity measurements three times each year. Fortunately, the average conductivity of stream water at all the monitoring sites is at or below the 800 uS threshold, except for Letts Creek, the small tributary to the North Fork, which averages 891 uS.

In response to the challenge of excessive phosphorus inputs to Mill Creek, HRWC began measuring levels of phosphorus in the creek at nine different sites in dry and wet conditions (when nutrients are most likely to run off the land). While the data still are being analyzed, the early stages of analysis show that phosphorus concentrations in Mill Creek increase from upstream to downstream. A disproportionately large amount of phosphorus seems to be contributed to the creek by one small agricultural tributary to the South Fork, monitored at the intersection of Parker and Liberty roads. Overall, the South Fork seems to contribute more phosphorus to the Mill Creek system than the North Fork.

IN CONCLUSION...

The general conclusions from this study of Mill Creek are not surprising. The healthiest monitoring sites are in the most upstream parts of the subwatershed, where the land area that could pollute the stream is the smallest.

In the context of the four challenges facing Mill Creek (heavy nutrient loads, flashy flows, soil erosion, and other contami-

nants), HRWC is increasing the understanding of their relative effects on the health of the subwatershed. Toxic pollution is unlikely to be a problem since volunteers find winter stoneflies at all Mill Creek monitoring sites. Sites which have few EPT or sensitive families probably suffer from erosion occurring upland and within the stream channels, caused by rapid runoff of stormwater from developed and agricultural lands. These flow and habitat studies support this conclusion. One exception may be Letts Creek, where relatively high conductivity and lack of sensitive insect families may indicate other pollutants.

Surrounding land use, riparian buffers, and channel modifications appear to have significant impacts on the health of Mill Creek. For example, the creek at Manchester Road on the South Fork, supports a relatively diverse macroinvertebrate community, with several sensitive varieties found on a regular basis, while the creek near Fletcher Road on the North Fork does not. While both sites drain mostly agricultural lands, the Manchester Road site is protected by streamside (riparian) buffers of wild vegetation and trees, including some woodlots, and has a variety of different in-stream habitats, like riffles and pools. The Fletcher Road site has inadequate riparian protection and is a homogeneous channel with little variety of habitat for aquatic life as it flows beneath both a railroad bed and a road.

The results of this study will be presented in two public meetings in the Mill Creek subwatershed; the first meeting will be on November 16th at the Dexter Township Hall and the second meeting will be on December 11th at the Sylvan Township Hall. An in-depth written report of these results also will be available. For more information, email jlatimore@hrwc.org.

— Jo Latimore

Creek Detectives Seek Sediment

Training people to assist with soil erosion and sediment control in Mill Creek

How can two people visit more than 1,000 active construction sites on a regular basis to check for compliance with soil erosion and sediment control standards? It's not easy. But that precisely is the situation in which Washtenaw County soil erosion officers find themselves – and they're not alone. Most agencies with enforcement authority for soil erosion standards are stretched thin.

To help remedy this problem, HRWC trained 25 residents in Dexter and Chelsea to assist in identifying and reporting problems with soil erosion and sediment control at active construction sites. Trainees learned sleuthing techniques from guest speakers Anya Dale, Soil Erosion Control Officer for Washtenaw County, and Dr. Dave Wilson, lead investigator of the Mill Creek sediment study and Professor Emeritus at Vanderbilt University. Dale and Wilson shared terrific visual examples of problem sites as well as good soil erosion control practices. All of the newly trained "creek detectives" agreed that the training gave them tools to assist soil erosion enforcement authorities with keeping soil on the land and out of Mill Creek and the Huron River.

Excessive soil erosion and sedimentation is one of the top three challenges facing Mill Creek. As new development spreads throughout the watershed, active construction sites will continue to be a significant source of soil erosion and sediment in local streams and lakes. The trainings were made possible by a grant from the US EPA and MDEQ.

— Elizabeth Riggs

At Home, At School, At Work

Restoration projects reduce runoff and improve habitat

HRWC is working on three projects to make physical improvements that will restore some of the natural hydrology within the river system. Two of these projects are “retrofits” – altering the flow through existing stormwater detention basins to improve their treatment capacity. These two projects, in the Huron’s headwaters near Wixom, are nearing completion. The third project, recently funded by MDEQ, will restore some of the natural flow and floodplain characteristics of a small section of Millers Creek in Ann Arbor.

RETROFITTING EXISTING DETENTION BASINS

In the past, most detention basins were built to capture some of the initial runoff and release it slowly to the stream system in an effort to reduce flooding from the largest storms. Such basins are often nothing more than dry depressions supporting grass or weeds. This design does little to reduce sediment and nutrient (particularly phosphorus) runoff into the streams.

At Sarah Banks Middle School on Charms Road, contractors working with HRWC have transformed the original detention basin into a stormwater wetland designed to remove phosphorus and sediment from stormwater before it runs off to Norton Creek and the Huron River. Added benefits include more suitable habitat for waterfowl and wetland wildlife, and a site to be used as an outdoor laboratory

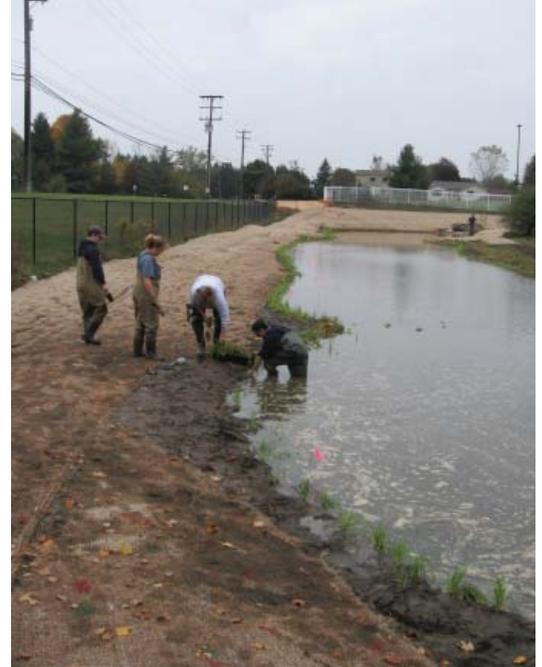
for school science projects and general education. Students from the school, along with community volunteers, assisted in planting native wildflowers, grasses, rushes, and other wetland plants, and have been charting progress on the site.

A detention basin that was built to hold runoff from a portion of the Wildwood Subdivision will be transformed into a deeper pond vegetated with native plants that will hold water on a more permanent basis, allowing phosphorus and sediments to be removed before flowing to Norton Creek.

MILLERS CREEK TO GET LARGE-SCALE RESTORATION

Millers Creek suffers from extensive erosion due to its steepness and large amount of impervious surface. The MDEQ recently granted HRWC \$396,000 to reconstruct a section of the west branch of Millers Creek. Pfizer Inc. is contributing an additional \$900,000 to the project. Pfizer has been involved with previous collaborative work with HRWC because sections of the creek are on company property.

Work on this highly eroded creek will restore connectivity to floodplains, decrease the grade of the channel, restore native vegetation, and dissipate the energy of



Volunteers planting native sedges along the bank of the reconstructed wetland at Sarah Banks Middle School. Erosion control mats over native seeds line the upper banks. — photo: HRWC

extreme flows that follow rain storms. The result should be reduced flash flooding, increased storm water storage and improved wildlife habitat. The project will take place over the next two years with monitoring to follow.

— Ric Lawson

Thank You, Susan . . . Hello, Jennifer

HRWC welcomes new Finance Manager



Susan Wooley is pursuing new adventures — photo: J. Wooley

Susan Wooley has left HRWC after seven years as Finance Manager to embark on her next adventure and spend more time with her family. We will miss Susan’s sharp focus on the details, organization and financial prowess. She has advanced the organization’s financial savvy skillfully. Luckily she still wants to volunteer with HRWC!

Jennifer Fike, our new Finance Manager, started in early November. Jennifer has years of experience in accounting for non-profit organizations. We will be sharing Jennifer with the Ann Arbor Summer Festival, where she works part-time. We look forward to her fresh eyes and enthusiasm.



Jennifer Fike is HRWC’s new Finance Manager — photo: HRWC

Detroit Heritage River Water Trail

Creating a paddling trail along the Detroit, Huron, Rouge, and Raisin rivers

The Detroit Heritage River Water Trail, the first regional water trail planned for Southeast Michigan, will allow canoeists and kayakers to paddle along the Detroit, Huron, Rouge, and Raisin rivers and experience first-hand the region's abundant natural resources and rich history.

The water trail will be, in effect, a river version of a greenway and is planned to encourage water recreation. It will connect people to the heritage and bountiful natural resources and wildlife along these waterways, with links to attractions, such as greenway trails, as well as cultural assets like museums, restaurants and shopping opportunities. The trail also will provide the opportunity to tell distinctive stories through signage about the rivers' ecology and heritage that will educate residents and visitors alike.

Phase I of the Water Trail begins in the City of Flat Rock on the lower Huron River and leads downstream to Lake Erie. It then runs up the west shoreline of Lake Erie into the mouth of the Detroit River, and extends out to Celeron, Round, Hickory, and Sugar islands as well as around Grosse Ile.

Significant progress has been made in implementing Phase I, particularly along the lower Huron. The Huron-Clinton Metropolitan Authority (HCMA) has designated two new canoe/kayak launches in Lake Erie Metropark and is planning to install signage at three existing launch sites. Additionally, HCMA will update its park master plans to reflect the desire to develop launches at Lower Huron, Willow, and Oakwoods Metroparks. The City of Flat Rock has approved a resolution that supports the establishment of its portion of the trail.

Next steps include incorporating the plan in local recreation and master plans, acquiring funding for launch site ameni-



Kayaks and canoes on the shore of the Huron River at Labo Park
— photo: HCMA

ties, developing strategies and methods for interpreting and communicating historical, cultural, and natural features, and establishing management and maintenance arrangements.

The Metropolitan Affairs Council (MAC) in the Detroit Metropolitan area initiated the project and funded Phase I with the understanding that quality-of-life amenities, like the Water Trail, are incredibly important to this region's economic development. Southeast Michigan businesses compete with other metropolitan areas in attracting workers - particularly the young, information-age professionals important for the growing knowledge-based economy. These young professionals evaluate the quality of life of regions when deciding where they want to live, work, and raise a family. To be competitive Southeast Michigan must emphasize its assets - blue waterways, abundant wildlife, rich natural resources, and wonderful recreational opportunities. One way to do that is through the Water Trail that can connect residents and visitors with those assets.

Go to the MAC website (<http://www.mac-web.org>) for details on the project. This site includes an "interactive guide" for the Phase I Development Plan and the ability to download a PDF version of the Detroit Heritage River Water Trail.

— Laura Rubin



Map of trail in the lower Huron River and Rouge River watersheds — graphic: courtesy of MAC

Know Your Board Representative

Jim Wilkes, Village of Barton Hills

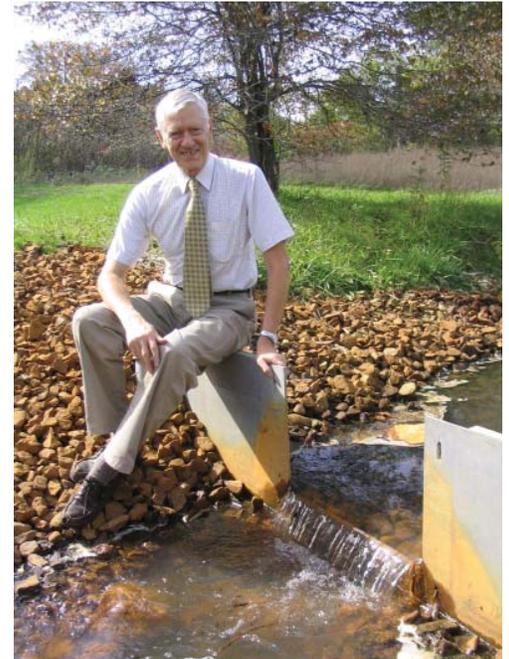
Jim Wilkes represents the Village of Barton Hills on the HRWC Board. Jim was born in Southampton, England. He was a chemical engineering student and faculty member at both the University of Cambridge and the University of Michigan. At the U-M, his distinguished 40-year career included chairing the Chemical Engineering Department, writing several books, and receiving the top two awards for excellence in teaching.

He and his wife, Mary Ann, have lived in Barton Hills since 1971. After witnessing an argument over water pressure adequacy in the Village, he helped conduct tests to resolve the issue. Jim developed a general purpose piping and computer program and the test results provided data to help predict consequences of any changes in the water distribution system.

Since 1991, Jim has chaired the Village Water Committee and written monthly reports. He has been a member of the Barton Hills Board of Trustees since 1995 and has served as its president.

His life is full of rich experiences, most of which cannot be listed here due to space constraints. He has two diplomas for organ performance and includes hiking, tennis, gardening, reading and writing among his hobbies.

Jim "greatly appreciates the advice and support given to Barton Hills by HRWC". If any resident of the Village would like more information, has comments or suggestions, or would like to become involved with HRWC's work, call Jim at (734) 663-6174 or HRWC at (734) 769-5123.



Barton Hills representative Jim Wilkes perches on a notch installed on a stream in the Barton Pond environs. —photo: Mary Ann Wilkes

— Eunice Burns

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Laura's Stream of Consciousness

An update on HRWC projects and activities

In early October I traveled to Toronto for a meeting on Great Lakes Climate Policy. This small project is organized by ICLEI, a non-profit working on "Local Governments for Sustainability." This third and final meeting of the group consisted of officials from nine large cities in the Great Lakes that have made commitments to ICLEI's Cities for Climate Protection project (www.iclei.org/usa). The cities represented were Chicago, Toronto, Buffalo, Milwaukee, Toledo, Minneapolis, St. Paul, Duluth, and Ann Arbor. For this meeting, the energy officials were asked to bring their water resource expert, so that's how I ended up there.

It was fascinating to hear all that these cities are doing to reduce greenhouse gas emissions, reduce energy consumption, and find energy and water co-benefits. But I was even more struck by the watershed impacts from global warming with which we are all dealing. Consistently, the water resource experts talked about the increased intensity and duration of storms, the fact that "100-year storms" (storms in the past have occurred on average every one hundred years) recently have been occurring every two years, and the resulting flooding, erosion, and poor water quality in our cities. We all are struggling to prevent the problems and manage the impacts of land use, but little did we all

understand that some of the root causes relate to global warming, and that the warming happening right now will only continue to exacerbate these problems.

Yet, I also heard inspiring tales about stormwater best management practices and energy use reduction in water treatment and wastewater treatment operations. We toured the City of Toronto's Enwave Deep Lake Water Cooling Plant that uses a layer of icy-cold (4°C) water 83 meters below the surface of Lake Ontario as the renewable source of energy to cool office towers, sports and entertainment complexes and proposed waterfront developments (see diagram at left). We

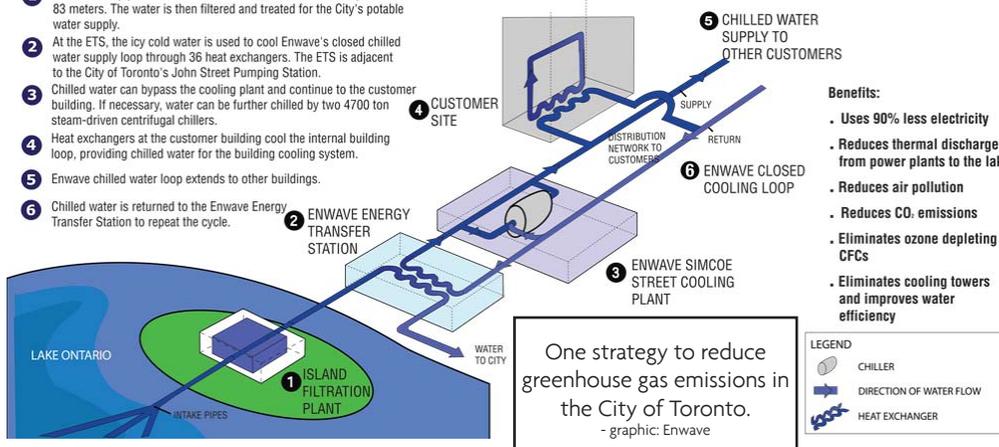
also heard about efforts to bring people back into cities and revitalize downtowns to reduce commutes and transportation-related emissions.

In all I came away with a renewed appreciation of the root of many of our watershed challenges and hope that by working with energy and climate protection specialists we can find productive initiatives to deter the impacts of global warming and solve some of the toughest problems plaguing the Huron River.

— Laura Rubin

Deep Lake Water Cooling System

- 1 Three intake pipes draw 4°C water from Lake Ontario at a depth of 83 meters. The water is then filtered and treated for the City's potable water supply.
- 2 At the ETS, the icy cold water is used to cool Enwave's closed chilled water supply loop through 36 heat exchangers. The ETS is adjacent to the City of Toronto's John Street Pumping Station.
- 3 Chilled water can bypass the cooling plant and continue to the customer building. If necessary, water can be further chilled by two 4700 ton steam-driven centrifugal chillers.
- 4 Heat exchangers at the customer building cool the internal building loop, providing chilled water for the building cooling system.
- 5 Enwave chilled water loop extends to other buildings.
- 6 Chilled water is returned to the Enwave Energy Transfer Station to repeat the cycle.



Whole Foods Community Support Day - January 11, 2007!

Mark your calendar...

Shop at Whole Foods on Thursday, January 11, and 5% of your purchase total will benefit the Huron River Watershed Council.

Special in-store activities include:

Japanese fish printing from 11 am - 4 pm. Make your own print of one of the types of fish found in the Huron River. Special rubber forms make this activity easy for kids and adults alike.

Learn more about Whole Foods Marine Stewardship Council. This innovative program supports sustainable, environmentally-friendly fishing practices.

Watch your mailbox for a special, members-only coupon and bring it with you on January 11 for great savings in the fish department.

Don't miss this special event! **3135 Washtenaw Avenue, Ann Arbor**

WHOLE FOODS MARKET

HRWC THANKS WHOLE FOODS AND YOU, OUR MEMBERS, IN ADVANCE FOR SUPPORTING EFFORTS TO PROTECT AND RESTORE THE WATERSHED.

Spotlight on Peter Allen and Associates

Walking the talk on Smart Growth

One of HRWC's business partners, Peter Allen, has put the spotlight on how developing condominiums downtown is good for open space, healthier for homeowners, and good for the Huron River.

At the corner of West Kingsley and Ashley streets, in Ann Arbor's Kerrytown District, 46 loft condominiums are being built by Berg and Allen, a business partnership between Peter Allen and Mark Berg.

Allen and Berg are trying a unique sales approach. "We're selling a lifestyle as much as a new home," Allen says. Berg and Allen believe Kingsley Lane Lofts, with its proximity to jobs, shopping, transportation options, and cultural amenities, isn't just a fun and exciting way to live, but one that also protects open space and encourages people to live without needing their own car.

As most European cities have proved—by building up, and not out—municipalities can forgo the need for additional infrastructure to supply "edge" development. This type of development also results in less impervious surface, which means less

polluted runoff reaching the Huron and its tributaries. "If even half of our buyers were to buy typical housing outside of town, that would create an acre of impervious surfaces," Allen says emphatically. "At Kingsley Lane we will have 70-100 people living on less than one-third of that."



Drawing of Kingsley Lane
— provided by Doug Allen

Developing downtown hopefully translates into less development pressure on the greenfields outside of town, but not as a rule, says Doug Allen, who works for Peter. "That's why we will be giving \$50,000 to the Greenbelt Advisory Commission," to help buy farmland and natural areas as

part of the Greenbelt around Ann Arbor.

Though it is more expensive to buy in downtown Ann Arbor, due to higher land prices and complex construction, the operating costs of an average condo in a loft building are very economical when compared to the average home in Ann Arbor. Because of the stacked construction, energy-efficient windows, and high-efficiency HVAC systems, Doug Allen says, "the utility and long-term maintenance costs will be roughly half the cost of living in a single family detached home."

"Not to mention the cost of transportation," Berg adds. "The average cost of car ownership is \$6,000 a year." He says the new residents will be a short bike or walk away from their work, shopping, the AATA transit station, or the Amtrak station. "That will keep more money in their pocket through the savings of gas money and repairs, . . . and, hopefully, fewer doctor visits," thanks to less time spent sitting in cars.

— Ellen Offen

Make a Difference—Leave a Legacy

Contribute to the Huron River Fund Endowment

The Huron River is an essential and beautiful resource in Southeast Michigan. It provides recreational opportunities, drinking water, wildlife habitat and economic vitality. There is a way that you can protect the Huron now and for future generations: the Huron River Fund Endowment.

The Endowment will ensure the financial future of HRWC and help maintain a beautiful, healthy river for years to come. If you would like to donate to the Huron River Fund, you can do so in a number of ways. Everyone's situation is unique so talk to your bank, financial planner or an attorney about supporting the Huron River Fund through:

- A percentage of your estate's value
- A part or the entire remainder residue on your estate bequest in your will to provide a specific percentage of your estate for the river
- All or part of the proceeds of your Life Insurance or Retirement Plan
- A Life Income Gift, such as a Charitable Remainder Trust

When you give to the Huron River Fund, your donation is invested professionally and securely by the Ann Arbor Area Community Foundation.

For more information about the Huron River Fund Endowment, please contact Ellen Offen at (734) 769-5123 x19 or by e-mail at eoffen@hrwc.org.



Students from Slauson Middle School in Ann Arbor enjoy a day of canoeing on the River.

— photo: HRWC

Phosphorus-Free Ann Arbor

City bans phosphorus in lawn fertilizers

The City of Ann Arbor recently passed an ordinance to ban the use of phosphorus-containing lawn fertilizers, effective January 2007. Like many communities within the watershed, the City is under a federal mandate to reduce phosphorus levels in the Huron River substantially in order to meet water quality standards. The City's sewage treatment plant already removes 95 percent of the phosphorus in wastewater processed through the plant, yet phosphorus levels in the Huron River remain too high. As a result, nonpoint sources of phosphorus also must be targeted for reduction.

Runoff of residential fertilizer is a primary source of phosphorus entering the Huron River. Ordinance No. 1-06 aims to reduce the excessive application of phosphorus-containing lawn fertilizer as an effective way to lower phosphorus levels in local waterways. While phosphorus is essential to the growth of healthy plants, soil tests in the Ann Arbor area find that 85 percent of lawns have enough phosphorus and don't need more. By limiting the unneces-



— illustration: David Zinn

sary application of phosphorus to lawns, the City expects to reduce the amount of phosphorus entering the river by an estimated 22 percent.

Commercial lawn care providers will be prohibited from applying phosphorus to

lawns, with exemptions for new lawns seeded or sodded within the last year. Residents are encouraged to use only lawn fertilizers that specify no phosphorus, as indicated by the middle number in the three-number series listed on the bag. Local retailers already are involved in the process to provide customers easy access to fertilizer products that comply with the ordinance. Meetings with service providers, retailers and other communities interested in the ordinance were held this fall.

If you are interested in reviewing the ordinance, please go to http://www.a2gov.org/CommunityServices/Clerks/new_ord.html or contact Matt Naud, Environmental Services Coordinator for the City of Ann Arbor, at mnaud@ci.ann-arbor.mi.us.

— Jennifer Wolf

The Huron River Watershed Council

The Huron River Watershed Council is a coalition of Huron Valley individuals, businesses and local governments established in 1965 under Michigan's Local River Management Act to inspire attitudes, behaviors, and economies that protect, rehabilitate, and sustain the Huron River system. HRWC is a non-profit organization under section 501(c)(3) of the federal tax code.

If you enjoy this newsletter, please consider membership. Services of HRWC include hands-on citizen education, technical assistance in policy development and direct river protection projects. You will find a membership form below. All contributions are tax deductible.

Yes, I want to help the Huron River Watershed Council protect and restore the Huron River.

Here are my member dues, mailed to: Huron River Watershed Council
1100 N. Main Street, Suite 210
Ann Arbor, MI 48104

<input type="checkbox"/> \$5,000 Mink	<input type="checkbox"/> \$500 Blue Heron	<input type="checkbox"/> \$50 Friend
<input type="checkbox"/> \$2,500 Smallmouth Bass	<input type="checkbox"/> \$250 Mayfly	<input type="checkbox"/> \$30 Supporting
<input type="checkbox"/> \$1,000 Green Heron	<input type="checkbox"/> \$100 Steward	<input type="checkbox"/> \$___ Other

Name _____

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We need your support.
Thanks.

The Huron River Watershed Council receives contributions via payroll deduction through EARTH SHARE of Michigan.



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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:**

David Reichhardt, Don Rottiers, and Dave Wilson for teaching Flat Rock Community High School students about the Huron through field trips and classroom activities.

One hundred-thirty volunteers who conducted the fall monitoring of 51 Adopt-A-Stream sites with expert assistance from entomologists **Gary Crawford, Dana Infante, Jill Kelley, and Beth Sparks-Jackson.**

Tom Chettleburgh, Margaret Doub, David Katz, and Graham Lewis for maintaining and regularly downloading our stream level loggers on Fleming, Mill, and Millers creeks.

Norma Jean Wade for transcribing our entire book of "Histories along the Huron".

Marty Baldwin, Sharon Brooks, Roberta Carr, Edward and Marilyn Couture, Magda Herkhof, John and Sue Lillie, Don Rottiers, Nancy Stokes, Wes Vivian, and Norma Jean Wade, who assisted heroically with the manual labor of set-up and take-down for the River RoundUp and ID Day. **Marty, Magda, Rosalie Meiland, Marcia Van Fossen and Scott Wade,** who greeted people, found their watersheds and made them welcome at the same events.

Sixty-five volunteers who trained and then measured and mapped the physical characteristics of 15 Adopt-A-Stream sites.

Sharon Brooks for scanning our slide collection, one by one, into electronic form.

Liz Ritter for designing fliers about the Millers Creek Film Festival and Video Workshop and the 17 people who distributed them.

Tom Chettleburgh, Margaret Doub and Graham Lewis for continuing to download our stream level sensors.

Tom Wieder and Sue Schooner for opening up their house and providing a wonderful breakfast.

Tim O'Brien for his time talking about Ford Motor and their environmental work.

Marc Akemann for his on-going photographic contributions to HRWC.