



Huron River Report

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SPRING 2016



feature story

Rain Gardens in Mitchell

Neighbors join together to protect Swift Run Creek

If one person can make a difference by building a rain garden – then a neighborhood can truly change the character of a creek. The Mitchell neighborhood – which borders Swift Run, a tributary creek to the Huron River – has started to improve the creek’s water quality by creating rain gardens, and helping each other.

Little did I know when I invited residents in the Mitchell neighborhood to take the Master Rain Gardener class last year that the six folks who signed up would end up having barbecues together, helping each other out, and becoming friends. And not only that – they built rain gardens. They built beautiful gardens that capture the runoff from their roofs and soak it into the ground, an important first step to improving the health of Swift Run.

Build it and they will come

The influence of these six people will be felt throughout the neighborhood. A recent study¹ found that the most important influence on a homeowner’s landscape decisions is what their neighbors do. So when you plant a rain garden, you influence your neighbors to plant one too.

The Swift Run community cares about the health of the creek. A neighborhood survey sent by HRWC found 34 percent of homesites already practice methods that reduce stormwater runoff and pollution (mulching grass, rain gardens, dispose of pet waste, plant trees and shrubs). A remarkable 89 percent say they are willing to take action to improve water quality. Neighbors had already started taking care of the creek. One neighbor itemized the things they had pulled

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Guest article by Susan Bryan

Rain garden plants, usually native species, help capture and filter polluted runoff. credit: S. Bryan

Fluctuating Flows Frustrate Fish

How providing more habitat helps fish spawn and thrive

Rivers naturally ebb and flow, with water speeds and water quantities that are affected by a variety of natural factors: weather, stream gradient, underlying soils, groundwater, and vegetation. Of course, humans directly influence how water flows as well. The more land that is covered by concrete, asphalt, buildings, and sewers, the faster the

rain moves to creeks and rivers. When a river goes from a trickle of water to a rip-roaring torrent quickly after a storm, it is called “flashy.” Flashy flows erode stream banks, scour the rocks and sand that make up the stream bed, and destroy aquatic life. Of particular concern is when these types of flows happen in the late spring and early summer, which is the

main spawning (reproductive) season for fish.

Lessons from Maine

A story from the Rapid River in Oxford County, Maine, highlights the disruption of fluctuating flows on spawning fish. In Maine, invasive

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INSIDE: UPCOMING EVENTS AND WORKSHOPS *Coal tar sealants and PAH levels*
Earth Day Eve Film Fest at Michigan Theater | 50th Anniversary Huron Love Stories compiled





Laura's Stream of Consciousness



H. Buffman

Over the last year many environmental debacles point to a serious threat to clean water and a safe environment.

Starting with Volkswagen's admission of cheating on emission testing to the natural gas leak in California to the Flint drinking water contamination, they all highlight a lack of trust, judgment, and oversight on human health and safety issues. What shocks me the most though, is the lack of accountability and regulation. I shouldn't be surprised given Michigan's recent derision of regulation, budget cuts to environmental protection, and a focus on shrinking government. Michigan ranks 50th among states in government transparency.

In the U.S., drinking water regulations were first enacted by the federal government in 1914 addressing the bacteriological quality of drinking water. This regulation was later strengthened in the 1960s as it became clear that industrial processes were threats to clean water and human health. Local governments were to provide clean water and safely dispose of waste. Oversight of local governments and industry was an expected role of State and federal governments.

Despite dozens of statewide environmental disasters (Enbridge oil spill, the Pall Gelman contamination, industrial clean-up sites), the State of Michigan has been shrinking the budgets and staff of the oversight and regulatory departments. In 1995 Governor John Engler split the Michigan Department of Natural Resources (MDNR) into the Michigan Department of Environmental Quality (MDEQ) and MDNR. The

MDEQ mission is to promote the wise management of Michigan's air, land, and water resources to support a sustainable environment, healthy communities, and vibrant economy. Governor Engler said the split secured more direct oversight of state environmental policy, but then he reduced the number of state environmental employees through budget cuts. A year later, oversight for drinking water protection was transferred from the Michigan Department of Health to the MDEQ. In 2009, Governor Jennifer Granholm briefly merged the MDNR and MDEQ again as the Department of Natural Resources (DNRE). In 2011, Governor Rick Snyder's first-ever executive order, Executive Order 2011-1, split the DNRE, returning MDNR and MDEQ into separate agencies.

Additionally, the MDEQ's budget and resources have been dramatically reduced. In the past 15 years, the general fund contributions to the MDEQ have been cut by 59 percent and the full-time equated positions have been cut by 25 percent. The impacts of these cuts and the general disdain for regulation is prevalent in MDEQ leadership and has led to a minimalist approach by most staff. It is clear that the primary responsibility for what happened in Flint rests with the MDEQ, despite the Governor's efforts to spread the blame. MDEQ failed in its responsibility to ensure safe drinking water in Michigan and, again, in its dismissive and scornful tone toward residents', health care professionals', and scientists' discoveries and concerns. Worse yet, the blatant misrepresentation of facts and manipulation of data to cover for bad policy decisions at the cost of

children's health suggests an agency well off the rails of its stated mission.

I see these problems regularly in our mission to protect and restore the Huron. Permits are quickly issued with little review. Corporate and municipal self-reporting with little, if any, review is common. The pursuit of scientific understanding and application is given low priority. The MDEQ staff that regulate inland lake and streams are overwhelmed with permit reviews and enforcement activities resulting in rubber-stamped permits that rarely get more than a cursory review. HRWC receives dozens of calls annually from citizens impacted by poor permitting and design, natural resource destruction or pollution violations. Without HRWC staff reviewing the permits, making site visits, and/or making phone calls and using our connections and influence, the problems would remain. Even the most well-intentioned and competent MDEQ staff are only able to respond to the most pressing problems, and much pressure is put on them to get out of the way of economic development.

What can we do to avoid these same disasters from happening again? We need to remind the Governor about MDEQ's responsibility to ensure clean water and push him to restore budgets, add staff and training, and support staff who serve that mission. Providing clean drinking water is a series of steps, a chain of events and actions starting with the source water. We need to empower citizens and agency staff to speak up and advocate effectively. We need to use science and water quality monitoring to develop policy and action. Finally, we must listen to the disempowered, to continue to take their concerns seriously, ask the questions and not take it for granted that expertise, good judgment and oversight are a matter of course.

— Laura Rubin
HRWC Executive Director





HRWC Events and Workshops

MARCH • APRIL • MAY • 2016



Native Plants and Rain Gardens at the Home, Garden & Lifestyle Show

Friday-Sunday, March 18-20, Washtenaw Farm Council Grounds, Ann Arbor

Learn tips for using native plants in landscaping and/or building a rain garden to capture and infiltrate runoff from HRWC and the Washtenaw County Water Resources Commissioner's Office. Experts on hand to answer questions and give advice.

Details: www.bragannarbor.com

Water Quality Monitoring Training

Saturday, March 19 1pm, NEW Center, Ann Arbor

Help measure the quality of local rivers and streams this spring and summer! Learn how to collect water samples, measure stream flow, and sample runoff from rain storms. No prior knowledge is necessary, however completion of training workshop required. Volunteers near or willing to travel to Wayne and Livingston Counties are particularly needed. Sampling in the field is 2+ hours each trip, with a commitment of 8 trips during the season (April – September).

Details: www.hrwc.org/water-quality-monitoring

Registration (required): www.hrwc.org/volunteer/water-sampling

River Roundup

Saturday, April 16, 9am or 10:30am, lasts 4 to 5 hours, NEW Center and throughout the watershed

Join a small team with your friends and family for this popular event. Collect a sample of the bugs and other creatures that live in our streams. Like canaries in a coal mine, these creatures tell us the health of the river.

Registration: www.hrwc.org/roundup

Wild & Scenic Film Festival

Thursday, April 21, 6pm, Michigan Theater, Ann Arbor

Join HRWC and five locally based environment and nature organizations on Earth Day eve, for inspiring films that celebrate our commitment to protect local ecosystems and the planet as a whole. Doors open at 6pm, films start at 6:30pm. Tickets: \$10 general; \$8 members; \$7.50 students/seniors.

Info: <https://aawildscenicfilmfest.wordpress.com>

Annual Meeting

Thursday, April 28, 5:30 – 7:30pm, Riverside Arts Center, 76 N. Huron St., Ypsilanti

Join us for an update on HRWC programs and a tour of our fish habitat restoration project (see the cover article).

Bug ID Day

Sunday, May 1, Noon – 2pm, or 2pm – 4pm, NEW Center

Discover what kinds of bugs volunteers found at the recent Roundup. Separate them into look-alike groups, and then an expert will identify them with you. Record the data and compare the results to past years.

Registration: www.hrwc.org/id-day

Bioreserve Field Assessment Training

Saturday, May 14, 10am – 4pm, Independence Lake County Park, Webster Township

Get outside, meet new people, and learn about local natural areas through this unique program. Inventory ecologically important natural areas throughout the watershed. Commitment entails performing (as part of a team) two or more assessments during the spring and summer. People with plant identification skills especially welcome.

Registration: www.hrwc.org/volunteer/bioreserve-field-assessments

WILD & SCENIC FILM FESTIVAL
where activism gets inspired

April 21, 2016 • Michigan Theatre

Ecology Center	Leslie Science & Nature Center
Huron River Watershed Council	The Stewardship Network
Legacy Land Conservancy	UM SNRE

meijer



Rain Gardens in Mitchell *continued from cover page*

out of Swift Run: 21 car tires, a child's plastic slide, several plastic shelves, a rusty bicycle frame and a "ton – only a slight exaggeration" of other junk.

Friends and neighbors

There is something special about working together with neighbors, rather than alone. Other problems get solved, not just creek issues. A solitary gardener got her fellow Master Rain Gardeners to help her weed the neighborhood park, where she had labored by herself for years. And out of the six Mitchell classmates, they built five rain gardens, an 83 percent success rate (exceeding the typical 64 percent). These Mitchell neighbors encouraged and helped each other. The resulting rain gardens are part of a larger project by HRWC, Washtenaw County Water Resources Commissioner, and the City of Ann Arbor to improve Swift Run with Green Infrastructure.

Little did I know when I invited residents in the Mitchell neighborhood to take the Master Rain Gardener class last year that the six folks who signed up would end up having barbecues together, helping each other out, and becoming friends. —Susan Bryan

That is what the Mitchell neighborhood is doing. Could your neighborhood do the same thing? What about just you, on your own property? Even one person can make a big difference. One person, who plants a beautiful rain garden in their front yard along with one of the program's rain garden signs can influence a whole neighborhood. Neighbors see the garden and the sign, and start to call the Rain Garden Program for assistance. They start to ask the gardener "What is this rain garden thing?" and an educational moment is born.

Why plant a rain garden?

Outdated landscaping has the roof runoff water from the house going straight down the driveway, into the street, and down the stormdrain - washing pollution into the Huron

River. Modern landscaping – a.k.a. "river safe landscaping" – keeps the water in the garden, where it keeps the garden looking lush and green.

Rain gardens capture the water running off of a roof, driveway or sidewalk. The water pools in a shallow puddle in the garden, which soaks into the soil and gets absorbed by the plants. The plants in a rain garden are common, but extraordinary. They are adapted to both dry periods, and wet periods – pretty amazing. And you may know many of them: Purple Coneflower, Rose Mallow Hibiscus, Black Eyed Susans, Joe Pye Weed, even non-natives like Hostas. These plants flourish and thrive in the difficult environment of a rain garden.

— Susan Bryan

Susan Bryan is the Rain Garden Coordinator for the Washtenaw County Water Resources Commissioner's Office. She has designed over 60 residential rain gardens planted in Washtenaw County, and mentored over 350 homeowners planting rain gardens. Notable projects in her portfolio include the Miller Avenue roadside rain gardens, and Wellington Park. She created and teaches the Master Rain Gardener class, is a past president of Wild Ones, has a master's degree in landscape architecture from the University of Michigan, and is an Advanced Master Gardener in Washtenaw County. Reach her at bryans@ewashtenaw.org.

¹ *Lawn People*, Paul Robbins, Professor, Department of Geography and Regional Development, University of Arizona/2007



ABOVE: A creek walk hosted by Michael Ziegler helped neighbors understand the connection to their creek.

BELOW LEFT: Signs help cue neighbors that a rain garden is more than just a perennial bed!

BELOW RIGHT: Rain gardens are aesthetically pleasing, in addition to being functional on many levels, as demonstrated by Gwynne Fisher's yard.

credit, all photos this page: S. Bryan





"The upcoming 2016 spring season will mark the fourth year for my first rain garden! I was so thrilled with the results that I've planted several more and completed the Master Rain Gardener course last year so that I may better assist others in my community. Rain gardens are diverse, adaptable, and once established, can be rather low maintenance. I've planned my rain gardens to bloom year round, attracting bees, butterflies, and even hummingbirds on occasion. Many of my neighbors have commented positively on my landscape addition, some going so far as to create their own! I would certainly encourage everyone with some land to plant a rain garden. Whether big or small, simple or complex, the possibilities are endless."

— Renee Ringholz
Swift Run Master Rain Gardener
(pictured at far left)

Neighbors embrace their roles as creekshed stewards and rain garden advocates. Pictured clockwise from upper left: Renee Ringholz, Lindsey Messing, Michael Zeidler, and Monica Milla.

credit, all photos this page: S. Bryan



How to plant a rain garden

- Visit the Washtenaw County Water Resources Commissioner's website www.ewashtenaw.org/raingardens for resources and how-to's.
- Ask for a site visit. Contact Susan Bryan bryans@ewashtenaw.org to schedule a site visit to analyze where a rain garden could go on your property, and how to do it.
- Take the Master Rain Gardener class, to learn how to design and build your own. The class takes students step-by-step through designing their own rain garden. By the end of class, you are ready to dig! www.MasterRainGardener.org
- Volunteer. Help spread the word by becoming a rain garden ambassador. Adopt a rain garden in a park. Contact Catie Wytychak to learn about opportunities to volunteer. wytychakc@ewashtenaw.org
- Go to www.hrwc.org/swiftrun to learn more about this project.





Fluctuating Flows Frustrate Fish *continued from cover page*

smallmouth bass were having a negative effect on native brook trout. Urged by local recreation and conservation groups, Maine's natural resource agency looked into non-toxic ways to remove the smallmouth population. They purposely released pulses of water from an upstream dam to displace adults, fry (baby fish), and eggs, and destroy nests. Following each pulse, divers estimated damage to nests and disappearance of fry. Forty percent of all spawning smallmouth bass in the Rapid River study were unsuccessful in spawning due to the dam releases, and an estimated 20 percent more were damaged in some way.

Flow pulses hurt Huron's native fish populations

In the Huron River, the smallmouth bass is a very important native species and would not intentionally be destroyed. However, the Huron experiences pulses of water after large storms, and when this happens during the spawning season, the pulses can have strong negative effects on the fish population. The pulses increase in magnitude in flashy urban streams. Climate change has already affected Huron River flows by creating higher intensity rain storms

that cause unstable water levels and speeds. Scientists expect trends to worsen in the future.

Storms are not the only factor making Huron River water flows unstable. Water releases from dams can accidentally cause the same damage to spawning fish like those purposely harmed in the Maine example. The flow situation at Argo Dam in Ann Arbor is a good example of this. Argo Dam is electronically controlled and even when there is no precipitation it is constantly opening and closing its gates and releasing water pulses to the river downstream. Most of these changes are minor fluctuations. However, the pulses can become very large after big storms. Exacerbating this problem is the storm runoff from Allens Creek, a large storm sewer that releases the rain just downstream of Argo Dam.

A recent independent study by Austin Elliott, a senior at the University of Michigan, concluded that water flow downstream of Argo Dam and Allens Creek had at least one major water pulse per year from 2010-2014 during the smallmouth bass spawning season. These pulses rapidly increased water flow by at least 100-150 percent, which was the same change of flow rate used to

purposely destroy fish in the Maine example. Less dramatic changes were even more common; on average, from 2010-2014 there were four water pulses per year that exceeded a 50 percent change.

In 2010, flow changes below Argo Dam and Allens Creek were the most pronounced of all five years in the study. Flow spikes occurred on May 1st, May 2nd, May 3rd, May 13th, June 3rd, and June 6th. The spacing of these flow spikes leaves the longest period without interruption (between May 13th and June 3rd, or 21 days) – too short a time for the smallmouth eggs or fry to finish development. The largest percent increase was the pulse on June 6th which increased flow by 540 percent (650 cubic per second to 3500 cubic feet per second) over a four hour period. This is the most extreme example from the five years, but it does display the river's response to heavy precipitation, flashiness, and erratic dam controls.

Safe nesting sites needed

Spawning success is also directly connected to a fish's ability to select a safe place to build a nest, which is also related to water flow changes. Fish pick nest locations that look safe from their perspective, but when they do this under low flow water conditions, their judgment can be faulty. When water flows increase, nest location may end up being highly exposed and wash away. In the future, we anticipate lower base flows and higher peak flows because of bigger storms and increased surface runoff, so poor nest site selection could be a real problem for native fish in the Huron.

One way to combat the negative effects of fluctuating water flow is to build resiliency into the river's habitat. In other words, habitat should protect the fish in any flow situation. River habitat must be secure and stable in high flow and still provide hiding places in low flow. Since smallmouth bass guard their nests from predators, achieving successful reproduction means having the ability to physically stay near nests. Therefore, good quality fish habitat needs to provide



An excavator sculpts the river bed to create a "pool" and suitable fish habitat in the Huron at Riverside Park. credit: HRWC

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Fluctuating Flows Frustrate Fish *continued from previous page*

breaks in the water so fish can get out of the current to rest, while allowing fish to hide from bigger fish and birds.

River habitat restoration in Ypsilanti

In the fall of 2015, HRWC oversaw the restoration of fish habitat in the Huron River in Ypsilanti, along the City's Riverside, Frog Island, and Waterworks Parks. Previously, this section of the Huron River had poor habitat for fish. There were no large rocks in the stretch that would provide breaks in the current. Fallen trees - important for cover and flow breaks - were sparse.

To build habitat that would protect the fish from fluctuating water flows, HRWC contractors felled and anchored 29 trees through this 1.5 mile stretch of the Huron River. A chainsaw expert hinged the trees, meaning that the trees were partially cut at the base and then directed into the river still attached. Workers also attached hidden anchors to prevent the trees from changing position or dislodging and floating downstream. The trees should maintain their position for at least a decade before breaking apart, and in that time will continue to trap

other debris coming down the river, creating flow breaks, cover for fish, and safe places for the fish to build nests while still allowing for safe paddling passage.

The Ypsilanti section of the Huron River lacks "pools" (areas of slower flowing, deeper water). Fish use pools as places to rest from fast water currents. As a part of the restoration effort, a large pool was excavated with a backhoe and the displaced cobbles and rocks were placed in front of it. The change in river bottom creates a small amount of scouring in order to keep the pool from filling in with fine sediment. A rock vane made of large limestone boulders was also placed to slow the flow at the edges of the pool. This feature is casting distance away from the gazebo at Riverside Park, providing a great fishing spot for smallmouth bass.

Argo Dam and future projects

In the future, HRWC plans to investigate other ways to make the river's habitat more varied and

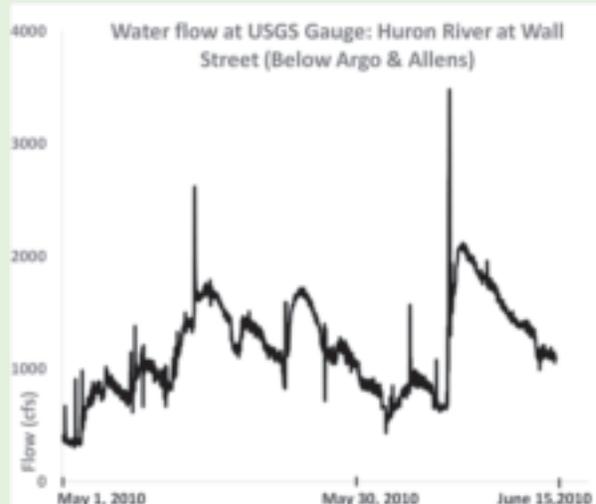
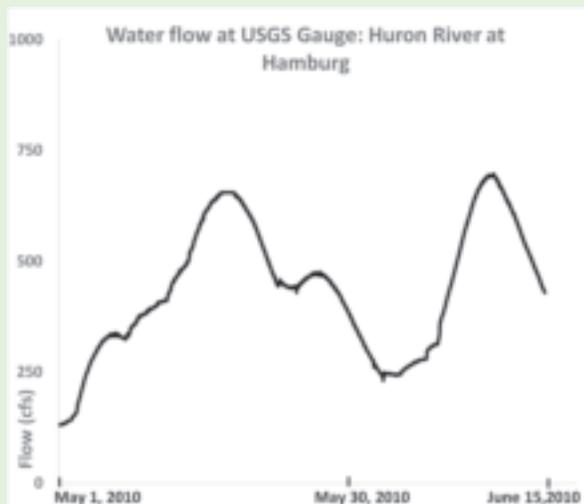


A brightly striped smallmouth bass. credit: M. Schultz

resilient. Of particular interest will be the river section downstream of Argo Dam and Allens Creek. HRWC's goal is to provide meaningful flow breaks to fish who have to withstand high water speed and flow conditions, as well as places for the fish to go when the flow plummets and the river runs dry. This work is still in its investigative phase, so stay tuned for future news.

— Paul Steen and Austin Elliot

Flow Pulse Graphs



A side by side comparison of the water flow at Hamburg, upstream of Ann Arbor (left), and below Argo Dam (right).

Both graphs show how water flows increase after a storm. Yet it is Argo Dam's erratic behavior and Allen Creek's flashy flows that create the water pulses so inhospitable for fish. Credit: USGS

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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The Huron River Watershed





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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The Bad, The Good, and The Really Good

Celebrating success toward a coal tar-free watershed

The Winter 2014 edition of the *Huron River Report* introduced the issues associated with coal tar sealcoat, a pavement maintenance product widely used in the watershed. The polycyclic aromatic hydrocarbons (PAHs) present in large quantities in this sealcoat product are hazardous to both aquatic life and human health. HRWC has been hard at work identifying impacts and pursuing solutions. There is much to report. While this pollutant is present in the watershed at alarming levels, significant gains have been made toward a coal tar-free future for the Huron River watershed, its residents and hopefully the State of Michigan.

Toxic detention ponds

First, the bad news. In late October, HRWC staff took sediment samples from three detention ponds around the City of Ann Arbor. The results were startling. Of the ten PAH compounds with scientifically identified “probable effects concentrations” (PEC, i.e. the concentration that results in health impacts or death in aquatic organisms), sediments from the Malletts Creek pond exceeded the PEC for eight PAH compounds! Some of those PAHs are known carcinogens. Sediments in the Traver and Fleming ponds exceeded the PEC for 6 and 4 of the PAH compounds, respectively. In the Malletts Creek sample, the PEC for one PAH was exceeded by more than 10-fold. The bottom line is these detention pond sediments are highly toxic!

Other studies have indicated that between 50–84 percent of PAHs in detention pond sediments originate from coal tar sealants. It appears that Ann Arbor (and most probably other paved areas in the watershed) has a

problem with coal tar leaching. The results from the HRWC samplings are consistent with findings from USGS and other research scientists nationally. Further, it is likely that sediments from stormwater runoff elsewhere (e.g. in catch basins and at storm pipe outfalls) are also toxic. All of these sediments require proper disposal.

Local Legislative Progress

Now, the good news. Initial outreach to HRWC board members, local elected officials and watershed residents led to a number of communities highly interested in taking action to restrict the use of coal tar sealcoat. Here’s a glimpse of the gains made:

- Washtenaw County prohibits the use of coal tar sealcoat for any pavement work they contract.
- Scio Township Planning Commission invited a presentation on the issue and a ban is being considered by the Ordinance Committee.
- Ann Arbor Environmental Commission presented a

resolution to ban coal tar sealcoat and other high PAH sealcoat products to City Council for consideration in the next few months.

- The Department of Environmental Quality is developing statewide guidance on the proper (and regulated) disposal of high-PAH detention pond sediments.

Ground-breaking legislation

Finally, the really good news. Two game-changing successes warrant celebration. In December of 2015, Van Buren Township’s Board of Trustees unanimously passed a ban on coal tar and other high PAH sealcoats – the first of its kind in the nation! In addition, Representative Kristy Pagan (D-Canton) introduced a bill to the State Legislature that would do the same.

Much of the credit for the first municipal-wide ban in Michigan belongs to Dr. David Wilson. A tireless HRWC volunteer and board member, Dave is a retired chemist and Van Buren Township Environmental Commission member. He picked up

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Ric Lawson and Paul Steen sample sediment from detention basins in Ann Arbor to test for PAH contamination.

credit: HRWC





this issue with fervor. Dave read the 2014 HRWC newsletter article and then shepherded the issue through the government process. At the same time, Dave directed outreach to residents of the township by speaking to audiences at the library, Rotary and the Grange. He wrote several articles for the Belleville Independent to raise awareness and support. And he initiated countless conversations with decision-makers critical to passing the ban, lending his expertise, answering questions and advocating for action.

On December 17th, at a township board meeting, the ordinance passed with unanimous support. The Board thanked Dr. Wilson and HRWC for bringing the issue to their attention and helping get an unnecessary pollutant out of the township.

That same week, as the congressional session closed for the year, HRWC worked quickly with Representative Pagan's office to finalize coal tar legislation to introduce to Michigan legislators. House Bill 5174 has several other sponsors from the area who had been briefed on the issue by HRWC staff over the past year including representatives Jeff Irwin (D-Ann Arbor), Gretchen Driskell (D-Saline), Bill LaVoy (D-Monroe) and Adam Zemke (D-Ann Arbor). While state legislation has a long road ahead, there is plenty of work to be done in the coming year to build support

for a state level ban and there are several local Representatives poised to do just that.

PAH vs. Coal Tar

Unique to HRWC's campaign is the regulation of not only coal tar sealcoat, but any sealcoat product high in PAH content. Van Buren's legislation is the first in the nation to regulate all high PAH content (over one percent, by weight) sealcoats. The introduced statewide legislation would do the same. This amendment became necessary as new sealcoat products have been introduced to the market and are being branded as "non-coal tar" or "environmentally friendly" but in reality still contain harmful quantities of PAHs, the substances of concern in coal tar sealcoat. (See the box at right for tips on identifying sealcoats with high PAH content.)

HRWC will continue its efforts in 2016 by working with a growing number of communities interested in banning coal tar sealcoat, reaching out to residents of the watershed with information to help people find less harmful ways to maintain paved surfaces and advocating at the state level for better regulations and laws that protect people and freshwater ecosystems from the harmful effects of PAH exposure. Learn more at hrwc.org/coaltar.

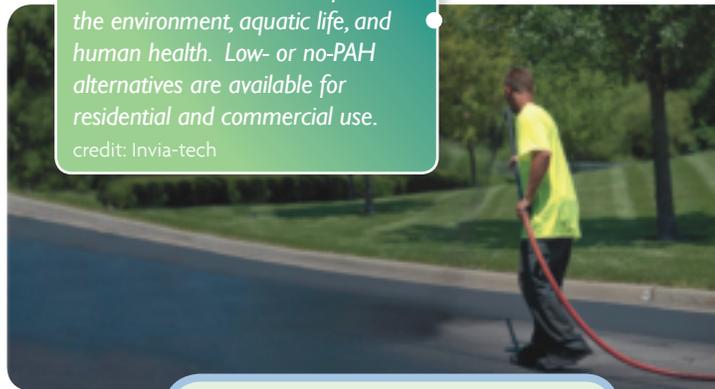
— Rebecca Esselman and Ric Lawson



Dave Wilson and Rebecca Esselman after the adoption of the coal tar ordinance by the Van Buren Board of Trustees. credit: R. Otzman

PAHs in sealants are harmful to the environment, aquatic life, and human health. Low- or no-PAH alternatives are available for residential and commercial use.

credit: Invia-tech



Identifying sealcoats with high PAH content

Request a Materials Safety Data Sheet (MSDS) or look at the product label.

Avoid products with the following identifiers:

Coal Tar Based Sealants

1. CAS#65996-92-1
2. CAS#65996-93-2
3. CAS#65996-89-6
4. CAS#8007-45-2
5. Coal Tar
6. Coal Tar Pitch
7. Coal Tar Distillates
8. RT-12
9. Refined Tar
10. Refined Coal Tar Pitch
11. Coal Tar Pitch Volatiles
12. Tar
13. Related terms

Other High PAH Sealants

1. CAS#64742-90-1
2. CAS#69013-21-4
3. Steam-cracked Petroleum Residues
4. Steam-cracked Asphalt
5. Pyrolysis Fuel Oil
6. Pyrolysis Oil
7. Heavy Aromatic Pyrolysis Oil
8. Heavy Fuel Oil (HFO)
9. Heavy Pyrolysis Oil (HPO)
10. Ethylene Tar
11. Ethylene Bottoms
12. Related terms



Huron Love Stories • HRWC oral history project

As part of HRWC's 50th Anniversary celebration, I volunteered to interview key "old timers" about their experiences and write newsletter stories, which became "The HRWC Oral History Project." With the anniversary year ended, I conclude the project with this article about my observations. Upon reviewing transcripts, I realized most were truly love stories. Some of the declarations of love were direct, while some were implied or could be inferred.

Janis Bobrin, former Washtenaw County Water Resources Commissioner, loved the river enough to find public funds and needed supplies for projects that would help assure the quality of the river. The Adopt-A-Stream project got its start with resources from her department. **Scott McEwen** and **Joan Martin**, successive Adopt-A-Stream directors, loved the river enough to devote their time to establishing rigorous benchmarks for monitoring, and measures of water quality.

Dave Brooks put his wife through dental school, and they made a "deal." He would retire early from UM and she would support him and the volunteer activities he loved, including projects for HRWC. Dave worked with teams to measure river elevations with surveyors' transects and level rods to develop cross sections of Miller's Creek. He headed up and provisioned the annual count of stoneflies in the winter and mapped study sites, becoming a "master" volunteer.

Ron Sell, who builds and repairs small boats, is a sailor and paddler extraordinaire. He joined HRWC to plan and participate in its first *Riverfest* in 1993, a river-long love fest involving nine days on the water and numerous paddlers. Says Ron, "I think it was a very significant thing and really got people thinking of the river as a whole, not just as separate communities." *Riverfest* involved local dignitaries and encouraged communities to organize events as they came along. "We would come in, have a party, camp overnight, and then be on our way." That's real love of the river.

Paul Cousins, former Dexter high school teacher of biology and environmental studies, as well as owner and operator of the former Cousins Heritage Inn in Dexter, is very direct about his love affair. It began in the 1960s. His high school was on the largest Huron River tributary, Mill Creek, which drains about 200 square miles of land. It became an outdoor laboratory for his students. Through the efforts of HRWC and many governmental entities, he saw the river go from polluted to the cleanest in Southeast Michigan. "The Watershed Council has been the love of my life for over 40 years."

So much of the Oral History project focused on the river, but **Janis Bobrin's** interview was a reminder of the land/water connection. Unprecedented growth and development in the 1990s and into the 2000s, brought concerns regarding stream protection, shifting



K. Snyder

the focus from the water to the land that drains in to the river system. Janis said, "I spent a lot of time explaining to the local governments that, 'You put in a subdivision here, you are going to affect a creek over there.' They may never have thought of that because one doesn't see the direct link. But you're changing the land. You're paving over natural areas. You're creating more runoff. And it all affects the waterways in that individual creekshed." As a result of efforts like Janis', more foresight and preventive action is now part of the development process in many communities.

As for me, this volunteer project as HRWC's oral historian has been a labor of love — of the river, of the interviewees, and of the staff who supported me. Thank you so much. It has been a pleasure.

— Karen Snyder

Thank you, Karen, for collecting and compiling many wonderful stories celebrating HRWC's history! All transcripts and photos will be turned over to the Bentley Library at the University of Michigan for preservation.



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Proceeds from the internet sale of old and unwanted books, CDs and DVDs helps HRWC. Please donate! We like the slightly esoteric, academic, scholarly and especially university presses. To put your "treasures" to work for HRWC bring your donation to the HRWC office, 9am-5pm weekdays. We will handle the rest.

QUESTIONS: Rebecca Foster (734) 769-5123 x 610 or rfoster@hrwc.org



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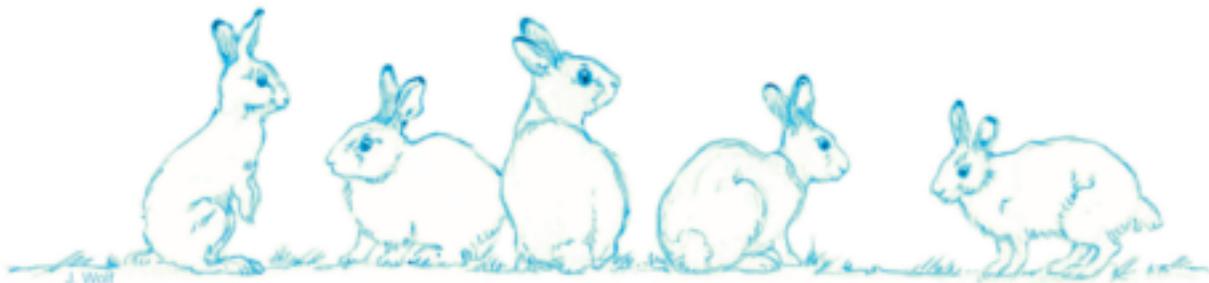
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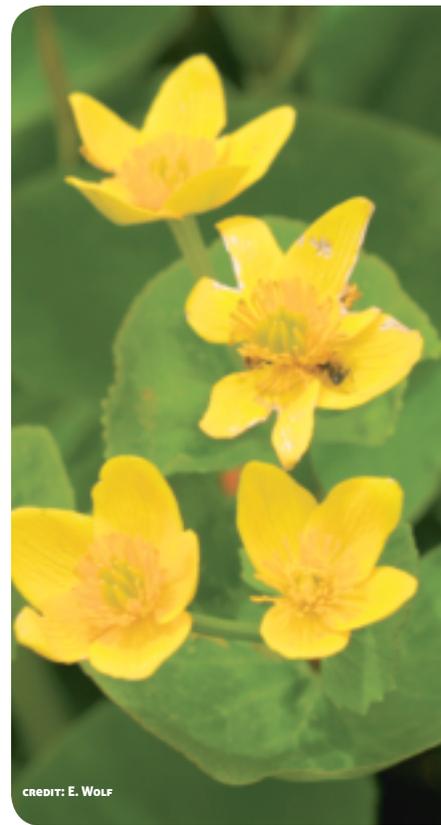
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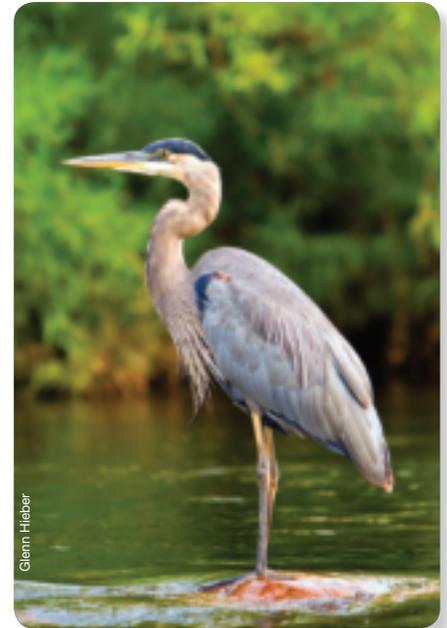
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