

The Water Spout

Vol. 11; Issue 2, November 18, 2019

Allen County Partnership for Water Quality Update

Since the April edition of the Water Spout, ACPWQ has been working to share information through Facebook, their website acwater.org, and a radio segment, the Water Cooler. The “Water Quality Monthly Tips” has been a successful program, reaching thousands of residents through our Facebook Page along with the pages of Leo-Cedarville and Huntertown. This program will continue for the rest of the year and begin again starting in 2020.

ACPWQ has also restarted a show with WELT 95.7 known as the Water Cooler. The Water Cooler is a 5-10 minute show that discusses how local action impacts water quality. To listen to the show, please check out the sound files found on our website. In addition to the Water Cooler, WELT has been airing public service announcements, PSAs, to help residents improve water quality. These monthly PSAs tie into the “Water Quality Monthly Tips.”

In total for 2019, ACPWQ has talked directly with 1050 people in direct programming and reached 20,000 people through social media and newspaper articles.

Where have we been?

ACPWQ has been making its way around the county trying to spread the word on water quality. Since April 2019, we have taken part in

- April 13th: Girl Scouts Earth Day Extravaganza
- April 22nd: Save Maumee Earth Day Event
- April 25th: Little River Wetland Project's Earth Day Event
- May 14th: Municipal Separate Storm Sewer System Annual Conference
- May 23rd: Wayne High School STEM Presentation
- May 28th: Wayne High School STEM Walk Through
- September 23rd: County Night Out-Grabill
- September 27th: Fort-4-Fitness
- September 28th: Moser Park Nature Center Presentation
- October 16th-18th: North American Association for Environmental Education Conference
- October 19th: Girl Scouts STEM Event
- October 20th: Young Naturalist Program

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Falling leaves can lead to falling water quality in our waterways

By Jacquelyn Buck

Allen County residents are no strangers to ushering red and orange leaves to the street during the Fall. This can mean loads of fun for kids, extra work for homeowners, and excess nutrients for our rivers. To help reduce extra phosphorus from entering our waterways, Allen County Partnership for Water Quality is challenging residents to rethink how they dispose of their leaves this season.

Leaves falling from the trees is a natural phenomenon, but it can lead to unnatural amounts of nutrients entering our waterways. Historically, leaves had the chance to decompose letting that organic matter feed the nearby soils. Today much of that organic matter breaks down and goes through concrete tunnels to our waterways. This can become a serious problem due to the phosphorus found in decomposing leaves. [It is estimated that 5 bags of leaves can create as much as 1 pound of phosphorus, which can produce 1,000 pounds of algae downstream.](#) To limit stormwater pollution, consider mulching or composting leaves to use in next year's gardens and landscaping. This can help reduce future fertilizer runoff and costs for homeowners.



When you have reached your mulching and composting limits, begin moving excess leaves towards the street. However, we challenge you to **keep your leaves off the street** until the day before pickup. When decomposing leaves are left on lawns, they can help nourish the soil while giving rain the chance to filter before running off into the street. This allows nutrients a chance to settle in your soil instead of being flushed away during a rain event. In addition to helping limit nutrients entering our waterways, this also helps to decrease localized flooding.

Localized flooding is caused by rainwater that is inadequately able to drain. One common blockade seen in and around storm drains is leaves that are stacked near, on, or around the drain. This flooding can cause unsafe conditions for those biking or driving through high waters. To help prevent these events, keep storm drains clean!

Help do your part and let us let leaves be the only thing falling this Fall. If you are interested in more ways you can help keep stormwater clean, please visit acwater.org.

The White River will never be clean until we tackle this filth hiding in plain sight

Sarah Bowman, Indianapolis Star
Published September 24, 2019

The hall was rented. Food was ordered. Parking passes were sent out. For months, Jill Hoffmann had been preparing for the biggest event of her year. And in just three days, nearly 200 scientists, city planners, elected officials, engineers and activists would descend on her world.

Now it was crunch time — 6 p.m., and well into the 11th hour of a long day — and she still had to finalize the agenda, print the handouts and finish writing bios for the speakers.

For people like Hoffmann, who love the White River watershed and see it as a valuable natural resource and potential recreational amenity for Indianapolis, now is a critical time.

For the first time in more than a century, the city is completing a system that will largely prevent raw sewage from flowing directly into the White River. And civic leaders envision a new day of riverside restaurants, bike paths, planned communities with boat launches and swimming areas. Yet Hoffmann and others know that regular human contact with the river will remain risky without further change.

Even after improvements to the sanitary sewer system are completed in 2025, Indianapolis will still dump huge amounts of unchecked pollution into the river — pollution that can be as filthy as combined sewage. A toxic mix of animal poop, gasoline, oil, plastics, fertilizers, pesticides, solvents, litter, carcinogens and heavy metals washes into the river from Indianapolis streets every time it rains, as much as 87 billion gallons of it each year. And the problem is growing.

"If we don't tackle stormwater," Hoffmann said, "then we need to stop having a conversation about coming back to the river."

Yet no comprehensive plan to prevent this assault on the White River's water quality exists. Solving the problem would take money for infrastructure. It would take ordinances to steer development. And, perhaps most significantly, it would take residents and officials recognizing a problem they have long ignored.

So, on that day in August, when Hoffmann just couldn't make her fingers move across the keyboard in preparation anymore, she found herself in what she called an "emotional tug of war." Should she keep working, or take a break? Would it be negligent to leave? Or was leaving necessary to get some perspective? Finally, she decided she needed to get in touch with her inspiration.

"I went to the river," she said. Within a half hour, Hoffmann was seated in a green kayak, paddling on Eagle Creek, a tributary of the White. As the sun set, double-crested cormorants, great blue herons and great white egrets prowled the grasses along the bank. The executive director of the White River Alliance was in her element.

And, just like that, Hoffmann — who considers the river a source of spirituality, serenity, health and community — was ready to renew the push.

'It can be fairly filthy'

Three days after her trip down Eagle Creek, Hoffmann's day kicked off when someone asked a very simple question: "Who in the room knows Jill Hoffmann?"

Almost in unison, nearly 200 hands shot into the air.

That was Hoffmann's cue to come up on stage and share why she had brought all these people together at the Athenaeum on a Thursday morning. It was the day she had been preparing for: the second annual Indiana Water Summit, an event to bring stakeholders together to find the best ways to protect the state's water resources.

"Sometimes she's our cheerleader, sometimes our coach," said Jean Ramsey, president of the White River Alliance board, "and sometimes our referee."

At that moment, Hoffmann was also an event planner. She'd placed diagrams and maps in front of every chair nearly an hour before attendees began to arrive. She'd made sure there was ice for drinks. But, even more important, Hoffmann stacked the speakers and packed the agenda with a recurring theme: stormwater and runoff. The problem that is hiding in plain sight.

Stormwater drains seem innocuous enough, dotting Indianapolis' roadsides and street corners, their purpose to keep rainfall off the streets. But they take so much more than water with them as they snake underneath the city and toward the White River.

Chemical testing of the first flush, or the initial wash of stormwater, shows it can be as polluted as the water that enters the river when storms overwhelm the sewer system and dump raw sewage.

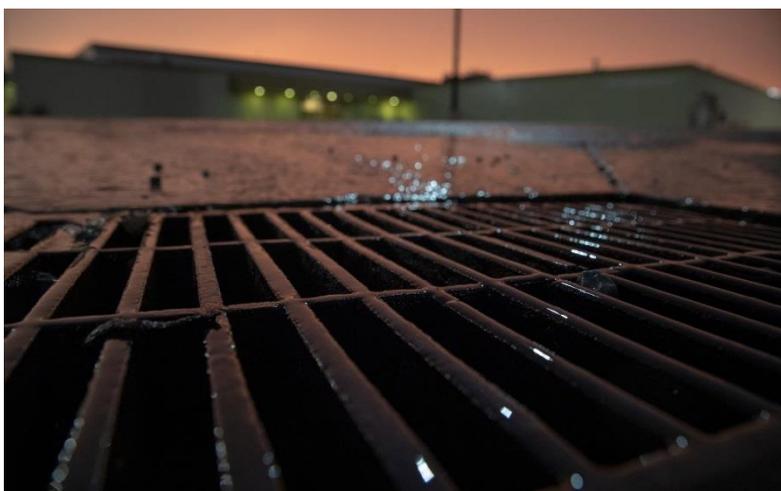


Figure 1: Robert Scheer IndyStar

"We are looking at comparable levels of E. Coli, heavy metals, and lots of nutrient pollution," said Rick Conrad, the stormwater coordinator for Muncie. "It can be fairly filthy."

And it all drains into the White River through roughly 10,000 pipes along its banks in Marion and Hamilton counties alone. That's the water that makes up Indianapolis' drinking water supply. It has to be treated at more intense, and costly, levels to make it safe.

How do everyday pollutants end up in the White River?

Every time it rains, stormwater picks up pollutants — gasoline, oil, animal waste, cigarette butts and more — off streets and sidewalks and carries this toxic mix directly into the river. In Marion County, there are roughly 5,000 outfalls that discharge into the river.

IN THE WATER: Common contaminants harm the river in unique ways. Animal waste, for example, carries fecal bacteria and transmits viruses like tapeworm, roundworm, E. coli, and more. And fertilizer runoff spurs aquatic dead zones and algal blooms that choke out other life.

Every acre of concrete, asphalt, roof and other impervious surface produces about 1 million gallons of stormwater runoff each year, according to John Hazlett, director of the Marion County Soil and Water Conservation District.

That means Lucas Oil Stadium shuns off nearly 32 million gallons of stormwater in a year. The Indiana Statehouse and government complex creates roughly 20 million gallons of polluted runoff. And the former GM Stamping Plant site creates more than both combined: about 83 million gallons annually.

Roughly 34% of Marion County is impervious, and that number is expected to grow by as much as 5% over the coming decades. The amount of precipitation in Indiana also is expected to increase substantially during that time.

According to the Indiana Climate Change Impact Assessments research out of Purdue University, the state will see about 6% to 8% more annual rainfall by mid-century. That jump could be as high as 27% in the winter and spring, as cited in the climate report.

“We’re a fast-developing part of the country,” said Hoffmann, who has headed the Alliance, a nonprofit dedicated to protecting water throughout Central Indiana, for more than 10 years. “So more and more impervious surface with more and more rain has created more volume on system.”

There will be as much as 25% more stormwater in the future, according to Hoffmann, referencing the Purdue studies. That jump also means more flooding, with old pipes that won’t be able to carry the water away as quickly as it comes in.

In need of a good crisis

The city, which oversees the stormwater system, is no stranger to flooding complaints. Its stormwater infrastructure is built to handle only 10-year rain events, or events that have a one-in-10 chance of happening in any given year. That means some neighborhoods aren’t built to current standards, according to Indianapolis Department of Public Works Director Dan Parker.

Based on various stream gauges around the city, such rain events are striking more frequently. For the gauge on the White River at 82nd Street near Nora, 10-year stream flow happened in 2003, 2005 and 2013. On Little Eagle Creek at Speedway, that threshold was passed in 2003, 2008, 2011, 2013 and 2016. It’s not “out of the ordinary” to have “multiple” such flood events throughout the city-county with intense, localized storms — particularly like the ones seen this past June.

“We had people calling every day during those storms saying there is something wrong with our stormwater system,” said Mike Massonne, stormwater program engineer with DPW. “I told them that’s not the case; it’s that our system wasn’t designed for those kinds of storms.”

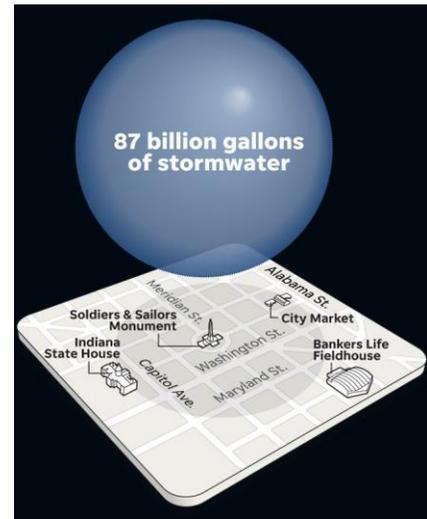


Figure 2: Stephen J. Beard and Sarah Bowman, *IndyStar*

“That wasn’t normal,” he continued, “but we don’t know what the new normal is.”

Parker said he didn’t need to look far across the Midwest this year to see the “damage that can be done by Mother Nature.” Nebraska, Missouri, Iowa and Kansas along the Missouri River [saw record-breaking floods](#) that put businesses, farms and homes under water.

For a long time, the city simply didn't have funding to upgrade its stormwater system, but in 2015 it adopted a new stormwater fee structure — charging all property owners based on their amount of impervious surface. It generated roughly \$38 million in 2018 alone, and now officials are busy tackling backlogged drainage projects across the city.

But more needs to be done, Hoffmann said. Central Indiana could face the same fate as those other states if it doesn’t make changes.

“Everyone keeps telling me, ‘Jill, you need a good crisis to get people to listen,’” she said. “But who wants that? We know everything we need to know, but the inclination is not to change until we have to.”

That’s where people like Tim Stottlemyer come in, Hoffmann says, a person she can’t fix this problem without.

Restoring the river's living filter

Stottlemyer has lived on the White River since he was born, first in Anderson and now near Noblesville. Growing up, he wasn’t allowed in the river. That’s just how it was. But starting in the ‘90s, he began to boat and fish the river. Just last summer, he kayaked from Anderson down to where the White River connects with the Wabash in Mt. Carmel.

He knows this river.

But he didn’t know about the problems with stormwater until he took a job with the city of Noblesville to manage it. Actually, he used to work for a family business building roads, pipes, manholes, etc. He figured he knew the infrastructure, so this was a natural fit.

“Then I really grew into that side of seeing my opportunity to leave the river a better place,” Stottlemyer said.

He isn't a desk and computer guy. Stottlemyer's pants could pass as khakis, but a closer look reveals cargo pockets on the side. He finds his groove when he can put his expertise to use out in the field.

In the early 2000s, the Environmental Protection Agency recognized that stormwater was a leading source of pollution and required cities to monitor it. As Noblesville's stormwater manager, it’s his job to make that happen.

The problem is it would be impractical to install individual monitors or filters on the thousands of pipes in the system, or to dig up and reroute them all away from the river.

The key, instead, is to keep the water where it falls, letting it seep into the ground before it enters the stormwater system.

The most promising tool to do that, according to Stottlemyer, is what’s called green infrastructure - which restores or mimics the natural water cycle. That can mean planting trees, using permeable pavement, installing green roofs and establishing wetlands, rain gardens and bioretention ponds.

Nature has a perfect system, Stottlemyer said, but changing the land use by, for example, cutting down trees or paving the land "can upset that balance and remove the living filter for our water."

When used and properly maintained, studies show "green" engineering has reduced flooding and runoff pollution, according to Sara McMillan, a Purdue University professor who studies the practices. Indianapolis has several such "green" engineering projects scattered across the city, but they are few and far between. Those changes, McMillan said, don't happen without a nudge.

"A lot of the onus rests on the city's leadership," she said. "It's hard to expect developers to necessarily do things unless there are stronger requirements and incentives to build in green infrastructure."

Rewiring our development DNA

Getting individuals and companies to accept change could be a challenge.

It could require policies that restrict land use or ban development in certain areas, which would almost certainly invite pushback from some developers and land owners. Added construction costs and the public cost of redesigning systems could also meet with resistance.

Some progress has been made, Stottlemyer said.

Indianapolis added a new zoning ordinance in 2016 that established a stream protection corridor with further standards for development near waterways. But few such incentives or requirements are in place for all private and public development, according to the White River Vision Plan.

That plan lays out a future — championed by city officials from Marion and Hamilton counties — of boat launches and swimming areas along with restaurants, shopping and businesses along 58 miles of the river. Many of those projects involve more development.

A move during Indiana's most recent legislative session, however, illustrates the difficulty in making progress when it comes to regulating runoff. When builders complained that cities were adopting additional ordinances designed to control construction site runoff, lawmakers banned cities from adopting measures "more stringent" than those required by the state for certain construction sites.

Builders argued the measures created a patchwork of regulation that was difficult to navigate. Those sorts of regulations — like ordinances that could be proposed regarding green infrastructure — add costs to development, according to Indiana Builders Association CEO Rick Wajda.

"To maximize use of the river, we need to have some growth and development around it," Wajda said. "Sometimes if there are stricter regulations, then it becomes cost prohibitive so no one develops and the city loses out on potential tax revenue."

He believes a better way to get there is with flexibility and a conversation with the city. He acknowledged that the building community would be open to a discussion to determine if there are some areas to be preserved.

Emily Mack, Indianapolis' Director of Metropolitan Development, said there are areas along the river where she thinks development would be appropriate and others where she thinks it would not. Mack served as a leader in developing the vision plan and is optimistic the political will exists to make it happen. The public wants it, she said. "But what it comes down to is money," Mack said. "When we talk about

stormwater management systems and putting new infrastructure or measures in place, that takes money.”

There’s no exact estimate on how much the vision plan will cost or where the funds will come from. It could be as high as in the hundreds of millions, with stormwater improvements being just one part of that.

It could be a redirection of existing stormwater funds. It could be the creation of a tax district among counties in the White River watershed. It could

be an investment from the development community because they see the economic potential of a clean and viable river. No one knows quite yet.

But it will take a new mindset to make it happen, Stottlemeyer said.

Stormwater might seem innocuous compared to the issues facing the watershed in the past. At one time, Indiana law not only required industry to locate next to the White River, but actually ordered those facilities to dump their waste — harmful chemicals, animal entrails, gasoline — directly into the waterway.

It wasn’t until passage of the Clean Water Act in 1972 that those practices were deemed unacceptable. But stormwater has some catching up to do, Stottlemeyer said.

“The problem with this type of pollution is that people don’t see it as a problem,” he said, “and people do not understand what it’s doing to our river or why it is so important (to stop it).”

That’s where he said he needs Hoffmann.

Believing in the vision

Coming back from a short break at the water summit, one of Hoffmann’s colleagues passed her in the hall — she was walking fast enough that her long hair wasn’t touching her shoulders. He asked Hoffmann if she needed anything, and her reply was simple: “Just butts in seats.”

She had woken up at 5 that morning and soon began loading more than 20 poster boards and just as many easels, dozens of name tags, and hundreds of printouts into her car.

Hoffmann drives a currant-red Ford Explorer, which she recognizes seems like the anti-environmental thing to do. The 44-year-old dreams of the day she can skirt around in a hybrid or electric vehicle, but for now, she needs the space to haul her heaps of equipment — and her kayak, too.

When Hoffmann walked into the massive room, seeing the empty seats she hoped would soon be filled, she told IndyStar what she thought: “I hope I get this right, and I hope they get it.”



Figure 3: Robert Scheer, IndyStar

Without managing it, bacteria levels could remain too high to swim or the beach and canoe chutes could be underwater from flooding — core ideas of the White River Vision Plan.

"Places that have postcard-worthy grand displays of nature are easier to protect," Stottlemeyer said. "In the Midwest and Indiana, we have to look harder for that."

But it's there, both Stottlemeyer and Hoffmann said, and they hope to help people see it.

They first met nearly a decade ago when they pioneered a program — one that has community members pledge to protect their local waters — that is now being replicated across the country. He could bring the knowledge of the challenges facing his system; she could set up an advocacy program that spanned beyond municipal boundaries. And so their work, and friendship, has thrived in the years since.

Stottlemeyer is already planning a workshop to teach people how to manage their green infrastructure. And Hoffmann, the day after the summit, was back out on the banks of the river for a meeting on how to clear an area of the White River State Park to make it more accessible.

Coincidentally, that's Hoffmann's favorite place on the river. She walks her dogs, Macy and Bella, along the park trail a few days a week. Normally, she said her go-to spot would be one that offered escape. This one, however, offers something else.