

WATERWAYS

City of Madison Engineering Division Annual Stormwater and Sewer Utilities Newsletter

cityofmadison.com/engineering/stormwater

FALL, 2022

New Ways to Save on Your Utility Bill

Did you know that none of the work done by the Stormwater Utility is funded by the property tax? Instead, all City of Madison properties are charged a stormwater fee through the monthly Municipal Services Utility Bill. This fee is charged based on the size and amount of hard surface (impervious) surface on the property. The more hard surface, the more water runs off the surface and has to be managed. The fee is the only funding that is used to allow the City to build and maintain stormwater infrastructure, including storm sewers, greenways and stormwater basins. This monthly fee varies depending on residents' yard size, but the average homeowner pays \$11.31 per month.

City Engineering's updated Stormwater Utility Credit Policy aims to fairly distribute the Stormwater Management Program's costs to residents by rewarding environmentally-friendly actions. Adjustments to monthly stormwater fees are granted for the situations described below:

- » Reductions to the flow and pollutant load to stormwater systems. The most common way residents can obtain a flow and pollutant load credit is through installing rain gardens.
- » Properties that drain directly to waters of the state, including Lake Wingra, Lake Monona, Lake Mendota, the Yahara River and Starkweather Creek. Residents are eligible for a reduction when their runoff does not enter the City's stormwater system but goes directly into a major body of water.
- » Properties that have wetlands within their boundaries.
- » Agricultural properties that are being actively farmed and are larger than five acres.
- » Properties over half an acre in size where active conservation or native vegetation restoration practices are in place.
- » Properties with street terrace rain gardens located between the curb and the sidewalk.
- » Rural properties that do not drain to waters managed by the City of Madison.

The process for obtaining a Stormwater Utility adjustment is simple. Residents who qualify for an adjustment should email engineer@cityofmadison.com explaining their type of property and the requested adjustment.



A Message from your new City Engineer, Jim Wolfe

Greetings, City of Madison!

As your new City Engineer, I'm proud to share that our commitment to stormwater resiliency continues to grow. That comes with an impressive amount of effort from our staff and consultants toward completing the next round of Watershed Studies, which will be vital to helping to plan and prioritize our future stormwater infrastructure investments (page 2). These studies involve a lot of data collection and analysis, but also include a growing community engagement program, with a bigger digital footprint. We will need input from our community, especially from those that have been impacted by past flood events, to help complete these studies, but to also help implement those solutions in the future.

Beyond the Watershed Studies, we're also getting involved with our community through stormwater education (page 3) and providing tips for ways you can help improve water quality in our lakes (page 2 and 3). Having lived in and worked for the City for over 15 years, it has been a pleasure not only to see how dedicated our staff is to the work that we do and our commitment towards making water quality improvements, but I've seen that same commitment from our residents, and we sincerely appreciate all of the help you provide!

Through the City's budgeting process, we've also worked to help our residents save money on their utility bills (page 1). Some of these opportunities will also help support water quality improvements and resiliency of our system, so we want to make sure that residents are aware of their options and are encouraged to participate. It's a new time to reflect on what we all can do to help our stormwater system, whether that be researching more about ways to integrate green infrastructure into our designs, installing your own rain garden (even in the fall! Check out page 3) or finding ways to cut back on salt use during the winter. We're doing our part, and we encourage you to continue your support as we work together to create a more resilient stormwater system.

I look forward to serving you in our community, it truly is an honor,

Jim Wolfe

Top 5 Ways You can Help Water Quality in Our Lakes

The path toward clean lakes is a shared journey where we all have a role to play. If everyone takes small actions at home, we can create a big impact for our lakes, and countless other environmental causes. Here are five great ways to help the lakes:

- 1. Plant Native & Diverse Vegetation:** Deep-rooted native plants and trees help absorb water and hold topsoil in place during rain events.
- 2. Create a rain garden:** Not only will rain gardens capture stormwater runoff and beautify your property, they also provide biodiversity that helps butterflies and bees survive.
- 3. Redirect downspouts:** This simple action allows you to redirect rainwater to your lawn or garden, while also reducing the amount of stormwater that goes to streets and directly into the lakes via storm sewers.
- 4. Install a rain barrel:** By capturing rainwater from your roof, rain barrels reduce the amount of stormwater runoff that reaches the lakes.
- 5. Rake for leaf-free streets:** Raking leaves from the street edge (three feet from the curb) and onto lawns will help fertilize the grass and reduce cyanobacteria (blue-green algae) blooms in our lakes.



Next Watershed Studies: Near West, Wingra Proper, Door Creek

City Engineering is now working on its next watershed studies on the Near West, Wingra Proper and Door Creek watersheds. The Near West watershed study is a collaborative partnership between the City and the University of Wisconsin-Madison. The City of Madison Engineering Division launched the Watershed Study Program in January 2019 following the historic floods of 2018.

The City's watershed studies evaluate the existing stormwater system by determining the causes of flooding.

"Is it because the lake is too high and water can't get out? Is it because the pipes are too small and water can't get in? Is it because this area just happens to be low and it is hard for water to get out? That is what the computer models will tell us," Stormwater Engineer Caroline Burger said.



First, consultants use computer models to create maps that display flood risks. The maps will then be available to the public before two public information meetings. The first public information meeting will explain how the City plans to address the flood risks. The second meeting will show residents the results of the mapping.

The results of the studies are used to develop projects that reduce the risk of flooding. Potential projects include installing bigger pipes, pumps and constructing ponds.

"We put together the reports, we work with all of our internal agencies like Parks, Planning and Traffic Engineering to make sure that whatever solutions we develop, they are OK with and will work with their infrastructure programs," Burger said.

Watershed studies generally take 18 to 24 months to complete. The reports are expected to be finalized in late 2023. Check the City's Flooding website, which has project pages for each study. On each project page, there are updates, maps, links to final reports and opportunities for public comment. cityofmadison.com/WatershedStudies

'Set it and Forget it,' Plant Your Rain Garden this Fall

Rain gardens, gardens of native plants built in shallow depressions, are great at combating stormwater runoff by capturing and absorbing water into the ground. Although rain gardens can be planted all year round, planting them in the fall and winter has several benefits.

Planting a rain garden in September and early October requires less work. The sun and heat is not as intense, so plants do not need to be watered as often.

"If you want to set it and forget it, fall is a good time to get plants in the ground," Greenway Vegetation Coordinator Maddie Dumas said.

Although you can't put plants in the ground during the winter, this time of year is perfect for scattering native seed. Winter months help stimulate growth through the freeze thaw cycle.

"Seeds are getting moisture from snow and rain. The rain is pushing the seeds into the soil gently. All those things stimulate the plant so that when sunny conditions come back in the spring, the plant is ready to grow," Dumas said.

Check out City Engineering's rain garden website for native plant suggestions and stay tuned for an upcoming rain garden workshop in the spring for discounts and information on native plants.

Stay connected on cityofmadison.com/RBRainGardenProgram



Avoid Mulching Black Tar Leaves this Fall

Before you mulch and mow, double check your leaves for black tar spots this fall. The black tar spots are a fungus that can live through the winter if you mulch them into your grass. These leaves should be brought to a composting facility to avoid spreading fungus and spores in the spring.

Properly disposing of leaves has a significant impact on phosphorus contamination in our local waterways.

Studies by the City show that 50 percent of phosphorus runoff in stormwater comes from leaves. In fact, leaves do not have to directly enter our waterways to contribute to contamination. The combination of rain and the improper disposal of leaves near the road causes phosphorus to leak from leaves into stormwater, creating "leaf tea." This increase in phosphorus runoff contributes to toxic algae blooms.

One way to reduce phosphorus runoff from leaves is to turn your leaves into mulch! Mowing leaves where they are has benefits for your soil and is typically easier than raking them. City crews collect 16,000 tons of leaves annually. Mulching reduces gas from City trucks and crews' workloads.



Applications Open in December: Paint, Learn, Join the Storm Drain Mural Program

December 2023 is the next chance local organizations and schools can apply to join the City of Madison in Dane County's Storm Drain Mural Program.

Dane County and the Madison Area Municipal Stormwater Partnership leads the Storm Drain Mural Program to educate residents on stormwater runoff while adding art to the community. Madison is one of 15 municipalities that take part in the program.

The City of Madison manages over 500 miles of pipes and open channel systems that collect stormwater runoff. Despite this advanced network, pollutants that enter storm sewers still end up in local waterways.

"This is just a fun way to draw attention to a storm drain that reminds people that we only want water going down the storm drain, not anything else," City of Madison Engineering Division Stormwater Engineer Phil Gaebler said.

Since 2018, local artists have worked with schools to paint 43 storm murals across Dane County. These artists use either pre-selected or students' designs as inspiration for the local storm murals.

Three new murals have been painted in Madison this year. Randall Elementary students designed a mural with a fish and a swan. At Jefferson Middle School, students designed a mural with salamanders. Tenney-Lapham residents inspired artists to paint a raindrop with fish swimming inside it.

Storm drain murals are strategically designed to prevent drivers from being distracted by the artwork. The murals are not typically painted on busy streets.

"We put these on low volume streets and then try to find places with a lot of foot traffic so that people will have the opportunity to walk past these and the time to stop to look at them," Gaebler said.

Residents can use an interactive map to take a virtual tour of the storm drain murals or to plan visits to them.

The application opens in December 2023 on www.ripple-effects.com.

Listen and more on the City of Madison Engineering Division's Podcast: **Everyday Engineering**.



Test Your Salt Wise IQ

City Engineering is moving forward Wisconsin Salt Wise practices help protect our lakes, streams, and drinking water. Smart salting also means less damage to our homes, streets, and bridges. How Salt Wise are you?

Question 1: Are there any environmentally friendly deicers?

Answer 1: There are no truth-in-labeling laws for deicers. The only 100% environmentally friendly deicer is the one you don't apply.

Question 2: Does winter salt make our lakes green in the summer?

Answer 2: Elevated salt (chloride) concentrations reduce the populations of the zooplankton that eat algae. High salt use contributes to greener, murkier lakes.

Question 3: How does the application of brine before the storm help reduce total salt use?

Answer 3: Brine pre-treatments work like oil on your skillet, preventing the formation of a bond between the snow and pavement. Brining before the storm can cut back on the amount of salt up to 50 percent, in comparison to not brining at all pre-storm.

Question 4: When is the best time to shovel to reduce salt use?

Answer 4: Shovel early and often to prevent the formation of ice.

Question 5: How much salt actually pollutes water?

Answer 5: It only takes one teaspoon of salt to pollute 5 gallons of water.

Learn more about the work of Salt Wise Champions in Madison and across the state at www.wisaltwise.com.



Hey, “Big Green Vector!”

Did you know? The City of Madison has one of the best preventative maintenance programs in the region with a dedication to maintaining and cleaning the City’s sanitary and storm sewer. The aggressive approach with the big green vectors helps the City of Madison decrease the number of sewer backups to single digits each year. Sewer backups are very expensive and a health hazard for the community. In addition to low backup numbers, another advantage to using the vectors is they do not use chemicals to clean, instead, they use high-pressure water pushed through a 1-inch flex hose with a specially-designed nozzle to propel through the underground sewer main during cleaning. After the nozzle makes its way through the sewer, it begins rolling back toward the vector while scouring the pipe and pulling any debris in the main back to the sewer hole the truck is working out of.

Learn more about the “Big Green Vector” program at www.cityofmadison.com/engineering/BigGreenVector



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