

# WINGRA WATERSHED NEWS

*Promoting a healthy Lake Wingra through an active watershed community.*

SPRING 2018 • VOLUME 15 • ISSUE 1

## How Monroe Street Storm water Management Is Changing

by Phil Gaebler, City of Madison Engineering

The Monroe Street reconstruction project is underway and the City would like to provide an overview of the erosion control and post construction storm water management. During the actual construction process, the Monroe Street project is taking efforts to expose the least amount of disturbed soil by leaving the majority of existing road surface in place and by covering the areas that disturb soil as quickly as possible with gravel. Additionally, the city is utilizing a new type of inlet protection that is flush to the ground that will do a better job of treating more runoff and allow for easier cleaning of captured sediment.

Once construction is completed several new green infrastructure

features will manage runoff from areas of Monroe Street. During the construction process a large underground screen structure will be installed in Wingra Park near the cul-du-sac of Arbor Dr. The screen structure will treat a large portion of Monroe Street and the surrounding area by running the water over a self-cleaning screen. Additionally, a rock infiltration

(continued on page 2)



Photo by Shingle Creek

Rock infiltration trench



New inlet protection

Photos by City of Madison

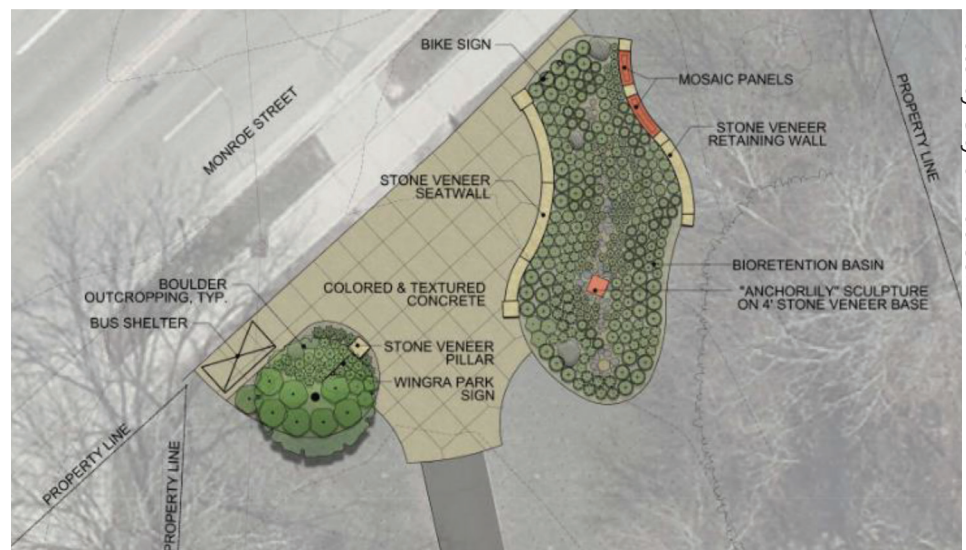


Photo by City of Madison

Wingra Park entrance

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trench will be installed along the edge of the Edgewood College property. This trench will allow



Monroe Street rock trenches

storm water to flow into a rock crib and soak into the ground. Two bioretention devices are being installed as part of the project, one on Commonwealth and one in the redesigned entrance to Wingra Park (see image on previous page). Two rain gardens are also part of the project; one in the Monroe Plaza and one on Chapman.

Combined, the storm water management devices will reduce the phosphorus loading to Lake Wingra by 33 pounds a year. Remember, one pound of phosphorus can produce 500 pounds of algae! Based on our current lake modeling efforts, reducing all this phosphorus will result in an additional 1% reduction in the total lake loading (in other words, a 1% reduction in phosphorus for the entire Wingra watershed). All together these green infrastructure improvements, which will capture runoff from some of Monroe Street and additional areas that drain to it, will make a big contribution in capturing phosphorus. It is predicted to capture more than twice the amount of total phosphorus that Monroe Street produces.

# What's Going on with Lake Wingra's Aquatic Plants?

by Casey Hanson

Beach and boat season are almost in full swing! These activities are relaxing, playful, adventurous, and downright unpredictable. To borrow from Forest Gump's mama, having an experience with aquatic vegetation (aka macrophytes) "is like a box of chocolates, you never know what you're going to get." When you paddle, luck might allow you to observe a beautiful blooming white water lily or you might spend time frustrated at the fact that your boat or paddle keeps clogging up with weeds. When you swim, you might feel the panic set in as a tickly plant wraps around your leg or you might be mesmerized watching the aquatic life darting and dashing between plants. It happens to all of us. Throughout all these experiences, do you wonder how much vegetation is too much, is Eurasian water-milfoil taking over Lake Wingra, or what strategy do mechanical harvesters on the lake follow, if any?

Well, here are some answers! The Wisconsin DNR conducts aquatic plant surveys on all the Dane County lakes at a minimum of every few years. Some of the findings from their 2017 survey are in the info graphic to the right.

All in all, it looks like we have a lot to be proud of in terms of Lake Wingra's aquatic plant diversity. These changes don't always seem so obvious to the naked eye;

however, they show Lake Wingra's aquatic plant life is making progress.

The Dane County Land & Water Resources Department uses the information gathered from aquatic plant surveys to help inform their harvesting program. Here are some answers to your frequently asked questions:

### What is the main goal of cutting on the lake?

Cutting is to preserve the health and lake ecosystem while harvesting Eurasian-water milfoil (EWM) and other nuisance vegetation so lake users can reasonably boat, fish, and swim.

### Will the County cut in areas where there is diverse vegetation close to the shoreline?

No, with some exceptions. The county plans to avoid harvesting (cutting) nearshore specifically to protect the diverse plant community. The only places where nearshore cutting will occur are close to the Wingra Park boat launch, fishing access points along Vilas Park Road, and the Vilas Beach area. All of these nearshore cuts are to provide shoreline recreation and lake access.

### When does the County decide to cut on the lake?

Dane County has a plant scout that visits the lake to evaluate the

conditions and provides recommendations on when harvesting should occur.

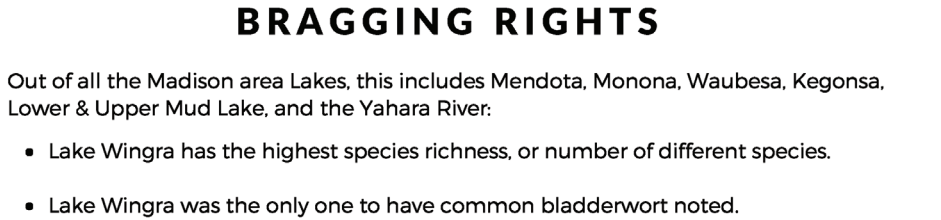
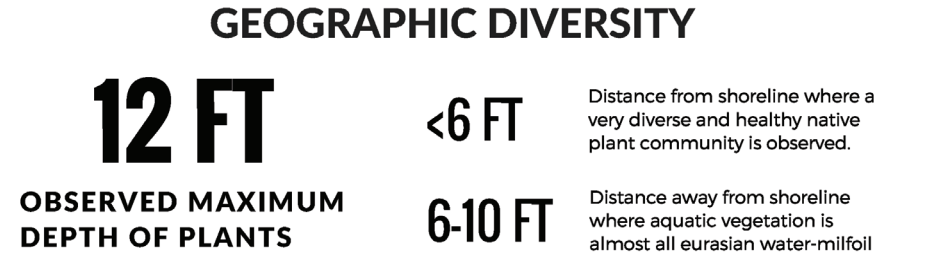
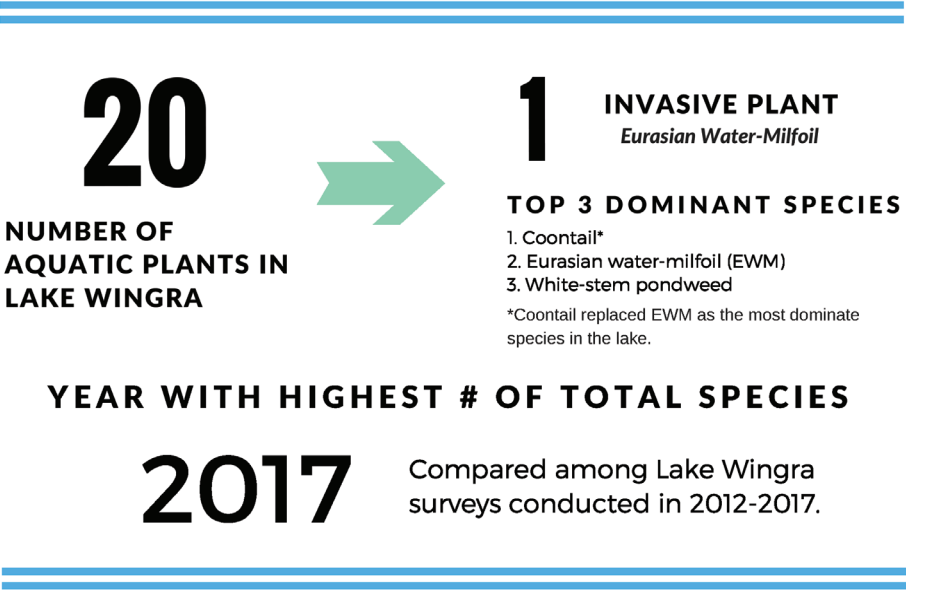
### How does the County prevent the transfer of invasive species from one lake to another?

Dane County cleans and disinfects the harvesting equipment before moving it to other waterbodies.

This includes removing visible plants, mud, debris, water, fish or animals from the machinery.

### Does the County plan to use chemical treatment on the lake?

No. The County believes that could undermine the ecological diversity of the plant community.



### Mission

We promote a healthy Lake Wingra through an active watershed community.

### Friends of Lake Wingra Board

Ben Yahr, Chair  
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Jim Baumann, Treasurer  
John Armstrong  
Roger Bannerman  
Timothy Kuhman

### Advisors to the Board

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### Become a Friend

To become a Friend of Lake Wingra, send your tax-deductible contribution to:

Friends of Lake Wingra, Inc.  
PO Box 45071, Madison, WI 53744

Please make checks to:  
"Friends of Lake Wingra"

### Friends of Lake Wingra, Inc.

PO Box 45071  
Madison, WI 53744  
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www.lakewingra.org

### Wingra Watershed News

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# Friends of Lake Wingra Launches Strategic Planning Effort

by Casey Hanson

A lot of activity is happening in our watershed this year! We have Monroe Street construction, Vilas bridges reconstruction, Wingra shoreline restoration, and more. While many of these activities are physical in nature, some aren't visible to the naked eye. They are behind the scenes and crucial to continue our work to keep Lake Wingra healthy.

This spring Friends of Lake Wingra launched a strategic planning process. Why? "With the Common Council's adoption of the Lake Wingra Watershed Management Plan in late 2016 and our evolution into an independent 501(c)(3) nonprofit organization in 2017, we feel this is a perfect time to evaluate how best to advance our mission and grow as an organization," say Friends of Lake Wingra chair, Ben Yahr.

Throughout the process we will create a three-year work plan and

**What is strategic planning?**  
Having a strategic plan is like having a map. It helps guide an organization over a specified time frame with a series of goals and actions. Usually this is through the creation of a work plan. To create a work plan, an organization conducts stakeholder reviews and does an internal analysis of its own mission and vision.

conduct an internal assessment of our organization. We believe it will help provide continuity, allow us to effectively build off our work year to year, and maintain focus on strategies and efforts that have been particularly effective in the past. Now that we are operating as an independent 501c3 organization, we also want to enhance areas of our operations like fundraising and outreach.

Everyone from our advisors and professional partners to our water-

shed residents and Friends of Lake Wingra supporters has an opinion that matters to us. Our strategic planning committee will contact many of you to hear your thoughts on future priorities, opportunities for growth, and how we can strengthen our relationship to accomplish our mission, "to promote a healthy Lake Wingra through an active watershed community."

We will do our best to consider everyone's thoughts and produce a three-year work plan that is reflective of the majority's feedback, aligns with our mission, and addresses the most critical areas of concern for Lake Wingra's health. Mindy Habecker from Dane County UW Extension is advising the Friends of Lake Wingra throughout this process. We will keep you updated throughout and plan to complete our strategic planning efforts in August 2018.

### Volunteer with Friends of Lake Wingra

Let us know if you want to get involved with us to help improve the health and quality of our beautiful Lake Wingra. Sign up for our monthly e-newsletter on our website [www.lakewingra.org](http://www.lakewingra.org). Opportunities include education programs, working with schools, rain garden installation/planting/maintenance, graphic design, newsletter editing, event planning, marketing and grant writing and review.

### Friends of Lake Wingra Board Meetings

Friends of Lake Wingra board meetings are open to the public and held at the Sequoya Library the first Thursday of the month from 6:30-8:30 p.m. Check our event webpage for any changes.

If you have an item to discuss with the board please email [info@lakewingra.org](mailto:info@lakewingra.org) a few days in advance of the meeting to be placed on the agenda.

### Become a Friends of Lake Wingra Board Member

Do you want to help Lake Wingra on a deeper level? Consider becoming a board member! Start off by attending one or more of our board meetings or by emailing your interest to: [info@lakewingra.org](mailto:info@lakewingra.org).

We can arrange a personal meeting with a current board member or staff person to explore opportunities.

# How Rain Gardens Help Lake Wingra

By Roger Bannerman

Rain gardens help improve the quality of our lakes by capturing pollutants and infiltrating runoff. One additional benefit for Lake Wingra is that increased infiltration can help restore spring flows, which is the main source of year-round flows into Lake Wingra.

Out of the 600 rain gardens that have been installed around the City of Madison at least 80 of those are in the Lake Wingra watershed. The Friends of Lake Wingra (FOLW) hope to see many more rain gardens installed in the Lake Wingra Watershed to help reach a short term goal of restoring 10% of the infiltration lost to development. Efforts are underway to install enough rain gardens to infiltrate over 1 million more gallons of runoff! The FOLW have also provided funds for schools to build rain gardens and the Friends have educated homeowners about the importance of rain gardens.



A terrace rain garden



A front yard rain garden

### Here are some helpful resources for you to learn how to install or afford a rain garden on your property:

#### How to Minimize Costs of Installing a Rain Garden

Terrace Rain Gardens: A program by the City of Madison will continue to install more rain gardens in city terraces during the reconstruction or resurfacing of residential streets. The city will offer cost-sharing to eligible homeowners. See more at: <https://www.cityofmadison.com/engineering/stormwater/raingardens/terraceraingardens.cfm>

Native Rain Garden Plants: Discounted native plants are available to Dane County residents through the Plant Dane Program for about \$2.25/plant. The program is open for orders around February each year: <http://www.ripple-effects.com/plantdane>

#### How to Choose Plants

Many resources exist to select what type of plants you can put in your rain garden. One easy option is to reference the City of Madison's planting designs. Typically these designs are used for homeowners to select from for cost-share programs, but they are available for you to look at to borrow ideas: <https://www.cityofmadison.com/engineering/stormwater/raingardens/index.cfm>

You can also look at the DNR's homeowner rain garden manual (see link in next subsection)

#### How to Decide the Location and Size of a Rain Garden

If you want to build a rain garden, you can find a lot of help in a rain garden manual prepared by the Wisconsin Department of Natural Resources: <http://dnr.wi.gov/topic/shorelandzoning/documents/rgmanual.pdf>



# Historic Wingra Tributary - Glenwood Children's Park

By Peter Nause

The beginning of the Madison Park System in 1931 grew out of the rich legacy of the "Park & Pleasure Drive Association" starting in the 1890's by wealthy benefactors with notable names we recognize today as parks – Vilas, Tenney, Brittingham & Olbrich. Unless you live on the near west side of Madison you may not know about Glenwood Children's Park. Its small size and being tucked into the steep forested terrain of the former quarry are ingredients for its charm as well as its obscurity. It is located immediately south of the SW Path west of Glenway Street & Glenway Golf Course. Glenwood's environmental story of problems and assets is a direct function to its place in the Wingra Watershed. The Wingra Watershed is estimated to be 3,500 acres. Glenwood is about 3.5 acres - only .1% of the watershed - yet it functions as a significant upstream tributary.

Glenwood is rich with local history. Along the park's north side, the Illinois Central Railroad – now the SW Bike Path – was incorporated



Pre-Glenwood Park 1945

in 1886 to construct a rail line between Chicago and Madison. A large storm culvert at the north end of Glenwood runs under the immense added grade of the rail line – it has a beautiful stone arch with a keystone chiseled date of 1887 or 1889.

The park was quarried in the mid-late 1800's by German stonemason Frederick Paunack who lived on Monroe Street where he built in 1853 what is now known as the Arbor House B&B. Easy access to the rail increased the opportunities for the quarry; unproven rumors exist that the first Wisconsin Capitol and two of the earliest buildings on Bascom Hill – North and South Halls - were constructed of stone from Glenwood. By the early 1900's after the best building stone layer was exhausted, the quarry was abandoned and became an eroded ravine & local dump.

Around 1920-1925 Attorney Michael Olbrich- of the Park & Pleasure Drive Association - noted the derelict land at Glenwood for its park potential. He was surveying northwest of Lake Wingra's wetlands along Monroe Street for the future UW Arboretum boundary. Presumably he noticed the watercourse coming down from the north and followed it from Monroe Street up to the abandoned quarry property.

Eventually this land was donated to the City as a future park in 1943 in the name of the children of the Gardner Baking Company.



1887 Railroad Stone Arch

UW Campus Landscape Architect William Longennecker -the first director of the Arboretum- persuaded "the Dean of American Landscape Architects" Jens Jensen (1860-1951) to design what became the "Children's Park" which was dedicated in 1949 when Jensen was 89 years old. Jensen's vast contributions to America's environmentalism are greatly overlooked. His concept for the park as a wild place for kids to explore nature was derived from his Danish Folk School upbringing and his work with Chicago reformer Jane Addams to provide playgrounds for the bleak industrial urban immigrant neighborhoods.

Because of the Jensen historical legacy, in 1975 Glenwood was the first park in Madison to be honored as a City Landmark due to efforts by Prof. Darrel Morrison of the UW Landscape Architecture Department.

Before Madison expanded west and the huge earthen dam of railroad grade was constructed across its watercourse, this was

likely a major drainage as some of the highest landforms in the city are north of Glenwood. Exposed stone outcroppings were probably evident from the natural runoff moving through the ravines which had formed - these attracted Mr. Paunack to quarry the site for building material.

1949 not only saw Glenwood's dedication as a park, but also marked the advent of erosion problems that have continually plagued the park. The post-WW2 housing boom in Westmorland to the north drastically increased storm water runoff in Glenwood via the stone culvert under the RR grade. In 1948 City Engineer Mabbett warned that an area of 45 acres was being drained through the park at a peak flow of 50-60 cf/sec.

He recommended a reservoir be constructed on the property that is now the MGE substation on Glen Drive.

As early as 1950 the first of two buried storm pipes and inlets were installed. By 1972 flooding to homes south of Glenwood was so severe that the second pipe, inlets and an impoundment berm were added. Peak storm surges exceed the carrying capacity of the buried pipes and create erosion havoc in the ravine.

Since 2012 the storm water system at Glenwood has been deteriorating at an accelerated rate. At the north of the park the walls and pipe system have failed where storm water surges out of the 1887 railroad culvert.

This has caused severe erosion displacing hundreds of tons of

sediment, carving serious gullies, clogging storm inlets, & toppling sandstone bedrock formations.

City Engineering and Parks staff are currently working with expert volunteers rallied by the Dudgeon-Monroe neighborhood association's Park Committee who have been steward advocates for the park's historic restoration for the past 12 years and Friends of Lake Wingra's leadership. The engineering solutions must comply with historic preservation criteria due to the park's City Landmark status. A landscape architectural expert in historic preservation



North storm water inlet



Erosion at west inlet

is part of the team working with the City Preservation Planner to advise on this process.

If you have further interest:

Glenwood on Facebook: <https://www.facebook.com/Glenwood-Childrens-Park-Madison-WI-163767666993119>

Glenwood History: <http://dmna.org/sites/default/files/FromQuarrytoLandmark.pdf>

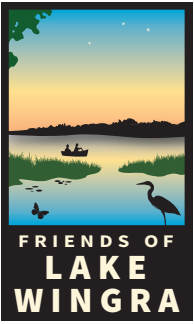
Jens Jensen: <http://thecrosssection.com/2014/05/01/trees-are-like-people-they-do-not-like-to-be-alone-jens-jensen/>



Erosion gully south



Erosion at south inlet



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