



Friends of Lake Wingra



Promoting a healthy Lake Wingra
through an active watershed community

Wingra Watershed News

Summer 2015 volume 12, number 1

Exciting Progress for the Lake Wingra Watershed!

Jim Baumann

A restoration plan for the Lake Wingra watershed is close to having legs! Around 45 residents attended a public meeting on March 26th to offer comments on a close-to-final plan developed by City of Madison Engineering, Friends of Lake Wingra and Strand Associates. To refresh your memory, here are the Friends' major goals for Lake Wingra:

- ◆ Reduce phosphorus reaching the lake to minimize nuisance aquatic weeds and algae;
- ◆ Reduce chlorides from de-icers, such as road salt, to reverse the trend of increasing concentrations in the lake; and
- ◆ Increase infiltration of stormwater to restore the flow from springs around the lake.

Comments from the public meeting raised questions and challenges.

Should we totally move away from using salt as a de-icer on streets and commercial parking lots? Should the city develop guidelines and ordinances on salt usage? What about requiring commercial salt applicators to go through training and be certified so they don't overdo it? Should there be a pilot or demonstration project to show we can use less salt? Others suggested we need more aggressive strategies to reduce



A peaceful Lake Wingra

Richard Hurd

chloride concentrations in Lake Wingra and other urban lakes.

How can the city and residents improve their leaf management and collection or use additional methods to control phosphorus? Leaf vacuums? More bags? Better communication about pick up dates? Is adding alum to stormwater retention ponds a helpful strategy?

What about encouraging more rain gardens and porous pavement to increase infiltration to the groundwater?

Next Steps

Over the next few months, the plan's steering team will consider all input, meet among themselves and with neighborhood associations, and recommend an implementation strategy.

This coming fall, the steering team will present the Lake Wingra Watershed Plan to the Commission on the Environment, the Board of Public Works and the Madison Common Council. The plan will also guide City Engineering in preparing their capital budgets.

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Friends of Lake Wingra, Inc.

Mission

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

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To become a Friend of Lake Wingra, send your tax-deductible contribution to Friends of Lake Wingra, Inc. c/o Office of Advancement, Edgewood College, 1000 Edgewood College Drive, Madison, WI 53711-1977. Please make checks to: "Edgewood College - FOLW."

Friends of Lake Wingra, Inc.

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Watershed Plan Update cont.

Some Positive Steps in the Works

According to Greg Fries of City Engineering, "This is a plan with a long implementation schedule that must begin immediately."

Some progress to date:

- ◆ Last fall, residents along three streets north of Odana Hills Golf Course took part in a leaf collection pilot project. (See "Leaf-It Out of the Street" in our Fall 2014 issue, available at lakewingra.org.) This pilot will continue in the fall of 2015.
- ◆ City Engineering applied for and will receive a \$138,000 grant from the Department of Natural Resources to restore the eroding intermittent stream banks of the channel along Cherokee Drive near Thoreau School.
- ◆ Road salt usage will be the topic of city-wide debate. The Madison Water Utility, faced with multi-million dollar upgrades at a well near University Avenue, is looking at ways to greatly decrease road salt use along the heavily traveled street.
- ◆ A reduced-salt demonstration project on a commercial parking lot within

the Lake Wingra watershed may lead to city-wide policy changes.

- ◆ Madison's Stormwater Utility may fund practices, such as stormwater basins, to control phosphorus. However, property owners may need financial incentives to install porous pavement and rain gardens to increase infiltration.

Implementing the Lake Wingra Watershed Plan will take a concerted effort over a number of years by many, including the City of Madison, Dane County, commercial property owners, residents and the Friends of Lake Wingra.

For information on the draft watershed plan or to provide comments, see Lake Wingra Watershed Plan at www.cityofmadison.com/engineering/stormwater/wingraplan.cfm. If you have questions about the plan, feel free to contact the Friends of Lake Wingra at info@lakewingra.org

Meanwhile, What Can We Do?

Residents

- Go to www.cityofmadison.com/engineering/stormwater/wingraplan.cfm and send comments and suggestions to the email address on the web page.
- Keep leaves out of the street. (See "Recycling Leaves for a Healthier Lawn" in our Fall 2014 issue, available at lakewingra.org)
- Install a rain garden or re-direct downspouts away from non-porous surfaces. (See "Rain Gardens: A Beautiful Way to Reduce Runoff Pollution," dnr.wi.gov/topic/stormwater/raingarden/)
- Report excessive salt to owners and managers of commercial parking lots.
- Support city funding to implement the watershed plan.

Commercial Parking Lot Owners and Managers

- Reduce salt used on parking lots.
- Consider alternatives, including demonstration projects, city application guidelines, applicator training and applicator certification.

City of Madison

- Approve the completed watershed plan and budget for its implementation.
- Continue leaf management pilot projects and improve leaf collection.
- Fund and install stormwater management practices.
- Incorporate green street concepts into street renovation projects.
- Reduce salt use on city streets, targeting areas of excessive application.
- Consider financial incentives to install rain gardens and porous pavement.



A terrace rain garden

Terrace Rain Gardens: A Success Story

—Liz McBride

How much would you pay for a professionally installed rain garden that diverted street runoff so it wouldn't pollute the lake?

\$700? \$400? How about \$100?

For years, the city has been installing rain gardens on terraces when they reconstruct a street. A homeowner must request the installation and share the cost. Originally, the homeowner fee was \$700.

While that sounds like a lot of money, these are not ordinary rain gardens. Runoff from the street enters the rain garden through a structure built into the curb. A pipe brings the runoff into the garden. (Perhaps you've seen rain gardens like these on Allen Street, a project that Friends of Lake Wingra initiated in 2005.)

During rain garden construction, a rich soil of compost, loam, and sand is spread over a base of clear stone. Homeowners choose from a set of designs featuring native plants, and a professional landscaper does the planting. With each garden extending to 15 feet, the plants alone are worth \$600.

However, when a homeowner is assessed \$7,000 for a curb and gutter, an extra \$700 is a stretch. And even when the city lowered the cost to \$400, only a few homeowners said yes.

So when I learned in a neighborhood meeting that the price was dropping to \$100, thanks to a grant from the county, I knew this was a real deal.

My neighborhood, Sunset Village, rests on the side of a hill. When it rains, water pours down South Owen Drive, sending soil, herbicides, oil, bits of trash, and other debris into the storm sewer, which dumps into Lake Mendota. This summer, the city is reconstructing part of the street, including new curbs and gutters. This means we have a once-in-thirty-years chance to install terrace rain gardens.

At the time of the neighborhood meeting, homeowners had received a postcard from the city about the rain-garden option—at the old price of \$400. Two owners had signed on. But to really control the runoff, we needed more.

I created a flyer that explained why terrace rain gardens are important, with photos of what they look like and a note about the new price of \$100. City Engineering provided a map showing which terraces were suitable. Then, on a sunny Saturday, I knocked on doors.

I discovered a few things: (1) Most people aren't familiar with rain gardens. (2) Neighbors are friendly. If they



Liz McBride

answer the door (many didn't), they like to chat. (3) People want to do the right thing, but the price must be right.

I spoke to about half of the eligible homeowners and left flyers for the rest. The next week, Susan Frett, the volunteer coordinator for Friends of Lake Wingra, went around again to answer questions and remind homeowners of the deadline for signing up.

The result? Eleven more homeowners said yes. Four were ultimately deemed ineligible because of trees or other constraints on their terraces. But come summer, on just two blocks of South Owen Drive, we'll have nine beautiful, functional rain gardens.

Are streets in your neighborhood due for reconstruction? If so, talk to your neighbors about terrace rain gardens! It's easy, it's fun, and it's rewarding—for you, the neighborhood, and our lakes.

A note to Liz from the Friends of Lake Wingra: Thank you, Liz, for your excellent service which will be a great benefit for the South Owen Drive neighborhood and the Lake Mendota watershed. You have shown how a motivated person can directly improve their community! Your extra effort making connections with city employees and your neighbors has ensured an increased level of success!

A note to residents of the Lake Wingra watershed: Let us know if you see a need for similar projects. We may be able to assist in some way to expand the impact.

Meet Susan Frett...

—Ben Yahr

Susan Frett, the new volunteer coordinator for the Friends of Lake Wingra is a graduate student in the Environmental Conservation Professional Master's Program in the UW Madison's Nelson Institute. She's been maintaining our Facebook page and website and coordinating our outreach efforts. As the weather warms she's finding volunteers to help with cleanup events around the Lake Wingra watershed. Friends of Lake Wingra will take an active role in the implementation of the watershed plan (See our lead story on page 1) and Susan will help facilitate that process as well.

Susan is a relatively new resident of Wisconsin, having moved to Madison from Eastern Iowa in June 2013 with her husband Pat. She received her undergraduate degree from the University of Iowa and has worked as an environmental consultant, primarily with groundwater issues. She has also

worked with the Iowa Department of Natural Resources Air Quality Bureau and was co-owner of a small construction company.

When Susan and her husband decided that small town life in Iowa was no longer a good fit for them, they decided to move to Madison. Needing more contacts for employment in the environmental field, Susan decided to get her master's degree. She discovered Friends of Lake Wingra through an Edgewood College sustainability class. A group project focused on the Monroe Street reconstruction (See our article on page 5). Project results will help the Friends' efforts to make the reconstruction process friendlier, greener and more sustainable for the community.

Susan's other academic interests involve urban natural areas, green storm-water management techniques, sustainability, urban wildlife and native plants. She will finish her master's degree over



Susan Frett

Pat Frett

the summer working on a plan to make the open spaces of a new residential development in Cottage Grove more useful for wildlife habitat. Feel free to contact Susan with any of your backyard habitat questions!

Water Network Gathering

—Susan Frett

To build relationships with other local groups concerned about water quality, Friends of Lake Wingra hosted a networking event in February. Held in the common house at Arboretum Co-housing, board members and attendees enjoyed excellent food paired with Ben Yahr's home brew.

The main aim of the gathering was to celebrate successes and share ideas for improving water quality in the region. During a "go round" representatives from various groups shared their plans and challenges for 2015. Thoughts and ideas captured included:

- ◆ Monarch butterfly and milkweed projects for schools
- ◆ Environmental effects of development projects
- ◆ Collaborating with local breweries for marketing and outreach (Did we

mention we were drinking home brew?)

- ◆ Promoting native plants and edible landscaping
- ◆ Water quality monitoring
- ◆ Involving kids in nature projects
- ◆ Recycling
- ◆ Pontoon boat tours
- ◆ High capacity well impacts on water quantity
- ◆ Social marketing
- ◆ How to have more of an impact on city policies
- ◆ A new "water sentinels" group
- ◆ Public engagement, and
- ◆ Stewardship efforts

Working collaboratively on common issues across the Yahara watershed can

"The whole is greater than the sum of its parts."

—Aristotle

have a bigger impact than each group may have working individually.

Monitoring development projects and influencing government policies are examples of systemic impacts. Developing methods for installing native plantings, delivering environmental education and social marketing can assist various groups so they don't have to start from scratch.

But we all have too much to do and we need more members! Having fun socially may be one way to build friendships and entice more folks to join our groups.

The Friends hope that we've started a tradition of groups getting together more regularly. With a small amount of effort, this event was fun and well attended. We got some great ideas for the future and hope that other groups did as well!

Alder Candidate Forum

—Susan Frett

On March 10th Friends of Lake Wingra and the Edgewood College Sustainability Leadership Program co-hosted a forum with the alder candidates for the 13th District (Sara Eskrich and Zach Madden). The main topic of the evening was the future reconstruction of Monroe Street.

Small groups discussed four themes:

- ◆ Water
- ◆ Food/nature
- ◆ Businesses/economics, and
- ◆ Transportation

The alder candidates rotated around to participate with all the groups. Those present also had a chance to ask the candidates specific questions mainly relating to the reconstruction but also about their views on environmental and sustainability issues.

Ideas generated included:

- ◆ More green infrastructure
- ◆ Increased pedestrian safety

- ◆ More biking and mass transit options
 - ◆ Additional outside seating in the business areas, and
 - ◆ A redesign of the Crazy Legs triangle
- Landscape architecture students from UW-Madison Associate Professor Sam Dennis' class "Open Space Planning and Design" also shared some of their designs. You can view them at lakewingra.org/library, under "Management Plans and Reports." The designs are listed according to the four themes under "Monroe Street Green Design Corridor."

The upcoming Monroe Street reconstruction, to begin in 2017, is a once-in-a-lifetime opportunity to build sustainability and green features into a design that benefits the community, businesses and the environment. The future could include successful and unique shops and restaurants with visitors arriving via bike, bus and on foot. Envision green spaces with a variety of street trees and gatherings spaces for friends and shoppers.

If you have ideas about the reconstruction of Monroe Street, please share them with us, either via email: info@lakewingra.org or through our Facebook page. We also encourage you to contact your alder person and discuss your ideas with him or her. More people involved will help the reconstruction move beyond "business as usual." Stay tuned to our website and Facebook page for more ideas and events about Monroe Street!



Rendering of possible Monroe Street neighborhood park

Coming Soon! Nature and Culture Trail

—Steve Glass

The Dudgeon-Monroe Neighborhood Association has received a grant from the city to create a nature and culture trail through a portion of the Dudgeon-Monroe neighborhood and the Lake Wingra watershed.

The walking and biking loop will link many of the social, cultural, ecological, and historic features, such as parks, restoration projects, springs, rain gardens, cultural landscapes (including two Jens Jensen-designed council rings), historic buildings, and Lake Wingra.

The route will begin and end at the kiosk in the Glenwood Children's Park at Glenway Street and will follow public bike paths, sidewalks, and footpaths.

A kickoff event in early July will introduce the new trail and celebrate the "place making" grant. Stay tuned to the Friends of Lake Wingra website and Facebook page or Dudgeon Monroe Neighborhood Association website for further details.



Laurie Kutil

Glenwood Children's Park council ring

Little Wonder—Duckweed

—Rex Merrill

Anyone who paddles in the quiet ponds and lake backwaters of Wisconsin is probably familiar with duckweed. These tiny, floating plants often carpet the water surface from spring into the fall. When we haul our boats out, duckweed sticks to their sides at waterline. Transferring our boats between bodies of water mimics the way that duckweed may be dispersed by dirty ducks.

Unlike typical plants with obvious stems and leaves, all duckweed plants consist of oval or linear units called fronds. New fronds start from buds in pockets in the sides of older fronds. After freezing temperatures in the fall, the plants lose buoyancy and sink to the lake or pond bottom where they lie dormant until resuming growth and floating back to the surface during the following spring.

On close inspection of a mat of duckweed, you can see that it may contain several different kinds of plants. In Lake Wingra, there are at least five species of duckweed in three genera. The greater or giant duckweed (*Spirodela polyrhiza*) has larger fronds (between 3 to 10 mm—less than ½ inch) than the other duckweeds. It also has several roots per frond. The lesser duckweed (*Lemna minor*) has fronds 2 to 5 mm long with one root per frond. The smallest of all duckweeds, and indeed of all flowering plants, are in the genus *Wolffia* and are commonly called watermeals. *Wolffia* has globular fronds 0.5 to 1.5 mm in diameter and no roots.

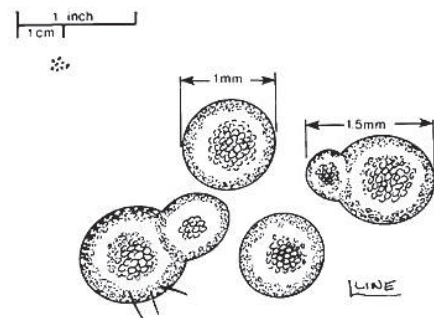
Although duckweeds usually reproduce asexually and prolifically by division, they occasionally produce a diminutive flower within a pocket open to the upper surface of a frond. Each flower typically consists of two pollen-bearing stamens and a single pistil that develops into one-seeded fruit. Details of flower structure have long lead botanists to suspect that the duckweeds are closely related to the aroids, the botanical

family to which skunk cabbage and philodendrons belong. This suspicion has lately been confirmed by comparisons of nucleic acids.

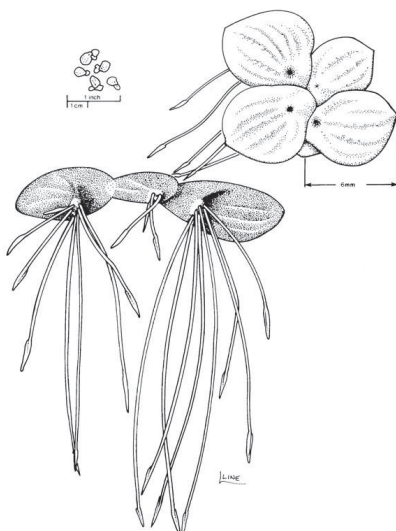
Ducks do eat duckweed. Duckweed has also been used as food for fish, poultry, livestock, and even humans. Under ideal conditions, protein can make up to 45% of the duckweed dry weight. Unlike most other plant proteins, the amino acid composition of duckweed protein resembles that found in animals. Its ability to grow rapidly (plant number doubling in as little as 24 hours) in small spaces could make duckweed a major source of animal feed in the future.

Duckweed may even help clean up our lakes. The technology for treating wastewater in artificial lagoons containing duckweed already exists. As duckweed grows, it takes up phosphates and nitrates, the nutrients that contribute to algal blooms and growth of water weeds. Duckweed in lagoons can be harvested periodically thus removing excess nutrients from the water. Harvested duckweed can then be used as animal feed or as green manure on farm fields.

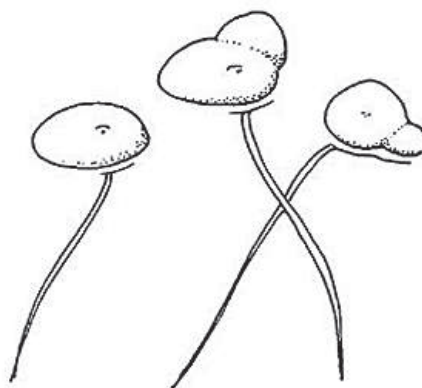
Weeds are sometimes described as plants whose true virtues are not appreciated. That description fits duckweed.



Wolffia columbiana Watermeal



Spirodela polyrhiza Giant duckweed



Lemna minor Lesser duckweed



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Illustration provided by IFAS, Center for Aquatic Plants,
University of Florida, Gainesville, 1990

Water World Meets Digital World

—Ben Yahr

Welcome to another edition of the Friends of Lake Wingra Newsletter! It has been an exciting year thus far, with many great projects coming up throughout the summer, fall, and beyond.

You'll probably notice a slightly different format to the newsletter. In an effort to more efficiently communicate with our Friends, we are moving towards a more robust online presence with smaller printed newsletters, and more content on the web. We'll continue to maintain the email listserve for updates and questions. See our website, www.lakewingra.org, for instructions to sub-

scribe to the listserve, articles, content, data, and detailed information about our projects.

Find us on Facebook for updates on volunteer opportunities, pictures, and fun updates. Look for updates and volunteer opportunities sent via email.

We're interested in hearing from our Friends. Do you prefer a printed newsletter, or would an electronic newsletter suit you better? Use the contact form on our website or send us an email at info@lakewingra.org. Let us know how we can be most effective at reaching you.

Welcome to Friends of Lake Wingra

Friends of Lake Wingra came together in 1998 with an interest in improving the health of Lake Wingra through coordinated watershed management and by engaging the watershed community in stewardship of the lake and its watershed.

Our Goal Areas

Citizen Stewardship	Integrated Watershed Management	Long-term Monitoring and Research	Organizational Capacity and Resources
Grow present and future generations of watershed stewards.	Protect and improve the 'lake as a system' through innovative and coordinated management practices.	Ensure that the information needed to address the mission is available on an ongoing basis.	Build the internal capacity to achieve the mission.

Volunteer with Friends of Lake Wingra

Let us know if you want to help improve the health and quality of our beautiful Lake Wingra. We'll keep a list of names, contact information and interest areas and will get a hold of you when your help is needed. Volunteer opportunities include watershed management issues, education programs, working with schools, rain garden installation/planting/cleanup, graphic design, newsletter editing, planning events, marketing, and grant application review. Contact Susan Frett (Email: sfrett@wisc.edu) if you want to get involved.

Upcoming Events

Wingra Creek Cleanup

June 6, 9:00 a.m. to Noon
lakewingra.org/event/winga-creek-cleanup

Jazz in the Park

June 20, 3:00 to 9:00 p.m.
dmna.org/jazzinthepark

Clean Lakes Festival

July 25, 9:00 a.m. to 9:00 p.m.
cleanlakesfestival.com

Monroe Street Festival

October 10, 10:00 a.m. to 5:00 p.m.
monroestreetfestival.com

Also, see our online calendar at lakewingra.org for up-to-date details on these and other upcoming events.

FOLW Board Meetings

FOLW Board Meetings are held on the first Thursday of each month and are open to the public. Check the calendar at lakewingra.org to confirm the time, location, and meeting agenda.

Friends of Lake Wingra, Inc.

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Ho-ne-um Pond, a spring-fed lagoon

Richard Hurd



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