

Volunteers ARE the Friends of Lake Wingra

- Steve Arnold, Past Chair

For more than a decade, Friends of Lake Wingra (FOLW) board members, advisors, volunteers and donors have worked collectively to improve water quality in Lake Wingra.

Their efforts have influenced city policy decisions, led to the installation of numerous rain gardens and other lake-friendly projects, and enhanced the Vilas Lagoon shoreline through restoration plantings.

The volunteer component of our organization has been incredibly important to each of these accomplishments.

To build on our past successes and to become an even more effective force in protecting Lake Wingra, we are working to strengthen our volunteer base.

Volunteers bring fresh ideas, creativity, specialized talents, and new energy that can be so valuable to grassroots community organizations like FOLW. Additionally, a strong volunteer base helps expand our capacity to attract new board members.

The FOLW is now embarking on an ambitious initiative to engage individuals or organizations that want to better manage stormwater.

Many potential projects will require a strong and active volunteer base to assist with project construction and maintenance.

For example, we would like to expand the Vilas Lagoon shoreline plantings, establish Neighborhood Association liaisons, develop a core group to maintain the Odana golf course rain garden, and establish a committee to maintain our public-education kiosks. We are also seeking volunteers to help with our Facebook page and website.

The opportunities for helping Lake Wingra are numerous and diverse. I encourage you to contact us to find out how you can personally contribute to our ongoing work protecting and improving this exceptional neighborhood resource. Give us a call at 608-663-2838 or e-mail us at info@lakewingra.org and have a positive impact on your lake today.



Please join us in thanking Steve Arnold, former chair of the FOLW Board, for his countless contributions and devotion to protecting and improving Lake Wingra over the years. Steve joined the Board in 2006, and has played a lead role in growing the effectiveness and capacity of our small, grassroots organization. He recently made the difficult decision to step down from the board to care for his ailing wife, Peg. We cannot be more grateful for all he has done (and continues to do!) for Lake Wingra and our surrounding neighborhoods.



Friends of Lake Wingra, Inc.

Mission

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

FOLW Board

Paul Dearlove, Chair David Thompson, Vice-chair Judi Dilks, Secretary Jim Baumann, Treasurer Roger Bannerman Karen Ecklund Jim Lorman Ben Yahr

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Tyler Leeper Rebecca Power
David Liebl Katy Wallace

Special Thanks to:

Rex Merrill, retiring member of the FOLW board, for his many contributions over the last three years.

David Liebl and Rebecca Power, FOLW advisors, for their ongoing participation on the Watershed Planning Steering Committee.

Become a Friend

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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Wingra Watershed News

Summer 2013, Vol. 10, No. 1

Wingra Watershed News is published twice each year by Friends of Lake Wingra.

Meet Nancy Sheehan Introducing our new Program Coordinator



The FOLW board welcomes Nancy Sheehan as its newest part-time contract employee! This arrangement was made possible through a partnership with the Rock River Coalition (RRC) where Nancy presently coordinates volunteers to conduct stream monitoring.

Through a contract with RRC, Nancy will now be able to work approximately 10 hours per week as our new program coordinator. With Nancy on board, the FOLW will be able to more effectively conduct and manage volunteer efforts, expand the reach of the organization to the watershed community, and be a more active partner with other watershed stakeholders.

Nancy strives to promote Aldo Leopold's belief that "We can be ethical only in relation to something we can see, feel, understand, love or otherwise have faith in." She is passionate about providing opportunities to citizens to see, feel, understand, and love the natural world through citizen science and environmental education programs.

Nancy knows from first-hand experience the thrill of finding oneself in the middle of a stream on a cold, spring morning. After first serving as a volunteer, Nancy eventually became the stream monitoring coordinator for the Rock River Coalition. She has participated in citizen science programs, involving the trapping of salamanders and listening for bats. She has even created several citizen science-monitoring programs for teachers and students, including a heron rookery and a sinkhole study.

As a part-time naturalist educator, Nancy has conducted environmental education activities for K-12 students at local natural areas and in school yards. Each year, she enjoys introducing the wonders of Lake Wingra to area educators during the Wingra Watershed Experience workshop organized by Debi Leeper and Wingra Boats.

Nancy has a Master's in Environmental Management from the Yale University School of Forestry and Environmental Management. After her master's program, she worked with various international relief and development organizations in West Africa—first as a U.S. Peace Corps volunteer and later as a Ph.D. candidate with the UW-Madison Nelson Institute of Environmental Studies.

Since 1991, Nancy has called the neighborhood around Lake Wingra her home. With her two children and husband, Nancy enjoys biking, canoeing, hiking, and camping. She now looks forward to working with the many FOLW volunteers and supporters who work tirelessly to create a culture of stewardship for the freshwater resource of Lake Wingra.

Eagle Scout Project Enhances the Wingra Watershed

David Thompson and Judi Dilks; photos by David Thompson

In the fall of 2012, Jack Nolan of Boy Scout Troop #16 in the Blessed Sacrament Parish approached the Friends of Lake Wingra to ask for help selecting a service project that would benefit the Lake Wingra watershed.

Jack wanted his project to demonstrate leadership ability and help him fulfill requirements for becoming an Eagle Scout. David Thompson, FOLW Board member, volunteered to help. He took Jack and Jack's dad, Rich, on a tour of the watershed, so they could choose the right opportunity.

David and Jack decided to build a second rain garden at the Thoreau School. There was an existing garden at the site, but an additional garden would help control runoff from a paved playground and the school's roof. During storms, torrents of water flowing down a hill towards Nakoma Park had eroded a deep gully.

A garden here could help capture that water, replenish groundwater, increase biodiversity and also demonstrate green storm water control. Thoreau Principal, Kathy Costello, and MMSD Director of Grounds, John Finnemore, approved the project, and the Friends of Lake Wingra granted Jack \$1,500 to fund his plan.

Plans take shape-slowly

A large rain garden is a complex project. There were many things to consider, including water flow, soil condition, trees and sunlight, pedestrian traffic, underground utilities, protection from snowplows in the winter, and how to water in the summer. Jack and the FOLW also wanted to include opportunities for education and public awareness.

There was only one place big enough for Jack's garden (and far enough away from snow plows), but it was very shady, and had a substantial slope. It would be challenging to build a garden here, but Jack and David decided they could handle the slope by "terracing" the garden using silt socks leftover from construction on the Edgewood Campus.

Spring was fast approaching, and it was time to decide on the plants to order. With snow on the ground, it was impossible to lay out the garden's outline in detail, but sketches estimated the square footage. Planning for one plant per square foot, Jack and David placed their order selecting shade tolerant plants, except for some butterfly weed planned for a corner that would receive some direct sun.

Final preparation

With the arrival of warm weather, plans were refined with an eye to organizing construction of the garden in an efficient way. To prepare for construction Jack and David built a 1/4 scale model of the garden at Vilas Beach. They realized that the downstream berm would have to be large—much higher at the downstream end, and they needed to plan sufficient space for it.



Jack Nolan builds a model of his garden at Vilas beach

David, Jack and Jack's dad, Rich, went to Edgewood to look at the condition of silt socks left over from construction and get permission to reuse them. Each sock was 20 feet long and weighed 400 soggy pounds. With help they moved about 4,800 pounds of socks!

Rich's van smelled like a mushroom farm. Then they proceeded to the Thoreau School site and used yellow rope to lay out the boundaries of the new rain garden.

Due to the slope and limited space, they decided to build multiple basins, each terraced with a silt sock across the middle, so less excavation would be required. The layout was inspected and cleared by Diggers Hotline.

Continued on page 4



While they were laying out the garden, a large snapping turtle arrived to inspect the work. Traffic was backed up while she crossed Nakoma Road.

Scout Rain Garden (cont.)



Construction Day

With construction only days away, Jack discovered the turnout of scouts for digging would be low, due to a scheduling conflict. Additional adults were rounded up, and on Saturday, June 1, about 17 people helped dig basins for the second rain garden at Thoreau School. This included 10 people from Jack's scout troop, and several FOLW board members.



One scout parent helped to shape and level the berm.



Construction day tidy up.

The team encountered an extensive root system while digging the upper basin, but decided not to cut any roots larger than 1-inch in diameter. This slowed the work some, but everything was completed, and the basins were protected against rain with silt socks and tarps. Excess dirt was piled for later pickup by the School District personnel.

Planting!

On Sunday before planting day, Jack met with FOLW volunteer Liz McBride to begin final planning for where the plants would go. Jack had already created a rough plan; their goal was to refine that plan, based on Liz's expertise, using a revised plant list, and the specifics of the basin as now constructed. Liz put markers into the basins, indicating zones and plant locations. She also created a handout of instructions for planting day.



Plant markers and silt socks are installed after the basins are excavated.



On Tuesday before planting day, David and Jack laid an erosion control blanket over the berm to protect against forecasted rain, and remained "on call" to shore up erosion controls in case of heavy rain.

On Wednesday, David picked up 480 plants from Agrecol, cramming them into every corner of his vehicle. They all looked healthy. Planting took place on Saturday, June 8, from 9:00 to 1:00, with scouts from Jack's troop, plus some adult volunteers. Liz gave everyone planting instructions and then she and Jack handed out plants and area assignments.

The biggest concern was to avoid stepping on plants in the very tight space of the garden, so planters were divided into teams of two, with one inside the garden doing the planting, and the "partner" outside the garden, passing in plants, compost, and other needed items.



Rain garden planting

Follow-up garden protection

Until the plants become established, a rain garden is at risk of washout, and mulch is a problem in rain gardens, because most kinds just float away when the garden floods.

During planting the team mulched half the garden with soggy wood chips from old silt socks, but the mulch moved around a lot during subsequent rain storms, burying some plants.

Jack and David decided to observe how the garden responded to rain before designing detailed protections against erosion. They didn't know where the water might overflow, from one terrace to the next, and the lowest garden had a big basin. If the berm there overflowed, a large gully could form, destroying the garden.

Four days after planting, on the evening of June 12, there was heavy rain—the fledgling garden was under siege! Torrents of water came down the drainage way, headed for the garden!

There was no plan to deflect water, but David was there during the storm, observing and taking corrective action. The lowest garden was at special risk, because a berm there

forms a large, deep pool that could overflow, washing out the berm. With suspense building,

David watched the pool fill to within 6 inches of the top, but it didn't overflow, so almost no damage was done to



Rain garden under siege!

any part of the garden—except for the plants looking muddy and bedraggled.

The week of June 23 brought more severe storms, so the team built a spillway from basin #2 to basin #3, and after each storm dug out the plants that were buried in debris.

Two silt socks began to shift and were stabilized with metal stakes. At dawn on June 26, there was a cloudburst with severe flooding in Nakoma Park. Torrents of water washed over the silt socks and into the garden.

The berm on pool #3 overflowed—but since one of the construction volunteers had made the berm so perfectly level, no single discharge channel formed, and the berm survived.

As of June 26, the garden had survived many severe storms and Jack and David had learned A LOT about rain gardens and organizing volunteers.

Could YOUR school benefit from a rain garden?

A recent FOLW survey of local schools revealed many opportunities for correcting stormwater and erosion problems. Contact us if your school would like help with a rain garden or other lake-friendly project. FOLW may be able to offer planning and construction advice, volunteers, and even funding assistance.



The Friends of Lake
Wingra celebrated their 15th
Anniversary on June 1, 2013,
at the Vilas Park Shelter with the
Wingra Watershed Wingding—three
hours of food and fun, complete
with door prizes and music by
Kristy Larson Trio.















Special Thanks to Our Donors

- Paul Dearlove, FOLW Board Member
- Tim Kay, Author
- Target

- Nancy Sheehan, Rock River Coalition
- Orange Schroeder, Orange Tree Imports
- William Scheckler, Professional Photographer
- Jennifer Filbert & Susan Graham, WDNR, Lakes/Aquatic Invasive Species Program
- Laura Herman, Citizen Lake Monitoring Network, UW-Stevens Point



City of Madison to Use Marion Dunn Pond to Test Improved Phosphorus Removal

-David S. Liebl

New stormwater regulations (the Rock River TMDL) require that the City of Madison remove an additional 6,000 pounds of phosphorus from its stormwater discharge to the Yahara Lakes. To accomplish this, the City is investigating new approaches to removing phosphorus from stormwater runoff.

One of these approaches is "alum addition." The City will be conducting a demonstration project at the Marion Dunn Pond (located at the foot of Glenway Street) to determine the feasibility of adding aluminum sulfate—also known as alum—to reduce phosphorus, turbidity, nitrogen, bacteria, and other pollutants in stormwater. These targeted pollutant reductions would go beyond the present capability of this stormwater detention pond.

The City chose the Marion Dunn Pond for the demonstration project because the U.S. Geological Survey had previously conducted comprehensive stormwater testing in the pond, providing a baseline against which to compare the results of the alum addition.

The alum-addition demonstration project will allow the City to determine how effective this approach is for Madison's stormwater runoff, while gaining a better understanding of costs and equipment-management requirements.

The demonstration is planned to take place for one or two summers, depending on rainfall. At the end of that time, the project will be evaluated to determine if it is acceptable to the community and the UW Arboretum. If so, it may continue. If not, the equipment will be removed.

While the project is intended to benefit the Arboretum wetlands and Lake Wingra by improving runoff water quality, there are other measures that can and should be taken in the watershed to reduce the need for using alum addition in the pond.

These include:

- Intensive street sweeping and leaf collection
- · Rain gardens installed on private property
- Infiltration basins on public property
- Underground treatment devices

Each of the above has costs and benefits that will need to be evaluated as part of a whole-watershed approach to stormwater management. The demonstration project will provide cost/benefit information for alum addition that can be compared to these other approaches.

For questions about the specifics of the demonstration project, contact John Reimer, City of Madison Engineering, at 608-266-4094 or reimer@cityofmadison.com.

Wingra Creek Cleanup June 8, 2013

Hosted by: FOLW and Strand Associates

Volunteers: David Liebl; Tom Lynch; Jillian, Amy & Tim Soderman; Dave Anderson; Dan Elsass; Rex Merrill; and Paul Dearlove

Trash haul: several garbage bags full of litter and two shopping carts



David Liebl and Rex Merrill took a stake in our waters when they volunteered at the Wingra Creek Cleanup.

One-hour Rain Gardens

You can make a big contribution to safety, lake quality, and neighborhood beauty in only one hour!

- David Thompson; photos by David Thompson

Sidewalks are an important link in the health of our lakes. In many places, storm runoff is channeled down sidewalks, and then into the street. From there, the water washes nutrients and pollution down the storm sewer and into our local waterways.



Pick your garden location

Get the whole family involved! Look for where rainwater flows and puddles. In winter, there's danger of slipping here as snow melts and refreezes.



Before planting, pour water to see which way it goes

You can also pour water on your driveway, sidewalk or patio to see which way it runs. Once you know which way the water flows, place your rain garden along the flow path so the flowers can intercept the water.

Instead of being part of the problem, you can create simple, low-cost rain gardens and become part of the solution to improved lake health. It involves diverting rainwater and nutrients where they can be used to grow flowers in your yard, rather than weeds and algae in Lake Wingra.

3 Decide on your plants

Plants that are native to our region and climate are best because they are low maintenance. Decide if you need plants for sun or shade, and try to match the plants with the particular soil conditions they require. Perennial plants can be purchased from local nurseries or consider coordinating plant exchanges with your neighbors.

4 Dig your trench

Create a shallow basin that can collect and contain rainwater. It should be dug deep enough to accommodate the plants, compost, mulch, and any debris that might collect, while still allowing for the temporary storage of stormwater. If building your rain garden along a sidewalk, make sure the trench is below the level of the concrete and at least one or two sidewalk squares in length. Next, bevel the edge next to the sidewalk for safety. An effective and attractive sidewalk garden can be a little as 20 inches wide and 6-8 inches deep.



5 What to do with the soil you removed

Plan to remove about half a garbage can of soil per square of sidewalk. Remove the sod from your trench in neat squares. These sod squares can then be used to patch bare areas in your lawn, salt-damaged strips along sidewalks, or even erosion-formed gullies in your neighborhood. Extra soil can be mixed with weeds, yard trimmings, and kitchen scraps to create garden-loving compost, or scattered on your lawn. Another option is to use extra soil to create low ridges in your yard so that water can temporarily pool and infiltrate into the soil. This way you create TWO rain gardens for the labor of one!

6 Follow-up and maintenance

Keep the plants properly watered and weeded until they become established. A layer of shredded bark mulch will help keep weeds at bay while retaining soil moisture. It is not necessary to rake leaves from the trench since they can help protect the soil and fertilize the plants as they decompose. Leaves also attract worms that will aerate the soil and improve its water-infiltration capacity.



Involve your child

Put kids in charge of building, improving and maintaining the garden.

They will learn quickly how to distinguish native plants from weeds while building powers of observation. For example, observe the rain garden in the rain and see how it functions as a natural sponge.

If there's more runoff than your garden can handle, create a mini-spillway so overflow water is directed to the middle of your

terrace rather than to the street gutter. Then, consider enlarging the garden to accept all the runoff.

Kids love to play in the rain. Empower them!



One day after planting native celandine poppies in shade.

Watershed Planning Steering Committee

- Rebecca Power

Clean, clear water. Restored spring flow. Abundant native plants and animals. Stewardship and enjoyment. Sound like worthy goals? If you think so, you're not alone. These are the goals presented in Lake Wingra: A Vision for the Future, a document developed by the Friends of Lake Wingra.

While there are many ongoing efforts to make these goals a reality, City of Madison Engineering and the Friends of Lake Wingra are working with Strand Associates and Bret Shaw of the UW-Extension to develop the first installment of a comprehensive Lake Wingra watershed plan.

This plan will provide a framework that integrates our vision for Lake Wingra's future with the diversity of Lake Wingra management activities. In addition, the plan makes it easier for anyone interested in the future of the Lake Wingra watershed to make a difference—no matter what your interest or skill set.

The first year of the planning process will address the following water resource issues: chloride pollution from winter snow and ice removal; low spring flow caused by pavement and other hard surfaces that prevent rainwater from recharging groundwater; sediment pollution that fills in valuable wetlands and destroys fish habitat; and phosphorus pollution that causes excess aquatic plant growth and algae blooms.

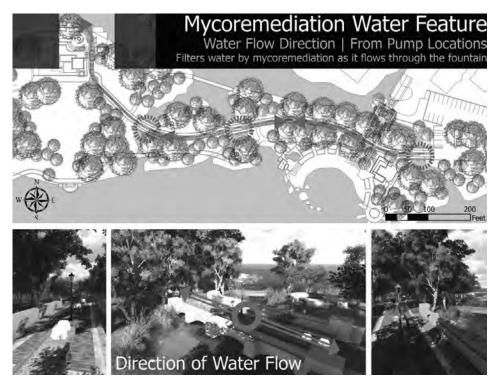
For Steering Committee meeting minutes and background documents, please visit the City's Lake Wingra Watershed Plan web page at: http://www.cityofmadison.com/engineering/stormwater/wingraplan.cfm.



If you would like more information on the planning process or would like to get involved, please e-mail us at info@lakewingra.org.

We will match your interests with upcoming volunteer opportunities, such as participating in planning meetings and communicating with elected officials, using less salt on your sidewalk in the winter, and/or helping to build a rain garden.

Look for announcements on our listserv: http://lists.danenet.org/listinfo.cgi/friends_wingra-danenet.org



Re-envisioning Vilas Park

-Ben Yahr

Friends of Lake Wingra is pleased to announce the completion of conceptual master plan designs for Vilas Park in collaboration with Mr. Kurt Schmidt.

Kurt chose to focus on Vilas Park as his Senior Capstone project for the UW-Madison Landscape Architecture Program. Capstone projects typically include one semester of analysis and one semester of design, ranging from the regional scale to individual sites.

Friends of Lake Wingra identified several goals for the project, including citizen stewardship, enhancements to previously produced plans for the site, integrated watershed management, long-term monitoring and research, and improved water quality.

Kurt's analysis identified several areas for possible improvements throughout Vilas Park and along Wingra Creek

Master planning efforts focused on the lakefront portion of Vilas Park to address: vehicular, bicycle, pedestrian and boat circulation; shore fishing access; lighting; a series of sculpture nodes highlighting the large mammals

of Wisconsin; native vegetation planning; and designated viewsheds.

One design concept involves reshaping the lakefront area into a series of five islands to enhance water quality and paddling access between Lake Wingra and the lagoon.

Vehicular circulation would be limited on the islands, though a series of bike and pedestrian paths would provide easy access throughout the park. While through traffic would no longer be permitted on Vilas Park Drive, existing parking lots would be optimized, and emergency or maintenance access would be allowed along bike paths.

Conceptual plans for Vilas Beach include: a large dock area, a stronger connection to the main zoo entrance, and a series of terraces that could provide significantly more usable beach area for sunbathers.

Environmental education was a major focus of the planning efforts. Stormwater management was another key element of the conceptual designs through lake-edge garden areas (which have the added benefit of discouraging geese), and through an active mycoremediation water feature. The water feature would use wetland plants in conjunction with fungi to filter and clean the water while providing a significant site element and opportunity for environmental education.

Kurt's designs were on display at the Wingra Wingding hosted by the Friends of Lake Wingra and received many positive comments. The Friends of Lake Wingra hopes that elements from this conceptual design will be considered in future planning efforts at Vilas Park and be incorporated into the larger Wingra Watershed planning effort underway (see "Watershed Planning Steering Committee" on page 9.)



Cattails: Grocery Market in the Marsh

-Rex Merrill

magine the Madison lakes as they looked before European settlement. Dense aquatic plant communities ringed the lake edges. Plants, such as the pondweeds with their submerged leaves, were closest to the open water, and water lilies with their floating leaf blades were common in the shallows.

On the border between land and lake, plants with erect strap-shaped leaves formed extensive marshes. Even today, we are lucky enough to see much of these plant communities still surrounding our urban lake.

The marshes around Lake Wingra are dominated by cattails (genus *Typha*) that are easy to identify by their tall, erect leaves and stems topped with fuzzy, sausage-like spikes.

From late summer through winter, the spikes consist of tiny fruits surrounded by dense hairs. The fruits develop from small female flowers that receive pollen from male flowers earlier in the summer. A flowering stem has a narrower spike of male flowers above the female flowers.

In Wisconsin, we have two cattail species: common cattail (Typha latifolia) and narrow-leaved cattail (Typha angustifolia). Typha latifolia, which is native, has leaves that may reach 9 feet in length, and produces flowering spikes without a gap between the male and female flowers.

Typha angustifolia, a non-native variety, has narrower leaves that are shorter than 5 feet, and flowering spikes with a gap between the male and female flowers. Many of our cattails are hybrids between the two species, which may crowd out other plants in our marshes.

All cattails can provide food throughout the year. As new, green leaves grow during the early spring, older leaves can be stripped away to reveal a succulent, pale heart that can be steamed like asparagus.

In late spring or early summer, new flowering spikes emerge from the

clusters of leaves. These are especially tasty sautéed and salted in butter and eaten like a corn dog.

Before mid-summer, the male flowers produce abundant pollen that one can shake out into a bag. The pollen can be added to wheat flower as a protein supplement.



In late summer on through the rest of the year, buds form on the rhizomes (horizontal stems) buried in the muck of the marsh. These also can be steamed or sautéed.

By fall, the sugars made during photosynthesis are converted to starch that is stored in the rhizomes over the winter. If you are hungry enough, you could dig the rhizomes out of the muck, clean them, and crush them in a pail of cold water. The starch will settle out. and when the rest of the rhizome and water are removed, the starch can be dried and used like white flour.

Like the Native Americans, modern anglers enjoy a productive fishery, which is supported by aquatic plant communities. Unlike the Native Americans, we tend to ignore another potential food source surrounding our lakes.

The cattails that nearly form a monoculture in the marshes around Lake Wingra can provide a veritable grocery market year-round.

Friends of Lake Wingra, Inc. c/o Office of Advancement

c/o Office of Advancement Edgewood College 1000 Edgewood College Dr. Madison, WI 53711-1977





FOLW Board Meetings are held the first Thursday of every month at the Sequoya Branch of the Madison Public Library. Meetings take place from 6:30 to 8:30 p.m. and are open to the public.

You are invited to attend to learn what's going on in and around the Lake Wingra watershed, and to hear about the Friend's various project initiatives.

In addition, we are always looking for enthusiastic individuals who may be interested in serving on the Board. Please consider joining us at one of our monthly meetings to learn more, or send us an e-mail at info@lakewingra.org.



Looking to do good works for Lake Wingra and the watershed community? To get involved, send an e-mail expressing your interests to: info@ lakewingra.org. Here are just a few of our needs for volunteer support:

- Anyone who is a team player and has time and energy!
- Fundraising and development expertise
- Community organizing
- Writing and editing
- Website management
- Shoreline caretakers
- Construction site erosion-control watchdogs