

Intensive effort to protect Wingra is a conservation model

By Ron Seely
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Some places become so much a part of a city or a landscape that it is difficult to imagine them not being there.

Think of Madison, for exam-

ple, without Lake Wingra and its necklace of woods and wetlands. It is a small patch of wild in a growing city, a place where, when the weather allows, you can paddle a canoe and catch a muskie. In the span of a pleasant walk you can study an Indi-



Betty MacDonald has lived happily with Lake Wingra for 56 years. From her Vilas Avenue home, she has a front-row seat for the changes prompting concern. Leah L. Jones-
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an mound, pick a water lily,
explore a spring, listen to the
croaking call of a sandhill crane
or just sit on the bank and dangle
your feet in the water.

Betty MacDonald has lived

Wingra

Continued from Page At with the lake and its woods outside her big front window since 1948. She never tires of the view and of knowing that just across the way from her Vilas Avenue home is another, wilder world - this time of year an elegant study in black and white with a complement of geese.

"You know," MacDonald said last week, "I bet hardly a day passes that I don't stand at that window and just look."

So important is the lake and its environs that it has become the focus of what may be the most intensive effort in the state to protect and clean up a watershed. From neighbors who glimpse the lake out their living room windows to UW-Madison biologists and students at Edgewood College, the effort involves hundreds of people and dozens of groups and is proving to be a model for such conservation work.

"If we can't fix Lake Wingra, what can we do?" asked Anne Forbes, chairman of the Friends of Lake Wingra, which was started in 1998 by neighborhood residents and others concerned about the future of the watershed.

The formation of the Friends group was the start of an effort that has paid off in ways big and small. Homeowners are beginning to think twice about using too much fertilizer or raking their leaves to curbside, and about where the water from their downspouts ends up. Others, including business owners and golf course managers, are considering innovative approaches to reduce pollutants — rain gardens and infiltration fields, for example, that allow storm water to soak into the ground slowly instead of running down a gutter to the lake.

And, for the first time anybody can remember, neighborhood groups and institutions such as UW-Madison and local governments, including the city of Madison and Dane County, are working together to study and correct problems in the watershed.

"I'm seeing education at all different levels now," said Roger Bannerman, a hydrologic engineer who oversees activities in the watershed for the state Department of Natural Resources. "I'm seeing differences not only in neighbors but in staff working for the county and the city. They see

the possibilities now. They see we don't have to do things the same old way. We can do something different."

The runoff problem

Lake Wingra needs the attention. There was a time when the lake truly was a rural retreat; in the mid-1800s, it was surrounded by farm fields and agricultural runoff was the major problem. Today, however, the runoff comes from streets and parking lots and rooftops.

A 1999 study by students in UW-Madison's Institute for Environmental Studies explained how this has changed the lake. Before the area became so built up, large expanses of farmland and prairie allowed rainwater to soak slowly into the ground. Today, all of the concrete prevents that, short-circuiting the natural process that recharges the ground water aquifers, or storage areas, that in turn feed the lake's wetlands and springs. As a result, at least 28 of those springs, essential to the lake's health, no longer flow.

Instead of soaking into the ground, rainwater — and right now, snow melt — flow into the lake. All of the nutrients and sediments in the runoff cause the growth of algae and weeds and also fill the lake and its wetlands with silt. There are also more direct problems, such as last summer's E. coli outbreak that closed Wingra to swimming.

The numbers tell the story. Experts estimate that runoff into the lake has increased from very little before the area was settled to 110 million cubic feet per year. Sediment being carried into the lake has increased from 100 tons per year before sediment to 400 tons per year and phosphorus, which causes weed and algae growth, from 300 pounds a year to 3,300 pounds per year.

No wonder, then, that the acreage of wetlands around Wingra is going in the opposite direction. Before settlement, the lake was surrounded by 1,500 acres of wetlands; today wetlands account for only 210 acres around Wingra. As discouraging is the disappearance of plants and animals that have lent the lake its character over the years. No longer will you find wild rice or celery or flocks of canvasback ducks.

These changes have been most noticeable to the people who live around the lake. In 1998, Friends of Lake Wingra played host to the first meeting of all the government agencies, groups and individuals that play a role in caring for the lake and its 5,140-acre watershed. It was a remarkable meeting, recalls Forbes, both because of how many were involved and because it was the first time all concerned had met as a group to talk about Wingra's fate.

"Just to have all the agencies there in the room together, that was something," said Forbes. "Finally we were asking, 'How does all of this fit together?'"

There were other meetings and, unlike many meetings, these resulted in considerably more than just talk. The ripples from those early and enthusiastic discussions, in fact, are still moving outward.

In the intervening years, the Friends group has successfully Applied for and received grants totaling thousands of dollars from the DNR for studying and improving the watershed. Those grants, one for \$40,000 and another for around \$30,000, are helping to pay for everything from the construction of rain gardens to shoreline improvements. And the group has either produced or sponsored studies on everything from new watershed management approaches to storm water.

The Wingra spirit spreads

From the UW Arboretum to the city of Madison, a project in the Lake Wingra watershed seems to be on everybody's agenda.

The UW Arboretum, for example, has embarked on an ambitious plan to study and manage storm water, focusing especially on the connections between runoff and restoration of the natural landscapes around the lake.

Arboretum Land Care Manager Steven Glass and UW-Extension's David Liebl are co-directors of the project. They say it has been eye-opening to understand just how large an area — about six square miles of Madison's West Side — contributes storm water to Lake Wingra. Few probably realize, Liebl said, that the water running off the parking lots of car dealerships on Odana Road ends up running through the Arboretum and into Lake Wingra.

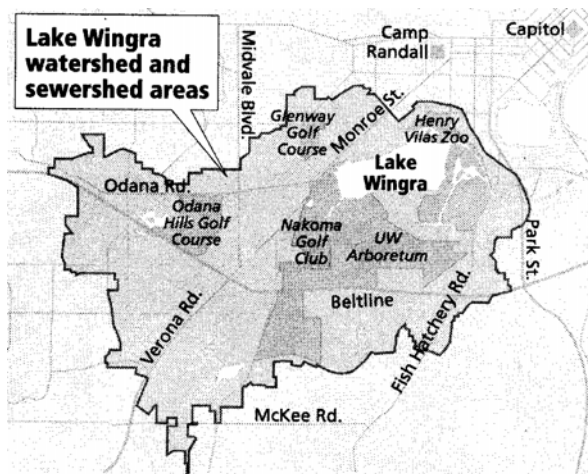
But understanding that, he added, is essential if practices contributing to Lake Wingra's problems are to be corrected. It's a different approach, Liebl said, because restoration used to focus on ecosystems such as prairies that were contained entirely within the Arboretum's boundaries.

"We looked at closed systems," Liebl said. "That used to be a pretty common paradigm in ecological thinking. To do restoration work with that old way of thinking, we would have focused on one area. Now we I have to think about what is happening two miles away from here."

Such an approach has led to discussions about building infiltration fields, large areas where water can more easily soak into the ground, at Odana Hills and Glenway golf courses.

The city of Madison seems open to such ideas, evidence in that city engineers are thinking differently, too. With the help of a grant secured by the Friends of Lake Wingra, the city is turning an entire street into a pollution control experiment. Adams Street, between Edgewood Avenue and Harrison Street on the hillside above the lake, is scheduled to be rebuilt and outfitted in coming months with eight or nine rain gardens, planted areas that catch and filter storm water that otherwise would run into storm sewers and directly into the lake.

The idea has been tried in Seattle, according to the DNR's Bannerman, where research has shown the technique to reduce runoff from a street by as much as 98 percent.



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It's not hard to find other examples of increased attentiveness to Wingra's plight. Students in Jim Lorman's science classes at Edgewood College have been busy taking water samples in the neighborhood to measure the amount of salt running into the lake.

And the remodeling of the college's Mazzuchelli Laboratory building on the shore of Lake Wingra is being done complete with rain gardens and a roof garden, the same kind of planted area atop a roof and meant to slow and filter runoff.

Even larger building projects in the watershed, such as the proposed remodeling of Midvale Plaza Shopping Center on Midvale Road, are being looked at with an eye toward controlling environmental damage. At one of the early meetings on the project, Bannerman recalls, members of the Friends of Lake Wingra and a couple of neighborhood groups were on hand to provide suggestions.

Such activism on behalf of a watershed is relatively new, Bannerman said. And it is immensely heartening. He can hardly believe he's going to meetings to talk about rain and roof gardens.

"A few years ago I was hesitant to even talk about roof gardens," Bannerman said. "It's always like people are a little afraid of new technologies. Now people are talking about them openly. They're out of the closet."



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More and more people are getting involved in tending to Lake Wingra's problems. Here, Edgewood College junior Julie Brania collects a water sample from a retention pond on the college grounds. Along with classmates Nicole Newman, standing left, and Mollie Roach, right.

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