

Lake Redstone

Protection Connection

LAKE REDSTONE PROTECTION DISTRICT • FALL 2006

Planning, Survey Help District Set Future Course

Forging a common vision for the future can be a challenge for any organization, and Lake Redstone is no exception.

Established by the Sauk County Board in 1976 to combat water quality problems which had arisen at the 10-year-old lake, the Lake Redstone Protection District recently completed the first strategic planning process in its 30-year history, allowing the organization to take stock of its accomplishments and shortcomings, and plot a course for the future.

“Throughout strategic planning, the whole idea is to get everybody working together,” said Sauk County UW-Extension Agent Jenny Erickson, who facilitated the six-month process. “A lot of times in groups you have people going in different directions, and planning is all about building consensus.

“It’s looking at your strength and weaknesses, it’s thinking about your stakeholders, it’s thinking about what are the issues facing the District and the lake,” she continued. “How do you prioritize those issues, how do you decide what to do, and how do you implement it?”

One of the first steps of the planning process was to learn more about the current community which surrounds the 612-acre lake, created in 1966 by impounding the waters of Big Creek. Crafting a current profile of Lake Redstone began in March with a survey mailed to each of the 1,047 households in the District.

Jumping out from the 340 responses was the relatively rapid turnover of District residents. More than half of those returning the survey had lived on the lake less than 10 years, indicating a need for continual communication, education, and engagement, according to Erickson.

In addition, fewer than a quarter are full-time year-round residents, with only 13% of part-time residents intending to establish full-time residency.

Most respondents indicated that they chose to own property at Lake Redstone to take advantage of the area’s natural beauty and recreational opportunities. These values were also reflected as water quality issues dominated residents’ concerns about the future of the lake. Meanwhile, 58% of respondents considered Lake Redstone to have good water quality, though many felt that the water quality in the lake was static or slightly deteriorating.

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LRPD_ LRPOA_What’s the Difference?

The Lake Redstone Protection District was established by the Sauk County Board on October 26, 1976 to “promote the public health, comfort, convenience, necessity or public welfare.” It is administered by a seven-person Board of Directors, five of whom are elected by residents of the District at the annual meeting held in August. Two commissioners are appointed by the Town of LaValle and Sauk County, respectively.

According to state law, the Board has the ability to issue rules and orders, as well as levy assessments on properties within the District, in order to achieve its mission of protecting and rehabilitating the water quality of Lake Redstone for its residents and the public.

A separate organization which serves the residents of the area is the Lake Redstone Property Owner’s Association. This group maintains a clubhouse for its members’ use and organizes a variety of social events centered around the lake, including dinners, golf outings and other sporting events, and a mid-summer pontoon party. Membership is voluntary. For more information, contact LRPOA President Warren Frank at 985-7455.

Getting Connected

IT IS A PLEASURE to send you this, our first edition of the Lake Redstone Protection District newsletter. Many of you took the time to give us feedback during last year's survey and others gave comments at the August 5th annual meeting, making it clear that we need to do a better job of keeping you informed. Hearing you, we plan to publish this newsletter twice a year to keep you up-to-date on our work and better informed about water quality issues affecting Lake Redstone.

Thanks to Mother Nature, the lake's water quality was very good throughout 2006, due to the limited rainfall during the spring and early summer months. We don't always get her blessing. Usually our pier—an unofficial yardstick—ends up under water at least once a season; not so this year. My neighbor, Linda, and I were reflecting on 2004, when heavy rains early in the spring turned the water green all year. While the Board would like to take the credit this year, we have to admit that Mother Nature was very good to us.

Our aquatic plant management efforts this year were much easier than expected, except for two shallow northern bays. Good native plants, including coontail and water lily emerged well, while the invasive Eurasian water milfoil and other destructive species were subdued by last year's chemical treatment. We own on Oriole Bay, where my family and I love to see the beautiful white blossoms on the now abundant water lilies that brighten the shoreline. We aren't the only ones enjoying them; the bass seem to like the shade and finding their lunch hiding under the pads.

This year also marked a turning point for the District as we completed our first comprehensive strategic plan. With the help of staff from Sauk County UW-Extension, and you, our neighbors and friends, we refined our mission statement, identified critical water quality issues to address, and developed a framework to focus our efforts and attention in the years ahead.

Essential to our continued success are the many volunteers and Board members who devote their time, energy, and expertise to make our lake the great resource that it is. We are blessed with people that carry out the administrative work, collect water samples on the lake each month, wade the creeks to keep monitoring devices active, follow through on projects, and just generally care about Lake Redstone. Thanks so much!

With that fresh energy and outlook, the Board and I look forward to serving you in 2007. Our survey results confirm that you bought on Lake Redstone because of its natural beauty and recreational opportunities, and that you care about water quality. We'll always keep this in mind, and hope to hear from you with your ideas and input.

Again, welcome, and may you enjoy your *Connection* to Lake Redstone!

Dave Starin
LRPD Chairman

Dave Starin is a retired vice president with the Federal Reserve System. He and his wife, Dottie, split their time between Elgin, Illinois and Oriole Bay, where they tirelessly try to catch (as yet unsuccessfully) a 14-inch crappie.



Lake Redstone Protection District

*Protecting and rehabilitating
the water quality of
Lake Redstone for its
residents and the public.*

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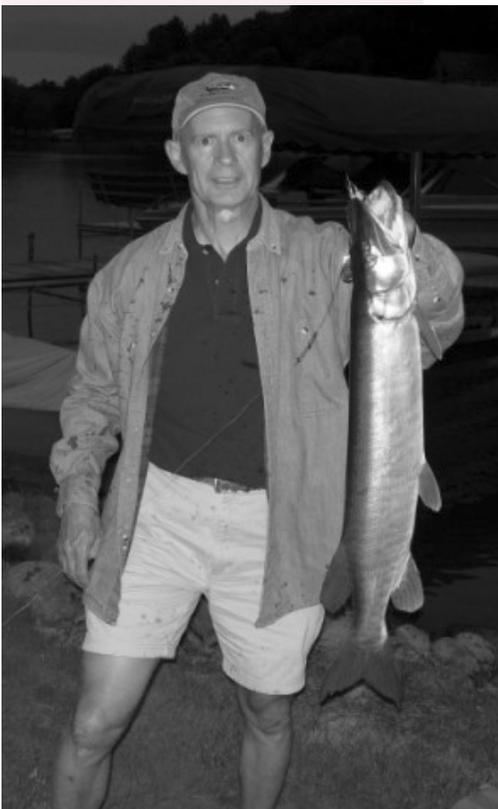
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Reeling in the Redstone Rumor Mill

by Tom Wagner

Any fisherman is aware how stories can be told and how details change with retelling. Early this spring, conversation and internet reports brought unwelcome stories regarding Lake Redstone. It was not clear to me that this information was factual, however, so I took it upon myself to contact Tim Larson, our fisheries biologist from the Wisconsin Department of Natural Resources. Mr. Larson responded immediately, and was very helpful in clarifying some of the misinformation I had come across.

The first rumor I had heard was that Lake Redstone would not be receiving any walleye stocking in 2006 or in the future. Tim confirmed that this was not true. Our lake has been receiving 21,400 2-inch walleye fingerlings on even-numbered years. We did, in fact, get our full allotment of walleye in June. New Wisconsin guidelines allow for stocking of 30 walleye per acre every-other year or 15 walleye per acre every year. Tim has decided to use the every-year option, so we should be receiving 10,700 walleye each year from now on. He also stated that the lake has continued to receive its allotment of two musky per acre on odd-numbered years, and should receive approximately 1,200 musky next year.

While the DNR has determined that walleye do not reproduce naturally in our lake, I asked Tim about the possibility of stocking sauger or saugeye, which may be able to reproduce naturally. He told me that the state does not stock saugeye because it is not a purebred fish, but rather a cross of sauger and walleye. I plan to follow up with him about the prospect of stocking sauger and report at a later date.

My next question to Tim concerned reports of after-dark netting during the late spring and summer. He stated that he was not aware of any nighttime netting on Lake Redstone, adding that a recent Wisconsin law change permits bow fishing at night on most waters of the state. He hypothesized that the reported incidents were probably bow hunters shooting carp, and encouraged the practice to reduce the carp population, which is known to be a problem on Redstone. Hopefully, we will see more bow hunters next spring and early summer.

Thirdly, I had been informed that 5,000 pounds of crappie were being netted from the lake to be placed in kids' fishing ponds in Reedsburg and Baraboo. Tim confirmed that crappie were being removed, but the actual figure was 1,000 fish. That's quite a difference, considering that most crappie in Wisconsin weigh less than a pound. Tim went on to say that the loss of 1,000 fish from a lake like Redstone would have essentially no ill effects, and the benefit to budding anglers is invaluable.

Like "the one that got away," tales about the lake can continue to grow unless checked, and I'll do my best to keep on top of suspect "news" in the future.

I have only been coming to Lake Redstone since 2001, but it appears to me that the water clarity and quality has improved every year. Congratulations and thank you to our Protection District members for their efforts over the past years.

The warm weather comes and goes so quickly, and here we are again facing the arrival of shorter days and longer nights. Enjoy what remains of the fall, and here's hoping for lots of good ice for that hard-water fishing season!

I look forward to our next edition in the spring. Be safe, and tight lines to all! ♦

Montana, Colorado, Florida, Canada, the East Coast, and the Great Lakes are just a few of the places Tom Wagner has dipped his line in the last 25 years. Since building a home at Lake Redstone in 2002 with his wife, Karen, Tom tries to spend as much time as possible on the lake enjoying the fish and other wildlife.

District Continues Nuisance

AGGRESSIVE EFFORTS to control invasive and nuisance plants in Lake Redstone continued this year as the District again enlisted professional help to perform chemical treatment in selected locations of the lake.

In two mid-summer visits, staff from Northern Environmental Technologies, Inc. (NETI) used four different herbicides to reduce infestations of Eurasian water milfoil (*Myriophyllum spicatum*), curlyleaf pondweed (*Potamogeton crispus*), and small pondweed (*Potamogeton pusillus*) on approximately 34 acres of the lake. All three species are considered invasive, and left unchecked, can severely damage the ecosystem of the lake, as well as impair swimming, boating, and other recreational uses.

This year marked the fourth consecutive season of chemical control on the lake since the District's Aquatic Plant Management Plan was adopted in 2003 and subsequently approved by the Wisconsin Department of Natural Resources.

"Since the lake water and plants in it are the property of the State of Wisconsin, we can only treat aquatic plants under their supervision," LRPD Chairman Dave Starin emphasized. "We can't just go out and spray whatever and wherever we want."

Instead, problem areas are identified in a spring survey, which is included in a DNR permit application. If approved, the permit will spell out what areas of the lake may be treated, under what conditions, and with what chemicals. Actual treatment, according to Starin, almost always involves DNR staff traveling alongside the contractor in a DNR craft and pointing out areas to be sprayed.

"So, in essence," he added, "the treatment is in the hands of the DNR, not the contractor or the LRPD."

The management plan aims at controlling nuisance levels of aquatic plants across 50 feet of each property's shoreline so that lake owners may reasonably navigate into and around their piers and swimming areas. Within these areas, both native and exotic species are targeted for removal. Even a very desirable native plant, such as coontail (*Ceratophyllum demersum*) can sometimes become so thick and problematic that reduction through chemical treatment is called for, as was the case in Swallow and Meadowlark Bays this year. "We would welcome coontail in lesser quantities, anywhere in the lake," Starin noted.

Of greatest concern at Lake Redstone, however, are curlyleaf pondweed and Eurasian

Know Thine Enemy: Eurasian W

EURASIAN WATER-MILFOIL (EWM) is an invasive, underwater aquatic plant accidentally introduced in the 1940s to North America from Europe, where it is widespread. It was most likely introduced to eastern North America when aquarium owners released the contents of their aquariums into local lakes. EWM flourished and began to spread westward by clinging to recreational boats, first arriving in southern Wisconsin in the 1960s and later spreading to the northern half of the state.

Growing up to two inches a day, EWM can form thick underwater stands of tangled stems and vast mats of vegetation on the water surface, especially in shallow, nutrient-rich water. These mats can limit boating, swimming, and fishing and disrupt the ecology of a water body by crowding out native aquatic plants. Because it interferes with

shoreline access to shallow waters, it can affect property values. Statewide, this plant costs Wisconsin citizens of Wisconsin millions of dollars a

EWM is an opportunistic species, with strategies that are difficult to manage. It gets ahead of other plants by growing tall before other species even begin to emerge in spring. When native plants begin to grow, EWM has taken the majority of the surrounding nutrients and shade out native plant competitors. The plant biomass that is produced by EWM is immense, and this, in turn, can begin a variety of negative environmental impacts, including algal blooms and dissolved oxygen depletion.

EWM plants spread naturally through rhizomes, and underground runners, but one troubling aspect of EWM is its ability to s



Nuisance Plant Battle

water milfoil, two exotic species which form tangled mats of vegetation, crowd out beneficial native plants, and contribute to mid-summer algae blooms.

Follow-up visits by Aaron Gruenewald, aquatic and environmental biologist with NETI, confirmed that the 2006 treatment successfully knocked back beds of the two exotics and reduced the navigational obstructions presented by small pondweed. Tests also indicated that residual herbicide levels in the lake were within federal and state health standards

Still, Gruenewald noted that continued monitoring and management will be necessary in 2007 and beyond. "Eurasian water milfoil and curlyleaf pondweed are extremely opportunistic plants and can grow to nuisance levels in a very short period of time," he warned. "The District must remain proactive in their approach."

It's a warning that Starin and the rest of the LRPD Board plan to heed.

"Our recent survey indicates that nuisance plants are one of the top concerns of Lake Redstone residents, and the District will continue to look for effective and creative means of control," he asserted. ♦

You can help prevent the spread of invasive species to Lake Redstone:

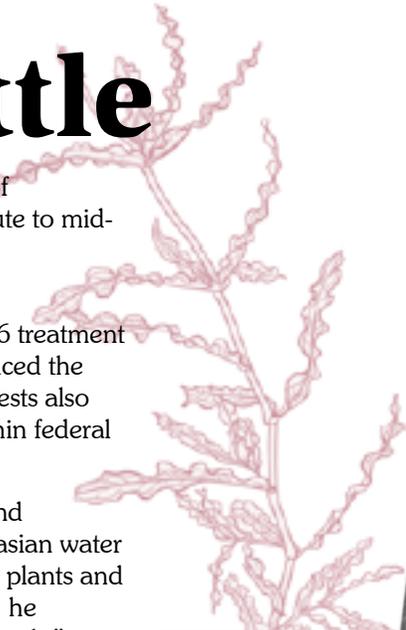
- ✓ **Inspect and remove aquatic plants, animals, and mud from boat, trailer, and equipment before leaving the water access;**
- ✓ **Drain water from boat, motor, bilge, live wells, and bait containers before leaving the water access;**
- ✓ **Dispose of unwanted bait in the trash;**
- ✓ **Spray/rinse boats and recreational equipment with high pressure and/or hot tap water (> 104° F), especially if moored for more than a day, OR dry boats and equipment thoroughly for at least five days.**

Water-Milfoil

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fragmentation. Stem pieces only two inches long can take root and start new colonies when deposited in new waters or in other areas of a lake. The fragments are transported by watercraft or on waves and currents to new areas where they can root and grow. The stems break easily and become tangled on propellers and trailers as a boat is retrieved from the water. If not cleaned off, these fragments can introduce the plant to new waters.

Although Eurasian water-milfoil looks very similar to Wisconsin's seven native milfoils, there are some characteristic traits typical of the invasive plant: Leaves of EWM come off the stem in whorls of four, and each leaflet typically has 12 to 21 pairs of "needle-like" leaflets. The numerous leaflets make EWM appear feathery. Often, EWM is limp and collapses upon the stem when removed from the water. ♦



Know Thine Enemy: **Curlyleaf Pondweed**

LIKELY ACCIDENTALLY introduced to the U.S. along with the common carp in the 1880s, curlyleaf pondweed (CLP) was the most severe nuisance aquatic plant in the Midwest until Eurasian water-milfoil appeared. A submersed aquatic plant, stems can reach the surface and form dense mats that interfere with aquatic recreation. CLP becomes invasive in some areas because its tolerance for extremely low light and cold water allow it to get a head start on and out-compete native plants in the spring.

In midsummer, when most aquatic plants are growing, curlyleaf pondweed plants are dying off, releasing high nutrient loads into the water column and often triggering algae blooms.

Summer foliage of CLP has been described as thick, waxy, and "crispy" to the touch. The alternate leaves are between 3 and 8 centimeters long and 5 to 12 centimeters wide, and look like a wavy lasagna noodle when viewed from the side. Upon close examination, the edges of the leaves look serrated, like the edge of a steak knife. The stem of CLP is flattened and the plant may exhibit a reddish cast. During winter, the leaves have the same shape, but they are smaller, flattened, and are so thin that they appear translucent. If your ice fishing line comes up with any light green foliage, check for the winter foliage description above.

Curly-leaf pondweed can be spread between waterbodies when vegetative buds (called turions) hitchhike a ride on boats and equipment. Turions settle into the bottom sediments, and are extremely effective at germination the following fall when water temperatures drop. ♦

Planning...continued from page 1

Yet, the most startling survey result, according to both Erickson and LRPD Chairman Dave Starin, was how little residents knew about the activities of the District.

“What really surprised us was that people were suggesting we do things that we’re already doing,” Starin recalled. “They weren’t aware of what we’re doing and how we were spending their dollars. It all came back down to this need for communication.”

Many of those who answered the survey agreed that a healthier dialogue was needed—not only about District activities, but also on how residents could be more active partners. “I don’t know what can be done to improve water clarity and reduce algae growth,” wrote one respondent. “I expect landowner education is part of the solution.”

Attitudes like these quickly convinced the Board that improved communication—both within and beyond the District—should be one of their highest priorities. As Board members continued to sift through the comments and data, 11 general areas of concern emerged, which were eventually winnowed to four critical issues where the District could focus its attention and resources:

- **Improved education and communication to Lake Redstone residents and day users;**
- **Safe and effective prevention and/or removal of sediment from the lake;**
- **Better management of exotic and invasive species found in and around the lake; and**
- **Reduction of the amount of nutrients entering Lake Redstone.**

Within each category, specific tasks were identified and assigned to individuals, along with deadlines, addressing one of the internal shortcomings that motivated the Board to start the planning process in the first place, according to Starin.

“Things just didn’t seem to get done. We had a lot of things on our plate and we just never followed through and got things finished,” he observed. “You could almost just xerox one agenda and use it for the next meeting.”

Also helping to focus the Board’s attention was the development of a mission statement for the District. Even though most people involved had a general sense of the District’s purpose, debating and adopting a precise definition helped guarantee everyone was on the same page:

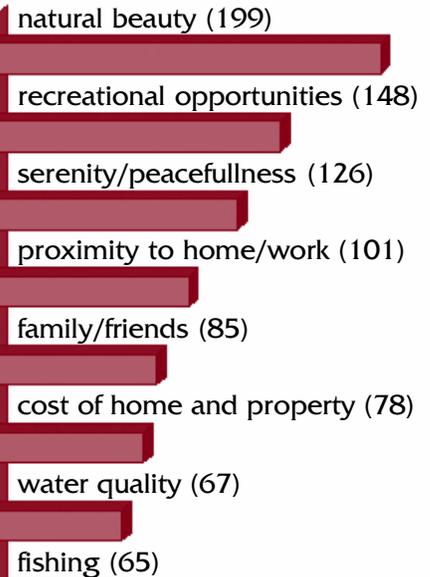
The mission of the Lake Redstone Protection District is to protect and rehabilitate the water quality of Lake Redstone for its residents and the public.

“It was nice to put it down on paper so that everybody understood it, because we would be presented with things to deal with that were outside of really what our mission was,” explained Starin. “We’d get pushed into some other things that were more zoning issues, property rights issues, things that really didn’t directly relate to water quality. It was good to identify our mission and know what our charge was, and then everything else should fall under that umbrella.”

Many survey respondents echoed Starin’s view: “Water quality is the reason I moved to Redstone for recreation and relaxation,” wrote one. “Protect it for future generations.”

Why Lake Redstone?

(top three responses)

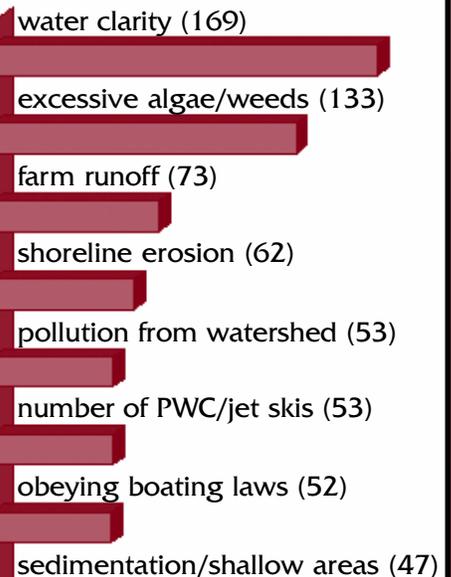


“Water quality is the reason I moved to Redstone for recreation and relaxation. Protect it for future generations.”

-survey respondent

Water Quality Concerns

(top five responses)



Reprise of 1996 Sampling Key to Moving Forward

by Al Baade

Algae are a necessary foundation of a healthy lake. These important microorganisms break down nutrients and chemicals in lake water and provide food for fish and other higher organisms. Unfortunately, too much of a good thing can lead to disaster, as rampant algae growth can ruin a lake's recreational and aesthetic value, not to mention the aquatic ecosystem.

Like most lakes, algae growth at Lake Redstone is largely controlled by the amount of phosphorus in the water. In 1996, the District obtained a grant from the Wisconsin Department of Natural Resources to help fund a study of how this nutrient was reaching Lake Redstone and what steps might be taken to control it.

Data gathered at that time indicated that almost all of the water coming into the lake is from streams, not in-lake springs. A little less than one-half of Redstone's water comes from the west branch of Big Creek at the northwest corner of the lake. Approximately 20% comes from Big Creek's east branch near the county boat landing, with the rest of the streams flowing into the lake contributing about 25% of the lake's water. Groundwater and rain account for the small remainder.

The 1996 study also revealed that water coming from the west branch of Big Creek contributed about one-fourth of all of the phosphorus in the lake. The east branch added another 10%, while the rest of the area draining into the lake, including all of the lots around the lake, accounted for about 25%. Decomposing organic matter in the lake supplied the balance of the phosphorus reaching Redstone.

These results pointed the District to the east and west branches of Big Creek as the primary sources of phosphorus coming into the lake. Focusing their attention on the watershed supplying water for those two creeks, the District cooperated with local farmers and the Natural Resources Conservation Service to control runoff from livestock operations with filter strips, gutter diversions, grassed waterways, and other practices.

The Board also investigated proposals which were eventually rejected as impractical, such as pumping phosphorus-laden water from the bottom of the lake, alum treatments, and aeration.

Ten years after the 1996 study, the Board felt it was time to answer whether projects implemented in the last decade have triggered improvements, whether sources of phosphorus reaching Lake Redstone have shifted over time, and what future steps would provide the biggest benefit to the lake and its residents.

Late in 2005, the District received \$20,000 in DNR grant money to repeat the 1996 study, about half of the total cost of the project. Data gathering began earlier this year, and will be used in 2007 to formulate a software model of the lake and its watershed. This model will allow the District to see the effects on water quality if various sources of phosphorus are removed or reduced.

As in 1996, there are six locations where water samples are being taken. These include three locations spread out in the main lake body where samples are taken near the surface and again near the bottom. They are sent to the State Laboratory of Hygiene in Madison for analysis of several forms of phosphorus as well as chlorophyll a, a measure of plant growth. Water clarity is also recorded along with the temperature and dissolved oxygen present every two feet from the surface to the bottom.

This will hopefully be a photo showing one of the LRPD volunteers actually doing some sampling on Lake Redstone.



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**Wisconsin Lakes Partnership
2007 Convention
April 26-28
Green Bay, Wisconsin**

The Wisconsin Lakes Partnership invites you to join colleagues from across the state for three days of educational presentations, field trips, and hands-on workshops.

The theme for 2007 is

**AGENTS OF CHANGE:
We make a difference.**

Our lakes need citizens to step forward as agents of change as pollution, global warming, invasive species and other tribulations take their toll. The convention will focus on ways citizens can be a force for positive changes that will result in clean, healthy lakes.

**For more information, visit
www.uwsp.edu/cnr/uwexlakes/conventions/**

Sampling...continued from page 7

In addition to the in-lake samples, monitoring stations were placed in the east and west branches of Big Creek. These stations record the water flow every 15 minutes and automatically take water samples when the streams rise during a storm. Between storm events, samples are collected manually. Like the in-lake sampling, these stream samples are sent to the lab for analysis of phosphorus content. The sixth monitoring location is at the stream flowing into Swallow Bay. Manually-collected samples are taken there during storm events and sent to the lab.

Daily lake levels are also recorded. Using the height of the lake, the amount of water flowing over the spillway can be calculated. Put together with the amount of water coming in from the streams and the sky, this data will give the overall picture of water sources for the lake.

When mentioning water sampling, the District's unpaid volunteers must be acknowledged. Bob Roloff and Gary Botsford have done the in-lake samples for the study, and have monitored the lake carefully for the past several years. Nick Ladas, meanwhile, has taken good care of the 2006 stream sampling. All of their time is tracked and used to directly reduce the District's costs (and your taxes). We all owe them our thanks. If you see them, please let them know their efforts are appreciated.

Once all of the data is gathered, a specialist will fit our data into one of several computer models. This is expected to occur in the first half of 2007. It is the Board's goal to see how our past efforts have reduced the nutrients coming into the lake as well as where our future projects should be focused. Future issues of this newsletter as well as the 2007 Annual Meeting in early August will discuss the results. Stay tuned!♦

Al Baade is an electrical design and development engineer at Eagle Test Systems. He served on the LRPD Board from 1993-2004 and has been a full-time resident of Lake Redstone with his wife, Pat, since 1988.