

Lake Redstone

Protection Connection

LAKE REDSTONE PROTECTION DISTRICT • SPRING 2007

Bio-Stabilization Efforts Yield Wake of Benefits

Annual Meeting set for August 4

The Annual Meeting of the Lake Redstone Protection District is scheduled for August 4, 2007 at the La Valle Fire Station, 103 E. Main St. The event gets underway at 8:30 a.m. and includes the election of board members and approval of the District budget.

"Some say the coffee and doughnuts are worth the trip!" joked LRPD Chairman Dave Starin, who emphasized that the morning is a good occasion for District members to provide input and feedback to the Board. "It's also a great opportunity to get more information on being good stewards of the lake."

Presentations on water quality management and other Lake projects will be featured, along with a keynote address to be announced this summer.

Factors beyond an individual's control—fluctuating water levels, waves from boat traffic, heaving ice, and even spawning carp—all can contribute to shoreline erosion, a problem which has left many waterfront residents literally watching their property wash into Lake Redstone. But landowners often have the power to either control erosion or accelerate it, based on their landscaping choices.

Riparian landowners often impose a "self-created hardship" by replacing existing vegetation with erosion-prone turf grass right up to the water's edge, said DNR Fisheries Policy Ecologist Paul Cunningham, who promotes a "don't mow-let it grow" approach. But once an erosion problem has begun, how does one stem the tide?

Highlighting one strategy, the LRPD recently sponsored three demonstration projects to showcase shoreline stabilization practices which employ native

plants to hold soil, reduce runoff into the lake, and protect a landowner's investment.

"With zoning regulations as particular as they are, with setbacks and so forth, you never want your shoreline to be receding," said Lisa Reas, partner at LJ Reas Environmental Consulting in Green Lake. "You don't want to get the soil in the lake, number one, but you also don't want to lose any of your building space, or yard space."

With Reas' guidance, the LRPD board solicited volunteers at the 2002 annual meeting, offering to share the expenses of shoreline "bio-stabilization" in exchange for allowing other Lake residents examine the results. The board evaluated potential sites for the demonstration projects, and eventually settled on three locations that were easily visible from the lake.

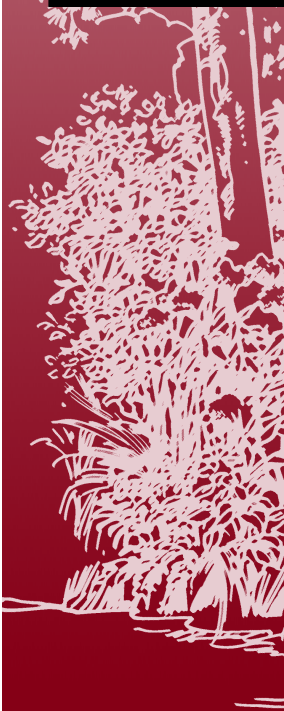
The timing couldn't have been better for John Bodendein, who attended that meeting looking for guidance on what he could legally do to repair the breaking down of his shoreline. Bodendein thought the opportunity "sounded interesting," and the following June, a crew was busy anchoring "biologs" at the edge of his crumbling bank and installing 630 tiny native plants.

"I think it's kind of pretty. Flowers out nice," says Bodendein, who three years later considers the project very successful. "I get an awful lot of compliments from it."

"It's natural, and they look nice," agreed LRPD Treasurer Cal Maurer. "If it's the right location, the DNR prefers something like this as opposed to riprap. Generally speaking, the homeowners have been satisfied with them."

Another option available, in some cases, is the installation of rock or riprap at the water's edge.

continued on page 4



Lobby Day Offers Wake-up for Legislators

by Warren Frank

OVER 400 PEOPLE GOT UP very early on the morning of February 21 to gather at the state Capitol. Like me, this impressive number arrived in Madison from all over the state, excited to be there and ready for the opportunity to share our hopes and concerns with our elected officials.

Sponsored by the Wisconsin League of Conservation Voters (WLCV), the third annual Conservation Lobby Day drew representatives from over 100 environmental, conservation, and sportsman groups across Wisconsin—including the Wisconsin Association of Lakes. With nearly double the attendance from the previous year, this all-day event demonstrated the common ground shared by these diverse constituencies.

Earlier, some of these same citizens spent five months working with neighbors and colleagues to craft a list of the major issues facing our state's environment. Eventually, these were crunched down to four key priorities that were presented to legislators:

- **Ratifying the Great Lakes Compact:** The Great Lakes contain 20% of the world's fresh water and provide drinking water to more than 40 million people. This Compact protects the Great Lakes by regulating the withdrawal of water outside the watershed.

- **Reauthorizing the Stewardship Fund:** Established in 1989, this fund protects more than 475,000 acres of ecologically-important land in Wisconsin. This pristine land is open to the public for many uses, such as hiking, birdwatching, and paddling.

- **Adopting a Hunter, Angler, Trapper Bill of Rights:** Integrity must be restored to three key components of our natural resources decision-making process: 1) Reassign appointment of the DNR Secretary back from the Governor to the Natural Resources Board to reduce political influence; 2) Stop political delays and make NRB appointments on a timely basis; and 3) Stop raids on hunting and fishing stamp fees and use the money as intended for habitat restoration.

- **Creating Good Jobs In Wisconsin Through Clean Energy:** Wisconsin is very reliant on dirty fossil fuels. Despite a lack of coal, natural gas, and uranium resources, Wisconsin ranks eighth nationally in terms of potential jobs in renewable energy industries, making a shift to renewables both ecologically and economically attractive.

All of the above are important, but I was especially enthused about the first and last items on the list.

There have been numerous attempts, notably by western U.S. states, to take water from the Great Lakes. You may recall just a few years ago when a proposal to bottle water from a deep well just 50 miles from Lake Redstone was rejected due to concerns about the water table and surrounding wells. Other similar attempts have been thwarted, but it's widely believed that our Great Lakes water will, in the relatively near future, become more important than oil is today. Already signed in 2005 by the governors of the eight U.S. states and two Canadian provinces which border the Lakes, the Great Lakes Compact would defend against diversions, but it still awaits authorizing legislation in each state to make it enforceable.

And since I was a child growing up in Milwaukee, I've read EPA statistics which

continued on page 3



Lake Redstone Protection District

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

Board of Directors

Dave Starin, Chairman

(847) 695-0204

(608) 985-7702, Lake

davestarin@wowway.com

Priscilla S. Bondhus, Vice-Chair

(608) 827-5554

(608) 985-8027, Lake

pbondhus@charter.net

Warren D. Frank, Secretary

(608) 985-7455

warrenfrank@msn.com

Calvin J. Maurer, Treasurer

(608) 985-7999

calshir@mwt.net

Jim Mercier, Commissioner

(608) 985-8218

mercijm@mwt.net

Edwin Bodendein,

Town of LaValle Representative

(608) 985-7712

tnlvl@mwt.net

Linda Borleske,

Sauk County Representative

(608) 524-2509

lborleske@co.sauk.wi.us

Protection Connection edited by

Rob Nelson

(608) 356-7662

unkierob@merr.com

Early Herbicide Treatment Aims at Curlyleaf Pondweed

Because of the limited snow cover on the Lake this winter, an early herbicide application is planned to control curlyleaf pondweed. This invasive species does well under the ice and emerges profusely in early spring. Control at this time is important, before it has a chance to seed itself for the following year.

Water temperature, rainfall, nutrient loading, and the effects of last year's treatment are among the factors which will impact the appearance of Eurasian water milfoil, small pondweed, and coontail. Chemicals will be applied to these species depending on their abundance and resulting nuisance levels around piers and swim areas. A special effort will be made to address several areas in the northern bays which had late blooms in 2006.

Despite the best efforts of the District and Northern Environmental, its contractor for 2007, some problem aquatic species may emerge in areas after the scheduled herbicide applications. To address these conditions, property owners should call one of the Board members listed on page 2 or write to the District at P. O. Box 313, La Valle, WI 53941. In addition, property owners are encouraged to fine-tune their beach and pier areas by raking out small infestations. Please be sure to completely remove all parts of the plants so they don't re-establish themselves. ♦

Lobby Day...*continued from page 2*

indicated that Wisconsin's air and water is among the worst in the country. Past and recent reports tell us the cause of this is the huge amount of coal burned to create the power needed to light our homes and run our factories. Our health and that of our children—as well as many of our jobs—depend on finding a clean, renewable source of power. Fuels based on bio-resources and others, such as wind power, are only short-term fixes. Research to find long-term solutions must be funded.

The key objective of each attendee was to meet with and establish a communication link with their elected officials. Meetings were tentatively arranged with Rep. Sheryl Albers and Sen. Dale Schultz, who represent the Lake Redstone area, but I was very disappointed that neither was available to meet with us. However, a half-dozen of us from the area did gather in their offices and talk with their assistants about the major points most pertinent to our individual groups. These assistants were gracious, but gave us little feedback regarding the thoughts of their bosses.

Regardless, in both legislators' offices, I left recent copies of the LRPD and LRPOA newsletters with their assistants. In addition, I summarized a few of the key projects of the LRPD to maintain and improve water quality, and emphasized the high level of activity and investment property owners have made to protect their shorelines and surrounding area. I also stressed the importance of guaranteeing individual property rights so that those personal protection efforts can continue to benefit Lake residents and their children and grandchildren.

Overall, despite not meeting Rep. Albers nor Sen. Schultz, this was a very informative and worthwhile day. It was a great opportunity to learn about major environmental issues, meet folks from all over the state, and learn how others are addressing concerns similar to those of Lake Redstone. Next year, why not consider joining us in this rewarding activity? Your participation might just be the wake-up call Wisconsin legislators need.

Warren

Warren Frank
LRPD Secretary

In addition to his duties as LRPD secretary, Warren Frank serves as president of the Lake Redstone Property Owners Association. A 35-year resident of Midland, Michigan, he returned to Wisconsin in 2000.

Holding your legislator accountable

To check any state legislator's voting record on conservation issues, visit the WLCV website at

www.conservationvoters.org.

You can also view a copy of legislative priorities for 2007 at this site or by calling 608-661-0845.

Legislators for Lake Redstone are:

Sen. Dale Schultz (800-978-8008) &

Rep. Sheryl Albers (877-947-0050).

Websites and email addresses for both are available through

www.legis.state.wi.us.

Biostabilization...continued from page 1

Proponents say riprap provides a “cleaner” look, requires less maintenance, and will withstand the ravages of waves and ice more reliably than vegetative solutions.

But Reas cautioned that riprap is not always a panacea. First of all, the DNR is reluctant to grant permits for riprap, generally making exceptions only for cases where shorelines are exposed to especially strong wave action or ice damage. Furthermore, “ice-jacking” can displace even large rocks, and uneven footing can make it difficult for residents to access weeds and maintain the tidy look.

“Long story short, rock is not an easy thing, either,” she said. “If everybody does rock, there’s no more habitat for frogs, reptiles, amphibians, and so forth, and you also lose any kind of filtering of storm water coming off the property.” Especially at lakes with steeper slopes, like Redstone, fertilizer, pet waste, and other pollution can flush right into the water if there’s no native vegetation to slow it down.

Sauk County Conservationist Joe Van Berkel agreed: “There’s not a lot of good arguments for concrete or rock.”

Reas’ approach, on the other hand, takes advantage of the dense and deep root structure of native plants to anchor the soil on both sides of the shoreline. Many species which she recommends have roots that reach eight feet or deeper, compared to just a few inches for turf grass.

And vegetative solutions can be beautiful, too. Purple coneflower, iris, and black-eyed Susans are among the two dozen species which contribute to the blaze of color at the three Redstone sites. One of Reas’ earlier clients on Green Lake even requested an “edible shoreline” with blueberries, asparagus, and wild rice included in his mix.

“You can plan these buffers out to have color and interest all season long,” she said. And the deep roots not only serve the lake well, they enable the plants to stay healthy, green, and colorful all season long, “whereas turf grass frequently doesn’t do that.”

‘It’s really vegetation that’s at the heart of anchoring those near-shore sediments.’

*-DNR Fisheries Policy Ecologist
Paul Cunningham*



Three examples of shoreline stabilization are available for inspection by Lake Redstone residents (from top): Goldfinch 11 (Kirby/Meier), Eagle 35-36(Schefske), and Eagle 18 (Bodendein).



PHOTOS BY CAL MAURER.
MAP COURTESY OF SAUK COUNTY
MAPPING DEPARTMENT.

Another perk, Reas noted, is that even a buffer as narrow as eight feet can be enough to discourage ducks and geese from visiting and leaving “presents” on your lawn.

Logging the bank

Reas, who authored *The Landowner's Guide to Controlling Shoreline Erosion* in 2004 (available at www.ljreas.com or 920-294-3116), characterized the three properties she assessed at Redstone in 2003 as fairly typical, and in urgent need of attention.

“They were mowed pretty much right up to the edge, so the bank would become undercut, and then, as that undercut got deeper and deeper into the bank, the weight of the soil on top just fell,” Reas recalled. “You’d see it actually tear on top of the bank and fall down and so that just kept causing it to erode and erode and erode.”

In two cases, her crew first staked 12- or 16-inch diameter “biologs” at the water’s edge, where wave action had undercut the soil. These tight rolls of coconut fiber provide a more gentle slope for the shore, and wick up water and nutrients from the lake, providing an excellent planting medium for the sedges and other wetland plants which are introduced next as 3-inch seedlings.

For the first few months, the biologs may be vulnerable, as strong waves can dislodge them or low water levels can cause them to dry out. But over the course of the next year or so, those plants send roots through the biolog and into the lake bed, establishing a dense, fibrous root system which holds the soil in place. At Lake Redstone, the plants “grow like gangbusters,” according to Reas, and within a decade, the biolog itself decomposes.

Along the shoreline, hundreds of native plants were introduced at each site, again featuring deep root systems. While the DNR recommends this buffer extend 35 feet from the ordinary high water mark, Reas emphasized that even a five-foot buffer will provide benefits: “Anything in that area is a good thing.”

Reas also noted that erosion problems often begin not at the water’s edge, but further upslope, and encouraged landowners to err on the side of caution before removing trees, shrubs, and other vegetation.

“As people clear out their trees and shrubs so they have a perfect view of the lake, they open those areas up for erosion,” she said. “And once that starts, especially on a sandy soil, it’s tough to re-stabilize it.”

Getting started, keeping up

Bodendein recalls that dry weather in 2003 compelled nightly watering of the young plants in July and August. But since that time, maintenance needs of the area have been minimal...though not zero. Reas recommends that spring is a good time to cut back old growth, rake it off, and then use a minimum of herbicide to treat weeds and any grass or creeping Charlie encroaching across the planting boundary. It’s also a good time to refresh mulch, for homeowners who prefer a more manicured look.

“A lot of people think that there’s no maintenance at all with these projects,” said Reas. “That’s not true. And if their landscaper tells them that, they’re lying.”

Reas suggests that landowners interested in pursuing shoreline stabilization contact a professional landscaper or consultant to assess the situation and discuss what options might be possible. Include questions about any permits which might be necessary for the project, and who will be responsible for obtaining them.

Bioengineering costs can also vary widely, depending on how elaborate the project and how much “sweat equity” the landowner is willing to invest. A professional assessment and design can cost as little as a few hundred dollars, while a full-scale project which involves hiring a crew to do all the installation and planting can exceed ten times that amount.

For more information about landscaping options at the water’s edge, including a list of nurseries which stock native plants, see ***The Shoreland Stewardship Series***, available through the Sauk County UW-Extension office (608-355-3250) or at <http://clean-water.uwex.edu/pubs/>. ♦

Before digging in...

Regulation of shoreline activities can be strict, and as bioengineering consultant Lisa Reas notes, “it’s important for landowners to know what they can and can’t do.”

Steve Sorenson, assistant zoning administrator for Sauk County, encourages landowners to contact his office (608-355-3285) early in the planning stages of a stabilization project. Depending on how much soil will be disturbed and whether any vegetation will be removed during the site preparation, a County permit may be required. In any case, Sorenson is happy to take a look at potential projects with landowners and offer feedback and suggestions.

At the state level, the Wisconsin DNR encourages native vegetation along lakes, streams, and rivers, and the permit process reflects this.

According to Water Regulations and Zoning Specialist Kyle Magyera, the DNR employs a three-tier permitting system. While projects involving rock or riprap usually require either a “general” or “individual” permit, many bio-stabilization projects qualify as exemptions from the permitting process.

To calculate the shoreline wave energy at your site and determine if a permit is necessary, visit <http://dnr.wi.gov/org/water/fhp/waterway/erosioncontrol.shtml> or contact DNR Water Regulations and Zoning Specialist Jeff Schure at 608-275-3228.

Other statutes stipulate that landowners shall not remove more than 30% of the existing vegetation along the shoreline.

“It always pays for the landowner to ask their professional about permits,” cautioned Reas. “Make sure if there’s a permit required, you see it and have a copy of it. It does pay to do your homework.”

'Clean Boats-Clean Waters' Campaign Aims to Stop Hitchhikers

Exotic species pose one of the greatest threats to Lake Redstone and the rest of Wisconsin's valuable water resources. You can play an critical part in preventing the spread of these "hitchhikers" by following the procedures below **every time** you visit a lake, river, stream, wetland, or other body of water.

There are hundreds of different harmful species ranging from plants, fish, amphibians, crustaceans, mollusks, diseases, or pathogens. Some organisms are so small, you may not even realize they are hitching a ride with you. The larvae of an animal can be invisibly tiny, but it can live in mud, dirt, sand, and on plant fragments.

To learn more about the "Clean Boats—Clean Waters" program or to take a more active role in protecting Wisconsin's waters, visit www.uwsp.edu/cnr/uwexlakes/CBCW or call 715-365-2659. And remember, after enjoying your day on the water...

Remove all visible mud, plants, fish/animals.

Before leaving any body of water, it is important to examine all your equipment, boats, trailers, clothing, boots, buckets, etc.:

- ✓ Remove any visible plants, fish, or animals;
- ✓ Remove mud and dirt since it too may contain hitchhikers;
- ✓ Remove even small plant fragments;
- ✓ Do not transport any potential hitchhiker, even back to your home. Remove and leave them at the site you visited.

Eliminate water from all equipment.

Much of the recreational equipment used in water contains many spots where water can collect and potentially harbor aquatic hitchhikers. Thus, make sure that you:

- ✓ Eliminate all water from every conceivable item **before** you leave the area you are visiting;
- ✓ Remove water from motors, jet drives, live wells, boat hulls, scuba tanks and regulators, boots, waders, bait buckets, seaplane floats, and swimming floats.

Clean and dry anything that came in contact with the water.

This includes boats, trailers, equipment, dogs, boots, and clothing:

- ✓ Use hot (over 40° C or 104° F) or salt water to clean your equipment;
- ✓ Wash your dog with water as warm as possible and brush its coat;
- ✓ If hot water is not available, spray equipment such as boats, motors, trailers anchors, decoys, floats, nets, with high-pressure water;
- ✓ For cleaning equipment that cannot be exposed to hot water, dip equipment into 100% vinegar for 20 minutes or a 1% table salt solution for 24 hours;
- ✓ DRY equipment. Allow 5 days of drying time before entering new waters.

Do not release or put plants, fish, or animals into a body of water unless they came out of that body of water.

Do not release them into storm drains, because most storm drains lead to water bodies or wetlands. Many plants and animals can survive even when they appear dead:

- ✓ If you cannot find a home for the critters in your aquarium, bury them. Dump the water into the toilet or yard, far away from storm drains;
- ✓ Whether you have obtained bait at a store or from another body of water, do not release unused bait into the waters.

NRB Adopts Emergency Rules to Slow Virus

The Wisconsin Natural Resources Board on April 4 adopted emergency rules in an effort to stop the spread of viral hemorrhagic septicemia (VHS) to the state's inland waters.

VHS causes bleeding and rapid death in fish, and has been detected in three of the five Great Lakes. Even healthy-looking fish can be carriers of the virus, which can also survive in water for at least 14 days.

To protect Wisconsin's fish, the rules limit the transport of fish and bait (crayfish, frogs, fish, or fish eggs) between water bodies:

● Live bait must be a) purchased from a licensed bait dealer, b) captured legally in the water to be fished, or c) captured in an inland lake or stream and retained for use in another inland lake or stream.

● Dead bait must be a) used on Lake Michigan, b) used on the lake or stream where it was captured, or c) preserved by means other than refrigeration or freezing.

● After fishing or boating on the waters of the Great Lakes or Mississippi River (including tributaries up to the first dam), you must immediately drain all water from boat and trailer, including any bilge, ballast tank, bait bucket, and live well.

Lawn Treatment a Fertile Area for Improvement

Are you fertilizing more than just your lawn? If you're a typical Lake Redstone resident, the answer may very well be yes.

Analysis conducted in 2005 confirmed that most properties around the lake have soils which are already saturated in nutrients—particularly phosphorus—and that many common fertilizers offer little benefit to lawns, while contributing to unsavory algae blooms in the lake.

Of the 12 established lawns sampled as part of the study, all 12 had phosphorus levels well above the 20 parts per million recommended for a healthy lawn, and several had more than three times that amount.

"Generally speaking, the study proved that there's plenty of phosphorus in the soil already," said LRPD Treasurer Cal Maurer, who helped collect the samples in October. "You don't need to add phosphorus to it, there's enough there now. If you're going to fertilize, you can use fertilizer without phosphorus."

Excess phosphorus applied to a lawn tends to build up in the soil—without benefitting the grass. Through leaching, runoff, and erosion, some eventually reaches Redstone's water, where an abundance of this nutrient contributes to algae and weed growth. Water clarity and fish populations subsequently suffer. Studies estimate one pound of phosphorus runoff can trigger 500 pounds of algae growth, and once introduced, it's a difficult element to remove.

"Once phosphorus gets into the lake, it's not just five or ten years to get rid of it, it's more like fifty or more," explained LRPD Vice-Chair Priscilla Bondhus, who coordinated the study. "So anything we can do to cut down on that is a big help in the long run."

A resident survey last year indicated that only 28% of Redstone residents who fertilize use phosphorus, but this figure likely underestimates the actual situation, as people are often confused about the content and labelling of the fertilizer they use. A

continued on page 8

Where to find it?

Phosphorus-free fertilizers, indicated by a middle digit of 0 on the label, is carried by the following Redstone-area retailers:

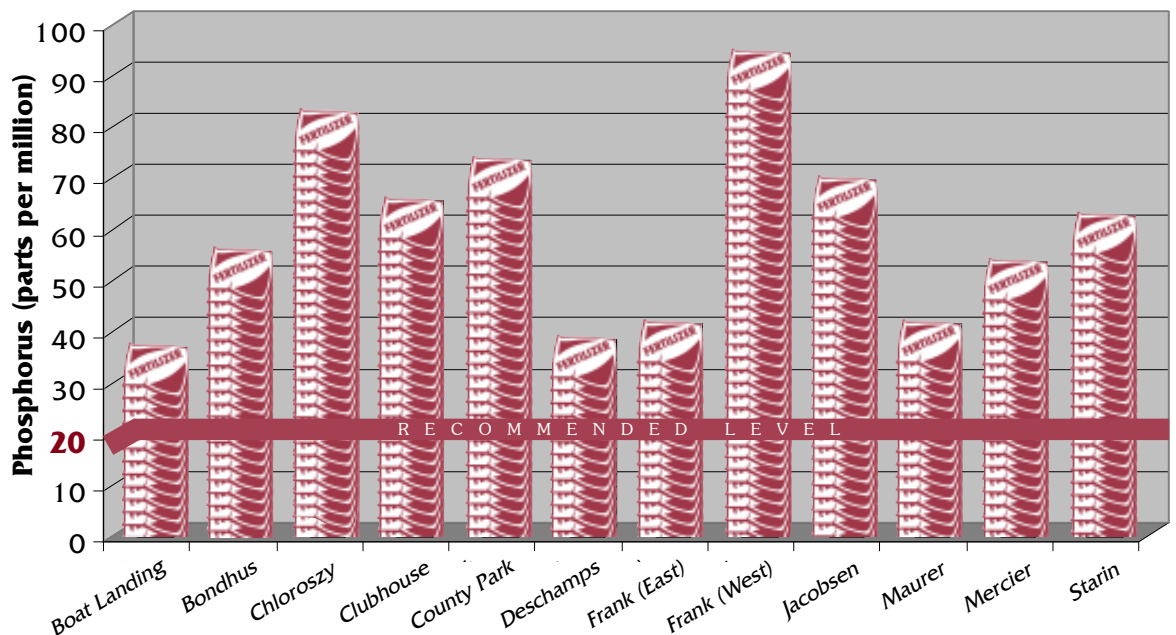
- **Big John's Landscape & Garden Center**, Reedsburg;
- **Hartje Farm, Home, & Sports**, LaValle; and
- **Home Depot**, Lake Delton.

Zero-phosphorus fertilizer can also be special-ordered at **True Value** and **United Co-Op** in Reedsburg.

To test your own soil

The UW-Madison Soil & Plant Analysis Lab performs soil analysis for \$15. To request a collection kit, call 608-262-4364, extension 1101.

Tests on 12 lawns surrounding Lake Redstone showed all had significantly more soil phosphorus than the 20 parts per million recommended by UW-Extension and other turf grass authorities in Wisconsin and Minnesota.



Other ways to save:

Landowners can help keep excess phosphorus out of Lake Redstone by following these recommendations:

- **Always sweep fertilizer off of driveways, sidewalks, and other paved surfaces;**
- **Pick up pet waste promptly;**
- **Inspect and maintain your septic system; and**
- **Don't let leaves and grass clippings wash into the lake.**

In addition, turf grass specialists recommend applying fertilizer in October, rather than May, to promote a healthy, deep-rooted lawn.

To learn more about fertilizers and lake-friendly lawn care, contact the Sauk County UW-Extension office at 608-355-3250 or visit <http://clean-water.uwex.edu/pubs/home.htm#yard>.

Fertilizer...continued from page 7

series of three numbers on the label, such as 25-4-5, indicates the relative amount of nitrogen, phosphorus, and potassium a fertilizer contains.

The survey also showed that only 3% of respondents had ever conducted a soil test to determine their property's needs.

Though phosphorus is the biggest contributor to water quality concerns, it is not the only one. Potassium was also measured in the study, and every site but one showed surplus of this element, as well.

"Phosphorus has the dirty label, but any excess nutrients can create problems," Bondhus added.

While other sources contribute phosphorus to Lake Redstone, including farm runoff, failing septic systems, and grass clippings, addressing the fertilizer issue can have a large impact. A 2002 study of Lauderdale Lakes in Walworth County showed that lawns fertilized with phosphorus fertilizer had twice the concentration of phosphorus in runoff compared to unfertilized lawns or those fertilized with phosphorus-free fertilizer.

Likewise, a watershed in Plymouth, MN which limited phosphorus fertilizer use showed a 23% decline in phosphorus runoff in 2001 compared to a neighboring community with no fertilizer restrictions.

Since then, Minnesota has enacted a statewide ban on phosphorus fertilizer, with a few narrow exceptions. The Wisconsin Association of Lakes and several Wisconsin counties support a similar action in Wisconsin, and Dane County enacted its own ban last year. It's a strategy that has been discussed for Redstone, but thus far dismissed in favor of education.

"We hope that as this information becomes more widely known, that people will act to protect their investment and take a stake in their lake!" said Bondhus. ♦