

# Project Update

by Heather Harwood, WACF Executive Director

WACF was very grateful to receive TWO - DNR Lake and River Enhancement (LARE) Grants this summer:

• an **Engineering Construction Project on Village Lake stream** in the ten Lake chain that feeds 43% of Wawasee Lake's surface water. The approved grant is for a \$62,500 construction project with a grant amount of 75% (\$46,875).

Village Lake is the 10th and final lake in the 10-Lake chain of pristine lakes prior to flowing into Wawasee Lake. The stream that outflows into the north side of Village Lake, near the historic site of the Indian Oven, has been severely eroding along approximately 600-1,000 feet of the stream that drains a 270-acre agricultural area. The banks have washed and been under cut up to eight feet in elevation. This sediment is being deposited at the outflow of the stream into Village Lake - over ½ acre of lake and wetlands have been converted to upland due to historic sedimentation from this stream. Village Lake is only inches deep up to 20 feet out from the existing shoreline and the bottom substrate consists of recently deposited sediments. This sediment brings with it phosphorus and other pollutants to our water supply.

• a **Feasibility/Design Study on Dillon Creek**. The approved grant is for a \$30,000 study with a grant amount of 90% (\$27,000).

Dillon Creek flows through agricultural farm fields and Enchanted Hills before entering Wawasee. It has deeply cut banks serving as the most cause of sedimentation to Wawasee. The problems: size of watershed (Dillon Creek drains water from 3,423 acres), grade drop (over 90 feet), and erodable soils. To be able to help 'manage' the sedimentation, the grade needs to be controlled near the stream, water holding capacity increased, and erosion prevented as much as possible. Sediment loading from EH has been estimated to contribute 330,150 lbs/yr. of sediment into Wawasee.

**THANK YOU** to these important volunteers for their work:

- **Cindy Kaiser**, Syracuse Lake Ecozone buoys
- **Jeff Guyas** and **George Hardie**, Conklin Bay Ecozone buoy
- **Wawasee Boat Company** North Bay Ecozone buoys
- **Sandy Green** for donor acknowledgment letters
- **Water Lilly Gallery** for framing of property aerial photos
- **Susie Brandes** for all her artwork on the WACF greeting cards and meeting tent

• **Powell Property Care** smoothing and seeding at electric supply CANOE TRIPS

This was the 13<sup>th</sup> year for the popular WACF sponsored summer **canoe trips** through Turkey Creek and the "Ten Lakes". WACF leads the canoe

## Big Wakes

WACF has become aware of mechanisms called switch blades and power wedges that attach to the wakeboard boats of certain manufacturers, Centurion, Malibu and possible others. Boaters have the option of employing these devices but, when they are used they maximize rather than minimize the impact of the wake which creates an increase in the size of the waves for wake boarders. The Conservancy views these increased sized waves as not only a possible hazard for recreational lake users, but one which could produce serious lake and wetland damage. It is of special concern for shallow lakes as we have in the Wawasee Area Watershed, because of "scaring" of the bottom of the lakes and possible destruction of wetlands. After talking to a local Centurion boat dealer about this product, both the dealer and WACF strongly recommend not using this new "switchblade" product on the Wawasee Area Watershed lakes.

trips from upstream in Knapp Lake at the Continental Divide in Noble County downstream to Village Lake at SR5. This Creek provides 43% of the surface water supply to Wawasee and Syracuse Lakes. If you are interested in joining us next summer, call WACF at 574-457-4549 or email at info@wacf.com.

### GOOD STEWARDSHIP

WACF reminds all property owners again that raking or blowing leaves in the lake is against the law. The Indiana DNR considers this act as "illegal filling" (the same as filling with dirt or sand etc) of a lake and is punishable.

Large waves can cause damage to a shoreline and create disruption and dirt in the water. Glacial stone seawalls are one way to protect water quality by helping control waves and don't require a permit if installed per DNR rules. If you are interested in a glacial stone seawall, the following names are some of our local installers. Please contact WACF at 457-4549 if you would like to be added to this list.

Ben's Seawall Rock Service	574-658-3816	installation and restacking
Beyond Landscaping	574-527-7973	installation and restacking
Earthwerks	260-856-4808	installation and restacking
Fultz Excavating	574-518-0341	installation and restacking
Russ White	574-529-2413	installation and restacking
Troy Ousley	574-834-2222	installation

### FOLLOW-UP BLUE-GREEN ALGAE WATER TEST PRODUCES LOWER RESULTS

Ten lakes in Kosciusko and Whitley Counties were randomly selected for water testing the first week of September for blue-green algae and the algal toxin Microcystin. Lake Wawasee was one of two lakes that tested in the high range for algal toxins (see chart below). With Wawasee's clean water reputation, the results of this test got a lot of attention.

Microcystin is a toxin that is created by some blue-green algae (also called cyanobacteria.) Blue-green algae are found in all of our Indiana lakes, and some have the ability to create a dangerous toxin. Direct contact with algal toxins can cause skin irritation. Drinking untreated water, intentionally or accidentally, may result in gastrointestinal illness and more severe liver and neurological damage.

A series of additional water tests from four locations in Wawasee Lake and one location in Syracuse Lake were completed the first week of October. The results: all tested in the LOW range for Microcystin and cyanobacteria (with the exception of the DNR public launch ramp on Wawasee, which was in the Moderate range for cyanobacteria). The best thing we can do for our lakes is to prevent these algae toxins from getting any worse. Toxins and weeds are a symptom of water pollution. Please help to keep our lakes clean! We can all help – every little bit counts:

- do not rake leaves or lawn clippings into the lake
- keep fertilizers well back from the edge and use phosphorus-free fertilizers
- install a stone seawall or natural shoreline
- do not stir up the bottom of the lake with your boat propeller. **Cautious boating in shallow areas may be our best defense.**

Deep drafting props dig up and resuspend sediment and nutrients (phosphorous) from the lake bottom. This greatly reduces water clarity and encourages algae blooms and weed growth. (J.F. New Study, April 13, 2007). Deep drafting props are uprooting "good" rooted aquatic plants from shallower areas. These rooted aquatic "good" plants provide cover for fish, help prevent algae blooms and help keep sediments in place (Commonwealth Study 1995). Prop stirring turbulence helps spread undesirable invasive plants such as Eurasian Watermilfoil. Motorboats driven through strands of Eurasian Watermilfoil have the potential to spread the invasive plant

## Wetlands Acquisition – Progress Report

by Tom Yoder

*"Leave it as it is. You cannot improve upon it.  
Keep it for your children, your children's children,  
And for all who come after you as  
The one great sight which every American should see"  
- Theodore Roosevelt on the Grand Canyon*

The primary mission of WACF is to preserve and enhance water quality in our lakes. To that end a long-term goal is to acquire wetlands and endangered areas along the shorelines and along the feeder streams. Wetlands serve as giant filter beds collecting sediment and unwanted nutrients. Several feeder streams into Lake Wawasee may not have giant wetlands but are sources of heavy erosion and point source agriculture pollution hotspots. Through acquisition and eventual remediation techniques (such as sediment traps, bank stabilization, filter strips, check dams to slow water flow, reduced tillage, etc) these problem areas have been and will be effectively addressed.

*So how are we doing on acquisition?*

Currently WACF has acquired **622.2 acres in fee simple ownership and 42.4 acres of conservation easement yielding a total protected of 664.6 acres**. A 664 acre "farm" would be a huge farm even by today's standards. The average farm today in Indiana is 242 acres. However, the conservancy's acres are spread out bordering the streams and lakes that make up our ecosystem. It is estimated that WACF is now **protecting 51,900 feet (9.8 miles) of lake and streamside shoreline**. All in all, Land Acquisition estimates that close to 50% of the ultimate goal has been achieved.

The sketch illustrates the widespread area in which WACF has made acquisitions and seeks to achieve future holdings. The shaded areas are the priority areas as identified by the Commonwealth Engineering Study of 1995 and verified by the WACF Ecology Committee. The table shows that the acquisitions are spread out in all the key areas. The owners of these properties prior to WACF have been wonderful stewards of the wetlands. Land Acquisition considers them to be among the greatest friends of the conservancy. Approximately 20% of the acquisitions have been donated.

*What acquisitions have been completed this past 12 months?*

### DILLON CREEK AREA

Late in 2008 two properties in the Dillon Creek sub watershed were acquired, a 21.8 acre parcel through outright purchase and a 53.49 acre gem was partially gifted by the owner. These properties adjoin at the point through which County Line road passes. Both are forested lowlands through which Dillon Creek passes. These acquisitions are key in that the conservancy now can identify remediation projects to tackle the biggest contributor of sediment to the lake system that being Dillon Creek.

### BAYSHORE AREA

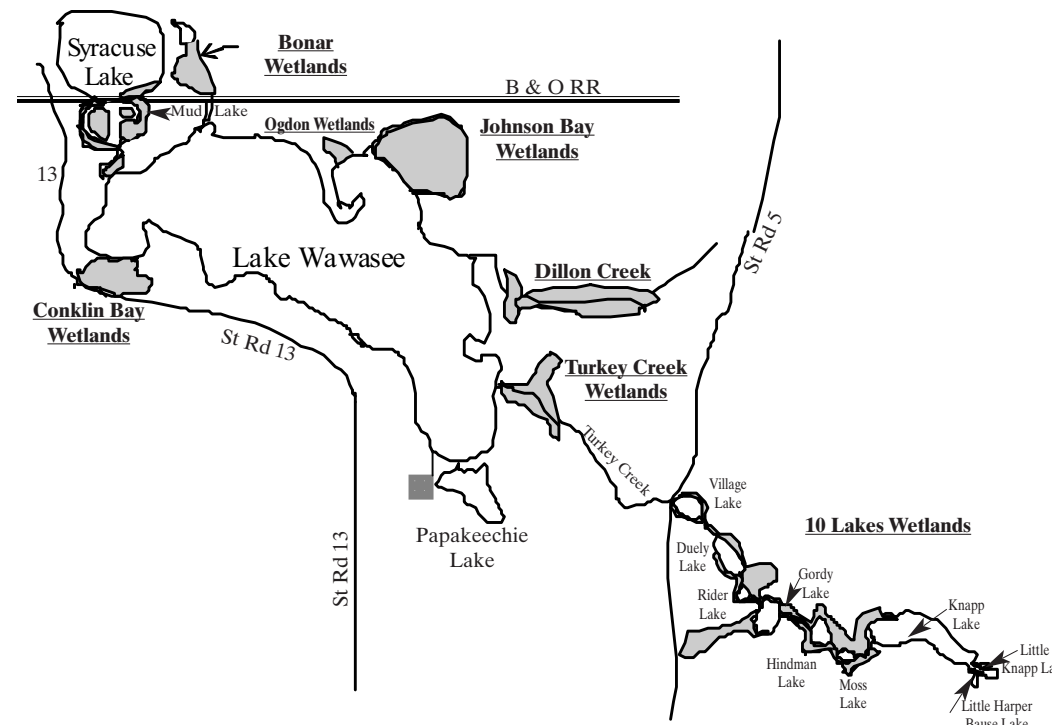
Through several transactions the conservancy has acquired a net 13.39 acres of cropland on the hillside above the existing three-tiered sediment ponds and enhanced wetlands. The objective of this acquisition is to convert the ground from cropland to grassland or combination grassland-wooded tree farm. This will further obviate sediment run-off due to the highly erodible soil especially in very heavy storm events.

### TEN LAKES AREA

The conservancy recently purchased 10.2 acres of wetlands and forested riparian wetlands bordering Village Lake. The property also borders the DNR boat ramp facility and extends to the south and east to the point where Turkey Creek enters Village Lake. This acquisition assures protection of important wetlands surrounding Village Lake, the closest of the ten lakes that is the major upstream subwatershed. The Ten Lakes subwatershed supplies approximately 43% of the water entering the Wawasee/Syracuse Lake system.

<b>Acquired acreage by area:</b>	
10 Lakes Wetlands	240.99 acres
Turkey Creek Inlet Wetlands	77.764
Bonar Lake Wetlands	93.188
Conklin Bay Wetlands	41.67
Ogdgen Island Wetlands	0
Johnson Bay Wetlands	0
Mud Lake Wetlands	24.609
Syracuse lake Wetlands	4.5
Lake Wawasee Wetlands	26.299
Dillon Creek Inlet Wetland	113.285
<b>TOTAL</b>	<b>622.195 acres</b>
<b>Total Conservation Easement</b>	
10 Lakes Wetlands	42.36
<b>TOTAL</b>	<b>664.555 acres</b>

*The Conservancy has acquired or has the goal of permanently preserving wetlands in the target areas shown as shaded in the watershed sketch illustration.*



## WACF Supports the DNR's Effort to Preserve Oakwood and Has Sent the DNR a Letter of Support

27 October 2009

Mr. Robert Carter  
Director, Department of Natural Resources  
402 W. Washington St.  
Indianapolis, IN 46204

Re: Oakwood, Lake Wawasee

Dear Mr. Carter:

The Wawasee Area Conservancy Foundation (WACF) is supportive of the DNR becoming involved with the ownership and operation of the Oakwood Hotel and adjoining property. We have received feedback from many of our constituents and believe that there is substantial support for public use and preservation of the property under the DNR "umbrella" of parks and recreation sites.

WACF has long recognized the ecological significance of the Conklin Bay and Oakwood areas and believes that the DNR could bring the appropriate combination of protection and recreation to that important area of Lake Wawasee. WACF appreciates the DNR's willingness to consider this important project during these difficult financial times. Please feel free to contact the undersigned if you have any questions about WACF or our mission.

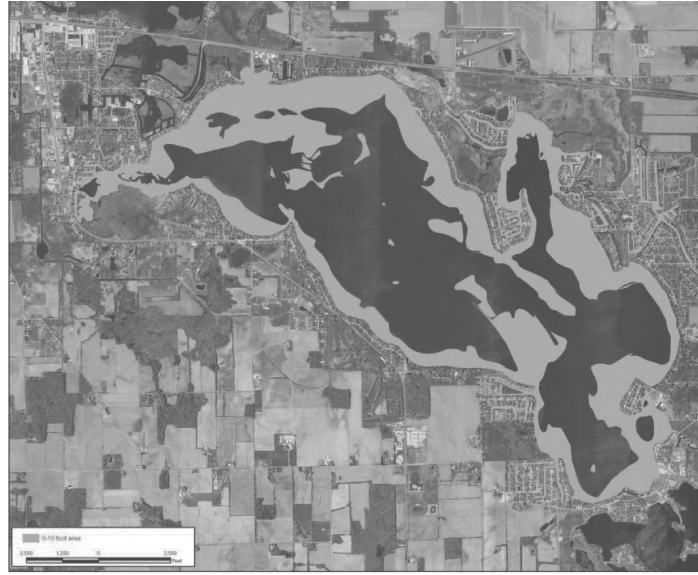
Sincerely,

Heather Harwood  
WACF Executive Director

Cc: Abigail Lawlis Kuzma, Esq.  
Director, Consumer Protection Division  
Office of the Indiana Attorney General  
302 W. Washington St.  
Indianapolis, IN 46204-2770

Philip Whistler, Esq.  
Ice Miller LLP  
One American Square, Suite 2900  
Indianapolis, IN 46282-0200

throughout the lake. (J.F. New April 13, 2007). See the adjoining bathy-metric map to view areas of Wawasee that are less than 10' deep.



Lake Wawasee depths of 10' and less.

There are several causes for this blender effect: Wawasee is a **shallow lake**. 18% of the lake is covered by water less than 5 feet deep, 55% is covered by water less than 15 feet deep. (JFN New April 13, 2007). The majority of boating activity, such as wake boarding, skiing and cruising takes place at this depth...just outside the buoy line. There are approximately 7000 boats on Wawasee and an increasing number are high powered in-board/outboard boats, wake board boats, and cabin cruisers whose props are deep drafting. It does not take much to disturb the bottom of the lake. JFN's study reports that a 10 hp. motor is capable of disturbing the bottom in six feet of water while a 50 hp. motor can easily disturb the bottom in 15 feet of depth. JFN reports that boat speeds in the range of 7 to 12 mph may have the greatest potential to stir up the bottom. These boats are being driven with their bows up and their sterns (props) down.

**ZERO-PHOSPHOROUS FERTILIZERS:**

Phosphorus attaches to sediment in the lake, and when the lake gets stirred up by boats, the phosphorus is released and feeds the algae. It is VERY important that shoreline residents use zero-phosphorus fertilizers. The following landscape companies use Phosphorus-free fertilizers. If your landscape company uses P-free and would like to be included in the list, contact us at: info@wacf.com

Company	Phone
Anderson's Property Management	574-453-3466
Beyond Landscaping	574-527-7973
The Cottage Gardener	574-457-4976
Horizon Landscapes	574-551-3146
Lawn and Turf Landscaping	260-747-3298
LML Estate Management	260-459-3707
Myers Landscaping Nursery	574-457-5354
TruGreen Chemlawn	574-534-3484
Vivid Scenery	574-453-4301
Wihebrink Landscape Management	574-268-2566

**Public Meeting**

Results of 2009 Aquatic Plant Survey  
Wednesday November 18, 2009 • 4:00 p.m. • WACF Center

**Commonly Asked Questions**

Diana Castell

This summer I fielded a number of questions from our watershed community. This article is based on a selection of those questions.

**1. Why was Wawasee water so cloudy/dirty this summer?**

A number of things affect the clarity of lake water. On the bottom of the lake, there is a layer of dirt or sediment. Wawasee and Syracuse are shallow lakes so the speed, size and type of boat will have a direct effect on this layer of sediment. This resuspension of sediment is pretty easy to see. The water looks brown. Hidden within that brown water is host of nutrients such as nitrogen and phosphorous both promote growth of all plants. Now specifically, this nutrient in our lake water increases those 'weeds' that foul our sailboats and wind around our propellers. Native plants benefit the health of our lakes. They provide habitat and food for our water wildlife, for a whole range of mirco insects to fish, to turtles to ducks.

Now comes the most serious problem. So we put up with the weeds but what about algae. The brown water or the sediment water will settle out. In past summers, at my house, the sediment usually would settle out by Monday night. I could once again see the minnows that play around my pier. BUT not this summer. We were not the only northern Indiana lakes that had this 'cloudy' water. Basically, Dr. William Jones, Indiana University professor in charge of the Indiana Clean Lakes Program, proposed that the heavy rains in early spring washed lots of nutrients, nitrogen and phosphorous, from agricultural fields and lawns into our streams and lakes causing an above normal growth of algae.

**2. If the water contains high levels of algae does that affect swimmers?**

Yes, basically some of the algae this summer was a type that can cause skin problems, sicken animals and respiratory problems. See the Heather Harwood's article for more details.

**3. What is the problem with invasive species?**

There are two classes of invasive species that affect our watershed. First, we have several land and aquatic plants that have a direct effect on our water quality. The Purple Loosestrife is a lovely looking plant that has a purple flower, each plant can produce millions of seeds. So what is the problem? This plant will take over wetlands crowding out native plants. The spread of this plant continues because it has no natural enemies. The cost of removal is estimated in the millions and then success is not assured.

Two aquatic plants, Eurasian Watermilfoil and Starry Stonewort, cause problems for boaters by fouling sailboat keels and motor boat propellers. With the help of the DNR and LARE funds, WACF has been attacking and trying to keep this plants under control. So far, neither has been eradicated. So funds that could be used for other projects must be used for plant treatment.

**4. What is so important about native plants?**

Native plants have evolved naturally in a specific region, and have a growth pattern and life cycle that allows them to benefit other surrounding plants and animals. In the case of wetland plants, they filter impurities, such as fertilizer, and pesticides. Another important function is providing habitat for small animals and fish.

Any questions? Email: [dcastell@mac.com](mailto:dcastell@mac.com)

PO Box 548 • Syracuse, IN 46567



**Preserving Water Quality**

**We're on the web!  
www.wacf.com**

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Fax: 574.457.4432  
E-Mail: info@wacf.com

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**CONSERVANCY VIEWS**

**Preserving Water Quality & Scenic Beauty of Our Lakes Fall 2009**

**CHAIRMAN'S LETTER**

By Deborah Flanagan

After necessary safety improvements were completed WACF hosted the following activities at the Center:

"The Water Quality and You Seminar" included professionals from the DNR, JF New, Hoosier Aquatic Management, Aquatic Weed Control and the St. Joseph Watershed Initiative. They joined with WACF to offer information on our watershed and threats to good water quality, invasive species, geese control, phosphorous free lawn care, and natural shoreline restoration. It was one of our first efforts to offer this type of half day seminar for free to the public. We look forward to offering more seminars on watershed quality issues in the future. Please keep an eye on our Calendar of Events next spring on our website and plan to attend if you can.

Members of the Tippecanoe Audubon Society visited our Center for a walking tour of the property, to share common interests and ideas for making our property more bird friendly.

The Center has begun its first mitigation project. The Louis Dreyfus Co will be mitigating (restoring to wetland) a small area of our property. This is a good experience for WACF and prepares us for more mitigation opportunities in the future.

WACF sponsored a breakfast to present the WACF organization to the Kosciusko County Leadership Academy. The Academy's goal is 'to develop informed and innovative leaders who will serve our community'. WACF is happy to help sponsor one of our board members, Holly Tuttle, in participating in this program. While participating in this leadership program Holly will be authoring a white paper on the impact of water quality on property values.

Upcoming Center plans will find us completing a Master Plan for the entire 35 acre property. Our goal will be to provide as many venues for watershed education and water quality improvement activities as possible.

In addition to addressing the physical property of the Center to maximize our education platform, we have also taken an organizational step which we believe will benefit our education programs. We have combined our Ecology Committee with our Education Committee. Most of the topics and messaging for the educational programs have their beginning in the Ecology Committee. Now the new joint Ecology and Education Committee headed up by Diana Castell will lead the way for us in programs offered at the Center. The Ecology committee meets on the Wednesday before the third Saturday of each month (April thru Oct) at 4PM. If you have any interest in this committee please let us know.

Thank you for all your interest and support in the 09 season. WACF remains dedicated to the preservation and enhancement of the Wawasee area watershed for present and future generations. We cannot do it without you! Please remember WACF when you consider your year end gifts.



**Officers and Directors**

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John Holdeman, *Vice Chairman*  
Heather Harwood, *Executive Director*  
Donn Baird, *Treasurer*

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David Brandes	Robert F. Myers
Diana Castell	Nancy Pickett
Robert Fanning	Jerry Riffle
Jan Hackleman	Betsy Roby
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Max Kendall	Nick Stanger
Betty Knapp	Holly Tuttle
Rebecca Kubacki	Thomas Yoder

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David Eckrich  
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Douglas Grant  
Richard Green  
Tom Hughes  
Needham Hurst  
Harriett Inskip  
Tina Kocher  
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Vance Lopp  
William McNagny  
Gordon Moore  
John Naab  
Bing Pratt  
Edwin F. Rogers  
Ian Rolland  
Dean Schwalm  
Jane T. Wilson

Another great summer at Wawasee and Syracuse Lakes has come to an end. Although not our best summer weather-wise, many families managed to continue to enjoy the lakes in numerous ways. I was sitting on the deck last week and realized that our use of the lake certainly changes over time. As a teenager the life of trips around Johnson Bay I could make salomine. Or how many times I could pull their siblings far into the atmosphere. I guess that is why my thoughts often return to lake and water quality preservation. And now I try and make decisions with that thought in mind.  
This year we purchased a new boat. And of course as the mother of three teenage boys it wasn't a portoon boat. No, it had to be a wake boarding boat. What makes a great wake boarding boat??? A boat that makes a huge wake!!!! Gee... just what our lakes need.  
Now at first I was dead set against this idea. I didn't really care for wake boarding boats. They are big, they are noisy (thanks to the wonderful stereo speakers mounted on the racks), they make big waves and they churn up the bottom of my lake. I know you will be surprised by this... But my boys didn't care about any of this... Can you imagine?? When I started talking about the water quality a glazed expression formed over their faces. Then I mentioned the wave action affecting the shoreline vegetation and I got "the eye roll." Now every parent knows that one... The upward gaze and rolling of the eyes usually accompanied by a "Oh Mom, don't start!" How could buying this boat end the world as they know it. They just wanted a big wake for their wake boarding tricks. So everyone needed some education. First of all, let's just look at the water. Even my kids realize that at the beginning of the summer the lake is clear and by August it is not. Part of this is natural

**Memo's from Mom**

By Joan Szynal

(some "normal" algae blooms), but part is due to the suspension of sediment from the bottom. I know for a fact that wake boarding boats churn up the water more than my old ski boat. I have seen it first hand. There is evidence that this action resuspends phosphorous from the lake bottom and helps spread invasive plant species throughout the lake. Generally not good.  
Then there is the wake. Great for the boarding... not so great for shoreline vegetation. So we spent several weeks driving demo boats around while I would look at the sediment that was churned up and think about some of the prop scattering we were probably engaged in. My back would ache from going over the wake my new boat was creating.  
But then something awful happened. I went surfing behind the wake boarding boat. What a blast!!  
So we bought a new wake boarding boat. But we try to be intelligent about its return to lake and water quality preservation. And now I try and make decisions with that thought in mind.  
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