

Lake Management Work Group Forwards Recommendations

At its October meeting, the Indiana Lake Management Work Group (LMWG) approved a number of recommendations that will begin the process of becoming new rules or laws during the coming months. The Work Group is a legislatively authorized, governor-appointed group of legislators, citizens, and professionals whose task is to help guide lake policy in Indiana. Here are some of the recommendations:

Phosphorus Dishwashing Detergent Ban

Phosphorus is the limiting nutrient in most Indiana lakes. This means that if you add more phosphorus to a lake, you get more algae growth. The Indiana legislature was the first in the U.S. to ban phosphorus in home laundry detergents in 1973. Many other states have followed that lead. Automatic dishwashers were not widely used at that time. The heavy box of dishwashing detergent can contain up to 8.7 percent phosphorus by weight. Phosphorus-free dishwashing detergents clean just as well because it is the enzymes, not the phosphorus, that does the most cleaning. While P-free dishwashing detergents may cost a bit more, these costs are substantially less than the cost to remove phosphorus from eutrophic lakes after the fact.

The recommendation called for a new law to limit the phosphorus content of household and commercial dishwashing detergent to not more than 0.5 percent phosphorus by weight.

Cyanobacteria and Cyanotoxins

Cyanobacteria (blue-green algae) blooms have occurred throughout the world for thousands of years. Cyanobacteria produce a number of nuisance compounds, including those that are toxic or cause severe taste-and-odor problems in drinking water supplies. Cyanobacterial toxins can make

drinking water and recreational use of water

unsafe. Animals, particularly dogs and livestock, die yearly as a

result of cyanotoxins, and though human death is

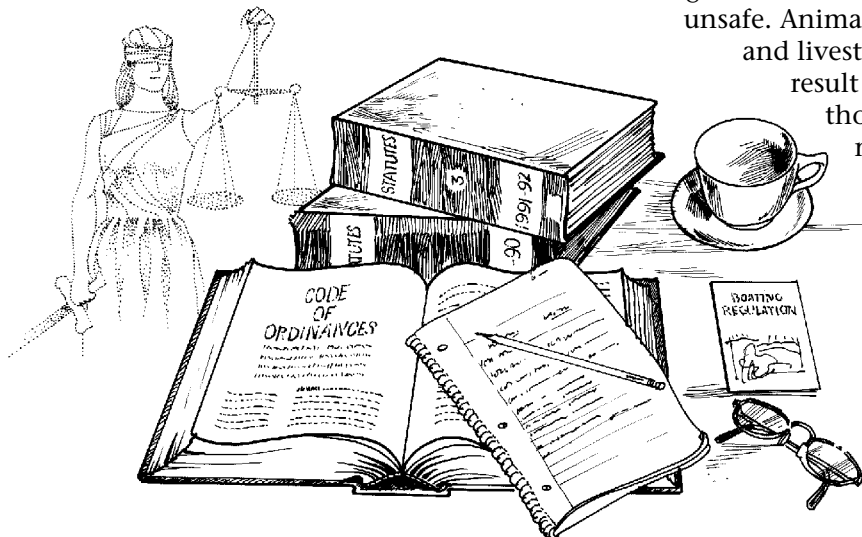
not common, many people experience

symptoms indicative of cyanotoxin

exposure such as skin rash, nausea, and diarrhea. Very

little is known about the long-term side affects

of ingestion of cyanotoxins.



In recent years, numerous cases of human illnesses have occurred resulting in the issuance of health advisories and lake closures in Nebraska, Kansas, Iowa, Illinois, and other states.

Wisconsin, Illinois, Iowa, Nebraska, and other states have regular monitoring programs in place to test recreational waters for cyanobacteria and their toxins. In 2007, Geist and Eagle Creek reservoirs near Indianapolis both had cyanotoxin advisories issued.

High densities of toxigenic cyanobacteria are a potential threat to the health of Indiana citizens and wildlife. Indiana must develop policies and programs to adequately monitor lakes and reservoirs to insure public health. As an initial step, the Work Group recommended that the Indiana State Department of Health (ISDH), the Indiana Department of Environmental Management (IDEM), and the Indiana Department of Natural Resources, (IDNR) work cooperatively to establish a Cyanobacteria Task Force, composed of qualified representatives from appropriate state agencies and recognized university experts. The purposes of this Task Force are to:

1. assess the risk of cyanobacteria and cyanotoxins in Indiana;
2. recommend an implementable program that would monitor Indiana lakes and reservoirs to detect toxigenic cyanobacteria; and

3. develop policies and procedures to provide rapid response capabilities in the event of a potential cyanotoxin event.

Aquatic Invasive Species Education

Aquatic Invasive Species (AIS) are those that invade new waters where they displace native species, disrupt the aquatic food chain, and create nuisance conditions. Species such as zebra mussels, Quagga mussels, purple loosestrife, Eurasian watermilfoil, curlyleaf pondweed, and Asian carp have plagued Midwestern waters in recent years. Recently, Indiana has spent \$1.5 million to control hydrilla in Lake Manitou, Brazilian elodea in Lake Griffy, and AIS in other waters. More state resources must be devoted to this serious problem, including more staff, education materials, and workshops, to train lake leaders, professionals, and citizens on identification and prevention techniques. The Work Group further recommended establishing an Aquatic Invasive Species Task Force to provide continuing guidance for this issue. Following the October meeting, the legislative Natural Resources Study Committee established an Invasive Species Task Force that is expected to issue a final report with recommendations by November 2008.

Economic Values of Lakes

Lakes are undervalued, considering the economic value of properties, fish in lakes, and tourism income.

Having data on true economic value of lakes will support investment in lake protection. The Work Group voiced support for a study by Prof. John Stevens of Tri-State University that will evaluate the economic value of Indiana lakes.

Public Freshwater Lake Law

The Lakes Preservation Act (IC 14-26-2), defines actions that IDNR may take to control and manage public freshwater lakes in Indiana. Many terms in the Act are either poorly defined and/or confusing. The Work Group recommends several changes to the existing law that will clarify terms.

1. The legal term "lake" is poorly defined in the current law. Unnecessary confusion has developed regarding defining natural glaciated lakes versus reservoirs. The recommended change would define lake as "a reasonably permanent body of water substantially at rest containing at least five acres of water, which existed on March 12, 1947, is of natural origin, or is part of a watercourse."
2. The DNR does not have a comprehensive list of which lakes are or are not public freshwater lakes. In the Act, "public freshwater lake" means a lake that has been used by the public with the acquiescence of a riparian owner, but acquiescence is not defined. The Work Group recommends adding the following language to define acquiescence: *Acquiescence refers to (1) consenting without conditions, (2) complying tacitly or passively, or (3) accepting, and indicators of acquiescence include the following: (1) Evidence that the general public has used a lake for recreational purposes. (2) Evidence that a riparian owner did not object to the operation by another person of a privately owned boat rental business, campground, or commercial enterprise whereby non-riparian owners gained access throughout the lake. (3) A record of*

Perspectives

A recent article in the F.X. Browne newsletter presented water proverbs from other countries. We thought we'd share these bits of wisdom with you over the next several issues of *WaterColumn*.

*Even hard rocks can be drilled
by the persistent soft drops of water. ~ Portugal*

All water flows into the ocean or into the purses of the rich. ~ Denmark

previous regulation of construction activities by the Department of Natural Resources or its predecessor, The Department of Conservation.

3. A recommendation to give the Natural Resources Commission authority to establish an expiration that is longer than two years for a particular type or types of permits.
4. A recommendation that temporary structure permits – such as those for piers – expire upon transfer of riparian ownership to assure that structures such as piers that don't conform to regulatory changes are not automatically accepted (“grandfathered”) in the future.
5. Authority for DNR to prepare a nonrule policy document that lists by name, county, and location, all known “public freshwater lakes” in Indiana.

Re-establish the Lake Management Work Group

The current law, which authorizes the existence of the LMWG, expires in June 2008. The group agreed that there is much work that remains to be done and hopes that legislation can be enacted to reconstitute the group for an additional two years.

Legislator members of the work group agreed to develop bills reflecting the indicated changes, which they will then attempt to introduce in the legislative session beginning in January 2008.

Lake More Fun Without Motorboats

Emily Dykstra

The old-timers would say I have no claims to nostalgia. Perhaps at 33 my experiences are too few to have any right to “remember when.” Although I can't technically remember the “good old days”, I got a good taste of them over the weekend at the motorboat-restricted Lake James.

I'll admit I was chagrined when I heard we would be shore-bound for Labor Day weekend due to high

water in the lake. I was looking forward to one last weekend of boating, wake boarding, tubing, and skiing. We even canceled our guests thinking we would have nothing to do without using our boat. My adventure-seeking husband was up for the challenge, but I was less than enthused. Traveling the 50 minutes from Leo to Angola, I was pessimistic about the weekend ahead, or as my girls would say, I was grumpy. I wasn't sure how much fun I would have, and I was worried about entertaining my three daughters, four-year-old twins and a seven-year-old. After all, fast boat rides and tubing are the reasons they like the lake, right?

However, upon arriving at Lake James, now amazingly transformed into an enormous millpond, I received two surprises. First, my negative attitude immediately vanished. The still water dotted with gliding kayaks and graceful sailboats enraptured me. The first thing I noticed as I stepped out of the car was the quiet. The only sounds were those of nature, no motors, no whirring jet skis, nothing. Looking out over the lake I was overcome with a peace I have never felt at the lake before. I immediately felt myself spontaneously relaxing, almost as if it was a reflex. I then realized that I never considered the lake a place to relax. I've always deemed it a place of action – we're always on the go in our boat, just like everyone else. As much fun as I have boating, I couldn't help feeling as though I've overlooked a big part of what lake life has to offer.

With a transformed attitude, I received my second surprise courtesy of my girls. They too stood transfixed for a moment, surveying the “new” lake, then immediately began enjoying it. They couldn't wait to go in the canoe, but not hugging the shore as we usually do. They wanted to head straight into the center of the lake, where common sense would normally never take us. As I looked around,



I realized that kids all over the lake were also enjoying the new “old-time” lake experience. With no motorboats to entertain them, kids were fishing, swimming (not just at the sandbars!), kayaking, and even tubing behind canoes. I was reminded that sometimes we give our kids so much that we deny them what they really want. Kids were using their creativity and making their own fun. I even heard some kids swimming behind a kayak say, “this is the most fun I've ever had.” I had to agree. I'll never forget how it felt swimming freely across the serene lake with my girls in tow and my husband paddling in the canoe.

Yet in the midst of this fantastic day, I had to fight sadness from entering my heart. I wondered whether we would ever get to enjoy the lake in this pristine state again. If that were true, I sincerely hoped my girls would remember this one time. After all, they are growing up too fast in a world that moves even faster. Slowing down and enjoying life in its purest form is unfortunately something we rarely make time for. On this weekend we were fortunate to have it thrust upon us in the form of a

boating ban. I am thankful to the Department of Natural Resources for the gift it gave my family and everyone else who enjoyed it. Yet perhaps thanks are due to an authority even higher. Perhaps God knew Indiana not only desperately needed rain, but we desperately needed a glimpse at how sweet life can be when we slow down and turn off the motors. So even at only 33, I can now join all the old-timers in saying "remember when," because I want to remember this weekend as long as I live.

(Re-printed with permission from the Ft. Wayne Journal Gazette, September 10, 2007)

Deadly Milfoil

A late-night swim in the Columbia River near Kennewick, WA turned deadly for a 22-year old man in August. The man, called "not a confident" swimmer, was encouraged to swim across the river with some friends. The man apparently panicked when he became entangled in a thick bed of milfoil in 10-12 feet of water, and drowned. A member of the dive rescue team described the scene as being a "complete forest of milfoil". If trapped in milfoil or other aquatic plants, experts advise swimmers to stay calm and to float. This is believed to be the first confirmed human death caused by milfoil.

New Approach to Calculate Value of Lakes Tried in Wisconsin

For some time there has been an interest in finding ways to show that clean, healthy lakes are important to our nation's economy. Some states such as Minnesota, New Hampshire, Maine, and Wisconsin have had some economic studies, hedonic modeling, and other work done

that look at the variation in waterfront property values with different parameters, such as water clarity, how does value change when there is removal of shoreland vegetation, and so on.

We looked at a simple premise: If we could discover the length of the frontage around lakes and we had some idea of the going price of a front foot in a given county, we should be able to get a rough idea of the value of bare lakeshore frontage (not considering improvements) in a given county. By calculating the number of feet around the lakes in a county, we felt the information could be used to give a county a rough idea of the value of their lake frontage.

Here is our Shoreline Length Analysis giving the number of feet around Wisconsin lakes by county and for the total state:

The approximate length around Wisconsin lakes, ponds, flowages, reservoirs (including the Great Lakes, but not including rivers or streams), is:

- 29,305 miles – greater than the circumference of the earth around the equator.
- 154.7 million feet of frontage. If you picked a number such as \$1,000 for the average value of a front foot of shoreline, that would equate to a total value for the frontage of all the lakes in Wisconsin of:
 - o \$154.7 billion dollars. To come up with more accurate values for your county, use what you believe is the average value per front foot in your area.

For comparison purposes, we pulled together some numbers on agriculture and forestry land:

- According to USDA Economic Research Services, total farmland in Wisconsin in 2002 was estimated at 15.7 million acres. Using a value of \$3,000/acre, this would equate to approximately \$46 billion dollars.
- According to the US Forest Service, total forestland in

Wisconsin in 2006 was estimated at 15.9 million acres. Using a value of \$3,000/acre, this would equate to approximately \$48 billion dollars.

These results suggest that, for Wisconsin, the economic value of total lake perimeter is significantly greater than the land value of forests and farmland combined.

(This information was compiled by Robert Korth and Tiffany Lyden, UW Extension Lakes at UW-Stevens Point, College of Natural Resources, working with Doug Miskowiak, at the Center for Land Use Education.)

Permeable Pavers Help Control Runoff

Permeable pavers are structural concrete pavement that "drinks" water. Water can pass between the individual pavers rather than run off into storm drains

carrying oil and other pollutants with it. Permeable pavers allow rainwater to pass directly through the pavement, into a storage layer of stone underneath, then into the soil naturally or into a tile drainage system. This specific type of concrete pavers cleans storm water before it reaches water stored beneath the earth.

Many communities are looking for more sustainable site development ideas that decrease the amount of impervious paved areas. More infiltration means less flooding, fewer or smaller detention ponds, increased water quality, and improved lake and stream health.

Those interested in seeing installed permeable pavers should take time to visit a recently developed permeable pavement site in central Indiana at the recently dedicated Dillon Park in Noblesville, IN. Permeable



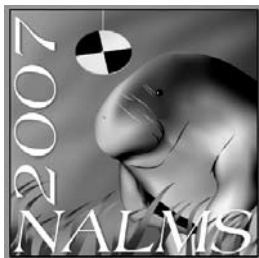
paver parking areas were recently installed at the park and the site helps demonstrate their environmental qualities. The park is located just north of the intersection of 146th Street and Hazel Dell Parkway, behind the new Kroger store on the south side of Edenshall Road. Last fall, October 12, 2006, the park served as a demonstration site for “how to install” permeable pavers. The event was hosted by Advanced Pavement Technology in cooperative effort with the Noblesville Park and Recreation Department, and the Hamilton County Soil and Water Conservation District. The park has special permeable paver parking areas as well as other stormwater Best Management Practices (BMPs).

For more information about this water quality protection method, enter “permeable pavers” into your favorite Internet search engine (Google, Yahoo, Ask, etc.) and you’ll find many sources of information.

(Source: Hamilton & Marion County Soil & Water Conservation Districts news release.)

500 Attend Annual NALMS Symposium

The 27th Annual Symposium of the North American Lake Management Society (NALMS)



was held from October 30th to November 2nd at the Coronado Springs Resort within Disney World in Orlando, FL. Over 500 scientists, professionals, lake enthusiasts, and exhibitors attended.

Preconference workshops included algae identification, phosphorus control, integrated plant management, and professional writing. The Technical Program featured sessions on algal toxins, aeration and circulation technologies, fisheries management, sediments, treatment wetlands, community involvement, climate change, remote sensing, shallow lakes, biomanipulation, social and economic issues, and emerging technologies.

Indiana was well-represented by the following attendees: Heather Buck (Christopher Burke Engineering), Bill Jones (Indiana University), Bob Mayer (Oliver Lake volunteer monitor), Mark Mongin (SePRO), Sara Peel (J.F. New), Jarka Popovicova (Ball State University), Angela Sturdevant (IDNR - LARE), and Steve and Kathie Tennent (Tennents Industrial Dredging).

The 2008 NALMS Symposium will be held at Lake Louise, Alberta, Canada.

Pet Waste Outreach Campaign Guide Published

The New Hampshire DES recently released a how-to manual providing a step-by-step guide to designing and implementing a well researched and sound pet waste outreach campaign. The manual explains how to work with local partners to motivate dog owners/walkers to pick up after their dogs and dispose of the waste in an environmentally sound and safe way. It gives readers background information to help decide if they want to start a pet waste outreach campaign, shows how to implement and promote a successful campaign, and provides suggested outreach activities, resources, and examples to make the campaigns easier. <http://www.des.state.nh.us/Coastal/scoopthepoop.htm>

NALMS Fundamentals of Urban Runoff Management Document Now Available

A second edition of the popular publication *Fundamentals of Urban Runoff Management: Technical and Institutional Issues* was recently published by the North American Lake Management Society (NALMS). This document revises an earlier 1994 edition. The authors sought to update the original document because of the tremendous amount of new information available as well as the significant shift in stormwater program direction from the historic mitigation-based approach to a more source-based approach. <http://www.nalms.org/Resources/FundamentalsOfUrbanRunoffManagement.aspx>

New Tools for Reducing Nitrogen and Phosphorus Pollution

The EPA Office of Water is rolling out several new tools to help fight high loadings of nitrogen and phosphorus in our waters. The redesigned Nitrogen and Phosphorus Web site (www.epa.gov/waterscience/nutrients/) now houses scientific literature reviews, monitoring data, guidance manuals, and Webcasts to help states establish numeric water quality criteria for nitrogen and phosphorus. The new Web site also offers answers to states’ questions about how to use the criteria and a clearinghouse of water treatment technologies and land-use practices. The public can also visit the Web site to learn more about this environmental problem and find out what each of us can do about it.

**Have you checked out the Indiana Clean Lakes Program Web page lately?
Take a look at <http://www.spea.indiana.edu/clp/>
and see what’s new and happening with the program and with Indiana lakes!**

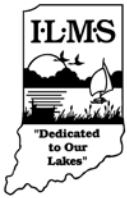


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Conference, March
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information: [http://
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WATER COLUMN

Published quarterly
by the Indiana Clean Lakes Program
as a medium for open exchange of
information regarding lake and
watershed management in Indiana

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