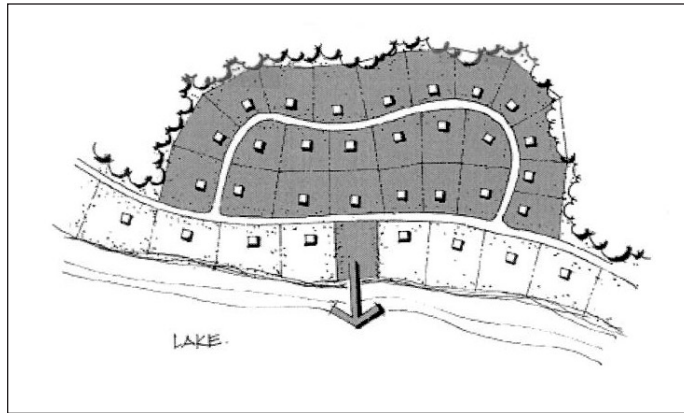


Funneling: A Threat to Indiana's Lakes

By Emily Kara

As the shorelines of inland lakes continue to be developed, many more empty lots now have houses, and small houses are growing into big ones! Some lots now no longer have houses, but instead serve as an access point for a nearby neighborhood or the general public. Many of us may remember the good old days when “we had the lake to ourselves”. Increasing popularity of watercraft and water sports has affected most lakes in this region. Funneling issues, in particular, have received increasing attention in Midwestern states including Michigan and Wisconsin, where townships have adopted anti-keyhole ordinances.

Funneling—also known as “keyhole development”—is the use of a single waterfront lot by multiple users. Through this type of development, direct lake access is made possible to non-adjacent lake users. Typical users



Lake access to remote dwellers through a “keyhole” lot.

of one waterfront lot do not exceed the number of inhabitants of the household situated on a lot; funneling allows access to numerous users of a lot designed for a single household. Examples of funneling include waterfront access to non-waterfront subdivision dwellers, campers, travel trailers, or possibly boat users (if the keyhole lot contains a boat launch).

Funneling may extend use of lakes and waterfront properties beyond the desired carrying capacity. Carrying capacity is the maximum amount of use that an environment can sustain over time without degradation in overall quality. Negative effects from funneling include increased boat and vehicle traffic, increased user conflicts, overcrowding, increased pollution, ecological damage, and decrease in natural beauty.

“According to Mark Sanborn, director of the Steuben County Plan Commission, the cost of lakefront property is \$6,000 to \$10,000 per foot of shoreline on any of the larger lakes in Steuben County. The more shore frontage a property has, the more valuable it is. Landlocked back lots that come with deeded easements make properties exponentially more valuable. If a developer can build a multiple-family building and purchase a relatively small lot to provide lake access, it is a guaranteed money-maker for the developer and tax income for the community” (Stacey Stumpf, *The Journal Gazette*).

“The development ‘Coves of Lake James’ is a classic example of lake funneling, and it had neighboring lakeshore property owners fuming. The Coves are landlocked condominiums 500 yards from the lakeshore with lake access through residentially zoned waterfront property. The developers built two 150-foot piers with 38 perpendicular boat slips. Lakefront neighbors were concerned that the large dock would bring too many boats and endanger people swimming in front of the adjacent properties. The DNR’s administrative hearing judge ruled against the Cove’s piers because they were longer and wider than piers of neighboring property owners” (Stacey Stumpf, *The Journal Gazette*).

Decisions by the Michigan Supreme Court in 1991 ruled that townships do have the authority to regulate development on lakes for the protection of health, safety, and welfare of community members. This ruling included the regulation of boat launching and docking. Townships in Michigan also have some control over state agency-controlled access sites. For example, although the Michigan Department of Natural Resources (MDNR) has jurisdiction over public-access boat launches, the launch and its use are still subject to local ordinances. In this way, local township ordinances may be implemented to protect a lake from detrimental over use.

In Wisconsin, counties have implemented several strategies to manage funneling. These principal modes include:

1. Prohibited or conditional use of waterfront lots. Keyhole developments may be prohibited except as permitted under special use or recreational use permits.
2. Minimum water frontage and area. Depending on the sensitivity of a lake riparian zone (boundary of land and water at lake edge), additional frontage may be required for lake use by more than one dwelling.

3. Design requirements for water access lots. Rules may be implemented upon access lots. These rules may address piers and moorings, noise limits, hours of use, parking controls, and land storage of boats.
4. Vegetative buffer along lot edge. Sawyer County, Wisconsin, requires a 25-foot vegetated zone along side lot lines of the access lot, thereby decreasing nuisance to adjacent waterfront landowners.

Here in Indiana, the Indiana Lakes Preservation Act (IC 14-26-2-5) places power and control of public freshwater lakes in trust by the state for the use of its citizens. The state does not have jurisdiction over adjacent land use, but as in Michigan and Wisconsin, county and local ordinances may be implemented to protect the ecological and economic resources of a lake. Planning and zoning ordinances must first be accepted locally, but may be necessary to protect a lake from degradation.

Balancing recreational demand and the aesthetic and environmental quality of a lake may be a delicate issue. However, it is important to consider proactive management of some form before the ground is broken and new development occurs. According to the Planning and Zoning Center, Inc., of Lansing, Michigan, an essential step in the adoption of a lake access ordinance is the preparation of a carrying capacity analysis. Such an evaluation might include maximum use levels for a particular lake. A carrying capacity analysis would address questions such as: What is the maximum number of boats or piers per waterfront lot that a healthy lake can sustain? How many boats can a lake safely contain at peak usage? Should capacities be different on lakes that are already heavily used or environmentally polluted?

To find out more about keyhole development and ordinances some communities have adopted

related to this issue, check out the following Web sites:

- **Planning and Zoning Center, Inc.:** www.pzcenter.com/pub2.cfm
- **Wisconsin DNR:** www.dnr.state.wi.us/org/water/fhp/lakes/fs14.htm
- **Michigan Carrying Capacity Analysis:** www.kbs.msu.edu/ftwrc/publications/Carryingcapacity.pdf/

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Indiana’s 2006 Conference Looks Back, Moves Forward

Scott Banfield – Secretary, Indiana Lakes Management Society

Of the many happenings at our 2006 Indiana Lakes Management Society conference on March 31st, those that stand out the most in my mind are the beginning and the end. With the Potawatomi Inn on the shores of Lake James as a backdrop, our keynote speaker, Bill Jones from the Indiana University School of Public and Environmental Affairs, presented the keynote speech at the start of the conference by taking us back a few years and reminding us of the humble beginnings and early days that fledged our organization. We have grown to hosting over 100 in attendance, 11 sponsors, 26 exhibitors, and 26 presenters at the 2006 conference. He also reminded us of the many problems and challenges faced in managing the stormwater retention ponds that dot our urban and suburban landscapes. Sometimes when we think of lake management we think big and forget the many small lake and pond owners and managers that face their own unique set of challenges.

Our initial conference session outlined grant opportunities available to Hoosier lake associations for aquatic plant

management, dredging, and lake and watershed assessment and remediation. In the late morning we followed the template set by last year's conference, running two concurrent sessions to appeal to attendees of varying interests. A less-technical presentation track offered lake associations and lake residents an option less weighted with technical jargon familiar to those of us in the lake management industry, while a more science-oriented track appealed to industry professionals and researchers. With this format lake associations and interest groups with multiple attendees can also have representatives split up and cover both sessions to view all the presentations that the conference has to offer. Our morning technical session included information on the use of native plants in bioengineered solutions for shoreline management and the management of aquatic plant communities. Our second session showed Hoosier lake residents how their lakes look from space through satellite imagery and discussed land-use and its effect on our lakes.

Our afternoon technical session covered the ever-menacing invasive species that affect our lakes, wetlands, and watersheds. Angela Bobeldyk from the University of Notre Dame shared her work in examining the role that streams play as pathways for new biological invasions, focusing on zebra mussel dispersal, and also using innovative exclusion techniques to assess the effects rusty crayfish have on our stream ecosystems. Other highlights included Rex Helton, a wildlife control specialist who has controlling nuisance Canada geese down to an art.

Once again our "Ask-it-Basket" feature allowed attendees to present any written question they chose to a panel of lake management experts for discussion. This feature has always been a great way to draw out issues and concerns most in need of being addressed by the Society and Indiana's regulatory and lake management professionals.

Before the closing, Orv Huffman shared with us the rich history of his lake community and many of the challenges faced and overcome by the residents of Lake Manitou in Rochester, Indiana. He reminded us of the role the Indiana Lakes Management Society has played over the years in bringing about the contacts and relationships necessary to preserve, protect, and restore his community's lake for future generations. Those words speak volumes and offer inspiration to those of us who lend our time and efforts toward promoting and managing the Society and a word of thanks goes out to Orv for sharing word of his successes at Lake Manitou.

I would also like to thank our many exhibitors, sponsors, and presenters for their help in bringing together those who love Indiana lakes in 2006. We look forward to another productive conference April 6th and 7th of 2007 at Four Winds Resort on Lake Monroe in Bloomington, Indiana. For more information on happenings with the Indiana Lake Management Society, be sure to pay us a visit online at www.indianalakes.org.

Green Lawns... Green Lakes?

(From Marion County Soil & Water Conservation District press release, 4/19/06)

Clean water in our lakes, reservoirs, and streams starts at home with basic practices you use in your lawn care program. Paula Baldwin, Chair of the Marion County Soil and Water Conservation District encourages county residents to remember, "Water quality begins at home. Regardless of where you live, you are part of a watershed, a region where water flows across or under the ground on its way to a lake, river, stream, reservoir, or ocean. Your year-round lawn and yard care practices impact water quality

even if you don't live near a water body". Thanks to sound science, we now understand how phosphorus-containing lawn fertilizers contribute to poor water quality. Phosphorus is present in all living things—including soil. However, too much phosphorus disrupts nature's balance. How and why does this imbalance occur?

Runoff from unused phosphorus in lawn fertilizer moves across lawns, roads, and woods into streams and ditches, and eventually into reservoirs and lakes.

The majority of Indiana's soils already contain adequate amounts of phosphorus for a healthy lawn, so most lawns don't need the extra food. Phosphorus is "junk food" for algae present in a reservoir, lake, or stream. One pound of phosphorus can produce 10,000 pounds of wet weeds and algae. When phosphorus is washed into lakes, the algae grow out of control. These "blooms" reduce the water's clarity and visibility. Some forms of blue-green algae can be toxic. Repeated algae blooms create "green" lakes, which can:

- cause fish kills or loss of cold water fish habitat;
- add a foul taste and smell to the drinking water;
- become a neighborhood nuisance; and
- produce poor water quality for fish, wildlife, and humans.

As watersheds are converted from their natural state to residential, commercial, or industrial uses, the amount of phosphorus runoff into a lake can increase five to ten times. "Green lakes" can have an economic impact on a community in several ways. Poor water quality significantly reduces recreational use of the water body. It also reduces property values.

Is There a Solution?

The solution to phosphorus runoff is to control the source. Using phosphorus-free lawn fertilizer is one easy way anyone



Use only phosphorus-free fertilizer like this on your lakefront property. (Photo by: Bob Kirschner)

can contribute to better water quality—regardless of where you live. When shopping for lawn fertilizer, look for the three numbers on the lawn fertilizer bag. The middle number indicates the phosphorus content of the fertilizer—so look for a 0. The other numbers indicate the amount of nitrogen (first number) and potassium (third number) in the fertilizer. Phosphorus is needed only on newly seeded lawns or where soil testing indicates a deficiency.

Just as Soil and Water Conservation Districts (SWCDs) across the U.S. have been working with the USDA Natural Resources Conservation Service (NRCS) to help farmers reduce their phosphorus applications to help improve water quality, SWCDs have also been encouraging homeowners to properly manage their lawn fertilizer applications for the same reason. In certain watersheds across the country studies have found the phosphorus contributions from large urban and suburban areas actually exceed phosphorus levels from the similar-sized agricultural areas in the same watershed. We

need to encourage homeowners to stop applying the whole bag of fertilizer, no matter what size their yard is, so they don't have to keep it stored in the garage. And instead encourage them to be good stewards of the land and only apply what is needed for yard area's nutrient needs so the community's water bodies are not polluted.

What Can You Do?

- Have your soil tested. For more information, visit Purdue Cooperative Extension Service's Web site at www.agry.purdue.edu/turf/pubs/ay18.htm or call your Marion County Purdue Extension office at 317-275-9305. (If you are not in Marion County you can get the phone number for any of Indiana's counties listed at www.ces.purdue.edu/counties.htm or check in the county government section of the phone book).
- Use phosphorus-free lawn fertilizer! Your local nursery or landscape supply store should have phosphorus-free fertilizers in stock. If not, ask the manager to order it.

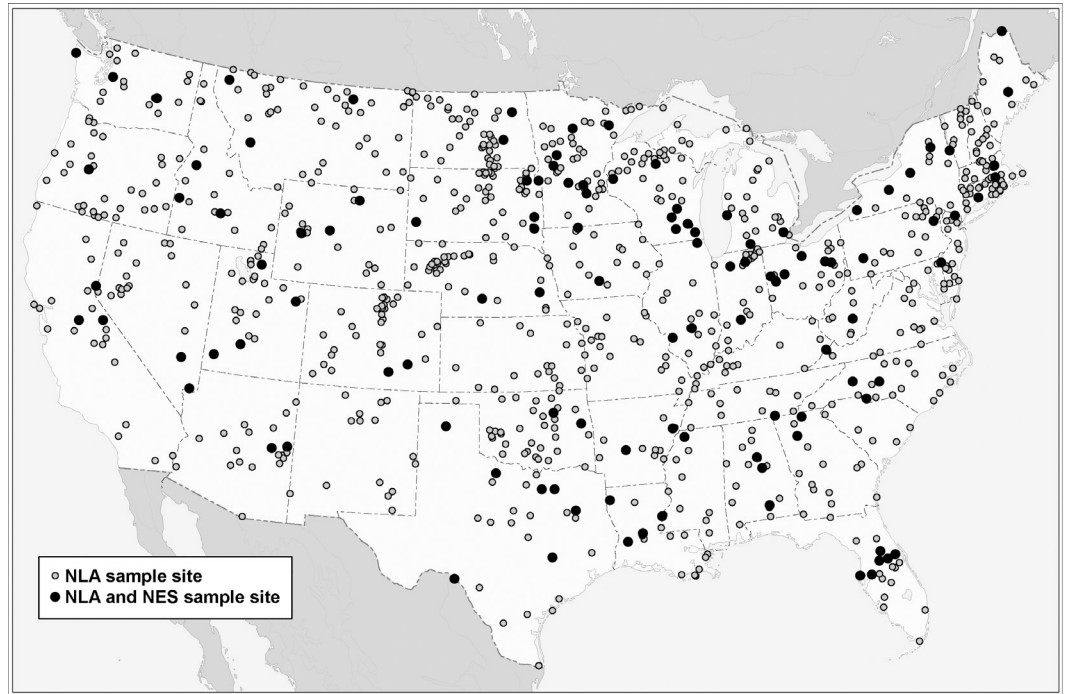
- Apply fertilizer only when it is needed, during the right season, and in proper amounts.
- Avoid getting fertilizer on driveways, sidewalks, and storm drains. Above all, fertilize carefully. Don't let your fertilizer application get into lakes, streams, or ponds.
- Use a mulching mower and cut no more than the top third of the grass.
- Keep leaves, grass clippings, and soil out of streets and gutters. Compost leaves and clippings on site, bag them for collection or use a community compost program. Registered organic recycling and composting facilities are listed at www.in.gov/idem/oppta/recycling/organics/programs/compostfacility.html.
- Clean up after your pet. Pet waste contains phosphorus.
- Prevent soil erosion by covering the ground with vegetation or mulch.

For more information about preventing "green lakes" contact your local Marion County Soil and Water Conservation District (SWCD) or the Indiana Department of Environmental Management (IDEM), Office of Water Quality, Watershed Planning Branch. You can contact the SWCD by calling 317-780-1765 or visit their Web site at: www.marionswcd.org for more information. IDEM's Office of water Quality, Watershed Planning Branch can be contacted at 317-233-8488 or toll free in Indiana at 800-451-6027. IDEM's water quality Web site is at: www.idem.IN.gov/water.

EPA Kicks Off Survey of the Nation's Lakes

EPA, states, tribes and other partners soon will embark on a survey of the nation's lakes to provide regional and national estimates of lake condition, similar to the draft "Wadeable Streams

Assessment". On April 25-28, 2006, EPA's Monitoring Branch co-sponsored a meeting in Chicago with 140 lakes experts, including representatives from 45 states, to plan the lakes survey. The meeting was cosponsored by the Chicago Botanic Garden and the North American Lake Management Society. The survey will use a statistically valid approach which, like an opinion poll, randomly selects lake sites that represent the condition of all sites in regions sharing similar ecological characteristics. Survey participants will use consistent sampling and analytical procedures to ensure that the results can be compared across the country. At the meeting, EPA provided packets to states (and tribes) identifying a preliminary list of sites that will be sampled in the summer of 2007. The preliminary list for Indiana included 21 public and private lakes to be sampled. For more information on the lakes survey, visit: <http://www.epa.gov/owow/lakes/lakessurvey/>.



In Memoriam

We were saddened to learn of the death in January of Roy W. Mann, of Bloomington. Roy was an early president of the Indiana Lake Management Society (ILMS). He earned a Master's degree from Indiana University in parks and recreation administration, and he was an assistant coach of the freshman IU basketball team under Coach Branch McCracken. Roy was a biology teacher and helped write the first book on water pollution for high school students. For 15 years, he was the manager of Apple Canyon Lake Residential and Recreational Development in Apple River, Illinois. He loved fishing and the outdoors.

Attend the 26th Annual international Symposium of the North American Lake Management Society (NALMS), November 8-10, 2006 in downtown Indianapolis.

This year's theme is, "Making Connections—Lakes, Watersheds, People."

www.nalms.org

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**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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