



Office of Water Management  
Indiana Department of  
Environmental Management

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SUMMER  
1991  
Vol. 3, No. 2

## 200 Attend Lake Management Conference

Nearly 200 people attended the Third Annual Indiana Lake Management Conference held April 19-20 at Tri-State University in Angola. The conference, sponsored by the Indiana Department of Environmental Management, was hosted locally by the Steuben County Lakes Council.



Members of the Steuben County Lakes Council help register conference participants.

At the Friday afternoon Technical Session, participants heard talks on management efforts at Shippshewana Lake, the LaGrange County water quality survey program, the U.S. Fish and Wildlife Service wetlands restoration program, an evaluation of aeration as a lake management technique, and exotic invaders threatening Indiana lakes. One invader is the zebra

mussel, an exotic from Europe that was accidentally introduced into the Great Lakes, according to Tom Lauer of the Indiana DNR. The mussels reproduce at an alarming rate and their dense numbers clog water intakes and outfalls. They can spread to inland waters by attaching to boats and trailers.

Pete Hippensteel, a professor at Tri-State University, told the audience of the purple loosestrife, an exotic plant that outcompetes native wetland vegetation. The plant, which has attractive purple flowers that bloom in July and August, was originally planted as an ornamental but has now invaded wetlands and lakeshores across Indiana and the eastern U.S.

Papers presented during the Technical Session will be published in a conference proceedings that should be available later in the year.

Saturday morning's General Session provided updates of lake and nonpoint source management activities of the IDEM and of the Lake Enhancement Program of IDNR. A highlight of the session was a presentation by Frank Lapensee, Chief of the U.S. Environmental Protection Agency's Clean Lakes Program in Washington, D.C. Mr. Lapensee told the audience that his program does not have sufficient

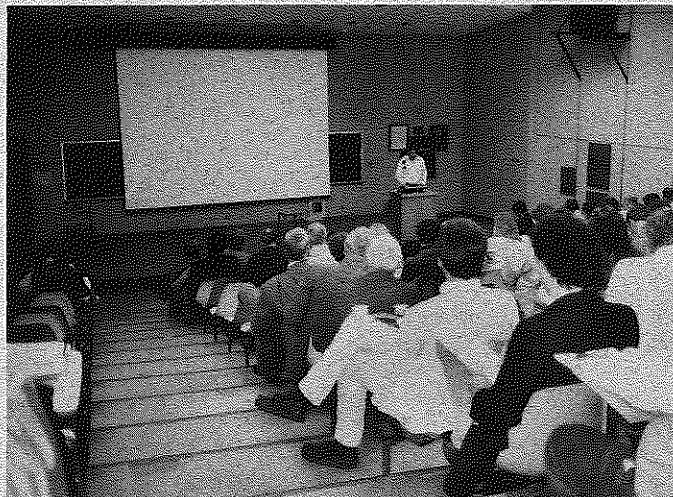


Purple loosestrife  
(*Lythrum salicaria*)

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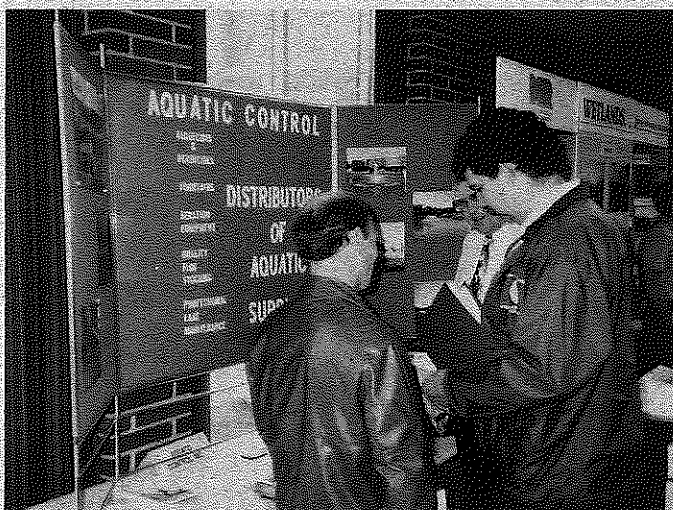
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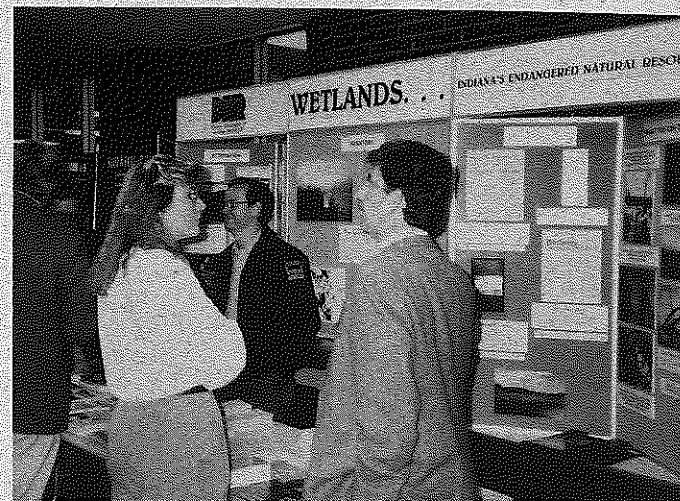
The facilities at the Best Hall auditorium were excellent.



Frank Lapensee, Chief of the U.S. EPA Clean Lakes Program and John Winters, Chief of the Water Quality Surveillance and Standards Branch of IDEM take time out to talk about lakes.



The exhibit area was a great place for discussions and to view new lake management products and services. Here, Dick Mickey and Guy Carlson of Cedar Lake talk with Bob Johnson.



Jane Dauffenbach and Bill James have a discussion in front of the IDNR wetlands display.

funding to address all the lake problems in the country, and he challenged people to work at the local and state levels to protect and manage Indiana lakes.

Following the luncheon, an afternoon session on local initiatives for lake protection provided a wealth of information and stimulated lively discussion. A booklet summarizing this session is being planned.

Plans for the 1992 Indiana Lake Management Conference are proceeding.

## Volunteer Lake Monitoring Program to Expand

The Volunteer Lake Monitoring Program, a component of IDEM's Clean Lakes Program, will be expanded to include water sampling this summer. During the summer of 1990, volunteers on 63 Indiana lakes measured Secchi disk transparency approximately every two weeks. Thirty of these lakes will be selected for the expanded program in which volunteers will collect monthly water samples for total phosphorus and chlorophyll *a* analyses. Phosphorus is the nutrient most responsible for algae growth in lakes and chlorophyll *a* is a measure of algal productivity. Volunteers will receive additional equipment and training for the expanded program.

The expanded program was expected to begin in June but will be delayed until federal funds become available. The Clean Lakes Program is looking for additional volunteers to monitor Indiana's public lakes. If you are interested in becoming a volunteer, write to Richard Harris in care of the *WATER COLUMN*.



## Governor's Task Force Against Operating Watercraft While Intoxicated

In a society where drinking and driving is socially unacceptable, it is ironic that setting sail with a boatload of booze is still considered appropriate by many people.

According to State Conservation Officer Scott Charters, recreational boating is second only to highway travel in the number of fatalities that occur each year, and it is estimated alcohol is involved in at least half of all boating accidents.

In response to such hazardous statistics, last summer the Law Enforcement Division of the Department of Natural Resources launched the "Governor's Task Force against Operating Watercraft While Intoxicated (OWWI)."

This detail was conducted to detect and suppress boat operators who were operating watercraft while under the influence of alcohol or drugs upon Indiana's waterways.

Forty Indiana conservation officers working on their days off utilized five specially equipped watercraft, patrolling 47 different waterways throughout Indiana. Fifty percent of the cost of the project was funded by the Federal Boat Safety Act. The Task Force commenced on Memorial Day weekend and concluded operations on September 9, 1990.

There was a total of 342 arrests made, 101 for O.W.W.I., 55 other alcohol-related, and 186 miscellaneous. There were also 216 warnings issued. A total of 3,754 occupants of watercraft were checked.

Boating fatalities were down from 16 in 1989 to 9 in 1990 (4 alcohol-related), and injuries were down from 107 to 58.

Based on last summer's success the Task Force will again be in operation from Memorial Day weekend through Labor Day weekend to discourage O.W.W.I through high visibility, public awareness, and education.

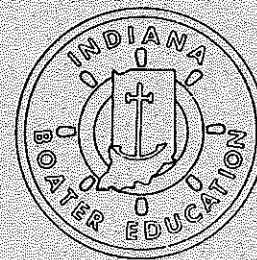
Boaters are reminded that everyone who consumes alcohol on a watercraft is at risk. Impairment can begin after only one or two drinks, and when the reduced coordination is coupled with the boat's motion, people can fall overboard.

In Indiana, a person who operates a watercraft with ten-hundredths percent (.10%) or more, by weight of alcohol in his blood; or while intoxicated (any combination of alcohol, controlled substances, or drugs; such that there is an impaired condition of thought and action and the loss of normal control of a person's faculties to such an extent as to endanger any

person) commits a class C misdemeanor (up to 60 days in jail and a \$500.00 fine). It becomes a class D felony if he has a previous conviction or causes bodily injury to another person. It is a class C felony if the crime results in the death of another person.

There is also an implied consent provision in the law, and if an officer has probable cause to believe a person is intoxicated, he will be offered a breath test using a AlcoSensor, which all Conservation Officers have. Refusal will result in suspension of boating privileges for a year and arrest.

To avoid such problems just remember, you don't have to drink to have fun on the water. If a weekend on the water is your escape from a fast-paced life, think how much more you'll relax if you learn to take things slow.



## Operation Clean Stream

Imagine drifting leisurely, in your canoe, down a meandering, clear running river, densely wooded on both sides giving the impression you may be in some pristine wilderness.

But wait, what's that ahead in the water? As you paddle closer for a look you notice a foul smell, and realize you're not away from civilization after all, you have discovered a dead Hereford calf in a log jam.

Such was the experience of canoeist-environmentalist Don Moon of Mongo, Indiana while canoeing the Pigeon River in LaGrange County this past week. Moon pulled the carcass up on shore and continued his trek, after which he contacted State Conservation Officer Tom Munich to report his find. Unfortunately, chances of locating the responsible party will be slim.

Moon makes several trips a year down the river, usually from State Road 327 in Steuben County through the Indiana Department of Natural Resources Pigeon River Fish & Wildlife Area, ending his trek approximately nine miles downstream at the millpond in Mongo.

*(Continued on next page...)*



(CLEAN STREAM . . .  
continued from page 3)

His trips are not all leisure however, because he has adopted this stretch of river to keep free of as much adverse civilized traces as possible, so there will be at least one place he and others can "get away from it all."

Over the years he has retrieved several pounds of cans, bottles, and other litter from the river and shoreline. He uses a 12-foot fish spear and a fish net to aid in reaching debris on the river bed and in log jams.

This is only one stretch of river experiencing abuse by man, regrettably this is common on most all rivers and streams in Indiana. In response to this unnecessary and illegal treatment of the environment there will be stepped up law enforcement activities this spring and summer by State Conservation Officers to curb such abuses and violations.

"OPERATION CLEAN STREAM", spearheaded by the Indiana Department of Natural Resources Law Enforcement Division will focus on such problems as underage drinking, which can be extremely dangerous when mixed with canoeing or fishing along a slippery bank. Litter will also be a primary concern. Conservation officers will also patrol rivers and streams checking for illegal dumps, discharges, water withdrawal sites, construction in floodways, wetlands destruction, and marijuana patches.

Conservation officers hope their efforts will result in a better water resource for the citizens of Indiana through an increased awareness of the abuses, and cause those who violate now to cease. And finally, that all individuals and organizations will follow Don Moons example and take an active interest in cleaning up the environment and reporting violations.

## Lake Enhancement Projects Update: Five Completed, One New, Five Pending

While budget uncertainties have temporarily slowed T-by-2000 lake enhancement new project approvals, activity on both current and pending projects remains brisk.

**Completed projects.** The following five have been completed and approved for payment by the State Soil Conservation Board: feasibility studies

for Fish Lake (LaPorte), Lake Waveland (Parke/Montgomery), Fish and Royer Lakes (LaGrange), and Big Long, Pretty, and Lake-of-the-Woods (LaGrange); and a combination feasibility study/design plan for Sullivan Lake (Sullivan).

**New projects.** In April, the State Board approved the program's first "lake watershed land treatment" project for the Shippshewana Lake watershed (LaGrange). Financed by Build Indiana funds, the three-year project will involve cost-share and incentive payments to agricultural landusers for conservation practices that reduce erosion and nutrient in-flow into the lake. The LaGrange SWCD serves as the local entity.

**Pending projects.** Applications are or soon will be submitted for "pilot" land treatment projects in the following lake watersheds: Hamilton Lake (Steuben), Cree and Shockopee Lakes (Noble), Ridinger Lake (Kosciusko/Whitley), Beaver Creek Lake (Dubois), and Lake Salinda (Washington). Earlier feasibility studies had documented the need for conservation practices to reduce the agricultural impacts on water quality in each of these lakes.

Since its inception, T-by-2000 lake enhancement has funded 54 projects in 22 districts involving 90 public-access lakes. Of those, 42 were preliminary investigations/feasibility studies, 7 design plans, 3 construction actions, 1 special projects, and 1 watershed land treatment. (TOPSOIL, No. 344)

## Algae May Iron Out Global Warming

Marine algae, their photosynthetic activity boosted by an extra shot of iron, may be the next enlistees in the battle against global warming. At a conference in Irvine, California, scientists recently explored the hypothesis that iron may be a limiting nutrient in many parts of the ocean which will interfere with the ability of algae to reach their maximum productivity. If iron is limiting, increasing the supply could raise algal photosynthetic levels to the point where the algae would be removing about 2 billion tons of carbon dioxide per day. Since so little is known about the ecological impact of fertilizing large areas with iron, workshop participants suggested that a pilot project be conducted after two more years of laboratory research. Workshop participants said that there would be no major environmental consequences if the pilot study involved a research vessel periodically spraying a 400-square kilometer area of the ocean near Antarctica with soluble iron. (HYDATA, 10[2]).



## Best Management Practices

**Integrated Pest Management:** Pests are any organisms that are harmful to desired plants, and they are controlled with chemical agents called pesticides. Integrated pest management considers factors such as how much pesticide is enough to control a problem, the best method of applying the pesticides, the appropriate time for application, and the safe handling, storage, and disposal of pesticides and their containers. Other considerations include using resistant crop varieties, optimizing crop planting time, optimizing time of day of application, rotating crops, and biological controls.

CRITERIA	REMARKS
1. Effectiveness	
a) Sediment	No effect, but pesticides attached to soil particles can be carried to streams and lakes
b) Nitrogen (N)	No effect.
c) Phosphorus (P)	No effect.
d) Runoff	No effect, but water is the primary route for transporting pesticides to lakes and streams.
e) Pesticides	Fair to good, 20-40% reductions.
2. Capital Costs	No effect.
3. Operation & Maintenance	Farming cost, potential reduction in pesticide costs, and an increase in net farm income.
4. Longevity	Poor, as pesticides are applied one or more times per year to address different pests and different crops.
5. Confidence	Fair to excellent, reported pollutant reductions range from 20-90%.
6. Adaptability	Methods are generally applicable wherever pesticides are used: forest, farms, homes.
7. Potential Treatment Side Effects	Potential for groundwater and surface water contamination. Toxic components may be available to aquatic plants and animals.
8. Concurrent Land Management Practices	See crop rotation, conservation tillage.

*Source:* NALMS. 1990. *Lake and Reservoir Restoration Guidance Manual*. EPA-440/4-90-006. U.S. Environmental Protection Agency, Washington, D.C.

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## 1991 Indiana Fish Consumption Advisory

Hoosier fishermen can continue to eat fish taken from most of Indiana's waterways, say officials of Indiana's Health, Environmental Management, and Natural Resources Agencies.

The 1991 Indiana Fish Consumption Advisory contains only one addition to the 1990 list. The updated advisory notes that channel catfish more than 19 inches long, taken from the Ohio River, should not be eaten. Smaller channel catfish and carp taken from this river remain on the limited consumption listing.

There were two stream reaches where advisories were either lifted or reduced to a less stringent category. Based on new data, the Group 3 advisory for carp in all of the White River in Delaware County has been downgraded to a Group 2 advisory which now only applies to carp taken from the White River in Delaware County downstream from the Yorktown Bridge (C.R. 575 W). The Group 3 advisory which had been in effect for carp taken from the St. Joseph River in St. Joseph and Elkhart Counties has been downgraded to a Group 2 advisory.

In recent years, Indiana has removed consumption advisories from over 600 miles of rivers and streams and our data indicate that contaminant levels in our major waterways continue to drop. At the present time, fish taken from thousands of miles of Indiana streams and tens of thousands of acres of Hoosier lakes and reservoirs can be eaten.

The 1991 fish consumption advisory report, which lists waterways from which specified species

of fish should be either avoided or eaten only in limited amounts is based on the analysis of samples of fish tissue collected by the Indiana Department of Environmental Management from a number of streams, lakes, rivers, and reservoirs in Indiana or adjacent to Indiana's borders.

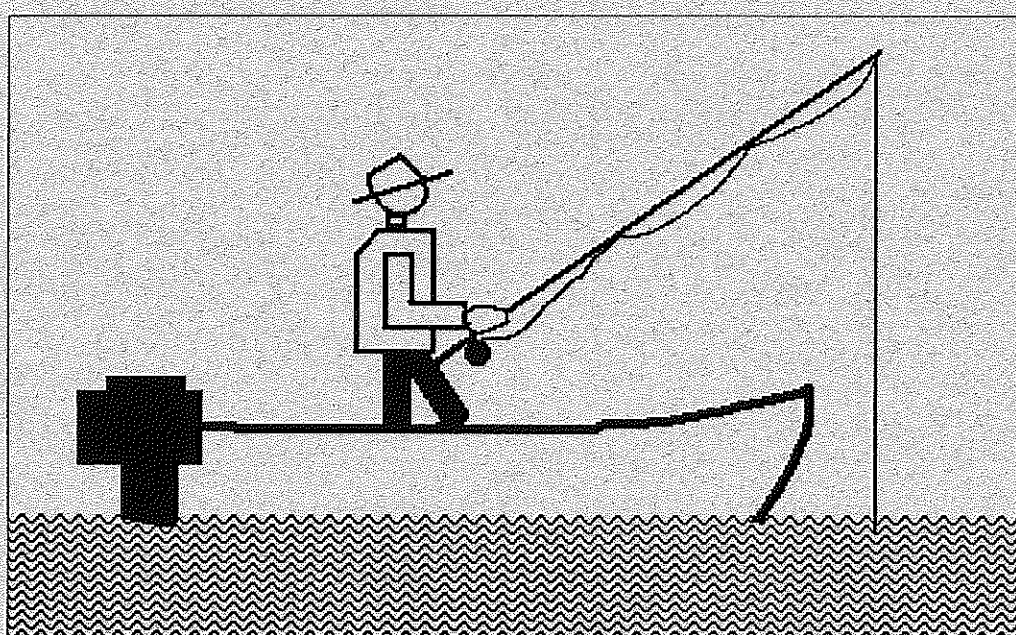
Dr. Chris Bailey, State Health Commissioner, said that waterways included on the advisory are those where concentrations of chlordane, PCBs, dieldrin, and/or DDT in the tissues of certain fish exceed action levels set by the U.S. Food and Drug Administration.

"These advisories are important, and I hope every person fishing or eating fish from Indiana waters is aware of them. Ingestion of contaminated fish from the waterways included in the advisory could lead to long-term health problems," Dr. Bailey warned. The effects of chronic, long-term, low-level ingestion of PCBs, chlordane, dieldrin and DDT are still under investigation.

"It is important to remember that this advisory is not directed toward those who are fishing Hoosier waterways and eating only a meal or two a year from their catch," Dr. Bailey said. "Persons who consume large quantities of fish that contain contaminant concentrations greater than the FDA action levels may face an increased risk to health problems. However, it is far more dangerous to smoke cigarettes or to not wear a seatbelt than to eat fish caught in Indiana waters."

Since the safety of consuming contaminated fish remains unclear in some cases, ISBH officials believe the best way to protect the health of Indiana's citizens is to limit the consumption of fish known to be contaminated with these chemicals. The risk can be further reduced by

preparing fish as skinless fillets, trimming all fat and by baking or broiling the fish so the fat can drip off while cooking. Preparing and cooking fish in this manner can reduce the amount of contamination by nearly 50%, according to state health officials. These tips are highlighted in the brochure *Preparing and Eating Fish Caught in Indiana Waters*, which is available upon request from the Indiana Department of Environmental Management.





# PERSPECTIVES

## The End of Nature

In the summer, my wife and I bike down to the lake nearly every afternoon for a swim. It is a dogleg Adirondack lake, with three beaver lodges, a blue heron, some otter, a family of mergansers, the occasional loon. A few summer houses cluster at one end, but mostly it is surrounded by wild state land. During the week we swim across and back, a trip of maybe 40 minutes—plenty of time to forget everything but the feel of the water around your body and the rippling, muscular joy of a hard kick and the pull on your arms.

But on the weekends, more and more often, someone will bring a boat out for waterskiing, and make pass after pass up and down the

lake. And then the whole experience changes, changes entirely. Instead of being able to forget everything but yourself, and even yourself except for the muscles and the skin, you must be alert, looking up every dozen strokes to see where the boat is, thinking about what you will do if it comes near. It is not so much the danger—few swimmers, I imagine, ever die by Evinrude. It's not even so much the blue smoke that hangs low over the water. It's that the motorboat gets in your mind. You're forced to think, not feel—to think of human society and of people. The lake is utterly different on these days, just as the planet is utterly different now.

(by Bill McKibben, reprinted from LAKE TIDES, 15[2]).

## Indiana Lakes Management Society Holds First Meeting

The Indiana Lakes Management Society (ILMS) held its first meeting and elected officers during the Third Indiana Lake Management Conference. The purpose of ILMS is "to promote and encourage the understanding and comprehensive management of lakes and reservoirs and their watershed ecosystems." Officers elected at the meeting were:

President—Henry Baker, Angola  
President-Elect—Ted Hege, Columbia City  
Secretary—Carolyn Smith, Angola  
Treasurer—Karen Dehne, Culver

### Board of Directors—

—Dave Campbell, Culver  
—Robert Hampton, Syracuse  
—Dave Palenick, Elkhart  
—Ron Shoemaker, Columbia City  
—Mark Young, Bloomington

Everyone interested in protecting and managing Indiana's lakes is encouraged to join ILMS. For information, write to:

Indiana Lakes Management Society  
909 West Maumee  
Angola, IN 46703

## Clean Lakes Program Publications Available

The following Clean Lakes Program publications are available in limited quantities while supplies last. You can request a free copy by writing in care of the *WATER COLUMN*.

1. *Indiana Volunteer Lake Monitoring Program Results for 1989* (August 1990).
2. *Proceedings, Second Indiana Lake Management Conference, April 27-28, 1990 in Culver, IN* (February 1991).

### WATER COLUMN

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## **St. Joseph River Basin Studies**

The Water Quality Surveillance and Standards Branch (WQSSB) of the Indiana Department of Environmental Management (IDEM) is conducting physical, chemical, and bacteriological studies of all significant wastewater treatment plants and streams in the Indiana portion of the St. Joseph River Basin. The purpose of the studies is to determine if the wastewater treatment plants are being properly maintained and operated and to assess the extent to which rivers and streams in the basin meet established water quality standards.

Lake tributaries and outlets are being sampled as part of this program. WQSSB biologists have already collected macroinvertebrate samples from key locations in the basin and are presently working with biologists from the U.S. EPA, Region V, to evaluate fish communities at representative river and stream stations. Data generated from

these studies along with the lake water quality assessments that have been conducted as part of the Clean Lakes Program will provide IDEM with valuable information regarding the extent to which designated water uses are supported.

## **Indiana 1988-1989 305(b) Report**

The 1988-1989 305(b) Report of the Indiana Department of Environmental Management (IDEM) has been sent to all public libraries in the state. This 300-page report discusses the programs and policies of IDEM's office of Water Management and contains an assessment of the quality of Indiana's lakes, reservoirs, streams, and rivers.

The water quality assessment section of the report as well as the appendix, which provides updated information on many lakes and reservoirs, will be of particular interest to lake property owners.

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