



Office of Water Management
Indiana Department of
Environmental Management

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New Policy Gives Public a Greater Say

by: Martha E. Clark

The public will have more input on development projects that affect water quality in Indiana under new procedures for public notification and comment being implemented by IDEM.

"People have a right to know what's happening, environmentally, in their own backyards," said Matt Rueff, assistant commissioner at the Indiana Department of Environmental Management's Office of Water Management (OWM).

The new procedures affect projects that require Clean Water Act Section 404 permits from the U.S. Army Corps of Engineers—generally those that require dredging, filling, or excavating within water bodies. They can include anything from building docks for river boats, which may require dredging; to developing subdivisions, which may require filling swampy areas; to building strip malls, which may require excavating near ponds.

Before the Corps can issue 404 permits, proposed projects must obtain Clean Water Act Section 401 water quality certification from IDEM. The agency grants certification when it determines that project activities do not harm water quality and do meet Indiana's water quality standards. IDEM usually puts conditions in these certifications to ensure that water quality standards are met.

Under the new procedures, IDEM will enhance public notification by sending interested persons notification when the agency receives project proposals or certification requests. Notices will be sent to adjacent property owners, state and local environmental groups, river basin commissions, and those who request notice. The public has 21 days to comment on the proposals.

"These procedures provide opportunities for dialogue," Rueff said. "Open discussion on issues, up front, helps our reviewers focus resources, increasing the efficiency and thoroughness of the review."

Martha E. Clark is an environmental manager in IDEM's Office of Enforcement. For more information on IDEM's 401 rule-making process or the new public input procedures, contact Andrew Pelloso at (800) 451-6027, ext. 2-2481.

IDEM's Web Site Has More to Offer

The Indiana Department of Environmental Management's World Wide Web site includes information on all of IDEM's program areas, including air, water, solid and hazardous waste, pollution prevention and technical assistance, environmental response, and enforcement. The site is interactive and allows visitors to send comments and questions to IDEM.

The following water programs can be reached via the Office of Water Management's home page at <http://www.ai.org/idem/owm.html>

Drinking Water Program Contacts: Names, titles, areas of responsibilities and phone numbers for this program's staff.

Nonpoint Source Program (Section 319): Description of the Nonpoint Source Program grants, guidelines for preparing quality assurance project plans and a summary of past grant recipients.

(Continued on next page)

(IDEM'S WEB SITE. . .
continued from page 1)

Nonpoint Notes: *Nonpoint Notes* is a newsletter on water issues that describes nonpoint source pollution projects throughout the state, as well as highlighting solutions to nonpoint source pollution. The online newsletter is distributed in PDF format, which means viewers need Adobe Acrobat Viewer to view it. This free software can be downloaded through a link next to the newsletter on IDEM's site.

DNR Makes Public Lake Wetland Reviews Available

Reviews showing Indiana public freshwater lakes' wetlands are available through the Indiana Department of Natural Resources. The public lake wetland reviews can help developers, engineers, and land owners on the lakes, identify wetland areas that may be protected under Indiana's lake preservation law. The reviews can be used for various programs and local planning decisions.

This year DNR biologists have developed the wetland reviews for 50 Indiana public freshwater lakes. The reviews depict remaining significant wetlands and areas of concern to the DNR along the shorelines of the public lakes. In 1996, DNR biologists conducted wetland reviews on 52 public lakes. Additional public lake wetland reviews will be developed each year and made available to the public.

Wetlands are important to Indiana for a variety of reasons including flood and pollution control, erosion reduction, fish and wildlife habitat, and recreation. Anyone who fills a wetland may be subject to regulatory action by the DNR and the U.S. Army Corp of Engineers.

An 8-1/2-inch by 11-inch copy of the public lake wetland reviews is available from the DNR's Division of Fish and Wildlife by calling (317) 232-4080.

Reviews are available for the following lakes in the following counties:

Fulton County: Nyona Lake.

Kosciusko County: Beaver Dam Lake, Caldwell Lake, Carr Lake, Center Lake, Crystal Lake, Diamond Lake, Hill Lake, Jamison Lake, Loon Lake, McClures Lake, Palestine Lake, Pike Lake, Rock Lake, Sellers Lake, Sherburn Lake, Silver Lake, Winona Lake, Yellow Creek Lake.

Lagrange County: Basin Lake, Martin Lake, Olin Lake, Oliver Lake, Pretty Lake.

Marshall County: Lake of the Woods.

Noble County: Bear Lake.

Starke County: Bass Lake.

Steuben County: McClish Lake.

Wabash County: Twin Lakes.

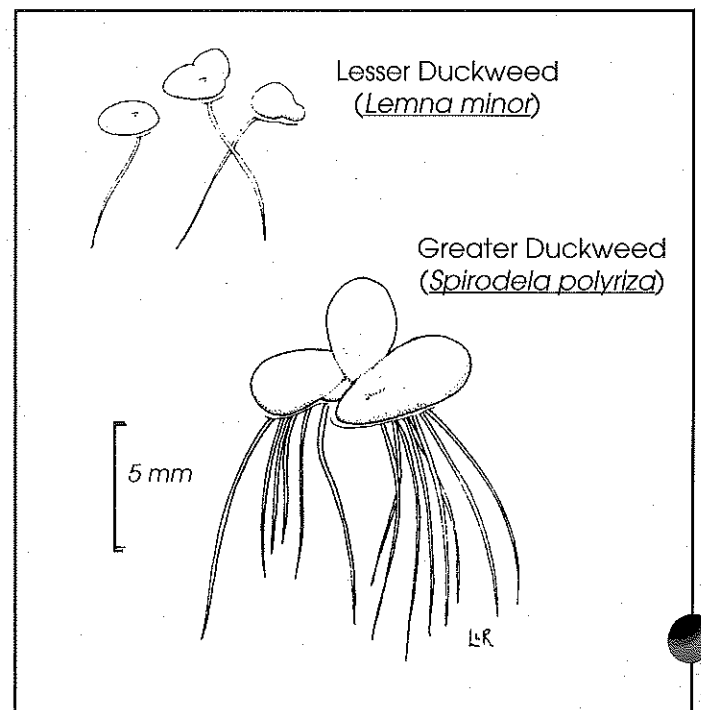
Whitley County: Black Lake, Blue Lake, Brown Lake, Cedar Lake, Goose Lake, Larwill Lake, Leininger Lake, Little Cedar Lake, Little Wilson Lake, Mud Lake, New Lake, Old Lake, Rine Lake, Robinson Lake, Round Lake, Scott Lake, Shriner Lake, Tadpole Lake, Troy Cedar Lake, Wilson Lake and Winters Lake. (*Indiana DNR News Release*)

Duckweed Complaints Surface at Lake Webster

North Webster—When Marilyn Stockey looks at the water from her Lake Webster home during the summer she sees nothing but green scum. A thick mat of duckweed blankets the surface. To Stockey the millions of tiny floating plants are not only unsightly, they grow so thick that boating is difficult and they reek of sewer smells.

Stockey, like many other lake residents, would like to get rid of the duckweed problem. So would the Division of Fish and Wildlife. But DFW officials say that is next to impossible.

Duckweed is just one of dozens of native aquatic plants found at most northern Indiana natural lakes. It typically consists of a small (less than 1/2 inch) leaf or cluster of leaves with small roots hanging down into the water. The roots do not attach to the lake bed. Duckweed is free to float anywhere the water current carries it. Herbicides sprayed on it can simply wash off and be toxic to other beneficial plants. Chemical applications usually fail to reach every plant so dense blooms can quickly return.



Biologists say duckweed is not a problem at most lakes. It grows mainly in quiet, shallow areas with high nutrient levels normally around lily pads and other emergent plants. Duckweed is more troublesome where the water is turbid and other plants are not present to hold it in place. Some lakes are worse than others, but problems occur at the same lakes year after year.

"Lake Webster has always had a duckweed problem, especially in the Backwater area," says Jed Pearson, DFW fisheries biologist. "I can remember going to the lake in the 1960s and seeing the surface of Backwater covered with duckweed. I have worked on Webster since the mid-'70s and have seen the problem develop each year. But it is usually only a problem during the middle of the summer.

Jim Hill, a Lake Webster resident since 1948, agrees. "Duckweed has been here every year since I first moved here. It's maybe gotten worse in the main part of the lake but Backwater has always been full of duckweed," says Hill.

Hill says duckweed used to stay mostly in Backwater and was held in place by dense stands of lily pads and coontail. He thinks when culverts were installed under Backwater Road to replace a bridge and lake residents removed most of the lilies, water flow changed and allowed more of the duckweed to move.

Over the years lake residents have tried periodically to chemically eradicate the duckweed. It never worked and most residents have now resigned to live with it. "It's not so bad. I kind of like it," says Hill. "It keeps some of the recreational boaters away."

Ducks also like it. They eat it.

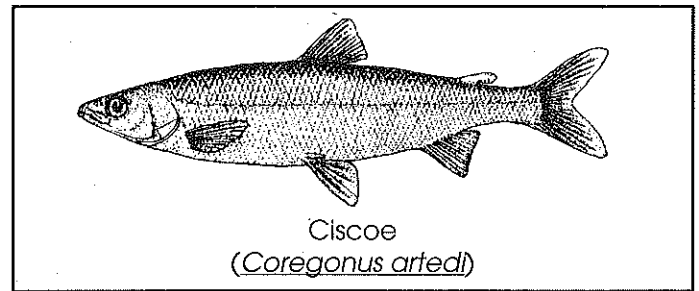
Pearson thinks that maybe something might be done to keep most of the duckweed in the Backwater. "We'd like to see many of the lily pads return to the lake. That would help. We're also willing to consider some sort of screen to keep it in place as long as it doesn't block water flow or boaters."

Pearson doesn't know whether a practical solution can be found to control the duckweed but he admits the world's tiniest flowering plant creates a giant problem. (Based on Indiana DNR news release.)

Ciscoes Disappearing at Crooked Lake

Columbia City—For the second year in a row, biologists failed to catch any ciscoes during routine sampling at Crooked Lake north of Columbia City. Biologists from the Division of Fish and Wildlife think the ciscoe population may be at its lowest level ever and that the unique fish may be on the verge of disappearing entirely from the lake.

Ciscoes are native to Indiana and were once



present in as many as 42 natural lakes across the northern part of the state. Declines in water quality over the past 40 years however wiped out the fish in 30 lakes.

Ciscoes are members of the salmon family and usually grow to 12 to 15 inches in length, but they may exceed 24 inches. They feed on tiny zooplankton that they filter out of the water. Ciscoes are coldwater fish that need clean water with plenty of dissolved oxygen. As lakes become degraded, they lose their oxygen in the deeper, colder areas where ciscoes live. Ciscoes are then forced to the surface to breathe but cannot survive the warmer water temperatures.

"We've seen the population reach low levels on three occasions before and then recover, but they've never been this scarce," says Jed Pearson, DFW fisheries biologist. Pearson says large numbers of ciscoes died at Crooked Lake and floated to the surface in 1981 and 1986. Although ciscoe die-offs have not occurred in recent years, the few adults remaining in the lake have failed to produce a strong generation of young fish.

"We found some young fish two years ago and thought the population was starting to recover," says Pearson. "Now it looks like few of them survived." Pearson isn't sure what is preventing the ciscoes from rebuilding their numbers in Crooked Lake.

Various programs are in place now to protect Crooked Lake's water quality. Local residents installed a lakewide sewer system. Alterations to the shoreline and lakebed by property owners are closely scrutinized. Work is nearly complete on construction of a wetland within the watershed to retain some of the sediment and nutrients that wash into the lake.

"We think all the things being done to protect water quality at Crooked Lake will eventually pay off, not only for the ciscoes but for the overall health of the lake," says Pearson. "What we need now is to see a big hatch of young ciscoes."

An Indiana University limnology class, with assistance from DNR, trapped one 16.7-inch ciscoe during a class field trip in early October.

Ciscoes spawn in late November and early December. Pearson says he will conduct some additional sampling at that time to find out whether any adult ciscoes remain in the lake and move into their traditional spawning grounds. (Based on Indiana DNR news release.)

New EPA Clean Lakes Case Study of the Use of Aquatic Weevils as a Biological Control

The U.S. Environmental Protection Agency (EPA) recently published a clean lakes case study highlighting the use of aquatic weevils as a biological control for an aquatic weed, Eurasian watermilfoil (*Myriophyllum spicatum*), in Lake Bomoseen, Vermont. The initial results in Lake Bomoseen, and in several other lakes, indicate that this technique shows promise for controlling the growth of Eurasian watermilfoil and could potentially be used in other lakes with similar problems.

Eurasian watermilfoil is an invasive, non-native rooted aquatic plant that infests many of Indiana lakes with dense stands of plants. They often crowd out native lake plants.

The case study entitled, "Use of Aquatic Weevils to Control a Nuisance Weed in Lake Bomoseen, Vermont," EPA document number 841-F-97-002, Number 3, is one in a series of lakes case studies which highlight different lake management techniques. This case study was developed with assistance from Dr. Robert Creed at Appalachian State University and Holy Crosson of the Vermont Department of Environmental Conservation, and it received extensive technical peer review. The other two previous Clean Lakes case studies are: "Phosphorus Inactivation and Wetland Manipulation Improve Kezar Lake, NH," EPA 841-F-95-002, Number 1, and "Watershed and In-Lake Practices Improve Green Valley Lake, Iowa," EPA 841-F-95-003, Number 2.

Copies of the new case study (and the other 2 case studies) are available at no charge from the National Center for Environmental Publications and Information (NCEPI) at 11029 Kenwood Road, Building 5, Cincinnati, OH 45242, Phone: (513) 489-8190 or (800) 490-9198 or Fax: (513) 489-8695. Please include the EPA document number and the name of the publication when requesting copies. In addition, all of the case studies will soon be on the Internet at the Clean Lakes homepage at: <http://www.epa.gov/OWOW/lakes/lakes.html> (U.S. EPA news release.)

IDEM Targets Pollution from Confined Feeding

by Russ Grunden

Concerns about environmental impacts from large amounts of animal waste have prompted IDEM to begin writing rules to regulate the design and operation of large-scale confined feeding operations in Indiana.

"The Indiana Department of Environmental Management will seek to develop rules that are environmentally protective, based on common sense, allow operator flexibility and achieve sound design and operation standards," said IDEM Commission John M. Hamilton.

IDEM expects to submit a set of proposed rules to the Indiana Water Pollution Control Board in the second half of 1998, said IDEM Agricultural Liaison Brian Daggy. The rules will be developed with input from a work-group that is updating IDEM guidance on confined feeding. The public will have ample opportunity for input throughout the rule-making process.

Confined feeding is defined under Indiana law as feeding of animals raised for food, fur or pleasure purposes in lots, pens, sheds, or buildings where food is supplied by means other than grazing. A confined feeding operation is defined as farms with at least 300 cattle, 600 swine or sheep, or 30,000 fowl. The law also covers operations that manage fewer livestock but choose to operate under it anyway and livestock farmers who have violated Indiana's water pollution laws.

There are about 3,700 confined feeding operations in the state, most of them hog farms. Manure from confined feeding operations is stored and applied to agricultural land as fertilizer.

To help clear up confusion in state law and develop a consistent process for permitting and regulating confined feeding operations, IDEM formed the Confined Feeding Task Force last fall, which evaluated the situation. It included legislators, farmers, environmentalists, academics, and government officials.

This year the Indiana General Assembly passed into law the points on which the task force agreed. The law took effect July 1. The law requires operators to develop and file manure management plans with IDEM. The plans must include soil and manure testing procedures, as well as maps showing where manure will be land-applied. All confined feeding operations are required to submit update manure management plans every five years.

IDEM's rule-making process will continue working on remaining unresolved issues, including design and operation standards, odors, and public input on confined feeding applications.

Russell Grunden is an information specialist in IDEM's Media and Communications Services. For more information on confined feeding laws, contact Agricultural Liaison Brian Daggy at (800) 451-6027, ext. 2-8587, or (317) 232-8587.

Telephone Locator for Lake Assistance

Below is an update of lake assistance contacts in Indiana which last appeared in the Spring 1994 issue of *Water Column*. If you have questions or problems concerning your lake, here are the people to call in Indiana:

County Health Department

- Septic tank problems or complaints
- Swimming beaches

Indiana State Department of Health

- Fish Consumption Advisories: Dollis Wright, Public Information Officer, (317) 233-7162.

Indiana Department of Environmental Management

- Biological Communities Monitoring: Assessment Branch, Steve Newhouse, (317) 308-4080.
- Clean Lake Program: Office of Water Management, Carol Newhouse, (317) 308-3217.
- Fish Tissue and Sediment Contaminant Monitoring: Assessment Branch, Jim Stahl, (317) 308-3187.
- Non-Point Source Pollution/Watershed Management, Office of Water Management, Sharen Jarzen, (317) 308-3208.
- Stream Water Quality Surveys: Water Quality Survey Section, Arthur Garceau, (317) 308-3381.
- Toxic Chemical Monitoring: Water Quality Survey Section, Arthur Garceau, (317) 308-3381.
- Volunteer Water Quality Monitoring: Office of Water Management, Kathryn Clendenin, (317) 308-3191.
- Wastewater Treatment Facility Inspections: Office of Water Management, Jeff Feller, (317) 232-8624.
- Water Quality Regulations: Planning Branch, Dennis Clark, (317) 233-2482.
- Wetlands: Planning Branch, Marty Maupin, (317) 233-2471.

Indiana Department of Natural Resources

- Aquatic Chemical Application: Division of Fish and Wildlife, Glen Salmon, (317) 232-4080.
- Dam Inspections: Division of Water (Water Office), George Crosby, (317) 233-4576.

- Fisheries Surveys: Division of Fish and Wildlife, Bill James, (317) 232-4094; Randy Lang, (317) 233-4094.

- Lake and River Enhancement Program: Division of Soil Conservation, Jim Ray, (317) 233-3870.

- Lake Shoreline Modifications: Division of Water, Andrea Gromeaux, (317) 233-5635.

- Streambank Modifications: Division of Water, George Bowman, (317) 232-5660.

Indiana Lakes Management Society

- Everett Lienhart, President, (219) 264-2883.

Meetings

January 26-28, 1998. Natural Buffer Technology Conference, San Antonio, Texas. Contact: CTIC @ (765) 494-9555 or check the web site (<http://www.ctic.purdue.edu>)

April 17-18, 1998. 10th Annual Indiana Lake Management Conference, LaPorte, Indiana. Sponsored by the Indiana Lakes Management Society and the Indiana Department of Environmental Management. Contact: Everett Lienhart @ (219) 264-2883.

PERSPECTIVES

*There are no passengers on Spaceship Earth.
Everybody's crew.*

—Marshall McLuhan

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