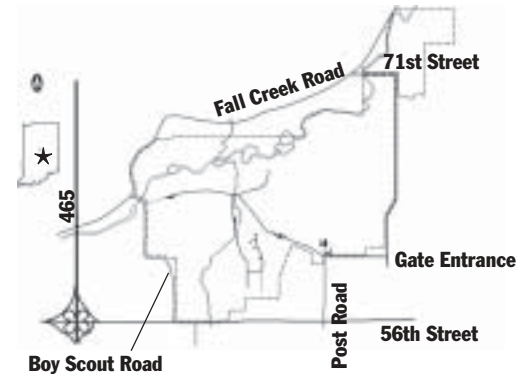


It's Not Too Early to Plan for the 2003 Indiana Lake Management Conference

Planning is well underway for the 2003 Indiana Lake Management Conference to be held this year from April 4-5, 2003 at Fort Benjamin Harrison State Park located on the northeast side of Indianapolis. This year's conference theme is, "Celebrating and Protecting Indiana Lakes."

There are four objectives for this year's conference:

1. To explore ways to restore, enhance, and preserve watersheds while supporting economic development.
2. To exchange ideas on current lake and reservoir issues in Indiana.
3. To promote local involvement with lake and watershed issues.
4. To encourage communication among watershed management agencies and lake users.



The conference, organized by the Indiana Lake Management Society, is for anyone with an interest in the management and protection of Indiana lakes, reservoirs, and their watersheds, including:

- Watershed, lake and reservoir managers
- Local/regional planners and developers
- Lakeshore property owners and lake association representatives
- Environmental and conservation agencies
- Scientists and engineers involved in lake and reservoir issues
- Industry and consulting representatives
- State, federal, and local watershed and lake management representatives
- Students and teachers with interests in water issues

Papers will be organized into four concurrent program focus tracks: technical, management, watershed, and legislative involvement. Tentative workshops on water quality and aquatic plant identification and management are also planned.

(continued on next page)

About Fort Harrison State Park

Landscape and history blend in a unique setting in northeast Indianapolis at Fort Harrison State Park. The 1,700-acre park features walking and jogging trails, picnic sites, fishing access to Fall Creek, and two national historic districts. The former Citizen's Military Training Camp, Civilian Conservation Corps camp, and World War II prisoner of war camp is preserved at the park headquarters location.

Visitors may enjoy a stop at the park's interpretive center to view exhibits and ask questions of park naturalists. Springtime is a great season to enjoy woodland wildflowers, to watch for warblers flying north for breeding season, or to listen for elusive resident pileated woodpeckers.

Facilities

- Bicycle Trail
- Fishing
- Hiking Trails/Multi-use Trail (paved)
- The Fort Golf Resort & Conference Center
 - Harrison House Suites & 3 Officer's Homes
 - The Garrison w/Dining & Conference
 - Facilities, 5 Meeting Rooms
 - Golf Course/18 holes & Driving Range
- Nature Center
- Interpretive Services
- Picnicking
- Picnic Shelters
- Shelter Reservations
- Saddle Barn w/horse trail rides, hayrides

For Additional Conference
Information Contact:

Mark Mongin
SePRO Corporation
(317) 580-8299
markm@sepro.com or

Tina Hissong
Lake Maxinkuckee Environmental
Council
(219) 842-3686
lmec@culcom.net

Improving Water Quality Through Water Conservation

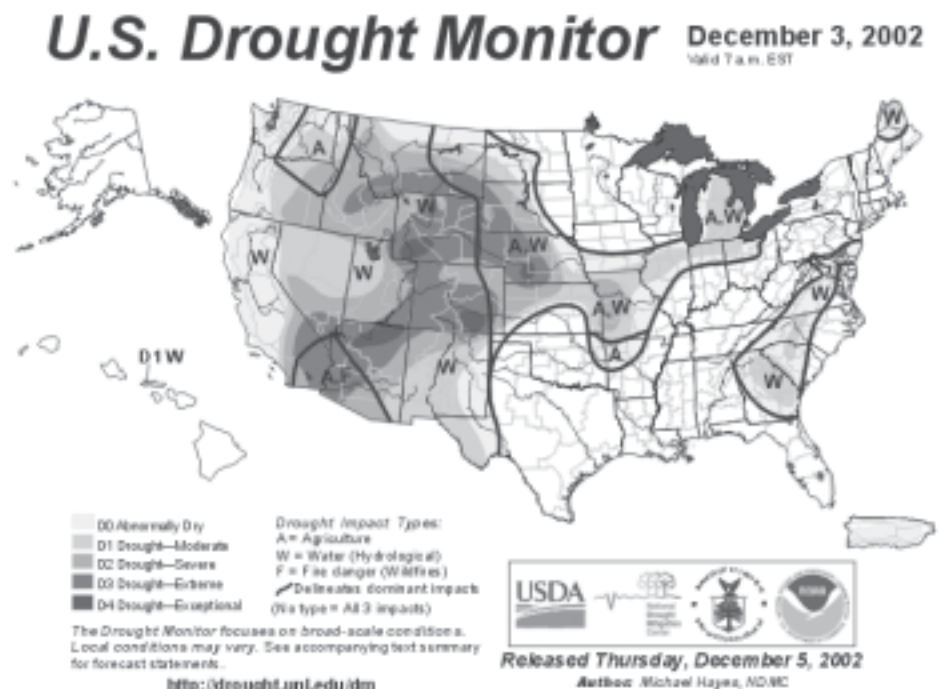
America is in the midst of the most severe drought in recent memory. Soils are parched, wells are dry, and reservoirs are depleted. Rural farmers, small towns, and cities now face water shortages across the country. The northern third of Indiana has been particularly dry this year and according to the most recent *Drought Monitor* report, moderate drought to abnormally dry conditions still prevail there.

Many states and communities have adopted policies to encourage more efficient use of water because the resulting economic and environmental benefits will continue to pay dividends long after a drought has passed. Some

states are legislating particular conservation measures statewide, while others are making state financial assistance or permit approval contingent upon local implementation of "best management practices" to improve water use efficiency. Since urban water use inevitably leads to demands on wastewater treatment systems, water conservation is now seen as an important tool for achieving water quality objectives, even in regions where water supplies are not scarce.

How Excessive Water Use Affects Water Quality

Typically, nonpoint source (NPS) pollution originates from rain and melted snow flowing over the land, which is called runoff. As runoff contacts the land's surface, it picks up many pollutants in its path—sediment, oil and grease, road salt, fertilizers, pesticides, nutrients, toxics, and other contaminants. Runoff can also originate from irrigation water used in agriculture and on lawns. Many pollutants are picked up by irrigation water as it runs off the land.



Water conservation, coupled with pollutant source reduction such as nutrient and pesticide management, would be a particularly effective approach to reducing the adverse effects of all types of NPS pollution.

The demand for water in the United States necessitates stream and river impoundments, the drilling of more and deeper wells, and water withdrawals from natural waterbodies across the country. The high demand for and overuse of water can contribute markedly to NPS in various forms, including:

- altered instream flows due to surface withdrawals;
- greater volume of discharges from wastewater treatment facilities;
- greater loading of septic system wastes into the ground;
- polluted runoff resulting from the excess of water applied for irrigation and landscape maintenance that carries with it sediments, nutrients, salts, and other pollutants

Conserving water decreases the need to impound or decrease the natural flow of streams, to decrease lake levels, and to lower groundwater tables, thus preserving the water to retain the value of stream and river systems as wildlife habitat and for tourism and recreation. Thus, water conservation programs not only reduce the costs and damage associated with drawing down reservoirs and groundwater aquifers to meet water demands, but they also can improve the quality of water by reducing the *volume* of pollutants discharged.

What Can You Do?

The main ways that most of us can help conserve water is by installing indoor plumbing fixtures that save water and by changing our water use habits. The City of Corpus Christi, for example, has estimated that an average three-member household can reduce its water use by 54,000 gallons annually and can lower water bills by about \$60 per year if water-efficient plumbing fixtures are used.

Low-Flush Toilets. Residential demands account for about three-fourths of the total urban water demand. Indoor use accounts for roughly 60 percent of all residential use, and of this, toilets (at 3.5 gallons per flush) use nearly 40 percent. Toilets, showers, and faucets combined represent two-thirds of all indoor water use. More than 4.8 billion gallons of water is flushed down toilets each day in the United States. In new construction and building rehabilitation or remodeling there is a great potential to reduce water consumption by installing low-flush toilets.

Conventional toilets use 3.5 to 5 gallons or more of water per flush, but low-flush toilets use only 1.6 gallons of water or less. Since low-flush toilets use less water, they also reduce the volume of wastewater produced.

Low-Flow Showerheads. Showers account for about 20 percent of total indoor water use. By replacing standard 4.5-gallon-per-minute showerheads with 2.5-gallon-per-minute heads, which cost less than \$5 each, a family of four can save approximately 20,000 gallons of water per year. Although individual preferences determine optimal shower flow rates, properly designed low-flow showerheads are available to provide the quality of

service found in higher-volume models.

Behavioral Practices.

Behavioral practices involve changing water use habits so that water is used more efficiently, thus reducing the overall water consumption in a home. These practices require a change in behavior, not modifications in the existing plumbing or fixtures in a home. Behavioral practices for residential water users can be applied both indoors in the kitchen, bathroom, and laundry room and outdoors.

In the kitchen, for example, 10 to 20 gallons of water a day can be saved by running the dishwasher only when it is full. If dishes are washed by hand, water can be saved by filling the sink or a dishpan with water rather than running the water continuously. An open conventional faucet lets about 5 gallons of water flow every 2 minutes.

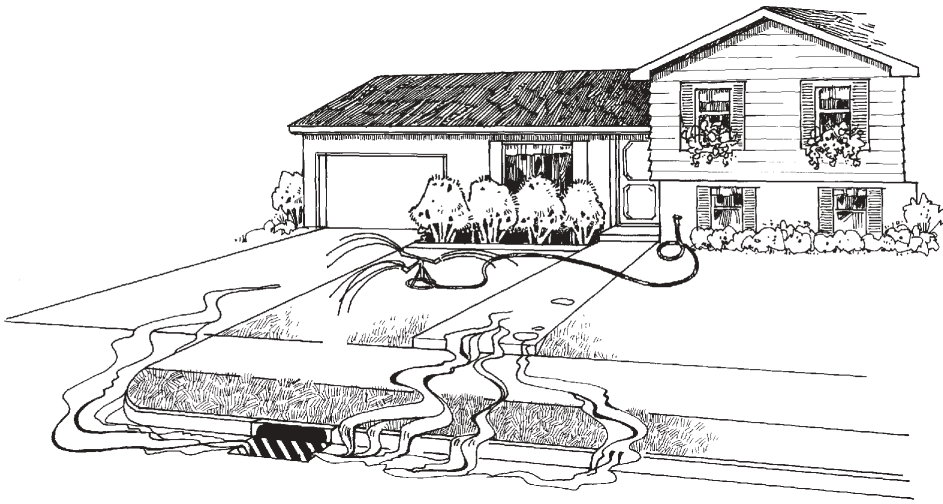
Water can be saved in the bathroom by turning off the faucet while brushing teeth or shaving. Water can be saved by taking short showers rather than long showers or baths and turning the water off while soaping. This water savings can be increased even further by installing low-flow showerheads, as discussed earlier. Toilets should be used only to carry away sanitary waste.

Water can be saved in the laundry room by adjusting water levels in the washing machine to match the size of the load. If the washing machine does not have a variable load control, water can be saved by running the machine only when it is full. If washing is done by hand, the water should not be left running. A laundry tub should be filled with water, and the wash and rinse water should be reused as much as possible.

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!



Outdoor water use can be reduced by watering the lawn early in the morning or late in the evening and on cooler days, when possible, to reduce evaporation. Allowing the grass to grow slightly taller will reduce water loss by providing more ground shade for the roots and by promoting water retention in the soil. Growing plants that are suited to the area (“indigenous” plants) can save more than 50 percent of the water normally used to care for outdoor plants.

As much as 150 gallons of water can be saved when washing a car by turning the hose off between rinses. The car should be washed on the lawn if possible to reduce runoff.

Additional savings of water can result from sweeping sidewalks and driveways instead of hosing them down. Washing a sidewalk or driveway with a hose uses about 50 gallons of water every 5 minutes. If a home has an outdoor pool, water can be saved by covering the pool when it is not in use.

Sources

State Environmental Resource Center website—<http://www.serconline.org/waterconservation/>.

Cleaner Water Through Conservation, U.S. EPA—<http://www.epa.gov/OW/you/intro.html>.

U.S. Drought Monitor—<http://www.drought.unl.edu/dm/monitor.html>.

New Water Poverty Index Defines World Water Crisis—U.S. is Most Wasteful Country

The **Water Poverty Index** (WPI) has been developed by a team of 31 researchers in consultation with more than 100 water professionals from around the world. At the international scale, it grades 147 countries according to five different measures—**resources, access, capacity, use, and environmental impact**—to show where the best and worst water situations exist.

The new index demonstrates the strong connection between “water poverty” and “income poverty” as the ten countries lowest on the WPI are all in the developing world. However, it is not solely the amount of water resources available that determine poverty levels in a country, but the effectiveness of how those resources are used.

“The links between poverty, social deprivation, environmental integrity, water availability, and health becomes clearer in the WPI, enabling policymakers and stakeholders to identify where problems exist and the appropriate measures to deal with their causes,” says Caroline Sullivan, Ph.D., who led an interdisciplinary team to develop the WPI concept at the

Centre for Ecology & Hydrology in Wallingford, United Kingdom.

It is interesting to note that in the **Use** category, which measures how efficiently a country uses water for domestic, agricultural and industrial purposes, the lowest-ranking country is the United States, because of wasteful or inefficient water use practices. For instance, despite the massive consumption of water in agriculture, the contribution of agriculture to the national Gross Domestic Product is tiny. The U.S. also practices high per capita domestic water use and high volumes of water used per dollar of industrial production.

See the sites below for more information.

World Water Council
<http://www.worldwatercouncil.org/>

CEH Wallingford, Oxford, UK
<http://www.nerc-wallingford.ac.uk/research/WPI/>

When in Doubt, Don't Go Out—Beware of Thin Ice

Thin sheets of ice have formed across many Indiana ponds and lakes as temperatures have plummeted in the past few weeks. If temperatures stay low, ice-covered lakes will attract thousands of anglers, skaters, snowmobilers, and hikers.

“People really enjoy getting out on the ice. It’s like walking on water,” said Captain Michael Crider, outdoor safety education director for the Indiana Department of Natural Resources.

Crider offers advice to people to ensure that they stay on top of the ice, and not under it. “Most importantly, warn your kids about playing on frozen lakes and streams. Kids should never go out on ice without it being checked by an adult and without close supervision,” said Crider.

To test the thickness of ice, drill a hole near shore with an ice auger. The test hole should show at least a four-inch thickness of clear ice like you get from your freezer. Be aware of various ice strengths and qualities. One area of a pond may be a foot thick while another spot of ice may only be an inch



thick. Ice strength can also change. Thick ice is rotten after rain. Old honey-combed ice, slush ice, or ice with current under it is also dangerous. New ice is almost always stronger than old ice.

Wind, waterfowl, and beavers can also keep areas of ice thin. Slush is a danger sign. Slush indicates that ice is no longer freezing from the bottom. Slush also indicates weak or deteriorated ice.

Snow can insulate ice and keep it strong. It can also insulate it to keep it from freezing. When ice is covered by snow, great precautions need to be taken to determine ice thickness before starting any activity. Snow can also hide cracked, weak, and open water areas.

Crider recommends wearing a life vest for extra safety and warmth when venturing onto the ice. "Ice is deceptive, so you need to be prepared even on thick ice. A comfortable life vest fits well under large, warm coats, and it can be the difference between life and death if you fall through the ice," said Crider.

Use these guidelines to judge the safety of fresh solid ice:

- When in doubt, don't go out
- Less than four inches—stay off
- Four inches of ice is needed for safe ice fishing.
- Five inches of ice is needed for snowmobiling.

- Eight inches of ice is needed to support the weight of a car or light truck.
- Ten inches of ice is needed to support a medium weight truck.

Reports on current fishing and ice conditions at many DNR properties are available at: http://www.ai.org/serv/dnr_fishingreport. Source: *Wild Bulletin*, Indiana Department of Natural Resources.

New Watershed Academy Web-Based Training Module— Clean Water Act

The U.S. EPA is pleased to mark the 30th anniversary of the Clean Water Act by announcing completion of the 44th Watershed Academy Web-based training module, called Introduction to the Clean Water Act, at: <http://www.epa.gov/watertrain/cwa/>. The Clean Water Act (CWA) is the cornerstone of surface water quality protection in the United States, and this Web-based training module provides an introduction to the major CWA programs in the following sequence:

1. water quality standards,
2. antidegradation policy,
3. waterbody monitoring and assessment,

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regarding lake and
watershed management in Indiana**

William W. Jones, Editor

**Address all correspondence to:
SPEA 347
1315 E. Tenth Street
Indiana University
Bloomington, IN 47405-1701**

**E-mail: joneswi@indiana.edu
Phone: (812) 855-4556
FAX: (812) 855-7802**

4. reports on condition of the nation's waters,
5. total maximum daily loads (TMDLs),
6. NPDES permit program for point sources,
7. Section 319 program for nonpoint sources,
8. Section 404 program regulating filling of wetlands and other waters;
9. Section 401 state water quality certification;
10. State revolving loan fund (SRF).

Users may go through the entire 65-slide module on the CWA in sequence or jump to the particular CWA program of interest by going to the CWA Big Picture at <http://www.epa.gov/watertrain/cwa/slide.htm> that is at the top of each slide.

Perspectives

*The birds are gone, the ground is white,
The winds are wild, they chill and bite;
The ground is thick with slush and sleet,
And I can barely feel my feet.*

—Author Unknown

Meetings

March 8-10, 2003. Midwest Aquatic Plant Management Society annual meeting. Columbus, OH. Contact: Scott Shuler, Tel: (812) 497-2410; e-mail: scotts@aquaticcontrol.com.

April 17, 2003. Hooked on Fishing Not on Drugs Workshop, Natural Resources Education Center, Fort Harrison State Park, Indianapolis, IN. Contact: Amanda Wuestefeld, Tel: (317) 549-0206.

June 23-28, 2003. Natural Resources Education Center Summer Institute, Natural Resources Education Center, Fort Harrison State Park, Indianapolis, IN.

- June 23/Monday—Project WILD: (317) 549-0348
- June 24/Tuesday—Project Learning Tree: (317) 549-0354
- June 25/Wednesday—Project WET: (317) 562-0788
- June 26/Thursday—GoFishIN: (317) 549-0206
- June 27/Friday—Hoosier Riverwatch Level 1: (317) 541-0617
- June 28/Saturday—Hoosier Riverwatch Level 2



16th Annual National Conference on Enhancing the States' Lake Management Programs

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**Got a question about your lake? Or lakes in general? Or about something you've read?
Write to us at the Water Column and we will do our best to answer it.**

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School of Public and Environmental Affairs
Room 347
1315 E. Tenth Street
Indiana University
Bloomington, IN 47405-1701

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