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1450 Linden Drive, 216 Agriculture Hall
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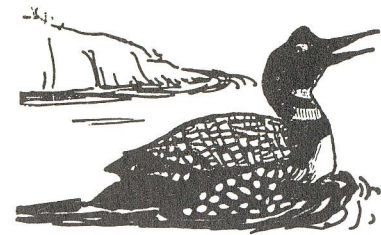


*A Newsletter for People
Interested in Wisconsin
Lakes*

Lake Tides

**JUNE 1984
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IN THE WAKE OF A LOON: AN EDITORIAL

The 1984 Wisconsin Lakes Convention is history. But it leaves a big wake that is still rippling across the state. The primary purpose of the annual spring meeting has always been education and the participants gave the meeting high marks on this primary criterion.

However, the convention also serves to develop contacts, promote fellowship, and engender enthusiasm. On these criteria, the 1984 event was probably the best ever.

Because it is increasingly difficult to obtain meeting space, room reservations have already been made for next year. Mark your calendars for MARCH 29-30, 1985!

Have a nice summer at your lake!

Sincerely,

Lowell L. Klessig
Professor

STATE TRUST FUND LOANS

The initiative of Rep. Calvin Potter, supported by the Wisconsin Association of Lake Districts, is responsible for a new funding option being available to lake districts.

Assembly Bill 284 was signed into law by Governor Earl at the 1984 Convention. Under the terms of the bill, lake districts can now obtain low interest loans from the Board of Commissioners of Public Lands. This puts lake districts on the same footing with towns, counties, villages, cities, and school districts.

Current rates for loans are:

8% for loans of ten years or less

8.75% for loans of 10-20 years

Procedures are still being developed for lake district loans. The Board of Commissioners of Public Lands can be contacted at P.O. Box 7857, Madison, WI 53707 (608) 266-1370.

NATIONAL NEWS

Clean Lakes Funding

Section 314 on clean lakes is being reauthorized with the entire Clean Water Act. Negotiations are currently under way regarding specific funding levels. Congressman Roe, Chairman of the Water Resources Subcommittee of the House Public Works and Transportation Committee, has proposed a well-funded authorization of \$30 million annually for lakes, \$100 million annually for watershed work and additional funds for construction grants for sewage treatment. Congressman Moody of Milwaukee is on the committee. Senator Proxmire serves on the Senate Committee that deals with annual appropriations for EPA.

International Symposium: Lake-Watershed Management

The 1984 lake meetings will be held on October 16-19, 1984 at the Americana Great Gorge Resort in New Jersey. For more information, contact Bob Burrows, North American Lake Management Society, P.O. Box 206, Mahwah, NJ 07430.

COMMISSIONERS' CORNER

Tips on the Annual Meeting

The following suggestions are designed to help you conduct a legal and informative annual meeting: (The final suggestion regarding education is equally applicable to voluntary associations.)

Notice: Your bylaws and Wisconsin Statutes 33.30(2) and 65.90(3) regulate the type and number of notices required for the "annual meeting and budget hearing." In most cases, written notice is sent at least ten days prior and newspaper notices are placed at least 15 days and again at least 7 days prior to the meeting.

Secret Ballot: Although not part of most bylaws, election of commissioners must be held by secret ballot.

Tax: The tax, if any, to be voted should be stated in terms of dollars and not in terms of a mill levy.

Education: Annual meetings are often boring if all that transpires is a few formal reports and a few non-controversial votes. You should use the occasion to help people better understand the lake and its watershed. Consider the following speakers--local professionals who are typically happy to give an educational presentation at no cost: DNR warden or area fish manager; County Extension agent, conservationist, or zoning administrator; Soil Conservation Service district conservationist.

The Extension office can also help you obtain films or bulletins. A new bulletin, The Lake in Your Community (G3216) is designed for lakeshore property owners. You might consider obtaining a copy for each family.

DIQUAT

As of this writing, use of Diquat is not permitted on public waters. However, the Department of Agriculture, Trade, and Consumer Protection (DATCP) is expecting new data from the manufacturer (Chevron) which may allow the DATCP to register the herbicide under "Special Local Need." "Special Local Need Registration" would apply statewide and would allow commercial use and use in public waters.

If the new label is registered, Diquat is likely to be available for use on Elodea, Milfoil, and Duckweed.

In addition to DATCP action, DNR must also decide whether to allow use to resume.

One issue that DNR will be examining is the level of ethylene dibromide (EDB) in Diquat. EDB is a highly toxic insecticide that is used in the manufacture of Diquat. Chevron has been able to reduce the amount of EDB to 10% of the maximum allowed under the formula.

For the most recent information, please contact your DNR district office.

SCREENS AND BLANKETS FOR LAKES

Excessive aquatic vegetation is typically controlled with harvesting (cutting) or chemicals. Two other alternatives have been tested for several years.

In one set of experiments, the sediment is covered with a plastic blanket to prohibit root penetration in the nutrient-rich sediments. In general, the results have not been encouraging; plants take root in the new sediment that accumulates on top of the blanket.

The other set of experiments involve screening the sunlight out of an area, thus inhibiting weed growth. The screens could be moved and cleaned and were judged effective in controlling weed growth. However, cost and maintenance needs would likely limit application to high-use areas of a lakeshore.

The report entitled "Evaluating Sediment Blankets and a Screen for Macrophyte Control in Lakes" can be obtained from Sandy Engel, Water Resources Research Section, DNR, 3911 Fish Hatchery Road, Madison, WI 53711.

NALMS

Membership in the North American Lake Management Society is open to any individual or group interested in lakes. Personal memberships are \$15 per year. Public and non-profit group memberships are \$25 per year.

The Society maintains an office in Washington, D.C. Members receive professionally edited newsletters, reduced registration fees at the annual meeting and other services.

Membership or requests for further information may be directed to Judy Taggart, P.O. Box 217, Merrifield, VA 22116.

"THERE ARE NO DUMMIES ON DUMMY LAKE"

Dale Hanson, Barron County Conservationist

Barely visible from the road, in Lakeland township of north-western Barron County, lies a small lake. Actually, there are two lakes, connected by a short channel.

The activity taking place on this lake may be unusual, because few other lakes have done what is being done here, but the name of the lakes is even more unusual. It is Big Dummy Lake and Little Dummy Lake.

The Inland Lake Renewal office of the Department of Natural Resources has been assisting lakes around Wisconsin with finances for feasibility studies, watershed projects, weed and algae control, and more. However, these funds have been removed from the state budget. With the disappearance of these funds, many lake residents around Wisconsin feel there is no benefit in undertaking lake district projects.

Well, the people around Dummy Lakes have proven that a worthwhile lake improvement project can still be done, and without state aids.

Dummy Lakes' problem is overgrowth of weeds. The problem was so severe, that some lake residents couldn't even get from their shore to the middle of the lakes. The solution, the people decided, was to purchase a weed cutter.

Without state aids, nearly \$7,000 had to be raised. The district's land is taxed annually, and raffles were held to raise money. However, more money was needed.

At the 1983 Annual Meeting in May, nineteen people came forward to make 0% interest loans to the Lake District, and \$500 was given in donations. The goal was reached and the cutter was purchased.

Navigation channels are being cut and maintained. Weeds are properly disposed. Care is taken not to cut weeds that are important for fish habitat.

The cutter is operated exclusively by a five-man committee. However, others are needed to dispose of the weeds. Weed cutting

is only done on Saturdays, and to notify lake residents that cutting will occur, a red buoy is placed in the middle of each lake. When the people arrive, they know that volunteers are needed. So far a shortage of volunteers has not been a problem, rather, so many people come to help, they often end up stumbling over each other.

Many lakes have similar problems to that of Dummy Lakes. The cooperation and dedication of these lake residents is an example that can be considered by lake residents everywhere. Many people are concerned about their own lakes, but the people on Dummy Lakes are doing something about their problems.

Concerned people who wish to follow the example of Dummy Lakes, can contact their county's Department of Land Conservation or Extension office.

When the red buoy goes out on Dummy Lakes, the people go into action. For the benefit of future generations, so they too can enjoy the lakes of Wisconsin, others should follow the example set by the people on Dummy Lakes, and start a red buoy program of their own.

OFFSHORE OIL OR GAS IN LAKE SUPERIOR?

by Albert B. Dickas, University of Wisconsin-Superior
and University of Wisconsin-Extension

Although the greater Lake Superior region is geologically associated with a southern extension of Canadian Shield igneous and metamorphic rocks, units which are devoid of hydrocarbons, oil and gas in the Lake Superior district is a subject that periodically occupies the front page of northern Wisconsin newspapers. In the mid-1970s, non-productive marsh gas was discovered in the Kettle River, Minnesota area. In early 1983 a highly suspicious, and never proven, oil strike in the Willmar, Minnesota region was given much publicity. Then in November of 1983, Superior and Ashland, Wisconsin papers highlighted the fact that a Pennsylvania brokerage company was in the process of buying "oil and gas leases in at least 100,000 acres of land in Ashland, Bayfield and Iron Counties." Based on the above listed earlier occurrences, one might readily assume that inexperience or impropriety was again at work, with the focus of attention having moved from central Minnesota eastward to extreme northern Wisconsin. Casting aside these thoughts, however, along with those of tax write-offs, let us give some thought to the possibility of this "lease play" being a legitimate initial step toward putting Wisconsin in the list of hydrocarbon producing states.

The presence of a gas or oil field is dependent upon three geologic conditions: (1) the deposition of an organic rich, fine grained sedimentary rock which could act as the source of hydrocarbons, (2) an adjacent, usually overlying, porous and permeable rock, the units of which have been altered into a structure capable of concentrating the hydrocarbons into a volume generally termed a "pool" and (3) yet another adjacent, but impermeable, rock unit which prevents the pooled hydrocarbons from leaching to the surface of the earth and thus being lost to the atmosphere or being transformed into tar deposits.

Along the south shore of Lake Superior, between the Keweenaw and Chequamegon peninsulas, a late Precambrian clastic, known as the Nonesuch Formation, is found in outcroppings, the most famous of which are in the vicinity of White Pine, Michigan (see map for distribution). The finer grained portions of this unit are medium gray to black in color and described by at least one geologist as "organic rich to the point of being petroliferous" (Daniels, 1982). This writer continues by stating "these indigenous hydrocarbons are the oldest known crude oil" and "... similar Nonesuch-type environments could provide hydrocarbon source beds." Thus, our first criterion, the presence of a source bed, is met by the existence of the Nonesuch Formation in the area of publicized lease

Our second requirement, the presence of structure, implies the disorientation of layered sediments from their original near horizontal position. Various field studies of the Nonesuch Formation indicates attitude of structure varies from less than 10 degrees to the horizontal to near-verticality. In order for hydrocarbons to migrate from their source unit and "pool" into economic volumes, similar structure should be present in adjacent, younger and more porous rock, a condition possible by the presence of the Freda Sandstone. This sedimentary sequence of conglomerates, sandstones, siltstones and shales, is gradationally in contact with the Nonesuch, that is, the contact between these two units is geologically continuous. Thus structure reported in the Nonesuch should also be found in the younger Freda. Our second criteria is met.

Detailed grain-size analysis of the Freda Sandstone by Smale (1958) and Hite (1968) have characterized this geologic unit as a fining-upward sequence, meaning the upper and younger units are generally finer grained as compared to the lower, older layers. As permeability, the property of a rock that allows the passage of a fluid or gas, is directly related to grain size, the upper Freda units, being finer grained, should also be lower in permeability values. The net effect of this relationship is that the upper Freda might well function as a "trap rock" to hydrocarbons concentrated below. Now all of our criterion are met.

Field studies indicate that the Nonesuch and Freda units are traceable into Lake Superior. The southern limit of their distribution extends into the lake in the vicinity of Calumet and the Porcupine Mountains, northwest of White Pine, Michigan. Further, thickness measurements show that the Nonesuch thickens northward into Lake Superior. Thus, any hydrocarbon possibilities associated with the Freda-Nonesuch sequence along the Lake Superior south shore might well be projected in the future by an oil company geologist into the lake proper, opening up conceivable offshore hydrocarbon production in the "north country."

Granted, the possibility of oil and/or gas reserves being discovered in the Lake Superior region is academic speculation at this time, but geologic evidence does give credence to such consideration. Most of the Freda-Nonesuch units are covered by glacial deposits in the areas of Bayfield, Ashland and Iron Counties, the counties of present lease interest. The next logical step, once leases have been secured, is to further evaluate this region by seismic review. Supposedly, this next step should be underway by the summer of 1984. Maybe, just maybe, Lake Superior and northern Wisconsin might take on added economic value in the next several years. The possibility is there, though still remote.

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