

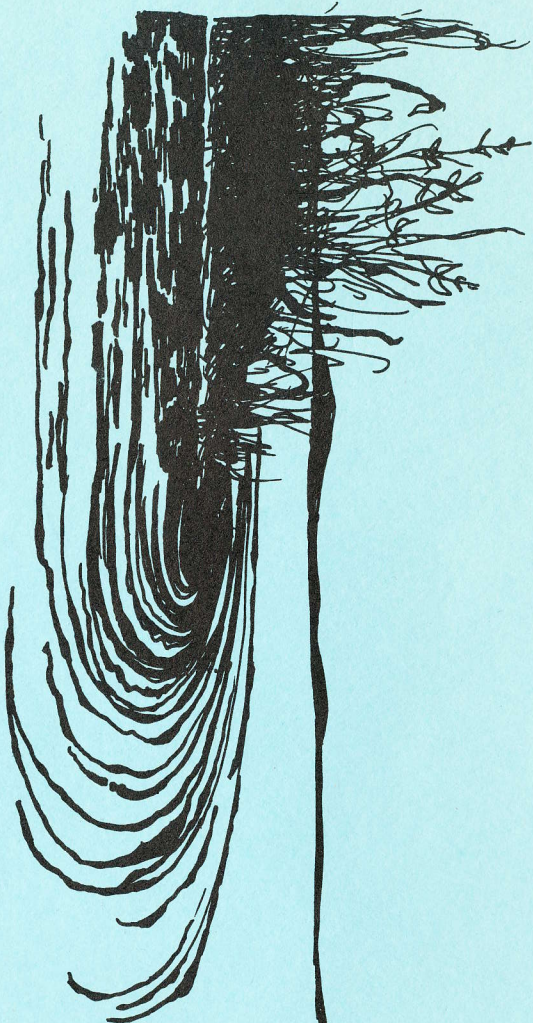


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COOPERATIVE EXTENSION PROGRAMS  
UNIVERSITY OF WISCONSIN-EXTENSION



*A Newsletter for People  
Interested in Wisconsin's  
Inland Lakes*

*Lake  
Tides*

**NOV. 1981**  
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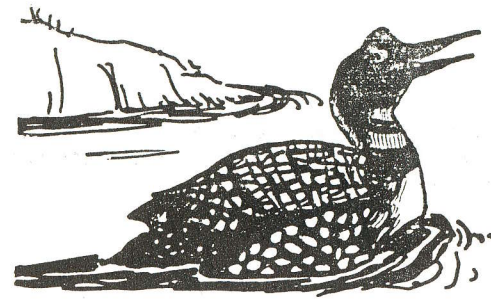
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COOPERATIVE EXTENSION PROGRAMS  
UNITED STATES DEPARTMENT OF AGRICULTURE  
UNIVERSITY OF WISCONSIN-EXTENSION  
432 NORTH LAKE STREET  
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## IN THE WAKE OF A LOON

### AN EDITORIAL ON THE FUTURE OF LAKE MANAGEMENT

On September 3rd, the Legislative Audit Bureau recommended that all state investment in the Inland Lakes Program be eliminated. Under this recommendation, lake districts could still be created and operated, but no cost-sharing would be available to districts. In addition, DNR and University Extension staff would no longer be assigned to assist lake communities.

To make such changes would require action by the Legislature. Hearings are being held. We encourage you to contact your legislators to find out what is happening regarding the Inland Lake Management Program and to express your views. You can write to them at the State Capitol, Madison, or call the toll free number (800/369-9696).

Over the years, we have had contact with thousands of lake property owners and hundreds of lake organizations. We have tried to encourage your hopes while seasoning them with realism. We have learned from your experiences at protection and rehabilitation and have tried to share this with other communities.

Most of all, we have learned to respect citizens like yourselves who are willing to donate your time to enhance a public resource. Your dedication can be measured by all the weekend and evening meetings you have attended, the countless forms you have filled out, and by your patience in putting up with those who prefer to complain about a job rather than to help get it done.

We hope that the audit report does not discourage you from continuing your efforts. We believe that the main thrust of Chapter 33 is to encourage you and assist you in your efforts to protect and rehabilitate lakes. (Unless and until the Legislature acts, the Program does not change.) The Legislature may again debate whether lakes can best be managed by local citizens with state assistance or by a state-directed operation.

This debate is part of democracy; it should not discourage you. There are no easy answers to the problems of lakes. While there can be honest differences on how to approach lake management, neglect has seldom been a successful approach.

Our lakes are a fragile resource, and our lake organizations are fragile institutions. Both require your enlightened self-interest and tender loving care.

Sincerely,

*George R. Gibson, Jr.* *Lowell L. Klessig*  
George R. Gibson, Jr. Lowell L. Klessig  
Lake Management Specialists

\* \* \*

A BRIEF SUMMARY OF THE LEGISLATIVE  
AUDIT BUREAU REPORT ON THE INLAND LAKES PROGRAM

The audit concentrated on the DNR, Office of Inland Lake Renewal component of the program, specifically the 25 funded lake restoration projects.

The auditors set up a five-point criteria based on their interpretation of Chapter 33, the Inland Lake Management Law, to judge the twenty-five projects. The criteria were: (1) Source of the problem addressed--they concluded that eleven projects did not; (2) Long-term improvements--they concluded that fourteen projects were short-term; (3) Improved recreational value--that nine projects would only marginally improve recreation; (4) Public benefit--that seven projects would provide only limited benefit; (5) State financial aid needed--that three projects probably would not have needed state aid and three others might have been undertaken on a reduced scale without state help.

They concluded that the projects failed their criteria because: (1) Lake districts are used as the means for selecting and funding projects; (2) The program has been inadequately developed and monitored by DNR; (3) There has been a declining rate of new district formation.

The auditors suggested seven points to include in an "effective state program" but concluded that ". . . it may be difficult to create a program which included all these elements."

The report, therefore, recommended that the Legislature eliminate all funding for the program.

UW-EXTENSION RESPONSE  
TO LEGISLATIVE AUDIT BUREAU REPORT  
ON THE INLAND LAKES PROGRAM

The following is the text of a letter by Dean Robert Rieck to the Co-chairmen of the Joint Legislative Audit Committee.

Dear Senator George and Representative Tuczynski:

We received a preliminary copy of the Inland Lake Protection and Rehabilitation Program audit report from the Legislative Audit Bureau during the week of August 24th. We expressed several concerns and were given an opportunity to respond to the report.

We believe that the report contains much that is useful and constructive, but it is seriously deficient in its principal recommendation. Total elimination of the Inland Lake Program would be short-sighted and not in the best interests of a wide variety of citizen groups in the state. Indeed, we believe that the recommendation for total elimination of the program is not justified by the findings in the report or by other facts not contained in the report.

Our initial response to the audit report is contained in the following seven points; given more time we can, of course, address more specific aspects of the Inland Lake Protection and Rehabilitation Program and implications of the audit report.

1. Lakes are an important natural resource with significant effects on the economy of Wisconsin. The need to manage and protect this resource will intensify in future years.

Recreation--the state's third largest industry--is heavily dependent on high-quality lakes. Two out of three citizens from the State of Wisconsin report using lakes every year. With escalating fuel prices, Wisconsinites are more likely to use local lake resources rather than travel to distant states.

Eutrophication and sedimentation of lakes have developed over decades and even centuries. Many years of effort will be required to slow and reverse the rate of degradation. Moreover, the turnover of those in a position to take constructive action (lake users, local government officials, lake district commissioners, members of lake associations, lake property owners, and others) requires continuing, uninterrupted state encouragement of those groups.

2. The audit has served a useful purpose by focusing attention on a number of problems that must be dealt with.

The recommendations for program improvement on pages 62-63 contain much that is constructive. While the report concludes that it will be difficult to design a program that would include

all those elements, we believe that the people of Wisconsin would prefer an inland lake management program with appropriate modifications rather than the extreme alternative of ignoring the lake resource. Some modifications would be easy to implement, for example, (a) to provide for larger cost-sharing ratios for higher priority (e.g., protection) work and smaller cost-sharing ratios for lower priority (e.g., dredging) work, and (b) to "improve" the lake selection process by enabling general purpose governments to participate in the program. We also agree that it would be desirable to establish mechanisms to assure that the most worthy projects are funded and evaluated. These efforts, however, must recognize the individual characteristics of each lake and must be done carefully by an interdisciplinary team.

3. The audit failed to fully capture the significance of Chapter 33 as legislation created to provide local communities with the option of accepting responsibility for lake management, aided but not directed by the state.

The legislation did not intend, nor did they create a state mandated and directed program. The declaration of intent of Chapter 33 states, in part:

" . . . the legislature declares that it is necessary . . . to authorize a conjunctive state and local program of lake protection and rehabilitation . . ."

and

" . . . The legislature finds that a state effort of research, analysis, planning and financing, and a local effort . . . of planning and plan implementation is necessary and desirable and that local districts should be formed by persons directly affected by the deteriorated condition of inland water and willing to assist financially, or through other means, in remedying lake problems. The legislature further finds that state efforts are needed to aid and assist local efforts."

By failing to recognize this central objective of Chapter 33, the audit failed to assess the effectiveness of the program in promoting local initiative and developing local leadership to deal with lake problems.

The validity of this approach is demonstrated by the fact that within 7 years, 130 communities have decided to accept formal responsibility for a public inland lake by forming a lake district. Even in a period of high taxes, the citizens of these communities have been willing to commit their time and tax dollars to saving these lakes. While only a few districts were formed in 1980 due to uncertainty regarding the statewide referendum on lake district voting, formations in 1981 (6) are already double the number formed in all of 1980 (3).

4. The lake district concept is an innovative approach for dealing with the management of some lakes, but was not meant to be a panacea or to apply to all lakes.

The lake district mechanism cannot deal with all lake problems (e.g., those of Lake Mendota or Lake Winnebago). However, it is a vehicle to address a variety of lake problems not dealt with adequately by other mechanisms.

In recognition that other institutions would continue to play important roles in lake and watershed management, University of Wisconsin-Extension has not confined its efforts to lake districts, but has also provided education assistance to general purpose government (towns, villages, cities, counties), voluntary associations, and resource management professionals.

5. As a result of the lake protection and rehabilitation program, many lake districts are undertaking local projects without state assistance. Apparently, no effort was made to evaluate such districts.

The audit concentrated on 25 state-funded projects. While not as expensive as state-funded projects, lake district activities that are entirely locally-supported are much more numerous. While these lakes receive no financial assistance from the state, they do receive technical and educational support from DNR and UWEX. A few examples are: dam maintenance at Mt. Morris Lake, aeration at Largon Lake, weed control at Okauchee Lake, algae control at Balsam Lake, carp control at Lake Puckaway, and a sanitary survey at Bear Lake.

Some of these efforts may result in long-term improvement, some may not. However, even where they do not, they keep the lake useable for both property owners and public access site users on an annual basis. Without the lake district mechanism, most such efforts would not continue.

6. The audit has not evaluated the substantial impact of the modest investment made in education assistance.

Though the audit briefly acknowledges that UWEX performs a role in the program, there was no effort to evaluate its effectiveness and certainly no evidence to support the recommendation that its contribution to the solution of lake problems be terminated.

The University of Wisconsin-Extension (UWEX) has performed a major role in the development and implementation of Wisconsin's overall Inland Lake Management Program. The program has been a model of cooperation between state agencies and between the state and local communities. For six years, UWEX and DNR cooperated in a demonstration project which led to the creation of the Chapter

33 Inland Lake Protection and Rehabilitation Program. In the past seven years since the enactment of Chapter 33, two state specialists and dozens of county-based UWEX staff have helped communities understand this law, and have provided educational assistance to the 130 communities who have decided to form formal lake districts and hundreds of other communities interested in understanding "their" lakes. That assistance was supplied on request and has been positively received. In addition to lake management information, UWEX specialists have provided technical opportunities to the citizens of Wisconsin regarding drinking water quality and acid rain.

We believe that the systematic development of a long-range comprehensive educational program including conferences, workshops, newsletters, bulletins, local presentations and other modes of educational delivery have been a worthy investment in the long-term future of Wisconsin water resources.

The local and statewide impact of the educational program should be carefully studied before making any recommendations regarding redirection, discontinuation, reduction or expansion of the educational program.

7. Elimination of the Inland Lake Program would have wide-spread impact on the people of the state, therefore, it is imperative that any substantial changes or reduction of the program be carefully and fully considered.

Elimination would have impacts far beyond the 25 projects evaluated, or even the 130 lake district communities.

If the program were eliminated, the thousands of people living in lake districts who know that their commitment of time and money is now being matched by the state would feel let down. The lake district commissions would especially feel betrayed.

Also affected, by elimination, would be those who depend upon quality lake resources for their livelihoods and for rest, relaxation and recreation--business people, local government officials, sportsmen and women, boaters, urban and rural recreationists, to name some.

In the long-run, most of the citizens of the state would suffer if interest in maintaining and improving lakes diminishes because the fiscal incentive for local involvement is curtailed or because educational support and encouragement has evaporated.

I would be delighted to discuss this response further with you and the members of your Committee.

Signed: Robert E. Rieck, Dean  
 Div. of Economic and Environmental  
 Development  
 UW-Extension

NOTE:

Secretary Besadny of the Wisconsin DNR has also responded to the audit report, and copies of his letter have been sent to the lake districts. Additional copies are also available from Oliver Williams, DNR Office of Inland Lake Renewal, P.O. Box 7921, Madison, WI 53707.

TAX CERTIFICATION

Any lake districts which intend to use the mill levy to collect revenue in 1982 should have submitted a certification of taxes to the municipal clerk by this time. If your district includes territory from more than one town, village, or city, you must submit a prorated amount to each clerk.

If you have not yet submitted your certification, call your clerk immediately to alert her/him to your needs, and send a formal certification as soon as possible.

If you need a form, call Lowell Klessig at 715/346-3783 and request the form for districts in a single municipality or a form for districts in more than one municipality.



ECO NOTE

Wisconsin Lakes . . . Water Supply and Management Approaches

Just about all of our lakes can be categorized by the way they receive and pass on their water supply. Not surprisingly, this characteristic is something most lake residents are very much aware of. What may not be as evident, though, is that some basic generalizations about lakes and lake management can be made if you know the characteristics of the drainage systems involved. (Having said this, I should also caution you to remember that each lake is unique and that generalizations should be extended only so far!)

The water supply for any lake may be dominated by either of two components of the overall hydrologic cycle--the groundwater system or the surface water system. The following list of six lake types is based on various combinations of how surface or groundwater enters and leaves a lake.

1. No tributary streams flowing into or out of the lake. These are primarily groundwater lakes.
2. Intermittent tributary streams flowing into or out of the lake--small streams which may flow only in the spring or fall.
3. Lakes with outlet stream(s) only (draining water from the lake).
4. Lakes with inlet stream(s) only (flowing into the lake).
5. "Perched" lakes. The lake bottom is above the groundwater table--little or no groundwater enters or leaves the lake. Water supply is mostly nearby surface runoff and direct precipitation.
6. Lakes with both inlet and outlet stream(s). Mixture of both surface and groundwater supply and discharge, but surface waters are usually dominant. They may be wide, flooded sections of a stream or river, flowages, reservoirs, or man-made recreational lakes created by damming a stream or river system.

Lakes in categories 1-4 are dominated by the groundwater system. Their levels may not change very suddenly, such as after a period of heavy rains, but may vary widely over the years as the groundwater table changes. Lakes in category 6--and to a limited extent those in category 4--reflect a mixed influence of a groundwater "base level" flow and surface runoff via streams. These lakes are more likely to swell in response to storms and flooding in the region. Perched lakes

(category 5), because they lack the base flow of groundwater, have the most variable levels of all and are the most responsive to local precipitation conditions. All six lake types, of course, receive a certain amount of their water supply from precipitation that falls on or near the lake, but this source of water is of critical importance only to type 5 lakes.

The primarily groundwater lakes (1-4) are most influenced by long-term and seasonal climatic variations affecting the groundwater supply, and by land use practices which interfere with groundwater recharge. For example, a site should be protected from being drained and developed if it is the "recharge" area where most snow and rain-fall soak into the ground to later enter the lake. Without this protection, the lake level will drop and local wells may run dry because precipitation previously available to the groundwater system (or aquifer) has been diverted. Similarly, if pastureland in a recharge area is converted to a shopping center, the broad expanse of sealed surface created by the buildings and parking lots will reduce the amount of water which infiltrates to replenish the groundwater supply.

On the other hand, because surface streams contribute relatively less water to them, these lakes are not as subject to the risks of stream-laden pollutants, nutrients, and sediments which can cause lake weed problems and in-filling. This absence of an extensive relationship with regional stream systems may also help protect the lake fishery from the introduction of nuisance species and disease. But the high "water residence time" of these lakes--water doesn't flow in and out very quickly--means that if anything does go wrong in the water column, the problem could stay that way for some time. This also means that these lakes (which may not even have a discharge stream) cannot be readily drawn down as a management technique to remedy shoreline or water quality problems.

The surface water lakes (primarily 6) are usually well supplied with water and protecting the quantity of the source (as with groundwater lakes) isn't usually a problem. Here, however, quality is the paramount issue. Typically, these lakes have proportionately larger watersheds than the groundwater lakes, and the lake community must be alert to a greater variety of changing land use practices over a greater expanse of drainage area. Erosion problems and stream pollution anywhere in the watershed may have an impact on the lake. Because of the greater amount of eroded material and nutrients that can be carried to these lakes, they are more likely to be plagued by sedimentation and weed and algae problems. They are, however, often our most popular recreational lakes because their enrichment and associated streams and marshes will support a greater diversity of fish and wildlife habitats.

So you can see that while each of our lakes is unique and must be recognized as such, there are some basic distinctions in the ecology and management options for surface and groundwater-dominated lakes. With groundwater lakes it is most important to protect the source of recharge and to realize that the lakes have very little ability to assimilate or flush out any contamination which may occur. Management and protection in this respect is often enhanced by the

relatively small watershed area with which the lake district or community must contend. Surface water lakes are much more subject to problems from land abuse causing nutrients and/or sediments to wash into the lake, often from considerable distances. But, these lakes usually lend themselves to greater management manipulation, especially drawdown, stream improvements, and improved land use practices. They tend also to support a more diverse and robust plant and animal ecology.