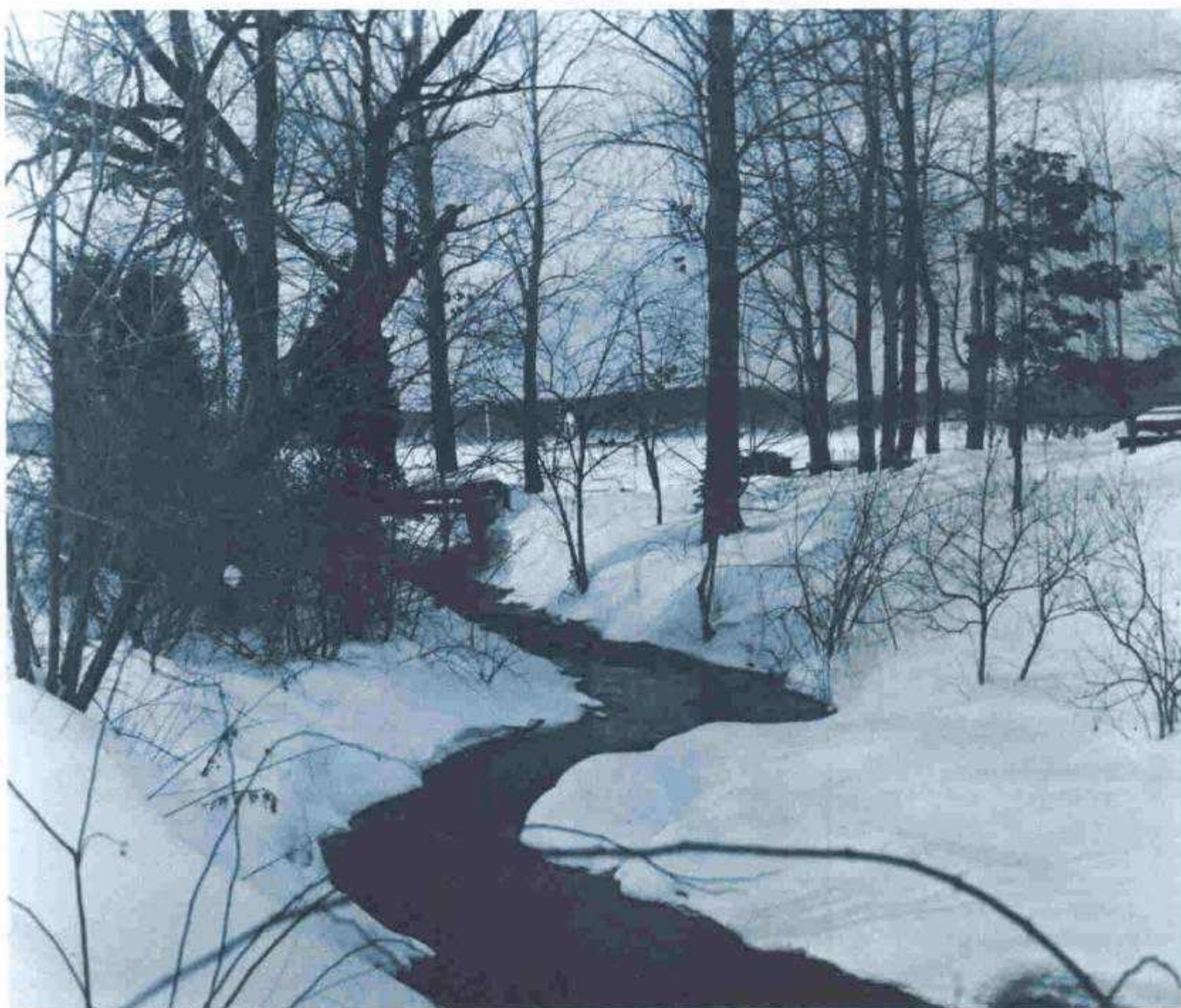


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## COMING EVENTS

(INTERCOM - Interdepartmental Committee on Environmental Affairs)

**FEBRUARY 7 - INTERCOM**  
Baker-Olin West Building, 3500 N. Logan St., Lansing.

**FEBRUARY 7,8 - Natural Resources Commission**, Law Building, 525 W. Ottawa, Lansing.

**FEBRUARY 25 - Michigan Environmental Review Board**, Baker-Olin West Bldg., Lansing.

**MARCH 6 - INTERCOM** Baker-Olin West Bldg., Lansing.

**MARCH 6,7 - NRC State Fair Grounds.**

**MARCH 19 - MERB** Natural Resources Bldg., MSU, East Lansing.

**MARCH 23 - Region 5 Meeting** at Lake Fenton.

**APRIL 3 - INTERCOM** Baker-Olin West Bldg., Lansing.

**APRIL 10,11 - NRC** Law Bldg., 525 W. Ottawa St., Lansing.

**APRIL 28 - MERB** Baker-Olin West Bldg., Lansing.

**MAY 4 - ML&SA** Board of Directors Meeting, 10 a.m., Doherty Inn, Clare, MI.

**MAY 7 - INTERCOM** Baker-Olin West Bldg., Lansing.

**MAY 8,9 - NRC** Law Building, Lansing.

**MAY 17 - ML&SA** Region II Meeting, Cadillac, Michigan.

**MAY 19 - MERB** Baker-Olin West Building, Lansing.

**JUNE 5 - INTERCOM** Baker-Olin West Building, Lansing.

**JUNE 12, 13 - NRC** Kalamazoo.

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**SEPTEMBER 24, 25, 26 - ML&SA** Nineteenth Annual Meeting, Hilton Shanty Creek, Bellaire, Michigan.

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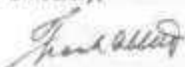
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## LETTER TO THE EDITOR

Dear Mr. Winne,

The Walloon Lake Association is anxious to write to you regarding your article in the November issue regarding Keyhole Lake access on pages 19 to 21. This is of very major importance to us in the Walloon Lake Association, and we are very pleased to see articles of this sort. Our hats off to Riparian Magazine. Keep up the good work.

Sincerely,



Frank Abbett  
Executive Director  
Walloon Lake Association, Inc.  
Walloon Lake, Michigan

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## EDITORIAL



Donald Winne

## NATURAL RESOURCES - WHERE ARE WE HEADED?

The Natural Resources Commission is to be commended for their resolution of September 1979 which urges "all citizens to join with sportsmen conservationists in a rededication to the wise use of our natural resources and their proper management for the benefit of future generations".

The wholesale and uncontrolled slaughter of the buffaloes on the western Plains is an American tragedy. Only by careful management and protection of the few remaining buffaloes in the early twentieth century was it possible to keep them from becoming extinct.

The passenger pigeon was wiped out. They came by the millions every summer to the Traverse City and Petosky areas to feed on the acorns and beech nuts of the hardwood trees. Many were captured and shipped

live elsewhere for target practice. Others were killed by the tons and made ready for market. Three to six tons of birds were packed in barrels and shipped south from Traverse City every day. By 1913 there were none left.

Similar stories can be told about the sturgeon and white fish that inhabited our inland and the Great Lakes, and about the white pine and hardwood trees that covered the land. **WHEN WILL WE LEARN THAT WE CANNOT EXHAUST A RESOURCE AND STILL HAVE IT TO ENJOY?**

The land and water can produce the food that is needed if it is properly attended and managed. Farmers have learned that if they want maximum production from the soil they must learn how to nurture it and then see that it is done. What have riparians and the public learned about the productive capability of our lakes and streams? With the trend to turn every body of water into a race-track and merry-go-round, it appears that we have learned little. Every lake and stream association should give immediate consideration to what is happening to their water and take steps to protect it as a useful natural resource. Some associations have awakened to the need and have requested their township government and the DNR to establish special controls to protect their lake before it is too late. During 1979, the Natural Resources Commission approved special controls on 39 lakes which were requested by the property owners on those lakes. (See page 23 of this issue for more information)

**PUBLICATION DATES:** Winter Issue, February 1; Spring, May 1; Summer, August 1st; and Fall, November 1.

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**SUBSCRIPTION RATES:** A blanket subscription includes every dues paying member (family) of the subscribing association. Blanket rate (100% of membership), \$2.00 each per year. **Quantity rates** but not a blanket subscription - 200 or more (same rate as blanket), \$2.00 each per year; 150-199 subscriptions, \$2.20 each per year; 100-149 subscriptions, \$2.30 each per year; 50-99 subscriptions, \$2.40 each per year; 49 or less subscriptions, \$2.50 each per year. Make check payable to **The Michigan Riparian**. Send the list of subscribers with permanent addresses, with check to 9620 E. Shore Drive, Portage, MI 49002.

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# DEPARTMENT OF NATURAL RESOURCES... a short history

*By John M. Robertson Executive Assistant to the Director*

Roots don't go back quite to the time of the American Revolution for the Department of Natural Resources, the state agency charged with the protection and management of Michigan's lands, waters, wildlife and air. But the DNR's ties with Michigan history can be traced for 166 years, to 1814, closely paralleling the initial settlement of the Michigan wilderness.

The Department's Lands Division, the unit charged with the keeping of 4.3 million acres of state-owned real estate, is a descendant of the Federal Land Office Board. The Board was established at Detroit in that first year to encourage eager farmers and lumbermen to build a new way of life in America's new "West".

## FIRST STATE LEGISLATURE — A NATURAL RESOURCES ORIENTATION

Also in 1937, only two hours after Michigan became the 26th State, the First Michigan Legislature organized the Geological Survey, forerunner of the DNR division of the same name. Douglass Houghton, the first State Geologist, divided the Survey into four components — geology, zoology, botany and topography — and, thus, it became the first state agency assigned a natural resources orientation.

"The Department's record is an old and proud one, especially since Michigan has continually been a leader in America's conservation movement," says DNR Director Howard A. Tanner. "Although the Department of Conservation was not organized until 1921, a great number of important events took place in the century of Michigan history that took place before that time. Additionally, in 1973, a landmark Executive Order was issued by Governor William G. Milliken, which assigned all environmental protection functions of state government to the Department.

"Although hunting and fishing

concerns are still of utmost importance to the DNR, our days as primarily a 'Fish and Game Department' are gone forever," adds Tanner. "But, as a Department, we certainly do not feel that the many milestones in conservation achieved mainly because the DNR was a 'Fish and Game Department' should be forgotten.

"The Pittman-Robertson legislation passed by Congress in 1937, at the urging of sportsmen, including the Michigan United Conservation Clubs, is a good example," Tanner continues. "The act made it possible to place a tax on firearms and ammunition with the revenue earmarked for land acquisition, wildlife management and wildlife research. The money was matched by fees from hunting license sales."

This self-sought tax on sportsmen made it possible for the DNR to obtain 270,000 acres of land for public hunting and other recreational uses. It also laid the foundation for Michigan's celebrated game and non-game management and research programs that are continually going on.

However important, Pittman-Robertson was not the only milestone in DNR history. A look at these significant dates tell part of the story:

Board of Fish Commissioners established, 1873; first planting of brown trout in the Au Sable River, 1876; first salaried game warden in the U.S. appointed in Michigan, 1887; first hunting license law enacted (50 cents for resident deer), 1895; Forestry Commission created, 1899; first state forest established at Higgins lake, 1903; Higgins Lake Forest Nursery established, 1904; eight elk released in Pigeon River County State Forest, 1918; and State Parks Commission created, 1919.

## DEPARTMENT OF CONSERVATION ORGANIZED IN 1921

Yet, as Tanner notes, the biggest milestone of all to that time came in

1921 when the Michigan Legislature set up the first Conservation Commission, which in turn organized the original Department of Conservation. John D. Baird, a one-time game warden and a noted conservationist, was named the first director.

Baird was instrumental in getting the one-buck law passed in the same year, a law which marked the first of several approaches by the Department to improve and manage Michigan's deer herd. Baird also became influential in introducing the state's first pheasant season in 1926. But he was only the first of many key conservation leaders in the DNR.

Among the most notable were P.S. Lovejoy, whose leadership brought about the Institute for Fisheries Research at the University of Michigan, and to the organization of the game, forest fire, education, parks and lands divisions in their present context; and P.J. Hoffmaster, director from 1934 to 1951, who was largely responsible for extensive land acquisition for recreational purposes and for the development of the state parks system.

## "I LOVE EVERY TREE —"

Former Conservation Commissioner Harold Titus ("I love every tree, every lake, every trout stream, every high hill in these forest lands") and Harry H. Whiteley, who became nationally known for his innovative ideas for natural resources management are two more of the many figures whose key policy-making decisions of long ago are still paramount to the functions of the DNR. Whiteley was the uncle of current Commissioner Harry H. Whiteley.

What decisions are considered landmarks? For Lovejoy, the organization of the Land Economic Survey in 1922, which led to the establishment of Michigan's wildlife refuge system, was foremost. Although no longer used by the DNR as part of its



management programs, the survey allowed for the development of the state's deer herd from less than 100,000 in the 1920's to the estimated 1,000,000 at the start of the 1979 firearm whitetail season.

For Hoffmaster, acquisition of tax-reverted lands during the Great Depression of the 1930's (totaling about 1.2 million acres) is noted. And for Titus and Whiteley, it was support of Michigan's national leadership in wildlife research and management programs.

"Thanks to the foresight of a few great Michigan conservationists, this state has more public lands than any other state in the continental United States," notes Tanner. "One can go to Texas, the largest state in the continental U.S. and be hard pressed to find a 40-acre plot on which to hunt or camp. In Michigan, one can choose from 4.3 million acres of designated park, state game or recreational lands, public access sites and state forests."

But Tanner ventures a step further than land ownership when addressing himself to the DNR, boldly saying that no state agency deals as much with the lives of Michigan's nine million residents, than does the Department. It literally is involved with citizen's air quality and solid waste problems as it is with one's leisure time.

"Even prior to 1966, the Michigan DNR was considered to be one of the 'broadest' state conservation agencies in the nation," remarks Tanner. "It was responsible for fish, game, forestry, parks, geology and supporting services, as law enforcement, fire control, information and education, and administrative services.

### PROTECTION OF THE ENVIRONMENT — NEW TASK

"Today, through a process of legislative statutes and Executive Orders from the Governor, the Department assumed responsibility for all environmental protection matters, too," he continues. "We have a natural resources branch and an environmental protection branch (the latter didn't exist at all in 1966), 25 operating divisions, over 3,500 fulltime employees, and a budget of \$120 million.

"Instead of just one Natural

Resources Commission, we have it along with supporting commissions for water resources, air pollution control, resource recovery, waterways and Mackinac Island," Tanner adds. "Thirty-eight committees advise the Department on everything from urban recreation to toxic substances in water. We issue more than 115 different kinds of permits, most of them dealing with environmental controls. In total, the Department administers nearly 250 programs."

### CONSERVATION OFFICERS — KEY TO WILDLIFE CONSERVATION

These changes, of course, have made for a more complex department. Interestingly, however, the new "bigness" of the Department can be seen through the DNR's 200 Conservation Officers, whose responsibilities for law enforcement include all avenues of the Department.

Originally known as "game wardens", Conservation Officers are also generally known as the "conservation keystones of Michigan," or as the Conservation Officer goes, so goes the Department.

"Conservation officers are the official conscience of the sportsmen, sworn to protect the public interest," says DNR Law Chief Frank Opolka. "without them, wildlife research and management efforts would be in vain, as all wildlife conservation depends upon a controlled harvest. I shudder to think what the present status of Michigan's natural resources would be had there not been Conservation Officers afield during the past 59 years."

But Opolka, and other DNR administrators, know that enforcement of the new, complex air and water pollution laws, among others, has become part of the Conservation Officer's job. They openly have to wonder whether or not the CO's traditional tasks have been proliferated under the Department's 1973 reorganization.

In June of 1975, then Chairman Carl T. Johnson of the Natural Resources Commission addressed his colleagues and the DNR staff on significant periods in Michigan's conservation history. Johnson noted that the state's "ugliest blot ... was the butchering of

millions of (passenger) pigeons on their nesting grounds near Petoskey during the late 1800's.

"Those were the 'Bad old days' when deer, pigeons, grouse, squirrels, rabbits, fish and just about anything else found in nature with meat on its bones was hunted mercilessly for food," stated Johnson. "It was perhaps an inevitable outgrowth of the pioneer days, dating back to 1776 and before, when Americans literally lived off the land.

"We awoke too late to save the passenger pigeon, and also the native elk and wild turkey once abundant in Michigan," he continued. "We have managed to restore the elk and turkey, because there was a breeding stock available from other parts of the country. Alas, the last passenger pigeon died in a Cincinnati zoo in 1913, and that species is lost to us forever."

### MORE DEER IN MICHIGAN TODAY THAN IN 1900

This experience, believed Johnson, helped to awaken Michigan conservationists to the need to manage its game and fish resources.

"The awakening may have come too late for the passenger pigeon but, thank God, it came in time for most other species," the commissioner added. "We have more deer in Michigan and in the nation today than we had in 1900. We have restored the elk and wild turkey. We have brought waterfowl back from their low ebb of the 1930's. We have much to be proud of."

Much of the habitat improvement programs for wildlife that Johnson was referring to reached their climax in the 1950's. The deer herd readily comes to mind. Although antlerless deer hunting is now considered of prime importance to the DNR's deer management program, it is a relatively new concept. In 1941, hunting for any-deer during the regular firearm season was allowed for the first time since the 1921 one-buck rule was implemented. But the relaxation of rules in 1941 was only in Allegan County (as an answer to complaints by farmers that deer were destroying the celery crop); an any-deer permit for camps was

[Continued On Next Page]



## THE DNR - A SHORT HISTORY

[Continued From Page 5]

allowed for part of the same season, but was discontinued because of public protest.

The next major any-deer season came in 1949 in Michigan's "Cherry Country" counties centering around Traverse City, and continued through 1951. But 1952 was the first any-deer season when large numbers of antlerless deer were harvested.

Game management's impact continued in 1954 when wild turkeys from Pennsylvania were released at Allegan State Forest. Turkeys are still hunted in the spring, under special permits in the Allegan County area and in parts of the northern lower peninsula. Other game animals that have increased in numbers sufficient for hunter harvests include quail, pheasant, grouse, and squirrel and rabbits.

### ENDANGERED SPECIES — A DNR CONCERN

Also important, is the DNR's non-game management programs, to include protection of endangered and near-endangered wildlife. The concern for survival of the tiny Kirtland's warbler is a good example. The Department maintains a habitat improvement program for the bird, found only in Michigan during the summer months.

Other significant events in Michigan conservation history unfold like this:

Chemical treatment for control of lamprey used successfully under stream conditions, 1957; State Legislature authorizes \$10 million revenue bond program for state parks to be repaid from park permit fees, 1960; coho salmon planted in Michigan waters, 1966, with first runs of mature coho salmon, 1967; Conservation's \$435 million bond ticket for Clean Water and Recreation approved by voters, 1968; "old" Department of Conservation becomes "new" Department of Natural Resources, 1968; and in 1969, Michigan became the first state to cancel registrations for general sale of DDT.

### DNR GIVEN RESPONSIBILITY FOR ALL NATURAL RESOURCES

Beginning in 1970, several pieces of landmark environmental legislation

was passed: Environmental Protection, Truth-in-Pollution, Natural Rivers and Shoreland Protection and Management Acts. In 1973, the state's Inland Lakes and Streams Act was expanded to safeguard "non-navigable" waters; and the DNR was reorganized under Governor Milliken's orders to include responsibilities for natural resources management and environmental protection under a single agency.

Also, there are three areas within the DNR that merit additional mention. The reconstruction of Fort Michilimackinac at Mackinaw City, and a nearby maritime museum, was completed following long-range historical restoration programming approved by the Mackinac Island State Park Commission in 1958. Secondly, starting in 1952, the Department pioneered the use of statistical methods and sample survey techniques in conservation work with wildlife. Thirdly, is the unusual significance of the DNR's Forest Fire Division in Department and Michigan history.

Most Americans have likely heard of the Great Chicago Fire of 1871, when Mrs. O'Leary's cow "apparently" kicked over the lantern that started the blaze, which claimed 250 lives and destroyed 17,000 buildings. But few states had more destructive or more numerous fires in the late 1800's than Michigan.

Also in 1871, forest fires ravaged over 2,000,000 acres of Michigan woodlands and claimed 200 lives, in scattered areas between Holland and Mackinaw City.

"But general conflagrations continued to occur, destroying whole communities in this state with great loss of life and property," says the DNR's Robert Compeau, assistant chief of the Bureau of Resources, and former head of the Forest Fire Division.

### FOREST PROTECTION — MICHIGAN SET PRECEDENTS

"This trend was not reversed until the Department of Conservation tackled the problem and began developing techniques to fight and control fires in our forested lands," Compeau adds. "In 1923, the Department was instrumental in getting the Forest Fire Law through

the State Legislature, and in 1931, the Department established a Forest Fire Experiment Station at Roscommon that has served as a model for firefighters throughout the nation."

It was at the Roscommon facility that many of today's "standard" forest fire fighting techniques were developed, to include use of tracked vehicles and compact large-wheeled jeeps, and on-site drilling methods for water wells.

The DNR established a network of 156 fire detection towers in select forested areas of the state, too, and only in recent years found them outdated. Today, the Department maintains a squadron of 19 airplanes and helicopters used primarily for forest fire and law enforcement assignments.

Has the DNR's forest fire protection work made Michigan's forested lands safer places to live and visit? Here's a statistical comparison: in 1925, 3,887 fires burned 733,750 acres; in 1974, only 6,166 acres were destroyed in 1,029 fires.

"It seems especially fitting to review the challenges and accomplishments of the Department as we enter a new decade," observed Director Tanner. "The Department's record is one that should make all Michigan citizens proud. The Department, too, is committed to continue this significant record of achievement in the years to come, so that future generations may enjoy an even better environment and quality of life than we and our predecessors have strived so hard to provide."

The DNR's policy-making board of directors is the non-partisan seven-member Natural Resources Commission. Appointed by the Governor for four-year terms, the commissioners are generally conservationists of long-standing and exceptional service as citizens to Michigan's many natural resources and environmental causes. Chairmen are selected for single year terms. The Commission meets monthly -- in Lansing and various out-state communities -- and strongly encourages citizen participation in its and the Department's activities. (More specific information may be obtained by writing John M. Robertson, Executive Secretary, Box 30028, Lansing, MI 48909, or by calling him at (517) 373-2352.)



# NATURAL LAKE AGING: A SERIOUS CONCERN?

By DR. GARY F. MARX

"Pollution acts to speed up the natural aging process of the lake." How often have you heard this statement made in relation to the water pollution caused by heavy development of the shores of a previously nice, clean lake? It seems to be one of the most common phrases used when the damage being done to a lake is described. But what does this phrase really mean? If we have a vacation home on a clean lake do we have to worry that the lake will become more and more polluted regardless of what we and our fellow shoreline owners do to keep that from happening?

The implication certainly seems to be that even if man didn't jam the lake's shoreline with resorts and condominiums and dump his sewage into it, that the lake would eventually become a polluted and smelly mess anyway. But, is this really true?

## EUTROPHICATION

Part of the problem with interpreting the validity of the above statement is the definition of the word pollution. In the context in which this phrase is normally used, pollution usually refers to the process known as eutrophication. This word has been given a number of definitions but there seems to be increasing consensus about what phenomena comprise this process. For the purposes of this discussion, I will define the eutrophication of a lake as increasing frequency of surface blooms of blue-green algae (those are the ones that form the thick green scums on the surface of the lake during the summer and smell so bad after a while), rapidly decreasing levels of oxygen in the bottom waters of a lake (this threatens these cold water fish that live near the bottom where it's cool during the summer), and increasingly thick and extensive patches of aquatic plants along the edges of the lake.

This process occurs as a result of increased in the amount of plant nutrients entering the lakes. The most common sources of these nutrients are sewage, discharged intentionally (from a treatment plant) or accidentally (from leaking septic systems), and from fertilizer that washes into the lake from lawns or farm fields. These plant nutrients allow the free floating algae in the lake (the phytoplankton) to grow to a much greater extent than would be possible with natural rates of nutrient supply. As these algae grow and die, they fall to the bottom of the lake where they are broken down or decomposed by oxygen-

consuming bacteria. As the amount of algal growth increases, more and more algae fall to the bottom and are decomposed, using up more and more oxygen. The oxygen-depleted conditions which result are characteristic of a eutrophic lake.

This increased growth of phytoplankton not only causes oxygen problems at the bottom, but results in severe nutrient imbalances in the water. This condition tends to favor the growth of undesirable blue-green algae over the normally-dominant and more desirable diatoms and green algae. As more nutrients are dumped into the lake, the blue-green algae become increasingly dominant and because they float (unlike the other algae), on calm days they rise to the surface forming the ugly green scums characteristic of polluted or eutrophic lakes.

All algae produced as a result of this nutrient enrichment ends up on the bottom where it is decomposed into the plant nutrients that it is made of. Where this occurs in relatively shallow water (20 feet or less), it provides perfect conditions for the growth of aquatic plants, accounting for the third characteristic of eutrophication that I mentioned earlier.

## Natural Aging Process

The process of eutrophication just described can be separated from the process of sedimentation or the filling in of a lake basin with sediment washed from shore or brought in by streams that flow into the lake. This is a process that occurs in all lakes, depending on the geology, the extent of erosion in the lake's watershed, and the degree of nutrient enrichment in the lake. While eutrophication of a lake may increase the rate of sedimentation due to increased growth and sinking of algae, this process will occur at some natural rate regardless of whether artificial inputs of nutrients occur or not. This is the process referred to as the natural aging of a lake. This process need not, for most of the life of a lake, be accompanied by the undesirable phenomena we associate with eutrophication. If left undisturbed, lakes may retain a high oligotrophic (clean, unpolluted) character for many thousands of years.

## Paleolimnology

Even lakes that do become eutrophic as a result of man's activity may return to their natural oligotrophic state if man's influence is removed from the lake's drainage basin. Evidence for this comes from the study of paleolimnology. Limnology is another word for aquatic or freshwater ecology, and the

prefix "paleo" is the same as that in the word paleontology, which is the study of fossils. So paleolimnology is essentially the study of the fossil history of lakes. This type of study is done by taking a core sample of the bottom sediments of a lake using something similar to a piece of plumbing pipe. The sediment core is cut into sections which are analyzed to determine how old they are using radioactive carbon dating and other similar methods. Then each section is examined for fossil remains that may remain from populations of algae and microcrustaceans (tiny floating animals that make up the zooplankton) that existed during that period of the lake's history.

Different groups of algae and zooplankton are characteristic of eutrophic that oligotrophic lakes, so the fossil organisms found in the sediment core indicate that the state of the lake at a particular time in history. This type of study works because when dead algae and other organisms sink to the bottom and pile up in the sediments, they tend to remain undisturbed over time, especially in the deep portions of lakes. In this way, newer sediments pile on top of older sediments resulting in a core sample in which the order of sediments represents the order in which they were deposited on the lake bottom, giving us a chronological history of the biological status of the lake.

One such study of a lake in Italy provides some evidence that lakes may remain in an oligotrophic state for long periods of time; and in fact, may recover from a eutrophic state once removed from man's influence. The lake studied here was Lake Ianula, which was formed in the collapsed crater of a volcano some 23,000 years ago. The study of the sediment core showed that the lake existed as a soft water, oligotrophic lake for over 20,000 years until man stepped in. This occurred around 171 B.C. when the Romans constructed a major road through the watershed of Lake Ianula. The construction and use of the road resulted in great increases in erosion in the area, resulting in large, new inputs of plant nutrients into the lake. The lake reacted as described above, developing large blooms of blue-green algae, oxygen depleted conditions on the bottom, and large stands of aquatic plants. All these changes can be seen by observing the remains of these organisms in the core sample. When the Roman empire declined, so did use of the road and lake conditions gradually returned to the natural soft water, oligotrophic state that existed earlier. Since medieval times, pig farming has increased in the basin of Lake Ianula and the process of eutrophication has begun again, presumably due to this influence.

This study shows that natural aging

[Continued On Next Page]



# Natural Resource Commission Policy Body For DNR

The seven members of the Natural Resources Commission promulgates rules, determines policy, and approves applications for permits which deal with Michigan's Natural Resources. Members are appointed by the Governor and approved by the Senate. The present commission members together with a short biographical sketch are listed below.

## HILARY F. SNELL

Hilary F. Snell of Grand Rapids began his third term on the Natural Resources Commission in January. He has served since April 2, 1971 and was chairman in 1974.

An attorney for the Grand Rapids law firm of Schmidt, Howelett, Van't Hof, Snell and Vanna. He is a Phi Beta Kappa graduate of Colgate University and a graduate of the University of Michigan Law School.

He was formerly president of the Grand Rapids Junior Chamber of Commerce. Snell has been a member of various committees of the Grand Rapids Bar Association, and the West Michigan Environmental Action Council.

"Hillary Snell brings to this important commission impressive credentials as a conservationist and environmentalists. He has worked closely with a number of Michigan conservation and environmental groups on behalf of such legislation as House Bill 3055, which gives citizens the right to sue polluters, and on behalf of such programs as the Clean Water and Recreation Bond issues.

## JOAN L. WOLFE

Joan L. Wolfe of Belmont, who served as chairman of the Natural Resources Commission for 1977, believes DNR employees should especially feel free to express their points of view on conservation and environmental matters to the Commission, which sets Department policy.

As chairman, Mrs. Wolfe became one of the nation's foremost women leaders in environmental and conservation efforts by assuming the leadership role for a citizen-appointed group that oversees the state department responsible for management of Michigan's natural resources and charged with environmental protection activities that affect the state's nine million residents.

She was the first woman appointed to the Commission when Governor William G. Milliken selected her for the job in 1973. In

addition to her efforts as chief lobbyist for the successful passage of Michigan's Environmental Protection Act (1970) and the Inland Lakes and Streams Act (1972), she also was founder and first chairman of the West Michigan Environmental Action Council (1968-70).

A 1951 University of Michigan graduate, Mrs. Wolfe is married to a Grand Rapids area dentist and is mother of two grown sons.

## PAUL H. WENDLER

Paul H. Wendler, longtime sportsman and Saginaw civic leader is the most recent appointee to the Natural Resources Commission.

Wendler, former president of the Michigan United Conservation Clubs (MUCC), and the Saginaw Field and Stream Club, is president of the Michigan Wildlife Foundation and the National Businessmen's Alliance of the National Wildlife Federation.

He replaces Carl T. Johnson of Cadillac, who is retiring from the commission after 17 years, for a four-year term beginning January 1, 1980. Senate confirmation is required.

"Paul Wendler will bring to the Natural Resources Commission not only the perspective and dedication of a sportsman but also a diverse background in management, political government and law enforcement. He will bring a strong voice for sports interests, as well as the kind of experience and judgement that will serve all citizens of Michigan."

He is a member of the MUCC board of Directors, the Saginaw Rotary Club board of directors, a life member of the National Wildlife Federation, and a member of the Saginaw Chamber of Commerce.

In 1978, he received an Honorary Doctorate from Saginaw Valley State College and a special award from National Wildlife Foundation for Outstanding Service. He is listed in "Who's Who in the Midwest," "Who's Who in the Steel Industry" and "Who's Who in America."

## JACOB A. HOEFER

Dr. Hoefer is professor of Animal Husbandry at Michigan State University. He is also Assistant Dean of the College of Agriculture and Natural Resources, and of the College of Natural Science.

He graduated with honors with a Bachelor of Science degree from Purdue University in 1937, and returned during the forties to earn a Master of Science Degree and Ph. D Degree.

He has taught at Purdue University, Oklahoma State University and became Professor of Animal Husbandry at MSU in 1950. He is Director of Kellogg Biological Station having been appointed to that position in November 1977.

Dr. Hoefer has written many scientific

articles on animal nutrition, swine nutrition, production and management.

He received the College of Agriculture's Distinguished Teacher Award in 1956. He is a FELLOW of the American Association for the Advancement of Science.

## E.M. LAITALA

E.M. (Matt) Laitala, 72, of Hancock, was appointed to the Conservation Commission by Governor Swainson in April, 1961, and has served continuously since that time. His most recent appointment was by Governor Milliken in January, 1975.

Chairman of the Commission in 1965, 1970 and 1973, Laitala is a member of the National Wildlife Federation, Friends of the Wilderness, Wilderness Society, Michigan Parks Association, Michigan Outdoor Writers Association and many other state and national organizations.

Laitala is a graduate of Stout State University (Wisconsin) and in July, 1969, he was honored by the University as a distinguished alumnus. The citation lauded him as an "educator, author, printer, civic leader, articulate spokesman in the field of conservation, and vice-consul of Finland, knighted for dedicated service."

## CHARLES G. YOUNGLOVE

Charles G. Younglove of Trenton has been a Natural Resources commissioner since his appointment by Governor William G. Milliken in 1972. His current term, from a 1975 reappointment, expires December 31, 1982.

A labor leader, Younglove, 61, directs the Detroit District of United Steelworkers of America. Active in Michigan's labor movement since his graduation from high school in Carleton. Younglove's labor career began in 1940 when he became a union steward while working for Great Lakes Steel. Six years later he became president of his local and has continued to hold top posts in the union.

As union president, Younglove launched a strong sports and recreation program which included a gun club and hunting and fishing contests.

Younglove is a member of numerous community boards and committees which include the United Foundation, Michigan Welfare League, the National Association for the Advancement of Colored People - he is a life member - The Migrant Labor Committee, the Michigan Heart Association, the Kidney Foundation of Michigan, the National Safety Council, the Economic Club of Detroit, and others.

## HARRY H. WHITELEY

Harry H. Whiteley, of Rogers City was recently reappointed to another four-year term on the Michigan Natural Resources Commission

Whiteley has been a member of the

[Continued On Next Page]



Commission since 1961. He also served as Chairman in 1964, 1968, 1972, and 1976.

Whiteley began his working career at age 22 on the staff of the Midland Daily News, later becoming advertising manager of the Niles Daily Star. In 1949, he joined his father, Hal, in publishing the Presque Isle County Advance and in 1964 became owner, president and publisher of Advance Publishing Co., Inc.

In 1968 at a joint session of the Michigan House and Senate, Governor George Romney awarded Whiteley a "Certificate of Honor" for distinguished leadership. He was given a similar honor the following year when he was named Rogers City Outstanding Citizen of the Year. He was named "Conservationist of the Year" in 1969 by the Michigan United Conservation Clubs.

## LAKE AGING ...

(Continued From Page 7)

(filling in) of a lake can take many times the length of human civilization to date. It and similar studies suggest that without human disturbance, lakes may remain in a clean, unpolluted state for thousands upon thousands of years, making it unlikely that we or our ancestors will ever have to worry about natural aging of a lake causing a decline in water quality or even causing a change in the way our lake looks, feels, or smells.

It seems possible that the people who encourage the widespread dissemination and use of the phrase "pollution acts only to speed up the natural aging process of a lake" may be the people who are polluting our lakes and wish to have you believe that what they are doing is only slightly accelerating something that would happen to all our lakes eventually regardless of all our pollution control efforts.

If we can clean up the pollution in our lakes today, and keep from polluting them tomorrow, they will remain valuable and pleasurable resources for many years to come.

### About the author:

Dr. Gary F. Marx has PhD. degree in aquatic biology from Michigan State University. His doctoral research was done in the area of lake eutrophication. He is now employed as a staff biologist for Lake Michigan Federation.

# NRC Acts To Save Lakes: Special Water Craft Controls

Procedure and Timetable for  
Establishing special Local watercraft  
controls

1. The lake association should formulate and approve the special watercraft control desired. A majority of the riparian property owners around the lake must be in favor of the control if it is to be given favorable consideration by local government and by the NRC.

2. The officers of the association should request an opportunity to present their proposed watercraft control to the township board and request the board adopt a resolution in support of the control. This resolution should be certified and sent to:

Roger L. Wood  
Marine Safety Section  
Law Enforcement Division  
Department of Natural Resources  
Steven T. Mason Building  
Box 30028  
Lansing, MI 48909

3. The DNR will hold a public hearing in the local area to collect facts and ascertain the desire of the majority of riparian property owners. This hearing will be held within 4-6 weeks from the receipt of the resolution from the Township Board. A decision is delayed for 10-14 days after the hearing to give interested persons time to send in written statements or additional information relevant to the resolution.

4. If the Law Enforcement Division feels that the regulation should be recommended, it will notify the Director, and he will ask the Natural Resources Commission to give tentative approval. Depending on timing of hearings and NRC meetings, this approval is usually given 6-8 weeks subsequent to the fact-finding hearing.

5. If the NRC gives tentative approval, the DNR will hold a formal public hearing within 4-6 weeks of the tentative approval by NRC. At this hearing the specific proposed rule(s) is presented for citizen review and comment. Following the formal hearing (if general reaction is

favorable) proposed rules are turned over to the local unit of government for acceptance or rejection.

6. The action of the local government (approval or rejection) is communicated to the DNR.

7. The DNR presents the rules to the Legislative Service Bureau and Office of the Attorney General for approval. These offices review proposed rules for form, numbering and legality. Normal review process is 2-3 weeks. If approved, it is returned to the Natural Resources Commission for formal and final adoption.

8. Proposed rules are presented to the Governor's office for consideration.

9. If approved, the DNR sends it to the local government for adoption, and Ordinance. A local ordinance is required in order to insure enforcement by state and local law enforcement officials.

10. When an ordinance has been adopted a copy is filed with the Secretary of State and becomes effective 15 days after filing.

This process, which takes from 10-15 months may seem futile, but  
**WHAT IS A GOOD LAKE OR  
STREAM WORTH?**

See page 23 for special watercraft controls established by NRC in 1979 on 39 inland lakes.

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# ML&SA NEWS

By Cecile Harbour

## NEW ML&SA MEMBERS

**Region IV**  
**PINE LAKE IMPROVEMENT ASSOCIATION, Kent County**  
Kathy Schmidt, President

**Region V**  
**LAKES PRESERVATION LEAGUE, INC., Lenawee County**  
John Davis, President

**PONTIAC LAKE PROPERTY OWNERS ASSOCIATION, Oakland County**  
John Johnson, President

**Region II**  
**HESS IMPROVEMENT ASSOCIATION, Newaygo County**  
Willis Timmer, President

**Region IV**  
**GARVER CONSERVATION & IMPROVEMENT ASSOCIATION, Cass County**  
James L. Gibney, President

**AUSTIN LAKE IMPROVEMENT ASSOCIATION, Region IV.** The Lake Board (PA #345, 1966) formed to determine if any restraion (deepening) is feasible, has received the engineering report. A recommendation was made to study the use of aeration to dissipate the sediment. Clean-Flo of Michigan made a presentation of its operation at the December Lake Board meeting.

**BEAVER LAKE ASSOCIATION, Region III.** The legal lake level was set Aug. 10, 1979 to the top of the existing dam. Beaver dams have to be destroyed regularly to prevent flooding in the area. A committee has been formed to monitor any shoreline work that may be permitted by the DNR.

**CLEAR LAKE IMPROVEMENT ASSOCIATION, Region IV.** Because the lake has been planted with tiger muskies, it is closed to spearing. Size limit for the muskies is 30 inches and they can be legally taken only with artificial lures. A Boy Scout troop collects newspapers in the area as a fund raiser.

**DEVEREAUX LAKE PROPERTY OWNERS ASSOCIATION, Region III.** Accomplishments this year included the arrangement for group rates for septic tank pumping by a local contractor; action initiated to have property in the area set aside as a sanctuary because it is a wetland in the watershed; a history and statement of purposes for the association were written; the Northeast Council of Governments (NEMCOG) has responded to a request for information on lake associations and has promised to help provide speakers for future meetings.

**INDIANWOOD LAKE IMPROVEMENT ASSOCIATION, Region V.** From July 7 through August 3, the Inland Lake Weed Harvesting Co. removed 300 tons of weeds. A crew of 35 people cleaned, improved and enlarged the beach area, adding picnic areas and resanding the beach. The association sends the Riparian to all riparians and non-riparians in the area. (We urge all families that receive this gift to apply for association membership).

**KEARSLEY LAKE ASSOCIATION, Region V.** By-laws for this year-old association have been drafted and plans are being completed for the publication of a newsletter. There is a volunteer Editor. The Army Corps of Engineers will inspect the dam starting in January. The work will necessitate the raising and lowering of the water level and the occasional closing of the road over the dam.

**LAKE FENTON PROPERTY OWNERS ASSOCIATION, Region V.** A Riparian subscription coupon has been included in the LFPOA newsletter. Several individual subscriptions have already been received. Other associations may wish to do this so that their members can subscribe on an individual basis. (The Riparian appreciates this gesture.) Two studies have been made recently on the lake by college students. One covers the cooperation between the DNR, the Township and the Association in relation to the public access site. A rezoning issue affecting land in the area is being opposed by the association.

**LAKES PRESERVATION LEAGUE, Region V.** We wish to welcome this association of 279 members to ML&SA. They represent Devils Lake and Round Lake in the



northwest corner of Lenawee County. Concern has been expressed about ground water supplies, due to the extensive agricultural irrigation in the area.

**LAKEVILLE LAKE ASSOCIATION,** Region V. The Lake Board PA #345, 1966) has approved an engineering feasibility report and the assessment rolls were approved at public hearings which will cover Financing for one year. Efforts are now being made to arrange proper financing for the purchase of a weed harvester for delivery this Spring.

**MORTON TOWNSHIP TRI-LAKES ASSOCIATION,** Region II. The association has located two rearing ponds to raise walleyes - one to full-size for transfer to the Tri-Lakes and one smaller lake to raise walleyes from fry stage to fingerling size. A source of full-grown walleyes is needed for the eggs. Any help appreciated - contact the ML&SA Secretary. Approximately 2000 6" tiger muskies have been planted and should reach 30" in 3 years.

**PINE LAKE ASSOCIATION,** Region IV. In order to improve water safety, the association plans to send letters to known violators advising them that the sheriff will be notified if unsafe activities continue. The association plans to back up the letter with two signed complaints in the files. The production of this newsletter is paid by local advertising.

**PINE LAKE IMPROVEMENT ASSOCIATION,** Region IV. We wish to welcome this association to membership with ML&SA. It is located in Kent County just east of Cedar Springs.

**PONTIAC LAKE PROPERTY OWNERS ASSOCIATION,** Region V. The association became the first 1980 member of ML&SA and we welcome it aboard. It is located in Pontiac, Oakland County.

**PINE LAKE PROPERTY OWNERS ASSOCIATION,** Region V. The annual meeting is scheduled for March 9, 2:00 p.m. at the Pine Lake Country Club. Responses to a questionnaire circulated last July puts BOATING SAFETY as the number 1 priority by those who responded (60 of 175), with Weed Harvesting, Boat Population and Water Pollution following in that order.

### WANTED: CASES AT LAW

It was suggested at the last Annual Meeting of ML&SA that the state-wide organization could assist local associations who are in litigation or who expect to become involved in litigation by serving as

### APPLICATION FOR MEMBERSHIP IN MICHIGAN LAKE AND STREAM ASSOCIATIONS, INC.

(Name Of Organization) \_\_\_\_\_ (Lake or Stream) \_\_\_\_\_

(Address) \_\_\_\_\_ (Township) \_\_\_\_\_ (County) \_\_\_\_\_

(City) \_\_\_\_\_ (Zip) \_\_\_\_\_

#### LAKE INFORMATION:

Year Organization was formed \_\_\_\_\_ Lake Location (County) \_\_\_\_\_ Lake Size \_\_\_\_\_

Are you incorporated? \_\_\_\_\_ Under What Act? (Summer Resort #137) \_\_\_\_\_ (Non-Profit #327) \_\_\_\_\_

President's Name & Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(If communication should be sent to a person other than the president, please list below.)

\_\_\_\_\_

\_\_\_\_\_

Dues for membership in ML&SA for 1980 includes a base amount of \$25.00 for associations with less than 150 members or \$35.00 for associations with 150 or more members plus 18 cents per member. Associations who join after the first of the year will pay a pro-rated amount for the remaining months of the year. (i.e., An association with 60 members joining in February would pay 10/12 of \$25.00 plus \$8.40 or \$27.87).

A check to cover dues should be made payable to Michigan Lake and Stream Associations, Inc., and sent along with the completed application to:

Michigan Lake and Stream Associations, Inc.  
9620 East Shore Drive  
Portage, MI 49002

a clearing-house of information from lake associations that have been involved in cases at law. The officers of the Association concur with this suggestion, and appreciate the offer of Margaret Peterson of Three Lakes Association, Antrim County, to undertake this useful resource. Even though the outcome of any case may not have been favorable to the lake association, the procedure and kind of evidence submitted in the case could be of benefit to another association. The information submitted should include the following:

1. Name and location of lake association.
2. Name and address of attorneys.
3. Plaintiffs and defendants in the case.
4. What issue was involved?
5. What State Statutes were involved?
6. What local governing agencies and ordinances were involved?
7. Identify, with dates, steps that were taken.
8. What were the counter-moves and their outcome?
9. Who in your association would be willing to supply additional information if requested?
10. What did the litigation cost the association?

The information should be sent to: Peg Peterson, Rte 1 Box 196-B, Central Lake, MI 49622 (Only that information which may be reported to other associations or which may be printed in The Michigan Riparian should be reported.)

Donations to underwrite this effort should be made to Michigan Lake and Stream Associations, Inc., and mailed to:

Mrs. Cecile D. Harbour  
9620 East Shore Drive  
Portage, Michigan 49002

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# MICHIGAN SAND DUNES

## "A Case Of Irreparable Harm"

Clete Brummel  
Professor of Biology  
Lake Michigan College  
Benton Harbor, Michigan  
October 30, 1979

Dunes are among the youngest land features of our state -- the oldest dunes are little more than 10,000 years old, while most of the big dunes along Lake Michigan are a mere 3,000 to 4,000 years old. The sand itself is much older and arrived subsequent to the recession of the last four great continental glaciers. When the glaciers melted back the surface material they carried -- glacial drift -- was left behind. Later, as water levels began to drop, vast areas of sand were exposed to coastal westerly winds, which sorted the sand as with a giant sifter so that about 80 percent of the grains ranged from 1/100 to 1/50 of an inch in diameter. However, any obstruction on the beach can trap blowing sand to start the formation of a dune.

When natural successional forces and processes prevail, the result, spanning several thousands of years, is the formation of foredunes and mature dunes. As this process occurs there is an increased diversity of flora and fauna which are capable of occupying and surviving in this tenuous and harsh environment. This increased development of habitats and niches allows the existence of unique flora and fauna.

The uniqueness of Michigan sand dunes has been recognized and studied by several noted ecologists including Cowles, Shelford, and Clements. These dunes provide an inexhaustible array of geological, biochemical, biological and aesthetic features, which will continue to stimulate many for many generations.

Michigan sand dunes are of particular interest to many and diverse persons or groups. These include residents of dune properties, sand mining companies, educational institutions, state and national governments.

Examples of state and government bodies which recognize the uniqueness and preservation of these dunes include Grand Mere, Ludington and Hoffmaster State Parks; and Sleeping Bear National Park and Indiana National Lake Shores.

It is with this diversity of interests in Lake Michigan Sand dunes that the present conflicts of wisest use exist.

Sandmining in Michigan is a substantial business -- more than 5.3 million tons were mined and removed from dune areas in 1976. Although sand sources include inland dunes and other sand deposits, more than two-thirds comes from coastal dunes along Lake Michigan. Coastal dune sand has a unique purity and uniform grain size, and the ease of its extraction, matched with nearby transportation routes, makes it valuable to the foundry industry for producing molds and cores, especially for the automobile industry.

A dune environment is fragile at the best of times, but an exhausted, unrestored mine site can be a potential ecological disaster. The land, stripped of its stabilizing flora and fauna and exposed to the erosive forces of wind and water, would in itself be left a useless part of our landscape, but worse than that, it could damage all of the surrounding landscape as well, whether it consists of other dunes, residential or commercial areas, or farmland.

Because of this potential danger to the dune ecology, and that the dune environment is a special, fragile place, the majority of residents and legislators of the State of Michigan passed, in 1976, the Sand Dune Protection and Management Act. The Act provides for the "study, protection, management and reclamation of the Great Lakes sand dunes" and gives the Department of Natural Resources, and especially the Geological Survey Division, the authority to administer and enforce the Act.

It is interesting to note the sequence of the words that are used to describe the implications of this Act, namely to "study, protect, manage and reclaim."

The Act, in Section 3, states that the "department, by July 1, 1977, shall make or cause to be made a comprehensive study and inventory of Great Lakes sand dunes areas in the state."

Some of the studies and inventories have been done, such as designation of "Barrier Dunes," but many of the other mandates (exonomic study, protection of certain dunes through purchase by the state or interests, methods for recycling, etc.) have

not been completed. The department claims that monies have not been available to complete the studies and the time frame was insufficient.

But the Act does not say "if the monies are available and enough time can be set aside, the studies will be completed by July 1, 1977."

The authors of the Act recognized the lack of knowledge of sand mining and particularly dune ecologies; and as such, mandated comprehensive studies to be quickly completed. Only in this way, could there be an effective management of sand mining in the state. **The failure to complete these studies undermines the validity of the permit process.**

In Section 4 of the Act, it states, "After July 1, 1977, a person or operator shall not engage in sand dune mining with the Great Lakes sand dunes without first obtaining a permit for that purpose from the department. It is logical to interpret the intent of the Act and its authors that Section 4 and following sections be not allowed or implemented until after Section 3 has been completed.

Also, Section 9 of the Act says that a sand mining permit shall be denied if upon review of the environmental impact statement it determines that the proposed sand mining operation would have an **irreparable harmful effect** on the environment. There has been no definition of an "irreparable harmful effect on the environment."

This statement is subject to many different interpretations. To a resident in the proposed mining area it might mean one thing, to the sand mining company another, and to the DNR's Geological Survey Unit or the Commission, yet another. Until this statement is further defined and criteria developed to determine when or if irreparable harm may be done, the purpose of the Act is not fulfilled.

Further comment on the Environmental Impact Statement required by the project originator is necessary. Up until 1970, when the National Environmental Policy Act was passed, a proposed industrial, commercial or individual project of large magnitude



was not subjected to take into consideration the effects on the environment the proposed project would have. Also, not until the Sand Dune Protection and Management Act was passed by the Michigan legislators in 1977, were the sand mining companies mandated to study and consider all of the environmental effects of their proposed project. If nothing else positive is said about these acts, there is now a mechanism for making one more aware of the environment in which he or she lives and a means for changing behavior.

Granted, these Federal and State impositions and guidelines are sometimes nebulous, time-consuming, subject to different interpretations, and sometimes add to the cost of the proposed project, but the investment of taking into consideration the effects of the proposed project on the environment (As NEPA requires "Full disclosure") and the searching and consideration of feasible alternatives will, in the long run, have a better cost/benefit relationship.

It is better to do it this way than to say later, "Sorry, I goofed." Unfortunately, we seem to be crisis-oriented; that is, we often react to a situation when most of the damage has already been done. However, I think Americans are gradually getting more astute in having the foresight and ability to see the benefits of long range planning in the wisest use of our natural resources.

This was evidenced recently by Department of Natural Resources decisions not to permit sand mining in two specific sites in Southwestern Michigan. Unfortunately, the DNR made these decisions only after extensive public testimony.

This change in behavior, i.e., the DNR was originally going to permit sand mining in these specific sites, but then changed its mind, points out the fact that qualified public and citizen input earlier in the decision-making process is vital.

But what about the rights of the owner of the sand areas, such as the sand mining company? Must he give up the opportunity to mine sand on his land for the sake of others? Recent Supreme Court ruling indicate the courts are holding protection and regulation acts do not raise a "taking of private property" problem. I think cooperative alternatives other than total extraction of these unique sand dunes may be proposed and agreed upon, so that all parties may benefit.

Section 101 of the National Environmental Policy Act adeptly specifies goals that all of us must follow:

"1) Fulfill the responsibilities of each generation as a trustee of the environment for succeeding generations,

2) Assure for all Americans, safe,

healthful, productive, and aesthetically and culturally pleasing surroundings,

3) Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences,

4) Preserve important historical, cultural, and natural aspects of our heritage and maintain, where possible, an environment that supports diversity and variety of individual choice,

5) Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities, and,

6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

A legitimate question can be asked, "Are these goals attainable?" I would say, "Yes." But it will involve a lot of sacrifice, compromise and cost for all of us.

The Sand Dune Protection and Management Act is the official recognition that Michigan wants to keep its sand dunes, and that the dune environment is a special, fragile place - one that deserves our protection as a truly unique natural resource. Even a DNR environmentalist attested to this fact when he said, "This and mining site exhibits a very diversified form of vegetation and some of the most prominent and stabilized sand dunes, not only in Michigan, but within the entire country. There are other areas and sources of sand that can be removed and utilized for industrial purposes that would have a much lesser impact than the removal of sand dune areas in Southwestern Michigan.

People are seriously considering what is "irreparable harm," and they are taking action to see that it does not occur in their unique natural areas. Working together reaps the greatest benefits.



## LAKE BOARDS FORMED TO SOLVE LAKE PROBLEMS

The Michigan legislature passed the "Inland Lake Improvement Act" in 1966, and it became effective on October 26, 1966. The Act was passed for the purpose of improving certain inland lakes. It also authorized the "dredging and removal of undesirable materials from lakes; the acquisition of lands and other property by gift, grant, purchase or condemnation; the raising of money by taxation and special assessments for the purpose of this act". It also provided for review and appeal, and prescribed the duties and powers of the legislative bodies of local units of government and the department of conservation (now DNR).

During the past 13 years thirty (30) lake boards have been formed in 17 counties of the state. The greatest number, six, have been formed in Oakland County. Livingston and Kent counties tie for second place with three each. Four counties had two and the rest one.

The reasons for forming lake boards and the number formed for that purpose follows:

REASON	NUMBER
Dredging	12
Weed Control	8
Combination Weed Control & Dredging	3
Lake Study	3
Central Sewer System	2
Lake Level Stabilization	1
Remove Sawmill Deposits	1

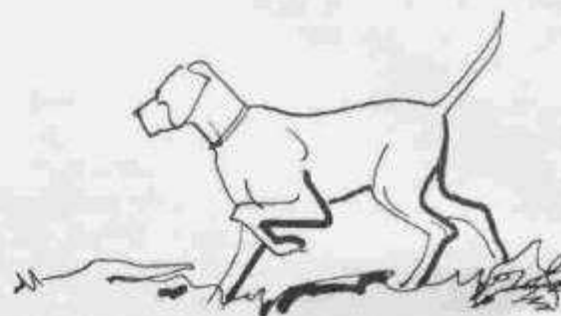
How successful have these Boards been? Fifteen or 50% are still pursuing their goal. Eight disbanded their project before it was undertaken due primarily to high cost. Three disbanded before the project was completed and three completed their project and then disbanded.

The Board may be formed by a motion of the local governing body "in which the whole or any part of the waters of any public inland lake is situated, or by petition of 2/3 of the free holders owning lands abutting the lake, for the protection of the public health, welfare and safety and the conservation of the natural resources of this state, or to preserve property values around a lake..."

[Continued On Page 22]



# SEPTIC SNOOPER



"My septic system works just fine. I'm not polluting the lake." How many times have you heard lakeside property owners say that? Or, you may have heard this comment: "We think the seepage from our septic system is getting into the lake, but we can't prove it. How can we find out for sure?"

The conventional method which

used dye and collection of water samples often failed to pinpoint problem areas and failed to provide accurate relative conditions around the lake. It was at the same time costly and time consuming.

It has recently been discovered that groundwater seepage into porous-bottom lakes is a major factor in lake condition. A report by K-V Associates

of Falmouth, Massachusetts states, "The contribution of nutrients from subsurface discharged of shoreline septic units has been estimated at 30% to 60% of the total nutrient load in certain New Hampshire lakes. Individual plumes from shoreline septic systems are frequently responsible for thick algal patches which develop along sandy beaches."



Left: Terry Hammar, Right: Stuart Skinner





Stuart Skinner with groundwater directional flow probe.



Terry Hammar with pump to collect subsurface water sample.

A new electronic device, the "Septic Snooper" may help to answer questions riparian property owners have about their septic systems. The "Snooper", developed by Dr. William B. Kerfoot and Stuart Skinner of K-V Associates is a combined fluorometer/conductance device. "It consists of a sub-surface probe, the water intake system, the analyzer control unit and the graphic recorder. Initially the unit is calibrated against stepwise increases of a wastewater effluent, of the type to be detected, added to the background of lake water. The probe of the unit is then placed in the lake water along the shoreline. Groundwater seeping through the shoreline bottom is drawn into the subsurface intake of the probe and travels upwards to the analyzer unit. As it passes through the analyzer, separate conductivity and specific fluorescence signals are generated and sent to the analog computer circuit which compares the signal against the standard to which the unit was calibrated. The resultant signal, as a percentage of the standard, is continuously docu-

mented on a strip chart recorder as the boat moves forward. The analyzed water is continuously discharged from the unit back into the receiving water. Wherever discharges of wastewater plumes are located, water samples are taken at the peak and analyzed by EPA standard methods for chemical content of the plume."

The U.S. Environmental Protection Agency (EPA has contracted with Dr. Kerfoot's firm K-V Associates, for a recently completed study of some 35 lakes, including Crystal Lake, Benzie County, and Crooked-Pickrel Lakes, Emmett County. EPA has also contracted with a private consulting firm from Chicago, WAPORA, for a study of 8 lakes in southwestern Michigan which include Sister Lakes, Indian and Pipestone lakes. The pictures accompanying this article were taken at a demonstration and explanation of the equipment and process at Indian Lake on October 25, 1979.

The cost for the survey of the 8 Cass County lakes is approximately \$25,000.00 for a total shoreline

distance of about 40 miles. The average per mile cost turns out to be about \$625.00.

The lake shoreline is a particular sensitive area since 1) the groundwater depth is shallow, encouraging soil water saturation and anaerobic conditions; 2) septic units and leaching field are frequently located close to the waters edge, allowing only a short distance for bacterial degradation and soil adsorption of potential contaminants; and 3) the recreation attractiveness of the lake shore often causes temporary overcrowding of homes leading to hydraulically overloaded septic systems. Groundwater inflows frequently convey wastewaters from nearshore units through bottom sediments and into lake waters, resulting in macrophyte growth and algal blooms, particularly in porous soils found on glacial outwash plains.

For additional information, call or write: K-V Associates, 49 Ranson Road, Falmouth, MA 02540 (617) 540-0561.



# Toxic waste panic — won't help cleanup

Health experts view  
water problems

Adrian area  
shows traces  
of carcinogen

LANSING, Mich. (AP) — Although the Department of Natural Resources is partly at fault for state neglect of pollution problems, all of society shares the blame, Michigan's top resource regulator says.

But pointing the finger of responsibility will not clean up 50,000 sites where Michigan's underground water supplies are threatened by potential contamination, DNR Director Howard Towner said Wednesday.

State senators considering  
tougher toxic waste rules

LANSING, Mich. (AP) — The soil beneath playgrounds and gardens around an Adrian chemical plant are laced with a toxic cancer-causing substance, according to tests by state environmental officials.

## Acid knocks out B.C. sewage plant

## Toxic wastes 'sleeping giant'

Three recent laws passed by the Michigan legislature are designed to stem the danger from misuse and improper disposal of solid, hazardous and toxic wastes. Two of those Acts, Act 116, cited as the John C. Hertel Toxic Substance Control Commission Act, and Act 641, known as the Solid Waste Management Act, were both passed by the 1978 legislature and became effective in January 1979. The third Act is the Hazardous Waste Management Act, Act # 64 of the Public Acts of 1979. It became effective on January 1, 1980.

### TOXIC WASTES

Act 116 provided for the creation of a toxic substance control commission to be set up as an autonomous body within the department of management and budget. The commission consists of the director of the department of agriculture, director of the department natural resources, the director of the department of public health and seven citizens appointed by the governor with the advice and consent of the senate.

The duties of the commission include:

1. Investigate all reports, problems, or irregularities which involve a toxic substance or could involve a toxic substance, including illnesses or abnormalities in animal or human behavior, or plant development.

2. Investigate and compile data ... relative to the health safety, or environmental testing program and commercial distribution of a product containing a toxic substance.

3. Alert the governor and the legislature when a potential toxic

substance problem has been identified and coordinate, assist, and monitor the investigation and evaluation of the potential problem by a state agency.

4. Declare a toxic substance emergency upon a  $\frac{2}{3}$  vote of the voting members.

Additional information can be learned by getting a copy of the Act.

### SOLID WASTES

Act 641, the Solid Waste Management Act, became effective on January 11, 1979. It provides that a waste management facility may not be undertaken by a person, county or municipality without a permit from the Department of Natural Resources. An application for a permit may be presented to the local health officer or made directly to the DNR.

The following governmental agencies will be notified when application has been made to construct a disposal facility:

1. Municipality in which facility is proposed to be located.

2. Soil erosion and sedimentation control agency.

3. Other DNR departments with responsibility in land, air or water management.

4. Regional solid waste management planning agency.

A person cannot operate a disposal facility without a license from the DNR. Each license expires in 2 years, but may be withdrawn sooner if violation(s) of the Act occur. A person who violates this act or a rule promulgated under this Act is guilty of a misdemeanor, and may be fined not to exceed \$1,000.00 Each day of

continued violation shall be considered a separate offense.

### HAZARDOUS WASTES

Act 64, the "Hazardous Waste Management Act" became effective on January 1, 1980. The Act provides for a 14 member state hazardous waste management planning committee which must prepare and submit a plan for handling of hazardous wastes to the Natural Resources Commission. The plan must include the following:

1. Disposal facilities must be distributed geographically.

2. Inventory present hazardous waste generators.

3. Inventory present disposal of hazardous wastes.

4. Investigate and analyze methods, incentives and technologies for source reduction.

5. Estimate the public and private costs of hazardous waste disposal.

The act also provides that a separate site approval board of nine persons shall be established in each municipality in which a disposal facility is planned to be located. Methodis of disposal shall be environmentally sound, maximize utilization of valuable resources and encourage resource conservation.

This Act is one of the first in the nation and may well become a model for other states. It will cover virtually every aspect of the production, transportation and disposal of Michigan's annual output of over one million tons of hazardous and toxic substances. It is designed to protect Michigan's resident and tourists from future contamination from factories, haulers and dumps.



# NRC To Consider CCI Land Transfer

LANSING -- The state's Natural Resources Commission, at its November 8-9 meeting in Lansing, will consider approving a major land transfer in Marquette County between the Department of Natural Resources (DNR) and the Cleveland Cliffs Iron Company (CCI). (See map).

Involved in the transfer would be 2,811 acres of CCI land two and one-quarter miles northwest of Marquette with over four miles of Lake Superior frontage and 8,931 acres of state forest land about 17 miles southwest of Marquette.

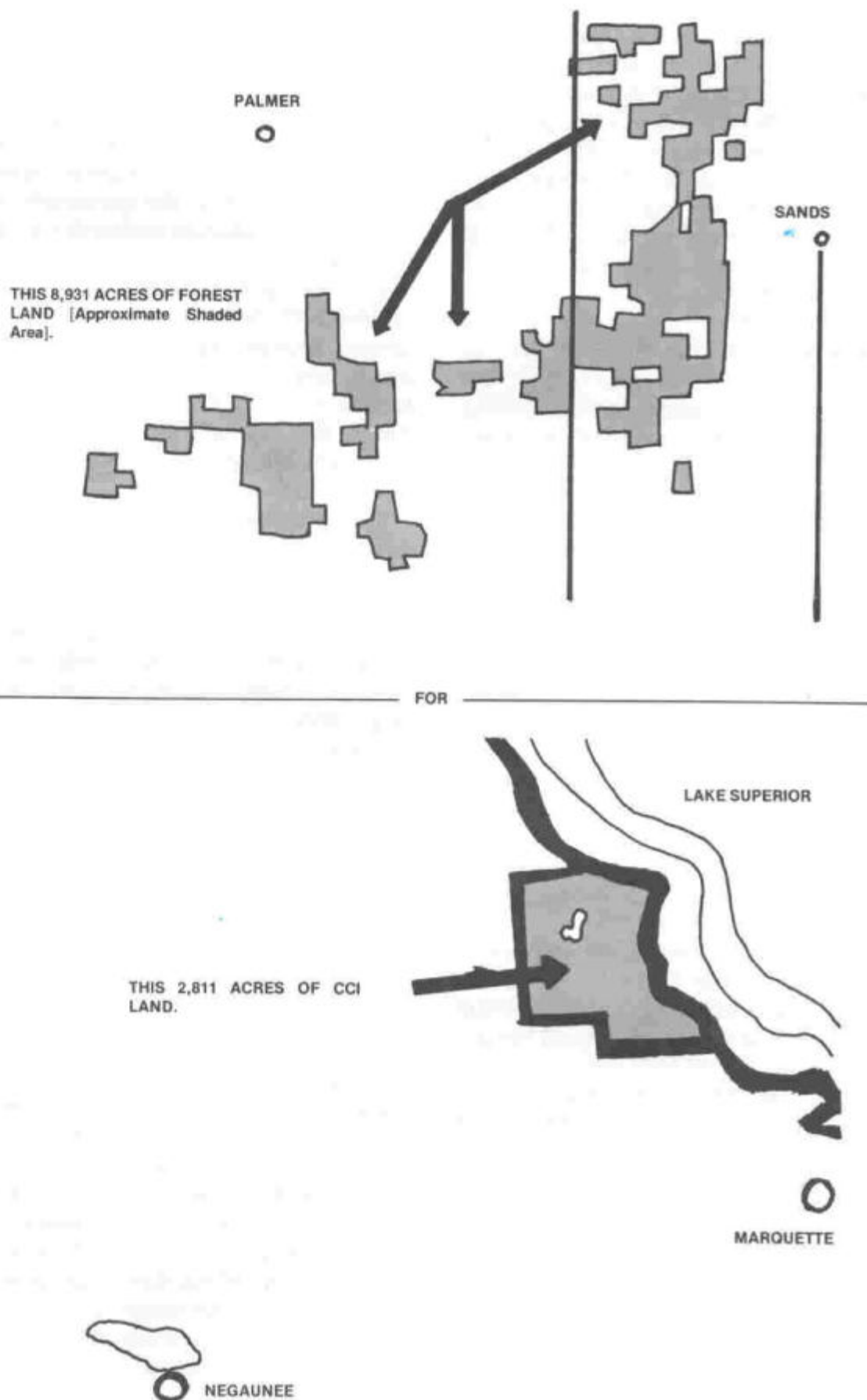
The CCI land is valued at \$1.83 million and the state land at \$1.28 million. CCI would use the exchanged state land for the expansion of iron ore mining over the next 25 years, including the development of a new mine near Cascade.

The state would develop a forest management plan for the CCI land with emphasis on shoreline recreation.

The land exchange has been the subject of two public meetings in Marquette in May and June and extensive environmental review. Those meetings have formed the basis for further refinement of environmental safeguards, which have now been developed into a series of major agreements between the DNR and CCI.

CCI has agreed to do the following:

- Submit a water management supply plan to the DNR for its approval prior to beginning any new mining development requiring additional water. The DNR presently believes that Lake Superior is an available source of process water for expanded mining operations. Any water management supply plan developed by CCI would therefore have to either recommend use of Lake Superior water or demonstrate conclusively that the use of an alternate



[Continued On Next Page]



## NCR TO CONSIDER LAND TRANSFER ...

[Continued From Page 17]

source of water would not adversely diminish the surface and groundwaters in the Upper Peninsula.

--Pay for a hydrological study costing up to \$235,000 on the Sand Plains area in Marquette County, to be conducted by the U.S. Geological Survey.

--Establish setback zones from principle river courses, with a minimum setback of at least 300 feet between the toe of any tailings basin dike and the edges of the Middle Branch of the Escanaba River, East Branch of the Escanaba River, Goose Lake outlet below Section 36, T 47N, R 26W and Green Creek east of Highway M-35.

--Permit free recreational use of land received from the DNR in this exchange, unless such lands are required to support active mining operations or are restricted for safety reasons.

--Notify the DNR at least four years in advance of energy requirements for any new mining operations on lands acquired in this exchange.

--Conduct an archaeological survey prior to any new mining development.

--Reclaim former tailings basins consistent with reclamation carried out on the Humboldt Basin by Michigan Technological University and obtain approval from the DNR prior to the development of any new or expanded tailings basins involving lands acquired in this exchange.

In addition, CCI has increased the final exchange offer by 23 acres, including 10.5 acres and 2,400 feet of frontage on the Little Garlic River, and an additional 12.5 acres and 500 feet of Lake Superior sand beach frontage.

CCI has also offered the DNR an option on an additional 600 feet of Lake Superior frontage should the DNR wish to consider other land exchanges in the future.

### OPPOSITION EXPRESSED

Jim Enger, Southfield, addressed the Commission on the proposed land

exchange involving 2,788 acres of land along Lake Superior owned by the Cleveland Cliffs Iron Company. The land would be traded for 8,932 acres of interior lands and waters now owned by the State of Michigan. Enger said there are grave conservation issues at stake as well as moral and ethical questions. He said there is a question of the Department being party to a dubiously-legal way by which the mining company is securing title to the lands within this area that are held by private parties. He presented an analysis which addresses all aspects of the proposed exchange which was prepared by Arthur Binard, a sportsman who dedicated himself to the preservation of the land in question and who is now deceased.

Director Tanner said the analysis as highlighted by Mr. Enger levels serious charges against the Department and its leadership involving failure to protect the public trust. Time is needed to review the document presented and the Director advised he would respond.

Commissioner Hoefer stated he has no quarrel with the right of Mr. Enger to challenge the decision on the exchange or its merits, but he could not accept the questioning of the integrity of the staff or the implication there is hidden meaning in the negotiations.

Commissioner Snell advised the agreement has been reviewed by the Attorney General.

Edgar H. Lotspeich, Boyne City, voiced opposition to the proposed land exchange between the State of Michigan and the Cleveland-Cliffs Iron Company. He said the State would be making a serious mistake in trading away the state forest lands involved. This land is where John Voelker (Robert Traver) collects material for his writings. If this location had been identified in his writings it would have become a natural beauty spot and the State would not consider turning it over to a mining company for fear of public outcry. He urged the Commission not to approve this exchange.

Commissioner Johnson stated that the Commission visited the area and he felt the language of the exchange would protect the area.

Has the NRC addressed themselves to the following questions?

1. What is the nature of the 2,811 acres of land which makes it worth \$550,000.00 more than 8,931 acres of land?

2. What kind of shoreline recreation can the State develop on the Lake Superior shoreline? How many people will make use of it?

3. How would the decision to make the transfer protect the public trust?

4. Will the setback provisions sufficiently protect all wetlands of the area?

(These 4 questions are raised by the editor.)



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# MICHIGAN'S NATURAL RIVERS PROGRESS

Information Source: DNR Releases

## MANY USES MADE OF MICHIGAN'S RIVERS

Michigan's 36,000 miles of rivers and streams form an intricate network across our State. Each is unique, having certain qualities attracting different uses - and abuses. Our rivers vary from the cold clear trout streams

of northern Michigan to the more sedate warmwater streams common to the agricultural areas of southern Michigan. Our rivers are used by industries and municipalities for both water supply and waste discharge; by

trout fishermen, bass and pike fishermen and archers stalking carp with bow and arrow; by swimmers, canoeists and "tubers"; in addition they provide attractive settings for homes and seasonal cottages.

## RIVERS ARE BEING MISUSED

Unfortunately, the very qualities which make our rivers so attractive are leading to their eventual destruction. The conflicts of overuse by fishermen and canoeists and the rush to acquire river frontage for building homes and cabins are beginning to take their toll. Canoeists and trout fishermen are in conflict on the AuSable, Pine, Pere Marquette, Little Manistee and Two Hearted. Property owners on streams with trout and salmon runs are complaining of litter and trespass problems. Extensive subdivision of property has occurred on the Betsie, Rogue, Muskegon, Shiawassee and on portions of the AuSable and Little Manistee. Banks are eroding because of careless removal of protective vegetation. Poorly placed septic systems are adding nutrient loads to rivers and eventually to the Great Lakes. Developments on narrow lots situated "right on the riverbank" are leading to "urbanized" river frontage and destroying many of the qualities which first attracted people to the area. Building on the flood plains are needlessly creating risks of flooding. Sheer numbers using some canoe launching areas are causing bank breakdown and subsequent siltation of spawning beds. Many of these problems can be corrected only by a change in attitude - developing a respect for the rights of others and developing a stewardship rather than "right to do as I please" attitude toward our river frontage. Other

misuses can be prevented by legislation.

## THE MICHIGAN LEGISLATURE DIRECTS DNR TO SAVE RIVERS

The Natural Rivers Act (Act 231, P.A. 1970) provides a system for preserving and enhancing the broad range of values of Michigan streams. Included are water conservation and flood plain preservation; ecologic, historic and scenic values; and those pertaining to fisheries, and general recreation. The Natural Resources Commission has been given the authority to designate recreational, scenic or wild rivers.

Difficulty with the application of the overlapping classes suggested in the Act - *wild*, *scenic* and *recreational*, have led us to adopt three new classes based on the general river setting rather than on a single quality or use. These are:

*Wilderness River*: a river and its tributaries in an extensive wilderness or primitive setting, free of impoundments or modifications, inaccessible except by trails, with shorelands of wild character, generally undeveloped and with waters of high quality and unaffected by activities of man.

*Wild-Scenic River*: A river and its tributaries with wild or forested borders or backlands, in close proximity to man-made development with high aesthetic values, having shorelands lightly developed, with

limited access by trail or road and with waters of high quality and meeting established water quality standards.

*Country-Scenic River*: A river and its tributaries generally in an agricultural setting with narrow bands of woods or pastoral borders, often with farms and other developments viewable from the river. It may be readily accessible by road, may be moderately developed along its shorelands and may have undergone some impounding in the past, with waters of high aesthetic quality and meeting established water quality standards.

Although a natural river and its tributaries sometimes will have more than one classified segment, a segment should be at least ten river miles long. However, a shorter river or segment that possesses outstanding qualities may be classified differently. The number of different classified segments within a designated natural river will be kept to a minimum.

## DNR HOPES TOWNSHIPS & COUNTIES WILL TAKE INITIATIVE

It is essential for the Department of Natural Resources to work closely with local governmental officials and local citizens to jointly develop sound and acceptable long-range plans for

[Continued On Next Page]



## MICHIGAN'S NATURAL RIVERS ....

[Continued From Page 19]



proposed natural rivers. The Department favors zoning by the counties and townships in accordance with state guidelines, rather than zoning by the Department of Natural Resources. The concept of local control of local land use problems is firmly ingrained in Michigan government. Those officials and citizens who are most familiar with local land use problems are best qualified to administer land use regulations. The Commission feels that good planning and administration of local zoning ordinances will protect the significant river resources while insuring that administration is kept at the level of government closest to the people.

### DISTINCTIVE FEATURE OF ACT PROVIDES FOR ZONING

The distinctive feature of Michigan's statute is the provision for protecting rivers and their tributaries through zoning the use of land adjacent to the streams except within the limits of an incorporated municipality. After designating a river, preparing long-range plans, and holding necessary public hearings, the Commission may declare that the river and tributary lands are to be zoned so as to control and guide their development

and provide for their protection. The local governmental units through which the stream flows then have one year in which to enact zoning ordinances that conform to the plan developed for the river.

If a county or township chooses not to enact such an ordinance, or if an adopted ordinance is found to be inadequate or in conflict with the long-range plan and guidelines, the Natural Resources Commission itself can adopt a zoning "rule" under the provisions of the State Administrative Code. The rule would be of the same nature and serve the same functions as a local ordinance.

### ZONING PROPOSALS ARE DESIGNED TO PROTECT

The general provision of the proposed zoning rules drafted by the DNR for designated rivers are included in the following 14 categories:

1. Definition of terms used.
2. Purposes of Natural River Designation
3. Boundaries of Natural River Area
4. Zoning Permits
5. Subdivision of Land
6. Permitted Uses
7. Natural Vegetation Strips
8. Special exception permits
9. Sub-standard lots of record
10. Non-conforming uses
11. Appeal procedure
12. Duties of Zoning Board and Administrator
13. Violations
14. Amendment Procedure

The following table gives set-back distances proposed by the DNR in its draft rules for the nine rivers designated by the Natural Resources Commission as "Natural Rivers".

RIVER	DWELLING SETBACK FROM HIGH WATER MARK		DWELLING SETBACK FROM TOP OF BLUFF		SEPTIC SETBACK FROM RIVER'S EDGE		SETBACK FROM OMBROPHAGOUS DRAINAGE	WIDTH OF RESTRICTIVE* CUTTING BELT (Permit Req.)	
	Mainstream	Tributaries	Cutting Edge	Non-C Edge	Mainstream	Tributary		Mainstream	Tributary
Jordan	200	100	(In conformance with local County health codes & provisions)					100	75
Betole	150-200	100	(In conformance with local County health codes & provisions)					50	50
Rogue	150	100	50	50	100	100	--	50	25
Two Hearted	100	100	--	--	100*	100*	--	100	100
White	100-150	75-100	50	50	100	100	50	50	50
Boardman	100-150	100	50	75	100	100	50	75	50
Huron	75-125	50	50	25	125	125	50	50	50
Pere Marquette	100-150	75-100	50	25	150	150	50	75	75
Flat	100	100	50	--	100	100	100	300	300

\*The restrictive cutting belt is the width of the strip on either side of the river which must be maintained as a vegetation strip which serves the following purposes:

1. To help stabilize the river bank.
2. To prevent erosion.
3. To provide shading which will help maintain cooler water temperatures.
4. To absorb nutrients from surface water run-off and groundwater movement.
5. Enhance fisheries and wildlife habitat.
6. Maintain the natural aesthetic quality of the river.

### SOME ADVANTAGES OF NATURAL RIVER DESIGNATION:

1. Allows riverfront property owners to take advantage of tax benefits under Act 116, Michigan's Farmland & Open Space Preservation Act.
2. Property owner can request trees at cost from state nurseries.
3. Provides direct controls over construction of public utilities and the management of public lands.

### STATE CANNOT FORCE SALE OF LAND

Apart from the zoning controls, the statute provides that State action may include certain management practices. It is contemplated that some lands will be purchased for preservation purposes. The need for such purchases should be minimal, however since application of appropriate zoning will provide for desirable uses of the land while it remains in private ownership. Any land to be used for public access or recreation purposes must be purchased, leased or easements acquired since zoning cannot provide public access to private land. LANDS OR INTERESTS IN LAND SHALL BE ACQUIRED UNDER THIS ACT ONLY WITH THE CONSENT OF THE OWNER. Thus, condemnation is not in the picture. It also provides the Commission with authority to review preliminary and final plans for such projects as highway construction, utility transmission lines, access sites, and publicly developed water management projects where they may affect the river designation or interfere with management objectives.



NINE RIVERS HAVE BEEN DESIGNATED "NATURAL RIVERS" BY THE NATURAL RESOURCES COMMISSION SINCE DECEMBER 1973 WHEN ACT 231 BECAME EFFECTIVE.

RIVER	DESIGNATION	MILES DESIGNATED			COUNTIES INVOLVED	MONTH & YEAR OF DESIGNATION	MONTH & YEAR OF DURING PROPOSAL	MONTH & YEAR RULES BECAME EFFECTIVE
		Maine	Tribu.	Total				
Jordan	Wild Scenic	33	40	73	Antrim Charlevoix	October 1972	--	September 1974
Betsie	Wild Scenic	50	20	70	Berrie Manistee	August 1973	--	June 1977
Rogue	Country Sc.	42	90	132	Kent	August 1973	November 1979	Incomplete
Two Hearted	Wilderness	35	80	115	Lape	December 1973	County Ordinance	December 1973
White	Country Sc.	70	93	163	Hackagoo Newaygo Oshtemo	June 1975	March 1979	May 1979
Boardman	Wild Scenic	21	67	88	Grand Travi Kalamazoo	February 1976	January 1980	Incomplete
Huron	Country Sc.	29	10	39	Livingston Washtenaw Wayne	May 1977	September 1979	Incomplete
Pere Marquette	Wild Scenic	66	140	216	Lake Macomb Newaygo Oshtemo	July 1978	August 1979	Incomplete
Flat	Country Sc.	66	39	105	Ionia Kent Montcalm	November 1979	Incomplete	Incomplete

### SOUTHERN MICHIGAN STREAMS SHOULD NOT BE OVERLOOKED

In the eyes of the Department, this law should *not* apply solely to those rivers of the northern part of the State which achieve current public notice because of the trout fishing and canoeing they offer. Many *southern* Michigan streams will qualify. These streams are under pressure from

urban and residential development, but have many long stretches which pass through rural and farm country where there is little impact from current development. Preservation of such pastoral stretches and the recognition of their recreation and aesthetic values could be accomplished under the provisions of the Natural Rivers Act.

## Michigan Rivers Are Cleaner!

EPA Journal Reprint, January 1980

*The Detroit River (Mich.).* The Detroit River, which connects Lake St. Clair and the upper Great Lakes (Huron, Michigan, and Superior) to Lake Erie, is a major — if incomplete — cleanup success. Before the Civil War, the river supported a rich and varied population of fish. But, with increasing industrialization and with the rapid increases in the amount of human wastes to be disposed of, the Detroit River's quality quickly deteriorated.

By the late 1940's, 35,000 gallons of oil per day were dumped into the river's waters. A quarter-inch-thick coating of oil covered its shoreline, and grease balls 8 and 10 inches thick washed up on its banks. Finally, in the cold winter of 1948, 20,000 ducks diving into openings in the ice cover came up coated with oil and died. Massive duck kills, with as many as 40,000 dying a year, continued into the 1960's.

Now the obvious pollution problems are almost gone. Only a few hundred gallons of oil reached the river's waters in 1976. No large duck kills from pollution have occurred since 1968, and some local fishermen are calling the Detroit River's once-again blue-green water "the world's biggest trout stream."

At the lower end, however, the City of Detroit still discharges large volumes of inadequately treated sewage, and there is still considerable, if invisible, contamination by toxic substances.

*The River Rouge (Mich.).* The river Rouge is the Detroit River's most industrialized tributary. Its color had become a rich orange because of pickling liquor, a steel-processing acid that was dumped into it. Its surface was so thoroughly coated with oil that it looked black; the orange color could only be seen momentarily, in the wake of passing boats. A State of Michigan

biologist at that time once drew a bucketful of water from the Rouge, and in an hour and a half, acids had eaten away the bucket's bottom.

But the industries along the Rouge have now greatly reduced their discharges, and the river now flows green again. Egrets are returning to its banks.

Yet, while many of the pollutant sources from industry have been removed, further cleanup is expected when the City of Detroit implements a combined sewer-overflow program. In the upper reaches of the Rouge, impoundments have aided in attainment of water quality. Further studies on best management practices for treating urban stormwater should significantly aid in attainment of fishable, swimmable waters.

*The Grand River (Mich.).* Despite vigorous pollution control efforts, the Grand River still suffered from severe problems in the mid-1950's. In 1966 two major fish kills occurred. Now, with the upgrading of most municipal discharges by secondary treatment plants and the elimination of 90 percent of the waste previously discharged by the metal plating industry, the Grand River's waters are significantly improved. Trout are plentiful, and fishermen come out in force to catch the salmon migrating to spawning grounds upstream. There is still an occasional spill from the metal plating industry.

## But: Fishermen Beware

In July 1979, the DNR reported segments of the following rivers and streams polluted by various chemicals, and that the fish collected from those streams contained concentration of toxic chemicals which exceeded safe limits. Those waterways identified were:

- Kalamazoo River (Kalamazoo & Allegan Counties)
- Portage Creek (Kalamazoo County)
- South branch of the Shiawassee River near Owosso
- The Chippewa River in Isabella County
- The Pine River downstream from St. Louis
- The Tittabawassee River downstream from Midland
- Saginaw River



# Legislative Update .....



## Wetlands Protection Bill Becomes Law

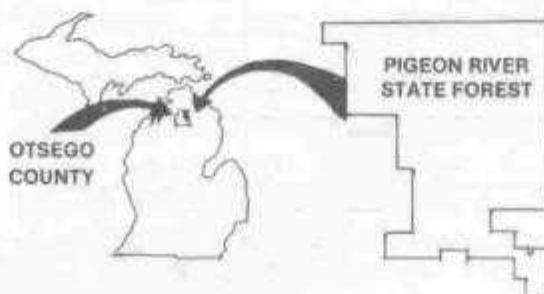
After 12 years of repeated efforts to pass a wetland protection bill, the legislature finally got the job done. Even though there were dogged attempts to derail Senate Bill #3 and waterdown its provisions, it passed the House with a 74-29 vote and the Senate by a 29-7 vote. The protection of Michigan wetlands is now a state function even though the state must fulfill certain guidelines established by EPA, and must work with the Army Corp of Engineers in protecting federal waters. The law, which will become effective on October 1 of this year in sixteen counties with 100,000 population and will protect wetlands of five acres or more which are next to a lake or stream, leaves unprotected wetlands in the other 67 counties of less than 100,000 population and wetlands which are perched or not contiguous to a lake or stream. Protection for perched wetlands awaits a complete inventory of all wetlands in each county. The law assigns this job to the Department of Natural Resources. If all agencies of the government of Michigan work together to supply information to the DNR, it will take less time to bring all wetlands under protection. Representative Thomas Anderson, D-Southgate, who guided the measure through the House, said, "The new law will represent one of the best efforts in the country" to protect wetlands. He also stated that 1/4 of the wetlands will come under protection on October 1, 1980.

## Pigeon River Country State Forest Update on Drilling For Oil

The State Supreme Court ruled on February 20, 1979, that drilling for oil at the 10 exploratory sites within the Pigeon River State Forest would have an adverse affect upon the environment and could not, therefore be permitted. Less than 2 weeks later, on March 1, 1979, in another allied suit, the Court denied a drilling permit to Michigan Oil Company on State Forest Land.

In light of the above decisions of the Supreme Court to protect the environment and to strengthen Michigan's Environmental Protection Act, Act 127 of the Public Acts of 1970, the Director of the Department of Natural Resources, Dr. Howard A. Tanner, denied (January 10, 1980) Shell Oil Company a drilling permit in the Pigeon River Country State Forest.

It appears that the courts and their judges may now have realized what the legislators wanted when they passed the Michigan Environmental Protection Act 10 years ago.



## Water Resources Commission Action

The WRC unanimously approved a motion "directing the Water Quality Division to take whatever action necessary to ensure the Court order is enforced against the Township of Clay." Clay Township is located in the southeast part of St. Clair County and includes Harsen's Island and includes other areas known as the St. Clair Flats. The area has a high groundwater table and the nature of the soils are not conducive to proper septic tank-tile field disposal of sewage. The Court Order prohibits the issuance of building permits which would result in further degradation of the waters of the State. Denial of permits by the Health department is being overturned by the County Appeals Board. At the same time, Township government is failing to act to provide other means of handling sewage, primarily because of high cost involved. The situation is worsening. The Commission has decided to act.

## User Fees Charged

Many riparians are pleased to know that the State Waterways Commission is assessing a \$1.00 per car and a \$2.00 per car-trailer fee for persons who use public access sites on certain inland lakes. The results are at least three-fold. It provides income for DNR to hire students and other persons who are unemployed in the summer time. The users are reminded that it is a privilege to use the lake and that by sharing in the maintenance of the site and the lake they are more apt to exercise more care in keeping it free of litter and debris. Having an attendant at the site lets riparian property owners know that the State is interested in policing its property and will share in maintaining the beauty and usefulness of the lake. Lakes reported where user fees are charged were Belleville, Fenton, Lakeview, Orchard, Portage, Union, Harley, Ensign Memorial and Selfridge Field.

## LAKE BOARDS ....

(Continued From Page 11)

Lake Boards shall consist of the following members:

1. A member of the county board of commissioners appointed by the chairman of the County Commissioners of each county affected by the lake improvement project.
2. A representative of each local unit appointed by the legislative body of the local unit, other than a county affected by the project.
3. The county drain commissioner, or a member of the county road commission in counties not having a drain commissioner.
4. A representative of the DNR.

A project to improve a private inland lake may be initiated "only upon petition of 2/3 of the freeholders owning lands abutting the lake. The preliminary costs for such a project "shall be assessed to the property owners in the assessment district by the lake board..."

For additional information, write to:  
Albert Massey  
Department of Natural Resources  
Inland Lake Management Unit  
Box 30028  
Lansing, MI 48909

January 7, 1980

Dear Potential Sponsor:

The Michigan Land Trust Fund Board is seeking public input on proposed land acquisitions for public outdoor recreational use.

The Department of Natural Resources will have information booklets and proposal forms available for anyone wishing to nominate lands for public purchase through the Michigan Land Trust Fund program. Land Acquisition Proposal forms may be obtained in person or by mail from the DNR's Office of Budget and Federal Aid, 6th Floor, Mason Building, Box 30028, Lansing, Michigan 48909. The deadline for submitting proposals is April 4, 1980.

The Michigan Land Trust Fund Board will recommend the purchase of recreational lands with funds raised by the sale of oil, gas and mineral leases and royalties on gas and oil wells located on state owned land. A third of each year's revenue, plus the interest and earnings from the trust fund itself, is available for land acquisition. The balance remains in the fund to be carried forward from year to year. Available funds from operations this fiscal year are expected to be about \$4.5 million.

The Board welcomes proposals submitted by anyone regarding land acquisitions that are of great public value and that will further the Board's goals.

One goal is to emphasize selection of lands in and near urban areas, where many recreational needs exist. The Board is also committed to acquiring lands that will provide more public access to and recreational use of Michigan's water resources. Other goals of the Board include expanding hunting and fishing opportunities, providing innovative recreation and educational experiences for the public, and purchasing lands with unusual natural features. One specific goal is to enhance recreational values of the Pigeon River Country State Forest.

After evaluating all proposals submitted by the public, the Board will determine its priority list of lands for acquisition. That list of recommended lands will then be submitted to the Legislature in January of 1981. Funds for acquisition of the lands are not expected to be available before the summer of 1981.

If there are any questions, please contact me at (517) 373-1750.

Sincerely,

Edward J. Hagan, Staff Assistant  
Michigan Land Trust Fund



# EXAMPLE OF RESOLUTION TO REGULATE HOURS OF WATER SKIING

TO: Members of the \_\_\_\_\_ Township Board

FROM: Members of the \_\_\_\_\_ Lake Association

RE: A request for the adoption of a resolution by the Board to be submitted to the Department of Natural Resources of the State of Michigan to provide local watercraft control to best protect the public safety and guarantee the perpetuation of the fish resources of \_\_\_\_\_ lake.

WHEREAS, the increased use of \_\_\_\_\_ lake by high speed boats during all hours of day causes turbulence of the water, which in turn, stirs up the sediments and nutrients settled to the bottom.

WHEREAS, the stirring of the sediment decreases the water quality and clarity and makes the lake less fit for swimming.

WHEREAS, the increased sediment and nutrient disturbance increases algae and plant growth and decreases the oxygen supply for fish and other aquatic organisms in the lake, and, WHEREAS, the high speed boats endanger the life of swimmers and fishermen who use the lake, the members of \_\_\_\_\_ Lake Association request that the members of the \_\_\_\_\_ Township Board give consideration to and approve the following resolution:

BE IT RESOLVED: The \_\_\_\_\_ Township Board approves a watercraft control regulation for \_\_\_\_\_ Lake which would make it unlawful for the operator of a vessel to:

(a) exceed a slow no-wake speed between the hours of 6:30 p.m. and 10:00 a.m. of the following day.

(b) Have in tow, or otherwise assist in the propulsion of, a person on water skis, a water sled, kite, surfboard, or other similar contrivance.

## SPECIAL WATERCRAFT RULES ESTABLISHED BY NATURAL RE- SOURCE COMMISSION ON 39 INLAND LAKES IN MICHIGAN DURING 1979.

The Marine Safety Act, Act 303 of the Public Acts of 1967 as amended, is the legal base for regulation of watercraft and controls for the use of Michigan waters. Most of the special regulations to protect lakes originate with riparian property owners by

requesting local township board to adopt resolutions which protect the lake against misuse. The following table gives a summary of the actions taken by the Natural Resources Commission during the calendar year of 1979.

SPECIAL RULE	NO. OF LAKES	SURFACE AREAS IN ACRES	ORIGIN OF REQUEST
PROHIBITS: High speed boating and Water skiing.	9	9-210	9--Twp Bd
PROHIBITS: Use of powered vessels except by electric motors.	13	11-163	8--Twp Bd 5--DNR
PROHIBITS: Water skiing between 6:30 p.m. & 10:00 a.m. the following day.	5	36-411	5-Twp Bd
PROHIBITS: Boat speed over 40 mph.	7	11-73	7--Twp Bd
PROHIBITS: Water skiing.	1	55	Twp Bd
PROVIDES: Slow no-wake speed.	3	250-2,167	1--Cty & Vill 2--Twp Bd
PROHIBITS: Other than slow no-wake speed between 6:30 p.m. and 10:00 a.m. the following day.	1	240	Twp Bd

### Summary of Requests:

Of the 39 lakes listed above, 33 requests originated with township board; 5 originated with rule

promulgation of the Department of Natural Resources; one came from a City and Village combined request.



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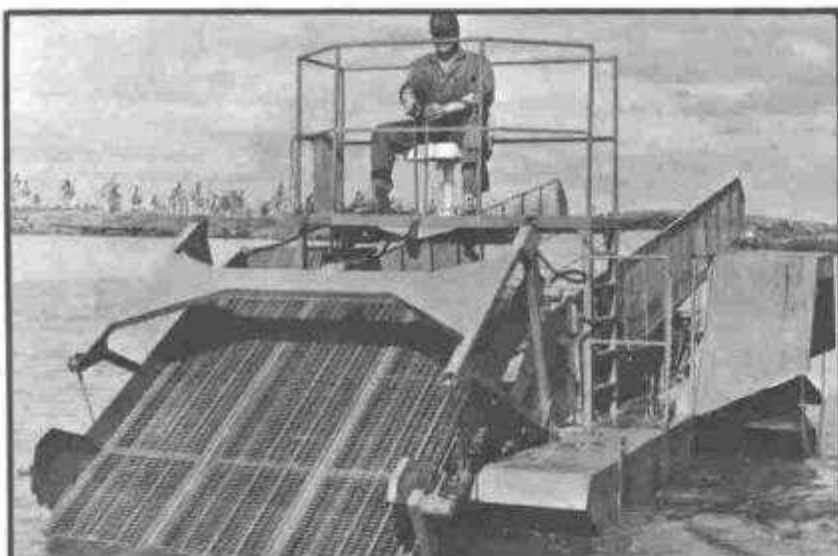
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