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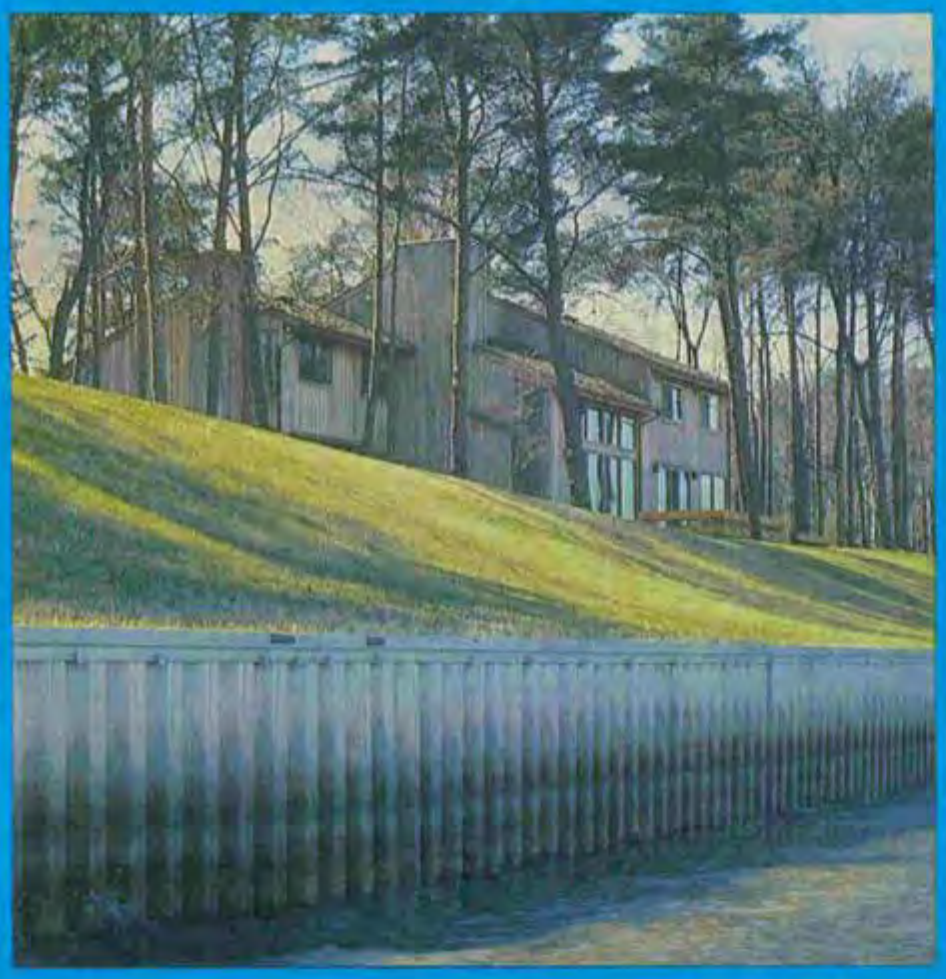

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COVER PICTURE

The cover picture of the Great Blue Heron was submitted to the magazine by James Laarman of West Bloomfield, Michigan.

This large Heron is frequently found standing at the edge of a pond or marshy pool, watching for fish or frogs which are its principal food. It also feeds on small mammals, reptiles and occasionally birds. Most Great Blue Herons migrate south in the fall, but a few remain in the North during the winter; such lingering birds often fall victim to severe weather.

The Great Blue Heron flies with neck folded. It ranges from Alaska, Quebec, and Nova Scotia south to Mexico and the West Indies.

The nests are made of a platform of sticks and lined with finer material. Nests are often located in the tops of tall trees, but sometimes occur in reedbeds or on the ground.

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THE MICHIGAN
RIPARIAN

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The Michigan RIPARIAN is the only magazine devoted exclusively to protection, preservation and improvement of Michigan waters and to the rights of riparian owners to enjoy their waterfront property.

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EDITORIAL

Donald Winne

Protecting Michigan's Inland Lakes

If lakes and wetlands bordering Michigan's inland lakes are to be protected from over-development, then Township Boards must take action. The Michigan legislature has empowered townships to take action under their "police power" to protect the "health, safety and welfare" of its citizens, or to take action under zoning powers.

There are 1245 townships in Michigan's 83 counties, but very few of them have passed ordinances to prevent the overdevelopment and over-crowding of inland lakes. Perhaps Michigan needs state legislation rather than leave it up to individual townships to take action. Wisconsin and Minnesota have legislation on the books which prevents the over-development of fragile environmental lakes. Minnesota's law places lakes in one of three categories. One of those categories is "natural environmental lake" and further development is prohibited. (See article in this issue).

Some townships in Michigan have passed zoning ordinances which are helping to solve over-development on the inland lakes, but it may be too little, too late. Spencer Township in Kent County passed such legislation in October this year. (See the news item on page 19 of this issue.) More townships should take similar action as soon as is possible, to prevent further eutrophication of our lakes.

Donald E. Winne

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ML&SA · The First 25 Years · 8 Challenges for the Future

DR. CLIFFORD HUMPHRYS, Professor of Resource Development at Michigan State University was the KEYNOTE speaker at the 25th Anniversary meeting of Michigan Lake & Stream Associations which was held at the Kellogg Center on Michigan State University campus on October 13, 1986.

Dr. Humphrys topic was ML&SA - The First 25 Years - A Challenge for the Future. His address follows:

There is on record a very long list of the names of dedicated people who served as Officers of ML&SA. They made the idea of the association work. They worked with no pay in the face of many gripes and controversies. I would like to honor them. Credit is also due to thousands of past officers and committee members of local lake associations. These people really took a lot of heat because they lived on the the stove. I would also like to honor them.

25 years ago I invited representatives of about 40 inland lake associations to attend a discussion of lake problems at M.S.U. Representatives of State and Federal agencies were also invited. About 90 people attended. After a general discussion of lake problems, the findings of a survey were presented. Forty problems were prominent but only five had high agreement. 1) aquatic plant control, 2) water quality, 3) lake level control, 4) beach improvement, 5) poor fishing. The subsequent discussion period emphasized the fact that several lake associations had successfully solved their problems but many had failed. It appeared obvious that the success stories, if publicized, would help other associations. It was also obvious that a State association of local lake and stream associations could best meet this need.

I excused myself at this time and took a walk in the hall. Within a few minutes Mr. Forrest Smith came out and informed me that there was now a State Association and acting officers were appointed. This Association is now 25 years old and has accomplished much. 1) the Michigan Riparian became the official communication organ, 2) hundreds of "blow-by-blow" accounts of lake problems have been published and provide a valuable reference source for other associations, 3) hundreds of technical articles have been published to educate riparians, 4) unknown numbers of phone calls and letters have been provided to assist local associations, 5) Don Winne, Executive Director ML&SA and current Editor and Publisher of the Michigan Riparian deserves recognition for his outstanding service, 6) Joseph Hollander, Attorney, Chairman of the Michigan Riparian Directors and (2) ad hoc legal council for the Association has helped many associations untangle their problems, 7) their predecessors also made their mark in the history of the Association.

Knowledge of basic riparian rights as introduced by ML&SA encouraged individual riparians and lake associations to challenge acts that would degrade a lake. In the 60's and 70's many court cases were initiated. Lake associations are now considered to be formidable adversaries. State agencies now consult with the Association prior to sponsoring new water statutes. Several key court cases won in the 60's and 70's now serve as protective references for legal court action. The main lesson learned was that talk is useful but legal advice and action is necessary in many stubborn lake problems. These successes are useful but if they are publicized the benefit is geometrically enhanced. Learn from history but plan for the future. Active, capable, dependable lake association members are in short supply.

In order to protect and manage a lake minimal success requires on-site vigilant attention. The "magic" 20th century approach is money - each lake association should have a kitty to use immediately when a problem occurs. Economy could be improved by cooperative agreements between several lakes for common lake management problems. A) weed control, B) beach improvement, C) lawn management. Riparians invest a large amount in land and home. Insurance covers house and landscape but no monetary planning to protect the lake:

- Aquatic plants
- Water quality
- Over-use
- Boating
- Lake level

Peripheral factors in lake management.

Freeloaders. Freeloaders are riparians who do not participate or pay dues after a lake management program has been initiated. Ordinary lake associations have no way to force participation.

Turnover. Many recent studies have shown that about 30% of the riparian property on a developed lake is sold each year. This phenomenon poses a special problem for lake associations in terms of maintaining a representative number of riparians active in their association.

Holdouts. Some people find that they cannot participate in a lake management program because of their ethical, legal or personal interests.

Lake Aging. A common belief - "the lake is getting old and changing in character". Most changes in water quality, surface water value and shoreline deterioration are caused by people.

Carrying Capacity Each use of a lake requires either direct arithmetic space or a pristine value. Boats require space; the faster the boat, the more space required. Loons require privacy; they leave developed lakes.

Wetlands. If wetlands are protected from development they protect the lake from over-development.

Surface runoff. Excess precipitation and snow melt becomes a negative factor that reduced water quality.

Set back If all structures, tile fields and landscape ventures are prohibited from the immediate shoreline the lake quality is protected.

State Statutes. We are protected by State law! Wrong, you would be protected *if* existing laws could be effectively enforced.

Basic Riparian Rights. Each riparian may reasonably use the entire lake surface. Each riparian is entitled to safe use of the lake. Each riparian is entitled to enjoyable use of the lake. Each riparian is entitled to continuous use of the lake. Each riparian must continuously monitor his rights and effectively challenge acts that would reduce or eliminate his rights.

Threat of Damage. Any act that is being considered or planned that would impact negatively upon basic riparian rights. The riparian must take action before the change is completed. Write a letter (registered) explaining your position, collect data supporting your position, an action seeking legal relief is best administered by a lawyer. A) seek an injunction, B) initiate a court action C) appeal case if necessary.

Keyhole Access. Any use or development of a small part of the lake shoreline that would provide access to the lake by a large number of people. A normal 65 foot lake lot in Michigan is used by 4 people; more users represent the exercise of keyhole access. Common keyhole practices - condominiums, marinas, fish access sites, motels, boat rentals, parks.

Shore Erosion. Shore erosion is natural - yes and no. Yes, the eternal incipient natural cycle of erosion is always occurring; usually slowly. No, many of our serious inland shore erosion problems are caused by: a) fast boats, b) ineffective sea walls, c) over use of shore, d) beach improvement, e) dredging, f) filling, g) landscape ventures, h) high lake level caused by dams.

"Bore Site Remedies". Frequently, lake associations will attempt to eliminate *all aquatic vegetation* in order to improve boating.

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Our new family of herbicides can easily accomplish this goal *but* other lake values would be lost; a) aquatic insects eliminated, b) fish eliminated, c) wildfowl eliminated, d) effluent streams and down stream lakes impacted, e) the next population of aquatic plants may be worse.

Aquatic Plant Control. Use of herbicides is a short term solution and may have to be repeated several times each summer. Long term reduction of aquatic plants can only be accomplished by reducing the input of nutrients. Harvesting is environmentally more acceptable than herbicides but excessively expensive and the need to reduce nutrient input still exists.

Nutrient Input. Major factors in nutrient input are: a) septic tank tile field installations, b) lawn fertilizer, c) surface runoff from developed shoreline, d) agricultural drainage, e) drains from off shore or up stream developed areas.

Quick, dirty and cheap control of nutrient input: a) stop using lawn fertilizer, b) test all tile fields, c) greater set back for tile fields, d) stop all new drains that will dump nutrients into lake, e) greater set back for all new shoreline development.

Future Protection - Management Alternatives

1. Mutual agreements by *all* riparians - type of development (will encumber use of land and water) (could reduce value of land). Kinds of boats, number, and fisheries management. Extremely difficult to *impossible to* accomplish because every riparian must agree.
2. Deed restrictions - must start on entire lake before development starts. *Impossible* on over 99% of lakes (can be lost by lack of enforcement!).
3. Zoning - township level - Hayes Township Ordinance Feasible when entire lake lies in one township.
4. Multi (coordinated) township zoning is much more difficult but not impossible. (Lake Charlevoix - 10 local governmental units). Zoning - my perpetual fear of zoning.
   A. An ideal ordinance can be adopted by the 1986 riparian population (at great expense of time and money).
   B. In 1987 the township population can approve; exceptions, waivers, and changes in local government. Also the lack of enforcement; results in insidious death of the basic zoning goals (original goals lost).
5. Single ownership of entire lake - a) management is easy, b) no controversies - no debate, c) limited only by time and money available.
6. Company ownership of all riparian land and all water surface; a) single family units, b) strict code for all structures, c) company retains perpetual ownership of all riparian rights, d) complete control of all aspects of lake management, e) perpetual performance bond for lake protection, f) (trust fund for expenses and borrowing capacity), g) complex legal contractual agreement.
7. Power of a group of individual riparian owners over the entire lake surface. (These individual private owners may represent the ownership of only a small percentage of the entire riparian lake shore.) Basic legal rule - each riparian has: a) right to use of entire lake surface, b) right to reasonable use of lake surface, c) right to continuous use of lake surface, d) right to safe use of lake surface, e) right to enjoyable use of lake surface. Also to: a) prevent over development of shoreland, b) protect water quality of entire lake, c) prevent over use of lake surface. This concept represents the *only* way to continuously protect a lake. It avoids local politics of majority rule. Avoids influence of local debate and controversy. It gags local political ventures and represents the exercise of *individual* riparian rights. It also avoids use of cumbersome and questionable State statutes and finally, represents an effort to protect *private* property. In essence, it is an invitation or exercise to a single riparian owner to legally demand the protection of a lake. Court action is used as a threat or mode to logically and efficiently achieve lake protection. This approach may be used more effectively to *prevent* undesired changes than to restore a lake to a selected level of quality (no Michigan inland lake has ever been completely restored).
8. Strong Lake Association Approach. High percentage of lake shore riparians are active members: Protection "kitty" ($40,000) available for action program: Seek pledges or verbal agreement to reinforce the protection "kitty": In depth data retrieval program to challenge the threatening action: "Notice" letter (registered) forwarded to offending party, (copy to DNR): Special letter to DNR or other agencies having authority over problem (registered) - permits, etc. Also request notice of any new permit applications: Continued verbal barrage directed to offending party; local paper, radio station and TV station: Notify local and State representatives (Senators & Representatives): Retain an attorney if there is not satisfactory progress: Summary of data substantiating problem circulated to all interested parties: Attorney will request additional data, surveys, etc.. It is frequently helpful to contact the Governor's Office especially if you desire "hands on" contact with State Agency: During the past 15 years, those lake associations following the above procedure have been eminently successful. Most cases are settled out of court but the arbitration usually protects the lake even though "trade offs" reduce the original goals of the Association.
   (Regardless of what your problem is there are present other Lake Associations that have had the experience and they will council with you; the ML&SA and other cooperating individuals can usually provide you with references.)
   It is also evident that many Lake Associations get mad enough to want to fight (in Court) but are deterred when they discover that the cost is significant. Suggestion - every Michigan Lake Association should earmark part of their Annual Membership fees for the lake protection "kitty". A few Lake Associations have bit the protection bullet by emergency subscriptions, baking sales and even bingo games.
   Other ways to raise money - Charge your friends and relatives for harboring their boats on your property; Rent your boats for fishing and water skiing; Lucky fish contests; Raffle a boat; Charge non-residents an annual fee for full year neighborhood watch service; Organize a lake shore lawn care program by using local summer labor and approved fertilizer practices. Seasonal rates would pay for operation plus an association profit. Most farm stores have all the equipment required; Actively seek township or county assistance for water quality testing, aquatic plant control and safety provisions. The request becomes quite formidable when you tally up your local tax contribution; Encourage local full time residents to run for township office, planning commission and zoning commssion; Collect rummage items from all members in July and hold a auction *well advertised* (urban dwellers make at least $100.00 per family from garage sales).

The most progressive Michigan Lake Associations each have separate standing committees for: Nutrient input - lawn fertilizer, tile fields; Oil leakage; Monitoring boating; Monitoring *all* construction and drainage projects; Membership recruitment, the welcome wagon approach, a) Association literature, b) Phone books, c) Map of lake, d) Service facilities, e) Road map, f) Emergency facilities, g) Recreational facilities and programs.

Those being: Emerald Lake Association, Troy, MI; Higgins Lake Association, Higgins Lake, MI; Charlevoix Lake, Charlevoix, MI; Walloon Lake, Charlevoix and Emmet Counties, MI.

My closing remarks have been definitely somber, but highly realistic in terms of my Michigan experience. I am of the opinion that the traditional way to protect a lake will not function, but that intense effort by one riparian can save the day and the lakes. My last words to you are that many of my efforts to save a lake have failed. My involvement in court cases has been highly successful. However, there is still a way to continue the struggle. The ML&SA and all individual Lake Associations must continue their efforts.

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SHORELAND MANAGEMENT IN MINNESOTA

The following information is from the "Supplementary Report No. 2" of the Minnesota Department of Natural Resources which covers "Elements and Explanation of the SHORELAND RULES & REGULATIONS", which were established by the Commissioner of Natural Resources as mandated by the Minnesota legislature (1969).

I. INTRODUCTION

Lakes and streams are two of Minnesota's most valuable natural resources. Rapidly expanding recreational needs, as well as increased agricultural, domestic and industrial demands for water, must be satisified from a fixed natural supply. The economy of many areas is dependent upon the fate of water bodies and their shorelands. As man is drawn to shoreland areas, he often creates problems, such as water pollution, over-crowding, unwise development, destruction of fish and wildlife habitat, and the impairment of natural beauty. Scattered cabins and resorts are built to form continuous ribbons of buildings along lakes and streams. When prime lands immediately adjacent to the shore are in use, a second tier of cabins is often built behind the first. As land values rise lots with water frontage are subdivided into smaller parcels. Frontage lands with steep slopes, high groundwater, and flooding conditions are platted and put to use in spite of their unsuitability for development. Uncontrolled lake and stream development may ultimately result in blighted recreational areas. Action is being taken now to meet these problems and preserve our waters and shoreland for future generations.

LEGISLATIVE ACTION

The 1969 session of the Minnesota Legislature passed a law, Chapter 777, amending Minnesota Statutes 1967, Chapter 105, which requires each county to adopt a shoreland management ordinance to combat these growing problems:

STATUTE PURPOSE. "In furtherance of the policies declared in Minnesota Statutes, Section 105.38, and Chapter 116, it is in the interest of the public health, safety, and welfare to provide guidance for the wise development of shorelands of public waters and thus preserve and enhance the quality of surface waters, preserve the economic and natural environmental values of shorelands, and provide for the wise utilization of water and related land resources of the State. (Laws of Minnesota, 1969, Chapter 777, Section 1).

EXPLANATION. Because of the importance of shoreland management to all the citizens of the state, the legislature also directed the Commissioner of Natural Resources to establish standards and criteria for shoreland development. These standards will serve as minimum guidelines for county shoreland management ordinances which must be adopted no later that July 1, 1972. The Commissioner is authorized to enact the standards into ordinance form for the counties which do not meet this deadline.

JURISDICTION

The shoreland management standards will pertain to the shorelands of public waters located in unincorporated areas.

"Shoreland", by statutory definition, includes lands within 1,000 feet of a lake or 300 feet from a river or stream. In certain cases the limit may be defined as the watershed divide wherever this divide occurs at lesser distances than the statutory limits of shorelands. Land uses beyond a lake's watershed divide generally have little effect on the water quality of that lake.

"Public water" is defined by statute as any body of water capable of substantial beneficial public use. For the purposes of this program this can be interpreted as any body of water which has the potential to support any type of recreational pursuit of water supply purpose. However, this program is designed to protect public water from improper shoreland development. Many of the state's lakes and streams are so small that they probably will never be developed for recreational uses. For this reason, and to simplify the administrative load, lower size limits for public waters were established. A lower limit of 25 acres for lakes, ponds and flowages eliminates approximately one-third of the lakes listed in An Inventory Of Minnesota Lakes. Only streams draining an area greater than two square miles need be included in this program.

SCOPE

No single solution will solve all the problems associated with shoreland development. A variety of land use controls are needed to deal with the major causes of the problems. The goals of this new shoreland management program are to coordinate land uses, to encourage development which is compatible with the shoreland resources, and to discourage development which is not. The approach, then, is to establish a set of land use controls which will guide shoreland development for the benefit of both the counties and the residents of the state as a whole. These controls include:

1. Regulations governing the type and placement of sanitary and waste disposal facilities;
2. Regulations governing the size and length of water frontage of lots suitable for building sites;
3. Regulations governing the placement of structures in relation to shorelines and roads;
4. Regulations governing alteration and preservation of the natural landscape; and
5. Regulations governing the subdivision of shoreland areas.

The remainder of this article will present quotations from the statewide standards in italics followed by an explanation of the goals and objectives of the standard.

WATER SUPPLY FACILITIES

STANDARD (CONS 72 (a):

1. Any public or private supply of water for domestic purposes must conform to Minnesota Department of Health standards for water quality.

2. Private wells shall be placed in areas not subject to flooding and upslope from any source of contamination. Wells already existing in areas subject to flooding shall be flood proofed in accordance with procedures established in Statewide Standards and Criteria for the Management of Flood Plain Areas of Minnesota.

EXPLANATION. Standards for water supply quality have been established by the Minnesota Department of Health. These standards are designed to prevent contamination of drinking water. The main concern of the shoreland management program is the placement of private wells. This is largely a matter of individual site evaluation. Therefore, specific spacing requirements are not set. This should be left to the local zoning administrator in his evaluation of building permit applications. The main considerations for evaluating the proposed location of a well includes ground slope, ground water elevation and geologic formations.

SEWAGE AND WASTE DISPOSAL

STANDARD CONS 72 (b)

Any premises used for human occupancy shall be provided with an adequate method of sewage disposal to be maintained in accordance with acceptable practices.

(1) Public or municipal collection and treatment facilities must be used where feasible.

(2) All private sewage and other sanitary waste disposal systems shall conform to applicable standards, criteria, rules and regulations of the Minnesota Department of Health and the Pollution Control Agency and any applicable local government regulations in terms of size, construction, use and maintenance.

(3) Location and installation of a septic tank and soil absorption system shall be such that, with reasonable maintenance, it will function in a sanitary manner and will not create a nuisance, endanger the safety of any domestic water supply, nor pollute or contaminate any waters of the state. In determining a suitable location for the system, consideration shall be given to the size and shape of the lot, slope of natural and finished grade, soil

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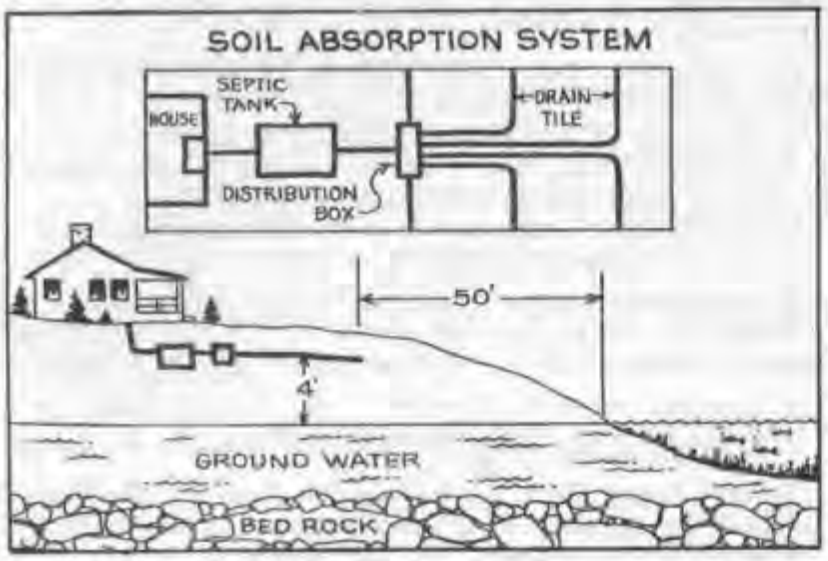
permeability, high ground water elevation, geology, proximity to existing or future water supplies, accessibility for maintenance, and possible expansion of the system.



(4) Septic tanks and soil absorption systems shall be set back from the normal high water mark in accordance with the class of public waters:

EXPLANATION. Individual sewage disposal systems consist of two parts; the septic tank, and the soil absorption system. Raw sewage from the household enters the septic tank where bacteria reduce the solids to liquids. Tank size must be large enough to provide sufficient time for the bacteria to act on the solids. A 3-day detention time is suggested for domestic systems. For example, 300 gallons of raw sewage daily requires that the septic tank must be at least 900 gallons. (A suggested minimum size is 1,000 gallons).

The septic tank must be a watertight tank of sound durable material not subject to excessive corrosion or decay. Suitable materials are precast concrete, poured concrete, concrete blocks with mortar joints and two plaster coats on the inside, metal with proper corrosion proofing, and fiberglass. The Code of the Minnesota Department of Health specifies other requirements of the septic tank such as: properly located inlet and outlet baffles; twenty percent of the tank volume reserved for floating scum storage; outlet pipe at least two and preferably 3 inches below the inlet pipe; provisions for inspection and pumping; and other features.

The function of the soil absorption system is to dispose of the effluent from the septic tank. The design of the system is based upon the results of percolation tests. Properly conducted percolation tests indicate how rapidly the soil will absorb the septic tank effluent. If the soil becomes saturated, the effluent will not be absorbed. It will flow with the groundwater or into nearby lakes or streams.

The Department of Health recommends placement of these systems at least 50 feet from a lake or stream.

(aa) On Natural Environment Lakes and Streams, at least 150 feet;

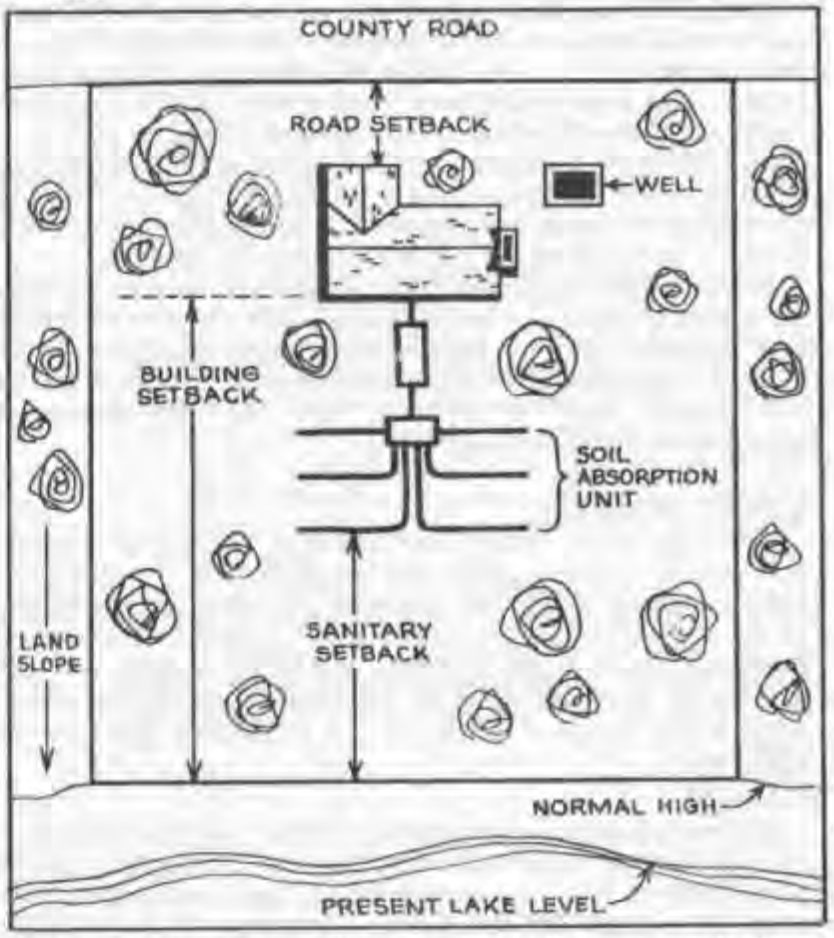
EXPLANATION. This setback provides a reasonable amount of assurance that no nutrient enrichment from individual sewage disposal systems will occur on these lakes. These lakes tend to have physical characteristics such as soils and ground slopes, which are not conducive to the operation of individual systems.

(bb) On Recreational Development Lakes, at least 75 feet;

EXPLANATION. A setback of 75 feet from the normal high water mark was established for Recreational Development Lakes. These lakes are better suited for development in terms of soils and elevation above ground water. These lakes have the potential of being developed for seasonal home use in the future. They would then be affected by other sources of pollution, such as outboard motors, swimming beaches and surface runoff from development sites. It would be unreasonable to severely regulate soil absorption systems while these other sources of pollution are largely uncontrolled.

(cc) On General Development Lakes and Streams, at least 50 feet.

EXPLANATION. General Development Lakes present another problem. These lakes are already heavily developed, usually in very small lots. Setback provisions must consider the existing lot sizes to be reasonable. In addition these lakes in many cases are bordered by municipalities where effluent from treatment plants is a problem for water quality. For these reasons, a setback of 50 feet was established for General Development lakes and streams.



(5) Septic tanks and soil absorption or similar systems ***shall not be acceptable*** *for disposal of domestic sewage for development on lots adjacent to public waters* ***under the following circumstances:***

(aa) Low swampy areas or areas subject to recurrent flooding;

EXPLANATION. Soil absorption systems do not function properly in low-lying swampy areas. The soil in many shoreland areas is subject to high ground water conditions during much or part of the year. Saturated soils cannot absorb sewage.

(bb) Areas where the highest known ground water table is within four feet of the bottom of the soil absorption system;

EXPLANATION. There must be an adequate amount of soil to filter the effluent if groundwater and surface water pollution is to be avoided. A standard recommended by the U.S. Public Health Service is four feet of soil between the maximum seasonal elevation of the ground water table and the bottom of the soil absorption system. This distance is necessary to prevent premature failure of continuously wet conditions and to provide for suitable absorption of the nutrient phosphorous.

(cc) Areas of exposed bedrock or shallow bedrock within four feet of the bottom of the soil absorption system or where subsurface conditions significantly restrict percolation of the effluent;

EXPLANATION. Rock formations or other impermeable strata should also be greater than 4 feet below the bottom of the system to provide enough soil filtration.

(dd) Areas of ground slope where there is a danger of seepage of the effluent onto the surface of the ground.

EXPLANATION. Ground slope is another important consideration. Where slopes are excessive, the effluent can seep onto the ground surface and pose a serious health hazard. Excessive slope values

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vary with the permeability of the soil. A tight soil is characterized by uniform capillary action in all directions. Thus, there is a relatively large amount of lateral seepage, and greater danger of surface runout. Coarse or loose soils are characterized by rapid gravity flow downward. The effluent does not seep laterally for very substantial distances, thus reducing the danger of surface runout.

(6) County ordinances may require or allow alternative methods of sewage disposal such as holding tanks, privies, electric or gas incinerators, biological and/or tertiary waste treatment plants or land disposal systems, provided such facilities meet the standards, criteria, rules and regulations of the Minnesota Pollution Control Agency and the Minnesota Department of Health.
EXPLANATION. A holding tank is a sealed disposal system. Instead of wastes being continually discharged into the soil, they are collected in a tank. The tank must be pumped by a commerical collector when full to prevent backup into the dwelling.

Privies, under certain conditions, may be more effective than septic tank systems. Soil conditions have little effect on the operation of privies, since the amount of liquids is usually not large. If a four foot soil separation exists between the bottom of the pit and ground water or bedrock, there is little danger of bacteriological contamination.

ZONING PROVISIONS

Zoning provisions control the location of land uses (residential, commerical, industrial, etc.) and the manner of use (lot sizes, building setbacks, etc.). The shoreland standards focus primarily on the manner of use. The purposes are to reduce the effects on the public waters of over-crowding and poorly planned development of the shoreland areas, to maintain property values, and to preserve the natural characteristics of shorelands and adjacent water areas.

LOT SIZE

Minimum lot sizes are necessary to insure a level of protection for each class of public waters consistent with management goals and objectives. Two basic considerations in determining a proper minimum size are evident: one, to insure that a lot will be large enough to meet the various dimensional standards, especially for sanitary facilities; and two, to set an overall density of development for a given body of water. This is possible by incorporating a minimum lot width with lot area.

STANDARD CONS 73 (a)
LOT SIZE
(1) For lots intended as residential building sites platted or created by metes and bounds description after the date of enactment of the county shoreland ordinance, the minimum size shall be:
(aa) For ***Natural Environment Lakes and Streams;*** *at least 80,000 square feet (approximately 2 acres) in area and at least 200 feet in width at the building line and at least 200 feet in width at the water line for lots abutting a public water.*
EXPLANATION. These lakes are usually less suited to shoreland development and presently have little or no development. This large lot size will limit development around lakes to avoid problems of over-crowding and unwise development on fragile shorelands.

(bb) For ***Recreational Development Lakes:*** *at least 40,000 square feet in area (approximately 1 acre) and at least 150 feet in width at the buiding line and at least 150 feet in width at the water line for lots abutting a public water.*
EXPLANATION. Here a main goal is to maintain a density of development on the shore which will minimize deterioration on the shorelands and the resultant effects on the water space.

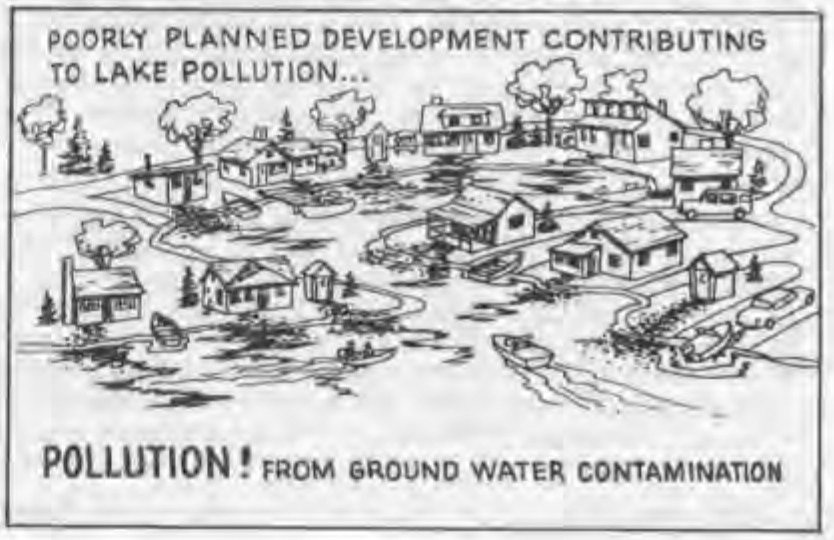
(cc) For ***General Development Lakes and Streams;*** *at least 20,000 square feet in area and at least 100 feet in width at the building line and at least 100 feet in width at the water line for lots abutting a public water.*
EXPLANATION. To provide a reasonable measure of assurance that lots will have enough area to be developed in accordance with proper sanitary facilities, the lot size was set at 20,000 square feet for General Development Lakes. Most of these lakes already have high levels of development and have ability to absorb high density development.
THE PROVISION THAT LOTS MUST HAVE A MINIMUM WIDTH AT THE BUILDING LINE, AS WELL AS AT THE WATER LINE, IS DESIGNED TO ELIMINATE PLATTING OR IRREGULARLY SHAPED LOTS, A PRACTICE WHICH COULD ALLOW A HIGHER DENSITY OF DEVELOPMENT THAN IS DESIRED.
EXPLANATION. A minimum lot width of 100 feet was determined upon consideration of existing densities of development.
(3) Substandard lots and CONS 73 (A) (4) Exceptions and Variances is not included in this article. The information is available upon request.

PLACEMENT OF STRUCTURES ON LOTS
STANDARD CONS 73 (b)
(1) Public Waters Class. The following minimum setbacks for each class of public waters shall apply to all structures except boat houses, piers and docks:
(aa) On Natural Environment Lakes and Streams, at least 200 feet from the normal high water mark.
(bb) On Recreational Development Lakes, at least 100 feet from the normal high water mark.
(cc) On General Development Lakes and Streams, at least 75 feet from the normal high water mark.
EXPLANATION. Where cabins develop in a continuous ring around a lake, the intrinsic qualities of the lake are greatly reduced. By requiring cabins to be placed back off the shoreline vegetative screening can preserve these qualities. Shoreland owners and lake users would not be faced with a ring of development around the lake that would be highly visible from the lake from the opposite shore. Setbacks also provide a measure of protection against erosion of the immediate shoreline and resultant siltation of lakebed arising from cleared construction sites.

Other STANDARDS established by the Comissioner of Natural Resources of the State of Minnesota, but which are not included in this article, include the following:

> High Water Elevation, Proximity to Roads and Highways, Exceptions, Variances, Shoreland Alterations, Grading and Filling of Shoreland areas, Alterations of Beds of Public Waters, Exceptions to Zoning Provisions.

Part IV of the Standards promulgated and established by the Commissioner are SUBDIVISION REGULATIONS. (Part IV is not included in this summary).
POSTSCRIPT "It is the responsibility of each county to adopt a shoreland management ordinance by July1, 1972 which meets the statewide minimum standards...Ordinances must be adopted through the procedures prescribed in the Minnesota Statutes.



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SHORELAND MANAGEMENT ON INLAND LAKES IN MICHIGAN – A RESPONSIBILITY OF LOCAL GOVERNMENT (Counties and Townships)

In the absence of state statutes in Michigan to control over-crowding of inland lakes, local government must take action if inland lakes are to be protected from deterioration.

Some counties and many townships in Michigan have adopted Zoning Ordinances to accomplish various purposes such as:

- to promote the safe use and enjoyment of public waters
- to limit the improper use of waterfront property
- to preserve property values of waterfront land
- to promote health, safety and general welfare of all citizens.

SOME EXAMPLES OF SUCH ORDINANCES FOLLOW:

Chesterfield Township - Macomb County

Only selected parts of the ordinance follow. The complete ordinance is available from the RIPARIAN upon request.

22.110 ARTICLE I PREAMBLE

22.111 Sec. 1. TITLE.
This ordinance shall be known as the Chesterfield Township Waterways Construction Ordinance. (ord. no. 54 eff. Sept. 12, 1975).

22.112 Sec. 2. PURPOSE.
The fundamental purpose of this ordinance is to promote the public health, safety, morals and general welfare; to encourage the use of lands and natural resources in the Township in accordance with their character and adaptability; to limit the improper use of land; to reduce hazards to life and property; to regulate the location and size of wharves, docks and piling which may be constructed along, abutting upon any lakes, rivers, lagoons, channels, canals, and other waterways and to control dredging on said waterways in the Township; to provide for the administration of this ordinance, including the official whose duty it shall be to enforce the provisions thereof; to provide penalties for the violation of this ordinance; and to provide for conflicts with other ordinances or regulations. (ord. no. 54 eff. Sept. 12, 1975).

22.120 ARTICLE II DEFINITIONS

22.121 Sec. 1. DOCK.
Docks shall include include all forms of dock, wharf, pier or other structure used as a means of entrance to or exit from water craft or for use in connection with other waterfront activities, including a structure used for retaining of lands and buildings. (ord. no. 54 eff. Sept. 12, 1975).

22.122 Sec. 2. FLOATING DOCK OR PIER.
Floating docks or piers shall include every kind of floating pier, dock or raft whether tied to another object, anchored or floating untied or not anchored. (ord. no. 54 eff. Sept. 12, 1975).

22.123 Sec. 3. PILING.
Piling shall include all forms of piles, spiles or stakes whether for typing or anchoring docks and/or watercraft or for use in connection with other waterfront activities. (ord. no. 54 eff. Sept. 12, 1975).

22.124 Sec. 4 WATERCRAFT.
Watercraft shall include every kind of boat, vessel, tug, tender, however propelled, and all classes of pleasure boats, however propelled. (ord. no. 54 eff. Sept. 12, 1975).

22.125 Sec. 5. WATERS EDGE.
Water edge is the point or points along a canal bank as described by the property description or lot line as measured in a plotted subdivision. Water edge along Lake St. Clair as along rivers, shall be as legally determined by the Corps of Engineers or the Michigan Department of Natural Resources. (ord. no. 54 eff. Sept. 12, 1975).

22.130 ARTICLE III RULES AND REGULATIONS

22.131 Sec. 1 DOCKING OF BOATS.
Single family residential use districts as designated in the Township Zoning Ordinance bordering on Lake St. Clair, the Salt River and Auvase River and/or public and private lagoons, channels and canals, docks, piling or other construction shall be limited to accommodate permanent docking of not more than three (3) boats. (ord. no. 54 eff. Sept. 12, 1975; amend. by ord. no. 54-2 eff. Aug. 12, 1983).

22.132 Sec. 2 CONSTRUCTION PERMITS.
It shall be unlawful to erect without permit any new building, seawall or structure, or alter or repair any existing building, seawall or structure, over or upon or contiguous to any waterways in the Township of Chesterfield, including lakes, rivers, lagoons, channels, canals, and other waterways in the Township. Application for such permits shall be made with the Chesterfield Township Building Official in accordance with an application prepared by said Building Official and subject to the requirements of this ordinance.

A. The provisions of this ordinance shall be subject to the littoral and riparian rights of property owners.

B. All docks, pilings or other construction in, over or upon and contiguous to any waterway in the Township shall be so constructed so as to leave a minimum of thirty (30) feet or as platted clearance and right of way for the free passage of watercraft. Such clearance or right or way shall measure twenty (20) feet in a perpendicular direction from the middle of the stream where a plat is recorded, and twenty (20) feet from the thread of the stream in all other cases, except as hereinafter set forth and provided. The Township Board may grant an exception if surrounding properties already have permanent obstructions.
   2. Entrance through the waterway to the job can only be by water propulsion or the applicant's property and not by any other propulsion such as catting or other such means.
   3. A minimum of One Hundred ($100.00) Dollars cash deposit must be made with the Chesterfield Township Treasurer to be refunded upon satisfactory completion of the job as determined by final inspection by the Building Official.
   4. All construction under this ordinance shall be treated as a structure permit with the applicable sections of the B.O.C.A. Code being enforced and adhered to.

G. In addition to the foregoing requirements all construction on Lake St. Clair shall meet with all requirements and permits for work in navigable waters as required by the United States Corps of Engineers and any other governmental agencies

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having jurisdiction thereon; and subject to the following control by the Township of Chesterfield pretaining to landfills and extensions beyond the shoreline of Lake St. Clair, or upstream of the Salt River or Auvase River.

1. No extensions into the waters of Lake St. Clair shall be permitted until an applicant has submitted to the Chesterfield Township Board plans and specifications setting forth the extension to be constructed in detail as to effect on lake bottom formations and water flow as required herein and such other data as required by the Board.
2. The Applicant shall show proof of approval of the Corps of Engineers or any other appropriate agency that the same plans and specifications have been approved.
3. The nature or type of fill to be used by applicant shall be recited in its plans and specifications.
4. Upon approval by the Chesterfield Township Board of applicant's plans and specifications, a permit will be issued and applicant must not deviate from said plans and specifications in its construction of said extension.

22.142 Sec. 2. BOAT WELLS.
No boat wells shall be constructed, installed or located closer than ten (10) feet to a side lot line, excepting, however, this prohibition shall not apply to boat wells of adjacent lots which abut at the common side lot line. Notwithstanding the foregoing provision, the end walls of a boat well installed or constructed parallel to the shoreline shall not be located closer than three (3) feet from the side lot line where said end wall intersects the shoreline and that said end walls shall angle in toward the boat well shoreline and each other intersecting the boat well shoreline at not less than 135° degrees or not more than 45° degrees, as the case may be. The Township Board may vary the provisions of this section upon finding that strict compliance therewith will result in practical difficulties by reason of the area, dimensions or configuration of the lot involved.

GERRISH TOWNSHIP ZONING ORDINANCE #15 - ROSCOMMON COUNTY

"Public Lateral Road End Zoning Ordinance"
Purpose and Authority

In order to insure continued and safe public access to the waters of Higgins Lake by all members of the general public for swimming and boating, the Gerrish Township Board enacts this Zoning Ordinance to regulate the land at the ends of public lateral roads that terminate at the water's edge of Higgins Lake and the riparian rights (the lakebed area) attached to such roads as extended into and under the waters of Higgins Lake.

Pursuant to Public Act 1967, No. 288, as amended (M.C.L.A. 41.4), and Michigan case law, Gerrish Township has the legal authority to regulate by zoning the lakebed area (riparian rights) extending into and under the waters of Higgins Lake from public lateral road ends that terminate at the water's edge of Higgins Lake (also see Roscommon County Circuit Court File No. 85-4047-CZ). This Zoning Ordinance is not regulating boat navigation upon the waters of Higgins Lake.

Pursuant to Public Act 1945, No. 246, as amended (M.C.L.A. 41.181-41.183), by the State of Michigan for the purpose of promoting the health, safety and general welfare of the public, by regulating private obstructions and congestion which create an extreme public safety hazard for swimming, boat launching and use at the ends of public lateral roads that terminate at the water's edge of Higgins Lake and the riparian rights (the lakebed area) attached to such public roads for the use of the public; and for the regulating and/or prevention of private appropriation and encroachments upon and obstructing the safe use of the ends of public lateral roads that terminate at the water's edge of Higgins Lake and the riparian rights (the lakebed area) attached to such lateral roads; to provide for and insure safe and orderly public ingress and egress into the waters of Higgins Lake; to provide penalties for violation of any provisions of this Ordinance, Gerrish Township enacts the following Zoning Ordinance:

Section 1. DOCKS.

a. No more than one public dock shall be allowed at the end of any public lateral road end leading into Higgins Lake. It must be placed perpendicular to the shore line of Higgins Lake and be so aligned as to remain within the right-of-way of the street as extended into the waters of Higgins Lake.
b. Said public dock shall be no more than four (4) feet in width and must have attached to the end of said dock some type of reflective device to promote safe night navigation. Any public dock shall be of uniform safe construction for use of the general public.
c. Said public dock must bear the name and address of the owner thereof or the party responsible for its erection and must be removed from the lakebed and right-of-way of any public lateral road before December 1st of each year.
d. All such docks shall be maintained free of any restriction or prohibition against use by the general public. Such signs as "Keep Off" or "Private Dock" are prohibited thereon.
e. Overnight mooring of any watercraft to such public docks or within the area of any lateral road end as extended into Higgins Lake is prohibited, except as permitted by Section 2 of this Ordinance to insure the safe and complete and full use of these areas by the general public.

(Section 2 is not included in this article)

Section 3. LATERAL ROAD ENDS - Parking and Encroachments.

a. Parking of any motor vehicle and of any boat trailers within the area of any public lateral road end right-of-way is subject to the Gerrish Township Parking Ordinance, as amended.
b. Storage of any boats, boat hoists, docks, ice shanties or any other such encroachments within the public road right-of-way of any lateral road end is absolutely prohibited at any time to insure the safe and complete use by the general public.

Section 4. LATERAL ROAD ENDS - Improvement and/or Maintenance.

a. No public lateral road end terminating at the water's edge of Higgins Lake shall be altered and/or improved upon in any manner by any individual or governmental body, including but not limited to the Gerrish Township Board, the Roscommon County Road Commission, the Roscommon County Board of Commissioners, the Michigan Department of Natural Resources, without a properly noticed public hearing by the appropriate governmental body, to discuss and determine the effect of any pollution, erosion or destruction to the waters of Higgins Lake by such proposed changes ("Thomas J. Anderson," Gordon Rockwell Environmental Protection Act of 1970 - M.C.L.A. 691.1201 - 691.1207 and Soil Erosion and Sedimentation Control Act of 1972 - M.C.L.A. 282.101 - 117).
b. Any individual or governmental body responsible for changes in the use or characteristics of a public road end by erection of any structure, placement of litter barrels, marker buoys for swimming or the like shall also be held responsible for their proper upkeep and maintenance to assure health, safety and environmental protection.

Section 5. PRIVATE PROPERTY.

a. Augering or driving of any mooring post, placing of any permanent or seasonal anchor or dock, or swimming raft, or anchoring of any boat hoists or encroachments of any nature within the lakebed area of privately owned riparian property, without the written consent of said private riparian property

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(continued from page 12)

owner, is strictly prohibited by any individual except said private riparian owner.

Section 6. GENERAL USE.

a. Except as otherwise prohibited by this Ordinance, the general public may utilize any lateral road end and/or right-of-way as extended into Higgins Lake for lounging, picnicking, swimming, fishing and boating, provided such activities do not create a safety hazard, cause unreasonable congestion, interfere with the intended use or otherwise disturb the peace. The use of any alcoholic beverages, controlled substances or fireworks is prohibited within and/or into the extended area of any lateral road end.

b. Fires and animals are prohibited at lateral road ends.

LYON TOWNSHIP ROAD-END ORDINANCE #31 - ROSCOMMON COUNTY.

Section 1. PURPOSE.

To control congestion on a beautiful, recreational inland waterway, and thereby promote the health, safety and welfare of its residents and visitors, the Lyon Township Board enacts this Ordinance to regulate the land at the ends of public lateral roads that terminate at the water's edge of Higgins Lake and the riparian rights attached to such roads as extended into and under the waters of Higgins Lake.

Section 2. SCOPE.

The regulations contained in this Ordinance shall only apply to road-ends upon which the Township of Lyon had authority to regulate riparian rights.

Section 3. DOCKS.

a. No more than one non-exclusive private dock shall be allowed at the end of any public lateral road leading into Higgins Lake. It must be placed so as to extend perpendicular to the shore line and so as to remain within the right-of-way of the street as extended into the waters of Higgins Lake. If any streets are improved by launching ramps, such docks may be located only on one side of the launching ramp so as not to interfere with the use of the launching ramp.

b. Said non-exclusive private dock shall be no more than four (4) feet in width and must have attached to the end of said dock some type of reflective device to promote safe night navigation.

c. Said non-exclusive private dock must bear the name and address of the owner thereof or the party responsible for its erection and must be removed from the lakebed and right-of-way of any public lateral road before December 1st of each year.

d. All such docks shall be maintained free of any restriction or prohibition against use by the general public. Such signs as "Keep Off" or "Private Dock" are prohibited thereon.

e. Overnight mooring of any watercraft to such non-exclusive private docks or within the area of any lateral road end as extended into Higgins Lake is prohibited, except as permitted by Section 4 of this Ordinance to insure the safe and complete and full use of these areas by the general public.

f. Any individual or group of individuals erecting a dock according to this Ordinance, for the use of the general public, hereby assumes any liability for its erection and public use, and agrees by the erection of this non-exclusive private dock to hold Lyon Township and its officials harmless from any liability for its erection and public use. Any such individual or group of individuals erecting a dock according to this Ordinance shall, before installing such dock, provide proof of liability insurance coverage in a minimal amount of $800,000 per incident naming Lyon Township as an additional insured to the Lyon Township Clerk and shall maintain such insurance coverage in effect until such dock is removed.

Section 4. PERMANENT ANCHORING DEVICES - Boat Hoists.

a. The augering or driving or any boat mooring post, the placing of any permanent or seasonal boat anchoring device or swimming rafts within the area of any public lateral road end as extended into Higgins Lake is prohibited.

b. Boat hoists for the placement of boats may be placed at lateral road ends but only in a uniform line and in such manner as to remain within the right-of-way of the public street as extended into the waters of Higgins Lake. At each lateral road end, all boat hoists must be on the same side of the dock, in line with each other, and the first boat hoist from the shore must be a minimum of fifty (50') feet from the water's edge. If a dock does not exist, all hoists shall be in line and parallel to the shoreline, the first hoist being no closer than fifty (50') feet from the water's edge. All hoists must have reflectors or reflective tape so as to promote safe night navigation.

c. Encroachments or appropriations by any individual for private purposes, other than one non-exclusive private dock placed at the end of any lateral road end as permitted by this Ordinance, are prohibited within the area of any lateral road end as extended into Higgins Lake to insure the safe and complete and full use of these areas by the general public.

Section 5. LATERAL ROAD ENDS - Parking and Encroachments.

a. Parking of any motor vehicle and of any boat trailers within the area of any lateral road end right-of-way is subject to Lyon Township Ordinance #14 and Lyon Township Ordinance #26.

b. Storage of any boats, boat hoists, docks, ice shanties or any other such encroachments within the public road right-of-way of any lateral road end if absolutely prohibited at any time.

Section 6. LATERAL ROAD ENDS - Improvement and/or Maintenance.

a. No Lateral road end terminating at the water's edge of Higgins Lake shall be altered and/or improved upon in any manner by any individual or group of individuals without first obtaining the written permission for such improvements from the Lyon Township Board, the Roscommon County Road Commission, the Roscommon County Board of Commissioners, and the Michigan Department of Natural Resources, and without compliance with MCL 691.1201 et seq and MCL 282.101 et seq.

b. Any individual or governmental body responsible for changes in the use or characteristics of a lateral road end by erection of any structure, placement of litter barrels, or the like shall also be held responsible for their proper upkeep and maintenance to assure health, safety and environmental protection.

Section 6. GENERAL USE.

a. Except as otherwise prohibited by this Ordinance, the general public may utilize any lateral road end and/or right-of-way as extended into Higgins Lake for lounging, picnicking, swimming, fishing and boating, provided such activities do not create a safety hazard, cause unreasonable congestion, interfere with the intended use, or otherwise disturb the peace. Campfires and the use of any controlled substances are prohibited within and/or into the extended area of any lateral road end.

Section 7. PENALTIES.

a. Any violation by any person of any provision of this Ordinance shall constitute a misdemeanor and upon conviction shall be subject to a fine not exceeding $100.00 for each and every day the violation continues, or by imprisonment in the county jail for a period not to exceed 90 days, or by both such fines and imprisonment.

b. Any violation by any person of any provison of this Ordinance will result in the Lyon Township Ordinance Enforcement Officer or his authorized agent removing and towing away and placing in storage said boat and/or hoist and/or encroachment at the owner's expense.

Section 9. SEVERABILITY.

a. Shall any portion of this Ordinance be declared invalid by court action, the Ordinance as a whole and all remaining portions shall be considered valid and in full force and effect.

Section 10. EFFECTIVE DATE.

This Ordinance shall become effective January 1, 1987.

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ML&SA NEWS

MICHIGAN LAKE & STREAM ASSOCIATIONS, INC.
Business Office: 11262 Oak Avenue, Three Rivers, Michigan 49093
Phone: (616) 244-5336. Donald E. Winne, Executive Director

NEW MICHIGAN LAKE & STREAM ASSOCIATION MEMBERS

Mirror Lake Association, Jackson County
John M. Beyer, President 273 members

Dunham Lake Property Owners Association, Oakland & Livingston Counties
Sharon Bolle, President, 378 members

Clifford Lake Improvement Association Montcalm County
Thomas M. Wall, President, 50 members

Lake Braemer Estates #1 Association, Oakland County
James Walters, President, 37 members

Upper Long Lakes Estates Corporation, Oakland County
Murray L. Yoffee, President, 72 members

OBJECTIVES OF MICHIGAN LAKE & STREAM ASSOCIATIONS

1. To inform riparian property owners and the public at large of **Riparian rights in Michigan.**
2. **To disseminate information about pending legislation** which will have an impact on riparian rights.
3. **To inform Riparians of applications** to **dredge, fill or change the shoreline** of lakes and streams in Michigan.
4. Sponsor **conferences and workshops** for riparians and the public to provide information regarding the **protection of lakes or streams.**
5. **To assist Riparians to establish an Association** to deal with problems which call for unity in action to prevent the degradation of the water quality of lakes or streams and to prevent their misuse.
6. **To assist Associations in the presentation** of their respective positions regarding riparian rights and water resource management before **courts, municipalities and government agencies.**
7. **To review and submit proposals to administrative and legislative bodies** considering statutes, ordinances and regulations impacting riparian property owners and water resources.
8. **To develop a library of information** including book, pamphlets, documents, research studies of Michigan's water resources and make the same available to riparians and the public at large.
9. **To sponsor studies and research** designed to expand the fund of knowledge about Michigan's water resources.
10. **To instruct Lake & Stream Association members** how to monitor land and water development within the watershed.
11. **To assist local associations in obtaining help** from local and state governing units in their efforts to protect their water resource.
12. **To support all efforts of state and federal governments to maintain water quality standards** established by state and federal law.

OFFICERS:
PRESIDENT
John Forester
Free Soil, MI

VICE PRESIDENT
James Taylor
Pontiac, MI

SECRETARY
Kathryn Shirk
Mishawaka, IN

TREASURER
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Long Lake, MI

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Joe Hollander - Kalamazoo, MI

AQUATIC BIOLOGIST
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HAZARDOUS WASTE SPECIALIST
Robert Wyatt - Clarkston, MI

WATER QUALITY SPECIALIST
Doug Denison - Maybee, MI

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NEWS FROM MEMBER ASSOCIATIONS

Barron Lake Association - Cass County
William Casper, President

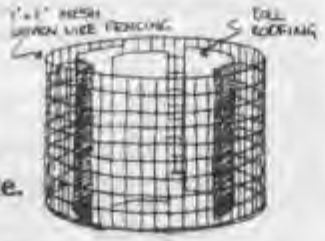
COMPOSTING. Composting is a method of converting all organic waste back into rich dark soil. This rich black earth can be used on flower beds, gardens or lawns. A compost pile is composed of unwanted leaves, grass clippings, hedge clippings, kitchen garbage, and all other forms of organic waste.

To build a compost pile it is unnecessary to keep working until completion, or done at any special time of the year. Late summer or early fall are both good times to start due to the accumulation of garden trimmings, leaves, lawn clippings, and other residues. Household garbage can be added throughout the year.

Composting is a way of keeping organic materials from entering a lake. Leaves and grass that blow into the lake decompose and add to the nutrient level of a lake. Ashes from burnt leaves still contain high levels of phosphate and can be blown into the lake. Composting is a simple and rewarding way to make use of all of these materials.

The first step in composting is to decide where to place and how to build the compost pile. There are as many different sizes and styles of composting containers as there are materials that can be added and ways to compost.

FENCED-IN-BIN. A cage-type composting bin is very practical if your backyard is small. It's quick and easy to construct by using a mesh fencing formed into a cylinder. Sheets of 90 lb. roll of roofing are cut the same height as the bin and formed around the inside. Vent holes should be pinched in the roofing liner to give the pile proper aeration. After the bin is full, cover with a sheet of 6 mil. black plastic, in order for decomposition. It is a good idea to have two of these bins, while one is rotting, the other can be drawn from.



1. Don't Burn Leaves On The Beach.

2. Don't Throw Leaves Or Grass Clipping Into The Lake.

Birch Lake Association - Cass County
Joyce Klimek, President

NOTES FROM THE PRES

Finally, as a result of the petitions to close Birch Lake to minnow trapping, a meeting was held September 3 at the Cass County Courthouse. Attending were Dave Johnson, DNR Fisheries Biologist; Susan Dobrich, Prosecuting Attorney; Ken Ray, Sheriff's Marine Division; myself as President of the Birch Lake Improvement Association and two Birch Lake witnesses. Absent were Dick Cox, Cass County Conservation Officer, and Rex Schmeler, DNR Legal Advisor who was ill.

After simply stating our problem with glass jars being placed on the lake bottom of our beaches, rough language, and threats of retaliation from the trappers, I read a statement from a resident who did not wish to be identified. Two Birch Lake people gave their eye witness testimony regarding a recent incident in which trappers were on their lakefront all one Saturday and Sunday refusing to leave when asked and then had the nerve to return the next day with the Conservation Officer who stated that trappers were within their rights!

After reading aloud the Attorney General's opinion that "the holder of a minnow & wigglers license may take minnows from any navigable body of water"; further, "such license holder may take minnows from non-navigable waters, *provided Licensee owns lands riparian to such waters or has permission to do so granted by the owner of lands to such waters*".

In 1982 the Supreme Court stated:

"The established law of this state it that the title of a riparian or littoral owner includes the bed or midpoint of the water..." (the public owns the water and the fish).

Ms. Dobrich explained that glass bottles on the lake bottom *constitutes trespass* and that she would instruct the Conservation Officer and Marine Division personnel at the Sheriff's Office to that effect. She would appreciate any documentation we could give her such as pictures, license numbers, etc. Dave Johnson stated that he would send out letters to all trappers.

That trappers have been absent most of this year spoke for itself - there are no minnows left! Dave Johnson stated that a survey verifying that by the DNR will give them the authority to lawfully close Birch Lake to trappers for five years. A DNR investigator will make that survey of our lake.

At least for once, we felt we were heard!

Dewey Lake POA - Cass County
William Kittridge, Vice President

PROGRAMS AND PLANS FOR THE 1986-1987 LAKE YEAR.

On August 9, 1986, the Annual Meeting was held and all officers were re-elected: namely, Don Bolduc, President; William Kittridge, Vice President; Bev Newman, Secretary; Chuck Moden, Treasurer; and Doris Wegner, Dr. Jim Meachum and Sue Aylmer as Directors.

On August 20, 1986, Don Bolduc resigned his position, due to business demands. We would like to thank Don for the job-well-done and ask him to continue to give us his support and aid our organization in future years.

On August 24, 1986, the Board met and set forth the following plans:

May 23, 1987: SPRING MEETING of the property owners, to be held at 9:00 AM - Silver Creek Township Hall.

Last week of October 1986: Board Meeting, Revision of Constitution and By-Laws.

Last week of December 1986: Same agenda as October meeting.

Last week of April 1987: Board Meeting, to prepare working-draft of the revisions, to be submitted at the May 23, 1987 Spring Meeting.

Douglas Lake Association - Otsego County
Alvin J. Laurie, Chairman

MAINTENANCE OF LAKE WATER QUALITY:

A. Do not rake leaves or debris into the lake. Rake away from the lake, pick up and discharge elsewhere.
B. Do not drain any type of sewage into the lake, it introduces nutrients into the water and degrades water quality.
C. Check septic tank condition at reasonable intervals (3-5 years). If it is not functioning properly or draining into the lake, replace it. Older septic systems probably do not meet current County standards and should be relocated to conform to regulations when replacement is necessary.
D. Otsego County has a Greenbelt Regulation regarding disturbance of vegetation on shorelines. Do not destroy sod or soil-holding brush on the shoreline. It prevents erosion and silting of the lake. Any alterations to the shoreline must be approved by the County.
E. Throw no fish cleaning remains into the lake. Bury them back from the shoreline. They make good fertilizer.
F. Use only minnows caught in the lake for bait. Do not take the chance of introducing unwanted species of fish into the lake.
G. Use biodegradable detergents with no phosphates. Phosphates are great fertilizers and can produce excessive weed growth in the lake.

Elk - Skegemog Lakes Association - Antrim, Grand Traverse and Kalkaska Counties - Stan Holzhauer, President

BIRDS NESTING NEARBY. You are approaching one of the few lakes in Michigan where the Common Loon is known to nest. The birds nesting nearby represent an endangered species in our state. Michigan's breeding population of the Common Loon totals less than 350 pairs. Please do your part to help save the Loon.

PLEASE KEEP YOUR DISTANCE, if you see a loon flapping its wings wildly and dancing across the water, you are **too close.** Consider "binocular range" as a safe distance for viewing and enjoying loons. Any disturbance could cause one of these birds to desert its nest, meaning a loss of young. No one wants that to happen. Besides, it's against State and Federal laws to bother or harass loons and other protected wildlife.

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Hutchins Lake Improvement Association - Allegan County
Neal Mol, President.

The Lake Association held its annual meeting Friday evening, August 22. The main topics for discussion centered on the water quality and aquatic plant growth in the lake. The water has been checked and tested by "Advance Analysis & Testing, Inc.", Grand Rapids, Michigan. In comparison with previous years, the nutrient level remains stable at a relatively low level especially for the phosphates. The lake is benefited from good flushing action. In addition, there is no evidence of any harmful bacteria such as fecal coloform.

The Eurasian and Water Milfoil infestation has virtually been eliminated during the past two years. There has been a limited amount chemical treatment during that time. This was done with AQUA-KLEEN, a 2-4-D granular herbicide. It appears that a disease infested the Milfoil in the treated areas when the plant was under stress because of the treatment. From there, it progressed into the untreated areas adjacent to it and caused the plants to crash during the latter part of 1985. They have not reappeared in those areas. The lake will be monitored next year for any further growth of Milfoil and treated as necessary. Other beneficial aquatic plants are reestablishing themselves in the lake.

The report was also given that the Association harvested 3200 northern fingerlings from the pike marsh on Russell Westfield's farm. They were planted in the lake during the month of May.

The featured speaker was Joseph H. Hollander from Kalamazoo. He is a Michigan Lake and Stream Association's representative. He addressed the members on some issues as to how to help preserve the quality of the lake.

Horsehead Lake Association - Mecosta County
Marion Morcom, President

WATER QUALITY. Director Harry Markiw is in the sixth year of taking clarity depth readings every week of the summer and reporting them to the DNR. Harry reports that our lake tests as one of the best in the State. His is a one-man committee and Harry works without fanfare or even much recognition, but the work he does is very important and long term records of this lake will be very valuable in the years to come. Thank you, Harry.

FISH RAISING IMPOUNDMENT Don Woodhams reported excellent success with raising the pike fingerlings at the impoundment on 90th Avenue this year. The DNR officers said ours is the most productive impoundment of its kind in the State.

This year, 5000 four to eight inch fingerlings were released into the three lakes. All who fish these lakes owe a debt of gratitude to the handful of dedicated men who help maintain the impoundment and distribute the fingerlings each spring.

Lake Charlevoix Association - Charlevoix County
John B. Hall, President

The proposed Amendments to the Articles of Incorporation will change the name of the Corporation from the "Lake Charlevoix Property Owners' Association" to "Lake Charlevoix Association"; will indicate that the Corporation is organized on a membership basis; and will amend the purposes of the Corporation to indicate that the Corporation is organized exclusively for charitable, educational and scientific purposes so as to qualify as an exempt organization under Section 501(c) (3) of the Internal Revenue Code.

The proposed amendments to the By-Laws, among other things, will include language to bring these By-Laws in conformity with the requirements of Section 501(c) (3) of the Internal Revenue Code.

PRESENT LAKE QUALITY Presently, Lake Charlevoix has cleaner, clearer and safer waters than in the past. It is a lake with low algae and coliform bacteria counts and high clarity range. However, these characteristics can change with increased use. By actively engaging in the sampling of lake water and its tributaries, monitoring boat and marina usage and encouraging fair, comprehensive zoning requirements in the municipalities around the lake, the Lake Charlevoix Association endeavors to protect and preserve Lake Charlevoix as a precious resource.

Indian Lake Association - Kalamazoo County
Bryan Senholtz, President

The Association continues its fight for clean air and water against the Strong/Hunter hog confinement operation (1000 feeder pigs and 1,000,000 slurry lagoon) located near the shore of Indian Lake. The determined efforts of our volunteers, and expert legal advice, have allowed us to make headway in this struggle. Recognizing our dependence on agriculture for food and fiber, and also agriculture's responsibility to properly site these facilities, our organization in July, headed by Ken Heisig, presented a petition to Dave Dempsey of the Governor's office. This petition, with over 4,000 signatures, asked that a moratorium be placed on all future Water Resources Commission discharge permits for this type of facility, the intent of which was to stop action on this operation until various study groups could draft rules for the permitting/control of this type of facility. Directly after that, several of our members along with Don Winne gave testimony at the WRC meeting. Several meetings in Vicksburg in August with DNR staff, agriculture resource people, politicans, and many concerned area residents led to two important meetings.

The first, the Air Pollution Control Commission meeting on September 16, met to consider the Association's request for declaratory ruling on the APCC's jurisdiction over this "hog hotel". The Air Quality Division of the DNR recommended that this facility be exempted from APCC rules because it is a "normal and tradition animal husbandry practice for the area", which is the key phrase that exempts agricultural operations from the APCC rules. The Association was represented by members Henry Molise and Dave Maturen, and by legal counsel John Fifarek of Joe Hollander's firm. With the aid of prior testimony by our expert witness, Dr. Ronald Miner of Oregon State University, they were able to successfully argue that this facility should not be exempt from air quality standards. The APCC voted 7-2 to reject the AQD staff recommendation, and in turn affirmed its jurisdiction over the facility. The ruling in part says that the hog factory shall not emit air pollutants that "unreasonably interfere with the comfortable enjoyment of life and property". Without that ruling, it would have been open season on the long established residential community by an interloping hog factory.

On the heels of that ruling came the WRC meeting of September 18. The Groundwater Quality Division staff of the DNR recommended issuance of the permit and a waiver of the hydrogeological study for the effluent application area. Again, our group of volunteers treked to Lansing to testify and object to the recommendations. Several WRC commissioners were concerned about odor emissions from this facility if the permit were granted. These concerns were prompted in part by massive odor problems from two Jackson County facilities, one of which located adjacent to Rice Creek, a tributary of the Kalamazoo River. With the fresh APCC ruling, and turmoil within the department, the WRC voted 5-2 to table consideration for the discharge permit until December 18.

In the interim, a Right to Farm Act Task Force revision team was set up to evaluate the Act, and make recommendations to strengthen its provisions. One of the recommendations was to exempt all agricultural facilities, meeting Michigan Department of Agriculture management guidelines, from APCC regulation. As of this date, the public hearings on the revision have been cancelled and the draft revision seems to have been put on hold. In its place is a Multi Disciplinary Evaluation Team which is looking at the livestock waste management issue. Currently this task force consists mainly of representatives from agricultural oriented organizations.

It is important for all citizens of the State of Michigan, especially riparians, to be aware of what is going on with the above administrative and legislative process. With the likelihood of nitrate induced groundwater and surfacewater pollution generated by these concentrated livestock facilities, along with the accompanying extreme nuisance odor, our lifestlyes are in great danger. The quality of life one enjoys as a riparian, the ability to utilize a clean lake and environment, and our property values, are all under attack by an industry masquerading as a farm.

Our new address is: P.O. Box 97, Vicksburg, MI 49097.

Lake Lapeer Association - Lapeer County
Leo Cynowa, President
Dear Neighbors,

I'm making this announcement in our newsletter to update everybody in regards to our lawsuit. Unfortunately, we received the court outcome 2 days after our annual meeting. I'm pleased to say we now have a shed size limitation, of sorts, to go by. The court interpreted our deed restrictions as follows: " the restrictions are such that an owner may not build a detached accessory building large enough to store an automobile, nor shall an owner store an automobile

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therein. The Lake Lapeer Association is advised that it should not approve construction of any proposed accessory building large enough to house an auto. A shed to store lawn equipment, lawn furniture and the like is contemplated by the wording in paragraph one of the restrictions." So basically we are looking at a size of about 8'x 14' or less. As of this date we are finished with the lawsuit involving Lake Lapeer Association, the Doils, and the Ross's unless there is an appeal. As far as the second lawsuit is concerned, involving Mr. Anker of Island Pointe Dr., to whom we would not give permission to build a 24'x 32' garage, we have advised him through our attorney that it would be futile on his part to pursue the case any further. Hopefully this decision by the court will eliminate the problems with this question that we have had for many years. We certainly can put our time and money to better use. Looking on the good side of all this, we now can and will enforce this ruling on our deed of restrictions. There will be no gray area to cloud the issue. I want to personally thank the outgoing board members for a job well done. It has not been easy to try to implement all the other work, as weed control, fish, and erosion with the lawsuit taking so much of our time and money. Hopefully everyone has a clearer picture of what has been taking place.

Lake Shores Association - Montcalm County (Indian Lake)
John Westveer, President

Birds, birds, birds. Now is the time to make plans for summer enjoyment by setting out nesting boxes, houses and other aids. John Westveer even has a screech owl as a friend that goes well with his 30 families of martins and half dozen wrens. Since spraying has been eliminated, the number of birds has multiplied. This year lets all make a resolution to leave all the wild birds alone and enjoy them. We have registered loons, swans, geese and ducks on the lake. We would like to caution the members from feeding the geese. A large number on the front lawn and in the lake can be a very severe problem.

Lake Orion Lake Association - Oakland County
G.W. Richards, President

LOLA requests that the Village Planning Commission adopt the R1LF zoning as the zoning recommendation to the Village Counsel.

This request is the result of several considerations including the results of LOLA's May 1986 lake survey. The survey results were reported back to all participating lake residents and local officials on June 25, 1986 (Ref: Attachment #1). Of the 700 survey questionnaires sent out, (159) were received back which reflects approximately a 23% return. It is important to realize that this questionnaire went to all Lake Orion riparian residents. The results of this survey overwhelming support the LOLA's request for R1LF zoning.

LOLA believes that the R1LF zoning is the only zoning which protects our lake environment from futher exploitation for commerical purposes and guarantee's the future of Lake Orion. If this travesty is nor corrected, it will serve as a precedent to further degradation of Lake Orion and the community as a whole.

The local ordinances must be enforceable and be observed without the continuing legal challenges every step of the way. The village and the township also have to continue to work together to offset the impacts of non-compliances. The attributes of the Master Plans of the Village and Township provide a common mode of orderly development.

Lake Sherwood Association - Oakland County
Marcel Musci, President

The increase in population and the popularity of boating and skiing in Lake Sherwood once again prompts to publish this reminder of the Marine Safety rules for the State of Michigan for inland waters!!

ALL OF THE FOLLOWING LAWS HAVE BEEN TAKEN FROM "A Guide to Safe Boating in Michigan" available at any DNR office. Please read and have any boaters in your family read also.

1. Motorboats **must** have working front and back lights on at night.
2. **No** boats are to exceed 55mph.
3. Motorboats must keep **100 feet** away from other boats, docks, and swimming areas.
4. Non-powered boats must **have** the right of way.
5. **"Slow No Wake"** speeds must be observed where indicated.
6. No skiing, water sleds, surfboards etc., after dark (its a misdemeanor).
7. **You must have** an observer when pulling skiers, etc.
8. You are **legally** responsible for:
   a. reckless driving
   b. damage caused by your wake

Lakes Preservation League - Lenawee County - Devils and Round Lakes - Dorothy Smith, President

Rollin Township, with the help of an attorney, is updating their Ordinances. There have been public meetings to discuss curfews for young people, disposition of trash and junk cars, hazardous materials and weeds. Petitions have been presented for regulations on boat speeds and "no wake", particularly on Posey Lake. A peititon was presented requesting the installation of a steel barrier and additional speed-limit signs on Round Lake Highway where there was a double fatality recently. A car was going at a high rate of speed on a curve near Sandy Beach road, it burned, damaging a residence, as well as taking lives.

Woodstock Township has restructured rates for building permits and inspections. Beware, they now assess a penalty for building without a permit.

We saw a 35-inch muskie caught last weekend by Mike Koppitsch at the north end of Devils Lake. Proves the big ones are in there. This association was instrumental in getting the lake stocked, remember? Dorothy Peterson has been named Vice President of Region Two by the Michigan Lake and Stream Association, and Mike Clark is a director.

Lakeville Lake Association - Oakland County
Ron Wonboy, President

GRANT RECEIVED. The Lakeville Lake Watershed Project received an $8,643 grant from the Environmental Protection Agency to plant 25 acres of trees, 150 acres of alfalfa and 27 acres of critical area seeding to reduce nonpoint source pollution into Lakeville Lake. The Watershed Project is looking for parcels of land to complete this planting. We need your input for this to be successful. If you are interested or know of any areas that may lend themselves to these practices, please contact the Watershed Project, 628-5409.

North Lake Land Owners Association - Van Buren County
Tom Sutka, President

Harvesting of the weeds on North Lake has been completed for this year with what money we had in the treasury. Jerry Gardner from Michigan Aquatic Weed Harvesting Co. did the work with his machine and truck, and in 40 hours he took out 48-50 tons of weeds. Our lake is very shallow so we had plenty of lake weeds mostly lily pads and milfoil plus other lake weeds. The neighbor was sure glad to get the weeds for his fields of sand as it makes good compost for his garden.

We raised the money by having garage-bake sales and raffles. All merchandise furnished by our association members and neighbors, we have already started on next years money makers, maybe somebody will come up with some new ideas to raise funds.

North Lake is a small private lake about 62 acres, and there are about 30 properties that have lake frontage, we have 24 members so our membership is very good if we could only get them all to come to the meetings, that is about the only problem that we have on the lake.

Walloon Lake Association - Charlevoix and Emmet Counties
Charles H. Breithaupt, President

WALLOON NIGHT BREAKS ALL RECORDS It was a record-breaking affair when over 325 friends of Walloon Lake got together on August 2nd at Victory Lanes for Walloon Night '86.

A record attendance. A record number of items (137) donated for the Silent Auction, and a record number of happy bidders. A record number of raffle tickets sold (350). A record number of winners (10) sharing a record raffle purse ($17,500). A record number of smiles on the faces of just about everyone who attended. And a record net proceeds of $26,704, for the Walloon Trust.

The happy event met the two objectives of Chairman Fred Koehler and his 37 volunteer helpers, in spades: 1) to put on a party-of-parties for the Walloon Community, and 2) to raise money to support the worthwhile work of the Walloon Trust.

What are you going to do for an encore in 1987, John Worcester?

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JOINT COMMITTEE ON RULES HAS APPROVED NEW WATER QUALITY RULES

The Joint Committee on Administrative Rules approved the new water quality rules on October 14, 1986. They are now on the Governor's desk and will go to the Secretary of State in the next few days.

The members of the Joint House and Senate Rules Committee are: Ed Fredricks, R-Holland, Chairman; Jack Welborn, R-Kalamazoo. Members of the Senate: Alan Cropsey, R-DeWitt; Patrick McCollough, D-Dearborn; Michael O'Brien, D-Detroit. Members of the House: Tom Alley, D-West Branch; Dennis Dutko, D-Warren; Michael Griffin, D-Jackson; Charles Mueller, R-Linden; Ernest Nash, R-Dimondale.

The new water quality rules were unaninously adopted by the Water Resources Commission and are designed to do the following:

1. Limit pollution discharges into the Great Lakes.
2. Improve the dissolved oxygen levels of state waters.
3. Prevent degradation of waters which now exceed pollution standards.
4. Provide authority to control pollution from urban and rural runoff.
5. Limit toxic pollution of the Great Lakes from dredging and disposal of contaminated river and harbor sediments.

Gorden Guyer, Director of the Department of Natural Resources has stated that it is imperative that the rules be approved for the future of the state. Some of the provisions of the new water quality rules are given below:

R 323.1050. PHYSICAL CHARACTERISTICS.

Rule 50. The waters of the state shall NOT HAVE ANY OF THE FOLLOWING UNNATURAL PHYSICAL PROPERTIES in quantities which are or may become injurious to any designated use: (a) Turbidity. (b) Color. (c) Oil films. (d) Floating solids. (e) Foams. (f) Settleable solids. (g) Suspended solids. (h) Deposits.

R 323.1053 HYDROGEN ION CONCENTRATION.

Rule 53. The hydrogen ion concentration expressed as pH shall be maintained within the range of 6.5 to 8.8 9.0 in all waters of the state. Any artificially induced variation in the natural pH shall remain within this range and shall not exceed 0.5 units of pH.

R 323.1055 TASTE OR ODOR PRODUCING SUBSTANCES.

Rule 55. The waters of the state shall contain no TASTE-PRODUCING OR ODOR-PRODUCING SUBSTANCES in concentrations which IMPAIR OR MAY IMPAIR their use for a public, industrial, or agricultural water supply SOURCE, IMPAIR the palatability of fish as measured by test procedures APPROVED BY the commission.

R 323.1058 RADIOACTIVE SUBSTANCES.

Rule 58. The control and regulation of radioactive substances discharged to the waters of the state shall be PURSUANT to the criteria, standards, or requirements prescribed by the UNITED STATES NUCLEAR REGULATORY COMMISSION IN 10 C.F.R. §20.1 ET SEQ. AND BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

R 323.1060. PLANT NUTRIENTS.

Rule 60. (1) CONSISTENT WITH GREAT LAKES PROTECTION, phosphorus which is or may readily become available as a plant nutrient shall be controlled from point source discharges TO ACHIEVE 1 MILLIGRAM PER LITER OF TOTAL PHOSPHORUS AS A MAXIMUM MONTHLY AVERAGE EFFLUENT CONCENTRATION UNLESS OTHER LIMITS, EITHER HIGHER OR LOWER, ARE DEEMED NECESSARY AND APPROPRIATE BY THE COMMISSION.

(2) IN ADDITION TO THE PROTECTION PROVIDED UNDER SUBRULE (1) OF THIS RULE, nutrients shall be limited to the ex-

(continued on page 23)

THOUSANDS OF HAWKS, LOONS, OWLS FLY OVER WHITEFISH POINT BIRD OBSERVATORY

The Whitefish Point Bird Observatory of the Michigan Audubon Society has recently completed its eighth season of monitoring the spectacular spring bird migration at the tip of Whitefish Point. Beginning in March and continuing through the end of June, the Observatory's seasonal staff of five observed 227 different species of birds. The 1986 season was an exceptional one, with over 45,000 spring migrants counted as part of the bird research at Whitefish Point.

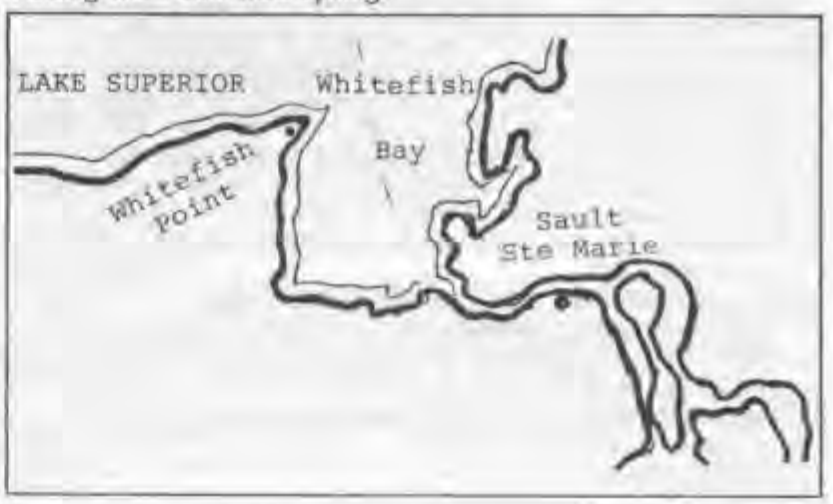
Because of the unique location of Whitefish Point, tremendous numbers of hawk, owls and songbirds are concentrated at the Point before crossing the 17 miles of water which separate the Point from Canada. In addition, many waterbirds such as loons and ducks tend to fly past Whitefish Point as they head north toward Lake Superior. Of special interest to the naturalists at the Observatory are the hawks, loons and owls. A record total of 20,536 hawks were counted at Whitefish Point this spring, including 16 Peregrine Falcons and 45 Bald Eagles. The number of Bald Eagles has increased in recent years, which is encouraging news for this endangered species.

Almost 6500 Common Loons were counted as they flew past the Point this spring. Perhaps nowhere else in North America can so many loons be seen during migration. Most of these birds breed in Canada; Michigan has less than 300 nesting pairs within its borders.

The Whitefish Point Bird Observatory conducted an extensive bird banding program this season, as volunteers captured and banded over 2500 birds of many different species. A number of owls were banded at the Point this year (almost 150), including such rare species as the Great Gray Owl and the Boreal Owl. Owls are normally very elusive, and much about their biology is learned as a result of the banding program.

The Observatory building, located near the Whitefish Point Lighthouse, contains a research center, banding laboratory, and visitor information center. In addition to its research activities the Observatory conducts educational programs for school classes and visiting groups, and provides bird banding demonstrations for the public. A number of displays in the visitor center describe the natural history of the area and provide detailed information about bird migration at Whitefish Point.

With its beautiful Lake Superior shoreline and multitude of birds, Whitefish Point is becoming known across the state and around the country as a fascinating springtime attraction. For more information about the Whitefish Point Bird Observatory, write W.P.B.O., c/o Michigan Audubon Society, 409 West E. Ave., Kalamazoo, Michigan 49007 or stop at the visitor center while visiting the Point next spring.



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Spencer Board Approves Zoning Amendments

Spencer Township, Kent County

(Editor's Note: Spencer Township, located in the northeast corner of Kent County has a population of 3,000. The township has 13 lakes with a total of 993 surface acres. The ratio of the population to acres of surface water is 3 to 1, and one residence for every 1⅓ acres of lake surface.

Action Restricts Mobile Homes, Limits Lake Development

The Daily News, Greenville, Michigan Wednesday, October 22, 1986
by Syliva Warner, DN Editor

CEDAR SPRINGS - Spencer Township Board approved amendments to the township zoning ordinance Tuesday night, tightening up restrictions on mobile homes, addressing the issue of satellite dishes, and limiting "funneling or keyholing" on lake property.

Supervisor Larry Hansen said those were the three main effects of zoning changes provided by the amended ordinance which will take effect 30 days after publication in the Daily News.

The ordinance, reviewed and recommended by the Planning Commission, raises the minimum square footage of mobile homes allowed in the township from 600 feet to 720 feet. It also changes some other requirements such as the depth of concrete pads allowed for the homes.

Hansen said 25 percent of the dwellings in the township are mobile homes and the new restrictions are needed to control some of the "junk" homes.

"The biggest thing (the ordinance) does though," Hansen said, "is limiting funneling and keyholing...to halt over-development of our lakes."

That portion of the ordinance amendment prohibits access property from offshore lands to a lake, stream or other body of water, either natural or man-made, unless there is water frontage on the access property of at least 70 foot at the normal high water mark and a minimum lot size of 9,500 square feet per dwelling unit using the access.

Zoning Ordinance Amendments - Spencer Township, Kent County, Michigan

(Approved by the Spencer Township Board on October 21, 1986. The amendments will become effective on November 22, 1986.)

Section 4.28 is added to read as follows:

Section 4.28 DENSITY ON WATER FRONTAGE.

LEGAL BASIS Whereas Article IV, Section 52 of the Constitution of the State of Michigan defines the conservation and development of the natural resources of the State "to be of paramount public concern in the interest of the health, safety, and general welfare of the people"; and

Whereas, funneling, as hereinafter defined, is inimical to the public health, safety and welfare and constitutes an improper use of land and natural resources because it causes overcrowding of lakes, streams and lands adjacent to them, contributes to the pollution and degradation of public waters, creates hazards to life and property by increasing the risks of boating and other similar accidents, and adversely affects property values of shoreline properties located near funneling developments;

INTENT. It is the intent of this section:

1. To carry out the purposes of the Township Rural Zoning Enabling Act (Act 184 of Public Acts 1943) and the Environmental Protection Act (Act 127 of Public Acts of 1970) and to regulate the proper use of natural resources within the Township.

2. To protect the quality of inland waters by limiting uses of the waters that tend to pollute them.

3. To prevent the overuse and misuse of water resources within the Township, particularly by boating traffic and similar activities which impact on the quality of inland waters, by limiting the number of users of lakes and streams.

4. To preserve the quality of waters and preserve the quality of the recreational use of all waters within the Township by limiting the number of users of lake and stream frontage.

Nothing in this ordinance shall be construed to limit access to lakes or waterways by the general public via a public park or a public access site provided or maintained by any unit of State, county, or local government. Nothing in this ordinance shall be construed as depriving any riparian owner of any natural inland body of water or waterway of any riparian rights.

1. DEFINITIONS

a. "Funneling" is defined as the use of an inland waterfront property, parcel or lot fronting upon a lake, stream, or other water body either natural or man-made, as common open space for waterfront access for a development located away from the waterfront.

b. "Access property" shall mean a property, parcel, or lot abutting a lake, stream, or other water body either natural or man-made and used or intended to be used for providing access by pedestrian or vehicular traffic to and from offshore land to a lake or stream.

c. A "Dwelling Unit" shall mean, notwithstanding Section 2.1 (10), a dwelling structure designed for use by only one family or occupant, whether for seasonal, all season, temporary or other use and shall include but not be limited to mobile homes, recreational units, and motels. Multiple family dwelling structures designed for multiple family or multiple individual occupancy, including but not limited to homes, multi-unit complexes, condominiums, and cooperatives, shall be deemed to be multiple dwelling units. Such multiple family structures shall be deemed to have two or more multiple dwelling units.

2. LIMITATION ON FUNNELING

No land in Spencer Township shall be used or provided for use as access property from offshore lands to a lake, stream, or other body of water either natural or man-made, unless there shall be provided access property with a water frontage of not less than seventy (70) feet as measured along the water's edge of normal high water mark of the lake or stream and a minimum lot area of nine thousand five hundred (9,500) square feet respectively per each dwelling unit using it as access property. These restrictions shall apply to any parcel regardless of whether access to the water shall be gained by easement, common fee ownership, single fee ownership, lease, license, gift, business invitation, or any other form of dedication or conveyance.

3. MOBILE HOME PARK, CAMP GROUND, MULTIPLE FAMILY DEVELOPMENTS.

All developments that consist of either mobile home parks, camp grounds, or multiple family dwelling structures or any

(continued on page 20)

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(continued from page 19)

combination thereof that front upon a lake, stream, or other body of water either natural or man-made shall be limited in size based upon the following:

a. One dwelling unit or one multiple dwelling unit per seventy (70) feet of frontage upon such lake, stream or other body of water.

b. One dwelling unit or one multiple dwelling unit per five thousand (5,000) square feet of lot area.

4. BOAT SLIPS

Docks for the mooring boats may be constructed in water abutting access property or developments specified in Section 2.28(3) provided they meet all other requirements of the Zoning Ordinance and provided that not more than one boat slip is provided for each dwelling unit or each multiple dwelling unit.

Section 4.19 is added to read as follows:

4.19 TRAFFIC VISIBILITY. On any corner lot no fence, structure or planting over 30 inches in height above the curb line, except deciduous plantings, shall be erected or maintained within twenty (20) feet of the intersection of the right-of-way lines so as to interfere with traffic visibility across the corner. No structure or planting which is deemed a traffic hazard shall be permitted in any zone. No lighting on any premises shall be located so the direct source is visible from a public street except for one standard porch or lamp light not exceeding seventy-five (75) watts.

The tentative text of said proposed amendments to the Zoning Ordinance and Land Use Map may be examined at the Township Hall, corner of Harvard Road and 18 Mile Road, Cedar Springs, MI 49319, on Thursday, August 28, 1986 at 9:00 AM to 11:00 AM and also on August 28, 1986 at 7:30 PM to 9:00 PM.

Spencer Township Planning and Zoning Commission

Hydrological Terms

Surface Water. Water on the land surface, such as puddles, ponds, lakes, and streams.

Zone of Aeration. Porous upper layers of earth that contain a certain amount of air (therefore oxygen). Water sinking through this zone to a sufficient depth (which varies with the material) is purified.

Zone of Saturation. The zone in which all spaces between soil, sand, gravel, rock, or other material are filled with water.

Permeability. A material's ability to allow water to flow through it - important because it largely determines a well's supply and rate of replenishment.

Artesian Well. In some regions rock layers are tilted to produce a pattern that consists of an aquifer capped by an impermeable layer and fed by an elevated recharge area. This creates pressure that forces water upward, sometimes to or above the ground surface to produce a *flowing artesian well.* A fissure or fault may produce an *artesian spring.*

Perched Water Table. A body of water, in a basin of impermeable material, perched higher than the main water table. Many have a small capacity and will disappear during a dry spell.

Water Table. The upper surface of the zone of saturation. It tends to follow the contours of the land surface.

Porosity. The proportion of a material's total volume that consists of open spaces or pores. The amount of water a material can hold depends on its porosity, which may be as much as 45 per cent for some sands and gravels and as little as 1 per cent for some igneous rocks.

Ground Water. Water below the ground and within the zone of saturation that can supply wells and springs. Because of gravity, it constantly moves downward, but this movement is usually only a few feet a week. The source of ground water is precipitation that has percolated into the ground either directly or indirectly, from surface water such as ponds and streams. Ground water is relatively pure and fresh, because of its general inaccessibility to man and the filtering action of soil and rocks. It can be contaminated, however, and when this happens purification may take years because of ground water's slow movement, the absence of sunlight, and the relative lack of air.

Aquifer. A body of permeable material that contains and conducts enough ground water to yield significant amounts to wells and springs. Gravel and sand are usually good aquifers; clay is usually a poor one. It might seem that rocks with low porosity, such as shales and granites, would be poor aquifers, but that is not necessarily true. Many such rocks have highly permeable zones because of cracks and fissures that have resulted from geological contortions, the effects of which you often see while driving through roadside cuts. The unpredictable nature and location of these fractures is one reason why wells quite close together can vary greatly in depth and yield.

Spring. A flow of ground water emerging naturally onto the surface in a concentrated stream by gravity flow.

Seep. Area where ground water comes to the surface without concentration.

Recharge. The addition of water to the zone of saturation. The areas where this occurs are known as *recharge areas.*

COURTLAND TOWNSHIP, KENT COUNTY, MICHIGAN - PLANNING COMMSSION

Proposed Ordinance scheduled for October 28, 1986 Public Hearing:

Riparian Access

Any development in any zoning district which shares a common lakefront area may not permit more than one single family dwelling to the use of each 30 feet of lake frontage in such common lakefront area as measured along the water's edge of the normal high water mark of the lake. This restriction is intended to limit the number of users of the lake frontage to preserve the quality of the waters, and to preserve the quality of recreational use of all lakes within the township. This restriction shall apply to any parcel of land regardless of whether access to the lake shall be gained by easement, lease or fee ownership. (If proposed ordinance is determined to have to be "regulatory" rather than an amendment to the presently exisiting Zoning Ordinance, the following paragraph shall be included).

The Zoning Board of Appeals may, upon petition and after notice and hearing as set forth in this zoning ordinance, vary or modify the strict application of this provision if it shall determine that undue hardship will otherwise result and that the spirit and intent of this ordinance will be preserved by such variance or modification. The Board of Appeals may, as a condition of such variance or modification, impose such conditions upon the use of the lands and lakefront as it shall deem necessary to preserve the spirit and intent of this ordinance.

Nadine M. Prawdzik
Secretary, Planning Commission
7383 Hessler Drive
Rockford, MI 49341 (616) 874-9000

Editors Note: The Courtland Township Board unanimously approved the above proposed ordinance on November 5, 1986.

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From the Kalamazoo Gazette

Ground Water Monitoring Simplified With Use Of WMU Computer System

by Mike VanBuren
Gazette Staff Writer

A ground water monitoring program based at Western Michigan University was used as a model for several recommendations in a new study by the Michigan Department of Management and Budget.

The study recommends developing computer-based systems to improve state and local ground water management. This would involve a statewide computer network linked to state agencies, universities, the Environmental Protection Agency and the U.S. Geological Survey.

Computer-based geologic and ground water quality data is already being gathered at WMU under a $418,571 grant from the W.K. Kellogg Foundation. The Southwest Michigan Ground Water Survey and Monitoring Program provides a comprehensive overview of the subsurface environment and character of local ground water. It supports management functions ranging from ground water modeling to land use planning.

WMU's program has "already developed a demonstrably useful system," the state study said, "including a model for appropriate training and support."

Donald Brown, director of WMU's Science for Citizens Center, said the study "recognizes that we cannot fully protect Michigan's drinking water supplies unless we have the information, supply, movement, and quality of ground water in the state".

The new strategy, Brown said, "provides a guide for taking us to that point".

The system recommended by the study would enable authorized users to access an array of ground water management tools by using a microcomputer in any geographic location, Brown said. The system relies heavily on computers and programs that are already in place - particularly at the state level - but are not used by everyone, he said.

"We are very pleased and gratified that the study recognizes so many features of our work, including the needs for public education and training of local government personnel," Brown said. "The value of a statewide system depends heavily on how well-trained the potential users are."

Brown said one of the key problems addressed in the study involves making better use of the ground water information already obtained and now being generated. Government agencies spend millions of dollars each year on studies of ground water contamination sites, he said, but most of the information generated is not plugged into a computer network.

"Frequently in these studies," Brown said, "raw data are collected, summarized, mapped and plotted by hand. So, once the project is finished the data become lost to future applications."

If the information was available on computers in a common format, much better use of it would occur, Brown said, and future work could be done faster, easier and at a lower cost.

From the Kalamazoo Gazette
Thursday, October 2, 1986

Suit seeks to shut down Jackson County "hog hotel"

by Jeffrey Savitskie
Booth News Service

JACKSON - A lawsuit has been filed in an attempt to shut down a Jackson County hog confinement facility that is similar to one proposed near Vicksburg in Kalamazoo County.

A rural Jackson couple and an environmental group filed the suit Tuesday seeking to close a "hog hotel" operated by Sand Livestock Systems on Callahan Road in Jackson County.

The lawsuit charges that pollution at the facility is endangering the health of Jack and Jan Tornga, who own property next to it. The Tornga are seeking damages in excess of $10,000 for ailments they say are caused by odors and airborne contaminants from the farm.

In Kalamazoo County, a proposed 1,000-head hog operation near Indian Lake has stirred strong opposition from nearby residents, who have also threatened to file a lawsuit.

The proposal by farmer Tobe Strong is currently on hold while the state's Water Resources Commission considers whether to grant Strong a permit to store swine manure in a lagoon. The state's Air Quality Control Commission has also ruled that Strong must meet state guidelines for air pollution control.

In Jackson County, the Sand operation raises hogs in confinement from birth to slaughter, storing the animal waste in lagoons until it can be sprayed onto fields as fertilizer.

The complaint charges that a state groundwater discharge permit was issued without adequate pollution controls and without sufficient review by the Water Resources Commission and Department of Natural Resources.

The Farm Environment Defense Foundation, a Jackson County-based environmental group, filed the lawsuit with the Torngas in Ingham County Circuit Court. Defendants are the Water Resources Commission and Sand, the Nebraska firm that opened the hog operation in 1984.

"The activities are causing pollution and we want it stopped," said Jeffrey K. Haynes, the attorney who filed the complaint. "We are saying that the permit is invalid because it violates provisions of the Environmental Protection Act. The permit allows pollution of the air and water."

The foundation and the Torngas are asking the court to declare the permit a violation of the Michigan Environmental Protection Act and are seeking a court order to stop Sand from storing swine manure in lagoons or applying it as fertilizer on land near the site.

Tim Cumberland, Sand treasurer contacted at his Nebraska office, defended the corporation and predicted that it would win the battle in court. But he added that the company has tried to work with citizens to ease their complaints in Parma.

"I am concerned, because anytime you have a lawsuit, you have the legal expenses and the image problems that come with it. But I have no concern that ultimately the courts will find that we are operating our facility correctly. We, from day one, have never felt that we were polluting...this is the latest in technology," Cumberland said.

Sand has hired a consultant from Texas A&M University to study the facility and recommend changes that could ease complaints about odors, he said. The report is expected to be completed this month.

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Procedure For Adopting Special Watercraft Regulations Streamlined

The procedure for adopting special regulations for watercraft control on Michigan's inland lakes was provided in the Marine Safety Act, Act #303, P.A. of 1967. The procedure was long and cumbersome and discouraged riparian property owners from taking any action to provide greater safety in use of public waters.

The procedure has been streamlined by the adoption of Act #36, P.A. of 1986. This Act became effective on March 17, 1986. It provides:

(Section 16): "Local political subdivision which believe that special local ordinances of the type authorized by this act are needed on waters subject to their jurisdiction shall inform the department (Of Natural Resources) and request assistance. All such requests shall be in the form of an official resolution approved by a majority of the governing body of the concerned political subdivision. Upon receipt of such resolutions the department shall proceed as required by Sections 14 and 15."

(Section 14): The department may initiate investigations and inquiries into the need for special rules for the use of vessels, water skis, water sleds, aquaplanes, surfboards, or other similar contrivances on any of the waters of this state. If controls for such activities are considered necessary, or changes or amendments to or repeal of an existing local ordinance is required, a local ordinance shall be prepared. Notice of a public hearing shall be made in a newspaper of general circulation in the area in which the local ordinance is to be imposed, amended, or repealed, not less than 10 calendar days before the hearing. Interested persons shall be afforded an opportunity to present their views on the proposed local ordinance either orally or in writing.

(Section 15): A local ordinance proposed pursuant to section 14 shall be submitted to the governing body of the political subdivision in which the controlled waters lie. Within 60 calendar days the governing body shall inform the department that it approves or disapproves of the proposed local ordinance. If the required information is not received within the time specified, the department shall consider the proposed local ordinance disapproved by the governing body. If the governing body disapproves the proposed local ordinance, or if the 60 day period has elapsed without a reply having been received from the governing body, no further action shall be taken. If the governing body approves the proposed local ordinance, the local ordinance shall be enacted identical in all respects to the local ordinance proposed by the department.

(Section 17): (1) State, county, and local peace officers shall enforce local ordinances enacted in accordance with this act.

Some examples of special local watercraft ordinances adopted by townships under this Act follow:

Harrison Township, Macomb County: "On the waters of the Maplehill/Elm Lane Canal, a vessel shall not moor in a manner which restricts channel - width to less than 12 feet."
Effective June 3, 1986

Sidney Township, Montcalm County: "On the waters of Derby Lake, Section 10, T10N,R7W, Sidney Township, Montcalm County, it is unlawful between the hours of 6:30 PM and 10:00 AM of the following day, to: a) operate a vessel at high speed, or b) have in tow or otherwise assist in the propulsion of a person on water skiis, water sled, surfboard or other similar contrivance."
Effective July 5, 1986

Frost Township, Clare County: "On the waters of Halfmoon Lake, Section 22 and 23, T20N, R4W, Frost Township, Clare County, it is unlawful to: a) operate a vessel at high speed or b) have it tow, or otherwise assist in the propulsion of a person on water skiis, a water sled, surfboard, or other similar contrivance."
Effective July 15, 1986

Algoma Township, Kent County: "On the waters of Camp Lake, Sections 7 and 18, T9N, R11W, Algoma Township, Kent County, it is unlawful at any time to operate a vessel in excess of 40 miles per hour (64 kilometers per hour).
Effective August 27, 1986

From the Kalamazoo Gazette
October 13, 1986

Another County Joins Water Survey Program

by Mike VanBuren
Gazette Staff Writer

Livingston County has become the first associate member of the Southwest Michigan Ground Water Survey and Monitoring Program based at Western Michigan University's Science for Citizens Center.

This is in addition to eight Michigan counties that have joined the program as full members - Allegan, Barry, Berrien, Calhoun, Eaton, Ingham, Ionia and Jackson.

Livingston County's application was recently approved by the program's policy board.

Organizers of the program are developing computer-based geologic and ground water quality data bases under a three-year $418,571 grant from W.K. Kellogg Foundation. The system provides a comprehensive overview of the subsurface environment and character of local ground water, they said.

"(Livingston County) relies solely on ground water for drinking water supplies," said Ted Westmeier, county environmental health director, "so we recognize the importance of preventing contamination of this resource and early detection of contamination should it occur."

"The health department is very enthusiastic about utilizing mapping and planning programs of the ground water survey to help protect local aquifers."

Earlier this year, the policy board of the ground water survey adopted a new policy that permits county governments, planning agencies and educational institutions to apply for associate memberships.

Associate members may join group training sessions and other educational and informational programs available to members. They will receive meeting agendas, a newsletter, operational manual and other materials, and may contract for additional services with the survey, its staff, or consultants.

The data base system is a useful ground water management tool, organizers said.

For more information write:
Science For Citizens Center, Western Michigan University
Kalamazoo, Michigan 49008

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(continued from page 18)

tent necessary to prevent stimulation of growths of aquatic rooted, attached, SUSPENDED and floating plants, fungi or bacteria which are or may become injurious to the designated uses of the waters of the state.

R 323.1062. MICROORGANISMS.

Rule 62. (1) ALL waters of the state shall contain not more than 200 fecal coliform per 100 milliliters. THIS concentration may be exceeded if SUCH CONCENTRATION IS due to uncontrollable non-point sources. THE COMMISSION MAY SUSPEND THIS RULE FROM NOVEMBER 1 THROUGH APRIL 30 UPON DETERMINING THAT DESIGNATED USES WILL BE PROTECTED.

(2) Compliance with the fecal coliform standards prescribed by subrule (1) OF THIS RULE shall be determined on the basis of the geometric average of any series of 5 or more consecutive samples taken over not more than a 30-day period.

(3) Protection of the waters of the state designated for total body contact recreation AND PUBLIC WATER SUPPLY SOURCE by the water quality standards prescribed by THIS rule may be subject to temporary interruption during or following flood conditions, accidents, OR EMERGENCIES to WHICH AFFECT a sewer or wastewater treatment system. In the event of such occurances, notice shall be served to those affected IN ACCORDANCE WITH PROCEDURES ESTABLISHED by the commission. PROMPT CORRECTIVE ACTION SHALL BE TAKEN BY THE DISCHARGER TO RESTORE THE DESIGNATED USE.

Additional information on the water quality rules will appear in the February 1987 issue of The Michigan Riparian magazine.

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