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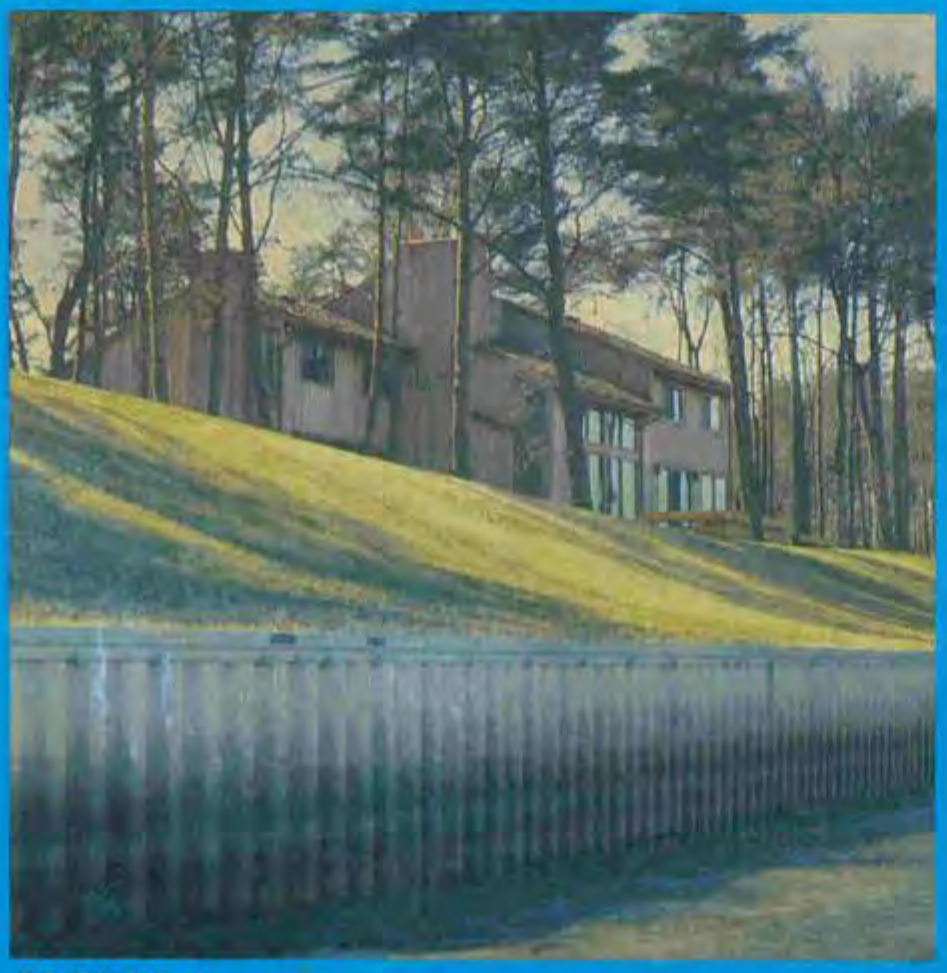

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A Cruise on the Canadian Empress

No, this is not an ocean cruise with big rolling waves that might make you seasick. No, you don't have to go in an airplane to get to the port of departure or drive for three days before you get on board. What am I talking about? Let me tell you.

I just completed my *second* trip down the St. Lawrence River aboard a very fine ship called the CANADIAN EMPRESS. The departure point was the Port of Kingston at the East end of Lake Ontario, a days drive from the Detroit area. An option to driving is to go by train from Windsor or Sarnia. We took the train from Windsor on our first trip.

So what's this got to do with Michigan Lakes and Streams Association? Well several things: Most of Michigan's inland water drains to the Great Lakes and almost all of the Great Lake's water drains down the St. Lawrence; most ML&SA folks are water oriented in their interests like myself and I just wanted to share this most delightful, near home experience with my fellow Riparians.

The very courteous crew hosted us (66 passengers max.) through the Thousand Islands area, a tour of Boldt Castle, Upper Canada Village, Fort Wellington and the International Seaway Locks. This *calm* water river cruise offers excellent food, live entertainment at a reasonable price aboard a 108 foot long diesel powered ship launched in 1981, but designed and outfitted in replica of steamships used on the Great Lakes during the late 1800's. Of course, it does have all the latest safety and essential comfort features.

In the beginning of this story, I said this was my second trip and some day we will go again. We enjoyed the cruises so much, we wanted to share the experience with our Michigan Riparian Friends. So if you have been thinking about "cruising" but hesitated because of ocean waves, time, distance or cost, reconsider and try it on the St. Lawrence River. For details, see the Canadian Empress advertisement below.

Paul A. Clark, Past President ML&SA

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On The Cover

Picture by Ross Meagher

This barge is located on Diamond Lake in southwestern Michigan and serves the Island there. It is powered by a paddle wheel on each side and I am told it is the only one of its type operating. The barge itself is a converted U.S. Army Barge which runs along a cable all the way to the Island.

Ross Meagher

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THE MICHIGAN
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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

Who Says The Riparian Doctrine is Obsolete?

A recent article in a southwest Michigan newspaper reported that the "existing riparian doctrine" is outdated and does not meet the needs of modern water resources management. Riparian rights in Michigan are based upon 1500 years of legal opinion. Roman Law, as laid down by Justinian (500 A.D.) and demonstrated by Vinnius affirms that all newly formed islands belong to the riparian proprietor and that this right is incident to and derived from the ownership of the bed of a stream.

English common law, in cases concerning tide-water rights, re-affirmed the right of the riparian property owner to exposed land from ebbing of the tides.

The Michigan Supreme Court, in Lorman vs. Benson (January 9, 1860) argued that the common law principle of riparian rights is equally applicable to tideless streams, such as the Detroit River, and "needs no changing". The Court decreed that the riparian property owner controls the bottomland of the Detroit River to the mid-point of the River. Other cases brought before the Michigan Supreme Court during the past 127 years have supported the position taken by the Court in 1860.

The Court argued that "The right of navigation, to which all others are subservient, is in no way injured or abridged by this holding" - (that the owner of the bank or upland along the shore of a lake or stream controls the bottomland of a lake or stream to its mid-point).

Donald E. Winne

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Your continued support of THE MICHIGAN RIPARIAN magazine through subscription renewal is vital to the continuance of the magazine. Comments and suggestions for articles, subjects and content of the magazine are requested.

Sincerely,

Donald E. Winne

Donald E. Winne, Editor & Publisher

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Diamond Lake

by Dave Gregg, President - Diamond Lake Association

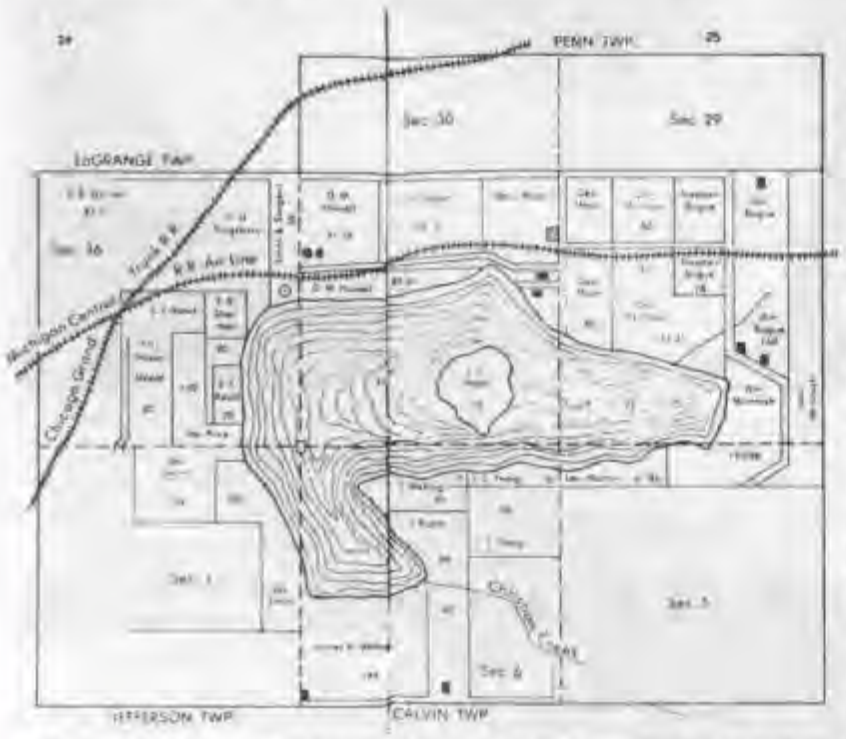
Diamond Lake, a glacier formed, spring fed lake is located in southwestern Michigan, Cass County. The lake is approximately 1020 acres, has 17 miles of shoreline with a 48 acre island. Currently there are about 700 waterfront homes including approximately 65 homes on the island. The island is currently served by a 4 car paddle-wheel ferry that operates from May through October. (Picture on cover.)

Diamond Lake was originally inhabited by Pottawatomie Indians, who were eventually driven from the land by Eastern trappers and fur gatherers who discovered the lake in 1814. Names common to the area like Pokagan and Shavehead were the names of leaders of the Pottawatomie Tribe.

The original settlement on the northwest side of the lake was the village of Geneva. The land surrounding the lake was originally platted in 1830. At about the same time, the Village of Cassopolis (some 3 miles away) was settled and eventually became the County seat.

From the 1840's through to the end of the Civil War, Cass County (named after Lewis Cass, Govenor of Michigan) achieved fame for it's underground railroad bringing slaves up from Kentucky.

While plans for railroads had been in the making prior to the period of the Civil War, most of the work on them spanned the decades to well beyond the time of the Blue and Grey.



Railroads began criss-crossing the state and eventually, the shrill whistle of the locomotive was heard in Cassopolis. On January 16, 1871, passenger and freight service was inaugurated in the community by the Michigan Central Railroad. The Grand Trunk and Chicago Railroad Company began its Cassopolis operations on February 7, 1871.

The land-locked era was over. The struggle for transportation had ended. Cassopolis began to thrive and flourish again. With it came a certain luxury for the mind and body. Time for recreation! With this, thoughts were directed increasingly to the wondrous beauties of Diamond Lake.

By May of 1873, it became apparent, the recreational advantages of Diamond Lake were beginning to be commercialized for the convenience of the visitors. Fishing was one of the primary interests of the Lake, at the time. In a brief article in the VIGILANT, mention is made of a string of 100 fish for sale at Major Smith's Grocery. John Moon had his boats painted for the season and launched in readiness for the anticipated visitors. Two sailboats were on hand, too, for those who wished to try their skill at sailing.

The season opened in June as some Chicago residents came to the Lake to enjoy what was then termed "rusticating". The impact of the Air Line Railroad tracks into the area is most evident, especially when the branch line was opened, thereby providing the first "easy" access to the Lake.

While the exact date is lost, it was about 1871 or 1872 when Chicagoans erected the first part of what was eventually to become Forest Hall. A communal dwelling was built by three men: H.E. Sargeant, an official of the Michigan Central Railroad; J.P. Smith and Nathan Corwith. The building was erected slightly beyond the end of the road leading into the present day Diamond Lake Golf Course.

"The Chicago House" was located at the top of the knoll that gently sloped to the water's edge. The land was cleared so that a better view could be enjoyed by the three families and their guests. Because data is lacking for this time, the exact size of the original structure is unknown. The possibility that it may have consisted of six apartments is open for consideration due to the fact that Howard Emmons (Kamp Kozy) recalls having heard it so described.

It is certain, however, that the railroad people of Chicago knew that Diamond Lake had many natural advantages for recreation. With the arrival of the Air Line in 1871, it did not take long for building activity to get underway. A small depot was erected to take care of the guests coming to the Lake. The precise location is unknown, but knowledge of its presence persists. The roads at that time were of the bare earth variety, barely sufficient to handle the horse-drawn carryall that was maintained for the railroad passengers and their baggage.

To John Moon, a "native", must go much credit for the visionary development of Diamond Lake.

Moon recognized the potential of the property he held, and as his concepts for the future grew, he began guarding his investment. For example, he posted the Island with many signs warning that trespassers would be punished. At the same time, he continued to make his fishing facilities attractive even offering reduced rates from time to time.

When the Air Line Railroad began operating, it was most logical to have one of its stopping points near Moon's landing. Boating was a predominate activity and picnics on the Island were most popular events, while Mr. Moon was duly recompensed for granting the privileges.

The Railroad officials recognizing the advantages Diamond Lake had for tourists from Chicago, South Bend and other points, soon began selling tickets for 80 cents round trip. By September of 1873, the SOUTH BEND UNION was proclaiming Diamond Lake as a "noted Pleasure resort", with "bountiful preparations for guests made by Mr. Moon". Moon permitted "picnic parties to rusticate to heart's content" on the Island for a reasonably established fee.

Moon's Landing was a huge success as Diamond Lake and the Island continued to be a focal point of attraction for the inhabitants of northcentral Indiana and southwestern Michigan. The railroads offered excursion rates and the newspapers were filled with announcements of all-day picnics. John Moon, although continuing to own the enterprises involved his brother, Fred, in many of the activities at the Landing. The Moons were joined by Colonel Allen of Kalamazoo, who took a most active interest in the affairs of Diamond Lake.

There was an air of bustling excitment around Diamond Lake in the final decade of the nineteenth century. More and more people were using the Lake facilities which were being expanded as quickly as possible. The fires of enthusiasm were being fanned by a continual flow of newspaper stories. The following one was published by the SOUTH BEND TRIBUNE and copied by the VIGILANT - in August

continued on page 9

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The Cyclonaias tuberculata or "Purple Pimple Back" mussel.
It is a rare mussel found in only two Michigan rivers - the Raisin River and the Huron River.

Article By: Mark K. Mitchell, Special Projects Coordinator, Huron River Watershed Council, 415 West Washington Street, Ann Arbor, Michigan 48103

SURVEY OF A RARE MUSSEL IN THE HURON RIVER

Michigan is home to a myriad of animal and plant species, some of which are found nowhere else. Unfortunately, habitat loss, water pollution and a host of other factors have led to a dramatic reduction in many species. But there is a program designed to reverse this trend.

The Michigan Nongame Wildlife Fund which is supported through citizen donations and state income tax refunds seek:

(a) to preserve populations of nongame wildlife species, and
(b) to increase people's enjoyment, understanding and appreciation of precious wildlife and plant species.

Last summer, the Huron River Watershed Council received a Nongame Wildlife grant to survey a rare mussel, Cyclonaias tuberculata. Its common name, the "purple pimple back", aptly describes this mussel — purplish inside the shell with "pimples" or nodules covering much of the outershell. The purple pimple back is found in only two Michigan rivers — the Raisin River and the Huron River.

The Huron River is located in southeast Michigan. Its source is Big Lake and the Huron Swamp northwest of Pontiac. On its 125 mile journey it flows through many river-lakes and impoundments before emptying into Lake Erie at Point Mouille. The upper reaches of the watershed are primarily agricultural or wooded which is a major factor in the high quality water found upriver.

The survey area included the reach from Hudson Mills (near the Washtenaw, Livingston county line) to Delhi Rapids (just northwest of Ann Arbor). This river reach is also designated "country-scenic" under the Natural Rivers Act and is protected by a natural river zone prohibiting development within 400 feet of the river. Hudson Mills to Delhi Rapids has also harbored the greatest

Surveyors studying rare mussels in the Huron River.

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number of Cyclonaias tuberculata over the years.

In 1935, Cyclonaias turberculata, along with 15 other mussel species, literally paved the shoals of the Huron River. At Delhi Rapids one could find 15 species representing 12 genera, including tremendous numbers of Cyclonaias tuberculata. World War II, however, signaled the demise of many mussel species. At Dexter, which sits along the Huron River two miles above Delhi, a laundromat accepted tons of greasy rags used in the Detroit bomber and munition plants. The volume of greasy, oily wastewater from the laundromat overwhelmed the Dexter wastewater treatment plant; consequently, nearly untreated wastewater was sent to the river.

The mussel beds downriver suffocated under this oily film and from the low dissolved oxygen levels caused by organic wastes. Mussels, like the purple pimple back, obtain the dissolved oxygen and food they need by siphoning water through their body. This mechanism also permits the bioaccumulation of pesticides and other chemcials. For these reasons, mussels are considered good monitors of water quality.

Another factor in the decline of mussels in the Huron River has been fluctuating water levels caused by the extensive dam system. Mussels have very specific habitat requirements comprising depth of water, type of river bottom or substrate, and velocity of flow. If these parameters are altered, so too is the health of the mussel population. Dams, without fish ladders, also prevent the passage of fish that carry the larval stage of the mussel. The young mussel or "glochidia" attaches itself to a host fish and releases its hold later. Through this behavior, mussels can recolonize upriver reaches, if the passage of fish is not prevented. The host fish species for Cyclonaias tuberculata is still unknown.

The purple pimple back inhabits coarse gravel bottoms along flowing reaches of the Huron River. Often, these robust clams, which grow to 10 - 11 cm across, bury themselves in the substrate. This type of habitat exists from Hudson Mills to Delhi Rapids. Henry Van der Schalie, a distinguished malacologist, also studied the purple pimple back along this reach. Although his studies revealed healthy populations of this mussel before World War II, by 1975 Cyclonaias tuberculata was listed as a rare and endangered Michigan species in need of protection (Van der Schalie, 1975). The purpose of the Watershed Council survey was to delineate numbers and locations of Cyclonaias over the same river reach. The results of our survey may be used by the Michigan DNR to upgrade (greater protection) or downgrade (less protection) their status in Michigan's Natural Features Inventory.

The survey involved the handpicking of (432) one square meter plots. In all, 370 specimens were found from 6 locations along the Huron River. Of these, only 23.5 percent were live animals. More significantly, very few young mussels were found. Young mussels begin life at a size smaller than a pinhead and are 1/8 inch long at a year old. However, even mussels of less than 2 inches were rarely found. The study demonstrated that Cyclonaias has recolonized the area; however, because of the lack of young, the health of the population is still in question.

The purple pimple back is a part of the rich natural endowment of the Huron River. This species add to the biotic diversity of our state along with other living things like the Kirtland's Warbler, the Bluebird, the Pine Marten, the Dwarf Lake Iris, the Northern Copperbelly Snake and the Common Loon. These, and many more, are a part of Michigan and enrich our lives.

Diamond Lake *continued from page 7*

of 1890:

"It Bids Fair to Become A Popular Resort For South Bend People. Of all the lakes in the vicinity of South Bend used as summer resorts. Diamond Lake seems to be growing in popularity. It was once quite a resort for people of South Bend; Joliet, Illinois and other places, but its popularity died out and it had only a few visitors. For the past year or two, however, it has been again gaining ground, especially with South Benders and , before many seasons, it will without a doubt be a great resort for our citizens. Diamond Lake has many features about it which are extremely attractive and all of these are fully appreciated by our citizens. The Lake itself is a beautiful sheet of water, an excellent place for boating and bathing, and it is made even more beautiful by the sunny wild island which is located near its center."

The early 1900's saw the development of the shorelines. The first areas to be developed were those closest to transportation. Shoreline areas that we know today like Park Shore, Eagle Point, Sandy Beach, Shore Acres, Kamp Kozy, Spring Beach, Diamond Shores, and Howell Point were all plotted in the period from 1900 - 1930.

The first property owners association was formed in 1911. It was called the Diamond Lake Park Improvement Association. 77 residents attended the first meeting. Among the goals and activities were; protection of fishing rights, property protection, social activities, and 4th of July celebrations. One project of the Association which had far reaching effect on the lake was the construction of a dam in 1927 that fixed the lake level at 825.25 feet. This dam was rebuilt at its present site in 1968.

Other Associations serving individual shoreline areas as well as the entire lake community were formed. Many still exist today. The present Diamond Lake Association has close to 200 members and has been active in protecting the lake from commercial and State development, monitoring and protection of water quality and providing a voice in local governmental issues that effect the Lake.

The Diamond Lake Yacht Club formed in 1938 has been the center of sailing activities. In the 1950's it boasted the largest Snipe fleet (45 boats) in the world. It currently sponsors organized sailing events for MC Scows and Hobie Cat 16's. The Yacht Club also sponsors on-lake swimming instruction to both members and non-members. In 1970 the Yacht Club, working with the Cass County Health Department, sponsored the first environmental survey of Diamond Lake.

Today, Diamond Lake is still a recreational mecca for people from South Bend, Chicago and Detroit. Many summer residents now live year round (approximately 60%). Sailing, fishing, powerboating, snowmobiling and cross country skiing are primary recreational attractions.

Ecologically the lake has remained clean and sustains excellent fish life. Work continues with local, state and federal agencies for the development of a sanitary sewer system.

For those of us who live and play at Diamond Lake we are very proud and protective of the "Sparkling Jewel" of southwestern Michigan.

NOTE: Many excerpts taken from "A Diamond Sparkles" by Lois Webster Welch published in 1970.

Edited by Ron Francis, Diamond Lake Association.

BIG STAR LAKE - WATER LEVEL CONTROL

by Tony Groves - Progressive Architects, Engineers, & Planners of Grand Rapids, Michigan

Big Star Lake is a 912 acre groundwater seepage lake located in the southwest corner of Lake County, Michigan, approximately 8 miles southwest of the Village of Baldwin. The lake has a long irregular shoreline and is comprised of three distinct basins. Currently, approximatley 350 seasonal cottages and year-round homes border the lake.

The water level of Big Star Lake has fluctuated for many years. Historical observations of the Big Star Lake level show a peak lake elevation of about 831 feet (above mean sea level) was recorded around 1924 (Michigan Department of Conservation 1959). A United States Geological Survey drainage map printed in 1931 showed a surface discharge from the east shore of Big Star Lake to Jenks Creek and the Pere Marquette River indicating a high water level existed on the lake into the early 1930's (see figure

1). However, by the mid-1930's the lake began to decline and by 1955 the lake level had receded to a point where the Big Star Lake Association contacted the Michigan Department of Conservation (predecessor to the Department of Natural Resources) concerning possible remedial actions. Lake level elevations recorded around this time ranged from 827.32 feet in July of 1955 to 824.59 feet in August of 1958 (Michigan Department of Conservation 1959). Preliminary investigations were made by the Conservation Department to evaluate the feasibility of obtaining supplemental water via pumping from either the Jenks/Danaher Creek system or the Pere Marquette River.

Pumping from the Jenks/Danaher system proved infeasible and possible legal difficulties associated with obtaining the right to pump water from the Pere Marquette prompted the Association to retain the services, of Dr. William G. Keck, a consulting geophysicist, to evaluate the possibility of pumping groundwater into the lake. In 1956, a test well was drilled about 500 feet from the easternmost tip of the lake, but it was found that a well at this location would recirculate a considerable amount of water from the lake. Thus, a second well site was selected ½ mile east of the lake in the general vicinity of the headwaters of Jenks Creek. Extensive well testing and hydrogeological investigations were conducted in this area and it appeared that a pumping rate of sufficient magnitude to provide supplemental water to Big Star Lake could be sustained. Although proceedings to authorize the drilling of production wells were initiated in late 1956, premanent wells were never constructed.

At present, the lake is again experiencing elevated water levels. During the spring of 1986 the lake level had risen to an elevation of about 831.25 feet. At this elevation, the foundations of approximately 25 lakeside homes were inundated with water.

In order to remedy this situation, the Big Star Lake Association retained Progressive Architects/Engineers/Planners, Inc. of Grand Rapids, Michigan, to conduct a study to evaluate the feasibility and cost of determining an optimum lake level. Once an optimum level was determined, steps could then be taken to establish a legal lake level pursuant to provisions of Act 146 of 1961, the Inland Lake Level Act.

However, before a detailed engineering feasibility study could be completed and the court proceedings required to establish a lake level initiated, an interim method had to be devised to conduct an emergency lake drawdown. If the lake could not be lowered to below flood stage by late winter, substantial structural damage to many lakeside homes and properties would invariably occur with the shifting of ice during the spring break-up.

On July 8, 1986 a meeting was held at the County Courthouse in Baldwin to discuss how the lake level issue was to be addressed. This meeting was attended by the Lake County Prosecuting Attorney, a representative of the United States Forest Service, several Lake County Commissioners and concerned lake residents. At this meeting, the proceedings under which an emergency lake level drawdown could be accomplished by acquiring a state permit under provisions of Act 346 of 1972, the Inland Lake and Streams Act, were examined and discussed. Subsequent to this meeting, the Lake County Board of Commissioners prepared a resolution directing the Lake County Prosecuting Attorney to petition the Circuit Court to determine and fix a legal lake level for Big Star Lake.

On July 24, 1986, a meeting arranged by John Dexter, P.E. and Chris Shafer of the Land and Water Resource Management Division of the Michigan Department of Natural Resources was held to bring together staff from Progressive and the Department to determine how an emergency drawdown of Big Star Lake could be achieved in an environmentally sound and timely fashion.

At this meeting, it was noted that the drawdown structure would have to be constructed at the east end of the lake at the site of the old lake outlet since topographic constraints made alternate flowage routes infeasible. Water discharged from this point would flow in a northeastward direction transversing federal land to Jenks Creek and ultimately to the Pere Marquette River via Danaher Lake. The objective of the drawdown would be to lower the lake about 2 feet to an elevation of 829.5 feet (approximately 0.75 feet below flood stage).

Since the transfer of water from Big Star Lake to the Jenks Creek/Pere Marquette River system involved discharging warm water from an inland lake to cold water trout streams, a controlled method of discharge had to be devised to prevent adverse environmental impacts. Environmental impacts of primary concern included temperature induced stress of the cold-water fish species predominant in the receiving waters, the migration of warm-water fish species out of Big Star Lake and excessive sedimentation of downstream waterways. In light of these environmental constraints, the MDNR permit to construct and operate the emergency drawdown structure stipulated the following: 1) erosion control devices had to be installed. 2) the drawdown could only be conducted when the lake water temperature was at or below 68°F. 3) a wire screen had to be installed on the drawdown structure to prevent the migration of warm-water fish species from Big Star Lake. 4) water quality monitoring of Jenks Creek had to be conducted to determine suspended solids and dissolved oxygen levels on a weekly basis for the duration of the drawdown.

To comply with the terms of the permit, the drawdown structure was designed and constructed with flared end sections, anti-

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seepage collars and flow dissipators for erosion control. Stone riprap and sand filled nylon reinforced bags were utilized for additional bank stabilization and erosion prevention. Two series of mesh screening were positioned to prevent physical blockage of the structure and inhibit the downstream migration of warm-water fish species from the lake (see Figure 2). Monitoring of the Big Star Lake discharge was to be conducted at the 76th Street crossing of Jenks Creek to insure downstream sedimentation and water quality degradation did not occur.

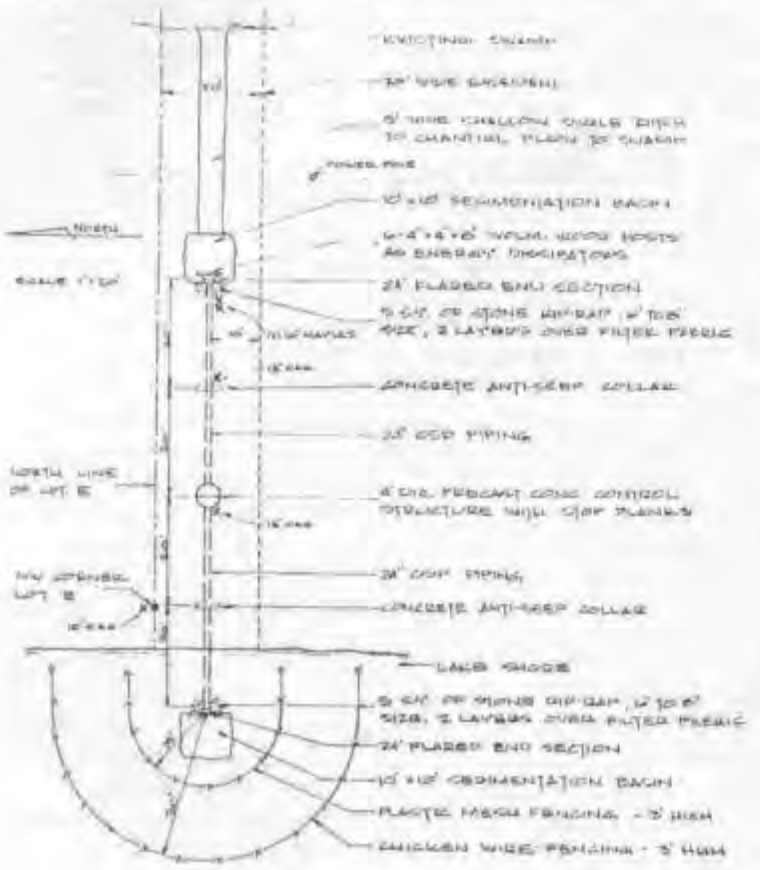

TABLE 1

JENKS CREEK
WATER QUALITY MONITORING DATA

Date	Total Suspended Solids (mg/l)	Dissolved Oxygen (mg/l)
October 27, 1986	12	--
November 3, 1986	14	8.8
November 5, 1986	13	--
November 6, 1986	13	10.0
November 8, 1986	17	8.1
November 9, 1986	20	7.7
November 10, 1986	Drain Opened	
November 11, 1986	8	9.5
November 12, 1986	18	9.1
November 13, 1986	8	9.6
November 14, 1986	12	9.7
November 15, 1986	9	10.0
November 20, 1986	3	11.2
November 24, 1986	4	11.2
November 28, 1986	2	12.4
December 9, 1986	2	--
December 10, 1986	2	11.6
December 28, 1986	3	11.8
December 31, 1986	2	--
January 9, 1987	1	--
January 15, 1987	1	12.7
January 21, 1987	1	9.6

TABLE 2

BIG STAR LAKE
WATER LEVEL ELEVATION READINGS

Date		Lake Level
July 20, 1986		831.28'
July 30, 1986		831.21'
August 10, 1986		831.04'
August 20, 1986		830.91'
August 30, 1986		830.75'
September 10, 1986		830.90'
September 20, 1986		831.65'
September 30, 1986		831.96'
October 10, 1986		832.07'
October 20, 1986		832.16'
October 30, 1986		832.14'
November 10, 1986	(Drain opened)	832.06'
November 20, 1986		831.96'
December 22, 1986		831.45'
December 31, 1986		831.26'
January 14, 1987		831.03'
February 13, 1987		830.60'
March 26, 1987		830.30'

On November 10, 1986 the drawdown structure was fully operational and the transfer of water from Big Star Lake to the Pere Marquette was initiated. As required, dissolved oxygen and total suspended solids concentrations were monitored on a weekly basis. For the most part, parameter levels were well within permitted limits (i.e. dissolved oxygen levels greater than 6 mg/l and suspended solids levels less than 10 mg/l). A summary of the water quality monitoring data from Jenks Creek is contained in Table 1. Big Star Lake water level elevation readings taken prior and subsequent to the initiation of drawdown are listed in Table 2. The unusually heavy rainfall which occurred in the fall of 1986 further aggrevated the flooding problem at Big Star Lake by increasing lake levels over 1 foot to an elevation over 832.0. By March of 1987, however, the lake had been drawn down to a level of 830.30 feet, an elevation which alleviated flooding of most of the low-lying lakeside homes. The drawdown of Big Star Lake will continue until such time as a lake elevation of 829.5 feet is achieved or the lake water temperature reaches 68°F.

Although an elevation of 829.5 feet is described in terms of alleviating localized flooding of lakeside homes, it does not provide sufficient isolation between the lake and near-shore septic/drainfield systems. Therefore, to provide adequate minimum isolation, an optimum legal level of 829.0 is being tentatively recommended for Big Star Lake. Since, due to environmental considerations, future discharges from Big Star Lake can only be conducted when the lake water temperature is at or below about 68°F, the period of discharge will be limited to cool and cold weather periods. At the recommended elevation of 829.0 feet, sufficient capacity will be available in the lake proper (below the 830.25 flood stage) to contain storm water should major storm events occur during the summer months. Typically, evaporative and subsurface water losses from Big Star Lake exceed water inputs to the lake during the summer months. Therefore, assuming a lake level elevation of 829.0 is achieved in the spring, the possibility of summer flooding (during the zero-discharge period) is extremely remote.

It is anticipated that a series of public meetings and hearings will be held in the near future to determine and fix a legal lake level for Big Star Lake. The success of this project to date has been the result of the cooperative efforts of the MDNR, Lake County, Lake Township and the residents of Big Star Lake.

Reference: Michigan Department of Conservation 1959. Big Star Lake Level Control-Report of Engineering Investigation.

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How To Choose A Marine Contractor

by Timothy Bureau, SHORELINE CONSULTANTS, INC., a member of the Shoreline Group, Inc.

Selecting a marine contractor for your water-related construction is the most critical decision you face in planning waterfront improvements and shoreline protection structures. The skills, integrity, and attitude of the work crew dictate the quality of the final product. There are many instances of poor workmanship, lack of respect for the customer, and structural failure. There are good and bad contractors, we suggest consideration of the following factors in choosing a reputable company:

1). **Bidding.** Always discuss your proposed project with more than one contractor. Obtain as many bids as possible. Do not stop there by taking the lowest bid. Price is important, but cost per year, structural strength, and quality of the job will mean more to you in the future. No erosion control is cost effective unless it works.

2). **Technology/Design.** Has the structure proposed been specifically designed for your particular site characteristics, or does the contractor use a "one size fits all" type of solution? It is to your advantage to have the structure designed to fit your needs and the site characteristics. Has the design been used elsewhere, or is it experimental? If it is experimental, is the contractor sharing part of the cost to develop the technology or are you bearing the entire cost?

3) **Longevity.** How long has the company been in business? While this is not critical, it gives you some idea as to the dependability and integrity of the contractor. However, do not depend on longevity, as there are poor contractors who have been in business for a number of years, and very good new contractors.

4). **Quality.** Ask to be shown or directed to projects in the area. Look at the construction. Are there obvious problems? Is the structure deteriorating? If so, how long has it been in place? Evaluate the aesthetics (assess the appearance). Is the product performing as it should, as the company contends yours will work? Ask or write down any questions you wish, the contractor should be happy to provide a response.

5). **Satisfaction.** Talk to previous clients of the contractors. Are they satisfied with the company's work? Is it a good job? Did the company do what it promised? Was the work crew courteous, considerate of the client and the property, and did they clean-up the site before leaving?

6). **Test Borings.** Installation of many different types of structures and materials must have an adequate knowledge of subsurface soil conditions. There are two basic concerns. First, if the soils are unstable, like muck, the structure design must take this into consideration. Second, if there are obstacles to installation, such as buried debris or hard clay, there may be additional customer costs to remove or penetrate the obstruction. You should inquire if the contractor is going to check for obstructions so you can be apprised of estimated costs. Remember, there may still be problems with construction no one has foreseen, but reasonable steps should be taken to insure fixed or estimated costs.

7). **Structural Comparison.** Contractors should be able to give you design plans of your proposed structure. When selecting between two or more plans, be sure to compare the size of the structural components. Downgrading specificiations can save initial costs, but may sacrifice strength and life expectancy of the structure. Also compare materials choice. Examples: When using treated wood, check the preservative retention (the higher the number, the more preservative); if using wood in Great Lakes construction, try to obtain white oak for structures in permanent contact with the water; when using concrete, check the amount of reinforcing rod, lakeward face slope, and mix; when using steel, check the gauge, whaler sizing, and welding. Always ask how long the structure can be expected to last (in good functioning condition).

8). **Guarantee.** Will the contractor stand behind his work? What does the guarantee consist of? Consider length it covers, if both labor and materials are included, and what the exceptions are. You may not always be able to obtain a guarantee in writing, especially for construction on the Great Lakes, where warranties are seldom available.

9). **Risks.** Has the contractor discussed with you the potential drawbacks, if any, with the proposal. For example, if you have choosen a low cost alternative, or feel the proposed structure may not be adequate or strong enough, be certain to ask. Be wary of a contractor who is willing to make any changes you wish just to satisfy your concerns (especially cost reductions). If the contractor offers you more than one choice in design and cost, ask which he recommends, and why (concentrating on the specific design changes).

10). **Monitoring.** Will the contractor follow-up the installation with periodic inspections for 3-6 months? Is the construction subject to a quality control inspection upon completion? Will you be present for the inspection and final approval of the work? Some structures take time to be effective, if this is the case, how long does the contractor estimate to maximum efficiency?

11). **Permits.** All construction in or over the waters of the state requires a permit from the Michigan DNR. Check with the local DNR office if you are in doubt of permit requirements or to obtain an application form. In many cases the contractor will apply for the permit on your behalf. There is usually a cost for this service, whether it is a separate charge or built into the estimate. Time to obtain a permit varies form 4 to 12 weeks, and if in coastal navigable waters, a permit is also required from the US Corps of Engineers, and this may extend the processing period significantly. Never do water related construction without obtaining permits as the penalties and potential for alteration to the structure are significant. Most waterfront projects also require a permit from the County Enforcing Agent for soil erosion control; check with the county offices where the project is located. As a final step, check with the local governmental unit (city, village, township).

12). **Scheduling.** After the permit(s) are received, how long will it take the contractor to begin construction? When will the materials be delivered? Where will they be placed? How many crews does the contractor have? How long will it take to build the structure? Does the contract contain a specified completion date? Remember, some types of construction are dependent upon favorable weather conditions, a stretch of bad weather can easily delay project completion.

13). **Insurance/Liability.** Be certain the contractor is legal regarding insurance and taxes. The company must carry Workman's Compensation Insurance, otherwise you run the risk of potential liability should a worker be injured on your property. Be certain the contractor has Public Liability Insurance, which will cover the project for injuries to others during the construction period. Check that the company has federal and state tax ID numbers; while this does not guarantee tax compliance, it is a good indication the company is legitimate. Remember that companies can offer you a much lower price if they are not paying the above costs, but you also run a risk of liability or involvement in investigations. The State of Michigan does not require licensing of marine contractors, so there are no standards or building codes for marine construction.

14). **Contracts.** It is best to have a written contract for the proposed construction. Make sure the contract includes a date, listing of parties, where the work will be performed, what the project consists of (ie. 100 lineal feet of 0.60 treated wood seawall), design specifications (ie. in accordance with attached drawing), payment schedule, who will carry what insurance, debris or obstruction clause, warranty if available, and signatures of both parties. It is typical a contractor requires a down payment for materials upon signing the contract, this could range form 25 to 100% of the total contract price. The contractor may also require an additional payment upon commencement of construction or when a certain percentage is completed. Never give a contractor 100% down,

continued on next page

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PROTECTING YOUR LAKE HOME

by Joel David Welty, Security Consultant

A home on a lake is vulnerable. You leave it empty much of the time. The neighboring homes are likely to be empty, too. Often the police (or the sheriff) are far away, not likely to patrol very often. That makes your lake home a tempting target for criminal types who prefer to steal what you've earned rather than earn their livings with jobs of their own.

Fire, too, is a serious threat. It's an unusual lake home with a fire hydrant nearby. If you depend on neighbors noticing smoke and calling the fire department, your home will be burned to the ground by the time the firefighters can get there. There are few neighbors around to notice. Any piles of old rags or debris could have all the time they need to overheat, smolder and finally burst into flame. You aren't there to notice.

Fortunately, there are things you can do to defend your lake home. You can install strong, deadbolt locks on the doors. You can put heavy shutters - lockable on the inside - on the windows. And you can have a security system installed to watch your place for you while you're gone.

The existence of a security system is often enough to deter a burglar from even attempting to break in. When he does break in, the alarm system will detect him. Deterrence plus detection adds up to protection: a home without an alarm system is five times more likely to be broken into than a home equipped with an alarm, police statistics show.

The improved experience of homes with alarm systems has prompted most insurance companies to give discounts on their insurance premiums for homes with monitored alarm systems.

A monitored alarm system is one connected by telephone to a Central Station, which is staffed around the clock every day of the year. When an emergency signal is received from your alarm system, the Central Station staff calls the police, the fire department, an ambulance - or whatever you want them to call.

An alarm system can be a simple, basic system: just switches on the doors, a pressure mat under the carpet, a siren, an arming console to turn it on and off and a control panel. If a door is opened or someone steps on the mat while the alarm is armed, the siren will sound and the control panel's digital communicator will send a coded message in seconds, asking for help to be sent to you by the Central Station staff. You need dialing-type phone service to do this, not the old-fashioned service with an operator asking you what number you want.

Or, an alarm system can be very sophisticated, with motion detectors that sense a person moving in the room, with heat-and-smoke sensors, with temperature monitors - to protect against unexpected freeze-ups - high-water detectors and invisible infrared beams. It is even possible, though expensive, to have an alarm system installed which notifies the Central Station if someone cuts your phone line.

The security consultant who designs your alarm system is in a constant battle of wits with burglars who try to defeat alarm systems. Fortunately, the alarm industry keeps improving the electronic devices available for the security consultant to work with. The same electronic ingenuity that gives us powerful calculators you can hold in your hand also gives us such marvels as sonic detectors that hear the sound of glass breaking and 'smart' controls to let you use your alarm system in a variety of ways.

For instance, do you want to let a friend use your lake home for a weekend? You can put a secondary code into your alarm for your friend to use while he or she is there, then later you can wipe out that code. Your own secret code remains unchanged, giving you complete control over what the alarm system does for you.

Some alarms are controlled by keys, but most are controlled by push buttons like the ones on an adding machine. Do you need medical aid? Push the right two buttons and the Central Station will send an ambulance. If you have a continuing medical problem, you can even wear the medical aid button on a chain around your neck. A wireless button you have with you at all times, you can use it even if you should fall and not be able to go to the arming console.

There have been cases when burglars have thought they killed the alarm system by cutting the electric wires. But when they broke in, the siren sounded anyway, scaring them off before they could set a foot inside. The secret: a rechargeable battery included in the control panel for back-up power in case of electric outages. When the electricity comes back on, the battery is charged back up again and remains ready for the next time it's needed.

Your lake home certainly does not need to be defenseless. You can detect fire, burglars, freeze-ups and flooding water. If everyone in your lake association had a security system, you can be sure the burglars would prefer to work on easier pickings, in some other neighborhood.

Joel David Welty is a Security Consultant associated with Midwest Detection Systems, serving a five-state area in the midwest from its offices in Midland, Michigan. 1-800-762-8723.

How To Choose A Marine Contractor *continued*

always hold at least 10% until the job is completed and you are satisfied with the final product.

As you can now understand, there is more to choosing a contractor for your waterfront construction than simply the price of the structure or service. Find a firm you can trust, and have confidence in their experience and credentials. If all other factors are equal, price should be the final consideration. All DNR and Corps offices have a listing of contractors available, or look in the yellow pages under marine, excavating, erosion control, or general contractors. If you wish to hire a consultant to assist in obtaining the permits, designing the project, or recommending a contractor, look in the yellow pages. Your lake or stream association may also know of good contractors in the area or consultants who are familiar with water-related construction and regulation. Good Luck!

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

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John Forester
Free Soil, MI

VICE PRESIDENT
James Taylor
Pontiac, MI

SECRETARY
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Mishawaka, IN

TREASURER
Pearl Bonnell
Long Lake, MI

BOARD MEMBERS:
(Region Vice Presidents)

1 - **Dan Wells**
Whitmore Lake, MI
2 - **Dorothy Peterson**
Manitou Beach, MI
3 - **Frank Mock**
Edwardsburg, MI
4 - **Ray Bier, Jr.**
Sand Lake, MI
5 - **Dan Wells** will serve Region 5 until a replacement for Jane Brown is found.
6 - **Kevin Walters**
Holly, MI
7 - **Charles Lafountaine**
Sanford, MI
8 - **Joe Landis**
E. Lansing, MI
9 - **Richmond Brown**
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Gladstone, MI

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Robert Pearce - Troy, MI

HAZARDOUS WASTE SPECIALIST
Robert Wyatt - Clarkston, MI

WATER QUALITY SPECIALIST
Doug Denison - Maybee, MI

Whitmore Hills Association, Whitmore Lake, Washtenaw & Livingston Counties
Bill Bedwell, President - 65 members

Friends Lake Community, Washtenaw County
William Bliss, President - 8 members

Fiesta Shores Association, Rose Lake, Branch County
Emily McElvany, President - 175 members

Strawberry Point Bluffs Homeowners Association, Livingston County
Tom Raynes, President - 69 members

Organization of Woodland Lake, Livingston County
Doug Taylor, President - 145 members

Deer Lake Farms Association, Oakland County
Eldon Trueman, President - 102 members

Hill-N-Dale Homeowners Association, Oakland County
Dennis Belcovre, President - 104 members

Eagle Island Protective Association, Oakland County
Mike Faust, President - 110 members

Big Lake Association, Osceola County
Bill Brady, President - 62 members

Perch Lake Association, Kenty County
Robert Van Noord, President - 35 members

Lake Ona Home Owners Association, Oakland County
Thomas Buckthorpe, President - 55 members

ML&SA Annual Meeting to be held at Holiday Inn, Grayling, Michigan September 26 - 27, 1987

Michigan Lake & Stream Associations will sorely miss Jane Brown at Board meetings and other ML&SA activities . Her untimely death early this year leaves a void for Lake Fenton Association, and her aggressive approach to protecting Fenton Township Lakes from degradation.

Governor Blanchard

by John Forester, President of ML&SA

Dr. Gordon E. Guyer, Director of the Michigan Department of Natural Resources and Supervisor of Wells, on April 23, 1987, in an historic and sweeping decision denied an oil driller's application for a permit to drill five wells in the Manistee National Forest in an area identified as the Big Point Sable - Nordhouse Dunes - Hamlin Lake Environmental System in north Mason County.

Based upon careful and in-depth environmental analysis, Dr. Guyer found "that hydrocarbon development, if permitted would have the effect of polluting, impairing or destroying the air, water and other natural resources of this State and public trust therein, in violation of the Michigan Environmental Protection Act..." While the protection by the DNR of this irreplaceable historic, natural, scenic and aesthetic area, widely used by the public for hiking, camping and other recreational uses, is significant in itself, the implications are far broader for those of us who have for more than four years urged the Supervisor of Wells to deny oil drilling permits in and around lakes and streams, cottages and residences, campsites and other public gathering places because of the inevitable and unavoidable environmental destruction which takes place, for the first time, so far as I am aware, the DNR has acknowledged officially and publicly that oil and gas activity is polluting and destructive to the air, water and other resources and is compatible with a quality environment which the Michigan Constitution guarantees to us.

We applaud Dr. Guyer's courageous stand against the industry which has for so long been able to get government to do its bidding at the expense of the individual property owner and the public.

This same pristine and pre-settlement dune area is being proposed by the U.S. Congress as a wilderness area in the H.R. #148, the Michigan Wilderness Heritage Act of 1987. Your President and Mrs. Forester had the privilege of testifying in support of the bill in Washington before two House Sub Committees in March. H.R. #148 was subsequently passed by the House and a similar bill has been introduced in the Senate by Senator Levin. We understand that our Senators, particularly Senator Riegel need to know that the people of Michigan support this bill. Please write and urge passage of the Wilderness Bill; Senator, Donald W. Riegle, Jr., Dirksen Senate Office Building, Washington, D.C. 20510. Senator Carl Levin, Russell Senate Office Building, Washington, D.C. 20510.

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Ray Bier Jr., Vice President of Region 4 ML&SA, Reports on Regional Activites: On Sunday evening, February 1, Mr. Earl Kraai of 8337 Jen-e-be Dr., Rockford, Michigan was the recipient of "Our Outstanding Appointed Official" Award from the West Michigan Environmental Action Council. Mr. Kraai resides on Brower Lake in Kent County, and is a long time member of ML&SA, Inc. Our congratulations to Earl for the recognition of his outstanding contributions to the environment, and to West Michigan Environmental Action Council for choosing him. (Annual awards banquet, Harley Hotel, Grand Rapids, MI.) Earl Kraai is Chairman of The Courtland Township Planning Commission. Earl was President of Big Brower Lake Association during the 1970's when the association was successful in getting a sewer installed around the lake.

Region 4 Meeting Held - May 5 at Grand Rapids

35 representatives from 9 lake associations met at Westgate Bowl to hear Frank Ruswick, Executive Director of West Michigan Environmental Action Council, give a resume of the stages of environmental protection in Michigan during the past 20 years and what must be done now and in the immediate future to make sure gains of the past are not lost.

Don Winne, Executive Director of ML&SA, listed some of the current battles around the state to protect lakes and streams from pollution and destruction.

Ray Bier, Jr. is Vice President of Region 4, ML&SA which includes Allegan, Barry, Kent, Montcalm, Ottawa, Ionia and Eaton Counties. You may call Ray at (616) 984-2295 if you need information or advice on solving lake problems.

Oakfield Township, Kent County Adopts Anti-Funneling Ordinance.

An Ordinance To Add Sections 9.70 Through 9.75 Of The Code Of The TOWNSHIP OF OAKFIELD To Be Entitled "FUNNELING".

The Township of Oakfield ordains: Section 1. That Sections 9.70 through 9.75 are hereby added to the Code to read as follows:

FUNNELING 9.70. Findings of Fact. The Township of Oakfield hereby determines that it is inimical to the public health, safety and welfare and an improper use of the land and natural resources to allow funneling, as hereinafter defined, as 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 effects property values of shoreline property located near funneled developments.

9.71. INTENT. It is the intent of these sections to carry out the purposes of the Township Rural Zoning Act and the Environmental Protection Act and to regulate the property use of natural resources within the Township; to protect the quality of inland waters by limiting uses of the waters which may tend to pollute them; to prevent the overuse and misuse of water resources within the Township, particularly relating to boating traffic and similar activities which have an impact on the quality of inland waters; to preserve the quality of waters and preserve the recreational use of all waters within the Township by limiting the number of users of lake and stream frontage.

Nothing within these sections shall be construed to limit access to lakes or waterways by the general public through public parks or public access sites provided or maintained by any unit of the state, county or local government, nor shall any section in this Ordinance be construed as depriving any riparian owner on any natural body of water or waterway of any riparian rights.

9.73 DEFINITIONS. For purposes of these sections, the following definitions shall apply:

(1) "Access property" shall mean a property, parcel or lot abutting a lake or stream and used or intended to be used for providing access by pedestrian or vehicular traffic to and from other property to a lake or stream.

(2) "Dwelling unit" shall mean a structure designed for use by one family or occupant, whether for seasonal, year round, temporary or other use and shall also include multiple dwelling units designed for multiple family or multiple individual occupancy, including but not limited to, homes, mobile homes, multi-unit com-

Oakfield Township has a total of 22 lakes with 1,220 total acres. The lakes range in size from seven to 448 acres. Lake Wabasis is the largest lake with 448 acres. Woodbeck is second with 88 acres, and Scram is third with 87 acres. Zigenfus is fourth with 80 acres. The other lakes have less than 60 acres.

plexes, condominiums, motels, hotels, cooperatives, or any similar use.

(3) "Funneling" is the use of waterfront property for use as common open space for waterfront access for a development or dwelling unit or units located in a non-waterfront area.

9.74 LIMITATION ON DEVELOPMENT. No land within the Township shall be used or provided for use as access property from non-waterfront lands to a lake or stream unless there is provided access property with water frontage of not less than 50 feet, measured along the waters edge in the normal high water mark of the lake or stream and a minimum lot area of 5,000 square feet respectively for each dwelling unit using it as access property. These restrictions shall apply to any property, regardless of whether access to the water shall be gained by easement, common fee ownership, single fee ownership, lease, gift, business invitation or any other form of dedication or conveyance.

9.75 VARIANCE. The Zoning Board of Appeals, may, upon petition and after notice and hearing as provided in this Chapter, vary or modify the strict application of these provisions, if it shall determine the undue hardship would otherwise result and that the spirit and intent of these sections and the zoning code may be preserved with such variance modification. The Board of Appeals may, as a condition of said variance, impose such conditions upon the use of the lands and lake front or stream front property as it shall deem necessary to preserve the spirit and intent of this Ordiance.

Kevin Walters, Region 6 ML&SA Vice President, reports on Fenton Township Board Meeting:

Fenton Township is the eastern township in the southernmost tier of townships in Genesee County.

The Classic Question: A classic confrontation over a classic question: To sewer, or not to sewer? That was the impression I got as I read an article in the local paper about a situation developing in southeastern Genesee County. The article said that opposition had developed to a proposed sewer project that was intended to service a few lakes in Fenton Township. Members of the Pine Lake Association and others were going to attend the Fenton Township Board meeting to get some questions answered. One resident was even challenging the necessity of the project based on tests she had conducted on Pine Lake muck. The article further inferred that costs for this project were particularly high and that other local sewer projects were less costly because the costs were absorbed by the whole township, not a special assessment district. So on April 6, I made the short drive over the county line to attend the meeting.

As is often the case with political scenes on local levels, the regular meeting room facilities could not handle the large number of residents (200-250) that attended the meeting. One resident commented that nothing brings people out like a public project funded by private money. It was necessary to hold the meeting in the basement of the Fenton Township Civic Center in a room that often is used for wedding receptions and such. As a matter of fact, some Region 5 and multi-regional ML&SA meetings have been held in the same room.

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NEWS FROM MEMBER ASSOCIATIONS

Birch Lake Association - Cass County
Joyce Klimek, President

In a recent discussion with Dave Johnson of the DNR on March 24, he said he plans to check the minnow population as soon as possible. Minnow trappers are operating legally at this time unless they use glass jars on the lake bottom or get out of the boat to walk in the lake. If you see them doing either or both, get pictures if you can, boat numbers, license numbers, etc. and record where and when you saw them to make a report. It is best not to confront them as Dave will hopefully handle it legally and that will settle it.

Taxes have been a very disturbing issue. Three years ago, the township hired a professional assessing firm to reevaluate and accurately assess the entire township. Each year we have had increases and this year is certainly no exception. They indiscriminately raised some Birch Lake taxes as much as 30 to 50%.

Barron Lake - Cass County
Art Curran, President

Each year safe and pleasant boating on Barron Lake becomes more and more difficult because too many boats all attempt to make use of this small lake at the same time. This situation is made far worse because owners disregard their own safety and that of others by ignoring marine regulations. In past years we have allowed anyone to launch their boats through the Beachcomber property for a $3.00 fee. We have done so because we felt an obligation to allow the whole community to share this lake.

Last summer several events changed our attitude about this open access. First, the Howard Township Board refused to support the efforts of the Barron Lake Association to cut weeds growing in Barron Lake. These weeds have been making safe boating more and more difficult. While we were disappointed by the short-sightedness of township officials, we were even more disappointed by the numerous residents who signed petitions and urged these officials to take no action to improve the quality of Barron Lake. These residents insisted that since there was no FREE public access to the lake, the township should do nothing to maintain the quality of the lake. Second, a serious boating accident pointed out clearly that the situation had gotten out of hand.

At first we considered closing all access to the Beachcomber ramp, but after much discussion with neighbors we realized this would create a difficult situation for those people who enjoy this lake, follow the rules, and work to improve the lake. In light of this we have worked out the following solution to limiting traffic and promoting safe boating.

Use of the Beachcomber boat ramp will be limited to members of a newly established **Barron Lake Club.** Two types of membership will be available.

1) Launching only - for those who keep their boats on the lake throughout the summer. Cost of this limited membership will be fifty dollars per year.

2) Launching and parking - for those who trailer their boats and make use of the lake on a per day basis. Cost of this membership will be one hundred dollars per year. We intend to limit this type of membership to 20 the first year. We will decrease or increase this number as we learn from experience what number achieves our goal of safe and pleasant boating on Barron Lake.

Since it is obvious that all of these boaters will not always be on the lake at the same time, we hope that this new system will insure more pleasant boating on Barron Lake. Even more important, we will expect all members to sign a contract allowing for suspension of their privileges if they are in violation of marine regulations.

In short, what we are trying to do is to limit the number of boats on the lake and make sure that safety and noise rules are followed so that members can enjoy Barron Lake. Obviously, members will face an increased cost for use of the lake, but we hope this will be a small price to pay for more pleasant and safe boating. Money collected from these membership fees will be used to maintain and improve the boat launching facilities and grounds.

Since we strongly support the efforts of the members of the Barron Lake Association to improve this lake we will reduce membership fees by 50% for those that present a **1986** Barron Lake Association Membership Card. *Beachcomber Management.*

Application For 1987 Barron Lake Club Membership

Name _____ Phone # _____

Boat Registration # _____

Address _____ City, State, ZIP _____

I wish to apply for membership in the Barron Lake Club for the period 4-1-87 through 3-31-88. This entitles me to use of boat launching ramp and picnic facilities located at 1259 Rose Drive. No lifeguards are available on this property so swimming is allowed only at your own risk.

The purpose of this club is to promote safe and pleasant boating on Barron Lake. For this reason I agree to abide by all Marine Laws of the State of Michigan and all posted signs on Beachcomber property. This includes but is not limited to:

1). No alcoholic beverages or illegal drugs are premitted on your person, boat or automobile while on this property. Any violation of this rule will result in forfeiture of all privileges for current year.

2). Attached digest of Michigan Watercraft laws as prepared by Cass County Sheriff's Department. Violation of any regulation affecting the safety of other boaters/swimmers will result in a 60 day suspension of privileges.

3). Parking is limited to parking area on Rose Drive road level. Automobiles are allowed on lower level only while launching boats or unloading in picnic area.

4). All trash is to be deposited in trash containers and no pets are allowed on property.

Violation of items #3 through #4 will result in 30 day suspension of privileges. Any misrespresentation in completing this application will result in forfeiture of all privileges.

I have read the above carefully and wish to apply for membership in the Barron Lake Club. I understand that this club is on private property and that membership is a privilege. I agree to all terms listed above and understand that dues will not be refunded during period of suspension or in the event of forfeiture of privileges. All decisions of Beachcomber Management are accepted as final.

Signature _____ Date _____

Lake Charlevoix Association - Charlevoix County
Janet Freidinger, President

Message from the President: Why a Lake Charlevoix Association? Very often the basic principles for which this Association stands are misunderstood. LCA is not meant to be a controversial, governing body! As outlined in the LCA By-Laws, Article I - Purposes; Section I: "The Association is organized exclusively for charitable, educational and scientific purposes, including for such purposes, the creation of a fund, the future contributions, principal, and income of which shall be used solely for charitable purposes, the making of distributions to organizations that qualify as exempt organizations under said Section".

The Lake Charlevoix Association is not committed to or responsible for taking sides or stands on political issues regarding Lake Charlevoix. As expressed in the By-Laws Article I - Purpose, Section 2: the LCA is simply an association of people interested in generating scientific and educational information "to aid in the formation and establishment of local policies and practices designed to conserve, restore, protect and regulate the natural resources of Lake Charlevoix; Political activity is expressly forbidden".

Organized in January, 1977, the Lake Charlevoix Association pledged itself to be an educational organization dedicated to helping members become better informed about issues pertaining to Lake Charleviox.

Other purposes: To furnish timely information with respect to the maintenance, preservation and development of Lake Charlevoix.

To aid in the control and prevention of water pollution, and otherwise improve the condition of the water for recreational purposes.

To provide programs and to educate the public in the area of water safety.

To provide and promote programs for the protection of the Lake Charlevoix Watershed.

To aid in scientific research for the control of pollution; to publish the results of such research, and to make any such publications available to the interested public.

Diamond Lake Association - Cass County
David Gregg, President.

The Diamond Lake Association is continuing its negotiations with the Department of Natural Resources Water Way Division.

We hope to have an agreement soon on the proposed expansion of the public access site.

In late August, of 1986, the Association hired an engineering firm from Grand Rapids to test the quality of our lake water. The following factors were evaluated: nitrate, chloride, phosphates, coliform, PH and temperature.

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Water samples were taken from several locations and depths including Sail Bay, and in the inlet that drains into the lake. We plan on doing this testing again in late June and will have a report on both of these tests at our annual meeting.

The Association has been in contact with the Cass County Government concerning new grant money that may be available for a sewer project.

A positive expression of interest from lake residents will be needed.

The annual meeting of the Association will be held at the Diamond Lake Yacht Club on July 11, 1987 at 10:00 a.m.

Please plan to attend and bring your neighbors.

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

At a meeting of the editor and the officers of the association, it was decided the newsletter should contain more than technical reports and legal happenings in water quality legislation. We would like to expand our "news" coverage of the association.

Riparians need to know riparians, we need to know each other. Who are the new people, who are our fellow riparians a half mile down the lake that have been there for years? Our lakes have an interesting history which includes sawmills, industry, resorts, excursion boats as well as properties that have been owned by two or three generations of one family. In the newsletter, we hope to explore some of this history and the people who have been part of it.

Other ideas for the newsletter are: letters to the editor, a question and answer section, a cartoon or two, and even a contest. Feedback from the membership is vital to an organization.

All the aforementioned ideas sound great, but how are we going to make these ideas a reality? This can be done by you, the membership, giving us help, writing usable reports, accepting responsibility in an area you feel comfortable with, and researching ideas.

One editor and a few officers cannot do all the work in producing a live and interesting newsletter. Volunteers are needed to make suggestions and obtain articles for the newsletter. Remember, this is your association and your newspaper. Any ideas, articles, letters, questions, may be sent to: **Elk-Skegemog Lakes Association,** P.O. Box 8, Elk Rapids, Michigan 49629.

EXPANDED WATER QUALITY TESTING PROGRAM. The final data from the above program involving testing of the Elk Lake water in the spring and later summer of 1985 have been received. The kinds of measurements, the dates and location of sampling have been reported in the Newsletters of the Association for July 1985 and January 1986.

The data from measurements of total phosphorus, chlorophyll "a" and transparency (Secchi disc) indicate with few exceptions that Elk Lake water is still classified as aligotrophic, the highest quality classified by the Michigan Department of Natural Resources (DNR).

As indicated in the final report and also as discussed in the DNR Annual Report (1985) of the Inland Lakes Self Help Program, a new term is being used to describe the quality of water of a given lake. This is the trophic state index (TSI) and is based on an article by R.E. Carlson (Limnology and Oceanography 5:361-368, 1977). Remember that the DNR's classification of the productivity is: eutrophic - very productive; mesotrophic - moderately productive; oligotrophic - little productivity.

Lake Lapeer - Lapeer County
Tim Healey, President.

As we start another year, one of the most striking observations is the number of new homes and the growing total of homes on our lake. Our total addresses of people living on the lake as of last May is 135. An unofficial count of the number of new houses built this summer is 14. We are getting very close to 150 out of a total of 302 on and off lake lots and parcels. While it is still only 50% built up, the change for the old-timers who moved here when there were 10 or 20 homes on the lake is dramatic. Believe it or not it was possible to invite everyone on the lake to a Christmas Party in your basement and not be afraid that they would all come. Inevitably, as the lake becomes more populated, the problems that we face will be related to overuse of our common resource, the lake, rather than to the size of our neighbors' house. Let us hope that we resolve our conflicts in the coming year(s) while still remaining good friends and neighbors. And a warm welcome to our new neighbors.

FISH PLANT AND FISHING CONTEST. As of the time of this writing the 200 10 - 14" pike have not been planted in the lake. The DNR requires a permit and has shown some reluctance to issue it. The survival rate of pike this size is estimated to be 75%. The cost was $750. Please return these pike to the lake, if you catch one, until they grow up.

Land 'O Lakes Association - Kent County
Doug Nelson, President.

At a special membership meeting 4/4/87 of the Land 'O Lakes Association, membership approval was given for the purchase of specific property on the chain of lakes that includes both acreage and a clubhouse. Expanded activities, both environmental and social, motivated the action. LOLA would like to express a special "thank you" to Joe Giuseppe for the use of his property.

Lower Scott Lake Improvement Association - Allegan County
Sam Blondina, President

Weed Harvester. After over four years of fund raisers, bingo events, and generous donations, the completion of a major undertaking was realized. On October 11, 1986, delivery was taken on a new "Yankee Clipper" weed harvester from Palmyra, Wisconsin. After a short welcoming party, the harvester was stored for the winter. A contest to name the craft has been underway since the Association's November newsletter and the winning entry will be decided by judges this spring.

The harvester is a 32 foot long pontoon craft that is designed for shallow water and conveys the cut weeds out of the water and onto the deck for disposal on-shore. Additional shore equipment for the land disposition of the weeds will be sought as funds become available. A committee of "cutters" will be formed and harvesting plans for the lake will be scheduled shortly.

A sincere thank you to everyone who helped in any way to make the acquisition of this harvester a reality!

As of this writing, our exisiting cutter, that we have used for the past five seasons, is for sale. It is a "Hockney" brand self-propelled weed-cutter. Two on-board 5 hp/4 cycle gas engines operate the machine. One engine drives the craft, while the other drives the cutting bar. A hydraulic pump controls the raising and lowering of the cutting bar. It cuts an underwater swath 10 feet wide up to 5 feet deep. For more details, interested parties should contact: Lower Scott Lake Improvement Association, P.O. Box 181, Pullman, MI 49450.

Portage and Base Lakes Association - Washtenau and Livingston Counties, H. Doug Smith, Secretary.

The PBLOA communicates its position to James R. Bernard, Coordinator of Great Lakes and Water Resources Planning Commission.

Dear Mr. Bernard:

The Board of the PBLOA at their March meeting were addressed by me concerning your invitation to provide input to help shape Second Tier Issue Papers. I will address the issues from the various pages of your 2/24/87 Draft (enclosed).

page 5 Herbicides: We oppose the use of chemical treatment to any part of the Chain of Lakes as a solution to weed problems. We support harvesting and winterkill via drawdown and shoreline plastic and sand covering during the winter months. PBLOA has purchased weed rakes and are placing them at various Marinas and Hardwares in the lakes area to be used gratis to discourage chemical use, especially 2,4D copper sulfate, etc. We have definite proof that there is downstream drift of 2,4D from HiLand Lake and Kent Lake (see enclosures).

page 5 Shoreline Development. This is probably the most serious and immediate threat to the well being of our lakes. The remaining undeveloped areas surrounding the Huron River Chain of Lakes are under the constant pressure from back lot developers, commerical/private boat launches and public access sites. The public launch sites under the control of the Parks Division of the DNR are creating the major problem in Dexter Township e.g. Silver Lake and Half Moon. Jet skis and whatever is portable are being launched in Silver Lake; drag and powerful jets are being launched at Half Moon Lake. Some fatalities have been the result.

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SADDLE LAKE — A CHRONOLOGY

Saddle Lake is a 277 acre lake located in Sections 9, 10, 15, 16, and 22 in Columbia Township, Van Buren County, Michigan. The lake perimeter is 4.74 miles long. The Saddle Lake watershed is 1,149 acres and has a perimeter of nearly six miles. The maximum depth of the lake is 32 feet and the mean depth is 8.2 feet. The first legal level set for the lake was set by Court Decree on July 6, 1931 at 668.0 feet above mean sea level.

Chronology

COLUMBIA TOWNSHIP SURVEYED 1830. Robert Clark, Jr., D.S., surveyed Columbia township, Van Buren County in January and February 1830. The map below shows Saddle Lake with an island and the lake extends about 200 feet into Section 22 and has a shoreline of about ½ mile in Section 22. The map also indicates a marsh area on the north half of the section line between Sections 22 and 23.

The map also shows a natural stream flowing from the north shore of Saddle Lake in a northerly direction across part of Sections 3, 4 9, & 10.

April 27, 1882. Property owners around Saddle Lake petitioned the County Commissioners to establish the Saddle Lake Drain. The application included the following: a. That the drain commence at Saddle Lake and extend north 279 rods (4,603.5 feet) to the Kalamazoo and South Haven Railroad. b. That the drain be three (3) feet wide at the bottom. c. That the dirt be thrown at least two feet back from the margin of the drain. d. The purpose of the drain to "benefit and improve the east-west roadway along the north line of Section 22, the north half of the roadway between Sections 22 and 23, and the road on the south half of the west eighth line of section 10".

June 11, 1882. The April 27 application approved by the Drain Commissioner.

September 4, 1882. The Saddle Lake Drain recorded on this date.

August 17, 1892. Application to widen, deepen, and clean out Saddle Lake Drain. The application requested the following: a. That the Drain be widened to 10 feet. b. That it be deepened for the first 100 feet from Saddle Lake. c. That the drain be cleaned out. d. That the costs be assessed against property owners in Section 15 only.

Circa 1917. That the Saddle Lake Inter County Drain be established. This Drain was to commence at the Kalamazoo and South Haven Railroad and extend north to a point approximately 70 feet east of the mid point of Section 34 of Lee Township. This drain was to be 6 - 8 feet wide at the bottom and 2 - 7 feet deep.

July 26, 1917. Contract was let to dig the Saddle Lake Inter-County Drain.

October 15, 1930. A number of property owners around Saddle Lake petitioned the County Commissioners to establish a legal level of Saddle Lake.

PETITION FOR ESTABLISHING NATURAL HEIGHT AND LEVEL OF SADDLE LAKE. To the Honorable Board of Supervisors of Van Buren County:

The undersigned, residents and taxpayers of the Township of Columbia, Van Buren County, Michigan, respectfully represent to your honorable body that Saddle Lake, so-called, is an island, navigable lake, located in parts of Sections 9, 10, 15, 16 and 22, of the Township of Columbia, in said County. The undersigned are persons interested in said Saddle Lake. We do further represent that it will be beneficial for the protection of the fish therein, and for the improving and maintaining of navigation thereon, and for the promotion of the public welfare, to have the natural height and level of the waters in said lake determined and maintained.

This petition is made for the reason that in the opinion of the petitioners the waters of said lake have settled below the natural height and level, and that it would be beneficial, as above set forth, to restore the lake to its natural level. For the further reason, that it is difficult at times, by reason of the low stage of water, to get from one portion of said lake to another. For the further reason, that Saddle Lake is, to a very large extent, a place for resort, for summer homes and recreation, and the restoration of said lake to its natural level would be greatly to the benefit of said lake for such purposes.

Petitioners further represent that the great majority of persons and property interested are desirous, and that it will be to their benefit, and to the benefit of all person concerned, that the natural level of said lake be authoritatively determined and settled.

On motion of Supervisor Hover, supported by Supervisor Burger, the petition was laid on the table until some future date.

October 24, 1930. The County Commissioners approved by resolution that the Court establish the legal level of Saddle Lake.

Attorney David Anderson of Paw Paw, addressed the Board on behalf of the signers of the petition to establish the natural height and level of the waters of Saddle Lake.

On motion of Supervisor Smith, supported by Supervisor Nagler, the petition was taken from the table.

RESOLUTION: Resolution, for determining and establishing the natural height and level of the waters of Saddle Lake, so called, in the Township of Columbia, Van Buren County, Michigan.

WHEREAS, residents and taxpayers of the Township of Columbia have petitioned for the determining and establishing of the natural height and level of the waters of Saddle Lake, a lake situated entirely within the Township of Columbia, County of Van Buren, State of Michigan.

THEREFORE, RESOLVED: That in the judgement of this Board of Supervisors of the County of Van Buren, it is deemed and is hereby declared to be expedient to have determined and established the natural height and level of the waters in said lake, for the purpose of promoting public health and the public welfare, and to improve navigation thereon, and to protect the fish therein, the said Saddle Lake being an inland, navigable lake.

IT IS FURTHER RESOLVED: That the prosecuting attorney is hereby authorized and directed to institute, by proper petition in

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Saddle Lake was known as a good fishing lake in the early 1900's. Shown (l to r) George Lowe, Louis Winne and Jesse Winne, father of Don Winne.

the Circuit Court, a proceeding for such determination, under the provisions of Act Number 377 of the Public Acts of the State of Michigan for the year 1921.

On motion of Supervisor Smith, supported by Supervisor Fox, the resolution was adopted by the following yea and nay vote: Yeas - Brown, Pollock, Hover, Fox, Landrus, Sutton, Loehr, Watson, Gillesby, Smith, Turner, Richards, Pearce, Allen, Nagler, Twitchell, and French. Nays - Burger, Cullom and Krohne. Total: Yeas - 17. Nays - 3.

July 6, 1931. The Van Buren County Circuit Court established the legal level at 668.0 feet above sea level. A concrete dam was installed to maintain the legal level.

IN THE MATTER OF THE DETERMINATION OF THE NATURAL HEIGHT AND LEVEL OF SADDLE LAKE.

This matter coming on to be heard before said Court, and it appearing to the Court that due notice of the order of hearing in said matter was given by publication, as is required by the statute, and the petitioner, the Board of Supervisors of Van Buren County, appearing by Lewis R. Williams, Prosecuting Attorney of said County of Van Buren, and certain property holders and persons interested appearing by DAVID ANDERSON, their attorney, on behalf of said petition, but not in opposition thereto, and proofs as to the allegations of said petition having been giving in open court, and the Court being fully advised in the premises;

IT IS ORDERED, ADJUDGED AND DETERMINED, that SADDLE LAKE named in said petition, is an inland, navigable lake, situated entirely within the Township of Columbia, County of Van Buren, and that for the protection of fish therein, and for the improving and maintaining of navigation thereon, and for the promotion of the public health and welfare, it is necessary and expedient that the natural height and level of the waters of said Lake be determined.

IT IS FURTHER ORDERED, ADJUDGED AND DETERMINED, that the natural height and level of Saddle Lake mentioned in said petition, is the elevation of six hundred sixty eight (668) feet, as referred to the United States Government Datum, which is mean, low water at the City of New York.

That the Board of Supervisors take any and all steps needful or necessary to maintain the said Lake at the level herein determined, whether by acquisition of land for location of dam or other purposes, by gift, purchase or condemnation, and by establishing special assessment district and causing assessment for benefits to be made as specified by statute, if the Board deem the same to be necessary; the same to be done whether said proceedings be required by the present condition of said Lake, or by reason of conditions as they may hereafter exist.

July 3, 1958. Letter from Glenn W. Smiley, Van Buren County Drain Commissioner, to Geza Bokar, Saddle Lake riparian property owner advised Mr. Bokar to petition the County Drain Commissioner to clean out the Saddle Lake Inter-County Drain (Mr. Bokar never followed through).

October 26, 1977. Gary F. Croskey of the Water Management Division of the DNR met with Elmyra J. Hearns, Drain Commissioner of Van Buren County, at the site of the concrete dam in the Saddle Lake Drain. The USGS bench mark had been removed so that the elevation of the dam could not be determined.

August 1979. Letter from Morton Butler to the Drain Commissioner that something be done about the fluctuating water level of Saddle Lake.

August 27, 1979. Elmyra requested that Don Gilchrist, County Surveyor and President of Alpha Engineering Company of South Haven to investigate the Saddle Lake outlet and drain and determine the level of the dam. Mr. Gilchrist's survey crew "found the spillway to be 0.77 feet below the Court established elevation of 668.0 feet above mean sea level".

Mr. Gilchrist recommended that the Saddle Lake Association petition the County Board of Commissioners to repair the control structure to the court decreed elevation. He also recommended that the Association petition the Drain Commissioner to clean the County Drain. He also recommended that the 1500 feet of the drain between the control structure and the lake be cleaned out.

September 20, 1979. In a letter from John Dexter, Chief of the Dam Safety & Lake Engineering Unit of the Water Management Division of the DNR to Francis J. McGourty, President of Saddle Lake Association, Mr. Dexter stated, "Mrs. Hearns has advised us that she has requested the County Board of Commissioners to take necessary action to provide the funds or to have a special assessment district established through circuit court action..."

May 18, 1981. Letter from Russell G. Stults, P.E. of Alpha Engineering, South Haven, to Elmyra Hearns stated:

"...Our field investigations checked the lake level on December 30, 1980 and found the lake to be about 1½ inches low at elevation 667.88...Our field check of the control structure (dam) revealed an almost constant difference of 0.66 feet between the 1931 design elevations and currently existing elevations. We presume that this is due to an error at the time of construction rather than settling or other foundation problems...The Lake Level now is a function of the hydraulic profile of the outlet stream from Black River to Saddle Lake...It is recognized that the lake is being maintained at the proper level and therefore we do not recommend any improvements to the control structure at this time."

May 10, 1982. Letter from John W. Dexter to Elmyra J. Hearns:

"Thank you for sending us the Notice of Hearing for the proposed special assessment district for Saddle Lake..."

September 8, 1982. The DNR issued a permit (#82-12-3) to the Van Buren County Drain Commissioner to:

"Construct 32 feet of interlocking sheet piling to maintain a lake level. Remove existing concrete control structure and deepen existing channel at the outlet of Saddle Lake."

June 3, 1983. The DNR recommends that the level of Saddle Lake be maintained at the Court set level of 668.0 feet above sea level. The DNR opposes lowering the lake level to 667.17 feet above sea level.

June 30, 1983. The Court reaffirmed the legal lake level at 668.0 feet above sea level. Court order #20-445.

The Court Order included the following:

At a session of said Court held at the Courthouse in the Village of Paw

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Paw, in said County on the 30th day of June, 1983.

PRESENT: HONORABLE MEYER WARSHAWSKY, Circuit Court Judge.

A Petition to Alter Court Established Lake Level or Set Level of Control Structure and Petition to Spread the Costs of this Action Over the Special Assessment District having been heard, IT IS HEREBY ORDERED as follows:

1. The lake level of Saddle Lake, Columbia Township, shall be maintained at 668 feet USGS Datum until further Order of this Court.

2. The Drain Commissioner of Van Buren County Michigan is authorized to take whatever steps are necessary, including lowering the control structure at least two and one-half inches, if necessary, to maintain the 668 feet and further, the Drain Commissioner is authorized to clean and dredge the outlet between Saddle Lake and the control structure to maintain such level if necessary.

3. The Drain Commissioner of Van Buren County shall monitor the lake level periodically to maintain the 668 feet and such period of monitoring shall be for at least six to eight months.

4. If problems persist, a lake study considering existing septic tanks, dock and seawall elevations, a survey of the riparian owner's desires, documentation of historic and potential impacts on fisheries and wildlife habitats shall be made.

IT IS FURTHER ORDERED THAT the costs of this Petition in those actions ordered by this Court shall be spread over an established Special Assessment District of Saddle Lake.

SADDLE LAKE - A CHRONOLOGY - PART TWO - WILL BE CONTINUED IN THE AUGUST 1987 ISSUE. Topics to be included in the next issue will deal with:

1. The carrying out of the Court Order (Order No. 20-445) by the Drain Commissioner.
2. The attempt by the Drain Commissioner to create a summer and winter level for Saddle Lake.
3. Proceedings in Court in 1987, and final order of the Court.

Fenton Township Meeting *continued from page 15*

Fenton Township Supervisor, Mr. James Smeets, opened the meeting and declared that the regular business of the Board would be set aside and the sewer project would be discussed first.

Mr. Smeets is a popular man who has served as Supervisor of Fenton Township, the fastest growing area in Genesee County and one of the fastest growing areas in the State, for 17 years. In that time, due to his foresight, 54 miles of sewers have been laid in Fenton Township. As he points out, 75% of the lakes in Genesee County are located in Fenton Township, and that is why people are drawn to the area. He feels that the lakes are the lifeblood of the township and that care must be taken to manage them properly. Part of this management philosophy dictates that sewers by installed to protect the lakes from further degradation.

The present project calls for higher assessments and tap-in fees than any of the previous projects. The township set up a special assessment district for those receiving benefit from the sewer. The special assessment is $1900.00 and the tap-in fee is $3050.00.

Mr. Ray Lord, President of the Pine Lake Property Owners Association, was first to speak. Mr. Lord very articulately explained the many concerns of his members: 1) many residents are retirees who are living on fixed incomes; 2) scheduled plant closings in nearby Flint will affect a great many of his members, leaving some without jobs; 3) an ongoing dispute with the city of Fenton over usable capacity at the Genesee District 3 wastewater treatment plant, which services Fenton, Linden, and Fenton Township, may result in more costs to the Fenton Township residents; 4) Fenton Township properties are currently being reappraised by the State because the state feels that Fenton Township has not been appraising property high enough for taxes. Mr. Lord admitted that he was not there to argue about whether or not the sewers were necessary, because as a caretaker of this valuable resource he felt they were. However, he wanted an amicable relationship with the Board so that they could work on reducing the costs of the project.

Mr. Smeets took the floor and answered Mr. Lord's questions. The capacity issue at the treatment plant is a separate issue that is being ironed out between Fenton and the Board. A modification will be made to the treatment plant with the help of government funds through the Clean Water Act. As for the cost of the sewer project, the township has adopted the "benefit use" concept where it is believed that each property benefits the same form the sewer, as opposed to an *ad valorem* tax where more valuable properties pay more of the cost. The existing 700 homes affected will absorb about 49% of the project costs while 500 homes to be built in the area as projected over the 20 year life of the bond issue will absorb the other 51% of the project costs. Mr. Smeets maintained that the sewer project would never be cheaper than at the present time because interest rates are expected to rise soon.

Mr. Smeets, who remained quite calm under fire, explained that: 1) the DNR approved of the project; 2) the engineers must have their reasons for designing the system as they did; 3) the township is required to charge 15% down ($458.00) and the rest will depend on the interest rate of the bond issue (estimated at 8%); 4) each unit in a multiple unit complex will pay the same as individual residences; 5) Federal and State funds are only available in low and moderate income neighborhoods, of which the proposed neighborhood is not; 6) other projects cost much less because Federal money to support innovative technology helped and the mere fact that inflation has affected costs; and 7) the issue of whether or not the lakes were polluted yet was a moot point because without sewers, the lakes would inevitably be polluted. Finally, he informed the audience that other sewer projects were financed through special assessment districts, also, and that the inference that all the township's residents were paying for the other projects was false.

One resident announced that a telephone poll had been conducted and that 80% of the people called were against the project. He declared that he would like to put the project to a vote. Another resident countered that because of the misinformation about the project coming from the newspapers and the pollsters, the results of the poll are invalid. He said that the pollsters were telling people that the project could cost $10,000 per household. This point was not denied.

Mr. Smeets replied to the voting question by explaining that there had been a referendum period that ran for 45 days from the time a notice of the project had been placed in a local paper (December 15). During the referendum period, the question could have been voted upon if a petition signed by 10% of the people in the special assessment district had been filed.

Some residents angrily charged that the project was being forced upon them. A few even inferred that the process was un-American. A great many were dismayed to find that they really could not stop the project at this point. At least one resident claimed that the big money interests were behind the project and that the Board was listening to the developers and such, not their constituents.

The project is not without its supporters. There are those who complain that their septic systems have failed and they need very costly repairs if the sewer doesn't go through. Some people argued that from an ecological standpoint, the project is necessary to protect the lakes. Some reinforced an arguement that Mr. Smeets had presented earlier that the project must be undertaken sometime in order to protect the lakes, and no time would be as inexpensive as the present. Others argued that some of the property affected by the project was unsuitable for building because the soil would not support a septic system. These people argued that the sewers will now make their property suitable for development.

My conclusions from watching this process should come as no surprise to anybody. First, the Board genuinely feels that they are acting in the best interests of the community. Second, the residents for the most part accept the fact that the sewer is necessary. Third, even though the township officials are being very straightforward about the cost determinations, most residents feel the costs are excessive. Fourth, and most importantly for the lesson it teaches, managing lakes is serious business and when plans are being developed for your lake and environs it is your obligation to keep yourself and your neighbors informed.

CREATION OF BEAVER DRAIN, WATSON TOWNSHIP, ALLEGAN COUNTY, MICHIGAN FINAL ORDER OF DETERMINATION, January 18, 1889.

WHEREAS, I, John Germain, Township Drain Commissioner of the Township of Watson, County of Allegan, State of Michigan, did on the 31st day of December, A.D. 1888 make and issue an order determining that it was necessary and conducive to the public health, convenience and welfare, that a certain drain should be located and established in the Township of Watson aforesaid as follows:

"Commencing at a point 32 rods and 6 links east of the central quarter post of Section No. 35, township of Watson, Allegan county, Michigan; thence north 12 degrees, 26 minutes east 25 rods...and ending at a point 21 rods west and 37 rods south of the quarter post in the north line of section 36, Township of Watson, Allegan County, Michigan.

Also a branch drain known as the east branch of the Beaver drain: Commencing ------

Also another branch drain, known as the west branch of the above described Beaver Drain ------

The land to be taken for said drain is 14 feet wide on each side of the center line of the above drain for its construction and deposit of earth, and the width of the drain to be five feet on each side of the center line of the above described line of drain.

Said order being based upon application, and examination and survey; and of cuts and of stakes which are made a part hereof. And, Whereas, Since the date of the said order, the right of way for said drain and all the damages by reason of the construction thereof has been released by all of the owners of the lands traversed by said drain;

Now, therefore, I John Germain, Township Drain Commissioner as aforesaid, do order and determine that said drain shall be and the same is hereby established in accordance with the hereinabove described survey, and the commencement, route, terminus, length, depth, and width of surface excavation of said drain shall in every respect be in accordance therewith and that the name of said drain shall be 'Beaver Drain' by which name it shall hereafter be known and recorded."

Given under my hand this 18th day of January A.D. 1889.

John Germain, Township Drain Commissioner of the Township of Watson.

Lower Beaver Drain Cleaned Out - 1967

Records from the Allegan County drain commissioner's office show that 5 freeholders applied for a cleaning out of the Beaver Drain on March 20, 1967. The stated purpose was to lower "Schnable approximately one foot". The Board of Determination

consisting of Clem Rewa, Nick Leep and Fritz Jager, approved the ORDER OF NECESSITY "to clean out from lower end to Schnable Lake, lowering Schnable Lake approximately one foot, on May 4 1967". A note at the bottom of the ORDER OF NECESSITY states, "The Board of Determination recommends that the clean out to go only far enough to lower the lake one foot".

"Furor Still High Over Low Lake Level."

by Rosemary Parker, Kalamazoo Gazette Staff Writer, 4-6-87.

WATSON TOWNSHIP - Allegan County Drain Commissioner Lynn Fleming said he's convinced he didn't overstep his authority in cleaning Beaver Drain.

But in the interest of keeping peace, Fleming said he will temporarily block the mouth of the drain to allow Schnable Lake to rise a bit until a dispute over the level of Schnable Lake is resolved.

Almost 100 people packed the recreation room of the Schnable Lake Campground Saturday to complain to Fleming that the cleaning last month of Beaver Drain (Schnable Brook) allowed the

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lake to drop - 16 inches by Fleming's count, 25 inches by residents' figures.

Campground owner Zeb Hempen and his campers said they like the old, higher lake level. Now, their docks are on dry ground and their shallow swimming area has been eliminated.

They are also angry that the maintenance project could be initiated by a few requests from the other side of the lake and that the whole drain district will get stuck with a bill for a project they don't want. The cleaning was requested by property owners on the other side of the lake who had high water in their yards and over driveways.

Fleming explained that the drain hadn't been cleaned for many years. When maintenance was requested, he was authorized to restore the drain to its original depth and width, he said.

Because the drain was clogged for many years, the previous lake level might be considered artificially high, he added.

Fleming and County Commissioner John Hinkle explained that the problem could be addressed by having a legal lake level established, an action through circuit court which must be petitioned for by two-thirds of the lakeshore property owners.

Unless a legal level is set, Fleming is under no obligation or authority to do work to maintain any level.

If a legal level is established an adjustable dam would be built at the lake's outlet and the drain office would be responsible for maintaining the level. Lakefront property owners would be assessed for the dam's construction and the level maintenance.

Audience members questioned the cost and time involved in that procedure; in addition, Fleming said only the 16 people who actually own property on the lake would be eligible petitioners.

Some audience members complained that the cleaning went beyond removing silt and obstructions and was more in the line with a widening and deepening project, which should require public hearings before work could begin.

They said the drain's bottom was distrubed and fish spawning areas destroyed. They want Fleming to assume responsibility for restocking the lake.

The contract called for dipping the drain bottom and removing obstructions but "if (the contractor) overdid it, that's my fault," Fleming said. Fleming said he will contact the contractor this week and go over the project to investigate those charges.

Hempen and other group members gave Fleming two weeks to respond to their demand to restore the lake level and restock the lake.

"We're not going to accept what happened here," Hempen said.

Fleming said he would visit the site today to review the work that had been done on the drain project. He said he hoped to determine whether residents' allegations about the extent of the drain work were accurate.

Editor's Note:

A review of the above records and a site inspection of the Beaver Drain, Schnable Lake, and the Schnable Lake watershed, leads me to believe that Schnable Lake is becoming the victim of man's mismanagement. Why was it necessary in 1889 to drain a number of potholes and small marshes into Schnable Lake? Why was it necessary to lower Schnable Lake one foot in 1967? Was it for the purpose of putting houses on the wetlands around the shore? Why was the cleaning out of the drain in 1987 not preceded by a petition from land owners who would benefit from cleaning out the drain? How can one believe that the work done this year was merely cleaning out of the drain, when the land along the drain was cleared out as far as 50 feet from the center of the drain at one point? One tree trunk lying in the cleared area has a diameter of approximately 28 inches. Did the Board of Determination exceed its authority in 1967 in lowering a lake's level? How many more lakes are we going to destroy before the people of Michigan rise up and say "this is enough"?

The drain commissioner did install a tube across the drain during the third week of April, and the water in Schnable lake had risen between six and ten inches by Sunday, April 19, 1987.

Many county and inter-county drains constructed in the late 1800's and early 1900's were constructed through wetlands and through marshes and into lakes. The impact on lakes of drains created 100 years ago was probably minimal with agricultural practices what they were at the time. But with modern agricultural practices of removal of fence rows, extensive use of commerical fertilizers, unregulated use of herbicides and pesticides, and growing of row crops year after year on the same soil, lakes and streams are being subjected to excessive nutrient input and soil infiltration. The results are weed choked lakes, decreased fish populations, and nuisance algae blooms.

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