

Ecology Committee of Whitewater Lake



"WHITEWATER LAKE"

LRP

TABLE OF CONTENTS

INTRODUCTION	- Wm. H. Lundin	1.	APPENDIX SECTION	
SUMMARY OF RECOMMENDATIONS	- Willard Gross	2.	LETTERS OF SUPPORT	36.
CHRONOLOGY OF COMMITTEE WORK	- Arnold Mamath	3.	NEWSPAPER HIGHLIGHTS OF THE YEAR	43.
HISTORY OF WHITEWATER LAKE	- Kathleen Lundin	5.	ORIGINAL RESOLUTION	46.
ECOLOGY AND COMMUNITY RELATIONS	- Wm. H. Lundin	14.	LIST OF CONTRIBUTORS AND VOLUNTEERS	47.
RESULTS OF THE LAKE STUDY	- Willard Gross	21.	A DO IT YOURSELF MANAGEMENT PROGRAM	
			GUIDELINES FOR PROFESSIONAL ACTION	48.

Report Responsibility, Mrs. Kathleen Lundin

SUMMARY OF WISCONSIN'S LAKE PROTECTION
AND REHABILITATION LAW

by WILLARD L. GROSS

The new law (Ch. 301, 1973 Statutes) establishes a joint state-local program for public inland lake protection and rehabilitation. The primary goal of the law is to provide a basis for improving Wisconsin's inland lakes by establishment of Lake Rehabilitation Districts. The new Districts established under the Law have advantages for lake communities not possible prior to the Law's passage.

Probably the most important aspect of the new law is that it provides for the establishment of an organization (lake district) which possesses legal authority and taxation powers to manage a particular lake. Prior to the law, the only organization possible were volunteer organizations such as our present Lake Association, or a Sanitary District. Volunteer associations tend to be unsatisfactory because they possess no legal authority and are dependent upon dues or volunteer assessments as a source of revenue. Sanitary Districts possess legal authority and taxation powers, but were developed for the purpose of constructing sewer systems and not lake management. However, a Lake Rehabilitation District is established for the expressed purpose of management and rehabilitation of a lake utilizing such techniques as algal control, weed harvesting, dredging, and other forms of lake management.

A specific point of interest to some individuals is the fact that a Lake Rehabilitation District does not include provisions for construction of sewer systems. Should such a rehabilitation program be necessary, it would require the property owners to file a new petition and obtain new signatures to establish a Sanitary District.

The fact that a Lake District has taxation powers is an important benefit to lake communities because it provides for a sharing of lake management costs. All property owners within the district are assessed a tax based upon the equalized valuation of their property. Therefore, individual owners who do not belong to some volunteer organization such as the Lake Association, but use the lake, are required to pay their share. The tax assessment is at the discretion of the Board of Commissioners established to operate the district. This board can adjust the assessments in relation to the extent to which an individual property owner may use the lake. For example, people living off the lake could be assessed at a lower rate than people living on the lake. Also, special consideration may be shown to individual property owners who own large segments of lake shoreline, but do not use the lake as much as other property owners.

The new Law specifically prevents any abuse of this taxation power. The assessment is limited to 2.5 mills of equalized valuation, plus a \$5,000 limit on an annual budget unless the higher budget is approved by individual members of the district at an annual meeting. This tax money is almost exclusively for lake management purposes. Commissioners serve without salary and Board expenses should be minimal.

At this point, the following question probably arises in your mind: "How much will it cost me to belong to a Lake Rehabilitation District?" A specific cost is difficult to estimate because of differences in property values and assessment rates. An estimated average annual cost is \$20 per year for lake maintenance, but the tax could range between \$5-\$90 for different individuals. If the Town Board would continue to share the management cost for Whitewater Lake, the above cost estimate would be lower depending upon the Town's contribution.

A Lake Rehabilitation District has the additional benefit of seeking answers to a lake's problem and providing for rehabilitation. It allows for the conduction of lake studies, development of a rehabilitation plan with a set of alternative courses of action, selection of a feasible rehabilitation or protection plan, and implementation of the plan. In each of these steps, various amounts of expertise and financial aid is available from the State. The cost of initial lake studies will probably be borne by the local District, except for special cases. However the Department of Natural Resources has an Inland Lake Renewal Group which can provide some technical assistance. The most important benefit here, is that when a rehabilitation plan has been developed and approved, a district can apply for state financial aid and have up to 90% of the project costs funded by the State. In certain cases of high risk experimental projects where eventual results are uncertain, it is possible to obtain 100% funding. The only limitation on funding, is that no one project can exceed 10% of the total State budget.

A final advantage of the Lake Rehabilitation District is the increased benefit to seasonal and/or out-of-state property owners. Under the Lake Rehabilitation Law, all property owners in the district have full voting privileges. While the new law is unclear regarding who may serve on the Board of Commissioners, present interpretation is that seasonal and/or out-of-state people may serve on the Board. In this regard, the Lake Rehabilitation Law provides substantial power to a segment of lake property owners who in the past were often victims of "taxation without representation." Through a Lake District, out-of-state property owners may voice their concerns and interests to Town Boards and County Boards. Both these bodies have representation on a Board of Commissioners for a Lake Rehabilitation District.

The Lake Protection and Rehabilitation District as established by Ch. 301 of the Wisconsin Statute is exactly the type of management body recommended by the Ecology Committee of Whitewater Lake in their 1972 report. Establishment of such a District for Whitewater Lake property owners. I urge that you give this matter serious attention and refer any questions or comments to the Board of Directors of GWLPA.

INTRODUCTION

A report to the communities of Whitewater and Richmond Townships - summarizing the work of the Ecology Committee of Whitewater Lake.

Founded one year ago in April, 1971, this Committee has functioned intensively - to complete a wide ranging ecological study of the lake; sponsoring educational panels and workshops; and raising the awareness of the community to lake problems.

The report will present a list of recommendations regarding the improvement of the water quality in Whitewater Lake.

THE MAJOR LONG TERM RECOMMENDATION WILL BE THE ESTABLISHMENT OF A SANITARY DISTRICT.

Other sections of the report will cover a detailed History of the area, with emphasis upon the lake, its stormy history, and its interesting role in the distant past.

You will also find two old photographs of the lake taken in 1947, the date of the second closing of the dam.

The more significant meetings and contacts made during the year are also detailed.

There is also a financial statement, together with a list of voluntary contributors

to the Committee's work.

Letters of support from Township, County, and State officials are also attached.

In addition there is a section which describes the relationships among people within this community - how progress was denied in the past, and how it may now be accomplished.

This land on which we live is old Indian territory - now called "the land of Blackhawk." You may not know what he wrote to General Atkinson...but he said,

Our village was healthy and there was no place in the country possessing such advantages, nor hunting grounds better than those we had in possession. If a prophet had come to our village in those days and told us that the things were to take place which have since come to pass, none of our people would have believed him.

We live on a eutrophic lake - a man made artifact. This report poses the question - do we want to improve our environment?

Or will it remain true as the Wintu Indians said..."How can the spirit of the earth like the White man?...Everywhere the White man has touched it, it is sore."

SUMMARY OF RECOMMENDATIONS

The following recommendations are based upon the fact that, at present, Whitewater Lake has a natural enrichment problem. Because of its origin, shallowness, and high concentrations of phosphorus and nitrogen nutrients, the lake requires intensive management and protection to provide maximum recreational benefits and prevent the development of additional pollution problems in the future.

1. Sanitary District

The management and long-term protection of the lake can best be accomplished through establishment of a governing body, whose primary function is looking after the needs of the lake. A point to consider is that this need relates to the lake itself and not just to individuals who live on the lake, if Whitewater Lake is to serve future generations.

2. Management Recommendations

Many of the presently known procedures for reducing or reversing nutrient enrichment of lakes appear impractical for Whitewater Lake. Instead, the following forms of control are recommended.

A. Promote the growth of vascular vegetation in the lake to compete with the present algal forms. This should decrease the abundance of algae and increase the depth to which one can see into the water. Development of vegetation beds will permit removal of lake nutrients through harvesting the vegetation.

B. Provide chemical control of algae in 1972 to aid in establishing vascular plants in the lake. Consider future algae control for this purpose only.

C. Use manual or mechanical harvesting of the aquatic plant growth as a means of removing nutrients from the lake.

D. Investigate techniques for establishing a flushing action in the lake. The feasibility and impact of lowering the dam spillway should be investigated. In addition, a hydrologist should be engaged to investigate the feasibility of increasing the water resources of the lake, such as rejuvenation of springs.

E. Initiate several monitoring programs for the lake through the sanitary district or other management body. One monitoring program should be the water quality of the lake. A second program should be a periodic survey of septic systems to ensure they are functioning properly.

W.G.

CHRONOLOGY OF COMMITTEE WORK

"Our motivation is clear and open - to construct a healthier environment for all of us who enjoy Whitewater Lake." Since the time Dr. Lundin made that statement in the first letter appealing for support for the Ecology Committee - ten months ago - we have been involved and active.

1. At a meeting in June, 1971 Game Warden Mr. John Plenke, whose jurisdiction covers the 20 lakes in Walworth County, stated that with the exception of Lake Delavan, the water quality of Whitewater Lake was one of the least attractive in the County. He offered the assistance of his office, and further suggested that we contact the County Zoning and Sanitation Office.

2. On June 28, 1971 the Committee held a conference with Mr. Norman DeLapp of Zoning and Sanitation; Mr. Gene Hollister, former Head of the Southeast Wisconsin Regional Planning Commission; Mr. Tim Cullen, Ombudsman for Congressman Les Aspin; Mr. Howard Darbo, President of the Lakeproperty Owners Association; Mr. Joseph Keith, Tax Assessor; Miss Alice Warner, Whitewater Town Clerk; and Mr. Werner Christen, Chairman of the Whitewater Town Board.

At that meeting Dr. Gross gave his first preliminary report on the condition of the lake. The need for a Sanitary District was pointed out by those present, and the urgency of Township cooperation was stressed.

3. In July, 1971 a questionnaire was mailed to residents, the results of which aided Dr. Gross' study, and showed that the community was optimistic about the future.

4. That same month a Hearing was called by the DNR, responding to a petition which requested the prevention of spraying the lake for weeds and algae. On the advice of Dr. Gross, for purposes of the biological study of the lake, the Property Owners decided to withdraw their request for a spraying permit. Dr. Lundin and Dr. Gross testified for the Ecology Committee; Mr. Howard Darbo testified for the Lake Property Owners; and Mrs. Shirley Krahn testified for the petitioners. The Lake was not sprayed by common consent.

5. On August 13, 1971 the Committee attended a First Congressional District Pollution Conference at the KTI in Elkhorn. This day long session featured speakers from the DNR, the U.S. Environmental Protection Agency, HUD, the U.S. Farmers Home Administration, and Congressman Aspin.

6. During the same month of August a well attended community panel discussion was sponsored by the Committee, the Township, and the Propertyowners Association. Congressman Aspin appeared, as did representatives from the various groups making up the community. Information was given to the 160 individuals at the meeting - one of the largest held in the Township.

7. On November 1, 1971, Drs. Lundin and Cross, and Kathleen Lundin presented the first official interim report to the Townships. The report included a History of the Lake, water quality findings, and a number of preliminary recommendations.

8. Later that month a meeting was held with Mr. Herb Johnson, of the firm of Jenson and Johnson, who provided advice about the relationships between the legal and the engineering aspects of establishing a Sanitary District.

9. On December 2, 1971 a meeting was held at the offices of Mr. Clark Dempsey, at which Mr. Werner Christen was present. The discussion involved specific steps in obtaining approval for a Sanitary District.

10. Mr. Jim Johnson, Head of Zoning and Sanitation was a guest speaker at a Committee meeting later in December. He described the extensive land use and soil maps being prepared by his Office, and outlined provisions of the new Zoning ordinances which affect the shoreland of lakes and the positioning of septic systems.

11. A Newsletter was mailed to residents, Edited by Mr. Don Striggow, giving information about the Committee's work, listing preliminary recommendations, and reporting results of a second questionnaire.

12. In February, 1972 the Committee sponsored a community Workshop. The guest speakers were: Mr. Jim Johnson; Mr. Terry Moe of the DNR; Mr. Wm. McElwee of SEWRPC; Representative Wilger; Mr. Bill Miles, District Sanitarian; Mr. Ron Peining, Fish Manager. The goal of a Sanitary District was explained, and newly completed soil and land use maps were presented to the audience.

In summary we are sure that you can appreciate the tremendous amount of time spent by your Chairman and the Committee, including the labors of Dr. Gross and his staff.

Obviously these meetings were not always in complete agreement and harmony. However, this is human nature, and it helped having a psychologist as Chairman.

The major goal of reaching an objective feasibility study, and presenting valid findings to the community has been realized.

It is hoped that it will be clear that we consulted as many informed people as possible, and that we present our recommendations on the basis of careful consideration. We followed leads given to us, and organized great amounts of facts to bring you this final report.

A.E.M.

HISTORY OF WHITEWATER LAKE

preface....

I realize that people might wonder why I spent half a day, each day, for the past year on committee matters, meeting arrangements and the History of the Lake. My motivation was simple...I care very much about this more than beautiful body of water and wanted to know everything about it. I started with a small bag of second-hand rumors and tarnished recollections, many of which were contradictory. A lot of people took credit for the lake when it was in good shape, merely because they were here. All the blame for the bad stuff was put on the "Illinois people". I thought to myself, I'm one of the "bad guys" so perhaps I can show that many of us can be "good guys", and show our concern about the lake. Then I found that every side of the fence was willing to work at everything from licking stamps to organizing mailing lists. All to help the lake.

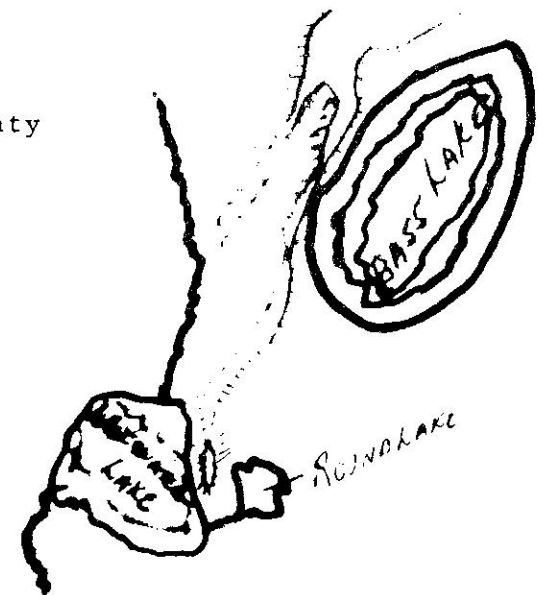
I could have done just half as much as I did had my standards of achievement been lower. And many times, after big hassles within the committee, I felt ready to quit, just so we would stop harrassing each other. However, I always had to keep in mind that the good of the lake was the most important goal, and the committee's hassles had nothing to do with the purpose of the committee.

I felt we made a very important contribution toward a community liaison with the University. Often, our limnologist brought up comments made to him at the University, complimenting him.

It certainly would have helped to have had more people with experience in organizing events, public contact, public speaking and objectivity. My newspaper experience saved me from disaster and from being overwhelmed.

I'm very grateful to the community for the chance to have done things I didn't know I could do, plus I have a thicker skin. I humbly hope that you also will benefit from my toil.

copied from
Walworth County
Atlas of
1873



In 1833, Black Hawk dictated his autobiography to Antoine LeClair. He dedicated his book to Brigadier General H. Atkinson, the "White Beaver" - "the great war chief who commanded the American army against my little band" leading to Black Hawk's surrender.

"Sir, the changes of fortune, and vicissitudes of war, made you my conqueror. When my last resources were exhausted, my warriors worn down with long and toilsome marches, we yielded, and I became your prisoner.

The story of my life is told in the following pages; it is intimately connected, and in some measure, identified with a part of the history of your own: I have, therefore, dedicated it to you,

The changes of many summers have brought old age upon me, - and I cannot expect to survive many moons. Before I set out on my journey to the land of my fathers, I have determined to give my motives and reasons for my former hostilities to the whites, and to vindicate my character from misrepresentation. The kindness I received from you whilst a prisoner of war, assures me that you will vouch for the facts contained in my narrative, so far as they came under your observation.

I am now an obscure member of a nation, that formerly honored and respected my opinions. The path to glory is rough, and many gloomy hours obscure it. May the Great Spirit shed light on yours - and that you may never

experience the humility that the power of the American government has reduced me to, is the wish of him, who, in his native forests, was once as proud and bold as yourself."

Black Hawk

10th Moon, 1833.

Algonquins named the lake Wau-be-gan-naw-po-cat...equivalent to whitish or muddy water. Governor Doty gives Waubish Nepayuaw as the Menomonee name, meaning White Water.

1832

Black Hawk and General Atkinson slept here on opposite sides of the lake and they had a small skirmish. The war tried to regain lands promised in the Treaty of 1804, but he lost. The Indian paths and clearings remained from Milwaukee to Galena.

1837

Benoni Finch and his party followed this 15" path and arrived in April from Milwaukee. The first road was known for years as Finch's Track. The early settlers avoided the rough lands and wet marshes around the lakes. The first white pioneer on the lake was entered in 1843. Sections 34 to 36 and 24 to 25 were entered as late, in some parts, in 1855. The English bought the best property in the township, and the Norwegians settled around the lake, which must have resembled their native land. The original size of the lakes was estimated to be 50 acres for Whitewater Lake.

Bass Lake is figured to be about 80 or more acres. In between, the areas were occasionally marshy and were cut by a dividing ridge which extends into Northern Wisconsin. The composition of Bass Lake is different than the other side of the ridge and Bass Lake is higher. The area was formed by leisuring moving glaciers. The height at the lake is 795' - lower than the highest level in the city which is 885'. The soil is glacial drift.

****1840****

Nearly every family in Whitewater received a copy of the Milwaukee Sentinel. Still no settlers on the lake, however. Township detached from Elkhorn and named for lake. The land area was determined at 20,302 acres.

****1846****

Malaria and fever. 21 Norwegian settlers die between September and December according to Little Brick Church records. They are now buried in the cemetery on the lake.

****1850-55****

First census of town and village: 1,229; 1860, 915; 1870, 1,006; 1880, 902; 1890, 849; 1900, 806. Buyers at the land office were...Hans Arvedson, Sec. 34, Hiram Gregg, Sec 34, Ole Hanson, Sec 34, Andrew and Gardner Johnson, Sec 35 & 36, Christian Mason, Sec 35, and Levi Hale Nelson, Sec 30.

****1857****

Little Brick Church built by Norwegians.

****1912****

The land of the township is valued at

\$1,239,500 - average value being \$61.02.

****1926****

September 23...Railway Commission gives o.k. to Morgan & Reddy of Whitewater Lake Realty to construct dam.

****1927****

July 28...BIRTH OF THE LAKE. City's businesses close doors at 3: to have a picnic celebrating the closing of the dam. Dignitaries came from Milwaukee, Janesville and Madison and proclaimed that "the desirable shoreline would be taken up quickly." The band played, the wheel turned and congratulations were heaped on Art Morgan and George Reddy. It was estimated that it would take 13 months to reach the proposed 12' at the dam. It came to within 2' of the top of the spillway. October 20...South end lake road (Townline Rd to Chapel Drive) disputed between Whitewater and Richmond. To bridge or not to bridge, depends on the level the lake reaches.

November 10...level of Lake Lorraine rises 20" in spite of dry summer and fall. There's no proof, but it was decided to be a consequence of the damming of Whitewater Lake.

****1929****

Petition circulated to close south lake rd. June 13...Judge Smalley hears case of Albert Hanson vs. Whitewater Lake Realty Co., requesting lake be restored to level before building of the dam. Easton Johnson represented Realty Co. They failed to pay \$15,000 option price for 20 acres of flooded land.

****1929 continued****

July 18...Judge Smalley orders lake to be drained. The dam, which cost several thousand dollars, was to be destroyed. The decision was a complete surprise. Hanson was also awarded \$975 in damages. Hanson's surveyor tells of 18 acres being under water before dam was closed. (Note: In those days property lines did not stop at the shoreline if the farm went around the lake.)

September 5...Very interesting letter from A. Hanson. He states he had never been contacted by the realtors and no money had changed hands. He had asked for \$2,200 damages and received \$975. For losses on cottage rentals, \$500...beach, boat and bath houses, \$150...concrete steps and platform, \$100...trees, \$200...and duck yard, \$25. There wasn't more than \$100 in the Realty Co. treasury and they owed two bills adding up to \$13,600. Also, Oscar Krahn's hay land was covered with water and so was A.J. Hanson's.

September 19...Answer to the above from Geo Reddy. The land prices are mentioned... Oscar Krahn asked \$45,000, Andrew Hanson asked \$8,000 for 30 acres of flooded pasture. September 26...Andrew J. Hanson letter asking \$8,000 for 40 acres which will be 2/3 under water with lake filled. States Realty Co. can't pay.

****1930****

April 10...Rumor that Geo Reddy opened dam.

April 17...Reddy opens the dam. Faces contempt of court charges. Pro-lake faction meet at Gutzmer's Farm. News article wonders who has final say so on any lake...R.R. Comm, state or courts?

April 24...State officials view lake and act as "friend of court". Farmer testifies he put up a guage and the lake rose an inch in a week after the dam was opened. Dam closed again because Cold Spring farmers were flooded. Judge Smalley decides again.

May 22...Judge Smalley decides to open dam again. Farmers along lake shore see their acreage being devalued to original acreage levels instead of in front feet.

May 29...About 1,600 cars and 6,000 people turned out to see the lake turned back to a marsh. There is still hope of a settlement. There was a suggestion to build a dam across the narrow channel on Bass Lake. They figured \$500 would cover the labor. (Ed Note: the lake was emptied and I went forward to the next big development)

****1945****

April 26...Ken Hackett gave the County 10 acres of land for park sites including the present dam site.

December 11...Public Service Commission held a hearing to operate the dam again.

****1946****

January 31...Another hearing, stating the present depth of the lake is generally 22" and poor pasture with much of it wet and marshy. The flooding plan stated that the dam would rise 1' above the lake's surface. There were many objectors and Hawthorn Mellody Farms felt their water supply would be cut drastically. In fact, the decision includes a provision that the dam be opened slightly if the Farms suffered a lack of water. All the flowage rights were settled and the lands condemned.

1946 continued

August 29...Proposed zoning map posted in Skindingrude's window. Subdividers urged to consult Statutes.

September 19...lake is zoned residential, and Park Board feels it will be an ideal recreation center. The zoning controlled the type of house built, and eliminated undesirable commercial enterprises.

November 14...Eleven parcels remaining to be condemned. Proceedings started.

November 21...County has received easements for more than half the property needed from less than half the property owners.

November 28...Remaining uncooperative property owners to have land appraised by commission of freeholders.

1947

January 9...Kettle Moraine Park Assn o.k.s option to buy Meyer farm of 148½ acres which touches the upper North end of Whitewater Lake and will provide a 600' bathing beach for the Park.

January 23...Developers moving in and buying farms. K.M.Hackett arranged sales....160 ac. John Kachel farm on Bass Lake to Van Evans and David Williams of Wauconda, Ill, which controlled 6,000' of shoreline. Pete Nelson farm next to the Brick Church was 120 ac.

February 13...Dam closed by County Engineer Lloyd Jensen at 10:30. Process took 3 years. Fences to be removed south of dam. Engineer to remove tamarack grove on Kachel farm along with trees. But it would be sometime before the water gets there. Estimate of future size of lake is 768 acres.

(pictures included are of lake just being filled, Jensen closing dam, and group mentioned next article at closing.)

February 20...picture of Jensen closing dam. Picture of group who attended the closing: Dr. H. E. Fowler, Earl Cox, Ralph Brown, Don Hackett, Frank Winnie, Bob Brown, Harold Rekstad, Walter Strong, Milo Krahn, Mrs. Luther Turner, Mrs. Milo Krahn, Mrs. Anton Fibikar, Bert Eelbeck, Pete Peterson, Anton Fibikar, Oscar Kasper, George Johnson, Charles Cruse, Henry Gutzmer, Dwight Turner, Bob Fero, Lloyd Jensen, Ken Hackett and Harley Johnson.

Letter to Mr. Ralph Brown from Mr. J.M. Albers Wi State Planning Board, congratulating County officials "who will find it a source of everlasting pride".

Editorial.. "This newspaper has done everything within its power to bring about the closing of Whitewater Lake Dam, and continues to press on for a State Park area adjacent to the Lake. Each of us who stood there was thinking of the future - the future of Whitewater. We envisioned a place of beauty and serenity carved out of a busy world where succeeding generations of our people may go for rest and pleasure. Long years after this generation is dust, Whitewater Lake will serve as a source of health, beauty and recreation to countless thousands and material gain to those who earn a livelihood here. February 13 marks a happy milestone in the history of our county.

February 29...Conservation Groups in Five Counties support project. Willard Reese presents a history to date to them. (Ed note: this history was never found) (Thank you to Jensen & Johnson for the old photographs from this year included here.)

1947 continued

March 13...Conservation Commission hearing on August Meyer farm. Walter Strong, Paul Scharine, C.G. Hickey and Henry Ludtke spoke in favor of the plan.

April 3...Henry Gutzmer elected Chairman of the Town Board without opposition, 68 residents voted.

April 10...Lake water gauge shows water rose 4.64 feet. Island near dam is leveled off to fill in channel for safer swimming. Crossroad near Church leveled off. Bottom of Bass Lake worked on.

July 3...Commission acquires State Park land. 157 acres of August Meyer farm cost \$15,500 with its 550' of frontage. 40 acres of Milo Krahn farm cost \$5,000. The Corp. holds 29,000' of shoreline on lake. State Park will contain 255 acres and 51,000' of shoreline.

July 17...Moraine Park Subdivision opens. Hackett, Evans and Williams are platting the land and want Whitewater people to buy first. David Williams and Bill Reese are the salesmen.

(Ed note: Willard Reese was Mayor at that time and Bill Reese may have been his son.) Half page ad appears with picture of West shore of lake near park. Residents of Whitewater are offered 30-day liberal discount.

July 24...14 lots sold at Sunday opening.

July 31...Ads getting smaller. Lots have 75 or more feet of frontage and are priced from \$1,100 to \$2,200. Large back lots are \$340 and up.

September 11...Level of the lake is 5.35. Boats and roads are in. Four homes are under construction.

October 2...United States census reports showed rural-farm population which gives the best picture of density of population. Town of Whitewater was 18.1 people per square mile compared to Geneva with 35.6. Beautiful description of Pleistocene period or the Great Ice Age of 35,000 to 50,000 years ago.

1948

March 25...News more infrequent. Lake level at 7.24'. 4.76' to go over spillway. Lot of rain and high water everywhere. Amount of water to go under culvert at Nelson's Corner was 27,561,600 in 1947. Enough to cover 100 acres to a depth of 6.3'.

May 27...Two new subdivisions open. Lake level at 7½'. Moraine Heights and Chapel Hills open. Strong advertising campaign going on in Milwaukee and Chicago. Road on peninsula ready.

September 2...Whitewater Lake Property Owners form Association. 19 owners representing 1/3 of the owners organize.

1949

March 17...State announces budgets for Park. Previous year spent \$36,000. Will spend a total of \$250,000 on recreation area.

(Ed note: News really dropped off and I went on.)

1960

May 12...Lake about to head over spillway. Has 2 feet left to go. Spilling height is 12.5 feet.

****1960 continued****

June 16...Large machinery gouged out over 13,000 cu yds of fill to create camp grounds. A mile of new road was cut through the woods and out buildings will be next. A launching area will be ready soon and camping ready next year.

July 7...15,000 people passed through park and 200 camped. Heavy rains tore up roads.

September 22...\$100,000 to be spent by Joy Baptist Church on Lake. Purchased 21 acre site. Will build next year. Bought land from John Sanderson for \$12,500. 655 feet of frontage included. Land rezoned from residential to recreational. Chairman Gutzmer approves.

October 27...Shereda Woods opens. 23 acres platted into lots of 75' to 100' wide and 150 to 250' deep. Prices start at \$3,000. Lake has more than 200 homes on it now.

****1961****

April 4...Gutzmer re-elected as Chairman with 292 voters coming to polls. James Walker lost 157 to 132. Lake Assn backed Walker. Werner Christen won as 1st Side Supr 166-122.

May 18...Camping area opens.

June 15...Rice Lake dedicated. Granite stone placed at cost of \$700, 4½ ton moved from Fontana and set in cement. Named for "Doc" Rice who served as assemblyman from 1936-60 and praised for untiring efforts on outdoor recreation.

August 31...Write-up about O'Brien family. In six years their neighbors grew from 2 to 175.

****1962****

February 1...County buys 100 trees for Park at South end.

April 12...Lake spraying opposed by some residents. Two hour hearing conducted by State Board of Health. Speaking for the the spraying program was Lloyd Lueschow, Biologist and Chief of Aquatic Nuisance Control, Jerome McKersie, Engineer, Lowell Wilson, V.P. Prop. Assn, Miss Lynn Cronin, Janesville, student with party that had a drowning earlier. Questions were also asked by Bill O'Brien, James Walker, William Dwinnell and Barry Barton. Those speaking against spraying were Don Gailloro and Henry Gutzmer, Chairman of the Town Board. 18 signatures were on petition. Objectors cited the unsightly chemical residue along the shoreline, lack of weed beds and stunted fish growth, a definite drop in the use of the lake by diving ducks and pointed out that the lake is up now and water weeds are not a factor. Lueschow testified that 82 Wi. lakes had been treated in 1961, most of which in Southern Wi. Whitewater Lake had to date no changes in the lake other than to control the nuisances intended. He said there really is no danger to swimmers in spraying and that a cow would have to drink 700 gallons in order for it to be harmful. The unsightly residue is more likely decaying algae, and would appear even without treatment. Wilson mentioned that the weeds definitely contributed to the drowning last year and made searching hard.

****1962 continued****

Gailloreto said he had heard no evidence regarding the fishing and duck conditions. Wisniewski of the WI Conservation Dept read a letter which stated that yes a 1959 net survey netted more fish than anywhere he had ever operated such a test. There is no carp problem. Also boat operators do not charge for boat rental if the renters don't catch a fish. The Game Manager stated the lake was up 35" and that cut the swamp area, and that the ducks were using Rice Lake. James Walker stated only 2 of the 18 petitioners lived on the lake. Gutzmer said he had signed the petition to give town residents opposed to spraying a chance to speak up. He said he is personally against spraying. Barton questioned Gutzmer about the clearness-dirtiness of the lake. Gutzmer said it was clear before spraying, but Barton took exception to the remark. He said he swims and skin dives in the lake and it is always dirty.

May 3... Park Sticker required for use of State lands. \$2 per year or 50 cents a day. State looks ahead to putting a 60 unit camp area at Rice Lake.

June 21... Lake Patrol started at a cost of \$25 a day. Christen and Millard favored it. Gutzmer wanted cost to be shared by both Richmond and Whitewater.

Permit to spray granted by State. Residents request bog removal program to be financed by tax on lakeshore owners.

June 14... Scattered Oaks Subdivision opened. Fred Peyer develops part of 284 acre farm with 400 feet on lake. 111 acres used for 73 building lots by George Venca, Chgo Atty who purchased part of farm. Lots of one acre.

July 12... 10th subdivision opens east of Lakeview School. Hackett & Schmitt are developers. Bought farm from Minnie Krahn. Some 13 acres are platted into 32 lots. **BIG, BLOWING BOG BEHAVES BADLY, BOUNCING BRAVELY**, reads the headline. A one acre bog is moving around and the State will not take responsibility for it. The bog froze last winter at a high level. Time will determine the bog's future.

August 30... Property Owners plan improvements. Feel spraying programs are effective, stated President Vernon. \$450 had been donated by residents for bog removal fund. Interest was shown in eliminating all bogs. Dues are \$5 and weed and algae control is extra.

December 27... Public Service Commission investigates encroachment on lake bed. James Crummeys' marina had constructed a point on the bed of the lake 50' wide at the shore, 32' at the lake end and 42' out into the lake consisting of earth and timber fill. The commission advised Crummeys that the encroachment is illegal and must be removed, but he has not done so.

****1963****

January 10... During 1962 there were 55 real estate transactions. 50 involved vacant property. Hackett & Schmitt sold 18 of 30 lots in Oak Knoll Subd. In 1962 103 property owners contributed to the cost of spraying the lake. 500 lbs of copper sulfate were used for algae control at a cost of \$779. 10,000 linear feet of weeds were treated at a cost of \$1,896. Voluntary contributions to the bog removal fund total \$750. Joined the Chamber of Commerce. Bulletin Board erected.

1963 continued

April 25...Sad news, Kenneth Hackett dies. Without his help and generosity the lake and park may not have been what they are today.

June 6...Property Owners Vote Against Weed Spray Program. Basic reason for vote against is the lack of funds. Some owners push for reversal of decision.

June 27...County Park developed. Jim Johnson, forester, submits plan. To be developed as an outdoor lab.

July 11...Township valued at \$2,435,795.

Trend is to less farming. One taxpayer protested his taxes at Board of Review.

July 18...Township joins Whitewater Unified School District with 262 children under 20.

September 19...Picture of sign which says, "Walworth County's Nature Land...for the youth of our county to help plan their future uses of our land scientifically and responsibly."

A NOTE OF THANKS.....

I certainly appreciate the encouragement of many, many people. In particular, Miss Alice Warner, who opened her library, memories and expertise to me. The Whitewater Register gave me original copies of newspapers whose pages I was afraid take in my hands and turn. The City Library spent time hunting sources for me and their article was very good. The University was very trusting to someone who had no identification. And to Lakeview School and their Girl Scouts who found my work could fit into their plans. And to my children and husband who didn't mind filling in as "mother" when she became "historian".

Mrs. Kathleen Lundin

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ECOLOGY AND COMMUNITY RELATIONS

It would be misleading to suggest that problems of ecology can be understood or solved without considering political realities and community relations. It is man who produces waste, disturbs the balance of nature, and who trifles with forces which can cause a backlash of destruction. For reasons such as these, it is our responsibility to include "people issues".

The relatively small community around Whitewater Lake contains within its limits, examples of typical problems people create for themselves. No better indication can be given than to recall that until April, 1971, it had been impossible to organize a shared effort to study the physical condition of the lake. Yet it was no secret that Whitewater Lake, like all other lakes in the Southeastern Region of Wisconsin suffered from early senility - or in biological terms, eutrophication.

Political Realities

Two forces exist within the Whitewater Lake area. One is the Whitewater Town Board, and the other is the Lake Propertyowners Association. The Town Board represents a greater variety of people and interests than does the Lake Association.

Lack of community participation at local Town Board meetings constituted the basic reason behind the apparent unconcern of Town government regarding conditions on Whitewater Lake. Local government tends to be responsive to those who complain and to their constituencies.

The majority of lake residents are "summer" residents. While they pay property taxes they do not vote. The major interest of their lives focus elsewhere - in another State, primarily Illinois, or in other Wisconsin communities. For example, their children do not attend Whitewater schools, and the breadwinner is not employed within the local area.

Whitewater Lake did not represent a high priority item for Town government. Where personal interest may have existed, no active or consistent community support developed to rally around the individual concern on the part of some Board members.

The telltale sign of local government apathy can be seen in the fact that no funds had ever been allocated directly to the lake, except for what the State decreed as mandatory...safety patrol and navigational devices and markers.

The Lake Association, representing a much narrower interest group, attempted to fill the vacuum left by Town government. In doing so it created an unfortunate polarization between "lake people" and "all others." In responding to the obvious degradation of the lake environment, the Association set up a modest program of informal and extra-legal lake management.

These programs, consisting mainly of partial algae and weed spraying, and educational work through twice yearly meetings, and infrequent mailings, constituted an abortive effort to bring about a better balance within the lake community. At the same time communication channels between local government and property owners functioned poorly and inconsistently. Most importantly, through the Winter months communication appeared to have ground to a halt.

With each passing year the slow deterioration of the lake continued. No one group appeared able to bring about a true change in the balance of power within the community. As a result the area's most valuable asset - Whitewater Lake - remained unmanaged, and open to any intrusion visited upon it by unthinking users of its pleasant environment. The biggest safeguard to property values - Whitewater Lake - went begging for serious and consistent attention. The problem was further complicated by the following set of facts.

Somewhat more than one half of the riparian owners are members of the Lake Assn., and of that group more than one half are Summer residents. Therefore, the Assn. actually voiced the concerns of a politically disenfranchised group.

A Sanitary District

A political stalemate described above is not an uncommon one. It has been resolved in many other communities through the establishment of a third political force - a Sanitary District. The Sanitary District, being more narrowly based than the average Town Board, and having more legal rights than a Lake Assn., offers a way out of a dilemma. In addition, the Sanitary District assumes the responsibility for furthering ecological progress through its devotion to principles of sound management.

In the Whitewater area, the Sanitary District can form a link between the Township and the Lake residents, and relieve the Town Board of difficult decisions which may alienate part of the non-lake residents. A specific example would be tax needs which should not be borne by the total Township in matters which concern primarily those people who have homes on or near the lake.

The Sanitary District can manage a lake for the benefit of all those who use it, according to standards which can rise above the overly personal, sometimes selfish and petty concerns of those who are too close to a situation. When a community elects its Commissioners, the elected people should be sensitive to the cross currents of feelings regarding lake management projects, and can carry on continuous educational programs as part of their function.

The logic of political life seems to dictate the existence of a Sanitary District for the Whitewater Lake area.

Whether eligible voters within whatever district limits are later proposed, decide to recommend a District, will be an indication of the amount of real interest generated during the past year (April, 1971 to April, 1972). A Sanitary District for Whitewater Lake represents a voluntary commitment on the part of lake residents. This community is not yet obliged to legally undertake the establishment of a Sanitary District. That is, the DNR has not mandated the establishment of sanitary controls.

This last point is most important in understanding the following section which deals with community relations. At present, we are still dealing with a completely self initiated and voluntary effort on the part of a relatively small number of active citizens. The community response to such efforts will soon be measured.

Community Relations

The work of the past year has provided unique opportunities to observe the reactions of the community to a tightly focussed action program in the area of ecology. Attitude samplings have been taken at two points during the year, and a large amount of anecdotal material has been collected.

In common with many other areas, the lake community can be characterized as personally unresponsive and passive in terms of individual action. On the other hand, interest can be mobilized through group oriented programs, as indicated by the number of people attending informational and educational events.

There is a paradox here as elsewhere. Individually, we see general apathy, whereas in group settings we find interest and interaction.

On two separate occasions local residents, numbering about 450, were mailed questionnaires inquiring about their degree of optimism regarding long range solutions to water quality problems. Approximately one third of the group of 450 responded. Ninety-five percent of the replies were received from residents living on the lake, and the remainder from those living within the watershed area around the lake.

Local residents are extremely optimistic regarding the future, even though their individual participation must be judged as minimal. Here, too, we see the paradox of individual apathy, versus faith in the future.

On that basis can a community assume that the future will be well taken care of when individual action is minimal? On the basis of what kind of motivation will a community turn out in relatively large numbers for group programs, yet retreat from personal involvement?

When called upon to make voluntary financial contributions to the Ecology Committee, fifty individuals donated a fund of about \$700. Still, very few individuals matched their financial support with the equally important contributions of time and effort.

It can only be concluded that the community is willing to turn responsibility over to those who are active, and who assume positions of leadership. This tendency to renounce personal responsibility is not regarded as a particularly healthy one. The chance one takes is that leadership will be mature, competent, concerned and trustworthy. As long as they are, the community would seem to be in good hands. However, history provides too many examples of the abuse of power when citizens remain apathetic for too long.

During the past year the dissensions which interfered with constructive lake management have been hardly noticeable. We do not know whether they have dissolved on the basis of more information being made available, or whether opposing groups are merely resting - ready to take up arms as soon as concrete proposals are made to lake residents.

What have been the reasons for prior conflict within the Whitewater Lake community?

It must be made clear that whatever motivated earlier disagreements - it could not have been in any way based upon fact, objective evidence, or scientific data. No solid data existed in sufficient quantity to enable anyone to reach valid conclusions about Whitewater Lake.

In other words, previous conflicts among groups of residents had little relationship to the actual condition of Whitewater Lake itself. What then were the motivations and the reasons?

We are no longer talking about ecology. We are into the field of community relations, attitudes, economics, prejudices, grudges and all manner of feelings.

The Janesville Gazette of March 15, 1972 reported on a meeting held at Stevens Point which gave information about three methods used to restore small lakes.....

"Professors G. Fred Lee and Isaac Sanchez of the Dept of Civil and Environmental Engineering said they have conducted a study of what happened to about 1.5 million pounds of copper sulfate added to Lake Monona over the past 50 years. The two said samplings failed to show any concentrations of copper toxic to fish in the Madison lake. Lee said a ban on the chemicals in Madison lakes initiated last year was based on "emotional considerations rather than technical evidence that copper sulfate was harmful to the lake's fisheries."

The following factors appear to have contributed to old conflicts:

1. Natives Versus New Residents...

In its present form Whitewater Lake is essentially man made. A fuller description will be found in the History Section of the Report. Older residents tend to recall the lake with great fondness, and in memory see it as having been much clearer than was actually the case. One finds an understandable feeling of possessiveness and protection expressed toward the lake on the part of "natives".

As more people built homes on the lake, and off the lake shore, bringing more power boats and creating a situation of greater eutrophication through septic system drainage, the "old" lake by comparison began to look cleaner and cleaner in memory. It must be recalled, however,

that the original land filled to create the present lake was already rich in nutrients.

However, with the increase in population, bringing in people who were seen as "different" from the "natives", it was inevitable that water quality deterioration was to become associated with the newer arrivals on the lake. More telling perhaps was the unfortunate linking of new residents with the use of chemicals to control weed and algae growth.

For many individuals the use of chemicals constituted a violation of nature, and an actual danger. This, too, is best appreciated when it is understood. There is in the minds of many, a fear of change and a possible destruction of old traditions, and a once easier way of life. People too readily associate things such as: newness, science, chemical sprays, city people, money, intruders - and when all or part of such traits are put together it is all too easy to see as an enemy anyone who happens to disagree with special point of view.

2. Social and Economic Differences...

The Whitewater area has attracted a wide range of people, representing a cross section of income and educational levels. Theoretically, such a situation should lead to a true democratic process. We find retirees living on fixed incomes, students living on minimum funds, small

and medium size farmers, retail merchants, as well as their employees, University faculty, and other members of the teaching profession, factory workers and foremen, as well as corporate middle and top management.

There are important implications in this analysis of lake residents. Differences in background do account for differences in the way people think, what they accept, and the degree of trust they have for one another. It takes time for any composite community to develop a common language, and to develop ways of working together.

The lack of a trusting and common language heritage is the major impediment to community action. For example, during the period of population growth around the lake - roughly the past decade - local government was controlled by farm and "native" oriented individuals. Whereas, lake residents represented urban oriented people - seeking a more natural, saner, and less competitive environment.

Very few opportunities existed for interaction among residents. Natural meeting places were seldom used by Summer residents, as they were by local year round residents. School activities which often serve as a normal channel of communication, could not operate since the majority of lake home owners were not involved during the school year. University faculty members tended to orient themselves around the City of Whitewater, and around the campus issues.

The lake community therefore, went by default, its destiny resting in the hands of those who - in spite of whatever good will may have been present - could not see their primary responsibility as one which extended toward a transient and invisible population.

A Challenge to Personal Commitment

There is no question that unless people are motivated to seek solutions to problems, there is little which can be expected in the way of successful outcomes. A philosophy of crisis where people become panicked into action need not be the best way to handle problems of ecology.

Too often communities have concentrated on the physical side of an issue, and have neglected the human side. It is true that pollution has been man made, but in most cases we have acted with incomplete knowledge, and had only partial information about the consequences of our actions. Should the developers - "the natives" - around the lake, have foreseen the results of flooding nutrient rich farm lands? Should they have immediately established a Sanitary District? Should lots have been larger than 75'²? Ten years ago there were inadequate County and State zoning ordinances. Today, Whitewater Lake could not be created on the basis that it was twenty-five years ago. Who do you wish to blame?

To fight the old issues is to neglect today's issues. It is estimated that the typical taxpayer in the yet to be established Sanitary District might be taxed \$15 or more for the active management of the lake. The willingness of a resident to pay this amount is the only meaningful measure we have as far as today's issues are concerned. Unfortunately, a community can fractionate itself around questions of method - that is, questions of how to do something, rather than handle the question of doing something rather than nothing.

The inability to solve physical problems can become the substitute for an unwillingness to solve personal and attitude problems. How much easier to argue about whether to spray or not to spray for weeds and algae than to argue about why one person just doesn't trust the ideas of another person - whatever those ideas may be! How much easier to huddle in corners, home and taverns, whispering rumors and questions than to stand up at a public meeting presenting logically thought out statements!

It is naive to assume that cooperation will be achieved merely because a group of people say that the environment may be threatened. There will be cooperation, compromise and reason only if each person in this community feels that the time has come for him - as a free individual - to accept some personal responsibility for the area in which he lives.

W.H.L.

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LAKE STUDY REPORT
 BY
 Willard L. Gross

The following is a summary of the limnological investigations of Whitewater Lake as they relate to management recommendations. The study is not complete with additional sampling planned at ice-out and during the spring turnover. A supplementary report will be presented at a later time.

Present Lake Conditions

Whitewater Lake is a shallow man-made impoundment. Fifty-four per cent of the total lake volume is five feet or less in depth, and 90% is ten feet or less in depth (Table 1). The average lake depth is only 6.2 feet. Other physical data were previously presented in the progress report. The fact that Whitewater Lake is shallow contributes to the problems presently existing on the lake.

Chemical Aspects

Whitewater Lake has alkaline, moderately-hard water typical of Lakes in Southern Wisconsin. It differs from some of the other lakes in the region in its relatively high nutrient content, that is, the amounts of nitrogen and phosphorus. (Table 4.)

Biological Aspects

The nitrogen and phosphorus materials in Whitewater Lake act as fertilizers and increase the biological production, particularly the aquatic plants. The effect is comparable to a gardener fertilizing his garden to get better growth and increased yield. Accompanying this increase in

aquatic plant production are a number of detrimental factors including: changes in the types of plants and animals living in the lake, loss of oxygen in deep waters during summer and winter stratification, and a filling-in of the lake with organic materials resulting in the lake becoming more shallow.

Whitewater Lake possesses few rooted vascular plants (weeds). Only 7.6 acres of rooted vegetation were present in 1971 (Table 2). This amount represents only 1.2% of the total lake surface. Rooted vegetation is not a problem in the lake except where they interfere with shoreline recreational activities. Based upon the spraying history of the lake, rooted vegetation never has been a major problem since the maximum area ever sprayed for nuisance control was 56 acres and the average area sprayed during the 1950-1968 period was only 42.7 acres or 6.7% of the total lake area.

Planktonic algae are the dominant vegetation in Whitewater Lake. The average concentration was 54,000 organisms per liter during the period June-October, 1971 (Table 3). This value is actually a conservative estimate because most of the forms were colonial blue-greens as Microcystis and Anacystis which contain as many as 200 individual cells in a colony. In addition, the concentration of algae represents only those forms large enough to become trapped in a plankton net.

The fact that the algae extended over the entire 637 acres of the lake to a depth of about three feet contrasts sharply with the 7.6 acres of rooted vegetation.

The abundance of planktonic algae is the major problem on Whitewater Lake at this time. This is not a pollution problem as such, but an aesthetic

TABLE 1. Areal Measurements of Whitewater Lake at Various Water Depths.

Contour Interval	Total Area (acres)	Contour Area (acres)	Cumulative Area (acres)	Percentage of Lake Area (Acres)
0 ft. (surface)	662.4	-----	-----	-----
5 ft.	359.9	302.5	359.9	54.3
10 ft.	62.3	297.6	600.1	90.6
15 ft.	40.0	22.3	622.4	94.0
20 ft.	21.2	18.8	641.2	96.8
25 ft.	10.8	10.4	651.6	98.4
30 ft.	5.6	5.2	656.8	99.1
35 ft.	2.0	3.6	660.4	99.7
Below 35 ft.			662.4	100.0

TABLE 2. Extent of rooted aquatic vegetation in Whitewater Lake in June - August 1971.

	<u>June</u>	<u>August</u>
Bass - Round Lakes Basins	2.33 acres	1.41 acres
Whitewater-West Arm Basins	1.62 acres	3.14 acres
South Basin	<u>3.50 acres</u>	<u>3.10 acres</u>
Total	7.45 acres	7.65 acres
Percentage of Lake Area	1.2%	1.2%

Table 3. Average concentrations of net plankton in various areas of Whitewater Lake during the period June - October 1971

<u>Location</u>	<u>Plankton Concentration</u> <u>(Organisms/liter)</u>
Bass L. Basin	43,500
East Arm	45,900
Round L. Basin	39,300
Whitewater L. Basin	66,300
West Arm	62,500
South Basin	70,300
Average plankton concentration entire Lake 54,600	

problem. Few aquatic enthusiasts enjoy a green film on their bodies, in their hair, on their boats, or along their shorelines. The abundant algae is indicative of an unhealthy lake with an imbalance in its ecology. Most people are aware of the problem. Of greater importance are the factors responsible for enrichment and what can be done about it.

Factors Responsible for Whitewater Lake Problems

Our study of Whitewater Lake indicates that the present condition of the lake is not a change due to accelerated introduction of nutrients from recreational use, increased development, or a specific pollution source. On the contrary, it appears that these conditions have existed for some time and largely resulted from creation of the lake.

Over the past ten years, a period of considerable land development and increased recreational use of the lake, the overall water quality has not changed to any great extent (Table 4). The concentrations of certain materials normally associated with pollution from human activities such as chloride, and phosphorus have changed only slightly during this period. However, the data provide an important warning of probable future pollution problems. Both the ammonia nitrogen and inorganic nitrogen demonstrated significant increases in this ten year period. Nitrogen forms are usually the first to reflect a change in water quality since they are readily soluble in water, easily leached from soils and, therefore, readily transported into lakes in groundwater, runoff, and other sources. It is evident that Whitewater Lake will have additional problems in the future.

TABLE 7. Average concentrations of nitrogen and phosphate nutrients at various sediment depths from Whitewater Lake. The data represent a composite of four to six cores.

Core Depth centimeters	Percentage Phosphate*	Percentage Nitrogen* (as $\text{NH}_3\text{-N}$)
0.0-2.0 cm.	0.1301	1.204
2.0-4.0 cm.	0.1202	1.050
4.0-6.0	0.1006	1.051
6.0-8.0	0.1065	1.285
8.0-10.0	0.1367	1.2630
10.0-12.0	0.1202	1.180
12.0-14.0	0.1520	1.068
14.0-16.0	0.1363	1.350
16.0-18.0	0.1245	1.530
18.0-20.0	0.0843	1.063
20.0-22.0	0.0881	0.898
22.0-24.0	0.1124	0.905
24.0-26.0	0.0984	1.136
26.0-28.0	0.1049	1.297
28.0-30.0	0.1042	1.226
30.0-32.0	0.0909	1.293
32.0-34.0	0.0903	1.432
34.0-36.0	0.0953	0.960
36.0-38.0	0.0534	0.753

TABLE 4. Comparison of Whitewater Lake water chemistry in 1971 with data from the Wisconsin Department of Natural Resources collected in 1960 and 1968.

Parameter	Date			
	5-13-60 SURFACE	10-29-68 SURFACE	6-8-71 SURFACE	10-2-71 SURFACE
pH	8.0	8.4	8.5	8.15
Total Alkalinity	180	178	176	176
Dissolved Phosphate	0.06	0.03	0.017	0.088
Total Phosphate	0.34	0.13	1.269	0.276
Ammonia-Nitrogen	0.10	0.18	1.38	0.77
Nitrite-Nitrogen	---	0.009	0.009	0.005
Nitrate-Nitrogen	0.20	0.08	0.12	0.11
Inorganic-Nitrogen	---	0.34	0.75	1.32
Chloride	2.7	---	3.9	3.1
Sulfate	4.0	---	12.8	23.3
Calcium	30.0	---	27.8	39.6
Iron	0.12	---	0.17	0.05
Hardness	---	200	182	205

Whitewater Lake's history of aquatic plant nuisance control efforts indicate that the problem has existed for some time. The fact that the lake has been chemically treated for algae and/or rooted vascular vegetation in 17 years of the 20 year period 1950 to 1970 demonstrates that the lake had sufficient nutrients to support abundant vegetation since the lake was created (Table 5.)

Previous measurements of the light penetration or limit of visibility in the lake also indicate that Whitewater Lake has possessed considerable plankton populations for a long number of years (Table 6). The maximum visibility ever recorded was 2.8 feet in the summer of 1959. In contrast, the Federal Committee on Water Quality Criteria recommends a minimum visibility of four feet for all recreational waters, a level which Whitewater Lake has rarely, if ever attained during the summer. The lake possesses better light penetration at other seasons of the year as the limit of visibility beneath the ice this winter ranged between 3 and 7 feet.

Studies of the nitrogen and phosphate content of the lake sediments indicate that the nutrients responsible for the "richness" of Whitewater Lake were derived from a leaching of the soils that were flooded when the lake was first formed. The average concentration of nitrogen (as ammonia-nitrogen) and phosphates at different depths of lake sediments is shown in Table 7. The top 18 cm (7 inches) represent sediments which have accrued since the lake was formed and the remaining core, 18 to 38 cm (7 to 14 inches), represents soil of the region before the lake was built. The top 18 cm possess slightly higher percentages of phosphate and nitrogen than the deeper samples, but, in general, little

variation exists throughout the core. If the nutrients in the lake were initially derived from sources outside the lake, one would expect much higher concentrations of nutrients in the top 18 cm. The low percentages of nitrogen and phosphate between 18 and 22 cm (7 and 8½ inches) may be indicative of nutrient loss from the sediments to the water when the land was flooded. Low concentrations of nutrients at this level were most noticeable in individual cores from regions not flooded before the dam was closed.

To summarize briefly, Whitewater Lake is a "rich" lake in that it contains substantial amounts of nitrogen and phosphorus nutrients. These nutrients, in turn, have provided a high productivity in the lake, especially in the form of planktonic algae. The problem has persisted throughout the lake's existence and, in large measure is derived from soils which were flooded when the lake was created.

In order to evaluate Whitewater Lake's condition, it was compared with six other lakes in Southern Wisconsin and its eutrophic rank determined on the basis of seven parameters defined by Lueschow, *et al.* (1970) in a study of Wisconsin Lakes. (Table 8). In the ranking, a healthy condition was assigned a low rank and a poor condition a high rank so that a low total represents a clean lake and a high total a very rich lake. Note that Whitewater Lake ranks sixth among the seven lakes compared. This rank is especially significant when one considers that Whitewater Lake is only 24 years old, whereas, the other lakes are much older and have had a much longer time period to reach their condition.

TABLE 8. Comparison of the trophic rank of Whitewater Lake with other selected Southern Wisconsin lakes on the basis of seven selected measurements.

Rank of a particular lake for a selected parameter								
Lake	Oxygen in Hypolimnion	Plankton Concentration	Organic Nitrogen	Inorganic Nitrogen	Dissolved Phosphate	Total Phosphate	Transparency	Cumulative Rank
Lake Geneva	1	1	1	1	1	1	1	7.0
Middle Lake	1.1	2	3	2	3	3.5	2.5	16.6
Oconomowoc Lake	1.1	3	2	3	7	5	3	24.1
Pewaukee Lake	1.1	6	6	4	2	2	6	27.6
Lake Mendota	1.1	4	4	6	5	6	4	30.1
Whitewater Lake	1.1	5	5	7	4	3.5	7	32.6
Delavan Lake	1.1	7	7	5	6	7	5	38.1

Data for lakes other than Whitewater from Leueschow, et al., 1970.

TABLE 5. A history of the Chemical treatment of Whitewater Lake for aquatic vegetation nuisance control.

Year	Copper Sulfate		Sodium Asenite	
	Acres Treated	#CuSO ₄	Acres Treated	#As ₂ O ₃
1968	200	1800(2)	22	44 gal aquathol
1967	108	1700(3)	--	----
1966	111	1200	--	----
1965	185	1000(2)	40	4860
1964	111	1200(2)	41	4860
1963	110	1200(2)	41	5580
1962	110	600	40	4740
1961	167	900	50	6480
1960	---	----	56	5040
1959	370	2000	37.5	6300
1958	---	----	45	4860
----	---	----	--	----
1955	370	2000	--	----
----	---	----	--	----
1953	---	----	25	2800
----	---	----	--	----
1951	---	----	45	4800
1950	---	----	50	5600
	Average Acres Treated	Total #CuSO ₄ 13,600	Average Acres Treated	Total #As ₂ O ₃ 55,920 44 gal. aquathol
	184.2		42.7	

TABLE 6. Secchi disc readings of the light penetration (limit of visibility) in Whitewater Lake in different years.

Year	Secchi Disc Reading (feet)
1951*	2.3
1959*	2.8
1968*	2.5
1971	1.3

*Wisc. Dept. of Natural Resources Whitewater Lake Report. 1968.

RECOMMENDATIONS

Sanitary District

The solution to Whitewater Lake's problems is intensive lake management. Of primary importance is the establishment of a regulating body to evaluate lake problems, consider corrective measures, establish priorities and make objective decisions. Because of the diverse interests that exist about Whitewater Lake in terms of recreational interests and political factions, I feel that this can best be accomplished through establishing a sanitary district. In addition, lake management requires authority and finances to apply corrective and preventive measures. These factors are included in the sanitary district concept.

A sanitary district for the Whitewater Lake area must be considered carefully. A poorly planned district, such as one that is too small, could be detrimental to the long-range interests of the lake. Areas of the watershed which may have a future impact upon the lake as a result of land development and land management practices should be included to avoid problems such as nutrient pollution of the groundwater. The establishment of the district must be consistent with the goal of long-range protection of the lake and not simply for the sake of organizing a governing board.

Management Considerations

A variety of procedures exist for attempting to halt and/or reverse the enrichment (eutrophication) of our lakes. Presently, much research seeking new and better ways of abating this problem is underway. However, no short-term, "miracle" type solutions exist. In addition, it must be realized that all methods are not applicable to all lakes. Each lake has its own individual characteristics and each technique must be evaluated in terms of its effectiveness in resolving the problems on that particular lake.

The solution to nutrient enrichment problems center about two basic objectives: one is to halt the introduction of nutrients into the lake, the other is to remove nutrients which have accrued within the lake. All efforts to resolve Whitewater Lake's problems should encompass these objectives.

As indicated previously, Whitewater Lake has a problem with excess algae production because of its "enriched" water. Presently, methods for controlling algae are few and the only economic technique is chemical spraying. While spraying to kill algae provides short-term benefits in alleviating an aesthetic problem and increasing the recreational use of the water body, it is not a solution to the enrichment problem. It is comparable to a physician giving a patient aspirin for pain from a bleeding ulcer. It treats the symptoms, but not the illness.

1. Increase the vascular vegetation of the lake.

The algal problem in Whitewater Lake can be controlled best by promoting the growth of rooted submerged plants. The rooted vegetation and algae compete with one another for the nutrients present in the water. If the nutrients can be incorporated into the rooted vegetation, it should decrease the extent and intensity of the algae growth.

Promoting the growth of vascular vegetation appears to be trading one problem (algae) for another problem (weeds). In part this is true, but the goal of this management procedure is to achieve a healthy balance and then maintain that balance. Rooted submerged plants have the advantage in that they can be harvested and removed from the lake, consistent with one of the basic objectives cited previously. The nutrient content of vascular plants varies with the plant species, but averages 2.25% nitrogen and 0.3% phosphorus on a dry weight basis. Therefore, approximately 45 pounds of nitrogen and 6 pounds of phosphorus could be removed with each ton of dry vascular plants removed from the lake. As yet, no satisfactory technique for harvesting algae has been devised.

Approximately 20 to 30% of the lake area should possess vascular vegetation, preferably, in areas where they interfere least with the recreational use of the lake. Where the plants do interfere along the shorelines, they should be removed manually or mechanically, but not chemically. The use of herbicides on rooted vegetation is another example of treating the symptoms instead of the problem itself. Past spraying to control aquatic weeds has been detrimental to the

lake because it has eliminated competition for the algae and has permitted the algae to flourish.

To promote the reestablishment of rooted vascular vegetation in the lake, it is recommended that the lake be chemically sprayed to control algae in 1972. The intent of spraying is to reverse past trends and give the rooted plants an advantage over the algae. Presently, the algae inhibit submerged plant growth in most areas of the lake by blocking-out the sunlight and utilizing available nutrients. This past summer, rooted plants were absent from areas deeper than four feet because below this depth insufficient light was present for photosynthesis. Spraying the algae should increase the light penetration and availability of nutrients to permit aquatic plant growth at greater depths.

Chemical control of algae should involve the entire lake and not just the shorelines (consistent with state regulations on spraying). Marginal spraying is inadequate because the algae from unsprayed areas are rapidly transported back along the shorelines within a short time by the wind. Also, the intent of spraying is to promote plant growth in off-shore areas where they will interfere less with most recreational activities.

The merits of chemical control of algae should be evaluated on an annual basis. If the spraying does not benefit rooted vegetation growth, it should be avoided.

The use of copper sulfate for chemical control of the algae should not biologically harm the lake, if properly applied. Whitewater Lake is very alkaline so that the copper rapidly precipitates

to the bottom and is eventually removed from the lake by a covering of sediment as the lake bottom fills. Crude copper measurements, taken beneath the ice this winter, showed 0.026 ppm in the water and 0.07 ppm in the sediments. Copper was detected only in water near the bottom. These values indicate that recirculation of copper is minimal and possess no threat to the plant or animal life of the lake,

Other techniques such as planting vegetation or cultivating vegetation beds should be encouraged at this time as the lake possesses only a small quantity of plants. Submerged vascular plants are the more desirable forms to grow because they tend to interfere least with most recreational activities. In addition, plants which do not extensively root in the bottom are better competitors for nutrients than rooted forms. However, these forms may collect upon the surface or shorelines and be more troublesome. Three plant forms which do not root extensively are Chara (actually an algae), Ceratophyllum, and Elodea. Other submerged forms which root in the bottom are Vallisneria, Potamogeton Najas, and Utricularia.

2. Provide a flushing action for the lake.

Whitewater Lake has never filled to the extent initially anticipated by the developers of the dam. In 1971, a year which most residents feel was a year of higher than normal lake level, the lake surface was still 42 inches below the level of the dam spillway. At present, the lake is "closed" without an outlet. Materials transported into the lake remain in the lake. The only source of removal is through burial in the bottom by overlying sediments.

A flushing action would facilitate removal of some of the nutrients and organic materials dissolved or suspended in the water. A flushing action is only a partial solution as the amounts of nutrients and organic materials lost would be minor, however, it is consistent with the objective of nutrient removal and would contribute to improving the lake.

Providing a flushing action for the lake does not necessarily mean lowering the lake level. It implies lowering the dam spillway to the level of the lake. At just what level the surface of the lake should be established requires further investigation. Staffguges should be placed at various sites in the lake to monitor lake level. These data can provide information for determining a lake level which will protect resident shorelines and still provide for a flushing action in the lake.

In conjunction with a flushing action, methods of increasing a flow of "clean" water, low in nutrients, into the lake should be considered. The concept of nutrient dilution has not been studied extensively, but has merit where the water supply is plentiful. No readily available sources of water were noted during the study, but local residents have commented that springs in the lake have declined in flow over past years. If this is true, and the cause is not due to some irreparable factor such as a lowered water table, corrective action such as rejuvenation could be attempted. The possibility of sinking wells to provide clean water could also be considered. However, a hydrologist should be consulted to evaluate the feasibility of these measures and their impact upon local water supplies.

The springs in the Walworth County Park on the south end of the lake represent a major water source for Whitewater Lake and should be investigated.

However, I recommend further study of their seasonal water quality as several of the springs exhibited levels of nitrogen (0.73 ppm) and chlorides (8.3 ppm) substantially higher than found in the lake, 0.148 and 3.4 ppm, respectively.

If a flushing action could be combined with an increased flow of "clean" water into the lake, Whitewater Lake would benefit considerably.

3. Monitoring programs.

A monitoring program is necessary for Whitewater Lake for a number of reasons. For the management procedures recommended in this report to be effective, the lake should be continuously monitored to insure that the lake has a balanced ecology which provides protection to the lake but assures maximum recreational benefits to the people. In addition, despite the lake's present condition, it is still very young and will be confronted with additional problems as land development and recreational use of the lake expands. Two future problems that I foresee are septic tank seepage and nutrient pollution of the ground water by septic systems. It is necessary to monitor the lake's water quality to detect problems early so that corrective measures may be taken before the lake is seriously damaged. Since Whitewater Lake already has problems, it is vital that additional problems be detected early. As indicated previously, corrective action for excessive nutrients and accompanying nuisance problems require long-term corrective procedures.

Factors which should be a part of the monitoring program include:

1. Chemical analysis of the water with emphasis on the nutrient and organic content of the water. A seasonal survey would be most beneficial, but a study should be conducted at least once annually.
2. Periodic (every 2 or 3 years) sanitary surveys to ensure the proper function of septic systems and minimize their contribution to the lake and groundwater.
3. Periodic surveys of the plant and animal populations of the lake and their condition. This information is useful for evaluating the lake's ecological condition and to indicate additional management problems. At present, two problems merit consideration. The reason for the apparent decline in fishing success and secondly, the influence of the carp population upon present lake conditions.

A monitoring program as recommended may appear to involve considerable expense. However, it could easily be accomplished through a sanitary district or similar regulating body and be conducted by professionals (private or state personnel) lake residents, or a combination of these.

Other Management Procedures Considered

Several other methods of managing the productivity problem and reducing the nutrient content of Whitewater Lake were considered. However, they are impractical for the lake at this time for a variety of reasons. The primary alternative procedures considered were destratification,

chemical precipitation, dredging, and bottom sediment isolation.

Destratification is a method where the entire water body is kept in circulation during normal stratification periods by either mechanical aeration or pumping of hypolimnic water to the surface. The principle of the method is to keep oxygen present in all parts of a lake and prevent the release and recirculation of nutrients that takes place in stagnant areas devoid of oxygen. The technique is not applicable to Whitewater Lake because the lake is very shallow and only 7% of the lake volume becomes devoid of oxygen in the summer.

Chemical precipitation to remove nutrients is a relatively new approach derived from a common practice in water and waste-water treatment processes. The principle of the method involves nutrient inactivation by complexing with some chemical (e.g. alum) added to the water and precipitation to the bottom where the nutrients are removed from the lake by a covering of sediments. The method is primarily for the removal of excess soluble phosphate. The technique was applied to a natural lake for the first time in 1970 on a 22-acre lake in Central Wisconsin (Horseshoe Lake). The technique was very efficient during the summer of application, but the long-term benefits of the procedure are unknown. At present, the method is still in the experimental stage and relatively expensive. I believe it would have limited application to Whitewater Lake because of the lake's shallow nature.

Dredging of lake bottoms has been widely used in rehabilitation of lakes. The method is most beneficial in very shallow lakes which have silted-in to the point that recreational activities are seriously curtailed. I do not feel the method would be effective in Whitewater Lake. Although dredging tends to remove nutrients accrued in the bottom sediments, I do not believe it would decrease the nutrient content of the water. As shown in our sediment cores, the original soils of the area contain substantial amounts of nitrogen and phosphorus. If dredging did not include this material, these nutrients could again leech into the water and provide for considerable vegetation growth.

Dredging could be detrimental to the lake by destroying the bottom seal and cause a lowering of the lake level. While monitoring the Whitewater Creek discharge below the lake between 1948 and 1954, the U. S. Geologic Survey noted that considerable seepage may exist from Whitewater Lake. In addition, a recent geological survey of the Whitewater region (Byrnes, 1970) indicated that the lake surface may be some 17 feet above the ground water level.

Other reasons for not considering dredging of Whitewater Lake includes the fact that few, if any, suitable spoil areas exist about lake so that dredged materials would probably have to be transported by truck and become an extremely expensive operation. Lastly, I have a personal bias against dredging because of the upset to a lake's ecology caused by increased turbidity and removal of bottom dwelling organisms during the operation.

The technique of bottom sediment isolation involves depositing a layer of sand or other material atop the bottom sediments to prevent

recirculation of nutrients within a lake. In some instances, consideration is given to applying a plastic sheeting or polymer layer on the bottom before adding the sand or gravel. As yet, this method is very much in the experimental stage and has only been attempted on a limited scale in small ponds a few acres in size. Its application to a lake the size of Whitewater is doubtful.

This technique may have limited application to very small areas along the shoreline where property owners experience limited recreational use of the area because of a mucky/silty bottom or extensive vegetation growth. However, most shoreline alterations require county approval and individuals should check with the county zoning office before initiating any shoreline alterations.

It is possible that at some future time one or more of the above management methods may be applicable to Whitewater Lake, but for the near future, I feel that promoting rooted vegetation growth and harvesting the vegetation to remove accrued nutrients is the most economic and environmentally-oriented approach to follow.

Future Outlook

Since rapid, "miracle" solutions do not exist, the recommendations cited in this report are long-term management procedures. As a consequence, lake residents will have to wait a number of years (3-5) for the vascular plants to become established and exert an influence. When this happens, it is hoped that Whitewater Lake will possess a transparency of 3 to 5 feet during

the summer and have plankton blooms limited to spring and fall rather than throughout the summer.

Once the submerged vegetation is established, large scale harvesting should be considered. However, removal of vegetation in areas where it interferes with recreational activities may be undertaken at any time.

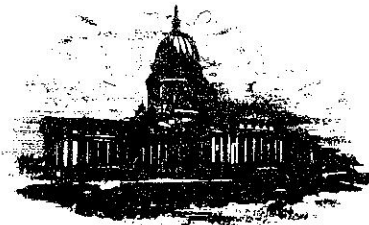
The removal of nutrients from the lake will seem slow. Essentially, all nutrients never will be eliminated from the water and Whitewater Lake will always have abundant nutrients. However, with proper management, a balance between input and removal of the nutrients can be achieved and the deterioration of the lake halted.

W.G.

SENATOR JAMES D. SWAN

Route 2
Elkhorn, Wisconsin 53121
(414) 728-2259

Room 136, South
State Capitol
Madison, Wisconsin
(608) 266-3197



WISCONSIN LEGISLATURE
SENATE CHAMBER
MADISON
53702

15th District

MEMBER:

*Joint Committee on Finance,
(Vice Chairman)
State Bond Board
Governor's Task Force on
Environmental Protection
Council for Economic Development*

36.

March 8, 1972

Ecology Committee of
Whitewater Lake
P. O. Box 84
Whitewater, Wisconsin 53190

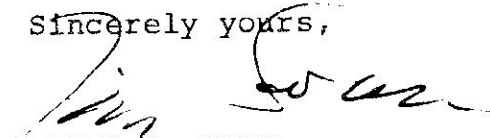
Dear Committee and Chairman Dr. Lundin:

I noted with pleasure the initiation of community effort of self-help by the Lake community and the constantly improving relationships of the Lake community with the township in matters that concern Whitewater Lake and its surroundings. Where this type of constructive cooperation has been undertaken, all property owners tend to benefit and, at the same time, benefits the community itself. The community's long-term potentials for beauty, recreation and industry including agriculture are promoted.

Similar efforts of cooperation elsewhere have promoted and preserved the interest of the entire community. Some of these communities have found it advantageous to develop a sanitary district. Such a district, if freely and openly formed with cooperation of the township and lake property owners, can help preserve not only the beauties and values of the community but achieve economies and orderly development which would be otherwise difficult.

With best wishes for your continued success,

Sincerely yours,


JAMES D. SWAN

JDS:ak



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

11611 West North Avenue
Milwaukee, Wisconsin 53226

L. P. Voigt
Secretary

March 3, 1972

IN REPLY REFER TO: _____

Dr. William H. Lundin, Chairman
Ecology Committee of Whitewater Lake
P. O. Box 84
Whitewater, Wisconsin 53190

Dear Mr. Lundin,

I am pleased to hear that the panel discussion of February 20th met with favorable response.

The panel's topic was the future of Whitewater Lake. If the future of a lake can be measured by the amount of interest and concern for it, then Whitewater Lake indeed has a bright future.

The panel also stressed the unification of interest to achieve desired goals. In my opinion, perhaps the best method of unification is through the formation of a Sanitary District. A good Sanitary District can be a very effective vehicle to carry out lake management and to slow down the lake eutrophication process.

I wish you success in the future.

Very truly yours,

Terry A. Noel
District Biologist

TAM/pn

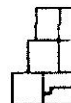
SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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March 13, 1972

Dr. William H. Lundin
Chairman
Ecology Committee of Whitewater Lake
P. O. Box 84
Whitewater, Wisconsin 53190

Dear Dr. Lundin:

Pursuant to your request to comment about needed Whitewater Lake water quality management programs to prevent further eutrophication of the lake, we have the following general statements to make in this regard.

Degradation of lake water quality has been generally accelerated in recent years in the lakes of Southeastern Wisconsin. Eutrophication--the natural aging process of lakes--is caused by a complex series of actions and reactions between the lake itself, additives to the lake, and the aquatic life in the lake. Although the process is not well understood, sunlight; basin hydrology; and the physical, chemical, and biological characteristics of the lake all affect the rate of eutrophication, as does land use and management in the tributary drainage basin. The SEWRPC has considered a number of different methods to retard this action by limiting the input of nutrients and other pollutants going into a lake by controlling certain kinds of man's activities within the watershed tributary to the lake.

Some of the kinds of methods which we have reviewed has been the control of agricultural runoff from both the spreading of manure on agricultural lands as well as erosion control of agricultural lands tributary to the lake. We have actually recommended the use of bench terraces with other appropriate land conservation management practices. We have also investigated the possibilities of weed harvesting, chemical algae control, lake water mixing or aeration, dredging, water replacement or filtration, lake water nutrient removal, and the necessary corrective action to abate pollution from either improperly located or malfunctioning private on-site sewage disposal systems.

Mr. William H. Lundin
Page 2
March 13, 1972

It is apparent from reviewing the kind of activities or programs needed to preserve or enhance lake water quality that areawide and community action programs are absolutely necessary. For this reason the SEWRPC has consistently recommended the formation of sanitary districts pursuant to Section 60.301 and 30.315 of the Wisconsin Statutes, to serve existing urban development around the many rurally located lakes within the Region. If a lake community is not presently located within an incorporated area, it seems a sanitary district is the only vehicle through which lake water quality management programs can be implemented effectively and equitably.

We thank you for giving us the opportunity to participate in your lake community water management education program, and will be glad to assist you in any way that we can in your continuing efforts to maintain a high standard of water quality in Whitewater Lake.

Sincerely,



William D. McElwee, P. E.
Chief Environmental Design Planner

WDM/cl

Walmorth County



40.

JAMES A. JOHNSON
Administrator

RONALD C. NEUMEISTER
Deputy

E. P. WANTSCHIK
Assistant Deputy

ZONING OFFICE
Room 115

TELEPHONE:
723-4900
Ext. 220

Elkhorn, Wisconsin

March 10, 1972

Dr. William Lundin, Chairman
Ecology Committee of Whitewater Lake
Post Office Box 84
Whitewater, Wisconsin 53190

Dear Dr. Lundin:

I enjoyed your meeting the other day very much. It is obvious that your committee has laid the proper groundwork for a management program of the Whitewater Lake watershed.

In general terms, land use planning can be thought of as the following process:

1. Setting of goals and objectives.
2. Compilation of data base.
3. Synthesis of data.
4. Analysis of alternative courses of action.
5. Selection of the best plan. (That best meets overall objectives of majority, yet also considering minority interests.
6. Implementation of plan -- through programs, ordinances, education etc.

In regards to water qualities and management, it is apparent that you are well along with steps 1-4. You have made an especially effective effort in informing and involving the local citizenry in all steps of the process.

I think you are farther along in lake management than with land management plans of adjacent lands, and this is where we can provide a major input. Because water quality is so directly related to land use in the watershed, long range water qualities will be greatly influenced by this phase of the program. Our existing shoreland zoning, subdivision regulations and sanitary code, and our proposed new comprehensive zoning ordinance, along with the resource data supporting these regulations, will provide an excellent base for proper land usage in the watershed. We hope to work with your committee and the Town Board in detailing these land use plans in the near future.

Dr. William Lundin, Chairman

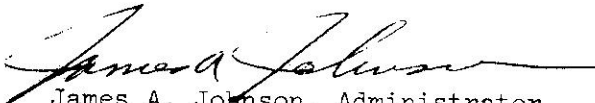
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March 10, 1972

Referring back to our planning process, the plan section and especially the implementation stage need a legal vehicle and administrative machinery to carry out the plans. A town sanitary district, in my opinion, provides both the necessary legal authority and effective administration, and is thus the best method of accomplishing your goals.

We are planning to contact you as soon as our new zoning ordinance draft is available so that we can work together on the land management program. We will also assist in the lake management program in any way that we can help. Based on your background work and the management recommendations to date, it looks like an excellent overall program -- one we would like to duplicate for other lakes in the County.

Very truly yours,



James A. Johnson, Administrator
of Planning, Zoning & Sanitation

JAJ:cm



GREATER WHITEWATER LAKE PROPERTY OWNER'S ASSN.

42.

March 20, 1972

Dr. William H. Lundin, Chairman
Ecology Committee of Whitewater Lake
Route 3
Whitewater, Wisconsin 53190

Dear Dr. Lundin:

In co-sponsoring the Ecology Committee with the Whitewater Town Board, it was the hope of the Whitewater Lake Association that the growing problems of lake management would be studied in depth and that a workable plan for coping with them would emerge. We await with keen interest the Committee's Final Report and have every expectation of continuing our policy of full cooperation with the Town Board in the implementation of the Committee's recommendations for the benefit of the entire Township as well as lake property owners.

We support without reservation the recommendation that a Sanitary District be organized to handle lake management problems. Such a legally constituted organization will have the capability of maintaining and improving the quality of the lake and its environment and in so doing will achieve what the Lake Association has sought with only limited success to do on a volunteer and voluntary basis. Of at least equal importance, property values in the vicinity of the lake will be maintained. This is not only of interest to the individual lake property owner, but to every real estate taxpayer in the Township as the lake property will continue to be the most important single source of Township tax revenue.

The Association is ready to undertake the job of implementing this recommendation of the Ecology Committee. With the continuing cooperation of the Town Board, the new Sanitary District should be in operation for the 1973 season. Meanwhile, the Committee's recommendations will provide guidance for lake management measures to be taken by the Town Board with the cooperation of the Association.

The Association is very appreciative of the time and energy expended by the Chairman and members of the Committee in carrying out its assigned task.

Sincerely yours,

GREATER WHITEWATER LAKE
PROPERTY OWNER'S ASSOCIATION

By Howard D. Darbo
President

HHD/vt

THE WHITEWATER REGISTER

ONE HUNDRED FIFTEENTH YEAR, NO. 11

WHITEWATER, WISCONSIN, THURSDAY, JUNE 3, 1971

TWO SECTIONS — PLUS FUN AND PEACH — 10¢ PER CO

Whitewater Lake Ecology Committee Head Says 'We're Sick If Lake Remains Sick'

The Greater Whitewater Lake Property Owners Association drew a record crowd of more than 100 persons last Saturday, May 29, including several "new faces."

Welcome guests included Town Board Chairman Werner Christian, who had a meaningful dialogue with the usually unseen taxpayers; Alice Warner, Town Clerk, Frank Gerke and Don Striggow, who are representatives of the Ecology Committee of Whitewater Lake; Dr. Willard Gross, biologist from Whitewater State University and Mrs. M. Hamilton, immediate past mayor of Wheaton, Illinois.

President Darbo welcomed the membership and reported that community relations were improving.

Status of the weed and algae program was reported to be in the hands of the State Department of Natural Resources, and no word has been received from this state agency regarding a hearing on

the association's permit.

Arnie Mamath appealed to the membership to recruit neighbors as only 150 families are members.

Dr. William Lundin, as the chairman of the Ecology committee of Whitewater Lake, gave the group a down-to-earth feeling of a very complex

(Continued on page 8)

Ecology

(Continued from page 1)

situation. He said "that our lake is dying as are many others. But man in his selfish ways is amplifying this process. We are all polluters, because we have not learned to live together. For many years this lake has been the symbol of a struggle between the segments of the community. Sure, everyone has his own problems, sees things his own way and has the 'revealed' word.

The concern now drawing people together is the pollution on the lake and maybe we're fortunate that there is pollution. Now all parts of the community must begin working together or there will soon be a stinking sewer in front of us all. The results of pollution are depressed property values, shrinking equity, stunted fish and neighbors who become suspicious of one another, for there will be no where else to deposit the end result of the polluted feelings in our own minds. If our lake remains sick it will no longer be an act of nature — it will be the sickness in ourselves which you will see and smell out there."

Dr. Gross, biologist from Whitewater State University, then presented the proposal for the long range feasibility study which has already been approved by the Whitewater and Richmond Town Boards.

Diane Mamath presented the results of the questionnaire.

Clerk Alice Warner reported that Open Book Day would be July 5 and Board of Review Day would be one week later.

The new water skiing, snowmobile and dog ordinances were discussed.

Coffee and cookies were served.

THE WHITEWATER REGISTER

ONE HUNDRED FIFTEENTH YEAR, NO. 24

WHITEWATER WISCONSIN, THURSDAY, SEPTEMBER 2, 1971

ONE SECTION - PLUS FUN AND PEACH - 10c PER COPY

Congressman Aspin Rates Whitewater Town As Best Organized Community In First District

Keynote speaker Congressman Les Aspin summed up his impressions of the Ecology Conference last Saturday night, August 28, at the Whitewater Town Hall, with "this is the best organized, most enthusiastic crowd I have seen in my district. Chances are most favorable for accomplishing solutions to your problems when people can work together. This is the one ingredient that leads to success in any ecology program."

Howard Darbo, panelist and president of the Lake Association, felt that much had been accomplished in a short time because of the leadership of Dr. William Lundin, chairman of the Ecology committee.

A large crowd of 160 applauded with enthusiasm and pride as each panelist spoke of his impressions. Dr. Lundin, moderator, introduced each panelist and explained how they came to be chosen to represent groups and currents of thought.

Jan Gnatzig, valedictorian, Whitewater High School Class of 1971, spoke of the "fire and spirit" that the youths of the community have to accomplish projects. She explained that young people care because they use the lake recreationally and water quality is important.

Ruth Ffoulkes, head of Elementary Special Education,

Whitewater School District, explained the need for more information to be given to elementary schools. She feels that young children are especially ready to learn to live properly in our environment and to help make it fit for them as adults.

Howard Darbo gave a summary of the Lake Association meeting and reported they had voted unanimously to match funds of \$1,500 with the Township for the study on the lake.

Wilfred Brotz spoke encouragingly from his experience as farmer and Town Board Chairman of Richmond, which has property on Whitewater Lake. He said it pleased him to see a community working together so well.

"This is certainly the way to get things done and protect the valuable asset you have," he pointed out.

Dr. Willard Gross, biologist, Whitewater State University, stressed self-interest as an important motivation. He feels that once there is an awareness of a problem of shrinking equity, loss of water quality and lack of respect for our environment, then property owners and visitors will begin to work harder on their own consciences.

Les Aspin, Congressman, First District, spoke of the

hurdles to be crossed when applying for federal funds and how a professional proposal writer may have to be employed. He felt the community to be at the threshold of success with our head start.

Aspin spoke of priorities in issuing federal funds, and how many lakes are very needy, some not so needy and an enormous group that just want funds. There is hardly enough money for the very needy group.

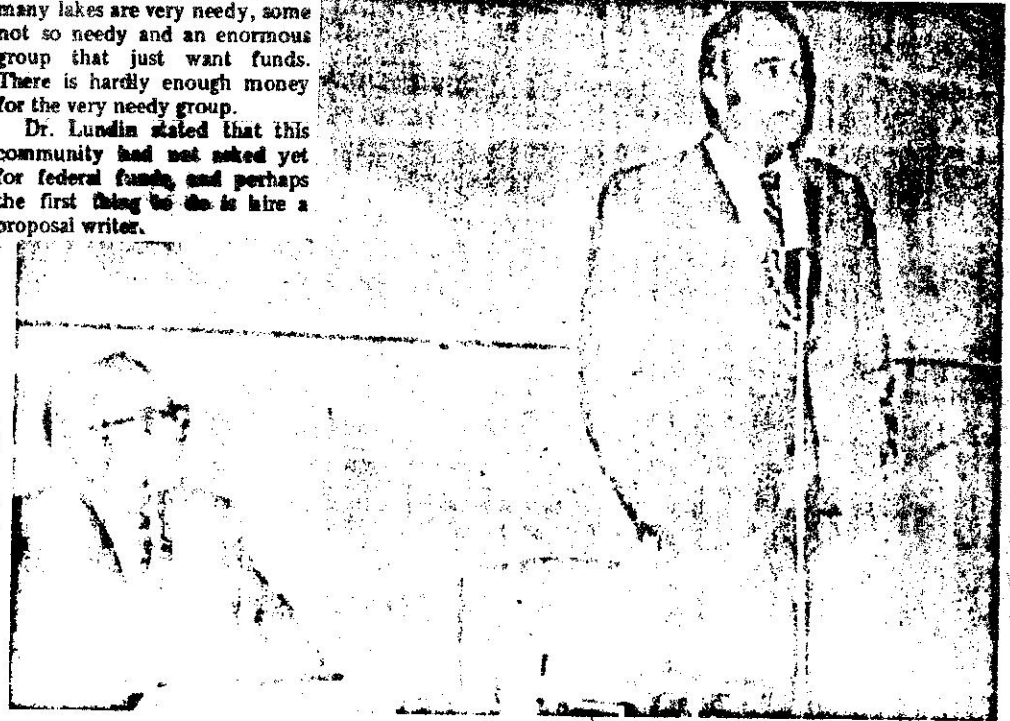
Dr. Lundin stated that this community had not asked yet for federal funds, and perhaps the first thing to do is hire a proposal writer.

A most social hour followed with many varieties of cookies and coffee.

The Ecology Committee of Whitewater Lake is trying to establish an Ecology Library, a sample of which was displayed at the social hour, to share

publications gathered by the committee on a library-loan basis with the community.

Anyone interested in these materials, or having some idea where such materials could be established, should contact Mrs. Kathleen Lundin, phone 883-2229.



WSU DR. WILLARD GROSS, SPEAKER CONGRESSMAN LES ASPIN, AT ECOLOGY CONFERENCE

April 13, 1971

WHITEWATER TOWNSHIP - ANNUAL MEETING

RESOLUTION PRESENTED BY DR. WM. LUNDIN

VOTE: Unanimous Ayes

I move the adoption of the following resolution....

To obtain the best scientific and professional advice regarding a long range solution to the problems of pollution on Whitewater Lake, it is proposed that a joint venture be undertaken between Whitewater Township and the Greater Whitewater Lake Propertyowners Assn. It is recognized that piecemeal attempts are in the long run more costly, and tend to divide residents whose aims are basically the same - to clean up and protect the Lake. To obtain equitable representation for all residents, and to insure professional advice during the planning stage, it is recommended that a committee of five be established - two members from the Lake Association, two members appointed by the Town Board, and one member selected on the basis of professional qualifications. The task of this committee will be to explore, and recommend a long range solution to Lake pollution. The committee will be funded jointly by the Township and the Lake Association - to pay consultants, obtain publications, visit other lakes, travel expenses to Madison or other cities, preparation of reports and supporting documents, and other usual expenses involved in obtaining the best professional information.

The Committee will deliver a Feasibility Report to the Town Board - to include... alternative methods of combating lake pollution, costs, required ordinances, County and State cooperation, if and where necessary, tax considerations, the time necessary to complete the project once started, administrative control, ultimate responsibility, and suggestions for obtaining public support for the actual recommendations.

To move this project forward in the best interests of all residents, the Lake Association suggests joint participation with the Township in this phase of the project - developing a Professional Report and firm recommendations. The Lake Assn. can match funds up to \$1500. It is recommended that the report be completed within three months after the establishment of the Committee.

#

APPOINTMENTS MADE AS A RESULT OF THIS RESOLUTION.....

LAKE ASSOCIATION:

Dr. William H. Lundin, Chairman
Arnold E. Mamath

TOWN OF WHITEWATER:

Dominick Gailloreto, Vice-Chrmn
Donald Striggow

RICHMOND TOWNSHIP: Frank Gerke, Treasurer
SECRETARY: Mrs. Diane Mamath

CONTRIBUTORS,,,

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 Reno Carrara
 Richard Culley
 Fred Dornacher
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 Anonymous

VOLUNTEERS...

Most of these kind people are on the Contributor list above.

For every person who contributes to a cause there are ten who, later wish they had done so. Saving a lake is not a one time event however. It is a continuous involvement - so to those who acted first, thank you; and to those who will come through later, thank you for the future.

WHITEWATER LAKE IS 25 YEARS OLD...
 BUT TODAY IS THE FIRST DAY OF THE REST OF
 ITS LIFE.

You are responsible for properly handling the land and shoreline around you. A good maintenance program will result in better lake quality.

Septic tanks and runoff (silt, lawn debris, pesticides) are the most serious problems. The resulting health hazards include bacterial and viral diseases, pesticide and nitrate poisoning, and aesthetically, odor and green mats of algae. Increased algae and aquatic weed growth will, if the sources of pollution are not checked, create a shallow, mucky lake filled with weeds bottom to top. This process is known as eutrophication.

Stop using pesticides such as D D T, Chlordane and lindane. Fertilizers, especially dry inorganic types, should never be used on slopes draining directly into the lake. When you think of green lawns also think of green lakes.

Have your water tested by the State of Wisconsin at least yearly for your own sake. Kits may be obtained simply by calling the Chamber of Commerce in Whitewater. 473-2571. Remember, your neighbor's or your own septic system could be filtering into your water supply.

Try planting a band of native vegetation on the lake shore as an effective nutrient filter and erosion control. Try terracing with local sandstone, or railroad ties, or anything attractive and natural to stop the dirt, leaves and runoff from filling in the lake.

You are responsible for your septic tank maintenance. In most cases, they should be pumped out every 2 or 3 years, and more often if a disposall is used. According to the U. S. Dept. of Health, Education and Welfare, the addition of yeasts, enzymes and chemicals to septic tanks does not aid in the decomposition of waste material, nor do they speed percolation of waste water into the soil. Some chemical additives may instead destroy soil structure, thus limiting the capacity of the drain field. The addition of large quantities of chemicals may also slow bacterial decomposition in the tank. (Source: Inland Lakes Reference Book, Office of Water Resources Research, U. S. Dept. of the Interior)

GUIDELINES FOR PROFESSIONAL ACTION

The following guidelines represent additional recommendations which a lake management body should consider.

1. Study the land management practices within the watershed and evaluate their potential impact upon the lake.
2. Periodically conduct a well survey to determine the quality of the ground water and evaluate variations in the water table level.
3. Promote the use of Whitewater Lake for research studies by state and/or university personnel. Important research areas include methods for reversing eutrophication and studies on the lake's plant and animal populations.
4. Establish a communications-educational center for the people. Such a center can serve as a channel of communication and also disseminate information to lake residents, visitors and other individuals on how they can contribute to protecting the lake and preventing its deterioration.

Dr. Willard Gross

64