JESSIE LAKE WATERSHED ASSOCIATION

JESSIE JABBER

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GREETINGS FROM PRESIDENT HAROLD GOETZMAN:

As I sit here writing I know that spring in the Northland can't be far off – It just seems to be taking longer this year. I am sure you all are looking forward to the coming lake season after the long winter, which I hope has been a healthy and prosperous one. During those long winter days, I have had time to reflect on both the past and the future. Certainly, the past year gave me a lot to be thankful for after getting through a difficult cancer surgery. However, during my recovery I was amazed at how things continued to get done, which is a sign of a good strong organization. My thanks go out to all who put in some extra time. It was also surprising that in summarizing the year 2000 efforts for the interim report on our Clean Water Partnership (CWP) grant, I found the Jessie Lake Watershed Association (JLWA) had put in over 850 volunteer hours and we had accomplished all we set out to do. This will be another busy year as we embark upon the second year of the CWP grant. An update on the project progress can be found in the following article.

Currently, we are working with the Itasca County Coalition of Lakes Association (ICOLA) on the county level to help produce an informational guide for lakeshore owners. Also, your Board of Directors recently moved to become a member of the Minnesota Lakes Association. This will provide us with a broader base of information and a voice in lobbying for issues at the state level. Collaboration with these groups in addition to our governmental partners at the Department of Natural Resources (DNR), U.S. Forest Service (USFS), and Itasca County Soil and Water Conservation District (ICSWCD) will keep us up to date on most issues dealing with our natural resources.

Looking back at last year's water quality data it appears our long-term trend for the past 15 years is one of decreasing quality. This year's data (4^{th} in succession) will provide a sound basis for future resource management decisions. Many people ask where this is heading? The answer is we can now develop a watershed comprehensive management plan that will serve us in sustaining the future of our valuable lake resources. This is really nothing more that an efficient, common sense way to use our natural resources. We all want to do what is right to preserve the quality of the watershed. Land use that results in poor water quality could impact wildlife and could make quality fishing nearly impossible. We all know that green water is not too good for other recreation such as swimming. Our grandchildren deserve better. Watershed management is the primary tool that allows us to focus on lakes and streams together rather than dealing with portions of the water resource in isolation. As the chemical and physical properties of water are transformed through natural processes and the activities of man, the characteristics of our lakes and streams are subject to change. We need to be in position to deal with that change.

I am looking forward to seeing you all at the spring meeting in May and sharing your ideas or concerns.

MEET YOUR NEW DIRECTOR

Bill Nichols. Bill and his wife Rhonda live in Apple Valley and built a house on Jessie Lake in 1975 (and are still trying to finish it). They have three girls and six grandchildren, all of whom have enjoyed many, many, trips to the lake. Bill has worked for Northwest Airlines for 34 years, the last 11 as a Production Planner, and Rhonda works as a Registered Nurse. They plan to retire in the very near future and make Jessie Lake their permanent address. Bill and Rhonda love this area and believe the JWLA is a necessary and very worthwhile organization. Bill looks forward to working in the JLWA to help our association realize our common goals to protect and improve this beautiful area.

CLEAN WATER PARTNERSHIP GRANT – UPDATE

By Harold Goetzman

This year will be the second year of work on the CWP project and efforts are already underway on sampling the streams. A planning meeting was held recently with the ICSWCD, DNR, and USFS to set the goals and distribution of work for the coming year. The JLWA will continue to sample Jessie Lake and the streams while the USFS will sample the three other major lakes in the watershed. Evaluation of last year's data is still in progress, but Noel Griese has a brief review of the water quality data in this newsletter. Upon the completion of this years sampling we will have four years of data to establish a good basis for future decisions. Modeling of the Watershed's water and phosphorus budgets will be one of the tools developed from this project.

The walleye spawning habitat project will be monitored by the JLWA and hopefully this year will start to show the fruits of our labor, as the 1996-year class fish should be spawning. An effort to keep the streams open from debris and beaver dams is of course an ongoing project. Anyone willing to spend some time on walking and cleaning the streams this summer should let me know.

Efforts have also been spent on reviewing and writing a historical report on the land use in the watershed. This will help to assist in determining the cultural impact of development in the forest and around the four major lakes in the watershed.

As part of this project, Joe Magner of the Minnesota Pollution Control Agency (MPCA) conducted groundwater sampling around Jessie Lake. He has also observed the geology of the area to determine how the wetlands and Marcell moraine complex influences the hydrology of the watershed.

Paleolimnology. John Kingston from the Natural Resources Research Institute visited Jessie Lake in March to take samples for a paleolimnology study that will help determine historical water quality conditions. We assisted him in taking sediment core samples through the ice at the deepest spot on the lake. About two feet of sediment was taken and divided into one-centimeter intervals for analyses. These samples will be subjected to radioisotope dating and diatom analysis that will reveal trends in water nutrients and soil erosion over the last 150 years. This paleolimnology evaluation can reconstruct the history of development on the lake and the cultural impact of nutrient enrichment in the sediment. Condition of the water quality back to pre-disturbance days before logging is important in assessing the causes for the current conditions. This is a rather new science for our area and the results will be of interest to other lake associations.

University of Minnesota. Dr. Miki Hondzo and his students will again have the floating instrument raft in the middle of Jessie Lake during August and September this year. Dr. Hong Wang will be doing post doctorate studies to develop a nutrient model for the phosphorus cycling in and out of the sediment. The automated sampling devices will provide data to relate wind and water currents with the exchange of chemicals from the bottom into the water column. All boaters should stay clear of this area since the raft will have an array of scientific devices hanging below it. A new design will be tested this year. Hopefully, it will survive any severe winds and avoid the disaster we had with the raft last year. Some of the data retrieved last year has been evaluated and will be compared to the data from this summer.

WATER QUALITY STUDIES- 2000

By Noel Griese, Limnologist, Itasca County Soil and Water Conservation District

Through the cooperation and efforts of the ICSWCD, JLWA, DNR, MPCA, University of Minnesota (UofM), and the USFS, we successfully completed our first year of sampling in 2000 under the CWP funded by the MPCA. The CWP has been a tremendous asset in helping providing us with the funds to obtain the necessary data and expert advice to better understand the Jessie Lake Watershed and its internal processes.

Overall sampling results from 2000 indicate that the health of Jessie Lake has stabilized since 1998. Carlson's Trophic Status Index (TSI) evaluates the productivity or health of a lake by using the amount of phosphorus and chlorophyll-a in the water, and the water clarity as measured by Secchi disk. Under Carlson's Trophic Status Index, which ranges from 1 (low nutrient, clear) to 100 (high nutrient, severe algae blooms), Jessie Lake had a TSI of 50.4 in 2000, a small decrease from 50.6 in 1999 and a substantial difference from 58.0 in 1998.

During the past sampling season more focus was placed on the Jessie Lake Watershed. Automatic stream samplers were installed by MPCA on Jessie Brook (Outlet), Spring Lake Creek, and Pooles Creek to help us better understand nutrient loading to the lake. The automatic stream samplers are triggered to take a composite water sample as the water levels rise after storm events. It has been determined that most of the nutrient loading from a stream is transported during storm events, and often this input is missed unless storm events are intensively sampled. The stream samplers were a welcome addition in helping us understand and determine what impacts, if any, are being brought into Jessie Lake via streams. When compared to the 1999 sampling season results for 2000 show yearly average phosphorus concentrations decreased slightly in Jessie Brook (decrease of 9 ppb) and Spring Creek (decrease of 1 ppb), while phosphorus concentrations increased in Pooles Creek (increase of 20 ppb) and the NW Inlet (increase of 55 ppb). This does not necessarily mean that the stream phosphorus concentrations/loading have increased over the years, but is more likely due to the fact that we were able to collect better data in 2000 during storm events when nutrient concentrations were highest.

The three major lakes within Jessie Lake's watershed, Peterson, Spring, and Little Spring, were sampled during 2000 to determine their water quality and role in Jessie Lake's health. All three lakes had fairly similar water quality to Jessie Lake with TSI values as follows: Peterson 46.9, Spring 42.2, and Little Spring 50.6. Spring and Peterson Lakes are dimictic, which means their top and bottom waters only mix twice a year during spring and fall turnover. Therefore, we know that nutrients from the bottom waters only mix into the overlying water twice a year. Little Spring Lake is a shallow polymictic lake like Jessie Lake, and because of that does not fully stratify.

A primary area of interest in this study is the internal mixing and stratification process within Jessie Lake. Jessie Lake is a polymictic lake, which means its entire water column mixes frequently due to high winds during the open water period. Jessie Lake does have periods of partial stratification, which means the upper warm water (epilimnion) is separated from the denser, colder, bottom water (hypolimnion). When this happens, the hypolimnion begins to lose its oxygen, which allows certain nutrients such as phosphorus to be released from the sediments into the overlying waters. This becomes a problem on lakes like Jessie, which mix frequently. After a period of stratification, nutrients released from the sediments are mixed into the epilimnion where they become available to be taken up by algae. It is during these events of internal loading that you often see algae blooms. Last year Jessie Lake exhibited only short periods of stratification, of which most were only partial stratifications. There was however a period of stratification in early August when elevated levels of phosphorus were found in the hypolimnion and eventually appeared in the upper waters available for algae to uptake when the lake mixed.

We are very excited for the upcoming sampling year to further our study of Jessie Lake and its watershed. At the beginning of this project our goal was to solidify a partnership between local citizens and governmental agencies in an effort to protect and maintain the aesthetic, economic, and recreational value of Jessie Lake and its watershed. I am confident that we accomplishing that goal and I would like to personally thank everyone who has been involved in this project thus far and look forward to working with you again this year.

SECCHI DISK POVIDES VALUABLE DATA

By Harold Goetzman

Have you every wondered exactly what was meant by the Secchi disk value for a particular lake? Each week during the summer season, volunteers on lakes throughout Minnesota record the Secchi disk reading for their lake. Traveling to the middle of the lake they lower an 8-inch diameter white metal disk attached to a calibrated rope off the shady side of the boat until it cannot be seen and noting the depth marking on the rope. The data can then be analyzed to see if the water quality or clarity of the lake is increasing or decreasing. The reading is a measurement of transparency, which is an indirect measure of the amount of suspended material in the water, usually present as algae.

This rather simple looking low-tech disk has become a powerful scientific tool that was invented by a priest more that 130 years ago. Pietro Angelo Secchi was an Italian Jesuit in the 19th century who was famous for his discoveries in astrophysics. As the scientific advisor to the Pope, he was commissioned to measure the

transparency or clarity of the Mediterranean Sea for the Papal Navy. He invented the tool in 1865 that would later bear his name, the Secchi disk.

The Secchi disk data has become invaluable to the biologists of the MPCA and ICSWCD who are monitoring the quality of our Minnesota lakes. Currently there are volunteers measuring water clarity in over 130 lakes in Itasca County and nearly 800 lakes statewide as part of the Citizen Lake Monitoring Program (CLMP). Because the MPCA needs about 10 years of data before they can analyze it for trends, much of the information is just starting to become available

Secchi disk readings have been collected on Jessie Lake for over 15 years and a good correlation has been established between the Secchi water clarity, phosphorus levels, and algae growth. In recent years we have also started measuring the Secchi clarity on Spring, Little Spring and Peterson Lakes. However, new volunteers are needed for these lakes in 2001 and anyone willing to do the measurement on these lakes (8 to 10 times per summer) should contact Bill Nelson at 832-3120. It is important to the future of the Watershed to monitor all the lakes such that we can be aware of any changes in water quality.

MINNESOTA LAKES ASSOCIATION

By Jim Anderson

At the April 7th JLWA Board of Directors meeting, the board voted to affiliate with the Minnesota Lakes Association (MLA). The MLA is a statewide organization of lakeshore property owners, lake associations, coalitions of lake associations, and business and citizens who are dedicated to protecting and improving Minnesota's lakes as irreplaceable natural assets to be held in trust for future generations to enjoy.

MLA works at the local, regional and statewide level to provide education on lake protection and stewardship, sponsors statewide educational conferences and networking opportunities for its members, and develops educational materials, such as the Guidebook for Lake Associations, and the Sustainable Lakes Workbook: A Model for Lake Management. MLA represents the lakeshore property owner's interests on government committees and task forces and works closely with state legislators to keep them informed of lake related issues. At the legislature, MLA represents the collective voice of over 30,000 lakeshore property owners to influence legislation that impacts the quality of Minnesota's lakes.

The MLA is tackling such tough issues as:

Property taxes	Fish stocking
Lake management planning	Surface water use conflicts
Youth education	Wastewater treatment
Exotics control	Local water planning
Lake association development	Best management practices

Controls for feedlots, pesticide, fertilizer and irrigation practices in sensitive lake areas.

Past legislative efforts have resulted in laws that:

Prohibited the spread and transport of exotic species
Strengthened ISTS (Individual Sewage Treatment Systems) requirements
Restored funding for the Citizens Lake Monitoring program
Reduced the market cap on property evaluations
Funded the development of lake management tools
Strengthened lake improvement districts as a tool for addressing lake problems

MLA is organized into 8 districts throughout the state, with representation from each district on the board of directors. The MLA web site is **www.mnlakesassn.org.** Check it out; it has a lot of good information.

A NATIONAL PARK OR FOREST ?

By Neil Gustafson

In 1891 the Minnesota Legislature established Minnesota's first state park at Lake Itasca. In that same year the Legislature petitioned President Benjamin Harrison to set aside extensive still-pristine lands across northern Minnesota for a national park. This park proposal passed through an arduous political process over the next decade, reaching a peak between 1897 and 1902. It failed to realize the national park that some had hoped for, but did establish the Minnesota Forest Reserve that had lasting effects on forestry across the nation. In 1908 the Reserve became the Minnesota National Forest, later renamed the Chippewa National Forest.

This accomplishment was particularly remarkable because it required balancing the interests of several contentious groups. These groups included:

- the conservationists who sought to protect the wilderness from exploitation,
- the lumber companies who sought to utilize the commercially valuable timber,
- the settlers who sought to earn a living from the land once the trees were removed,
- the Indians who resided on well-timbered reservation lands proposed to be included in the national park,
- the social reformers who sought to treat the Indians fairly and give them opportunities for full citizenship, and
- the state and federal governments who sought to clarify their responsibilities in ensuring the public good.

A compromise was reached in 1902 among these groups. The national park idea, while not yet clearly defined, was set aside in favor of a "forest reserve" to test the emerging principles of long range scientific forest management. Page Morris, U.S. congressman from Duluth, sponsored a bill that proposed the nation's first forest reserve to be established by congress (rather than by Presidential proclamation) and assigned responsibility for its management to the U.S. Bureau of Forestry. This act elevated that agency from a small information office to an administrative department and for the first time gave it the responsibilities of long range planning and development, i.e. the designing, testing and implementing of forestry management principles. The Minnesota Forest Reserve thereby became a laboratory for comprehensive forestry management and the foundation of a comprehensive national resource management plan.

As lumbering in northern Minnesota accelerated in the late Nineteenth Century and the end of the trees was in sight, conservation was becoming a more serious concern - especially under president Theodore Roosevelt's leadership. Conservation was part of the moralistic fervor at the beginning of the Twentieth Century. This included the rights of women and laborers, the breaking up of trusts and industrial monopolies, and the clarification of government responsibility for the common welfare. In this revolutionary environment, conservation emerged in Minnesota as an effort of unlikely collaborators: environmental activists, business leaders, and government officials who sought to secure an ongoing supply of forest products and other natural resources considered essential for the nation's economic prosperity. Conservationists in Minnesota were civic-minded visionaries who sought to use the authority of government to promote the efficient development and judicious use of the nation's resources. In their opinion, the rapid depletion of forest resources elevated conservation to one of the nation's most urgent issues.

Lumber executives supported scientific forest management because it offered a legitimate way to control the supply of timber and thereby maintain prices over the longer term. The existing incentive was to cut as much wood as possible, which flooded the market and depressed prices. Working with government to conserve supplies and stabilize prices, lumber companies could realize long-term profitability. Rising demand and diminishing supplies made conservation profitable for the lumber interests.

Some of the most extensive stands of red and white pine were on the Leech Lake Reservation, and lumbermen cast covetous glances toward them. But to acquire reservation timber, title to the land was necessary. Federal policy was to gradually disperse Indians onto individual homesteads of 160 acres per family. Under provisions of the Dawes General Allotment Act of 1887, native people were expected to engage in agriculture and become self-sufficient. In 1891 the allotment was reduced to 80 acres per family to assure some land for every family on the reservation. This was expected to leave a surplus of land that could be sold, with the proceeds credited to the tribe. It was believed by its supporters that the land allotment would soon convert the Indians to "models of good citizenship". In retrospect, the allotment scheme was one of many federal actions that undermined Native American culture and authority. It did not offer the same kind of support system available to white settlers, and therefore failed to integrate native people successfully into the dominant Euro-American culture.

In an effort to clarify the intent of the Dawes Act and secure for the Indians the benefit of timber harvesting, the provisions of that Act were modified by the "Nelson Law" in 1897, which allowed only Indians to remove "dead and down" timber on the reservation. The good intentions of this amendment backfired, however, when Indians were persuaded to sell their logging permits to others who burned forest lands in order to create "dead and down" timber, then selling the timber to large buyers.

This practice brought an outcry from conservationists, social reformers, lumbermen, businessmen, the Department of the Interior, and Minnesota Congressmen. Christopher Andrews, Minnesota State Fire Warden, condemned the practice of deliberate burning as illegal, destructive and dangerous. The evidence and support for amending this flaw in the Nelson Law increased, but agreement on how that could be done did not. Amidst the controversy the national park idea gained support. This proposed that the entire Leech Lake Reservation be included within an extensive "park", the intent being to allow Indians to live on land administered by the federal government.

The Minnesota controversy received national attention when Chicago sportsman John S. Cooper organized a rail trip at the peak of Fall colors for about one hundred Congressmen and other dignitaries in October 1899. Railroad magnate James J. Hill provided the transportation and Minnesota lumberman Thomas Shevlin entertained the tourists when they returned via Minneapolis. Following the triumphant excursion, Cooper felt optimistic that his proposed four million acre playground (i.e. "park") for fishing and hunting would become a reality. In its September 30, 1899 edition the St. Paul Pioneer Press had confidently predicted "the park project is already an assured fact".

The Minnesota Federation of Women's Clubs (MFWC), under the leadership of Florence Bramhall, undertook the cause and organized an extensive public relations effort in support of a comprehensive "forest reserve". Politically astute, Florence Bramhall knew that the four million acre park proposal was excessive and not realistic because it denied access to valuable timber. She felt that businessmen and lumbermen would form strong opposition, along with settlers, who sought to remove the trees and develop the land. Mrs. Bramhall labeled the national sportsmen's park as a Chicago promotion, and called the alternative conservationist "forest

reserve" proposal a Minnesota project. The MFWC offered a scaled down proposal of 489,000 acres and descended on Washington to confer with President Roosevelt, Secretary of the Interior Ethan Hitchcock, the commissioner of public lands, the Bureau of Indian Affairs, and various congressional committees. The proposal that was finally adopted called for a forest reserve of 225,000 acres to be based on scientific forestry management principles suggested by Herman Haupt Chapman, Superintendent of the North Central Agricultural Experiment Station in Grand Rapids, and placed under the supervision of the U.S. Forestry Bureau.

Settlers and small businesses in northern Minnesota felt that a park (as perceived by Cooper) would stifle further economic development. They wanted more settlers to establish themselves in the north and they actively encouraged new residents. Most of those who came were struggling entrepreneurs and homesteaders who owned small farms and businesses. They were suspicious of the motives of those who promoted the "park" and the "forest reserve" and could see little real distinction between the two. They perceived trees as an export commodity and a resource to build and heat their homes. With the landscape cleared of trees, they could cultivate crops and pasture their cattle. Those who wanted to preserve the forest, they believed, were just impractical idealists. Speculators and pioneers had staked out their claims ahead of organized settlement, anticipating an economic boom. Prosperity would come, they believed, when the Nelson Law (with its imperfections) was enforced and the trees and Indians were gone.

The concept of a "park" or "forest reserve" symbolized a class struggle. In general, northern Minnesotans regarded the park movement as the brainchild of southern Minnesotans (i.e. Twin Citians) who were meddling with territory that belonged to northerners. Rumors abounded, with some calling the park proposal the shrewdest con game ever contrived. Among the contending parties and interest groups, there was very little face to face dialogue, debate, or attempts at negotiated settlement - just a continuous flow of rumors and misinformation - and the local press helped very little in overcoming the controversies. According to historian Newell Searle, some northerners "probably feared that their local economy would become dependent on providing services to wealthy tourists. This carried with it implications of servile status, antithetical to the aims of the area's independent and single-minded settlers".

Proponents of federal management based principles of scientific forestry, believed this would secure an ongoing logging industry. They anticipated that tourists would bring money to help stimulate and diversify the local economy, benefiting everyone. Furthermore, poor soil conditions made agriculture a marginal economic activity as compared with the rich prairie soils of western and southern Minnesota. But the locals remained unconvinced and vowed to demonstrate that cutover lands were suitable for intensive and sustained agricultural production. Homesteading the cutover lands, they believed, would bring thousands of settlers who would purchase essential goods and services from local merchants, which in turn would stimulate the growth of communities to serve the settlers. And if the cutover lands should not immediately be profitable, settlers could find seasonal work in lumber camps during the transitional period from logging to agriculture and permanent settlement.

Repeated tests and careful observations at the experiment station in Grand Rapids generally confirmed the judgment that northern pine soils were inferior in fertility and long-term productivity to prairie and hardwood forest soils. Crops, especially vegetables, might produce well for several years, but the infertile sandy soils would soon become exhausted without intensive fertilization. When inexperienced persons purchased this marginal land from speculators at high prices and on a mortgage, failure was inevitable, according to Chapman.

The only persons who benefited from the milieu of misinformation and poor communication were the real estate speculators who bought up cut over lands for as little as twenty five to fifty cents an acre and resold them to eager settlers for five to fifteen dollars an acre. Few settlers had good information on the cost and difficulty of clearing stumps and tilling the poor soil, in addition to the expected hardships of frontier life. Descendants of some of those courageous, persistent, self sufficient settlers remain on the land today - but most succumbed at least a half century ago. Chapman deplored as "absolutely conscienceless" the tactics and misrepresentations real estate speculators used to dispose of their land, indenturing honest settlers to a life of hardship and poverty. With the many contending perspectives, Minnesota's congressional delegation was immobilized and attempts to amend the Nelson Law were deferred.

Perceiving the national significance of an anticipated showdown, Gifford Pinchot, Chief of the US Forestry Bureau, appointed Chapman in January 1901 to help construct a compromise solution. Chapman's communication with Cooper was not fruitful, but Andrews and Mrs. Bramhall enthusiastically supported Chapman's initiative. Together they developed a forestry management proposal on a much smaller scale than the vast and vague proposal put forth by Cooper and friends. Chapman's proposal was acceptable to Morris, who then called together representatives of the disagreeing factions who were able to reach consensus. Pinchot drafted the final version of the bill and Morris introduced it in Congress on Feb. 3, 1902.

The bill provided for a reserve of about 225,000 acres and specified that the U.S. Bureau of Forestry would supervise all reserve lands. On ten sections (6,400 acres) the Bureau could establish whatever experimental logging practices it thought necessary. The remaining timberlands were open to logging of all merchantable trees excluding five percent of the mature timber that was to remain uncut for reforestation purposes. The federal government retained title to the land. Lands were open to settlement and certain scenic points and islands in Cass Lake and Leech Lake were set aside for park purposes. President Roosevelt signed the bill into law on June 23, 1902 and the Minnesota Forest Reserve became a reality.

Reaction to the Morris Act was widespread and nearly unanimous. The lumbermen liked it and respected its provisions, sportsmen were generally accepting of it, and the MFWC celebrated the victory. The news media predicted prosperity for logging towns on or near the reserve. Prospective settlers arrived seeking land. Native Americans were relieved that the issue of timber marketing was finally settled. Everyone wanted some of the credit. Only the unscrupulous real estate speculators were disappointed.

The prosperity expected was slow to come, and some Morris Act modifications were made in 1908 opening more land for farming and increasing the timber left for reforestation from five to ten percent. The Minnesota Forest Reserve was declared

a success and renamed the Minnesota National Forest. The name was changed to the Chippewa National Forest in 1928 to concur with its common, but unofficial nickname. The soils proved to be as inferior as the North Central Experimentation Station had anticipated and as a result much land was forfeited for delinquent taxes and gradually added to the National Forest, its boundaries being extended northward and eastward in 1933 to encompass the Jessie Lake watershed.

This decade-long struggle represented constructive politics at its finest, achieving an acceptable solution and creating the Minnesota National Forest, the first established by an act of Congress.

Note: Credits for this article go to Newell Searle, who did much of the research when a graduate student in history at the University of Minnesota. Findings were published in Minnesota History in the fall of 1971.

WATER PLANTS MAKE THE LAKE

DNR Press Release

During the spring and summer people spend time at cabins, enjoy lake activities, and fix up lake property. They watch lakes change and many help lakes remain productive homes for plants, animals, insects, and fish. Unfortunately, some of the fix up and lakeshore changes that lake dwellers make can harm habitat and damage the lake. Removal of plant material is one example.

Aquatic plants are a natural part of lakes. And, while many lake dwellers want to remove these water plants they call weeds, there are good reasons to keep them intact. Aquatic plants provide food, nesting sites, and cover for a variety of animals and fish.

Benefits of Aquatic Plants. Many aquatic plants are a food source – seeds and tubers – for waterfowl. Others support insects and other invertebrates that become food for wildlife. Emergent vegetation furnishes nesting cover for waterfowl, wading birds, shorebirds, and songbirds. Mammals such as mink and muskrats also use aquatic vegetation for food and cover.

Minnesota's most sought-after fish species depend on aquatic vegetation throughout their lives. Yellow perch, northern pike, muskellunge, panfish, and bass all need aquatic vegetation for food, spawning, and nurseries. Juvenile fish feed on the small crustaceans and insects that live in stands of aquatic plants. Beyond food and shelter, aquatic vegetation provides many other benefits. They:

- Are one of several sources of oxygen essential for aquatic animals to survive.
- Help maintain water quality.
- Stabilize bottom sediments**,** keeping the water clear.
- Act as a filter by using up the same nutrients which cause algae blooms. Removing the aquatic plants makes more nutrients available for algae. Algae blooms, the green scum on the water surface, make swimming and water sports less appealing.
- Limit erosion of shorelines, moderating the effects of waves. Emergent vegetation such as bulrush, is particularly effective in preventing erosion and once removed is difficult to reestablish.
- Are also part of the visual character and natural beauty of lakes. Many people buy lakeshore property to enjoy the natural scenery, view wildlife, and catch fish. Changes to shoreland and removal of aquatic plants threaten that beauty.

Cumulative Impacts. Alterations to the shoreline and near shore areas can harm essential links between water and land habitats. Typical shoreline alterations include upland clearing, cutting trees and shrubs, converting native grasses to lawn, removing dead snags and downed logs, making sand blankets, and removing aquatic plants. Most of these activities don't seem harmful by themselves. But as our lakes become more developed and more people change the shoreline, collectively they can negatively impact the lake. Cumulative impacts are those, which may seem individually minor, but they are collectively harmful and the consequences increase over time, often leading to declines in fish and wildlife populations.

How Lake Dwellers Can Help. Lakeshore landowners can minimize the effects of human disturbance and help provide fish and wildlife habitat. Suggested strategies;

- Leave things as natural as possible.
- Don't turn all of your property into a manicured lawn.
- Use phosphorus-free fertilizer (if any).

- Leave a buffer strip of native vegetation in the water and on land. A buffer zone may extend 25 to 100 or more feet from the water's edge onto the land and 25 to 50 feet into the lake. With a buffer zone the shoreline regains its value and associated benefits for fish, wildlife, and water quality. The buffer zone filters nutrients and sediments before they reach the water, avoiding excess algae and plant growth.

Aquatic Plant Regulations. The following is a short review of aquatic plant regulations. A permit is not required to cut or pull submerged vegetation, like coontail, under the following conditions:

- The cleared area does not extend more than 50 feet along shore, or more than one half your frontage width, whichever is less; and the area does not exceed 2,500 square feet in size.
- All vegetation that is cut or pulled must be removed from the water; and the cleared area remains in the same location year to year.
- Water lilies and other floating leaf vegetation may be cut or pulled to create a channel 15 feet wide extending to open water provided the channel is located in the same location every year. More extensive removal will require a permit.

A permit is always required when:

- Using herbicides to control aquatic plants;
- Using a pesticide to control snails which carry swimmers itch;
- Using an algaecide to control algae;
- Removing emergent vegetation, like bulrush, cattails, or wild rice;
- Removing floating leaf vegetation (water lilies) in an area larger than a channel 15 feet wide extending to open water; or
- Removing more than 2,500 square feet of submerged vegetation; or
- Removing or relocating floating bog; or
- Using and automatic aquatic plant control device.

The cost of an individual aquatic plant management permit from the DNR is $20. In most cases permits must be obtained annually.

WILL CHARLIE RETURN?

By Harold Goetzman

This spring on Jessie Lake we will anxiously await the return of a trumpeter swan with green neckband No.88, otherwise known as Charlie. He, or she, came upon the name Charlie last year after following John Lichtscheidl around in his fishing boat. After some people doubted John's tale he demonstrated how he could get the swan to shore by calling its name - Charlie. Later in September we saw the swan again for several weeks and I managed to call him to shore also. Not knowing if it was Charlie, I started calling him and sure enough he swam right up. Diane came out with some bread and I took her picture feeding the swan. She likes to tell the story adding how he liked the white bread, but turned and swam off when she offered dark bread. White bird—white bread, hmmm.

Anyway, I notified the DNR of his presence since they have a program to keep track of the trumpeter swans located in the state. Other people on the lake have also reported seeing several swans during the past couple years.

Trumpeter swans were once exceedingly rare in MN, but are making a comeback. The DNR started a program nearly 20 years ago when they began releasing pairs of adult swans. Today's population numbers more than 800 birds and wildlife managers report there are a few pairs nesting in Itasca County.

JET SKIS

By Bill Nelson

A reoccurring theme heard at many of our association meetings are complaints dealing with the operation of personal watercraft, or jet skis as they are more commonly called. The number of complaints has always surprised me considering the infrequency in which people operate jet skis on the lakes in the watershed.

In fact, on these lakes any type of boat traffic except for fishing or pontoon boats is rare except for the major holiday weekends when a few boats are pulling water skiers, knee boarders, or tubers.

Complaints about jet skis invariably deal with three issues.

1. Most, if not all, homeowners find having their peaceful visit to the lake shattered by the noise of riders operating their machines and continually jumping their wake, exceedingly irritating.
2. The complaints become even stronger if the jet ski operator passes to closely or, worse yet, continually buzz past fisherman.
3. Chasing wildlife, especially loons and their chicks.

Regulations' pertaining to the operation of jet skis clearly addresses these issues. The laws state personal watercraft must travel at slow – no wake speed (5 mph or less) within 150 feet of non-motorized boats, shore (unless launching or landing skiers directly to or from open water), docks, swim rafts, swimmers, any moored or anchored craft, or through emergent or floating vegetation. Operators may not weave their machines through congested watercraft traffic or jump the wake of another watercraft within 150 feet of another watercraft. Personal watercraft may only be operated between 9:30 A.M. and one hour before sunset. It is unlawful to chase or harass wildlife. Most importantly, if operators of jet skis use their common sense and courteously slow down around other boats and ride as far away from shore as possible they can enjoy their form of recreation without spoiling someone else's.

DID YOU KNOW?

By Harold Goetzman

- The 1999 Jessie Lake test netting report is available at the DNR or can be accessed at their Website – www.dnr.state.mn.us.
- Northeastern MN has seven species of frogs and one toad, which start their spring singing for mates in early April. Spring Peepers are usually the first. There are still many studies being conducted and great concern as to why frogs are often deformed and are disappearing in great numbers.
- To get rid of the smell in your house when cooking fish, put a small bowl of white vinegar next to the stove while your frying the fish. Burning a scented candle also helps.
- Many names of lakes are not words at all. The name Itasca is a classic example. It is derived from a joining of the two Latin words ver**itas ca**put ("true head") and was coined in a conversation between explorer Henry Schoolcraft and Rev. Boutwell as Schoolcraft departed for the Mississippi headwaters of Lake Itasca.
- Each year, anglers, hunters, and wildlife watchers spend more that $3 billion pursuing Minnesota fish and wildlife. Last year l.6 million anglers spent $1.8 billion in MN on fishing, which averages out to $1,086 per angler.
- Wildlife watching is one of the fastest growing activities in the U.S. and it is estimated that 1.3 million Minnesotans watch wildlife as recreation.
- Minnesota is one of the few states to have moose, wolves, fishers, pine martens and trumpeter swans.
- Protecting our wetlands is important to help purify water, control floods, restore groundwater, and provide habitat for waterfowl and rare species of plants and animals.
- Jessie Lake was frozen over from November 22 until April 29. These dates indicate the lake froze over three days earlier and that the ice went out four days later than normal.
- There are over 140,000 new cases of prostate cancer diagnosed in the USA every year. Don't forget to get your annual PSA test.

MEETING ANNOUCEMENT

The spring meeting of the Jessie Lake Watershed Association will be held at 10:00 A.M. on May 26 at the Bowstring Town hall. Don't forget to return the septic survey and try keeping the boat speed down during the high water period to avoid shoreline erosion.