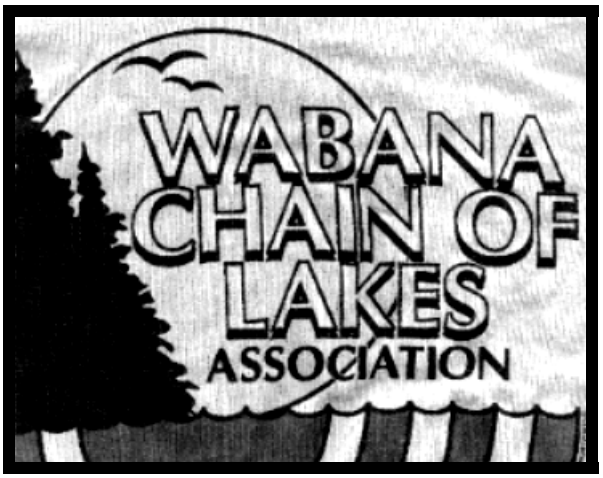

THE CHAIN LETTER

April 1999
Volume 3, Number 1
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Editor pro tem: Bill Downing

The Association published three issues of *The Chain Letter* in 1989, one issue in 1994, and is now trying again. We hope it will be published regularly for all members, and that in the future it will act as a voice from member to member, and a connection among us. Contact William L. Downing, *Winter*, 1834 Simpson St., Falcon Heights, MN 55113-6143; 651-644-9625. *Summer*, 38067 Forest Lane, Grand Rapids, MN 55744, 218-326-4730. wdowning@uslink.net.

WATER TESTING

Many newer members of the Association are not aware that we have a history of thorough testing of water in our chain of lakes; and even members of long standing may not be aware of the extent of our results.

In 1990, the Wabana Chain of Lakes Association voted to insure that the waters in our lakes have, and will continue to have, the conditions that give us clear, transparent water. Few other Lake Associations have afforded to pay for meticulous water testing while the water is still pure—they have usually waited until the water becomes degraded—but ours has a head start. Our data show that our lakes are generally in good condition, and that fact alone is gratifying; but the most important factor is that we have the information for future reference; and it will stand up legally, since it was obtained under scientifically accepted conditions and analyzed by certified laboratories.

In 1994 the Association's Water Quality Committee published a preliminary report to the membership on water testing during 1990, 1991 and 1994, and has now published a complete report of testing in those years. The publication consists of many pages of tables, graphs and interpretation, but most people will not want to read more than the following summary.

Persons unfamiliar with the reasons and methods of water testing may want to read the following section on "Assumptions" before reading the "Summary" on the next pages.

Background Assumptions for our Water Testing
(A primer for those who are new to the subject.)

- Suspended materials reduce water clarity. In our clear lakes, most suspended material is tiny *algae*.
- All living plants, including algae, require about the same nutrients, and lake waters that have a heavy algae growth contain enough chemicals to support that vigorous growth.
- Chemical nutrients that fertilize algae can be detected by testing the water.
- If one element is in short enough supply so algae do not grow well, that element is called *limiting*.
- Lakes like ours that are clear and relatively free of algae nearly always lack *phosphorus*, and we have reason to believe that phosphorus is the limiting element in our chain of lakes.
- Testing for phosphorus in our very clear lakes requires extreme accuracy, down to parts per billion, also called *micrograms per liter*. Few laboratories are set up to test this sensitively.
- Algae (like all plants) contains *chlorophyll*, and the amount of chlorophyll is tied to the amount of algae present, so our tests for chlorophyll tells us how much algae is suspended in the lake at the time the sample is taken. An expensive and delicate test.
- Nitrogen is the element in next shortest supply, and we test for it. A less expensive test.
- Amounts of nutrients change throughout the year, so testing is needed at intervals in order to have a complete record: (1) ice out, (2) spring, (3) midsummer, (4) autumn. See "Expected Seasonal Variation" on next page.
- Water tends to layer itself, and surface water is the most variable of the water layers. A mixed sample of all layers gives better data than a surface grab. We use a 10-meter (about 30-foot) sample.

In Theory: Expected Seasonal Variation

Winter with its ice cover kills most plants in water, large and small, due to cold and lack of sunlight, and bacteria that break down dead plant mass release nutrients from the decomposed plants into the water.

Ice-out shows high phosphorus, high nitrogen, but low chlorophyll, since there are few suspended algae. We tested on 5/10/91.

Spring water is cold and high in nutrients, so green algae (that can double themselves daily) and bluegreen algae (that can double themselves hourly) reproduce rapidly, growing until they have used essentially all the phosphorus available. Tests in spring will show rapidly decreasing concentrations of nitrogen and phosphorus, and rapidly increasing chlorophyll. We tested on 6/24/91.

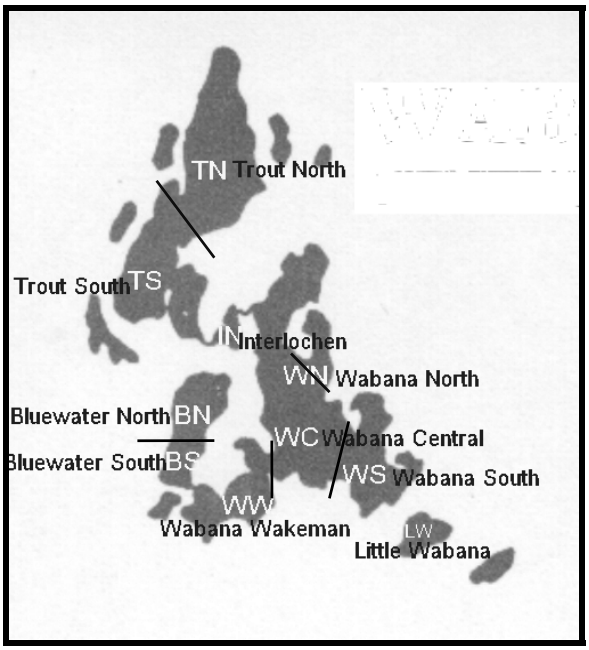
Summer water is warm at the top, but Spring growth has taken up most of the nutrients, so algae will remain rather stable. Thus we expect very low phosphorus, chlorophyll as high as it can go, and whatever amount of nitrogen that was not used in Spring to grow new algae. We tested on 9/1/90, 9/4/91, and 8/21/94.

Autumn lakes turn over, usually mixing from top to bottom, so if some nutrients have been trapped in the bottom layer, they may increase in the water. Testing results in Autumn will vary widely from place to place. We tested on 10/20/90 and 10/21/91.

Freezing paves the way for dim light, plant death, and increasing nutrients.

SUMMARY OF WATER TESTING

Ten Lake Basins Studied



Trout Lake is two large and deep basins **TN** and **TS**, connected by a large shallow bar across the southern end. The south basin has no human development around it, and we can use it in a sense as a "base line"

Bluewater Lake is probably only a single deep basin, but the large population around the lake warrants testing in each end, **BN** and **BS**.

Interlachen (Little Trout) is a single and very deep basin, **IN**.

Little Wabana Lake is a single basin **LW**.

Wabana Lake has a very complex bottom, with a large basin **WC** that extends down the west side of the main lake from the Pinch (that separates it from Buckman Cove) southwards to the bar that runs from Arrowhead Point to Balgillow Island; a smaller basin **WS** that makes up the south arm of the lake, and a small basin **WN** that is separated from WC by a large bar. Wabana also has two large shallow areas: the west arm contains Wakeman Bay, **WW**, which has only one place in excess of 30 feet deep from which we could take 10-meter samples, but which contains considerable development around it; and Buckman Cove, with little development. We could not sample this site because there was no place deep enough to allow a 10-meter sample.

Results

Trout Lake: good. Phosphorus and chlorophyll tested low year-around in both basins. Nitrogen was low in the north basin, but increased in the Spring in the south basin, which may be due to a lot of vegetation dying during the winter.

Interlachen ("Little Trout"): good. It had essentially the same phosphorus content as the lakes emptying into it via Trout Creek. It also showed a higher blip of nitrogen at ice-out, reflected in a higher level of chlorophyll, which indicates a higher level of algae. Fortunately the low phosphorus level prevented an overgrowth of algae.

Little Wabana: fair. It is dependent on ground water, since it has no surface inlet or outlet. Its phosphorus content is low, but its nitrogen content is relatively high, which allows for more algae growth than found in most of the other basins studied. Little Wabana's nitrogen concentration allows the algae to grow, but the low phosphorus concentration prevents greater growth.

Bluewater: good north, less so south. This is a "marl" lake, and owes its unusual color both to tiny crystals of calcium carbonate suspended in the water, which reflect blue light back upwards toward the surface; and blue-green clay in the lake bottom, which adds to the intensity of the color. This is a highly sensitive condition, which could be changed radically through careless addition of phosphorus to

the lake, before we even knew what was happening. *Bluewater North* is similar to Trout North in its low phosphorus and chlorophyll, but there is some June increase in nitrogen, which, if it continues, could be a source of concern. *Bluewater South*, on the other hand, shows a consistent elevation in chlorophyll, therefore in algae growth, in the early summer, accompanied by a large increase in nitrogen. The growing algae use up the available phosphorus, and so the growth levels off, but this is an indication that human activity is adding phosphorus.

Wabana Lake: some good, some not.

Wakeman Bay is in the poorest condition of all basins. It has both high phosphorus and high nitrogen in the spring, and these combine to produce relatively high algae chlorophyll in the later summer. This area deserves special attention to prevent more serious problems from developing.

Wabana Central and *Wabana South* are in good condition. They have relatively low phosphorus; probably because their large volume dilutes the higher-phosphorus water they receive from shallower, high-nutrient areas. They both have a slightly elevated nitrogen content, and their nitrogen's appearance in the Spring allows an increase in growth of algae later in the summer, but growth is kept low by the low phosphorus content.

Wabana North is in satisfactory but uncertain condition. It is a small and deep basin, almost completely cut off from Wabana Central, WC, by a large shallow bar. Other studies done privately show that the basin lacks oxygen in its depths, probably all year round, and does not mix to the bottom. High nitrogen content in the Spring is accompanied by a high algae growth, which seems to drop off during the summer and reappear in the Autumn. Fortunately the phosphorus level is relatively low, which prevents further algal growth, but the increase in phosphorus in 1994 could be a disturbing trend if it is borne out in the future. More study is needed to understand the unusual dynamics of this basin.

Additional testing by the MPCA.

Because we were already embarked on our lake analysis in 1990, the Minnesota Pollution Control Agency agreed to include Wabana Lake—though not the others in the Chain—in its Lake Assessment Program (LAP) in 1991.This gave us an unusual chance for a check on our data, since the Minnesota Department of Health, the ultimate reference for lab accuracy in Minnesota, did the laboratory analysis for the MPCA. There was enough agreement in dates, places and parameters to give a lot of confidence to our own figures for Wabana, and by extension to our figures for the other basins in the Chain.

The Association has considerable additional data from various sources. The Chippewa Tribe laboratory has provided us with alkalinity, chloride, turbidity, color, transparency, iron, silica, and others at various depths. The MPCA has data on depths, temperatures, and several chemical parameters. Several people around the lakes regularly make these less complex and cheaper measurements.

Conclusion

Ten basins in the Wabana Chain of Lakes in 1990 and 1991 were oligotrophic, with Little Wabana, Wakeman Bay and Bluewater South having some potential for future algae growth. Data from the single testing series in August 1994 suggest that phosphorus content may be increasing.

WHAT WE NEED NOW

1. **Complete testing schedule in 1999.**
2. **A thorough, on-going Secchi disk program.**
3. **Stop adding phosphorus to the lakes.**

1. 1999 TESTING SCHEDULE

The Water Quality Committee (Bob Gephart, George Wilbert, Warren Jewett) is planning to sample from each of our ten basins, and send them to the laboratory to be tested for phosphorus, nitrogen and chlorophyll, four times this summer: ice-out, spring, summer, and autumn. That will be 40 of each of three tests. Phosphorus and nitrogen tests are $18 each, chlorophyll is $30, for a total of $2,640. Collecting the samples is interesting but hard work. **Please call Bob Gephart, 218-327-1545, to get on the volunteer list.**

2. SECCHI DISK PROGRAM

Nancy Ellsworth, Warren Jewett and the Harold Ungers are part of the Minnesota Pollution Control Agency's Secchi disk program on Minnesota lake water quality, and have provided valuable information to that agency on Bluewater, Trout and Interlachen (Little Trout) over the years. Use of the Secchi is an easy way to keep track of lake water quality on a week-by-week basis. If we are sincere in our desire to protect water quality in our chain of lakes, we will lose no time in setting up a network of readers. With it, we can keep running track of quality.

Use of the Secchi disk is time-honored and valuable. It was invented in April 1865 by Father Pietro Angelo Secchi, an astrophysicist and scientific advisor to the Pope, to measure transparency in the Bay of Naples. Various sizes of

disks have been used since that time, but the most frequently used disk is an 8 inch diameter metal disk painted in alternate black and white quadrants. It is simple to use, to measure how deeply a person can see into the water, by lowering it into the water until the observer loses sight of it, then raising until it reappears. The depth of the water where the disk vanishes and reappears is the Secchi disk reading. Water clarity should be measured with the Secchi Disk once a week, May to October.

Lakes in our chain are classified as *oligotrophic* (''little growth''), in the high teens and low twenties on the Secchi disk scale:

Secchi Disc (ft.)	Mean:	Range:
Oligotrophic	8.0	5.0-28.0
Mesotrophic	4.0	1.5- 8.0
Eutrophic	2.5	0.8- 7.0
Hypertrophic	----	0.4- 0.5

The value of the measurements lies in comparing readings of a single site, from week to week, month to month and season to season. The most valuable information is the graph which shows the weekly changes. If the readings decrease, it is due to increased floating material-—free-floating algae, sediment from erosion, or lake bottom stirred by motorboat activity.

Measurement should be taken in the same place weekly, at the deepest part of the basin, within a couple of hours of midday, the water surface smooth, on the shady side of the boat. Ideally the same person should be taking all readings, but it is more important to have reliably continuous data, so we suggest that a team of two or more people volunteer to report weekly readings for the summer. They should compare readings enough so they look for the same things, and send it via postcard to the Secchi point-person for collating.

Volunteers: we are counting on you! We urgently need ten teams, one for each of our ten basins! Please call Nancy Ellsworth, 218-326-8056, who will arrange for disks, explain techniques, and collect the data. We will publish the names of the Secchi readers and their data, monthly during the summer, in the *Chain Letter*. This process should begin as soon as ice is out.

3. STOP PHOSPHORUS.

Dishwasher detergent: It is difficult to find a good phosphorus-free product on the American market, that will work well in ''hard'' (high calcium) water, which is what many of us get from wells deeper than 60 feet. There are non-phosphorus products, and they probably use soap as the detergent, which reacts with calcium to produce gray, insoluble calcium soap, which sticks to dishes. To ''soften'' water is to mechanically replace calcium with sodium, but not everyone wants to add large amounts of sodium to his drinking water. Another ploy is to add excess sodium in the form of washing soda (sodium carbonate) when the soap-containing product is added.

Major manufacturers of dishwasher detergents are therefore allowed to use phosphorus detergents, arguing that dishwashers use erosion to clean the dishes, and these are needed for the erosion to work effectively. Note, though, that people can use about one third of the recommended amount for the wash cycle, and none at all for the pre-wash cycle, and still get clean dishes. Also, users can have their septic tanks pumped annually, and get rid of the phosphorus before it gets into their drain field.

Sweden has very stringent laws on phosphorus, and there may be a good phosphorus-free dishwasher detergent for sale there-—is there any member who has connections in Sweden, who can find out?

Lawn fertilizers. The most important item that gets into water, about which we *can* do something, is lawn fertilizer. Nearly every product that people buy for lawns contains phosphorus, which should not be applied around lakes at all. There is probably no lawn in the entire Mississippi-Missouri-Ohio river drainage valley that needs any added phosphorus at all, and particularly not in the northern forested area, where there is a lot more phosphorus in the soil already than grass can use. People might note that every bit of phosphorus they add to their lawns around lakes will end up in the lake!

1999 MEETING SCHEDULE

Meetings are normally held on the second Saturdays of the months, June through September, at the Wabana Community Center (a.k.a. Township Hall), with coffee and conversation at 9:00 A. M., followed by a

program, if any, and the meeting. Program topics will be announced in future *Chain Letters*.

- May 22
- June 12
- July 10
- August 14
- September 11

Please mark your calendar now!

HISTORY COMMITTEE

At the September meeting it was voted to establish a History Committee (Bud Sage, Kathy Doty, Bill Downing), not necessarily to *write* a history of the Chain of Lakes, but to collect primary data for a future historian to use. The Association will provide storage in the Wabana Community Center, and Bud Sage is the ''Point Person'' for historical data.

The Wabana Chain of Lakes has been historically blessed, and few lakeshore residents are aware of the history that has led to the present commendable arrangement. A complete history should be written, but if we wait for the author to appear, a lot of primary sources will be gone. Some starts have been made, for example:

- Discussion with Bill McLaughlin, the grandson of the owners of the Cochran Hotel, and appointment made to tape anecdotes that he remembers from his grandmother. He provided a fine photograph of the hotel.
- Contact made with Dr. Barbara Seckinger Killen, whose father Albert owned and ran a fishing camp on Clearwater Lake, and owned land on Wabana after the first World War. She will write a memoir of her father, and will provide copies of photographs.
- We have copies of two articles on Wabana Chain history that were published in the *Herald Review* about 1933. Will obtain permission to reprint them in the C*hain Letter.*

These are a few of those we are working on, but we need much more, from every one of the past 100 or more years. **What can you provide? Please call L. W. (Bud) Sage, 218-326-4535, and tell him what kind of copies you can put in our files-—photographs, narratives, taped interviews, published documents, private documents, and so on.**

Minutes of the Wabana Chain of Lakes Association

Regular meeting - September 9, 1998

The meeting was opened at 9:00am by chair Jon Rowe, welcoming all present and introducing the guest presenter Bob Leibfried, representing Baseline - On-site Sewage Treatment Systems.

A consultant and private provider, Bob is licensed to inspect, design and install septic systems. Baseline is owned by Bob I.eibfried, 271 Cimarron Trail, Grand Rapids, MN 557744, phone 218-327-2380. Bob presented an overview of septic systems including:

I. What they are - general configurations, changes in construction over time.

II. How they work - disposal vs. treatment, the evaporation myth.

III. Types - gravity systems, pumped systems, i. e. pressurized beds and mounds.

IV. Inspecting a system - three main reasons for a failing system, tanks, soil absorption area, replacing a failed system.

V. Questions -

Wabana Chain of Lakes Assn. members had many questions, input and resources to share:

- Low interest loans for septic system upgrades are available to resorts through both the State Office of Tourism and County Soil and Water Conservation offices.
- Septic systems inspections are initiated with a new building permit, transfer of title, complaints.
- Septic System Owners Guide, is available through the Itasca County Extension Service.
- Septic System Fact Sheets. are available, through the Minnesota Department of @Natural Resources.

Bob Leibfried invited members to call him with individual question any time.

Jon Rowe suggested the association is considering ideas for action within the next year concerning septic systems and asked for input. Bob's suggestions included:

- agreeing with the association's existing idea to work with a septic pumper/s to contract for a "member's" rate.
- highly encouraged testing of water wells
- infrared aerial photographs of the lakes on "high use recreational weekends" like the 4th of July.

Bob was thanked by the association membership for his time, and a break ended the presentation.

Chairman Jon Rowe called the Wabana Chain of Lakes Association regular meeting together at 10:20am., with introductions by all members and guests present.

Minutes of the previous meeting of August 15. 1998, were approved as mailed

Treasurer's Report: Cathy Rudolph submitted the following report:

Balance (8-15-98)	$4,352.36
Received membership dues	180.00
Total received:	180.00
Paid Out:	
Stamps&copies	58.63
Brochures	341.33
Total Paid out	399.96
Balance (9-19-98)	$4,132.40

Paid members: 55.

Jon Rowe suggested some balance of association funds be put into an interest-bearing account. Nancy Ellsworth recommended the Advisory Committee make that decision and act on it.

Workshop Report: The Future of Northeastern Minnesota Lakes - Treasures under Pressure Workshop was reported on by Bill Downing and Bud Sage, two of a number of Wabana Chain of Lakes Association members in attendance. The Workshop was held in Grand Rapids on September 12, 1998. Bill explained that an Act of Congress adopted the Sea Grant Program as a federal initiative to look at water issues. Included in the seaboards are the Great Lakes. Major sponsors: University of Minnesota Sea Grant Program, Minnesota DNR Region III, Minnesota Power, University of Minnesota Water Resources Center and Extension Services, Western Bank, N. A. Sponsors: Arrowhead Water Quality Team, Itasca Coalition of Lake Associations, Itasca County Water Plan Implementation Committee, Minnesota Board of Water Soil Resources, and White Iron Chain of Lakes Association.

Both Bill and Bud listed the major objectives of the workshop as 1) fact giving and gathering, 2) input from the workshop to be included in an ongoing report, 3) consensus building between developers, owners and others, 4) defining the issues: developments along lake shore and water usage.

Transfer of land from private, to public grant proposal, was reported on by Joel Solomon. A proposal to the Blandin Foundation. was explained as a depleting grant, to cover The Conservation Fund's closing costs and other out of pocket expenses, when acting as interim buyer in transactions involving the transfer of lands in the Chippewa National Forest from private ownership to the public domain (U.S. Forest Service).

The Wabana Chain of Lakes Association Advisory Committee recommend to the association to be a financial partner in this grant under the following stipulations, as read by Joel from a preliminary letter from the association to The Blandin Foundation:

- On a transaction by transaction basis, the WCL Association will contribute a sum of $1,500, or 20%, whichever is less, by way of reimbursement of the funds documented closing costs and other out of pocket expenses directly related to the transaction. Payment will be made as requested by the fund but not prior to the time of transfer of ownership either to the fund or the U. S. Forest Service.
- The WCL Association's commitment shall be construed as running to The Conservation Fund only and not to the U.S. Forest Service, the Blandin Foundation or anyone else.
- The WCL Association reserves the right to terminate its commitment at any time for any reason whatsoever in which event written notice will be given to all parties of interest. However, in such event a full good faith effort will be made to raise the money via individual contributions.
- The WCL Association's participation as outlined must be limited to transactions associated with the Wabana Chain of Lakes.

A motion was made by Bill Downing to "approve expenditures of $1,000, or 20%, whichever is less, with the stipulations noted in the letter to the Blandin Foundation." Following further discussion the motion was seconded. Vote: motion approved.

A Wabana Chain of Lakes Water Quality Report is currently being finalized by Bill Downing. Information on lakes testing from the year 1990, 1991 and 1994, summarizes most of what we know scientifically. The goal of the report is to make this information available to the Association's membership in language which is less technical and usable as an ongoing baseline of information. The introduction explains why we need and have this data and why we have algae blooms in our lakes now.

The testing has divided the chain of lakes into basin areas for the study: Trout Lake north, Trout Lake south, Little Trout, Wabana central, Wabana north, Wabana south , Wabana Wakeman Bay, Bluewater north, Bluewater south. Phosphorous, Nitrogen and Chlorophyll concentrations were studied primarily. Bill showed an example of the graphs that explain the results and where the Minnesota Pollution Control Agency's information testing resulted as well, and suggested that the association membership study these as recommendations. Secchi disk readings within all of the lake basin study areas are recommended immediately to assist in monitoring the lakes. Bill suggested the association get together volunteer Secchi disk reading teams in all of the study basins.

Bob Sage questioned where the phosphorus is coming from? Bill responded: 1) absolutely *no* phosphorus on lawns -- it is the most direct enemy of the water quality, 2) soaps are not, if run through a working septic, 3) septics that are not in compliance and/or not working.

Ryan Reed, limnologist with Itasca Soil and Water Conservation has invited our association and Bill to join their agency in a continued testing program. Joining forces is highly recommended by Bill if they will continue to monitor all of the lake basin areas as in the original study. In the past the Chippewa Tribe's testing resources have been utilized and Bill recommended we continue that valuable relationship.

Nancy Ellsworth commented on how to be a participant in Secchi disk readings, as simple and informative. Jon Rowe suggested Secchi discs are a good general indicator of any problems, not what the problem is specifically. Bill Downing's report will show scientific research pinpointing any problems.

Bill Downing moved that the Wabana Chain of Lakes Association look into contracting for three chemical testing following the 10 site lake basin format for a full year in 1999. Discussion followed. Motion seconded. Vote, motion approved.

Wabana Chain of Lakes Newsletter update was reported on by Jon Rowe. Kathleen Preece will do a newsletter for $100 per issue. Following discussion the association advisory committee recommended that the newsletter contain information on the chain of lakes history, water quality reporting and stewardship, membership information and promotion and not to be in competition with the existing Wabana 'Township Warbler newsletter. Barb Wilkus moved that the association begin a 1 year trial of the newsletter, of 4 issues. Following further discussion, seconded. Motion approved.

Wabana Chain of Lakes History project was discussed and Bill Downing and Kathryn Dotty agreed to begin to write the history of the area. Bill recomrnended that the association begin to file the archives of information like photos, maps, documented conversations with elders and other residents that can be utilized by the volunteer historians. Jon Rowe asked other association members if they would like to assist in the history project. Bud Sage volunteered to help. Anyone with any historical information should contact Bill Downing, 38067 Forest Lane; Kathryn Doty, 1550 Zims Lane; and/or Bud Sage - 301 Sage Road.

Membership mailing addresses in some cases have changed, and Nancy Ellsworth suggested improving the lists for more accuracy. Bruce Smith suggested revising the lists to accommodate the first mailing of the new newsletter to begin in January. Dick Chambers suggested members make an effort to get new, seasonal and permanent addresses to the association.

Lakeshore taxes were brought up by Dick Chambers who also made available copies of an article "High taxes are forcing people to sell". Dick described a newly formed group, The Itasca County Tax Association, which will have a web site of information. The group is discussing ways to cap taxable market values and recommended we all contact our local politicians to insist on tax reform. Those interested in the issue are welcome to contact Dick Chambers or Jackie Baggott, meetings will also be announced in the Grand Rapids Herald Review.

Dock Signs were discussed with no new information at this time.

October 98 meeting was discuss with no strong interest to meet.

Jon Rowe thanked members for their participation, and a schedule of the next meeting dates and for the next year will be determined by the advisory committee. Adjournment 11:30 am.

Respectfully submitted,
Susan Lick, Recording Secretary.

ABOUT THE *CHAIN LETTER*

This is *your* newsletter, and will continue only as long as the membership finds it useful. There are many members who live at considerable distance and visit here rarely or never, but who want to support the Association in all ways possible. They, and many others, cannot attend meetings, but want to be kept up-to-date on activities. *The Chain Letter* can be used to convey meeting Minutes, summaries of programs, notices, news, historical notes, changes in ownership around the lakes, etc., but one of its best uses can be the exchange of ideas and facts among us through Letters to the Editor. These can be on any subject that you feel needs airing to the membership—taxes, development, Joyce Estate, camp sites, water quality, or whatever. They will be published, though they might be shortened, since our space is limited.

How should they be sent? Easiest for the Editor would be e-mail or a 3½ inch floppy disk with the writing in Microsoft Word. We can convert from Word Perfect, also. If you send something typed, we can scan it quickly. Longhand will have to be typed out. If you call by phone, we will write it down and probably get it garbled. But do send something. The important thing is communication in our community.

If you are a potential underwriter of *The Chain Letter*, and would like your logo or message to appear in an issue, please contact the Editor for details and amount of contribution.

ASSOCIATION DUES: $20.00 ANNUALLY

The Association's fiscal year runs from July 1 through June 30; and those who have paid dues for this year are paid for the fiscal year 1998. Dues for 1999 will be due on July 1, 1999. There has not been an increase in dues since the organization began, in 1988, though expenses have increased greatly.

Dues Payment and Address Update Form

Annual $20**,** membership checks can be made out to: Wabana Chain of Lakes Association
If your dues were unpaid for 1998, should you now pay for 2 years? It is not *necessary* to do so, but our testing this year will be costly, and your additional support will be appreciated.

Dues for: 1998 1999 Both

Please fill out and mail the form below, whether paying dues or not.

Address #1, Permanent Address:

Name_____

Address_____

City_____ State _____ Zip Code:_____

Which months of the year for mailing? _____

Address #2, Seasonal Address:

Name_____

Address_____

City_____ State: _____ Zip Code:_____

Which months of the year for mailing? _____

Mail this form and/ or your membership dues to.-

Wabana Chain of Lakes Association, Cathy Rudolph, Treasurer 36542 Havenwood Drive, Grand Rapids, MN 55744

----------Please cut off, or make a copy, and mail----------