

MINNESOTA GROUND WATER ASSOCIATION

NEWSLETTER

v. 1, n. 2

February, 1983

WE GOT STARTED!

The Inaugural meeting of the Minnesota Groundwater Association was attended by 72 people representing many professional areas...consultants, professors, lawyers, geologists, hydrologist, administrators, engineers, and students. Where did all of those students come from? For those of you who missed the meeting, I will recap Tom Johnson's presentation. Tom reviewed various waste disposal "philosophies" and the related methods of disposal. He discussed some work done to test the integrity of clay liners for landfills, and he spent the remainder of the presentation discussing two waste sites in Illinois. The Sheffield site represents an area of low radiation contamination and the Wilsonville site represents a landfill containing drums filled with more chemicals than I have room here to list. The wastes at the Wilsonville site are currently being exhumed as a result of a suit against the state. Tom is involved in a detailed study investigating contaminant migration from the site. An interesting result of their work involves the alteration of clay minerals in contact with organic compounds. Tom concluded the talk by answering questions about his work. In a phone conversation with Tom several weeks ago, he told me that since our meeting some people in Minnesota have contacted him regarding his work in Illinois. I hope that future meetings will present additional opportunities for people to acquire new information and contacts with professionals working with groundwater resources.

Our next meeting will cover a topic that many technical people do not know much about and that is legal aspects of groundwater contamination in Minnesota. The meeting will be an afternoon session with four speakers discussing the basis of Minnesota laws, the PCA's rules and regulations governing contamination and liability issues, and a discussion of current project involving southeastern Minnesota. Admission will be free and refreshments will be supplied by the Association. The Earle Brown Center is nicely set up for meetings and you will find parking cheap and available. I look forward to seeing all of you at the meeting.

This newsletter contains information about state regulatory programs and explains where to find groundwater information. Linda Bruemmer's Consumers Guide to Minnesota's Groundwater Programs is an excellent synopsis of many data collection programs. Tom Clark's and Dale Trippler's article on groundwater quality summarizes one of these data collection programs. The next Newsletter will carry similar articles on the groundwater observation-well network, water use in Minnesota, and the state's climatological data network. I find that many people interested in groundwater are not aware of these data collection programs, the data systems that contain this information, and where these systems are maintained.

Our intention is to have an annual newsletter devoted to current research and work related to groundwater resources. Anyone who is currently working on a research project is invited to send in a short description of their work to Pat Mayer. I particularly would like to hear from members who live outside the metropolitan area, what are you people working on? What are you students working on? Who is developing models, who is studying groundwater contamination, who has developed a new technique, and who has recently published an article related to Minnesota groundwater resources?

We would like to hear your response to the idea of developing a groundwater modeling workshop for members. We would also like to hear suggestions on raising some money to pay off our debt. We would like to hear about meeting topics, speakers, and field trip ideas. We would like to have people volunteer to keep the members informed as to changes in agency rules, current legislation, other organizational meetings, publications, new groundwater problem areas, etc..

The first meeting was a success and we feel that the effort to organize has been a success too. To date, we have 95 paid members, we are currently working on public education, and we are currently making contact with other organizations (I will give a short address to the Minnesota Water Well Association Convention on February 8th). The numbers tell me that the association has uncovered an enormous amount of interest, energy, and enthusiasm. Let's keep this movement going, let's share our ideas on what this group of people can do together. Note two things...this organization needs your ideas and there is nothing stopping you from contributing.

NOW, LET'S HEAR FROM YOU!
Gil Gabanski, President

A CONSUMER'S GUIDE TO MINNESOTA'S GROUND WATER PROGRAMS

Linda Bruemmer, Water Planning Board

At times, trying to find out which state agency gathers what ground water data and performs what services, is like being trapped in a maze. But, armed with a.) a reasonable amount of patience, b.) an appreciation for the complexity of ground water resources/ the state bureaucracy/your question, and c.) the following guide to state programs, you will probably be able to obtain the information that you need.

General Rule: The state's ground water programs fall within three agencies: the Department of Natural Resources (DNR); the Pollution Control Agency (PCA); and the Department of Health (MDH).

A.) Ground water quantity matters such as appropriation permits, recorded water use, pumping tests, resolution of well interference complaints, and hydrologic studies are handled by the DNR's Division of Waters. (296-4800)

B.) Water quality data for public water supplies falls under the auspices of the Safe Drinking Water program at the MDH. Public water supply data describe the finished water quality, i.e. water quality after treatment and often after waters from several sources are mixed. Questions about the health effects from chemical constituents in drinking water supplies can also be answered by this staff. (296-5330)

C.) Water well, exploratory well, and monitoring well construction, inspection, and logs are overseen by the MDH. (296-5338) This same program includes licensing of drillers.

D.) Ground water monitoring and sampling involves the greatest number of agencies. Water levels are monitored under a DNR-U.S. Geological Survey Cooperative program. The PCA carries out a ground water quality monitoring program which tracks the ambient quality at over 300 sites in the state.

Residential private well sampling is the responsibility of each county's community health service. Problems with water quality in a public water supply system should be referred directly to the municipal utility.

Operators of Grade A dairy farms must submit periodic water quality data to the State Department of Agriculture.

E.) Most ground water quality problems are handled by the PCA. The PCA's ground water programs fall within the Division of Solid and Hazardous Waste. (296-2735, Director) The organizational approach is set up according to land-use activity and its impact on ground water. The PCA also has an emergency response unit for spills and a site response unit to investigate toxic waste contamination. The MDH houses the laboratory where the majority of these analyses are done.

F.) Geological information and well logs can be obtained from the Minnesota Geological Survey at the University of Minnesota. (373-3372)

G.) The Land Management Information Center (LMIC, 296-1211) at the Department of Energy, Planning, and Development has developed a catalog of water information systems. This catalog may be obtained in hard copy or through a public-access computer program. A more specialized summary of ground water data is currently being developed through Systems for Water Information Management (SWIM) at LMIC. This includes a list of ground water staff and the programs they operate.

Of course, if you're really in doubt as to where to begin, your state-employed MGWA officers--Gil Gabanski (DNR), 296-0431, and Tom Clark (PCA), 297-3362, will gladly assist you.

Minnesota Pollution Control Agency

Ambient Ground Water Monitoring Program for Minnesota

As a part of its charge to assess and protect the quality of the state's ground water, the Minnesota Pollution Control Agency (MPCA) began an ambient ground water quality monitoring program in 1978. The goal is to establish a network of 400 wells or springs to be sampled on a rotating basis once every five years. Each year MPCA staff collect samples from approximately 80 stations. The original program design was developed under contract with the United States Geological Survey (USGS). The USGS recommended 400 sampling sites, discussed three different monitoring objectives, identified the parameters necessary to meet each of those objectives and detailed a sampling protocol which has been followed at each site.

The purpose of the program is to determine ambient or background water quality, and to discover and monitor long-term changes in ground water quality which may occur in one or more of 12 principal state aquifers. The program is coordinated with ground water quality networks maintained by other governmental agencies in the state. The ambient monitoring program has become an important element in a federally-mandated ground water protection strategy for Minnesota which the MPCA is developing.

The ambient ground water quality monitoring program has concluded its fifth year of data collection. All of the physical and chemical data have been stored in the USEPA STORET computer system. The data are made available to any state agency, local government, private citizen or industry upon request, and to other STORET users nationwide. Data interpretation was begun last year and is published in Volume 4 of the MPCA's annual report entitled Ground Water Quality Monitoring Program: A Compilation of Analytical Data. Copies of Volume 1, 2 and 4 are available by contacting Dale Tripler or Tom Clark at (612) 297-3362 at the MPCA, 1935 West County Road B-2, Roseville, Minnesota 55113.

In the future, analysis of data from Minnesota's ambient ground water quality monitoring program will include an examination of the spatial distribution of wells within the state and how this correlates with their ionic composition. As stations with more reliable well logs are located and sampled, an attempt will be made to determine how the chemical quality of the principal aquifers varies with depth within each aquifer. Use of multivariate statistical analyses is being investigated to allow MPCA to make better use of the well log and chemical quality information collected so far.

Expansion of the ambient program data base to include analyses for organic compounds has just begun. Because of the expense associated with these analyses, the number of wells where samples for organic compounds have been taken is limited. However, a pending appropriation from the Legislative Commission on Minnesota Resources (LCMR) may allow MPCA to expand this effort, beginning in July 1983.

Tom Clark
Dale Tripler

The Minnesota Ground Water Association received letters from the Governor and President of the State Senate on the occasion of our first membership meeting.



STATE OF MINNESOTA
OFFICE OF THE GOVERNOR
SAINT PAUL

November 17, 1982

ALBERT H. QUIE
GOVERNOR

Dear Friends:

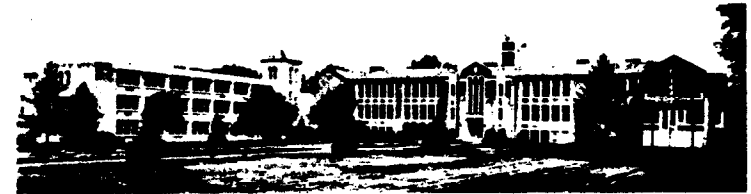
On the occasion of your first meeting, it is a pleasure to send greetings to the newly-formed Minnesota Ground Water Association. I urge this congress of professionals to take advantage of the national interest in water issues and to transform it into a productive time for developing public awareness of ground water resources. Future wise management of our water in Minnesota is dependent upon a strong, basic understanding of the nature of ground water.

Good luck to you and the members of the Association. It is my hope that all Minnesotans will benefit from the comprehensive approach to the science of ground water hydrology which is afforded by the variety of professions represented in your membership.

Sincerely,

ALBERT H. QUIE
GOVERNOR

WILLIAM MITCHELL
College of Law



875 SUMMIT AVENUE □ ST. PAUL, MINNESOTA 55105 □ (612) 227-9171

November 24, 1982

Pat Leonard-Mayer
Minnesota Ground Water Association
P.O. Box 3362
St. Paul, MN 55165

Dear Pat:

Congratulations on tackling a difficult but significant public service. The resource of groundwater is invaluable. As you build awareness of the threats to that asset, you will be serving in an important way the long range interests of our state.

I hope you can successfully deal with the reality of "Out of sight, out of mind," and win appropriate attention so that our state will face up to the challenge of protecting our groundwater. It looks to me like your organization is going about its work in a sensible way.

Sincerely,

Jack Davies
Professor of Law
State Senator

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MINNESOTA GROUND WATER ASSOCIATION WINTER MEETING/SEMINAR

LEGAL AND REGULATORY ASPECTS OF GROUND WATER CONTAMINATION
IN MINNESOTA

The Winter Meeting announced in the previous MGWA Newsletter has been expanded to a half-day seminar. The seminar will be held at the Earle Brown Continuing Education Center in St. Paul on March 1, 1983. The seminar is open to MGWA members without charge. Please register by mail in advance so that arrangements and refreshments can be planned accordingly.

PROGRAM

- 1:00 Welcome. Dennis Woodward, Minnesota Ground Water Association
- 1:10 Ground Water Law. Prof. J. David Prince, William Mitchell College of Law
Professor Prince will present a brief history of ground water law, explain how the law developed and what it is today, and will explore future trends in ground water law.
- 2:10 Break.
- 2:15 The Role of the Minnesota Pollution Control Agency. Marlene Senechal, Attorney General/MPCA
Ms. Senechal will explain the MPCA's strategies for the protection of ground water, and discuss the MPCA rules regulating ground water quality and the statutes administered by the Agency.
- 3:00 Break, refreshments.
- 3:20 Causes of Action for Ground Water Pollution. Leroy Paddock, Attorney General/Waste Management Board
Mr. Paddock will explain both the common law causes of action and actions available under Federal law, including the Comprehensive Environmental Response, Cleanup, and Liability Act (Superfund). He will also present the recommendations of the 301(e) Superfund Study and comment on the future of the State Superfund.
- 4:20 Break.
- 4:25 Finding Solutions to Southeast Minnesota's Ground Water Problem. Loni Kemp, The Minnesota Project
The Minnesota Project is carrying out a one-year project for developing public education materials, studying the legal and regulatory framework for ground water protection, and developing a model ordinance to help counties in southeastern Minnesota. Ms. Kemp will bring us up-to-date on this current project.

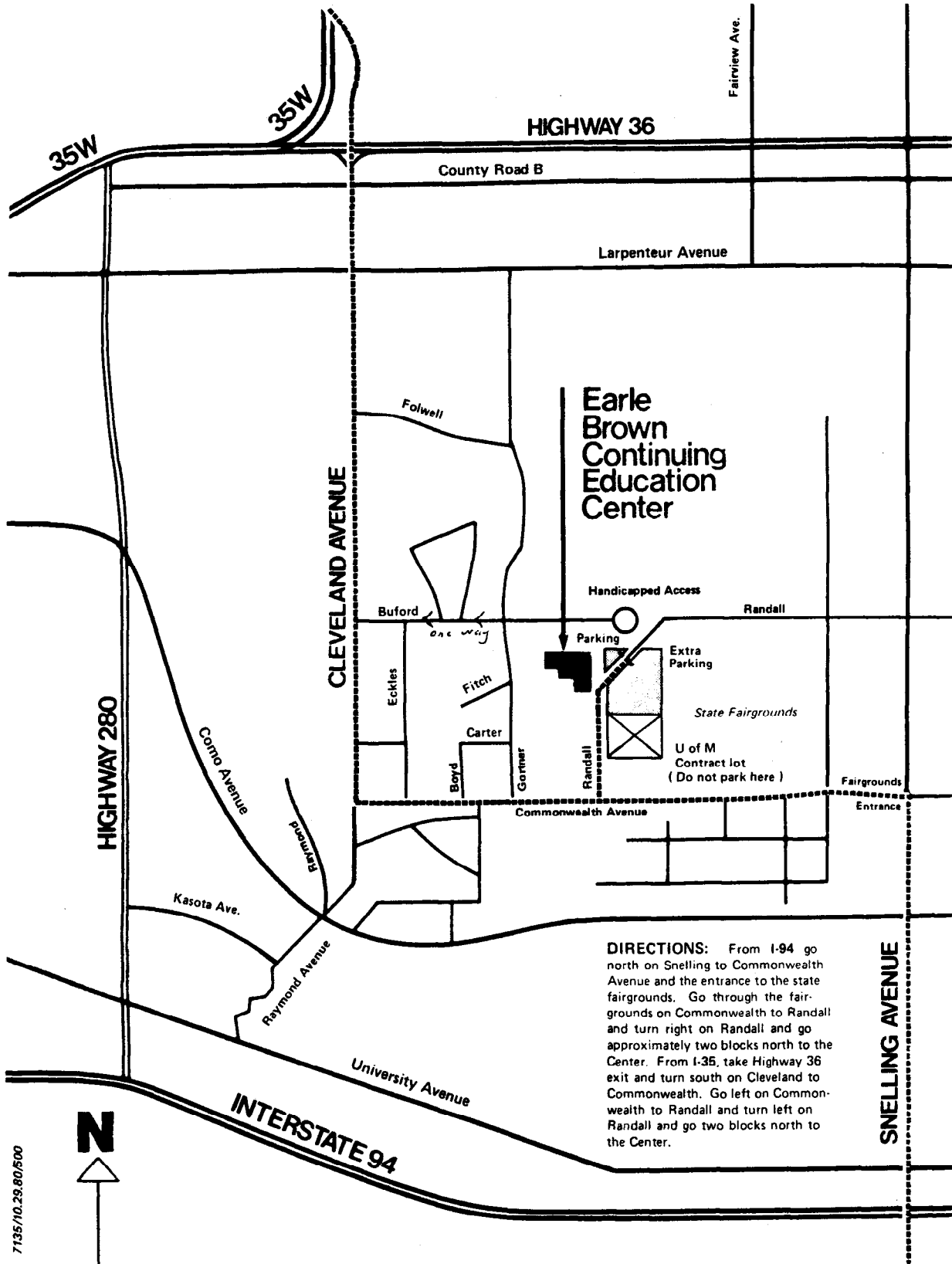
Speakers will answer questions following individual presentations.

MINNESOTA GROUND WATER ASSOCIATION SEMINAR/WINTER MEETING, MARCH 1, 1983
Earle Brown Continuing Education Center
Legal and Regulatory Aspects of Ground Water Contamination in Minnesota

Number of persons attending: _____

Mail to MGWA
P.O. Box 3362
St. Paul, MN 55165

REGISTER BY MAIL
BEFORE FEB. 23, 1983



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MGWA Seminar Speakers

Professor J. David Prince is the Northwest Area Foundation Professor of Environmental Law at William Mitchell College of Law in St. Paul. Professor Prince was formerly with the Attorney General/Minnesota Department of Natural Resources, and has served as Vice-Chairman on the ABA Natural Resources Law Section. He has been a Lecturer at Victoria University in Wellington, New Zealand and is co-author of a new textbook on Environmental Law.

Ms. Marlene Senechal had been with the Attorney General/Minnesota Pollution Control Agency for 5 years. Ms. Senechal received her BA from the University of Minnesota in 1972 and JD in 1977. She taught the Environmental Law Clinic at the University in 1981-82.

Leroy Paddock has worked in the Minnesota Attorney General's Office since 1978. Mr. Paddock graduated from the University of Michigan and received his JD with high honors from the University of Iowa Law School in 1977. Mr Paddock was a member of the staff to Attorney General Spannaus on the Federal study of liability for injuries resulting from exposure to hazardous substances.

Loni Kemp is on the staff of the Minnesota Project, a non-profit center for public policy study and community assistance. She directs the southeast office in Preston. Loni has carried out a number of projects on a variety of natural resource and environmental issues. Loni graduated from Macalester College and has a Master's degree from the Humphrey Institute of Public Affairs at the University of Minnesota. Loni has formerly worked as a city planner.

The Board of Directors of the Minnesota Ground Water Association thanks the speakers for the presentations and for their cooperation in planning the seminar.

ANNOUNCEMENTS

AWRA Meeting - Feb. 8, Green Mill Too, Minneapolis; Dennis Woodward: Saudi Arabia - Not a Waterless Wasteland. Contact Linda Bruemmer (612) 297-2375.

Twin Cities Geologists - Feb. 9, Nino's, St. Paul; John Parker: Something about his homeland - Australia; \$2.00 dues plus meal; FREE BEER; Contact Bruce Bloomgren (612) 373-3591.

AWRA/Twin Cities Geologists Joint Meeting in April, probably at the Olympia Brewery.

Minnesota Water Well Association Annual Convention and Exposition - Sheraton Inn-Northwest, Minneapolis, Feb. 7-9; Contact Gerald Ramsdell (612) 935-7100.

Practical Solutions to Chemical Spillages and Ground Water Contamination - Seminar, March 24-25, Sponsored by MKA Groundwater/Waste Control Group; cost \$220.00; Contact Ms. Kim Hewitt (612) 559-3700.

Geological Society of America, Madison, WI. April 28-29, North Central Sectional Meeting. Symposium in Ground Water Hydrology; Contact Dr. Mary P. Anderson, Dept. of Geology and Geophysics, University of Wisconsin, Madison, WI (608) 262-2396/262-8960.

Ground Water Workshop - Presented by the Illinois State Water Survey, Feb. 21-22, Champaign, Illinois; cost \$95.00; Contact Ellis Sanderson (217) 333-0235.

1983 Midwest Groundwater Conference: Oct. 26-28 Champaign, Illinois. Planning committee for this conference is currently seeking speakers and discussion leaders; if you are interested, contact Gil Gabanski (612) 296-0431 for further information.

Board of Directors

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(612) 296-0431

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Tom Clark, Membership Chairman
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(612) 297-3362

Newsletter; Public Education
Committee

Pat Leonard-Mayer
U.S. Bureau of Mines
(612) 725-4500

The Minnesota Ground Water Association has been appointed to the Advisory Committee for a project being coordinated by Loni Kemp of the Minnesota Project in Preston, Minnesota. One part of Loni's project involves putting together educational materials - brochures, fact sheets, a video-tape - which will present in clear, simple language the principles of ground water flow and contamination in karst aquifers. The educational materials will be distributed through civic groups and farmer's organizations in southeast Minnesota. Members of the MGWA Public Education Committee are reviewing the materials for technical content.

* * *

All MGWA members are invited to contribute to the Newsletter. Materials should be typed, if possible, and mailed to Pat Leonard-Mayer, MGWA, P.O. Box 3362, St. Paul, MN 55165. Many thanks to those who contributed to this edition.

For your information. For those of you who would like to become more involved in community affairs and in the legislative process in Minnesota, but don't know where to begin, a booklet prepared by the League of Women Voters of Minnesota is just what you need. The booklet, Citizens in Action, provides detailed information about citizen involvement and about the legislative and executive branches of the state government, including the names of the 1983-84 Senators, Legislators, and the designated committee chairpersons. The booklet is available from the League of Women Voters of Minnesota, (612) 224-5445.

MGWA DIRECTORY

MGWA is putting together a membership directory which will be provided to all members at no additional cost. The directory will be updated periodically, perhaps yearly. If you would like information about yourself printed in the directory, fill out the form below and mail it to MGWA by March 31, 1983.

Tom Clark, Membership Chairman

NAME _____
BUSINESS ADDRESS _____

PHONE _____
POSITION/TITLE _____
PROFESSIONAL INTERESTS _____

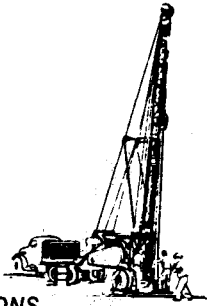
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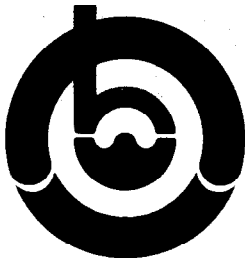
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The financial status of the association is presented in the table below. Revenues are from annual dues, newsletter advertisements and from a loan by the NWWA. Expenses have been speaker expenses, printing and mailing of the newsletter.

Total Revenues	\$1120.83
Total Expenses	593.78
<hr/>	
Net Worth	527.05
Total Liabilities (NWWA Loan)	550.00
Total Cash	\$1077.05




612-559-1423

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