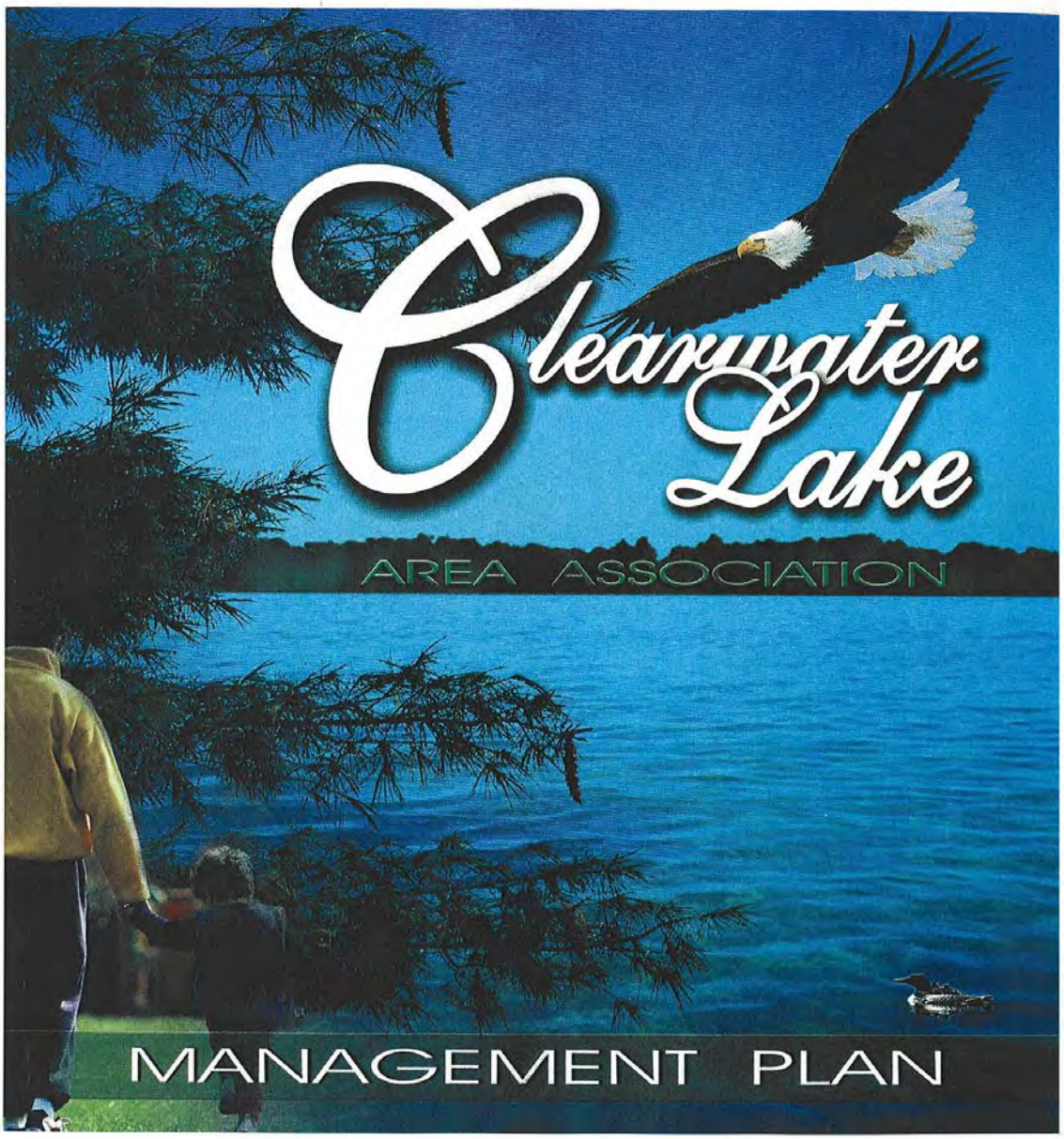

Clearwater Lake
AREA ASSOCIATION
MANAGEMENT PLAN

Contents

Clearwater Lake Area Association
Mission Statement

The Clearwater Lake Area Association shall improve and maintain the environment and quality of life through education, awareness and responsibility of our community for ours and future generations.

CLEARWATER AREA LAKE ASSOCIATION VISION STATEMENT

The Association will attempt to do all possible to protect the environmental, and recreational qualities of Clearwater Lake and its vicinity.

This will be accomplished by:

- Working in conjunction with federal, state, local, private and public agencies and landowners to monitor, maintain, and improve the water quality of the lake and its watershed.
- Working in conjunction with these groups to encourage the implementation of projects and practices that protect and improve the quality of water entering the lake from the Clearwater River.
- Minimizing negative impacts to the lake from development, recreation, and agriculture by providing educational information and resources for protecting the quality of the Clearwater Lake area and its wildlife.
- Provide input to MNDNR, Section of Fisheries in development of fisheries management plans, setting long-range goals and working cooperatively to implement management strategies.
- Having a Government Committee to effectively communicate the Association's interests on political issues that affect the Clearwater Lake Area.
- Informing our membership of all concerns, civic and otherwise.

This Association will maintain its non-profit, non-stock organization status while maintaining its values and goals for generations to come.

Section A.
Survey Results

Clearwater Lake Property Owners' Survey
Results Description

Introduction

This report provides an analysis of the Clearwater Lake Property Owners' Survey. The purpose of this report is to communicate the findings of the survey to Clearwater Lake area property owners, residents, governmental staff, and the general public in order to facilitate discussions regarding sustainable lake planning. Particularly during meetings meant to develop a lake management plan. The survey assessed characteristics of the property, property owners' use of Clearwater Lake, concerns about Clearwater Lake, and opinions concerning potential ways to solve these concerns.

Data Collection

A comprehensive property owners' survey was mailed to all property owners, area residents and government agencies in September 2001. After an October deadline, follow up notices were sent to all non-respondents. The questionnaire was returned by 62% of the property owners (78 of 131). 4 notes were returned, which stated that the survey could not be returned for various reasons.

Methods

The survey responses were entered into a Microsoft Excel spreadsheet and tables were developed using the Excel program. Frequencies, means, and percentages for each portion of each question were obtained by using functions available in the Excel program. Each number in the tables corresponds to the percent of all property owners responding similarly to the individual question. Therefore, the summation of each row in each table will equal one hundred percent.

With some of the tables (e.g. Table 6), the responses in each table are listed by their means (other tables are organized by frequency or percentage). For example, respondents ranked algae growth as the highest overall problem on Clearwater Lake because this type of problem had the highest mean of 5.38 (see Table 6). The mean was determined by giving a number to each response option when entering them into the Microsoft Excel spreadsheet. Not a problem was entered as a one, slight as a two, moderate as a three, serious as a four, and very serious as a five. A mean of "3" shows that it is a "moderate" problem. Each response's mean value was tabulated by a similar method. All the tables are organized by either the severity of the problem, the highest number of days property owners participated in a recreational activity, or by the strength of support for a specific management action.

Responses to the Clearwater Lake Property Owners' Survey

Initial Question

Table 1: Do you own property on Clearwater Lake?

Response	Frequency*	Percent
Yes	61	83.6
No	7	9.6

*Respondents = 68; non-respondents = 5

Section 1: Characteristics of the Property

Table 2: Does this property have shoreline frontage on Clearwater Lake?

Response	Frequency	Percent
Yes	68	95.7
No	3	4.2

Source: Question 1

- Of the responses that answered no, one stated that they do have property rights to the lake, none stated that they did not have property rights to the lake.

Table 3: How Many feet of shoreline frontage does this property have?

Response	Frequency	Percent
1' - 50'	14	20.8
51' - 100'	12	17.9
101' - 150'	13	19.4
151'+	26	38.8
Other	2	2.9

Source: Question 1

Table 4: Which statement best describes how your household used this property during the last 12 months?

Response	Frequency	Percent
Spring, summer, fall use (mostly on weekends, holidays, vacations)	13	18.8
Year-round use	13	18.8
Summer use (mostly on weekends, holidays, vacations)	10	14.4
Spring, summer, fall, winter use (mostly on weekends, holidays, vacations)	10	14.4
Summer use (most or all of the time)	8	11.5
Other	8	11.5
Not used at all	7	10.1
Rental	0	0

Source: Question 2

Table 5: Which statement best describes this property?

Response	Frequency	Percent
The dwelling is suitable for warm weather use only	22	31.4
The dwelling was built originally as a year-round structure	21	30
There is no permanent dwelling on the property	13	18.5
The dwelling is suitable for year-round use and was converted from a seasonal dwelling	11	15.7
Other	3	4.2

Source: Question 3

- On average, the dwellings around Clearwater Lake were built in 1967.
- On average, seasonal dwellings were converted to year round structures in 1986.
- On average, Clearwater Lake properties came into ownership of the current owners or their families in 1908.

Section 2: General Impressions of Clearwater Lake

Table 6: To what extent do you feel each of the following to be a problem on Clearwater Lake?

Response	N*	Not a Problem	Slight	Moderate	Serious	Extremely Serious	Don't Know	Mean
Algae growth in Clearwater Lake	67	1.4	11.9	25.3	22.3	28.3	10.4	5.38
LW Pollution from storm sewer runoff (Bagley)	70	1.4	10	14.2	15.7	44.2	14.2	4.07
Aquatic plant growth in Clearwater Lake	68	2.9	4.4	20.5	27.9	35.2	8.8	3.97
Overall water quality	71	5.6	25.3	29.5	23.9	8.4	7	3.04
Lake water pollution due to agricultural runoff	71	8.4	22.5	18.3	15.4	12.6	22.5	3.02
Sediment build up near river inset S side of lake	69	11.5	14.4	26	8.6	13	26	2.96
Lake shore erosion	68	17.6	22	17.6	17.6	13.2	11.7	2.85
Lake water pollution due to animals grazing	72	25	19.4	18	8.3	5.5	23.6	2.34
LW Pollution from agricultural chemical spraying	71	19.7	19.7	12.6	5.6	5.6	36.6	2.33
Inadequate response of public officials to your concerns	76	28.9	7.8	13.1	10.5	9.2	23.6	2.26
LW pollution due to faulty/substandard septic systems	76	17.1	22.3	17.1	5.2	1.3	36.8	2.23
Improper alteration to shoreline made by property owners	68	32.3	19.1	11.7	5.8	1.4	29.4	1.94
Zoning ordinances are not followed	71	39.4	15.4	7	1.4	5.6	30.9	1.82
Inadequate public safety(i.e. fire, health, emergency, law	68	39.7	23.5	5.8	7.3	1.4	22	1.81
Water level fluctuations on Clearwater Lake	70	48.5	22.8	10	7.1	1.4	10	1.78
Family health concerns caused by ag. Chem. Spraying	72	44.4	11.1	5.5	1.3	4.1	33.3	1.64
Neighbors causing disturbances (noise)	67	58.2	20.8	5.9	1.4	2.9	10.4	1.55
Improper burning of leaves and brush	69	49.2	17.3	4.3	2.8	0	26	1.47
Inadequate public service (roads)	70	65.7	11.4	10	1.4	1.4	10	1.46
Well water contamination due to ag. Chem. Spraying	71	39.4	14	1.4	1.4	0	43.6	1.37
Well contamination	70	51.4	8.5	5.7	1.4	0	32.8	1.36

Source: Question 7

*N's may vary due to some respondents not answering every question.

Table 7: For the problems on Clearwater Lake that you thought were moderate, serious or extremely serious, give us more details.

Response	Frequency	Percent
Weeds	14	29.2
Water quality	14	29.2
Run off	6	12.5
Bagley Sewer	6	12.5
Road grading	2	4.2
Pollution	1	2.1
Law & Order	1	2.1
Zoning	1	2.1
Roadside spraying	1	2.1
Swimmer's rash	1	2.1
Inadequate response public officials	1	2.1

Source: Question 8

Table 8: Over the past five years, would you say the overall quality of Clearwater Lake is what?

Response	Frequency*	Percent
Getting Worse	30	51.7
About the same	19	32.8
Getting Better	9	15.5

Source: Question 9

*Respondents = 58; non-respondents = 11

Table 9: Over the past five years, what if anything has gotten particularly better?

Response	Frequency	Percent
Lake Association doing good job	8	25
Water quality	7	21.9
Nothing	3	9.4
Public education	2	6.2
Litter	2	6.2
Pollution	2	6.2
Bagley sewer	2	6.2
Fishing	1	3.1
Jet Skis	1	3.1
Improved sewers	1	3.1
Loon nesting	1	3.1
More crayfish	1	3.1
Wildlife	1	3.1

Source: Question 10

Table 10: Over the past five years, what if anything has gotten particularly worse?

Response	Frequency	Percent
Weeds	23	50
Water quality	6	13
Pollution	3	6.5
Erosion	3	6.5
Bottom mucky	2	4.3
Algae	2	4.3
North Shore road	1	2.2
Can't say	1	2.2
Can't get worse	1	2.2
More people	1	2.2
Loud Boat	1	2.2
Jet skis	1	2.2
No fish	1	2.2

Source: Question 11

Table 11: Would you support working with other agencies to secure the use of a weed harvester?

Response	Frequency	Percent
Maybe	30	47.6
Yes	19	30.1
No	14	22.2

Source: Question 12

Table 12: Are you willing to share in the expense of removing weeds from your lake frontage?

Response	Frequency	Percent
Yes	25	36.2
No	23	33.3
Maybe	21	30.4

Source: Question 13

Table 13: Write several words or phrases that express why you value living on or near Clearwater Lake.

Response	Frequency	Percent
Beautiful	15	27.8
Peaceful	10	18.5
Serenity	8	14.8
Fishing	4	7.4
Home on lake	3	5.5
Quiet	3	5.5
Wildlife	2	3.7
Good	2	3.7
Great	2	3.7
Heaven	1	1.8
Restful	1	1.8
Work on lake	1	1.8
Low boat traffic	1	1.8
Activity around lake	1	1.8

Source: Question 14

Section 3: Use and Impressions of Clearwater Lake this Past Winter

Table 14: From November 2000 through February 2001, estimate how many days members of your household used Clearwater Lake for the following activities.

Response	N*	0 Days	1 to 5	6 to 10	11 or more	Mean
Other/Being Outdoors	1	0	0	0	100	4
Hiking/walking	47	31.9	31.9	10.6	25.5	2.29
Ice fishing (in a fish house)	48	45.8	16.6	22.9	14.5	2.06
Snowmobiling	48	60.4	12.5	4.1	22.9	1.89
Ice fishing (without a fish house)	43	53.4	32.5	6.9	6.9	1.67
ATV Riding	47	63.8	25.5	0	10.6	1.57
Snow shoeing	48	70.8	18.7	2	8.3	1.48
Cross-Country skiing	47	65.9	25.5	4.2	4.2	1.47
Dark house spearing	47	82.9	8.5	2.1	6.3	1.32
Ice skating (other than hockey)	45	84.4	13.3	2.2	0	1.18
Hockey	44	97.7	2.2	0	0	1.02

Source: Question 15

*N's may vary due to some respondents not answering every question.

Table 15: Given the conditions on Clearwater Lake this past Winter, November 2000 through February 2001, how do you feel about each of the following actions?

Response	N*	Strongly Support	Support	Neither S/O	Oppose	Strongly Oppose	Mean
Prohibit use of snowmobiles during certain times (e.g. 10 pm - 6 am	48	12.5	16.7	41.7	8.3	20.8	3.08
Reduce current 50 mph speed limit for snowmobiles on Clearwater Lake	50	16	14	48	12	10	2.86
Be more aggressive to service the trash containers at the public landings	48	18.7	33.3	43.8	4.2	0	2.33
Provide more trash containers at the public landings	46	15.2	36.9	47.8	0	0	2.33
Be more aggressive in the enforcement of safety rules and regulations	49	22.4	34.7	38.8	0	4.1	2.28
Post signs warning and advising of hazards and/or thin ice	50	34	24	96	32	2	2.2

Source: Question 16
*N's may vary due to some respondents not answering every question.

Table 16: To what extent do you feel each of the following was a problem on Clearwater Lake during the past Winter, November 2000 through February 2001?

Response	N*	Not a Problem	Slight	Moderate	Serious	Extremely Serious	Don't Know	Mean
Hazardous ice chunks left on the lake by spear house users	46	21.7	15.2	13	2.1	19.5	28.3	2.76
Litter left on the lake by fish house users	45	17.7	26.6	8.8	11.1	4.4	31.1	2.39
Catching too few fish	45	33.3	13.3	6.6	13.3	8.8	24.4	2.35
Litter at the public landings or on the access roads	46	10.8	26	8.6	2.1	4.3	48.9	2.29
Lk. Users operating motor veh. Or snowmobiles in unsafe manner	45	31.1	17.7	6.6	2.2	2.2	40	1.81
Not enough law enforcement on the lake	46	45.6	8.6	4.3	8.6	2.1	30.4	1.75
Lake users being inconsiderate	45	46.6	13.3	11.1	0	2.2	26.7	1.61
Trespassing on your property by lake users	46	58.6	15.2	2.1	2.1	4.3	17.4	1.53
People on ice during unsafe ice conditions	43	39.5	18.6	4.6	2.3	0	34.9	1.53
Noise from snowmobiles on the lake	44	54.5	15.9	4.5	0	2.2	22.7	1.44
Too many fish houses on the lake	44	56.8	6.8	0	6.8	0	29.5	1.39
Lake users drinking alcoholic beverages	44	50	9	4.5	2.2	0	34.1	1.38
Too many snowmobiles on the lake on weekends or holidays	46	60.8	6.5	2.1	2.1	2.1	26.1	1.35
Too many people on the lake on weekends	46	63	6.5	0	2.1	2.1	26.1	1.29
Too many snowmobiles on the lake on weekdays	46	65.2	2.1	2.1	2.1	2.1	26.1	1.29
Vandalism of your property by lake users	46	71.7	1.3	0	6.5	0	19.6	1.27
Vandalism of your fish house by lake users	43	55.8	11.6	0	2.3	0	30.2	1.27
Unskilled snowmobilers on the lake	44	47.7	6.8	4.5	0	0	4.09	1.27
Too many people on the lake on weekdays	46	67.3	4.3	0	0	2.1	26.1	1.18
Too much law enforcement on the lake	45	60	4.4	2.2	0	0	33.3	1.13

Source: Question 17
*N's may vary due to some respondents not answering every question.

Table 17: For the problems that you thought were moderate serious or extremely serious, give more details about what the problems were.

Response	Frequency	Percent
Fishing poor	5	20.8
Ice chunks left on ice	4	16.7
Litter	3	12.5
Snowmobiles on private land	2	8.3
New owner - doesn't know	2	8.3
Dam area needs law enforcement	2	8.3
Complaints	1	4.2
Alcohol	1	4.2
Too many spear houses	1	4.2
Stocking lake	1	4.2
Not here winters	1	4.2
People on ice too early	1	4.2

Source: Question 18

Section 4: Use and Impressions of Clearwater Lake this Past Summer

Table 18: From March 2001 through October 2001, estimate how many days members of your household used Clearwater Lake for the following activities.

Response	N*	0 Days	1 to 5	6 to 10	11 or more	Mean
Walking/hiking	66	22.7	10.6	12.1	54.5	3.14
Pleasure boating (in motorized boat)	65	18.5	21.5	9.2	50.8	2.92
Fishing from a boat	66	18.2	22.7	18.2	40.9	2.82
Swimming	67	11.9	31.3	20.9	35.8	2.8
Fishing from shore or dock	65	30.8	33.8	10.8	24.6	2.29
Photography	64	39.1	18.7	20.3	21.9	2.25
Gardening	66	50	9.1	10.6	30.3	2.21
Birding	63	49.2	17.5	1.6	31.7	2.16
Water skiing	73	46.6	19.2	6.8	27.4	2.15
Paddle boating	68	51.5	22.1	11.8	14.7	1.9
Canoeing	63	50.8	27	12.7	9.5	1.81
Snorkeling	60	73.3	15	6.7	5	1.43
Kayaking	63	88.9	6.3	0	4.8	1.21
Boardsailing	63	92.1	3.2	1.6	3.2	1.16
Scuba diving	63	90.5	7.9	0	1.6	1.13
Jet skiing (personal watercraft)	62	95.2	1.6	0	3.2	1.11
Sail boating	61	91.8	4.9	3.3	0	1.11
Waterfowl hunting	63	92.1	7.9	0	0	1.08

Source: Question 19

*N's may vary due to some respondents not answering every question.

Table 19: To what extent do feel each of the following was a problem on Clearwater Lake during the past Summer, March 2001 through October 2001.

Response	N*	Not a Problem	Slight	Moderate	Serious	Extremely Serious	Don't Know	Mean
Noise from loud boat motors	66	28.8	27.3	18.2	6.1	10.6	9.1	2.37
Noise from jet skiers (personal watercraft)	67	38.8	20.9	14.9	1.5	14.9	8.9	2.26
Catching too few fish	68	35.3	25	16.2	4.4	10.3	8.8	2.22
Litter at public landing or on access roads	66	16.7	37.9	10.6	4.5	3	27.3	2.17
Litter in the lake	65	30.8	36.9	18.5	1.5	3.1	9.2	2
Too many jet skis on the lake on weekends or holidays	67	52.2	17.9	4.5	4.5	10.4	10.4	1.92
Unskilled jet skiers (personal watercraft)	65	40	21.5	7.7	0	6.1	24.6	1.82
People being inconsiderate	66	57.6	15.1	9.1	7.6	3	7.6	1.74
More boats speeding on the lake	66	51.5	27.3	6.1	1.5	4.5	9.1	1.68
Too many jet skis on the lake on weekdays	66	66.7	6.1	6.1	4.5	6.1	10.6	1.63
Not enough law enforcement on the lake	66	66.7	7.6	3	4.5	4.5	13.6	1.53
Too many boats on the lake on weekends or holidays	66	63.6	19.7	4.5	1.5	3	7.6	1.49
More larger boats using the lake	66	65.1	10.6	7.6	1.5	3	12.1	1.48
Fishing tournaments	69	73.9	10.1	4.3	1.4	2.9	7.2	1.37
Fishing "disturbed" due to overcrowding of the lake	67	64.2	14.9	7.5	0	0	13.4	1.34
People drinking alcoholic beverages	66	68.2	10.6	3	1.5	1.5	15.2	1.32
Unskilled boaters	67	55.2	14.9	3	0	0	26.9	1.28
Trespassing on your property by lake users	66	80.3	9.1	1.5	0	3	6.1	1.26
Unsafe boating conditions due to overcrowding on the lake	67	82.1	4.5	1.5	1.5	0	10.4	1.13
Too many people fishing on weekdays	55	78.2	10.9	0	0	0	10.9	1.12
Vandalism of your porperty by lake users	66	89.4	1.5	1.5	0	1.5	6.1	1.11
Too many boats on the lake on weekdays	67	86.6	4.5	0	0	1.5	7.5	1.11
Too many people fishing on weekends or holidays	65	73.8	12.3	4.6	0	0	9.2	1.08
Too much law enforcement on the lake	67	83.6	0	1.5	0	0	14.9	1.03

Source: Question 20
*N's may vary due to some respondents not answering every question.

Table 20: For the problems that you thought were moderate, serious, or extremely serious, give more details about what the problems were.

Response	Frequency	Percent
Boat noise	9	33.3
Jet skis	5	18.5
Trash in water	3	11.1
Don't fish	1	3.7
Inconsiderate skiers	1	3.7
Tournaments	1	3.7
Wake zone	1	3.7
Poor law enforcement	1	3.7
Dam Area	1	3.7
Inconsiderate fishermen	1	3.7
Need one direction for skiers	1	3.7
Noise	1	3.7
Stock lake more	1	3.7

Source: Question 21

Table 21: Given the conditions on Clearwater Lake this past Summer, March 2001 through October 2001, how do you feel about each of the following actions?

Response	N*	Strongly Support	Support	Neither S/O	Oppose	Strongly Oppose	Mean
Lower the water level of Clearwater Lake	64	4.7	4.7	51.6	21.9	17.2	3.42
Limit the size of motors on the lake	65	15.4	10.8	33.8	15.4	24.6	3.23
Raise the water level of Clearwater Lake	66	10.6	10.6	51.5	13.6	13.6	3.09
Establish speed limits for motorboats on Clearwater Lake	67	16.4	11.9	40.3	10.4	20.9	3.07
Establish speed limits for motorized watercraft in high use periods	64	15.6	15.6	37.5	15.6	15.6	3
Be more aggressive in the enforcement of safety rules and regulations	71	14.1	25.3	43.7	8.4	8.4	2.72
Prohibit jet skis (personal watercraft) on the lake	60	28.3	16.7	3	16.7	8.3	2.6
Limit hours of jet ski use on the lake	66	25.7	37.9	16.7	9.1	10.6	2.41
Be more aggressive to service the trash containers at public landing	55	18.2	34.5	43.6	1.8	1.8	2.34
Provide more trash containers at the public landing	63	14.3	49.2	33.3	1.6	1.6	2.27
Provide better control of rough fish	67	28.3	35.8	31.3	4.5	0	2.12
Be more aggressive in aquatic plant control in lake	66	50	36.4	10.6	1.5	1.5	1.68
Provide more stocking of game fish	68	45.5	45.5	8.8	0	0	1.63

Source: Question 22
*N's may vary due to some respondents not answering every question.

Table 22: Given the fishing conditions on Clearwater Lake the past few years, how do you feel about each of the following actions?

Response	N*	Strongly Support	Support	Neither N/O	Oppose	Strongly Oppose	Mean
Fishing pressure on Clearwater Lake is more than the lake can sustain	65	6.1	6.1	67.7	13.8	6.1	3.08
Special regulations protecting medium and large Northern Pike	68	13.2	19.1	51.5	8.8	7.3	2.78
Special regulations on walleye fishing such as slot limits	69	17.4	23.2	44.9	7.2	7.2	2.64

Source: Question 23
*N's may vary due to some respondents not answering every question.

Section 5: Household Information

- The average size families residing in each household around Clearwater Lake homes and cabins was 3.

Table 23: Do you have overnight guests (one night or more)?

Response	Frequency*	Percent
Yes	56	87.5
No	8	12.5

Source: Question 25

*Respondents = 64; non-respondents = 9

Table 24: If you have overnight guests, identify the frequency of stays.

Response	Frequency	Percent
Occasionally	34	60.7
Weekly	8	14.3
Monthly	10	17.9
Annually	1	1.8
Holidays	3	5.4
Other	1	1.8

Source: Question 25

Table 25: How many licensed watercraft(s) does your household own that were used on Clearwater Lake during the past 12 months?

Response	Frequency	Percent
Fishing Boats	60	36.8
Canoes	32	19.6
Paddleboats	21	12.9
Pontoon Boats	19	11.6
Speedboats	14	8.6
Kayaks	6	3.7
Rowboats	3	1.8
Sailboats	3	1.8
Bass Boats	2	1.2
Sailboards	2	1.2
Personal Watercrafts (Jet Skis)	1	0.6
Seaplanes	0	0
Other	0	0

Source: Question 26

Section 6: Connection with the Clearwater Lake Area Association

- 96% of all the respondents were aware of the Clearwater Lake Area Association.
- Of those aware of the lake association 75% are members, 25% are non-members.

Table 26: What are three important things the Clearwater Lake Area Association can do to better serve you, your household and Clearwater Lake?

Response	Frequency	Percent
Water quality	18	38.3
Weeds	5	10.6
Stock walleyes	4	8.5
Trash pollution	4	8.5
Management plan	2	4.2
Lake Association doing good job	2	4.2
North shore Drainage	1	2.1
Emergency service	1	2.1
Newsletter	1	2.1
Too many Federal & State Laws	1	2.1
Water etiquitte	1	2.1
Erosion	1	2.1
Bagley sewer	1	2.1
More law enforcement	1	2.1
Roads to islands needs bigger culvert	1	2.1
Road maintenance on North Shore	1	2.1
Unhappy with public officials	1	2.1
None	1	2.1

Source: Question 28

Table 27: Any other comments you would like to make about Clearwater Lake and the Clearwater Lake Area Association?

Response	Frequency	Percent
Water quality	8	25.8
Good lake board	6	19.3
Active membership	4	12.9
Work with other government agencies	2	6.4
Cars parked on road by bridge	1	3.2
Lake overcrowded	1	3.2
Lake Association is good social event	1	3.2
Survey biased	1	3.2
More Law enforcement	1	3.2
Weeds	1	3.2
No meetings on holidays	1	3.2
None	1	3.2
Fishing quality	1	3.2
Stock fish	1	3.2
Sign at road with lake owner's names	1	3.2

Source: Question 29

Table 28: Would you be willing to volunteer your time for Clearwater Lake Area Association projects?

Response	Frequency	Percent
Maybe	28	41.8
Yes	25	37.3
No	11	16.4
Need more information	3	4.5

Section B.
Identified Areas of Concern

Clearwater Lake Area Association
Identified Areas of Concern

Areas of Concern:

Hillside erosion was identified as an area of concern causing sedimentation into the lake from sluffing.

Solutions Identified:

- A possible solution identified to hillside erosion could be individual property owners planting trees, shrubs, and grasses to deter erosion.
- Individual property owners could place riprap on their shoreline.
- Educating Clearwater Lake Area Association members and property owners about the rules, regulations and who to contact. Also, let them know about any cost sharing opportunities that are available.
- Drop the lake level

Septic Systems were identified as an area of concern with regard to upgrades and compliance. Clearwater Lake is in both Clearwater County and Beltrami County. All property owners on the Clearwater County side were made to come into compliance a few years ago. It is reported that all but two property owners on the Clearwater County side of Clearwater Lake are in Septic System Compliance.

Solutions Identified:

- "Lobby the Beltrami County Commissioners, as a lake association, for adoption of stricter requirements. On the other hand, if the issue is that Beltrami County is not enforcing in-place DNR requirements, then force Beltrami County to enforce compliance.

The need for a **Governmental Committee** was identified. This committee would be a small representative group for the CLAA to represent our interests in political matters so the membership can make meaningful decisions.

Solutions Identified:

- Attend government agency and county meetings and report back so the membership can make meaningful decisions. An example would be issues concerning feedlots.

  Note: A government committee was set up and work has been started with a local group attempting to set up a COLA.

Self-Policing through neighborly communication was identified as an area that could be helpful.

Solutions Identified:

- Enlighten uninformed neighbors about lakeshore volunteer programs (i.e. U of MN Extension Shoreland Volunteer Program.)
- Inform neighbors about the Clearwater Lake Area Association in an effort to increase membership participation and meeting attendance.

Fishery Concerns were identified by observation of the numbers and kinds of fish being caught in Clearwater Lake. A DNR Fisheries Survey is being conducted in July 2002.

Solutions Identified:

- Enhance spawning areas.
- Voluntary creel survey was suggested. Perhaps asking fishermen to complete a survey as they exit the public access.
- Increase the frequency of surveys.

Water Quality was identified as an area of concern for Clearwater Lake. The water quality issues involve nutritional loading, weed growth, exotics, siltation, algae bloom and oxygen deprived water.

Solutions Identified:

- Continue studies and testing through the project. When results of the studies are given to us then we need to continue by implementing recommendations.
- Use phosphorous free fertilizers
- Educate lakeshore owners about septic systems. If county agencies do not require compliance then ask for voluntary compliance of septic systems.
- Pursue government assistance with cost sharing of projects, low interest loans for projects and grants.
- Educate lakeshore owners about shore land restoration and buffer strips. Possible demonstrations regarding this.
- Continue to keep an eye on sewer and storm water run-off from city upstream.

Noise and Traffic Pollution was mentioned. This was identified as a minor concern.

Solutions Identified:

- No solutions suggested.

Environment was discussed. This concerned physical, aesthetic and social environment.

Solutions Identified:

- Improve

Education was identified as a concern. The need to inform and continue to update stakeholders is important.

Solutions Identified:

- Educate stakeholders regarding issues of lakescaping, erosion, public laws, and political issues.

  Education through ongoing meeting attendance at seminars, establishment of a web page and Newsletter.

Section C.
Lake Case History

The Tale of Two Clearwaters, Lake and River
A Co-Biography

Roster of
the loyal fans and friends of the Clearwaters, Lake and River, who contributed to the telling of their story

The Volunteer Committee:

Monte Mason - Researched and wrote the history of the South West Area of the lake and contributed to "Lake Lore."

Helen Widerski - Researched the history of the East Side of the Lake

Ralph Gustafson - Co-research the early history of the Lake and River.

June Gustafson - Co-researched and wrote the early history of the Lake and River and the history of the Northwest area of the Lake

Corrine Richards - Researched and wrote the East Side.

Dick Richards - Historical information person.

Arvilla Livingston - Researched and wrote the history of the North Shore area.

Skip Anderson - Researched and wrote the tribute to Wes Westrum

June Gustafson, Project Chairman

The Other loyal lake and river fans and friends who were local history sources

Ernie and Charlotte Stoker
Orville and Ardys Bjerke
Gary Bjerke
Bruce and Debbie Bjerke
George Boorman
Al Johnson
Phil Johnson
Carroll Anderson
Carl and Margaret Johnson Seeman
Ole Johnson
Louan and Tom Hendrickson
Marcy Useldinger
Lillian Helgeson

The Tale of Two Clearwaters, Lake and River - a Co-Biography

How does one small obscure body of water like Clearwater Lake, tucked way up north in Clearwater County, Minnesota, get to be the subject of a biography?

Particularly in the state where there are 15,000 other beautiful lakes with very similar or even better qualifications?

It's precisely because Clearwater Lake is in Minnesota.

That's the "The Land of Lakes," where it's a given that every one of those 15,000 beautiful, ageless glacier lakes of all shapes and sizes, is each thought of as being a singular body of water!

Each has its own distinct personality!

Collectively they may be called the jewels in Minnesota's "Crown of Glory," but separately, each one of them is considered to be an individual gem.

Of course every one of these bodies of water big enough to be called a lake has its own name. And just as important, each lake, large or small, has its own loyal group of resident admirers.

You can bet your bottom dollar that every one of those loyal fans thinks of his or her lake as "the Greatest" — Our Hide-Away-From-The-World, Our Personal Shangri-La, My Soul Home, Our Pot of Gold at the End of the Rainbow, and even "Golden Pond."

So it's not so strange that a group of "resident admirers" of Clearwater Lake, when offered the opportunity, grabbed the chance to honor the "object of their affections" the best way they knew how. By writing a co-biography of her and her Perpetual Partner, Clearwater River — like the old song, "You Can't Have One Without the Other."

There's a precedent for this display of sentiment — Mark Twain was known to have honored his favorite river with this compliment: "The Mississippi is a 'wonderful book' [with] a new story to tell every day." We all know that his passion was sharing those enjoyable stories with others. Of course, Clearwater Lake is no Lake Superior and Clearwater River is no Mighty Mississippi, but their story, the co-biography of the Clearwaters, Lake and River, doesn't need to be as big as Mark Twain's Mississippi "book" to be an enjoyable story, too.

Actually, the desire of resident admirers to honor their lakes has been going on a long, long time. In fact, there's an old saying that goes, "There's always been a love affair between Minnesotans and their lakes!" Evidence is readily available to prove the point. That wonderful "love affair" has been going on for a very long time.

The way history has it, the first permanent Native Americans of the North Country could very well have been the ones who set the example. They were the Dakota Sioux, with a reputation as fierce warriors who, sometime before 1600, settled in the territory that was to be Minnesota. Fortunately, they were also a poetic people who revered their lakes and rivers. The following is an example.

Have you ever asked yourself why anyone would name a lake "Red Lake"? Evidently a goodly number of people have. In fact, there was a long, contentious controversy about that subject that went on for over a hundred years and was not resolved until 1887. According to the *Historical Review of the Red Lake Reservation*, Rev. Joseph Gilfillan, a missionary at the Red Lake Reservation who had done years of research on the subject, was given credit for settling the argument. The following is a segment from Rev Gilfillan's report:

To [the Dakotas], Red Lake was 'the lake of red water.' 'Misquagumiwi sagaiigun,' meaning: It is so called from the color of the lake, reflecting redness of sunset, on a calm summer day when unruffled by wind and in a glassy state, at which time it is of a distinctly wine color. [Could there possibly be a more romantic expression of affection?]

There was another beautiful poetic legacy that the Dakotas left for those of us who came after. It was both the word, "Minisota" and its meaning, "waters that reflect the sky," describing the beauty of its bodies of water

Some two hundred years later in the late 1700's, the Dakota Sioux were driven out and replaced by the Ojibway, but the tradition carried on. These new people were definitely "Early Waterways Admirers." To them, reverence for waterways was so much a part of their lives that it was an important element of their legends and one of the basic tenets of their religion. One of their beliefs was that "Water was the life-blood of Mother Earth and waterways were its vessels."

A book of Ojibway legends, collected by the half-Indian wife of Henry Schoolcraft, and published in 1832, was given credit by Henry Wadsworth Longfellow as being the inspiration for his famous poem, *The Song of Hiawatha.* For many years every school kid in the Midwest, at some juncture of his or her education, came to know Hiawatha, his Minnehaha, and "Gitchi Goomi, the shining big sea waters." For many of those students, seeing the world around them through the eyes of a Native American was a new and wonderful experience. [Incidentally Hiawatha could be thought of as our first Native American "folk hero," couldn't he.]

The Introduction

So here is Clearwater Lake! Besides being one of the 15,000 gems in Minnesota's "Crown of Glory," she is also one of eight other Clearwater Lakes in the state. And she is one of two Clearwater Lake-and-Clearwater-River partnerships in the state. [The other is in Wright County.]

Considered one of the Headwaters Lake Group, up in the North Country, Clearwater Lake has the unusual distinction of being located in two counties, Clearwater County and Beltrami County. For the past 100 years she has been in that unenviable and uncomfortable position of "sitting astride" a county line, thereby being saddled with the divided obligation of being legally and politically responsible to both counties

The following is what happened to her in 1902 when the powers-that-be decided that large-tract counties like Beltrami County needed to be divided into more equitable sizes.

When the redrawing that would downsize Beltrami was done, it became apparent that Clearwater Lake would end up being, smack dab atop the new dividing line. Being faced with such a "Solomon-size" decision of trying to keep everybody happy, what would those solid citizens do about a sticky situation like that? An educated guess might have it that, after the long, tiring discussion that usually goes on at a time like this, the good gentlemen decided to just pick a spot on the northeast shore of the lake and draw a line from that point across the map to an opposite spot on the southwest shore. Then the chairman declared, "The east part goes to Beltrami County and the west part goes to Clearwater. So Be It!" Down came the gavel and they called it a day, put on their hats and coats, and headed home.

Clearwater County is one of those picture postcard counties up in the North Country with a wonderful atmosphere of serenity that just won't quit. Beautiful winding roads curl around, over and past rolling hills dotted with a terrific mix of lakes, all 168 of them. Small, interesting towns are tucked in amid farm fields and pastures. All of this is interspersed and laced together with interesting wetlands and patches of woodland, just dense enough to evoke fleeting memories of the grandeur of "forests past." Clearwater Lake was lucky that her "Glacier pothole" had, by chance, been dug out in a super-choice spot. It was one in which she would grow up with those primordial forests and still end up, all those years later, comfortably nestled down in one of the few beautiful patches of "forests past" that are still around!

In 1832, Henry Schoolcraft literally put the still future county on the map. It all came about because, for the previous hundred years or so, there had been a deadly serious competition among the area adventurers and explorers, both foreign and local, to find the elusive source of the Mississippi River. At that point, he and all of his fellow competitors had repeatedly failed in their efforts.

This occasion would be marked with a bit more fanfare. This time he was representing the United States government in his do-or-die try for the title of being the discoverer of the "Source" — which just happened to be a small lake in the southeast corner of the future Clearwater County. Of course, Henry won the contest and by doing so, forever sealed that county's place in history!

Two little known facts of the illusive source story:

Of all the competitors, foreign and local in the century long contest, Schoolcraft accomplished the deed by being the one who finally got around to figuring out the simple solution for the problem — choose the right guide! In his case, it turned out to be a local knowledgeable Ojibway, one Oza Windib, who of course knew the area like the back of his hand and who had even tried earlier to convince Schoolcraft that the "Source" was a small lake, variously known as La Biche, (meaning "deer," "doe," or "roe," courtesy of some French explorer) — or Omushkos, the Indian name for Elk Lake.

As soon as the location was established, Schoolcraft immediately pronounced its name to be Lake Itasca. Unfortunately, "Itasca" was not an Indian name, as many have thought. It was a made-up one that Schoolcraft and one of his subordinates pieced together that morning from the Latin words for "truth" (veritas) and "head" (caput). They wrote the words together (verITASCAput) and then cut off the first and last syllables (itasca). Thus Lake Itasca.

It was recorded that, within twenty-four hours after the momentous discovery of the source of the Mississippi, the "man-of-the-hour" and his entourage were on their way back to Washington and to the acclaim that awaited him. Nothing was said about what Oza, the guide, did. [NOTE: Eventually Schoolcraft was sharply criticized and did lose some of his "luster" because he had "forgotten" to mention Oza Windib or give him the recognition he deserved until pressured to do so.

Lake La Biche or Omushkos now became famous as Lake Itasca, along with her attached mini-river with its equally famous "stepping stones" — those half dozen strategically placed rocks that so conveniently afford every visitor who comes to the site the coveted chance of having a picture taken "walking across the SOURCE of the Mighty Mississippi!"

The following tidbits involving Clearwater Lake and Clearwater River may be interesting only to trivia buffs, but here goes, anyway—

Did you know that Clearwater County, "at 47 degrees north latitude and 95 degrees north longitude, is close to being the Geographical Center of North America"? [According to the Clearwater County Historical Society's web site.]

Did you also know that Clearwater County also shares another distinction, this time geological, that of being located atop or beside the Great Continental Divide, along with Beltrami and a few of the other sister counties. The Great Divide, or Giant Rift, was a huge crack in the earth that millions of years ago split the North American continent from Minnesota, way out through Kansas. The big crevice was then filled up with hot lava from the depths of the earth, turning it into one big long "snake of land" that presented quite a "flowing" problem for the new glacier rivers that came along later. The waters on the north side of the Divide were supposed to flow toward Hudson Bay, on the east side toward the Atlantic, and on the south toward the Gulf of Mexico.

Maybe that's why, on a Minnesota map, those poor confused and wandering rivers come off looking like a bunch of inebriated night crawlers hunting around for the nearest exit.

Beltrami County, the east part of the Clearwater Lake ownership, is the interesting county that proudly sports road signs along county road 89 telling the world about its location on the "Top of the World," the Continental Divide.

Clearwater Lake was the center of the Headwaters Lake Group, which also included Bemidji, Cass, Itasca, and Red Lakes. These were the big sister lakes that were key elements of the important North End Section of the Headwaters String of Lakes. From the earliest times, the quintet figured prominently in the political, commercial, and other good and bad activities that transpired along the Mississippi flowing south.

Clearwater Lake was located close enough to the source of the Mississippi River to be considered a bone fide member of the Headwaters Area Lake Group. Unfortunately she was also just far enough out of the away to miss being right in the middle of all the action in which her sister lakes reveled — on their way to making history!

* * * * * * * *

Now that we've established Clearwater Lake's identity and location, it's time to return to the Clearwater Lake of the present. Today she is at the zenith of her popularity! Much admired and cared-for by her resident fans.

For anyone lucky enough to share the annual springtime ritual with her, it's pure magic: watching the change from the dead gray-brown pallor of late winter as it slowly changes into the bright promise of renewal and wanting only to enjoy the magic of her newness. What a mind-boggling experience it is then to remember that for thousands upon thousands of springtimes before, Clearwater Lake has "been there, done that!"

That leads us back to the beginning of the story — The Tale of Two Clearwaters, a Lake and a River, ("Co-Bio of Two Partners in Perpetuity") — a tale that began so long ago, no one today knows with any degree of certainty exactly when that was or what it was really like.

Many people have spent years studying and researching the beginning of the world and have come up with some good ideas, all the while acknowledging that their findings contain some facts and just as many "educated guesses." That frees us to "wing it."

So here goes——

Once Upon A Time, millions of years ago, there were mountains in Minnesota. Also, just as surprising and spectacular, there are fossils and seashells that we can now look at and touch today, tested and proven evidence indicating that at another time, possibly even longer ago, there had been a tropical sea covering the place.

Vicious volcanoes and earthquakes shook things up from time to time over the eons. Then came the ice ages, with their crudely efficient glaciers that rearranged the landscape as they rolled back and forth, back and forth for thousands of years at a time. So, by the time the earth got around to having its age counted in the "thousands of years ago" periods, the mountains had all but disappeared. They had become so worn down by the elements, that all there was left of them was a collar of deep and solid rock that circled the top of the earth. The upper half of land that would be Minnesota along with the top parts of other Northern States and Canada were a part of the collar. According to an article, "Itasca State Park: Giant Trees and Peaceful Lakes," on the Wilderness Inquiry website (http://www.wildernessinquiry.org/itasca/area_history.html), samples of that rock hauled up from deep drilling of 680 feet down in Itasca Park tested out as being about 2.1 billion years old. That's ancient!

Thousands of years would pass, alternating back and forth between warm periods of hundreds to thousands of year's duration, then back to the deep freeze for another ice age. That's when the ice-mountains, Nature's bulldozers, were programmed to endlessly rumble and crawl back and forth over the unimaginably old hard-rock target-terrain. Sometimes for thousands of years at a time, those earth movers and rock crushers would spread out hundreds of miles, going about their recycling job of tearing the rock up, breaking it up, cracking it up and then pulverizing what was left.

That's the way they turned the old useless collar into new, useful material like boulders, rocks, stones, sand and silt. Plus they pulled off the neat trick of rearrang-

ing the face of the earth into a thing of beauty. Such a bargain — two for the price of one. Now it's back to basking in another warm period.

The Wilderness Inquiry website suggests that the present form of Itasca's lakes and rivers [and her sister lake, Clearwater] were the result of being buried for thousands of years under glacial ice. That's the polite way of saying that Clearwater Lake's beginning was just about as lowdown and dirty as it could get! A sorry existence it was, being a "pothole" that had been gouged out of the rock by one of those mile high mountains of ice and facing a dismal future of eventually being reamed out more and more. Then it was to be stuffed with passing ice debris while being imprisoned in a dark underworld for more thousands of endless, frigid and water-sodden years.

Of course, "partner" Clearwater River's origin would have been a similar version of the same imprisonment. Only, in his case, he would have started out as a string of long crooked scratched furrows dug into the rock by the same kind of the dagger-point of ice that reamed out his partner's "pothole."

Now for another little happy surprise — Wilderness Inquiry website tells us that, "Unlike northeastern Minnesota, which was covered in ice until about 10,000 years ago, Itasca [and the nearby Clearwater county area] lay under the Wadena Lobe [evidently a smaller size auxiliary iceberg] in the last ice age. The Wadena Lobe retreated from the Itasca area about 20, 000 years ago, giving it a longer human history and an independent natural and geographical history." [Practically every other research source has had this area's "coming out party" as 10,000 years ago, like all of the others in the North Country.] The article continues with the information that the lakes and rivers of the area were formed by leftover ice masses buried under glacial debris. The land is a glacial moraine, a mound of sand, gravel and other debris left behind as the glacier melted and receded. [Hold that good thought during your next trip over to Bemidji by way of Debs.]

Time passes. The newly "de-iced," immature glacier lakes will be known as "kettles," and many times were surrounded by small deposits of silt and sand left by the glacier that were called "knobs."

* * * * * * *

Now the Intrepid Twosome is out from under its long, frigid, down and dirty, years of incubation under the glacier. A few thousand years of meltdown and run-off were all it took for them to be liberated, and ready to go.

Still a little kettle, our Clearwater Lake, surrounded by her protective knobs, is all settled down, ready to work toward becoming a full-fledged lake. Forty miles to the south her partner, Clearwater River, too, is hunkered down in his "source" of energetic springs preparing him for his trickling debut as a new river, dribbling and crawling through his waiting world of wetlands toward his ultimate goal.

The 10,000 years head start the Bio-Buddies and their territory have had will unfortunately mean a long wait for the other less fortunate glacier potholes and gouged-out scratches still stuck under their ice mountains waiting for their big "melt down" to be turned into the giant lake, Lake Agassiz. It spread out about 750 miles long and 250 miles wide covering most of what is now northwestern Minnesota, the Dakotas and a large area north into present day Canada. Its eastern beaches were said to have reached as far as the northwest third of Clearwater County area. In fact one of the boundaries came to within two miles of Clearbrook, the Edge of the Great Bog. The local historical society placed an identifying marker near the Windsor School.

Time passes, and passes. Finally the "Marvelous Make-Over and Facelift" debuts. The old worn out, worthless, rock-bound territory has been turned it into a new, fertile wonderland of plant and animal life.

All of those 15, 000 former "potholes" have now entered their next stage of development, all turned into kettles, each surrounded by its own knobs. The same routine is true for neophyte rivers whose water supply has been initiated by the bubbling springs in their sources. They are all hard at work generating the necessary "push" to keep those now-small trickles of water moving! Up and out, crawling around to find the wetlands with the "right stuff" water levels. Preferably they'll have enough downward tilt so they slide down faster and pick up more speed while pulling in more of the precious wet stuff as they go.

That's the way Clearwater River is about to begin his seminal journey to maturity.

That brings us to the vignette of two Clearwater Lake's "Admiring Fans" who took it upon themselves to do a pale imitation of Henry Schoolcraft — trying to find Clearwater River's "source" and then follow its "growing up" journey. After foolishly making some of the same mistakes as Schoolcraft, these two "contemporary explorers" decided to do what he finally had done, find person or persons who "knew the lay of the land." Straight forward and simple. A local man said, "Just go back out to Highway 2 and turn right. About 3 miles down the way, almost to Ebro. There'll be a patch of wetland with several active springs. That's it!" Not very impressive, but it's the only spot near that fits the description. So that's where the embryonic river takes off — probably just as a junior size trickle among the cattails when the tiny line of water makes the original move that ends up heading east.

On through the swamps, the Clearwater River creeps. Then working his way on through some lowlands so

mucky and marshy, it's amazing that this little, not quite a creek, could still keep his header moving ever eastward to and through Second Lake. Now it's on through another area just south of a road today called Hog Road in today's Bagley to and through First Lake.

By now Little Clearwater River is definitely more than a creek and has been picking up momentum and increasing in size as he cruises along. Some distance past Bagley, his path begins to turn a bit to the north but still definitely continues to head east. Then he encounters the first real obstacle in his path, possibly an edge of the Continental Divide, and finds himself doing a sweeping curve, which ends up going due north.

Now his true carefree, wandering personality begins to show as he smoothly negotiates his passage through and past twin side-by-side lakes, both named Buzzle, Big Buzzle and Little Buzzle. On he goes, now zigging and zagging on his way north toward the next tempting wetland. That turns out to be the one between him and Clearwater Lake.

Sliding and gliding through the little Clearwater Lake's introductory slue and subsequently joining waters with this small lake is a breeze — a slick passage as smooth and casual as Clearwater River's encounters with the previously friendly "Buzzle Twins" had been, without a ripple. That is, until his restless nature began to assert itself, signaling "the party's over." It is time for the "passing through move."

That's when stark reality sets in— it doesn't always take something big like the Continental Divide to dictate the direction a glacier river should run! A small innocent-looking lake like Clearwater Lake can turn out to be one formidable 60 to 70 feet-deep former kettle that is so firmly hunkered down that her "knobs" all along the east and north sides turn out to be very tall cliffs. And as for the contours of the rest of her lakeshore — with the small exception of the south part where he'd come in — it is just as ominous, with rolling embankments of considerable proportions, too high for any hope of negotiating.

Since rivers don't retreat, the Clearwater River's position spelled only one conclusion — trapped!" Fortunately for him and history, another of his powerful urges, that "water always seeks a lower level to propel itself forward," took over and was finally able to locate the right low level spot in a narrow opening over in the northwest area. That's it! Finally free!

"All's well that ends well." Now the Clearwater River is off and running again, rippling along his merry way. This time it's "westward ho" with only a slight listing to the north. His path does angle just far enough north to mark the borderline around the southwest corner of the Red Lake Reservation as it is today. Then he climbs just enough farther northward to meet and share a short "portage distance" between him and the Red Lake River — the beginning of another serendipitous relationship as they follow their parallel pattern of westward movement. For him it will be another one of those lucky encounters that boded well for his future. These two rivers will later become "The Two Major Water Ways to the West" — key avenues of transportation, for moving material and people from the Headwaters area westward to key distribution points in the western side of the state.

The Red Lake River path eventually curved right, flowing toward the future city of Thief River Falls. Clearwater River, at almost the same juncture, negotiated a duplicate maneuver to the left, and passed through the spot where, many years later, there would be the town of Red Lake Falls.

Continuing on, Clearwater River joined up again with Red Lake River and wandered on over to a spot to be the town of Crookston. That move definitely sealed the two rivers into the future "symbiotic partnership" that history will record was a joyride for both of them.

The Next Addition — Humanoids.

The stage is set for the next Epoch. This time it will feature a new addition, Humanoids, They have been called the Paleo Indians, nomadic hunter-gatherers who are said to have appeared, or possibly reappeared, sometime around 9,000 years ago. Information about them is very sketchy and open to discussion, but most "educated guesses" seem to have it that the ancestors of this group of very early humanoids had likely been here in the distant past. They had probably "gone south" as the latest Ice Age and its menacing glaciers crept up on them.

For generations, these people could have been waiting in warmer southern border areas, waiting for the big meltdown so they could return. This time around they were going to be in for a big surprise. The old home country would be sporting a terrific new look that had turned it into "Eden." On the whole, they evidently weren't impressed, because most of them didn't hang around very long.

However, those who stayed left valuable clues. Paleo People were known to have been in the area that is now Clearwater County. Evidence has been unearthed indicating that they did leave a few bits of interesting information. One was an artifact indicating that they had domesticated dogs that long ago. Also there are remnants of an ancient site from the same period that has been unearthed in Itasca Park. It has come to be called the Great Bison Kill and was a spot where these people had evidently driven their prey animals into some kind of trap to harvest them. Great Bison were said to have been prevalent in the area surrounding Lake Itasca so chances are that the area around Clearwater Lake in

Clearwater County, which isn't all that far away, would probably have been equally well stocked with the beasts at one time.

During the next four or five thousand year, more advanced nomadic Native Americans, who were part of the vast swirling movement of Native American peoples all over the continent of North America, would, from time to time, check out the Headwaters area. Other early ones like the Eastern Archaic people did pass through Clearwater territory and the Mississippi source area from time to time, but only fleetingly and again left very little evidence of having been there.

However the next group, the Woodland Indians, also known as the Mound Builders, later arrivals from large centers of culture in Ohio and Illinois, definitely made a deeper impression. A couple of reputable sources recorded that in the beginning, their population in the north country area was definitely on the sparse side — that is, until a dramatic change occurred.

Actually the credit probably should go to some local cook who, around eight hundred A.D., came up with the idea that the seeds of one of the water plants in the shallows of their lakes could be good eating when cooked! And later on, with an even more valuable stroke of brilliance, someone also hit upon the idea that the seeds could also be dried and stored for a long time, all ready to be taken out and cooked some cold day the next winter. Wild rice ("manooman" in Ojibwa) was discovered!

Sometimes the smallest incidents do make some startling major changes in the flow of events. Those who have studied such things feel that manooman (wild rice) was probably the prime reason that the Woodland Culture people began to prosper and increase their numbers. This led to their becoming so powerful that, even with the incursion of other tribes, including the equally powerful Mississippian Culture, they still remained dominant.

Today there are very few physical reminders left of the Woodland Mound Builders, as well as the Mississippi and Illinois Cultures. Of the estimated 10,000 burial mounds, built by them around Minnesota's lakes, only small numbers still exist. Most were destroyed through lumbering and agriculture activities.

American tribes of Dakotas, Lakotas, and Sioux, with other lesser tribes in Iowa and Missouri, had considered themselves to be a Nation. Consensus seems to have it that eventually, sometime before 1600, this Dakota Sioux Nation had spread out and taken over most of the area that would later become the state of Minnesota. They continued to populate this land for the next couple of hundred years. Up in the Mississippi Source Country, including Clearwater Lake and River territory, the Seven Dakota Tribes were the ones who held the power. Called the O-ce-ti-sa-ko-win, or the seven council fires, they included the Teto, Yankton, Yanktonai, Wahpekute, Wahpeton, Sisseton and the Mdewakanton. Although they were the most powerful group in the area, they certainly weren't alone. There were always "wannabes" around, ready to challenge them from all sides.

Small villages were the way of life for the Dakotas, with general fraternization only on special occasions. As Clearwater Lake was only ten miles or so south of the center of activity in and around Red Lake, it must have been the home site for one of those Dakota villages.

Humanoids a Few Hundred Years Later

Information in the "Pre-Ojibwa Inhabitation of Northern Minnesota" chapter of the book, *Historical Review of the Red Lake Indian Reservation* (co-published in 1957 by the General Council of the Red Lake Band of Chippewa Indians and the Beltrami County Historical society), generalizes that, during the 1600's and 1700's, the North Country Indian population was in the state of turmoil, as was the rest of the population of the area to be Minnesota. All kinds of Indian tribes were constantly on the move from one place to another, here and all over the surrounding states and territories, basically vying for power and the property. It was a wild, wooly and interesting period in Native American history.

Intrigue was rampant. "Today's friend" would likely be tomorrow's enemy, and vice versa. Many well-known tribal groups were involved in the constant round of petty conflicts and stealthy raids, punctuated by Peace Powwows which led to short lived truces to regroup and continue the pattern of sporadic incidents. This ever-changing scenario that our Bio-Buddies must have witnessed and been a part of continued its existence until the addition of new and very interesting players as part of the cast. These newcomers were the white Europeans.

Clearwater Lake's First Big Adventure

Clearwater River's meandering encounter with Clearwater Lake is about to pay off. It has already led to his partnership with the Red Lake River creating the only water "throughway" to the west. Although it does not seem to be officially recorded anywhere, the two rivers must have had something of a monopoly on canoe travel west, when later, all the explorers, fur traders, missionaries and adventurers of one ilk or another descended upon the place and needed transportation. Canoes on the two westward waterways were the big thing. Explorers, working for their countries, needed to cover as much territory as possible as quickly as possible, to discover, to map, to name and to claim. Missionaries needed to get around to do what missionaries did. Fur traders, beside introducing commerce and industry to

the New World, were engaged in public relations and planting the first seeds of colonization, as we shall see later. Adventurers had as many self-serving reasons for dashing around as there were adventures.

Up to now, the rest of the world has been going on its way, not having much effect upon the doings of the North Country and the existence of our Bio Buddies. The following is one of the rare exceptions. We've all heard of the fur trade of the North Country.

Would you believe that it all came about because of a hat? A beaver hat, yet!! Hats made of a couple of beaver pelts, that had first been stripped of their coarse outer hairs and then made into pieces of fine felt that could be molded into hats. Some of these could be said to have resembled the ones that the Pilgrims wore, or later, more of them looked more like President Abe Lincoln's famous stovepipe model.

It was in the 1600's, according to the *Story of Trapping and Fur Trading in Minnesota,* that the first white men known to travel into what is now Minnesota were two French fur traders, Pierre Radisson and Sieur de Groselliers. They came from Quebec in 1655 to explore and trade. Early French trappers and traders who followed in their footsteps were independents, known as the "couriers de bois" or the "bush rangers" who lived, trapped and traded with the Indians during the winters. In the spring they would go back east to trade their furs for the next round of supplies and trade goods. These were the ordinary adventurers who freely adopted the Native American ways and would have been the ones familiar to Clearwater Lake and River.

By 1700 these independents had been mostly replaced by the big fur companies with their own employees called the "voyageurs" or travelers to transport the furs back and supplies out to the field again. Two fur companies dominated the market, the French Northwest Fur Company and the Hudson's Bay Company out of England. Montreal in Canada and Grand Portage in Minnesota were the so-called "fur centers." Winters were the hunting and trapping seasons. But come spring and it was loading up to travel! Canoe traffic, probably on Clearwater and Red Lakes traveled from the western and northern woods to the outer trading posts, for the shipping to trading posts on Upper and Lower Red Lake. Then on the freight went by large "freighter canoes" to Grand Portage, to end up in Montreal. The voyageurs had a only a few days to relax and celebrate a bit before they had to start paddling against time in the mad rush back west to beat freeze-up time.

In the early 1800's, the newly formed country, the United States, was concerned with protecting its own interests in the fur business. John Jacob Astor, an upstart entrepreneur founded the first American fur company, The American Fur Company, and came to Minnesota to compete with The Hudson's Bay and the Northwest Fur Companies. Coincidentally, in 1816 the new U.S. Congress passed an Act prohibiting foreigners from engaging in the fur trade within the U. S. How about that? J. J. Astor's American Fur Company enjoyed a monopoly for the next thirty years — until silk hats became all the rage, sending the fur trade into a dive, along with the Astor enterprise.

By this time on lakes like Clearwater, the beaver dams were empty, deserted, their occupants gone. According to the Wilderness Inquiry website, the thriving "back to normal population" that we have today is due to a most timely gift from neighbors to the north, some generous Canadians, who sent four of the little fellows to Itasca Park to exert their best efforts, repopulating the sadly deficient area. One of them died. Obviously the others did a superb job.

There were quite a number of the Frenchmen who accepted the Indians' hospitality, at first from necessity, then later, because they enjoyed the lifestyle so much. Many changed their permanent address to Northern Minnesota, took women of the tribe as their wives, and raised families. In winter, the Dakota lived in teepees, poles covered with buffalo hides. In summer they had bark covered summer cottages on camp grounds. Clearwater Lake could very well have been the site of one of the small, winter or summer villages.

Trappers and Indians going and coming from the trading posts on the east and west sides of Red Lake would have had Clearwater River sharing canoe traffic with Red Lake River on the Water Highway. That's where the action was — east, west, north and south, you name it, during the hectic fur trade period. Another era has ended for the Clearwater Buddies but the Water Highway West was "just getting started!" Busier, more hectic and more exciting days would be yet to come for the Co-Bio Duo and their partners Red Lake and Red Lake River.

Some of the most well known of the early North Country adventurers, explorers and missionaries who must have been among Clearwater's clientele of the period — Radisson, Sieur du Luth, Father Hennepin, David Thompson, Nicollett, Henry Schoolcraft, Lewis Cass, Zebulon Pike and Giacomo Beltrami, to name a few — are probably more familiar as names of cities, streets, counties and lakes in Minnesota.

One of the most interesting and colorful characters was Ciacomo Constantino Beltrami, an Italian blueblood, who, no matter what his own version was, has been documented as having taken up exploring and adventuring chiefly because he had been handed a one-way ticket out of Italy, all because back in the old country he had held a position of some importance in the Italian government, until he was accused of plotting to establish a separate Italian republic.

Evidently, after getting bored with traveling and "doing" the social scene in northern Europe, Beltrami decided his destiny lay in a try at "the new world." He arrived in Philadelphia in 1823 and quickly made the acquaintance of an Indian agent named Taliaferro. The two of them set forth by steamboat, shipped down the Ohio and up the Mississippi and then to Pembina on the Red River. Then they talked their way into joining a military exploring expedition continuing on the Red River. At some point Beltrami either insisted upon leaving the military protection to continue his exploration all on his own, with a pair of Ojibwas and a mixed-blood interpreter, or as noted in another version, because of his contentious behavior, Beltrami was kicked out to go it alone. Then the military took pity on him and had a native guide him.

According to his notes, Beltrami began his crisscrossing marathon of the North Country from the junction of the Red and Thief River to Red Lake, conservatively enough, at first — going by canoe, back and forth between Clearwater River and Red Lake River, exploring on side trips while taking voluminous notes. Soon his tempo kicked up to "presto." Engaged in even more frenzied exploration, he produced countless pretentious pronouncements in his volumes of feverishly scribbled notes. In addition, he counterfeited maps made by other people of places he claimed to have explored and mapped but was known to never have done.

He did take time to name a lake, Lake Julia, for "a dear dead friend," or was it "his long lost love" or "his current something or other"? You name it. He pronounced himself to be the first white man to set foot in North Country to be the discoverer of the source of the Mississippi - that source was Lake Julia.

Finishing off the five months it took to make himself the "leading authority" on his chosen subject, he left the North Country. He had evidently decided that the best and quickest way to achieve his goal of the moment was to become a best selling international author. He moved to New Orleans and spent the next winter publishing his initial literary gem in French. In English it would have been *The Discovery of the Sources of the Mississippi and of the Bloody River,* an expensive hodge-podge of his reams of conclusions, arrived at from little or no evidence and lots of imagination. One of his more controversial pronouncements was that the Red Lake was named for the "Blood of the Dakotas' enemies as it flowed in the water." The brouhaha concerning the correct meaning of the Dakota word for Red Lake lasted almost a hundred years until Rev. Gilfillan, the Red Lake Missionary, after years of extensive research and a lot of publicity, finally settled the matter and took a bow.

In 1828 Beltrami published his most celebrated work entitled *A Pilgrimage in Europe and America, leading to the Discovery of the Sources of the Mississippi and Bloody River; with a Description of the Whole Course of the former and of the Ohio.* This two-volume tome was set up in the literary form of letters addressed to an Italian countess, perhaps the Julia of Lake Julia. Unfortunately for the poor fellow, his only claim to fame was having a county in northern Minnesota named for him.

The Old Order Changeth

The next Native Americans to take over the North Country were the Ojibway, variously described as "unusually sharp," "more advanced," and "quick learners." They were members of the historically famous Iroquois Nation and were also alleged to have been chased out of their homeland on the east coast on something of a regular basis for years and years by some of their Iroquois cousins.

According to their legends, guided by their religion, the Ojibway wandered around rather aimlessly, mostly westward, "looking for their promised-land" and ended up in the Michigan and Wisconsin Territories around the early 1600's. They finally moved up into the northern part of the Wisconsin Territory and then gradually eased on into the area around Lake Superior.

In the era of fur trade, the Ojibways showed a flair for the commercial life and acquired quite a reputation as agents for fellow tribes in bargaining beaver pelts and other furs for goods with the European buyers. They were the first Native Americans to become bona fide members of the "Fur Trading Entrepreneurs" dealing with the likes of the famous French fur traders, Radisson, Nicollett and fellow American, John Jacob Astor,

As the beaver population dwindled in the Wisconsin area, depleting their trading stock, the Ojibways needed to push their commercial enterprise west of Lake Superior into the Dakota Territory. That would be easier said than done. Described in several resources as "seeming fearful" in their early encounters and business dealing with the Dakotas, their reputation became established. However, by the early 1700's, the scene began to take on a different hue. They had not only grown considerably in numbers but also in knowledge of the enemy, the "Nadowas," as they later called the Dakotas.

According to Dakota historians, the Ojibway had been collecting guns, generously supplied them by the French trappers who were unhappy with the Sioux and wanted to get even because the Sioux drove a hard bargain. The Sioux only did this because the Frenchmen continually tried to take advantage of them. The other French version was short and simple. The Sioux were double-crossing the French so the French were getting even.

But to continue. The Ojibwas had also been honing their marksmanship to become warriors, while playing politics with their allies among the other tribes in the area. So it was bound to happen! On the pretext of

avenging a wrongful murder of an Ojibway family, they planned a "surprise" for their long entrenched and evidently complacent neighbors, the North Country Headwaters Dakotas. They did it by charging over and making them "a 'moving' offer they couldn't refuse!" It took battle after battle and skirmish after skirmish. Experts disagree somewhat, but the general consensus is that it actually took them between 50 to 100 years to accomplish "one of the longest moves on record!" They certainly couldn't be faulted for lack of tenacity!

As noted in the *Historical Review of the Red Lake Indian Reservation*, the end was made official with a pronouncement by a chief of the Red Lake band. "Wa-wonje-gwon, an aged and intellectual Chief of Red Lake in 1850 stated that from the date of the expedition of Jean Baptiste Cadotte in 1792 or 1793 can be dated the settlement of Red Lake permanently by the Ojibwas." In other words, the Ojibwas had finally succeeded in kicking the Dakotas out for good.

Then there was the early anecdote, also courtesy of the *Historical Review of the Red Lake Indian Reservation*, about a sorry little drama that could have been titled, the Dakotas Last Stand. It was about as productive as Custer's Last Stand, some fifty years later. It went like this.

In the early 1800's, a group of ten Dakota lodges of Dakota Indians succeeded, for a number of years, to occupy the headwaters of Thief River where it empties into the Red Lake River [at present-day Thief River Falls].

Here they managed to live from year to year in fear, but in their rich hunting grounds, evading and escaping the search of Ojibwa war parties. They built high embankments of earth around their lodges for defense, so as not to be noticed by passing or searching Ojibwa. They even discarded the use of their guns, because of the loud report made by them which might give their location away, and reverted to the use of their primitive bows and arrows in killing their wild game for food.

The Assiniboins and Crees finally learned of their existence and notified the Ojibwa who organized a War Party and after a fierce battle the Dakotas were entirely annihilated.

That must be some record for proving your point! Think it was worth it?

* * * * * * *

So for the next hundred years, during the 1800's, Clearwater Lake and Clearwater River were a part of Chippewa Territory. The following are snippets from the *Historical Review* about what it was like for the Clearwater River and Lake to have the Chippewa as their new landlords and neighbors:

1830—Fur traders had been at Red Lake earlier but about this time [the Ojibwa] people began to settle here permanently to form one of the oldest villages in Northwest Minnesota, with a population of 70 men, 90 women, 130 children for a total of 290 Chippewas. The first mission was established here in 1842.

1843—The Red Lake Indians were so successful in raising grain and vegetables that they supported many families who came and wintered at the reservation to escape starvation. The Red Lake band were known to be thrifty farmers even before the whites came.

1848—The Territory of Minnesota was formed.

1851—J.P. Bardwell, Indian Agent, reported that the Red Lake School was in a prosperous state.

1871—An estimate of the Red Lake pine [cut and sold] was set at 50,000,000 to 75,000,000 feet.

1872—The Red Lake band had very large crops and built many houses.

1873—The first record of a school being built by the government was this year and it has a capacity of twenty students.

1875—The first Red Lake Post Office was established at Red Lake.

1878—A new Agent reported good progress at Red Lake in acquiring the ways of civilization such as dress and methods of living.

1879—A store was started at Red Lake by W. R. Spears.

1889—During the 1889-1890 11million feet of lumber was cut on the Reservations in this season by 300 Indians and 8 whites [Timber cutting continued the several-million-per-year pace until 1895.]

1893—Red Lake began to show itself as a growing and prosperous little village about this time. There were hotels or stopping places and stores, with traders' supplies larger than anywhere in that part of the country. Many settlers and homesteaders passing through stocked up with groceries and supplies for their journey ahead. Beltrami County was not organized until 1897. Mr. Spears moved the post office into his hotel.

189—John G. Morrison opened a hotel.

1896—Ceded reservation land was opened for settlement to homesteaders on May 15.

Starring Roles in the Lumber Drama

The lumber business that had been gradually creeping over from Wisconsin and Michigan and up from southern Minnesota since sometime in the later 1850's finally began arriving in the North Country during the late 1800's. It brought with it characters straight out of Horatio Alger books, talented guys with the humble beginnings all chasing the "American Dream," the buzzword of that era. Several of these All-American, "rags to riches" guys were the principle actors in the Headwaters Country Lumber story. Most of them had started out as loggers, then worked up to cruisers, strollers, mill owners and eventually ending up as the entrepreneurs whose mission in life was to live out the "American Dream" of becoming rich and powerful and famous.

The local "dreamers" were Thomas B. Walker, who was the first to log Clearwater and Beltrami Counties, with Sumner Bagley and Tom Shevlin following close behind. And that was just the beginning. Soon there was a crowd. In Minnesota, most of them were from out of state, immigrants hailing from the east coast, looking for the next frontier of opportunity to open. The majority got their starts working a while in the woods for experience. The next step for the really ambitious ones was to borrow enough money to "by hook or by crook" get their hands on a small stand of local timber land so they could log it out, build a little sawmill in Minneapolis — and they were in business!

For many, the rest of the way turned out to be a life of "boom or bust." T. B. Walker was one of the more colorful examples. His mode of operation was usually to acquire miles and miles of timber, preferably white pine, than he could pay for. Therefore he was continually involved in a cycle of making deals, going broke, recovering, and going back to making big money again. In the end, his dream of fame and fortune seems to have come true. Today there are a town in northern Minnesota and an art gallery in Minneapolis that bear his name.

By the late 1800's the supply of timber was on the way to being depleted so the "dreamers" were already working their way northward, clearing as they went. The Headwaters area with its miles and miles of topnotch virgin forests and well-placed waterways, like the Clearwaters Lake and River, was tantalizingly out of reach because of bogus surveying. It was the U.S. Government land survey, setting up legal boundaries for counties, townships acreages, etc. all over the country, which would ultimately lead to issuance of claims to potential buyers. At last in 1875 immediately after publication of all of the survey maps, the floodgates opened, and the land was made available.

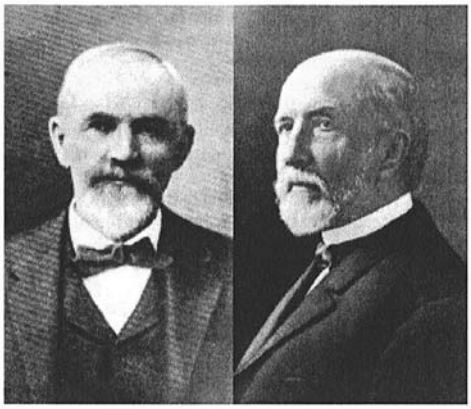
Manipulating something called "scrip" was one of the newer imaginative ways of acquiring the precious acreage. "Scrip" was a kind of loosely negotiable legal tender handed out by Uncle Sam after the Civil War to various select groups such as Civil War veterans, Indians, "half breeds" (offspring of Native American wives and non-native American husbands), etc. Representatives of the Minneapolis "Big Boys" were swarming all over the place acquiring scrip, which could be used to get the best timberlands. Scrip was usually bought from the holder for $50 per forty acres, plus the commission for the agent.

Thomas B. Walker used still another equally imaginative approach. He had somehow managed to get himself a job as a surveyor on the previously mentioned land survey project. As he went about his surveying job for the U.S. Government, he was also surveying for himself, picking out the best stands of timber for him to obtain later. Like the fable of the fox guarding the chickens, he was way ahead of the game. That's how he acquired some of the best timber in the area in Beltrami and Clearwater Counties.

Clearwater Lake's Debut as the Dominant Partner

Clearwater Lake has had a very minor role in the story up to now but all of that is about to change. The Treaty between the Chippewas and the U. S. Government would change the allegiance of the two Clearwaters once more, this time to that interesting "joint-tenancy" situation involving Clearwater and Beltrami counties. And it will see them undergoing the biggest change in their mode of existence since the other really big one they underwent when they got out from under a glacier, way back when.

After eons of knowing only the serene existence of a forested world, with small clearings, the two Clearwaters become part the process of turning that world into another that will consist of large clearings with small patches of forest. Even the changes brought about by the intrusion of the explorers, missionaries, fur traders and adventurers a couple of hundred years ago is no preparation for what they and the Native Americans, who have shared the habitat, are about to experience. This era will spin them into a world of "wild and wooly" adventures like nothing they've ever experienced before.



Sumner Bagley **Thomas B. Walker**

The first and largest logging operation in Beltrami [and Clearwater Counties] before 1895 was the one on the Clearwater River. T. B. Walker owned a good deal of this stumpage originally and early in the 1880's he started logging it. Sumner C. Bagley, one of the "Boys from Maine" to become lumber barons, was formerly Walker's chief "walking boss" and later his main logging contractor. He could be called the other half of the earliest lumber barons in the Clearwater Lake and River world.

The logging story continues with excerpts from oral interviews collected by Charles Vandersluis in his book *Mainly Logging.* These excerpts provide information about T. B. Walker and Sumner C. Bagley, pioneers in the logging industry in the Clearwater and Beltrami Counties.

Bagley came to Fosston in the winter of 1882 and took out a homestead in section 17, two miles south of town, in the fall of 1883.

Before the Crookston mill was built by Walker in 1883 Bagley [drove logs on] the Clearwater River [through Clearwater Lake] into the Red Lake River and into the Red River clear to Winnipeg. After 1883 all of the logs stopped at Crookston. Sometime in there the reservoir dam was built two miles west of Pinewood and called Bagley dam. For a long time it served as a bridge across the Clearwater River for settlers coming into the country. The best timber was right in there, west and a little north of Pinewood. There were big trees from Solway down to Shevlin. There was nice timber south of Bagley too. Bagley always said that the logs he brought down Walker Brook, southeast of Bagley, into the Clearwater, were the largest on the river, but there weren't more than three or four million feet of them all together.

At the time of the final bust Walker had a lot of logs in the Clearwater River with no market for them; so in 1883 so he built a mill at Carman, across the river from Crookston. He continued operation until about 1893 when he became short of money and couldn't buy logs. The Minneapolis Banks would not let him have any money because he had made a remark against a certain bank that had foreclosed on a logger to get $600,000 worth of property for a $200,000 mortgage. As a result of this Tom Shevlin stepped in, bought up timber tributary to Crookston and the reservation timber when it was open for sale in 1896. Walker sold his mill and timber to Shevlin in 1897 and concentrated on his mill at Akeley.

The Clearwater River heads [had its source] in the vicinity of Ebro, flows east to the vicinity of Pinewood and then north to Clearwater Lake and west to join the Red Lake River at Red Lake Falls. [Before logging could start, Walker needed to clean out the Clearwater River, so it was said that he dredged, widened and cleared the first fifty miles of it to facilitate movement of logs.]

Logging on the Clearwater had started at Second Lake west of Bagley with driving out of there. Passage down the Clearwater was slow. At one point logs had to go around seventeen bends to gain one mile. Settlers received $4.00 per thousand for white pine and $3.00 a thousand for Norway, and the logs had to be flawless. Settlers saved rejects until a portable sawmill came to the area and they then could use the lumber for building up their farms.

About 1888 Bagley built the large Bagley reservoir dam which had a big flowage and backed up water almost to Bagley. It had a 16-or 20-foot head of water, and the logs had to be towed across the flowage or the dam opened enough to create a current.

Continuing north on the river seven more dams were built to keep the logs moving. Some of the dams that were thrown up early were piles of dirt with a few logs. Later others, totally of logs, were added. Outfits from the size of Walker's and Bagley's to the medium to small partnerships and on down to the one-man operations of the settlers- turned-wannabe loggers were in a frenzied whirl of activity. They frantically tried to get as many trees as possible cut down, getting "their mark" on the resulting logs, scrambling to get them hauled down to the Clearwater as fast as they could, to join the cross-country drive to the mill where the money, money, money was!

Walker dam was the first built, the second the Bagley dam that backed up the water some fifteen miles to almost the town with that name. It later washed out. Then there was the Copley dam. According to one of the oral histories,

There was a cluster of dams including Nelson and Noonan in the Buzzle Lake region, over by Pinewood

and Solway, controlling water entering the Clearwater R. from the east. Buzzle Creek entered Little Buzzle Lake from the east then flowed into Big Buzzle Lake and then into the Clearwater River. Only two or three miles above Clearwater Lake there was a dam they called Burnt Stove dam, where there were some rapids.

At the outlet [on the west side] of Clearwater Lake, some say Bagley built a dam of logs and dirt, where the old White Earth-Red Lake Indian trail crossed Clearwater River at Neving's place, others disagree. It was later replaced with another log one constructed by the government, that raised the level of Clearwater Lake about 8 feet. Neving homesteaded that site. A logging out fit camped on the north side of the Clearwater Lake, one of Bagley's.

The two Clearwaters, at this point in time were the heart of the operation. Clearwater River was the sole means of collecting and moving the logs that were constantly accumulating at the multitude of entry points along the miles of banks from the header lake at Ebro to be deposited at the main holding and staging center, Clearwater Lake.

The Native Americans at the Red Lake and White Earth Reservations were also in on the lumbering business in a major way. Their yearly reports on timber cut, varied between 11,000 000 to 15, 000,000 feet per season. [From the *Historical Review of the Red Lake Indian Reservation*)

Another important part of the picture was the logging camp. Those were literally all over the place. Descriptions by a couple of old timers quoted in Mainly Logging should prove the point.

Camp # 2 of the Clearwater Logging Company, run by Bert Gray, was a hold-over from Lammers Brothers and north of the headquarters camp about midway between present-day Aure and Debs and several miles east of the old road, but is on the west side of the new road which was build through a swamp. Bert Gray's camp was on the south end of the swamp.

The camps evidently varied greatly in size. There were some housing more that three hundred workers and others accommodated as few as twenty-five.

Bert Gray's big camp had a cook camp, a sleeping camp and a barn over the hill. Most of the logging took place east of there. There was also another Bert Gray camp 21/2 NW of Debs. Another Bert Gray camp was in section 27 of Roosevelt. A Bert Gray camp was later used as a town hall for years. It was just a shack.

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Who were the lumberjacks?

What was it like to be a Logger? And who were the loggers? In the following excerpts from *Driving on the Clearwater and Red Lake Rivers,* Fred Cyr relates some of his experiences as a logger on Clearwater River and Clearwater Lake. His story begins:

My complete name is Fred E. Cyr and I was born March 4, 1882. . . My birthplace was in Polk County at that time but now is in Red Lake County, about a mile out of Red Lake Falls on the Clearwater River near where it runs into the Red Lake River. As a young boy I played on the logs coming down the river past our home and I got to be well acquainted with the drives. We could tell when the logs were coming because the water became roiled. We watched for that and saw it year after year. The next day the chips would come down and then it wasn't very long until the logs would come. We were always anxious to see the drivers. They had calks in their shoes and made tracks on the shore. We kids looked at those tracks and thought that sometime we would be log drivers. At that time I didn't know where the logs came from, but later on I found they came from around Bagley and Solway. Some of our friends were working for Bagley who was the big logger, and I suppose he started around 1890. Large water reservoirs were held up around those towns for the spring drive and those logs were driven down to Crookston and perhaps to Grand Forks. . . .

I grew up on the farm and when I became a young man I left there to go to work. There wasn't much to do [around Red Lake Falls] at the time. We could either drive logs or work in the woods; so when I was seventeen I went to work in the woods toting supplies. My father sent me to Solway with a team to tote for J. C. Parker. [Parker was one of the logging company owners in the Clearwater River-Clearwater Lake area during the waning days of Walker and Bagley and later.] I loaded up there and went as far as J.C. Parker's Camp #1, his headquarters camp, where I stayed over night. Then I went to Camp #2, which was 10 miles below Clearwater Lake, where Bert Gray was foreman. Then I went back to Solway, repeating this round trip over and over again.

The roads were very poor. I got stuck often while toting because they gave me too much to carry. The combination of rain, ruts, stumps and rocks and heavy loads was discouraging. There was nothing else to do in the country. Everyone would work for $2.00 a day if he had a chance, and sometimes a man could accumulate 250 dollars if he would stick. The average lumberjack, of course, would blow his money in the first town he came to. . . .

The lice was pretty bad. All the camps had them; you couldn't get away from them. Sometimes we slept with mittens on so we couldn't scratch in our sleep. On bad

nights we turned our shirts inside out and by the time the lice had crawled around it we could get a little sleep. Then we turned them inside out again. There were so many lice we simply couldn't get away from them. They were just plain lice, or graybacks, and they were big. Of course, we boiled up once in a while and that helped. We had to boil the blankets as well as our clothes, and this was hard to do in a camp in the winter time. We didn't have mattresses but slept on straw or hay put on hard board bunks. The lice got into the hay too. We didn't have any insecticide at that time. We didn't notice the lice much during the day in the wintertime because it was cold, but night was bad. When we went home we would have to clean up and boil up before going to bed. . . .

In those early days I worked a couple of summers in the sawmills at Cass Lake. . .

Later on I got on at J. C. Parker's camp at Solway. . . . Our Camp #2 wasn't very far from the Clearwater [River] . . . not very far from Clearwater river. We hauled the logs out of the woods on big sleds or bunkers and then threw them in the river in the wintertime. . . . There were no steam haulers at that time. Logging was done hand and sleigh. There were 25 of us in the Bert Gray logging camp. There were two or more camps in the #2 camp. . . . It seemed that we called our camp Lammers Camp [the boss of the camp]. . . . Of course Bagley was doing a lot of logging yet and he was the man of the hour at that time.

I think we got about $2.00 a day, with our food. This was considered good wages at that time but we worked from 5 A.M. until 8 at night. We got four meals a day and the best food there was. The food was hauled right along side of the river or was bought from the farmers as the drive proceded. Sometimes a cow or calf bought from a farmer would be killed and eaten fresh. We had wanigans, which were houses built on flat-bottomed boats. Half of one house was used for cooking and the other half for sleeping quarters. There were double bunks with an aisle in the center. Those boats were quite long but not very high. Sometimes we had to cut them down even more to get under some of the bridges. We could sort of fold them down.. Those wanigans did not leak. They were calked and had tar paper on the outside. In the summer time they were rather hot but the mosquitoes were the worst trouble. They were terrible. We couldn't sleep without mosquito nets, which we got from Red Lake Falls ready made. We tied them up at the four corners and a hitch in the middle. Of course there weren't any windows in the wanigen but we each had a little door along the side which we could open for air. Nights on the river were always quite, cool and damp. The company furnished all the eating dishes and blankets but we bought our own mosquito nets. Most of the men took a bath almost every day. It seemed like they were always in water up to their necks during the drive. We would generally take a bath in the river on getting to the wanigan, otherwise we wouldn't unless we went swimming or fell in. They used to say that when one fell in he closed the hole with his hat, because the hat was always left floating and so it closed up the Hole. We all had to be pretty good swimmers. No on drowned on our drive. The water in the Clearwater River was pretty deep way over out heads. I never remember anyone getting sick on our drives either.

In the summer time on those wanigans the lice often became bad. Then we would road our shirts. Some one would ask what we were doing and that was it, looking for lice. We found them especially along the seams and killed them with our fingers. Sometimes if we were just sitting out in the sun and didn't have anything to do we would take off our shirts and go over them. It was said that if one put his shirt on an ant hill in the woods the ants would get rid of the lice, the eggs and everything.

After that drive we men from Red Lake Falls were pretty much favored in getting future driving work. At the beginning of a drive J.C. Parker would hire anybody and everybody who came along and wanted a job. They would go to work and then Parker would watch to see how those newly hired men worked. The next morning J. C. Parker 'passed the sieve', that is he pointed to those who hadn't worked well and said 'You don't have to put up your lunch today'. . . . By weeding those out this way, he would have a good crew of men by the time they left Clearwater Lake and were going down the river in wanigans. After he had picked a good crew of men and after they had gotten below the dam at the outlet of Clearwater Lake he never fired a man.

Parker's camp was about 10 or 15 miles above Clearwater Lake and the logs were landed in the Clearwater River and on Clearwater Lake. After the logs were all sluiced into the lake they were made into to tows crossing Clearwater Lake and were pulled by some kind of a dink with a growser. I can't remember how it was propelled but it must have been run by steam. I don't think the boat had a name or I would have remembered it. Lammers Brothers seemed to own most of the timber there at that time, but I don't know exactly who they logged for. Most of the logs that Parker put in the river and lake and I helped to drive went to Crookston and a few of them to Grand Forks.

Those logs were all bark marked and stamped. I stamped some of them myself when I worked in the woods. The stamp mark would compress the grain in three inches from each end of the log; so if the log was sawed off near either end the mark would still show. It would be large enough so that if you were at one end of the log you could see it and there was a bark mark 1/3 of the way from one end. It was made with an axe and maybe it was 4 x or something like that. I remember that the Red Lake Falls sawmill had a crowfoot as a bark mark. That took a lot of time to make. A regular axe is used for that, and usually the swamper makes

the bark mark. A swamper is a man who works in the woods and clears the roads and cuts limbs. A sawyer cuts the logs but has nothing to do with the limbs. The sawmen use saws and the axemen axes. The undercutter is the first man who comes to a large tree and undercuts it and then the sawyer comes along to saw it. Then the swamper comes along and cuts off and piles up the limbs so that the team can come along to skid out the logs to rollaways. Rollaways consist of two stringers made of long trees. They are set up near a road and logs are decked high up on them. I used to do that before I started loading. In the early years we used a team and chains for this decking, but later they had jammers and steam rigs. Then the logs would be loaded from the rollaways to logging sleds and taken to a landing on the Clearwater River or Clearwater Lake. The big logging sleighs were made right in the camp, and the horses were shod there in the big camp blacksmith shop.

If the logs got too heavy they would generally sink the ice down. The logs were generally put in the river and all along the bank. In the spring the first thing one had to do was to break up the landings and open up the river. Breaking a landing was pretty tough work as it was done when it was still cold, in the spring of the year, just when the ice was beginning to break up. There were so many logs that jams were the general rule, and drivers would have to wade in the water perhaps up to their waists to get at the logs. That was tough work. Often times the water would freeze at night, and it might rain for three or four days at a time so that the drivers would come into camp wet at night. They would put on dry clothes, sleep on blankets in their tents and wake up in the morning lying in water. When it rained for three or four days at a time the drivers were wet all the time, starting out with wet clothes in the morning. I will never forget this as long as I live. A lot of the fellows quit but the bunch of us from Red Lake Falls stuck. That put us in good standing. After the logs got started down the river into Clearwater Lake it was a snap. The wanigans, about eight or ten of them had been built in Clearwater Lake at Neving's in readiness for the drive. When the logs were in the lake and ready to go over the dam the drive started. When the first wanigan was to be started the foreman came along and picked ten men out of three hundred. Generally we fellows from Red Lake Falls were chosen because the foreman knew we would stick, at least until we tot to Red Lake Falls. So we started down over the dam with the first wanigan and were just like wild cats. We'd holler and celebrate generally because our quarters were such a change from the rough camping we had been doing. We loved our nice new wanigan with new blankets and everything new and a cook. That was swell. We knew this was coming; that is why we stuck on the Clearwater River in breaking up the jam and getting the logs started. The Clearwater River was crooked, and I would say it was 175 miles from Clearwater lake to Red Lake Falls. Drivers and wanigans were scattered along quite a stretch of it.

Every few days a crew with a wanigan would start down the river from Clearwater Lake until there would get to be as many as ten crews with their wanigans on the river, scattered maybe a hundred miles. There would be as many as 24 men in a wanigan.

We were armed with pike poles and occasionally peavies, which differ from cant hooks by having a spike in the center. Peavies were used mainly in log jams. The river is a lot larger after leaving Clearwater Lake than before it reaches it, and after getting down a ways, it gets pretty rapid for 10 or 15 miles and then it becomes quiet and the men have to use the pike poles to keep logs in the channel and keep them moving through about 90 miles of meadow. The men called this stretch of quiet water the Big Meadow, but still it didn't take much to jam the logs. There were men on nearly every bend there. They used to have lookouts made of logs where the lumberjacks would watch. Maybe they would sit on the bend all day and not do a bit of work. Shear booms were often put along the banks too; so when the logs hit them they wouldn't stick in the bank and make a jam. If a driver had his bend well fixed up with shear booms he could stay there all day and not do a thing - just listen to the birds sing. The sheer boom would be doing all the work. A shear boom was a peeled log with a peg driven into it tied to shore. When the logs hit those shear boom logs they would glance off and go down stream. The shear boom logs were concentrated on the outside of each bend in the river. We knew by experience where the current directed the logs and we put the shear booms in the best places. Our log lookouts were about 12 to 16 feet above the river and we could see about a mile up the river. We made these lookouts of dry 6 inch logs tied together with bark, and then we made ladders going up to them. If something went wrong we could generally get there before a big pile-up occurred. When they got to a certain point, about half way, what they called Flag Point, the logs would go through and there wouldn't be any trouble until getting to Plummer. From Plummer on down to Crookston the water was pretty swift and it was quite a job breaking up the jams. They used peavies for that work.

The low water on the Clearwater was on the rapids, which were especially rocky and shallow from Terrebonne to Red Lake Falls. We had to roll the logs over and over, and it was slow and expensive. It was ten miles by land but 20 miles by river from Terrebonne to Red Lake Falls. The last twenty miles was the hardest in low water time. If we had enough rain it wasn't too bad, but when it was dry we were hung up. We had most of our trouble the first year I worked, and the crew was laid off. After that we had more water. That was perhaps provided for by building more dams and reservoirs. Drives would often become hung up by no rain and a drying up of the reservoirs behind the dams. I have seen drives tied up in the big meadows all summer. Perhaps in the fall, after a big rain, they could start driving again. That didn't happen very often, but it did happen. If they weren't

lucky they were tied up until the next spring. At that time most of these logs went to Crookston. Lammers Brothers seemed to own the timber and log it for the Crookston Lumber Company.

There was no sorting gap on the Clearwater River. The first sorting took place on the Red Lake River about two miles above the Crookston city limits, in a flowage where the water was quiet. There were two pockets, one for inside logs and the other for outside logs. "Outside" meant that the log went on to Grand Forks and it was channeled down the river. The inside logs were sawed at Crookston. I never worked in a sorting gap. The sorters would look for both the bark mark and the end stamp. With a picaroon they would roll the logs until one mark or the other showed up. We had to wait until all of the logs were sorted and then we took the rest on to Grand Forks.

I think that logging on the Clearwater wound up around 1907 or 1908. I was on the last drive, and I think it was at that time.

(Reminiscences of Fred Cyr - from the collection of oral histories collected by Dr. Vanderluis)

Time of the settlers

For a while railroads were the transportation of choice for the logging industry. The source of supply for the lumber business was becoming depleted and reduced into patches of trees here and there. So the hectic, clamorous grinding fury of the lumbering scene tapered off gradually through the late 1920's and came to a quiet end some time in the 1930's.

By that time the area was already sporting a new look and in the grip of a new enthusiasm. With swarms of settlers clearing stumpage and turning the last vestiges of the majestic forests into farm fields plus building communities to match, the New Age of Agriculture was now in full swing. The Glory Days of the Clearwater River were coming to an end. Clearwater Lake, on the other hand, was coming into her own.

More Dreamers of the American Dream

Robert Neving was a major player in the changing roles of the Clearwater River and Clearwater Lake, a role based on an emphasis on agriculture and the build-

Neving 1885

At Clearwater Lake at present Westrum Resort Robert Neving was a man on the black roan and buggy. Mrs Neving was a sister of the late Jerome Thayer. Post office was stopping place for stage on Red Lake trail. Joined Walker Road in Copley Township. Walker Road was early historic trail from Fosston east to Bagley Dam and later Bemidji area. Robert Neving managed the Dam at Clearwater Lake for the log drive and Wannagans were built here also. Early activity in Clearwater County Neving post office later moved .

ing of community. Unlike many of the other lumbermen of the time, whose "Horatio Alger" stories were well documented, Bob Neving, known as the "man who owned the Clearwater dam," was a man of mystery. The earliest available mention of him prior to his coming to the Dam was a vague quote by some anonymous person who was mentioned in some research source as saying that Neving was a "tote man" on the White Earth to Red Lake Train and another had met him when he was a stage driver on the same trail.

John Morrison, one of the lumberjacks quoted in *Mainly Logging* said,

Bob Neving located there [at the Clearwater Lake dam site] with his Indian wife Caroline in 1888 when it was still within the reservation. Later on he filed on the land for homestead entry. He had no trouble proving up because he had a lot of improvements there. He had a nice barn and house and a dam there for waterworks. I think he proved up in a little over a year. He shipped his wife back to the Red Lake Reservation, [in 1891 where she lived at Little Rock, and then he married a woman named Thayer.

The only clue so far resembling anything personal about Bob Neving is the following quote by George Boorman, "Frank Bailey, a local lumberjack, who was born in 1882, said that Bob Neving was his uncle." [The only way that would have been possible was as an honorary one through Neving's second marriage to a "woman named Thayer". Mrs. Thayer Neving didn't seem to have any living relatives or anyone who else who had ever heard of her to verify or contradict his statement.]

Despite the questionable manner by which Neving obtained homestead rights to the Clearwater Lake Dam and surrounding acreage that was still on the reservation, he seems to have had a good reputation as a successful and hard working lumberman and as an astute businessman as well. Not only was he the toll taker collecting 7 cents per thousand board feet of Norway pine and 10 cents per thousand board feet of white pine logs as they went over his dam, but he also operated a "stopping place [an early frontier bed and breakfast] with a popular saloon there that had good patronage from the men driving the Clearwater River." He also had a full time crew building wanigans, the all-purpose houseboats to be used as bunk houses, cook shack, etc. on the long 145-mile log drives to Crookston. He then rented or sold these wanigans to loggers. He also had a crew of repairmen ready to take care of any equipment problems that a log drive arriving from the south might have to be ready for the last tough leg of the journey west.

On April 17, 1900, Neving obtained a government con-

The Old Post Office after it was moved to the town of Neving.

tract to become the local postmaster. He set up his own post office in a building near his house at the dam site that some have conjectured may have been the saloon. The only picture available that depicts him at all is the one taken of him in his horse and cart, in front of his Post Office building and it was taken at quite a distance.

During the logging years Neving was described in one of the local newspapers in the early 1900s as being "one of the best loggers on the Clearwater." Another snippet later that same year: "Bob Neving was in Crookston from Solway. He banked 7 million feet of logs this winter, most of which were cut on his own land. This fact, as well as other favorable conditions, has made him one of the most successful contractors of the season. (*Crookston Times).*"

Bob Neving came to be the acknowledged best and most successful of the individual loggers in the Beltrami-Clearwater county timber country. One dream realized. But by the time railroads began to supersede Clearwater River and Lake as transportation in the area, his interest had already turned to another new venture. This time it was that of creating his own personal town of Neving, already being staked out about two miles west of the dam in an area on the first side road south on the road to Clearbrook. By 1910 several buildings including a working creamery with its operator's home, a general store and post office with another home, and a schoolhouse had been erected and were in business. Electricity was added with a fifteen-mile stretch of wire from Clearbrook.

Sometime in 1911 Neving sold his entire holdings to a Mr. Isaac Florsheim and sometime later disappeared as quietly and as mysteriously as he had appeared twenty or thirty years before. An unsubstantiated rumor later had it that he had gone to Canada.

Today the only tangible reminder left of his "dream town" of Neving and of Robert Neving, Clearwater Lake's first resident entrepreneur, is the building still located on its original site and referred to as the Neving School house, although it has been a private home for several years. Several senior citizens in the area do remember having attended school there. [It can be seen on the south side of the Clearbrook road, just past the first gravel road on the left about two miles west of the lake.]

Lake Story

The following newspaper article that appeared in the *Olbert Journal* with quotes from the *Minneapolis Tribune* in 1917 is an interesting and funny version of the "dime novel" fantasy life of the Country Gentleman of Clearwater Lake and his Lady.

The last line in the article asks, "Where will the Harvard Grad make his mark next?"

Now we know the answer — The esteemed Country Gentleman of Clearwater Lake and his Lady left the area in one big hurry—knee-deep in debt, according to information on the abstract for his property. So it's a good bet that the next mark the Harvard Graduate made was the deep imprint his boot left as he jumped into his buggy to tear out of town ahead of the irate creditors.

Farm Among the Pines Lures Harvard "Grad"

I. S. Florsheim, Son of Millionarie, is Transforming Cut-Over Lands.

Trained for Professional Life He is Running Model Farm near Clearbrook, Clearwater Co., Minn.

Nervous Breakdown Was Turning Point--Romance Entered His Life, Too.

Amid the woods northeast of Clearbrook I. S. Florsheim, Harvard graduate, son of the millionaire shoe man, has transformed several hundred acres of cut-over lands into a rich and model farm and is blazing the trail of advanced farming methods to the hardy homesteaders who are his neighbors

What turned a Harvard man, trained for the professional and business world, into a farmer of the lands once consecrated to the pines? The answer is twofold. First, it was a nervous breakdown and next a romance for the culmination of which the pines and balsams furnish a fitting setting.

The breakdown took Mr Florsheim to a sanatorium. The romance, which has its setting there, brought him a bride The great cities now have nothing to offer the principals of this romance in exchange for their present lives. Mr. Florsheim is the son of Simon Florsheim, perhaps best know as a shoe dealer, but incidentally president of several other million-dollar corporations.

His Early Training.

Isaac Florsheim spent his youth in Chicago. First it was the public grade school and next a prepartory school. He graduated from Harvard with the class of 1898 as a bachelor of laws.

Still, the smell of the balsams, the thought of the land, was foreign to him He put law aside for business, as his father before him. Ten years later saw him manager of a big mail order business in Chicago. Then the nervous breakdown. In a Wisconsin sanatorium he fought for his life. Miss Clara Priebe, nurse, by her constant attention, weighed the life and death scale in his favor. Speedily there followed the marriage. But what was young Florsheim to do? Idleness he abhorred. His health would not permit him to re-enter the seething Chicago business world. The same objection arose to taking up his profession.

"Open Air" Advised.

"The open air," advised the doctors. That carried with it first thought of the land. But a Harvard law course had not equipped young Florsheim to milk cows, mend a mowers, judge a horse. So he attended the Wisconsin Agricultural college. Then he and his bride crossed into northern Minnesota.

On the shores of beautiful Clearwater lake, about 30 miles north from Bemidji, they found their ideal. There Robert Neving had builded himself a home and cleared some 40 acres. There are about 500 acres in the tract Mr. Florsheim purchased. The front windows of his home look out upon the Neving dam and the Clearwater river. The side windows reveal Clerrwater lake, which pours over the dam into the river. Millions of feet of lumber have passed over that dam.

Next came modern farming methods. The home was enlarged to 15 rooms, Modern plumbing, hot and cold running water, and other conveniences were provided for. Then came an engine which cleared the land of its stumps and brush. "Too costly," declared the homesteaders.

"Twelve dollars an acre," replied the Harvard "grad"

The "Homesteaders" Laughed.

Blooded cattle, swine and horses followed. That was three years ago. Homesteaders laughed the first year. Blooded Guernsey cattle in the pine woods a joke! Florsheim answered the laughter by tearing down the old cow barn and putting up a modern one with cement floor and running water in front of each animal. Beside the barn he erected a hollow tile silo. Also he purchased a team of team of horses which put him and his bride into touch with civilization.

Rudolph has been know to trot the mile in 2;06: Queen Maud, team mate, has a 2:20 mark. Mr. Florsheim says they make the halfway mark to Bemidji in one jump and rough roads just give them an

The second year the homesteaders dropped in to ask questions. Now they take their swine, their cattle, their horses over to the Florsheim place for breeding purposes. Also they are gradually installing modern conveniences for the woman folks.

From a joke the Harvard "grad" has become a leader. He organized the Neving Dam Co-operative Creamery and is its president Cattle owners for miles around drive to the creamery with their milk. Mr. Florsheim's butter all goes direct to the New York market, where it brings the highest premium price. Perhaps some of his classmates find it on the table in their clubs. But they know not that I. S. Florsheim, Harvard, '98, is the shipper.

Clearing More Acres.

Mr. Florsheim is clerk of the school board and a new schoolhouse is the result. Mrs. Florsheim's two brothers, Walter and adolph five with them. The farm has quadrupled in value. Mr. Florsheim, his health regained, does not find it big enough for his entire attention and has purchased and is clearing several hundred acres more. The soil is ideal.

Mrs. Florsheim's impression of this life is important. "The woods give partridge, deer and moose. The lake gives us fish and ducks. The woods and waters give us health. The land is manufacturing wealth." And she threw a stick for her pet Collie to fetch. Where will the Harvard "grad" make his mark next?—Minneapolis Tribune.

Mr. Florsheim's beautiful and up-to-date Dairy Farm, located on the shore of the picturesque Clearwater Lake, and north bank

Next — The Quiet (it's all relative) Years with the Garmer Family

Claus and Pauline Garmer, a farm family from Baldwin, North Dakota bought the Florsheim property from a local bank and were the next family to occupy the house at the Dam.

For the Garmers, the house was the right size for a family with six children and the place would be a no-nonsense, regular working farm like those of all of their neighbors. According to the youngest child, Elva, they came there when she was three years old and that's where she and her brothers and sisters grew up. [She is married to Orville Nelson and still lives in the area just south of Clearbrook.]

A couple of "almost" exciting events did happen during the 19 years the Garmers were there. In 1927 someone tried to blow up the New Dam. (That's the one that was still being called the "New Dam" in spite of the fact that it had been there since 1898.) Little damage was done to the structure and none of the perpetrators were ever apprehended. Fortunately this explosion was a pale version of the "really big blowout" that happened to the same dam back in 1908. [See Lake Lore at end.]

Three years later the aged and decrepit "New Dam" was torn down and replaced with a sleek new concrete one, finished in 1931. The nice new bridge built across the top of the structure was a very important part of the new dam package and would do its bit to help speed up Clearwater Lake's new era.

Even by 1919, the year the Garmers came to Clearwater Lake, the earlier wild and exciting days of logging were rapidly winding down and becoming a thing of the past.

And, the dream that the "Harvard Graduate," Isaac Florsheim had of bringing Utopia to the local settlers had gone up in smoke! In spite of his smooth-talkin' ways and magic solutions for all of their problems, those sturdy and stubborn pioneers that he'd tried so hard to educate had listened to him politely — as all good Scandinavians would —and then continued doing their own thing in the good old fashioned way, working from dawn to dusk. By the time the late 1920s rolled around they had succeeded in whipping the wilderness into shape, doing it their way, and now they were going about the next step, turning it into a community.

Once the community began to take shape, the pleasant idea of rest and recreation began to take on a new importance. Now they were ready to get around to "kicking up their heels" a little and having some fun. What better place for recreation than the beautiful little lake that had always been right there in their midst, Clearwater Lake and good buddy, Clearwater River. Dramatic changes were in store for the Durable Duo.

All during their long history together, Clearwater River had always been the one who was famous and important — always playing the lead role while making history. Now it was Clearwater Lake's turn to take center stage and be the Star — with a flock of admirers and her own fan club!

Clearwater River's last great performance had occurred during the hectic days of the lumbering business in the area. The exciting flurry of that activity was soon to wind down and gradually become a thing of the past. For Clearwater River there would be no more working dams along the way to supply the vitally necessary energy needed to keep him moving and rolling along. Inevitably his pace slackened, and he returned to his much earlier way of existence — quietly wending his meandering way through the countryside, from wetland to wetland.

Today, in many places the once famous and important Clearwater River has dwindled down to being a trickling brook. In fact, in one area near Plummer where a century ago he had been moving hundreds of logs along on their way to the mills in Crookston, he can be seen today, barely moving at a crawl through a culvert under highway 59.

But now on to Clearwater Lake's Cinderella tale of how a little working lake was transformed into a very special lake of leisure. Surprisingly, her debut was not at the Clearwater Lake Dam Site, as would be expected, but in a far lesser known area on the southwest shore of the Lake. How could that have happened?

In the early twenties, an old Indian trail had become Solway Road that circled the south end of the Lake, branching out in several directions. Though it is virtually unknown today, back then, it was a major source of transportation for the local citizenry. Sooner or later, it would take them to a place where a local farmer with a big dream had turned a spot with a nice sandy beach into a fun place with picnic grounds and a resort. Simple as that!

The Southwest Shore Story

Contributed by Monte Mason

"On November 24, 1903, the United States Government issued a patent to one George Hanna for 160 acres of land, ranging back from about a mile of lake shore on the southwesterly side of Clearwater Lake in northern Minnesota. So begins this land's official recorded history.

"But homesteaders, lumberjacks, settlers of every description were in the area long before that official date.

"In 1994 Minnie Stenlund wrote a letter to Louan

Hendrickson describing the scene around Clearwater Lake as her father saw it in 1894, and it is interesting enough to quote in its entirety.

Our father, Adolph (Carlson) Stenlund, homesteaded in the year 1894. He dug out a hillside and lived in it for a while.

He tells that the (Clearwater) Lake was a small puddle about in the middle of the (present) lake where the river runs through the part from Bruce Halseth and Mason Island was a cedar swamp where they were cutting logs and hauling them to the Shevlin saw mills.

Later there was a steamboat that would haul logs that were brought in to the Thulin Boat Landing across the lake and landed near where Bruce (Bjerke's) boat landing is and then the logs were transferred onto wagons and driven through the woods to the Shevlin mill.

Dad told how he would walk to Shevlin for groceries. He'd strap a 50# bag of flour on his back. Guess they ate a lot of mush (grot)! The Neving store was just about where the Philip's house is.

The road came from Red Lake and would divide after it came across the river. Maybe some of you wonder what those logs and debris is just east of the present dam. It was a bridge.

I could write a lot more.

Minnie Stenlund (87 years)'

[NOTE: Minnie Stenlund had a trailer house that stood on the north edge of the family farm on the slight rise just south of the Clearwater Lake Store for so many years that she became one of the lake's icons. The daughter of Adolph (Carlson) Stenlund who emigrated to this area before 1895, she was a repository of information about the lake. JG]

"In the same year that George Hanna received a patent on his land, 1903, he sold the land to Robert Neving, who then sold it to Ole Evanson. In 1907 Evanson apparently financed the property through the Edinburgh (Scotland) Mortgage Co., Ltd., and then sold the property to R.A. Moore in 1909.

"Moore then sold the property to The Leonard Land Co. This was a consortium whose members were Jackson Rentes, Susan Anderson, C. P. Bull, W. D. Hiestand, Louis Head and D. C. Converse.

"In 1920 Martin Kjolhaug of Gonvick surveyed this parcel of land for the 'Clearwater Summer Resort' company. Starting from Genzel's Point and continuing northwestward completely around Mason's Island, the shoreline was platted in 50 feet lots. The interior of the Island, according to the plat, was to have a dance hall, lodge and store. The plat shows that many of the lots were bought and paid for, but the dream was never realized.

"In the 1920s and very early '30s, the southwestern shores of the lake appeared to be the prime property area of the lake, with the Smith resort in full operation—boats rented, minnows sold. The previous plat of the lake specifically showed 'sandy beaches' along this shore. However, in 1930, the completion of a permanent concrete dam at Clearwater River's exit from the lake resulted in a markedly higher water level. The sandy beaches were covered with water, and that shore line was no longer so desirable.

"The land south of the Hanna parcel, now owned by Ernest Stoker, was previously farmed by the Genzel family and Arnie Althoff.

"For many years the land lay dormant and many put it to good use. It became a picnic spot for church and other gatherings. It has been rumored that during prohibition there were spots where whiskey could be purchased. Baseball games were played there. And campers camped there.

"In 1925 the land was mortgaged to the First State Bank of Leonard, which assigned the mortgage to the Peoples' State Bank of Newfolden. The Newfolden bank foreclosed on the land, but then in 1929, that bank was liquidated. During the process of liquidation, the property was sold to J. D. Mason in 1932.

"The Mason family spent the summer of 1935 in the old homestead cabin in the center of what is now known as Mason Island. In the next few years, five members of the family built cabins on the 'island'. . . .

"In 1980 the company, Roosevelt Ridge Property, was formed, and this group purchased and developed the Mason property in Beltrami County."

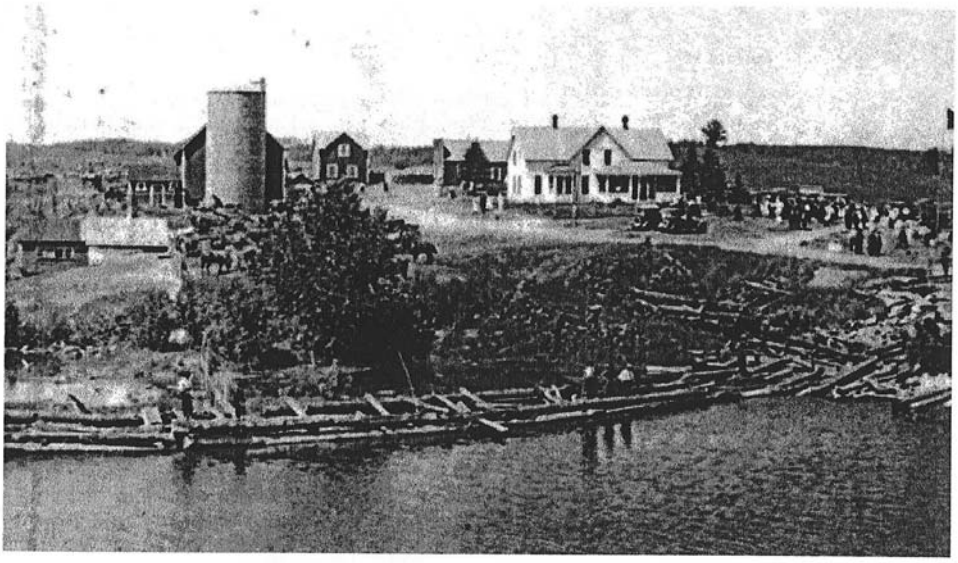
The Mason Subsection

Rance Mason owned and sold the lots of this area. Ray and Edna Thompson, who owned the lumberyard in Clearbrook, built the first house there in 1947. It is now owned by Shirley Shaw of Leonard.

Pearl and Orvin Westrum of Clearbrook built the next one that now belongs to Karen Schroth of Bemidji.

Ole and Karen Johnson of Leonard own the one erected by Roger Lundmark in 1974.

Tom and Louan Hendrickson from Thief River Falls bought the house owned by the Copelands of Redby. They enlarged and remodeled it in 1985.



Richard and Pat Kjensrud of Newfolden purchased their house from George and Carla Johnson.

Donovan and Marlene Westrum built their house in the 1950s, and it is still owned by the four Westrum children.

Luther Erikson from Beltrami, Minnesota, built his house in 1981.

Tom and Jolee Hjort of Leonard own the house built by Jerry and Kathy Thompson Westrum.

Mike and Lisa Johnson, Ole and Karen Johnsons's son and daughter-in- law, built their house in 1987 and sold it to Ken Groshong of Minneapolis in 1999.

Ed and Lynn Turenne of Thief River Falls are the present owners of the house they bought from Leslie Erickson in 1990. Leslie is now a fishing guide on Lake of the Woods.

The "last house on the block" was built by Gary and Marci Useldinger in 1994. Gary passed away in 1996. Later Marci added the second story in 1999.

The Northwest Shore

To get to the next section of the lake, the Northwest Shore, we now turn back north on Roosevelt Road to emerge near one of Clearwater Lake's sentimental places, the building known for fifty-six years as the Clearwater Lake Store.

Clearwater Lake Store

Contributed by Monte Mason

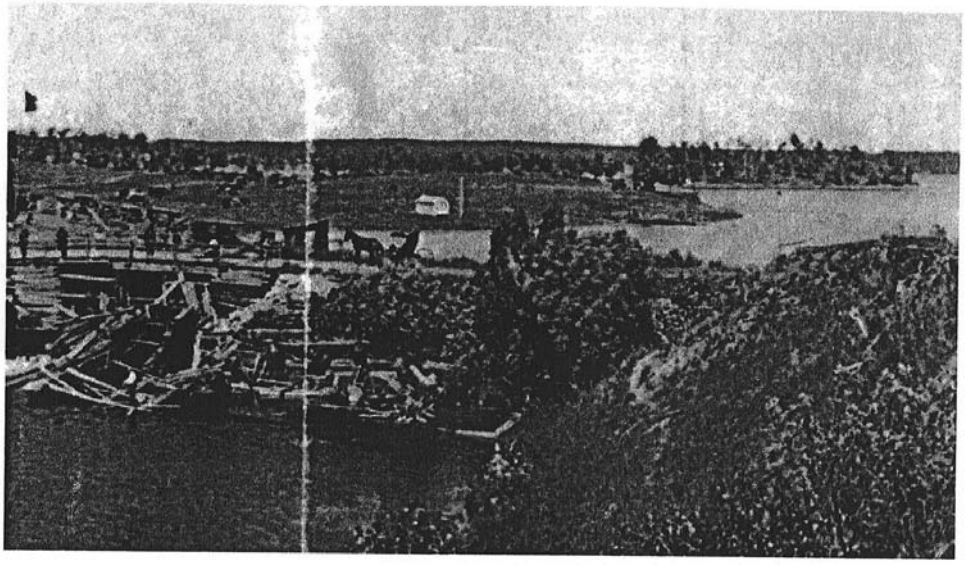
"The Clearwater Lake Store was built in 1946 on the northwesterly shore of Clearwater Lake by Ray and Delores Hooley. The land, purchased from B. C. Johnson, was located across the road from the Stenlund farm. The Hooleys sold groceries, on and off sale beer, and gasoline.

"In 1950 and 1951 Harley Olson operated the store; Ray Hooley left to work as an electrician. In 1951 the Hooleys sold the store to Kenneth and June Hopewell.

"Orval and Ardys Bjerke purchased the store from the Hopewells in 1967 and sold gas, groceries, off sale beer, and live bait and established a campground for trailers and tenters. For a time the Bjerkes operated a lunch counter and Ardys established an international reputation for the quality of her doughnuts. As time went on, the store building was remodeled to include living quarters for the owners.

"In 1973 the Bjerkes went through the traumatic experience of an attempted robbery. The following is quoted in part from the local newspaper, the Leader-Record:

The robbery attempt was approximately 5:50 a.m., when the dog started barking. Orval came from the living quarters as the front door was broken open. Two men entered and when asked what they were doing said, 'This is a robbery.' Mr. Bjerke replied, 'If this is a robbery you



won't get anything—you better leave.' At this time a revolver was pointed at him and he was told that indeed it was a robbery. His son Gary came out with a double barreled loaded shotgun and held the suspects at gunpoint until the sheriff could be called.

Prior to entering the store, the suspects had cut the telephone line so Mr. Bjerke had to go to the neighbors, the Al Johnsons, to call.

After returning from the call, the suspects said that they were going to leave and what would Mr. Bjerke do. Mr. Bjerke told them not to leave until the sheriff arrived. They got in their car however, and as they drove away, Mr. Bjerke fired his rifle and punctured a rear tire of the suspects car. . . The suspects were in their car at the Clearwater Lake dam when they were arrested by the Sheriff and taken to the Bemidji jail.

"In an apparent miscarriage of justice, the miscreants were later acquitted.

"In 1985, the Bjerkes sold the store and campgrounds to Wayne and Devonne Halseth. The Halseths closed the store in 1992 and the property was then acquired by Ross and Sharon Lembke in 2001." [Note: The Lembkes are in the process of remodeling the building into a home. JG]

The Northwest Shore and
B. C. Johnson, Clearwater Lake's Last Entrepreneur

Based on excerpts from notes contributed by Dr. Carl Seeman

In 1938 the Garmers sold their farm to B. C. Johnson, who would become the last entrepreneur of Clearwater Lake, and who would accelerate the pace of settlement of the Northwest shore areas.

Johnson, his wife, Inez, with their three children, Al, Phil, and Margaret, moved to Clearwater County and the Clearwater Lake area in 1938, while the Great Depression was still having an impact. B. C. was a man with quite an interesting background.

As a young man in the early 20's, he had been quite successful as an energy entrepreneur, providing electricity from his own plants that used dams for power, then running the lines to the homes and businesses of his customers. At one time he did so well that he put together $50,000, a considerable sum in those days.

The Big Bust in '29 caught him, and he was reduced to scratching out a living running gas stations. As a proud man who had experienced considerable success, he found this a difficult role to take. Then he heard of a farm for sale on Clearwater Lake from a man with a traveling minstrel show that had its home base in the area of Marine-on-St. Croix, where B. C. lived.

Scratching together what money he could, he took his

city-bred family to the wilds of Northern Minnesota to try his luck at farming. Their new home would be the House at the Clearwater Dam, known as the Neving-Florsheim House. The Johnson children remember that it had an interesting, long building behind it. It had been the famous Neving's "Sunnyside Saloon," with dance hall, that supplied "R and R" for tired and bored loggers between lumber drives. Purebred milk cows, possibly remnants of the Florsheim Utopia, were also part of the package, so it was partially a dairy farm. There were also sheep and horses. It seems that B. C. didn't find farming fulfilling enough, so he invested in a U-2 Caterpillar and did custom work for loggers and other people. Later he branched out into a logging operation of his own.

Meanwhile another venture was being hatched in his mind. When some adjoining land came up for sale, or was recoverable for back taxes, he borrowed money and added that to the original Garmer farm. Members of the family remember their being constantly strapped financially so that he could make the next payment on a loan. He finally owned 2000 acres. In the words of a true entrepreneur, he was quoted as saying, "I don't want to own all the land in the world, just what's next to me."

He and his sons built several cabins on his lake property and sold them. B. C. Johnson and his son, Phil, used boards saved from the Florsheim barn to build a summer home overlooking the lake on the north side of the Dam for the father and mother. Years later, when Phil retired, he and his wife Dorothy returned to live at the lake. He had the house moved across the county road, and it now sits on the south side of the river.

B.C also built a couple of roads from the mainland into islands. One went into Goat Island that became Pine Island in the 1940's, and later another to High Island. Then he platted lots to sell.

Although the Last Entrepreneur of Clearwater Lake is no longer with us, traces of his legacy are still here. Much of the 2000 acres of farmland that he accumulated, some of it bordering the road on the west side of the lake, is still in family hands. His other son Al and his wife bought it, and Al continues his father's pattern of buying and selling adjoining farmland. Al's sister, Margaret, is married to Dr. Carl Seeman, a veterinarian, lives in Bemidji and owns a cabin on the southwest side of the Lake.

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In 1965 B. C. Johnson's house at the Dam, known variously as the Neving, the Florsheim, or the Johnson House, was sold, with its immediate property, to Lyle and Wes Westrum for their mother, Mabel Pallister. She was interested in having a group of cabins as a small resort. The Johnsons had long ago torn down the old Sunnyside Saloon and replaced it with a long building

divided into several compartments. The Westrums converted the compartments into rooms to be rented to tourists. Later Wes became sole owner and made it his summer residence until he passed away May 28, 2002. At his death it became the property of his nephew, Jim Goudge, partner in Gustafson and Goudge. He now lives there.

The Northwest Shore of Clearwater Lake is an interesting hodgepodge of real estate, beginning with Dane Hill, across the bay from the former Bjerke Store. According to a reliable source, it got that name because the man who first cleared that spot was the only Dane in the area, where everyone else was either Swedish or Norwegian. It was just plain logical for those practical people to pick "the Dane's Hill" to become one of their landmarks.

Bruce, Debbie, Brandon, and Jason Bjerke live in the house the Bjerkes built on the southwest corner, facing the lake. Carroll Anderson owned the house that occupies the opposite end of Dane Hill. He sold it to Lois and Stan Grey of Clearbrook in the summer of 2002.

Moving on. At the end of a narrow road-path on the south side of the Dam is a secluded setting where Paul Valley, brother of the two Valleys who had built a cabin on Pine Island, chose to build his home on a small point of land. One side of the yard is on the south side of the lake entrance to the dam and the other faces the lake. In 1992 David and Deanna Hovda from Roseau became the new owners. Members of the family, who are snorkelers, retrieved an old anchor with a missing barb from the dam area beside their house. They've been told that it came from either a barge or a "wanigan" [the home away from home for the loggers when they were on a log drive to the sawmills]. This bit of history is on display in the Hovda's front yard.

Cross the Dam Bridge and proceed past the House at the Dam. The first right turn is the beginning of a road-path that wanders east through a wooded area, then

opens up to the area known as the High Island Subdivision. The first house is a two-story one with a wide vista view of the lake and its approach to the Dam. Built by the Don Flynn family in 1988, it is located on a carefully manicured lawn surrounding an unusual centerpiece, a spectacular vegetable and flower garden designed to look like a carefully sculptured English garden. This was the artwork of the owner, Don Flynn. While Don is no longer with us, his wife and family still spend time at the cabin.

Just behind the Flynn home, the Al Wasson family built another house on the east side of the rounded southeast corner of the area, with a beautiful view facing the approach to the dam. It is now owned by the Les Sorenson family from Roseau.

The meandering road-path continued through a little swampy area to the north, then around and up to a raised spot that in the early times was set up with cement tables, benches, and fireplaces, courtesy of B. C. It was known as Picnic Island. Many people who grew up locally have pleasant memories of Sunday family picnics there when they were kids. Later two houses were built on the spot. The first one, by Carroll Anderson, was painted brown and located perfectly to be a marker for fishermen lining up their boats with a good-fishing sandbar that ran straight east from there. The other home was put up by Francis Erickson and is still owned by the Erickson family. There are also two manufactured homes that were moved in later.

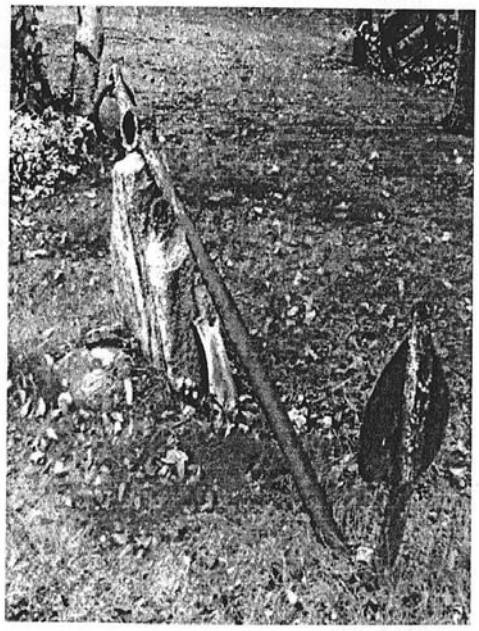
The road-path continued east until it came to the water's edge of the shallow swamp between the mainland and a tall sand pillar with tree-covered sides called High Island. Seen from the lake it was a tantalizingly dark and mysterious tower rising from the lake. Its tree-shaded, flat top had a spectacular, broad view of the surrounding area. In earlier times, it could have been a perfect lookout spot for the warring Dakotas and Chippawas.

Until considerably later, the only means of getting from one side of the swamp to the other side, High Island, was to go by boat, slog through two feet deep water, or teeter across a little wooden bridge. The trip would have been well worth the effort, but not everyone felt that way.

On the north side of the High Island Subdivision there was a scallop of land that could only be reached by returning to the main road and taking the next right turn. Then one had to follow a road-path to an area near the north shore of the area where years ago Al Johnson, B. C.'s son, had built a log cabin and sold it to the John LaPlant family from Crookston. Bert and Carol Valley bought it from them. Nancy Goudge, niece of Wes Westrum and sister of Jim Goudge, is now the owner. For a number of years, Dot (Dorothy) Nederbo and Babe (Emma) Roberts lived in a manufactured home near the entrance.

Fred Cyr, the lumberjack, whose story of his days on log drives up and down the Clearwater River and through Clearwater Lake, appeared earlier in this volume, seems to have been High Island's first admiring fan. He'd evidently grown so fond of the place during his logging days that he came back in 1919 or 1920 from Crookston where he lived, and negotiated a twenty-year lease of the Island from the Garmers. He and a couple of friends built a permanent hunter's cabin there, which they maintained for 20 years until it was moved when their lease expired, after High Island had come into the possession of B. C. Johnson.

Some time after 1955, B. C. built a road through the swamp and then set up his second public picnic area on top of the High Island. Later he platted the island's flat top and in 1957 sold three lots on the north end to Lyle Nelson, formerly of the Clearbrook-Gonvick area, now retired and living in Fort Myers, Florida. Lyle still owns the lots but has never built a house there. He returns on occasion, pitches a tent and camps there for a few days. The other lots on the south end of the island were purchased by Dr. Reuben Anderson, a dentist in Clearbrook. At present, a nephew of Dr. Anderson, Lynton Mattson, and wife, Pat, own the property and have a house there.



Goat Island to Pine Island

The next piece of real estate north of High Island was an oblong, flat-topped pile of sand and clay, four hundred feet or so into the bay, just far enough out to be accessible only by boat. Forgotten and neglected, this island had languished on the farthest north outskirts of B. C. Johnson's lake properties and had gradually taken on the bedraggled and unkempt look of an outcast—which it was.

The wretched place was overburdened with a heavy stand of white pines, Norways, and deciduous trees of all sizes. All were struggling to grow and push their way skyward through a messy tangle of brush and thorny thickets of wild rose, blackberry and raspberry bushes—always under thick clouds of fierce and voracious mosquitoes.

Then came the day that the owner became aware of the island's possibilities and set out to alter its personality. For starters, he bought a pair of goats. Then he ferried them out to the island to do the initial clean-out job. [Note: Lake lore has it that the place became known as Goat Island because of those valiant and efficient goats.]

Within a surprisingly short time those inexorable mowing machines had devoured the messy tangle of thorny thicket and demolished the mosquito paradise! Transformation of the place was well on its way. For some unknown reason, probably practical, B. C. got rid of the goats and boated in a flock of sheep to be the maintenance crew.

His campaign continued. According to his family, one morning he announced that a road was going in to Goat Island. The fence had already been taken down in front of a sizable hill in his field across the road, behind the island. In a while, a man from Leonard arrived with his dirt-moving equipment and began lopping the top off the hill. He transported it across the road to the edge of the slough and dumped it into the water. Shovel full by shovel full, that sizable hill became the road that turned Goat Island, the lonely outcast, into beautiful, friendly Pine Island, the joy of its resident fans.

Most of the canopy of pine trees that are now well over a hundred years old, are still there today—except for the few that Mother Nature has periodically seen fit to smite and eliminate. The tangle of berry bushes has all but disappeared. The rampant, wild rose bushes have finally been subdued and are now an important, but well disciplined, part of the landscape.

The first log cabin to be built on the new Pine Island was erected by Phil Johnson, son of B. C., and then sold to Dr. Bob Johnson (no relation), who was a circuit dentist from Oklee. He and his wife, who must have been of sturdy pioneer stock, and their infant son spent the baby's first winter there. The following summer the family moved to California. Bob kept the cabin for several years, and his father, Roy, with second wife, Hulda and their two teenage sons, Gordie and Glenn, spent summers there after Roy retired. When the Roy Johnsons could no longer come to the cabin, Bob sold it to Arlene Everhart, a local school teacher. The present owners of the log cabin are recently retired educators from Northland College, Les and Carol Torgerson. They have doubled its size and made it a modern, comfortable, year-around home.

Al Everhart, the former owner of the Everhart grocery store-gas station on Highway 92 in Clearbrook, built the next cabin on the south end of the island. According to his wife, Mick, the cabin began as a single room and grew, room by room, as they had time and money to make it happen. Mick and her four daughters, who were growing up in those years, still feel they never had enough time at the lake because of that grocery store. Years later the Everharts sold it to Ray Skoe, who owned a wild rice farm six miles north of Clearbrook, which at that time it was the largest, contiguous rice farm in the United States. He replaced the early cabin with a large, spacious house with an interesting and original feature. The south side was comprised of two large picture windows, designed to simulate the prow of a ship. Although Ray is no longer with us, the family still owns the property and the rice farm. Nephew Rod Skoe, who manages the family business, is a state Representative.

Cabin number three was a redwood ranch house erected in the summer of 1956 by B. C. Johnson. That same year, a young engineer from Illinois, formerly from Thief River Falls, was on vacation there with his wife and three kids. He chanced to be in the Clearbrook area, saw the cabin, and it was "love at first sight". Now, Ralph and June spend their summers at the cabin, and their three offspring, who grew up coming there, plus their mates and the three grandchildren, continue to spend as much time as possible at "the dream cabin" every summer.

The fourth cabin was built on the north end of the island by the Valleys, Lloyd and Irene and Bert and Carol. The four of them put it up using their version of an old fashioned way of building a house. It seems that over a period of four consecutive weeks, a side of the cabin would be constructed in Macintosh during the week, mounted on a flatbed truck, and hauled to the island. The cabin was put up on four consecutive weekends. Later the Valley cabin was sold to Vernon Johnson, a local farmer, who remodeled it into a beautiful, modern, year-around home.

Jan and Dean Lorenz from Thief River Falls, who had bought the lot south of the Valleys from them, later built the fifth and last cabin on the island.

North Shore History

Charles Eisenman owned some land on the North shore of Clearwater Lake and farmed where Bob Granley's home is now located. Arter owned some shoreland and in the 1930's they plotted and sold lots on the North shore. Omar Bakken and Leonard Nordlund were their salesmen. The shore was a tangle of uprooted trees. You cannot imagine what is was like.

* Original purchaser of the lot.

#	Parcel ID	Original Owner	Current Owner
43	20-300-0010	Boob Miller*	Engrebretson family He moved a small cabin in.
44	20-300-0020	Roy A. Wheelhouse* 7-29-40 Andy Welter 1950 - 1976 Mom Anderson	Paul Anderson (Skip)
45	20-300-0030	Rudolf Stockman* Carol Bagusson, Mary Jo	Donald & Arvilla Livingston Rudolf built the first cabin on the shore with the help of the Wennberg brothers.
46	20-300-0040	George M.Granley*	Donald & Arvilla Livingston George purchased two lots 4 & 5. Tented for a few years, then George built a platform on lot 4 and erected an army tent with open area on platform for cooking. It sure beat the umbrella tent! No electricity. No wells. To keep things cool we buried a wash boiler in the ground. Arvilla went by boat (usually for 2-3 cabins) to the spring at Thulins for water. We were able to buy milk and cream from the Eisenmans. In 1945 after WW 2 Olander (son) and George built a cabin on lot 4. Gerald Granley remembers pumping water for the cement used for the basement. This cabin was moved back on the lot and a new modern year around house was erected in 1980.
47	20-300-0050	George M. Granley* Marvin Granley	Granley family Original 12X20 cabin started as the roof of the scale weigh station from the Clearbrook Stock Yard which was located just west of the Elevator. The walls came from rough sawed lumber purchased from some saw mill on the reservation. Since then, the place has been added on three times.
48	20-300-0060	Clarence Peterson* Durwood Peterson	Gerald & Janice Granley Clarence built the first cabin on the North shore. His daughter couldn't understand why they didn't have finished walls. Just open studs. He used a blowtorch and scorched the outside and varnished over it. Later it was painted. About 1973 it was tore down and a new modern home was built which was purchased by Jerry and Janice Granley in 1991.

49	20-300-0070	Dr Davis* Dr. Anderson Rolf Andersron Arnold Philips	Jim & Barbara Erbes Dr. Davis had a cabin built. He had high school students clear the land for him – Donald Livingston, Kermit Berglund, Ralph Brynelson.
50	20-300-0080	Selmer Nelson* Rueben Sandland	Shirley Pearson Lyle Nelson remembers building the original cabin with his father. Shirley replaced the original with a new home.
51	20-300-0090	Christ Bakken* Norman Heskins Bud Aasen	Mark J. McEvers Heskins drowned when he fell off his pontoon boat while fishing.
52	20-300-0100	Dr.Rueben Anderson*	Michael & Pam Oosterwijk
53	20-300-0110	Clarence Berndt* Wadekamper	Eugene & Ardis Jensen
54	20-300-0120	Ralph North*	Yvonne Johnson Yvonne rebuilt and added to original in 1994.
55	20-300-0130	Louis Jay* Roy Smiley Groshong	Eric & Gerri Thorsgard Original burned while Groshong owned it. Jerel Johnson erected double wide and garage.
56	20-300-0140	Orville & Adeline Lee* Charlie Nyman	Roger & Janet Holm Purchased in 1992
57	20-300-0150	Omar Bakken* Prichard	John & Beverly Cucci
58	20-301-0010	Leonard Nordlund* Prichard McEvers Leonard LePlant	John & Beverly Cucci Prichard purchased Bakken's and Nordlund cabins and combined them into one cabin.
59	20-301-0020	Oscar Edeen*	Robert & Helen Widerski Rip (Robert) has done a lot of building and now has a year around modern home.
60	20-301-0030	Lowell Johnson*	Lowell Johnson In 1944 they built a shack says Pat. In 1952 they built the cabin.
61	20-301-0040	Ralph & Lucille Millette*	Thomas Millette, et.al.
62	20-301-0050	Eddie Anderson*	Truman & Avis Sandland
63	20-301-0060	Clarence Hanson* Alvin Olberg	Kenneth & Helen Ask
64	20-301-0070	John Barber* A.L. Long Glen Long	Richard & Laurel Long
65	20-301-0090	Sig Rimstad* Ron Ballard Ada Mc Alister* Arlen Birkeland Nelson	Roger & Christina Mc Guire In 2001 the Mc Guires combined the Ballard and Birkeland cabins into one large unit.

66	20-301-0100	Strong Brothers*	Rita Hoff
67	20-301-0101	Strong Brothers*	Shawn B & Sharon L. Bubb The Strong brothers built a cabin on each lot with a storage between them. Later the Hoff's and Bubb's added and made it one big unit
68	20-301-0110	Patrick Johnson*	Kenneth & Patrica Janssen Empty lot
69	20-301-0120	Rev. Loland*	Laverne & Pearl M. Adamson
70	20-301-0130	Ray Ambuel*	David Lindmark
71	20-301-0140	Rev.King*	Betty Ann Dahl

Eisenman parcel is 300
Arter's parcel is 301

Eisenman's land was an original Homestead grant to Frank Hixon on 8/9/1897.
Eisenman purchased it from Stowe in 1927.

abl
8/21/01

East Shore History

Joe Bass had a cabin on the shore. He bought pottery from Mexico and lived in the cities. The cabin was moved up the hill and across the county road where Leo Stai lived for awhile. He painted the house blue. Michael Winkel purchased the property with another cabin on the property and has done considerable remodeling to the structure. Tony and Evelyn Winkel spend summers at the new house taking time from their home in California.

Henry B. Slotnick and his wife lived in Grand Forks, North Dakota before moving to Arizona. They spend the summers at Clearwater Lake.

Charmain Barranco is now living in the property that once belonged to Helgesons. She works for the Blackduck newspaper and is the daughter of Matilda Barranco. The house at one time, during the early 70's, had several people living in the same quarters. They made candles and art items that they sold at art fairs and to the neighbors. They made delicious rose hip and dandelion wine.

Reuben Stai and his wife Olga were some of the first permanent residents on the east side of the lake. They were caretakers of the Debs School. They fished, hunted and grew their own garden and canned as much as they could for the winter. They had one son Leo who still owns the property but does not live there. Olga baked and enjoyed playing the piano at home and church. Reuben was an excellent woodsmen. He could walk through the woods without a sound. Leo recently sold the property to Tom and Theresa Burandt and they are in the process of building a year-round home on the lake.

Leon and Constance Cooper - Their cabin was first owned by Alvin and Ruth Stai. When Leon was looking at the property he saw Reuben Stai walk by with a string of sunfish and that is what sold the property. Leon was a Chicago Business man who owned property in Chicago, also owned a home in Miami, Florida. They had 3 Cadillacs - 1 to pull a small boat to area lakes, 1 to go to town with and 1 that only went long distances. He had a high security room in his cabin with a well screened in room as his wife was afraid of bugs and bears. Their daughter Mrs. Crawford Hodges inherited the property and sold to Darrel and Darlene Reinke. The Reinkes are from South Dakota and they built a year-round home on the lake property..

Don Haugen moved a part of a cabin on his property and later sold to Goldie and Richard Claycomb. Richard was a civil engineer who died unexpectedly of a gunshot wound in his garden. She married Goldie Shipley. She who had property in Colorado and Sedona, Arizona and decided that it was too much for her so she sold the property to Dick and Corrine Richards. They have owned the cabin since 1972.

Wes Bierbaum built his cabin next door in the 1950's. He enjoyed his flowers and feeding the raccoons in his front yard. He owned a cafe in Clearbrook for many years before his retirement. He served meat and potatoes to the many farmers and area people. He also entertained lots of friends and family at his cabin. Stephen and Jean Chadwick purchased the cabin from his estate.

The Colaizy Family was a large family from St. Paul who owned the property that David and Jolynn Chadwick now own. The property had a large cabin and a smaller one for guests. The place was called ELF BERG with a sign over the driveway. The sign signified the first letter of each of the brothers who had interest in the property. Frank and Irene bought out the interests of the other brothers and they spent as much time as they could at the lake. He had been a supervisor at the Black Dog Power Plant in Minneapolis. He had an excellent shop and enjoyed helping his neighbors or by stopping by to visit. He liked to cook as many Italian dishes in a variety of ways. He fed the bears outside his window and didn't want raccoons bothering so he had a hole in the wall behind a picture so that he could aim his gun out and scare the creatures away.

Keith Ricke now owns the property just south of David Chadwicks. He has been clearing the land and has a small trailer parked there.

Louis and Catherine Millie He was a school bus driver and a gun smith. His target for his guns was across the road by his place so you had to proceed with caution. The large portion on the east side was sold by Kay Millie to several people. Richie and Diane Langseth from Leonard who have not done anything with their portion. Brian and Rebecca Livermore from Bemidji have built some tremendous steps down to the lake. Robert and Lori Burgess are building a permanent log home He is a veterinarian for Clearwater Veterinary Service out of Gonvick.

Donald and Fern Ahlgren are living on the property oringinally owned by T.E. Rider. they used it as a summer place. They have also purchased land to the east and they raised Polled Herefords. Don has been a supervisor in Roosevelt Township and Fern a member of the Debs Homemakers.

The South side of the Lake

In the early years the land on the south side of the lake was part of farms in the area and of little use to their owners.

Currently the area is in the possession of Ernie Stoker - and of course the local furry and the feathered longtime inhabitants. As a good example, every spring a powerful urge comes over the latest representatives of the venerable bald eagle family. It causes them to chose the same stark skeleton of an old dead pine tree, still standing tall along the shore, as the place to nest and rear the next generation.

That brings the tale of Clearwater Lake, the little glacier Kettle, and the inhabitants of its Knobs, full circle, ending one version of "That's The Way It Was"!

LAKE LORE

There were so many interesting and untold stories yet to be shared that one more section has been added. It is called "Lake Lore." The plan is to leave it open-ended so that more tidbits of history can be added for a long time to come. (June Gustafson will be happy to receive the stories, put them together, and have the pages ready from time to time to add to this ringed booklet.)

The Birth of the Clearwater Lake Area Association

August 1992

The minutes of this first information organizational meeting were--:

"The following persons were elected to serve as the organization's first board --
Carroll Anderson, Skip Anderson, Tom Hendrickson, Bob Granley, Dick Richards, Bruce Bjerke, Bob Pearson and Marcia Useldinger.

It was further approved that the organization's President, Vice President, Secretary and Treasurer positions would be determined by the Board of Directors. At a following meeting of the newly elected Directors it was determined that these positions be filled as follows: President Carroll Anderson, Vice Presidetn Marcia Useldinger, Secretary Bob Granley and Treasurer Bob Pearson.

A motion was seconded and passed that a formal organization be established. Articles of Incorporation were approved as written.

Organizational Bylaws were passed as written, with the exception that Article XI woudl be modified to read as follows:

These Bylaws may be amended at any meeting of the association by a simple majority of 51% of members attending and voting (including Proxy votes) provided that a written notice of what is being proposed is provided to the general membership at least fifteen (15) days prior to the meeting of which the amendment shall be voted on.

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1st General Meeting
Clearwater Lake Area Association Minutes of the Meeting
September 7, 1992

The initial organizational meeting for the Clearwater Lake Area Association was called to order by acting Chairman Carroll Anderson.

Carroll informed the group of attendees that the reason for the meeting was to determine if a formal group should be established and if so, to approve Bylaws, Articles of Incorporation and Elect a Board of Directors.

Following Carroll's introduction a group discussion was held concerning the impact of raising the water level 8 to 10". Apparently sometime in the past, boards had been removed from the Dam with a consequent lowering of the lake level. The general consensus was that raising the level would be beneficial for the Lake. Mr. Mason expressed some concern that his access road might end up under water. It was explained that the present level is 8 to 10" above normal due to the recent rains. Mr. Mason stated that he felt another 2" above current levels would be O.K.

Mr. Widerski asked if any projects undertaken would be approved by majority vote of the members. His answer was "yes'.

There was a query concerning the general rules for chemical weed control. No one present knew the answer. Skip Anderson stated that there is a new weed machine apparently approved by the DNR that he would look into for the group.

"AND THAT'S THE WAY IT WAS---"

As the history of Clearwater Lake and River continues, future generations of "Lake lovers' will have the opportunity to continue documenting the tale of the two Clearwaters, River and Lake.

The Biggest Dam Blowout

It happened in 1908 when Bob Neving was still in charge of the Clearwater Lake Dam, raising and lowering the water level of the dam when the log drives went out to Plummer and then to Red Lake Falls, then on to Crookston and Grand Forks, some even north on the Red River.

It seems that a farmer whose farm was located along the river was firmly convinced that the pesky raising and lowering of the water level was ruining his farm. His reaction was to repeatedly send complaints to the Dam Master — who persisted in ignoring them. Furious, he finally decided he had to get Robert Neving's attention and show him he couldn't get away with ignoring complaints. The big bundle of dynamite that he planted under one end of the "New Dam" had the desired effect.

The resulting explosion not only blew a big hole in the dam, but all of the windows of Neving's house were also blown out—as well as those in every other building on Neving's property within a hundred yards of the explosion. According to the article in the newspaper, the Olberg Journal, "The barn and other building sustained major damage." And "The S.P.K. Lumber, Cedar & Tie Co. sustained considerable damage through the explosion. The flood of water which was let out of the hole in the damaged dam carried away a large quantity of their logs banked on the river below the dam."

The farmer was found guilty of being the perpetrator of the deed and sentenced to time in jail.

That didn't stop the "mad bomber," though. It just slowed him down a bit in his pursuit of justice. This time it took him 3 years of diligent effort to finally get Neving into court. Now, he would get what he wanted from Neving, legally. Unfortunately all the accuser ended up getting was a stern warning from the judge to stop bothering plaintiff Neving, or else!

* * * * * *

Picnic Island

Contributed by Carroll Anderson

"Back in the late 30's I was 7 or 8 years old. B. C. owned an arch of land called Picnic Island. He had made concrete fireplaces and picnic tables and rented these parcels out for 50 cents a day. I remember driving through water up to the running board to get to the picnic area. Back in those days there was a wooden footbridge going out to High Island. The shoreline at the picnic grounds was beautiful. Sandy for a few feet then rocky bottom suitable for fabulous walleye fishing.

"I came to Clearbrook in 1959 and in 1961 or '62 Picnic Island was parcelled off into lots for sale. I was the first one to buy a lot. The ice had just started to move away from shore and I could see sand about 3 feet out. What a surprise I had when the ice went all the way out. Now the shoreline had become mud 6 inches to 12 inches deep in the bay. Since I picnicked there in the late 30's B. C. had made an earthen road with a culvert in the center, cutting off the natural flow of water and creating a shallow and mud bottomed bay.

"In 1963 I started building my cabin. It took 5 years to build, because we only built on it when we had cash to spend. We enjoyed the cabin anyway, even when it was one 'Big' room. My kids always had to bring a friend, so much of the time we would sleep wall to wall with kids."

* * * * * *

Excerpts from the chapter "Life at Clearwater Lake"

in Grace Clemenson's book, Grandmother's Stories

"We have now reached the fall of 1938. The economic depression had reached its lowest ebb. Jobs were scarce and Gerhart [her husband] was searching for any kind of work. Uncle Carl knew Mr. McCrady, a man from Plummer, who owned several acres of timberland in the Clearwater Lake area. He was looking for a man to do some cutting. He couldn't pay wages, he said, but he would open a charge account at the local grocery store for anyone who would take the job. There was a house on the place and Gerhart accepted the job. We moved in.

"We had no furniture and no curtains. But this was not a serious handicap. I made the curtains and Gerhart bought lumber and nails and built and painted our furniture. Our first home was established. We were happy, cozy and comfortable.

"The winter was not without its excitement, however. Jim [Gerhart's brother] happened to be in the right place at the right time to see the burying of a body in the Clearwater River. One clear sunny morning Jim walked two miles to Genzel's on an errand. The main road and Clearwater River ran parallel to each other through the woods. On his return home Jim took a shortcut through the woods. This brought him up onto a high elevation overlooking the road and the river. He saw a car drive down the road and stop near the river. Two men got out and set a long sled on the ground. Then they opened the trunk of the car and took out what appeared to be a human body. It was long and slim and wrapped in a blanket. They laid it on the sled and both men took hold of the rope and started pulling. The sled runners cut into the snow and the body drug along over the end, making a deep track as they pulled it along. The two men pulled their load off the road and out across the field to the river. There they took out an ice saw and cut and removed a round chunk of ice. Then they took the

body off the sled and slid it into the hole. They replaced the cut chunk of ice in the hole and returned to their car and drove away.

"Jim was standing in a position to get a good view of the whole procedure without being seen. He came home breathless and told us his story. Gerhart, Jim and I took a flashlight and a blanket and went to the river. We found the hole and took out the chunk of ice. We put the blanket over our heads and looked into the hole. All we could see was rushing water. We replaced the chunk of ice and walked over to talk to our neighbor, John. He advised us to keep the adventure strictly quiet. He said it was for our own safety. In those days there was bootlegging and gang wars in the big cities of Chicago and Minneapolis. None of us believed this was a local incident. As we watched the papers we found no reports of missing local persons. Could it be that some ganglord had ordered the death sentence of some little member who knew too much? We did not want to be among those who knew too much. We told our story to no one."

[NOTE: Grandmother's Stories is a delightful and interesting book that is fun to read. JG]

* * * * * *

The Dane Hill Deal

Ole Johnson of the Clearbrook Lumber Company [not related to the B. C. Johnson family] tells the tale of how he acquired a choice piece of B. C. Johnson's lake property, Dane Hill, that he had secretly coveted for some time. One day he met B. C. on the street in Clearbrook and asked him if he was ready to sell the particular spot on the lake and what he wanted for it. Without hesitation the good man replied, "See that brown Cadillac across the street? That's what I want." Ole never did say how he managed that part of the deal, but B. C. got his brown Caddie and Ole became the new owner of the property. Coincidentally, B. C. was once quoted as having said that his goal in life was to become a millionaire and drive a Cadillac. So that one may have been his first one—but not his last, as he owned a different one at the time of his death.

The Legend of Igloo Island

Contributed by Monte Mason

"On the southwestern side of Clearwater Lake, a peninsula, about 17 acres in size, juts up in a northerly direction and is connected to the mainland by a strip of land not much wider than the width of a car. Until recent years this peninsula was known as Igloo Island.

"How did the 'island' get its name? There are a couple of versions.

"Loren McCrehin in 'The History of the City of Leonard, Dudley Township', published in 1982, is paraphrased as follows.

'Dr. Spears'

'Shortly after World War I ended, a man clad in Eskimo clothing made his appearance on the streets of Leonard. He had come from Siberia and was looking for a place to practice. He was located in the basement of the bank and there he practiced medicine. Leonard now had a doctor!

'He was instrumental in the project of constructing an Igloo at Clearwater Lake.'

"It is the understanding of this writer that the 'Igloo' was intended to be used as a tuberculosis sanitarium and was built on the north shore of the island—and in those days the patients were supposed to get a lot of sunlight to aid in their recovery. Dr. Spears called it an Igloo because the concrete structure had an entrance that reminded him of an Eskimo igloo. Some of the concrete structure still remains standing as of this day.

"Loren McCrehin goes on:

'He (Dr. Spears) would come out of the basement quite often dressed in a different colored Eskimo fur parka, leggins, shoes, and would cause a lot of curiosity among the people that saw him. He was quite a fluent talker and because he came from Siberia (another version says he came from Alaska) he had to live in a cold basement. It was costing a lot of money to build this Eskimo Igloo at Clearwater Lake and his shipment of gold was delayed somewhere between Siberia and Leonard.

'A dispute arose over money matters and shortly after some one stuffed a wad of hay in the top of the chimney and Dr. Spears was smoked out of his basement abode. He left town as suddenly as he came and no one ever found out where he went.'

"Another version of this story indicates that the heir of the Florsheim shoe family was involved in the financing of the 'Igloo' and didn't make money on the sanitarium either! The 'island' was included in the land purchased by J. D. Mason in 1932 and is now sometimes locally called 'Mason's Island'."

* * * * * *

A couple of incidents that happened on the Southwest Shore

Contributed by Monte Mason

"When Wayne Halseth was about ten years old, his folks had the cottage at the location of Ole Johnson's present cabin. One night Wayne became seriously ill and his folks took him to the hospital. When they went

back to the cottage the next day the cabin was gone. There had been an explosion and the building burned to the ground. Source of the explosion apparently was not determined.

"Another fire story. In the early 1940s a forest fire of undetermined origin swept through the area behind the Roosevelt Road all the way to the Solway trail, destroying a beautiful spruce swamp in the process. The many popples now in that area are the result of that fire. It is our understanding that Phil Johnson helped in establishing a fire break that impeded the progress of the fire."

Tribute to Wes Westrum

A small community is always eager and proud to share one of its best with the world. Wes Westrum was one of major league baseball's best, and he was always glad to come home to Clearbrook to be with family and friends.

After graduating from Clearbrook High School in 1941, Wes was a highly regarded football and basketball player, but baseball was where he would make his mark. Community members raised money to sponsor his travel and tryout expenses in Crookston with the New York Giants farm club -- he was on his way. Wes Westrum signed with the New York Giants in September, 1947. In his second season with them he set a club record by hitting 5 grand-slam homers, and another, catching record, in 1950 with only one error in 140 games.

Wes caught every game for the Giants in the 1951 (the year they won the pennant) and 1954 World Series, and played in the 1952 and 1953 All Star games. He hit .217 with 96 homeruns and 315 RBIs in eleven major league seasons with the Giants, staying on with them when the club moved to San Francisco in 1958.

In 1964, Wes Joined the Atlanta Braves organization as a scout and remained with them until his retirement in 1992. Upon retirement, Wes devoted much more of his time to his home on Clearwater Lake, and spent summers there, with the winter months being spent in Arizona, near his daughter and her family.

In 1990, prior to his retirement from baseball, the City of Clearbrook dedicated a portion of the American Legion building to honor him with the Wes Westrum Museum, where many mementos are on display, including a copy of the very first "Sports Illustrated" magazine , of which Westrum was on the cover. Minnesota Twins owner, Carl Pohlad, president Herry Bell, executive vice-president Andy MacPhail and Chicago Tribune columnist Jerome Holzman were among the dignitaries at the museum's official opening.

The legacy of Wes Westrum's baseball career will be a proud memory for many local people. There are still many family members in the area. Although Wes, was preceeded in death by his two brothers, Lyle and Harris, and sister, Frances Goudge, there are many nieces and nephews and their descendants. His only surviving daughter lives in Arizona with her husband and children.

Wes Westrum was a humble man, never using his popularity to get any special attention. He cared for everyone and made very effort to help people wherever and whenever possible.

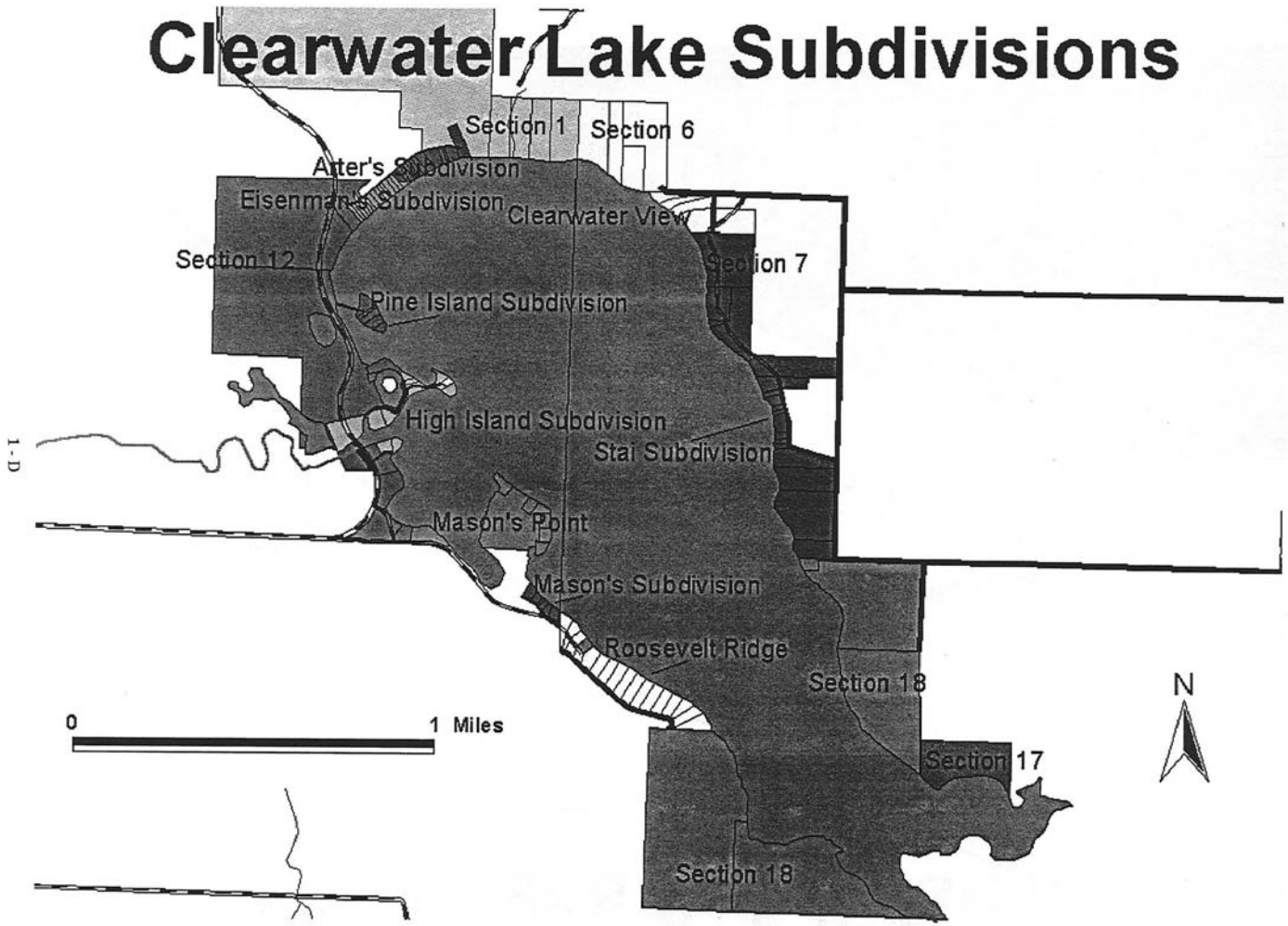
Wesley Noreen Westrum passed away in Clearbrook on May 28, 2002 at the age of 79 and was laid to rest in the Silver Creek Cemetery on June 1, 2002.

Compiled by Skip Anderson, with much help from Jim Goudge, Wes' nephew

Section D.
Parcel Based Database

Some information for this section obtained in 2002

Clearwater Lake Subdivisions



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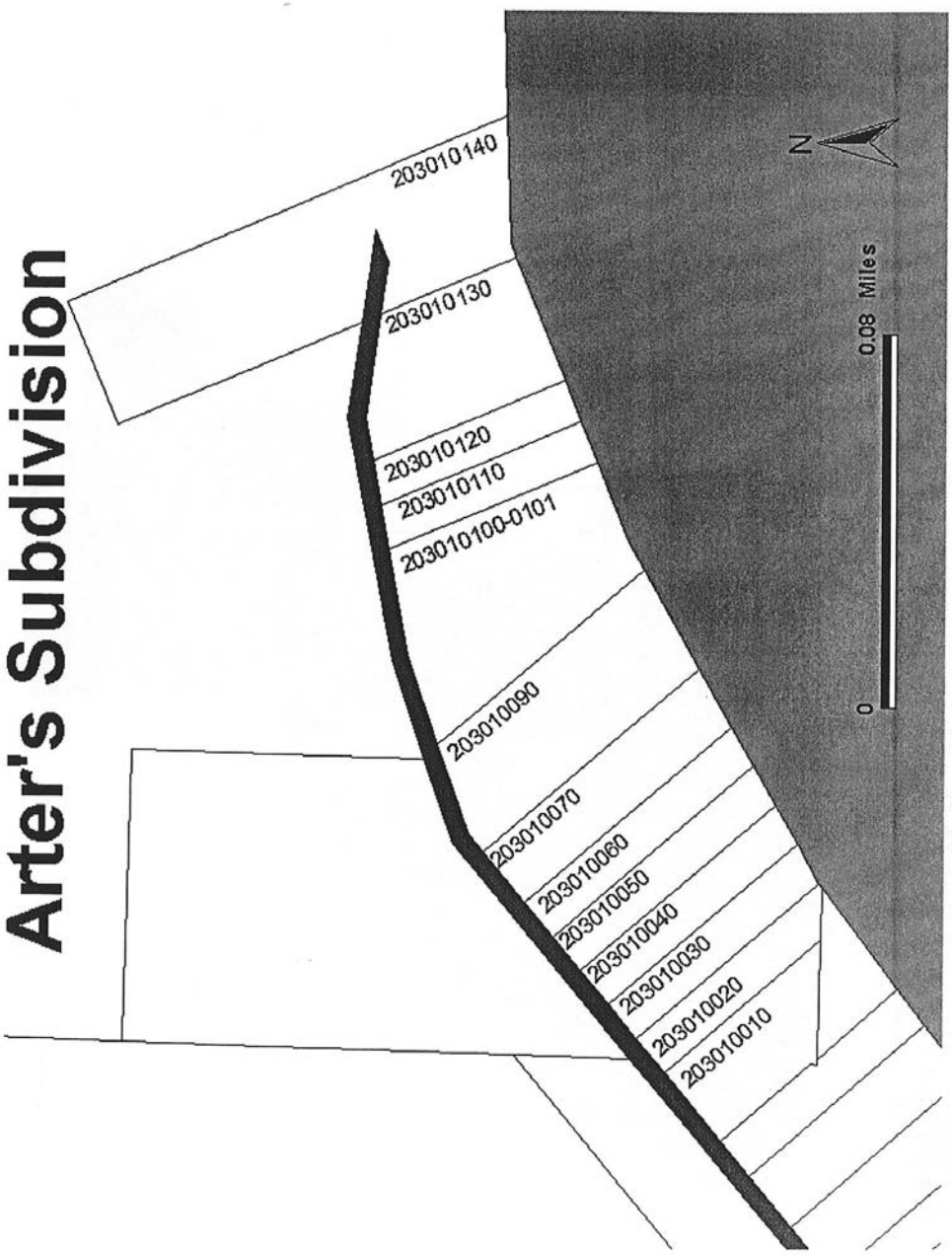
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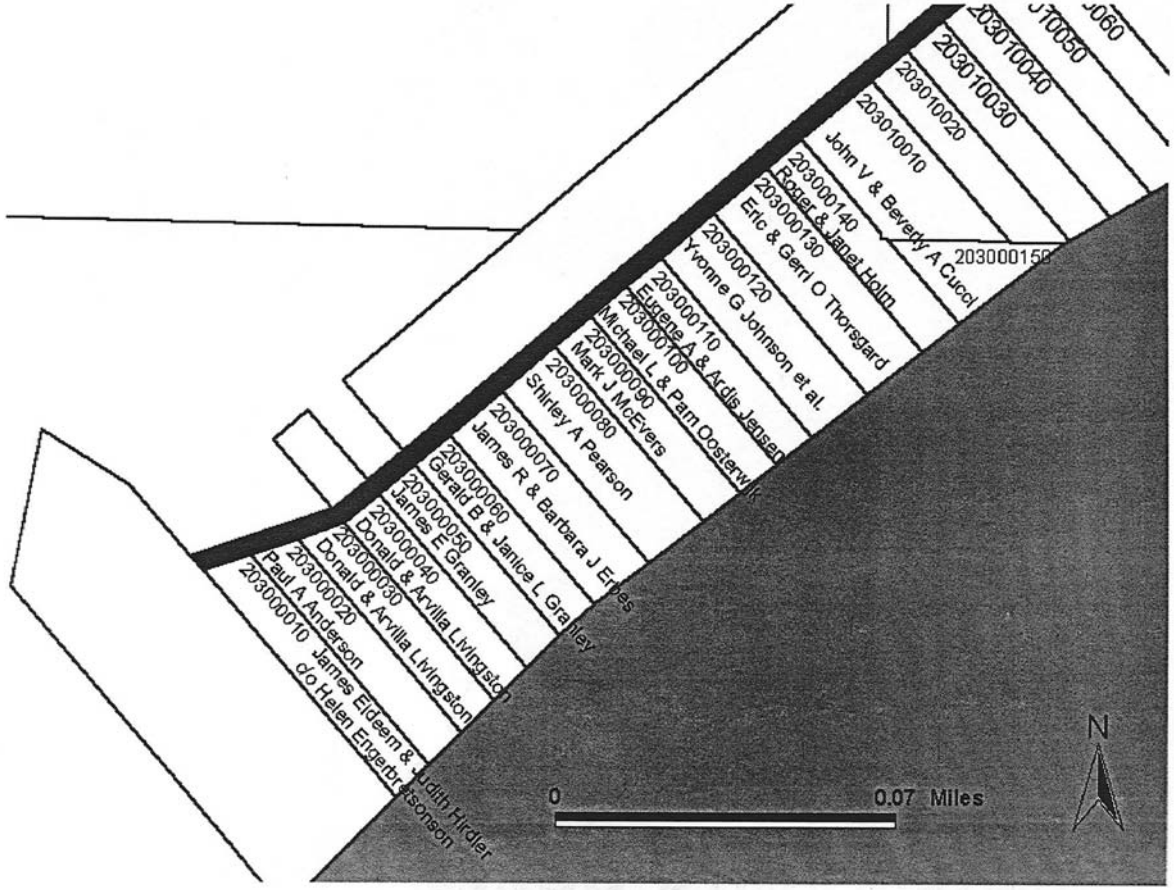

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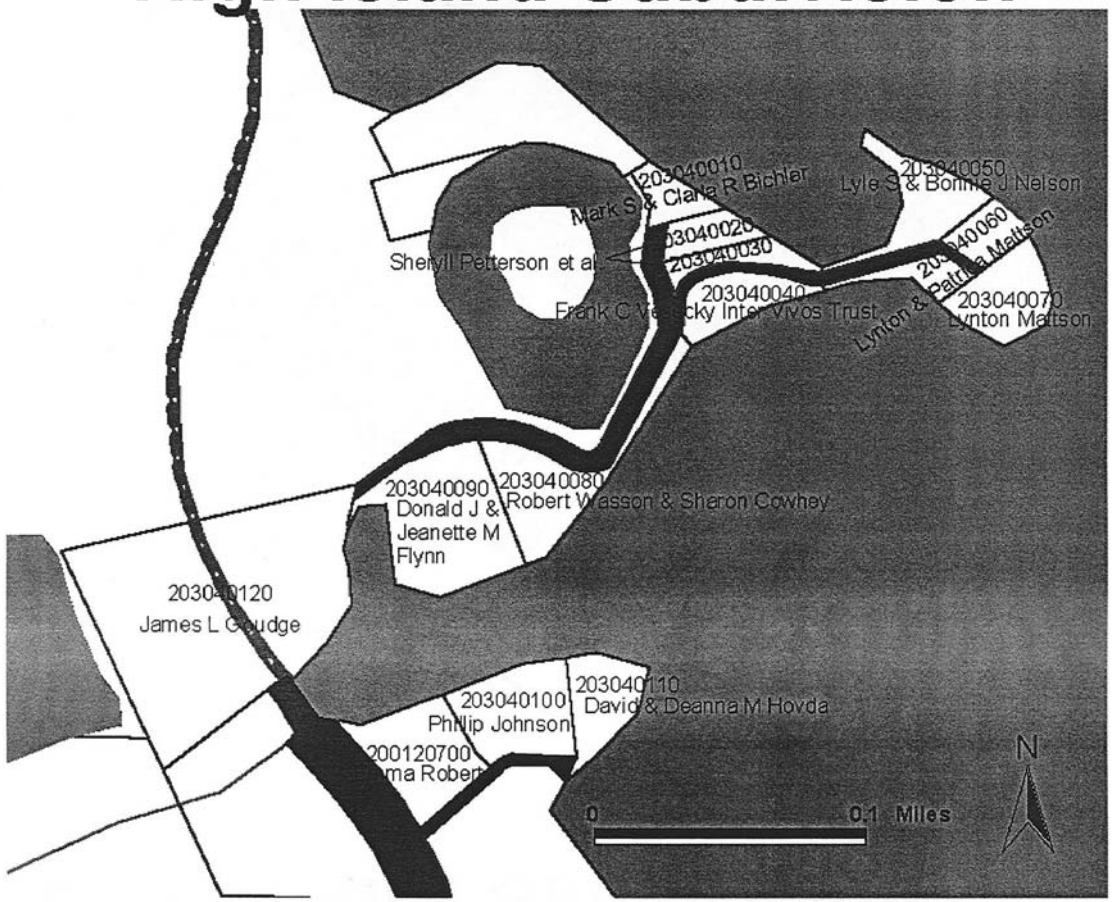

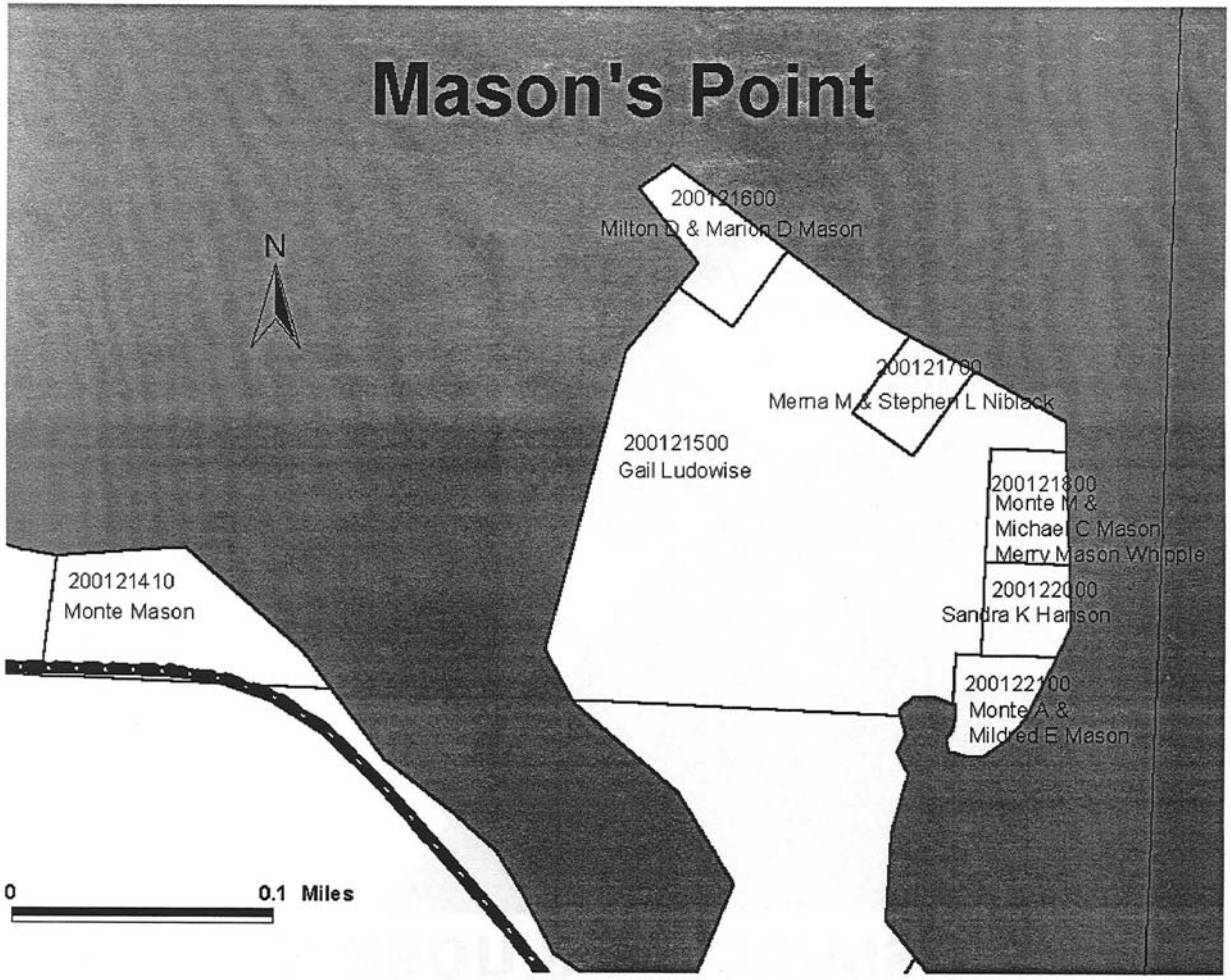
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Gail Ludowise
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Monte M &
Michael C Mason
Merry Mason Whipple
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Sandra K Hanson
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Monte A &
Mildred E Mason
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Monte Mason
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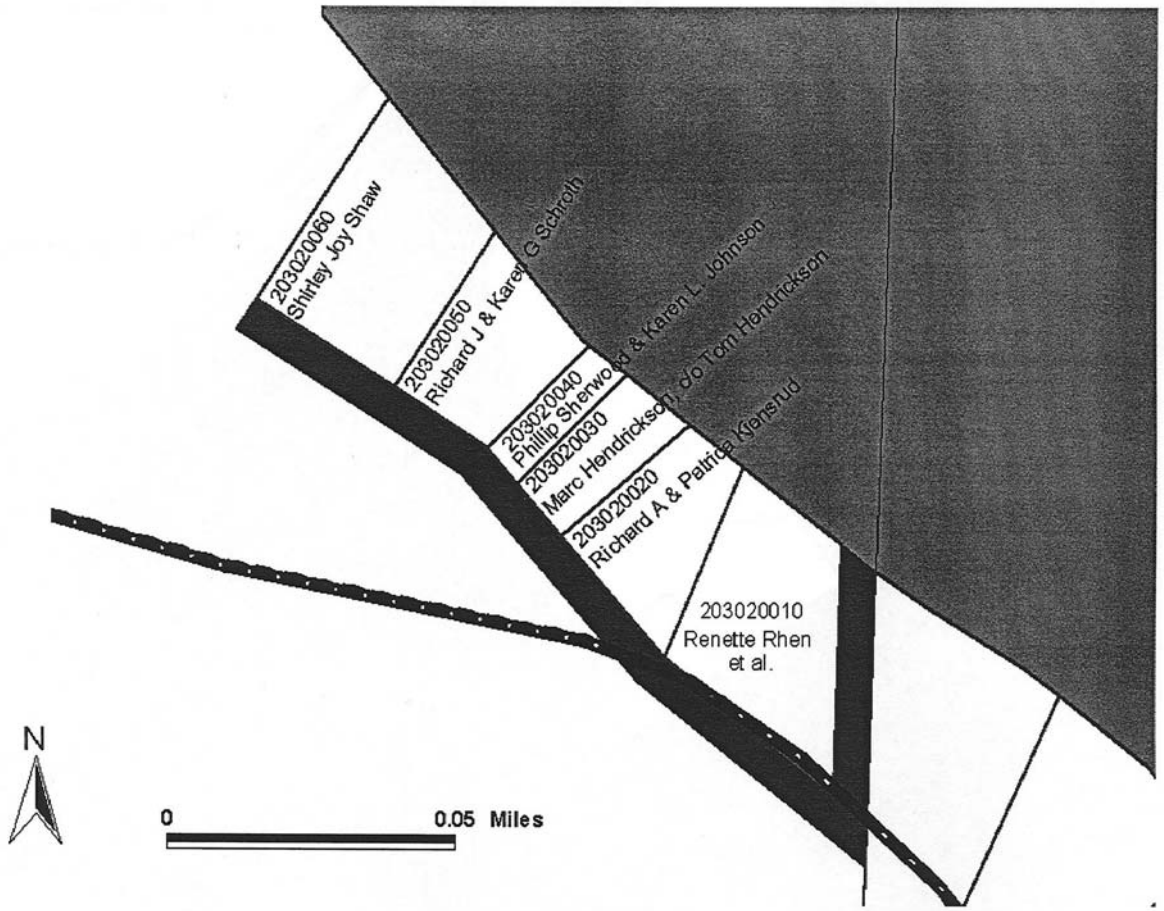
Mason's Subdivision



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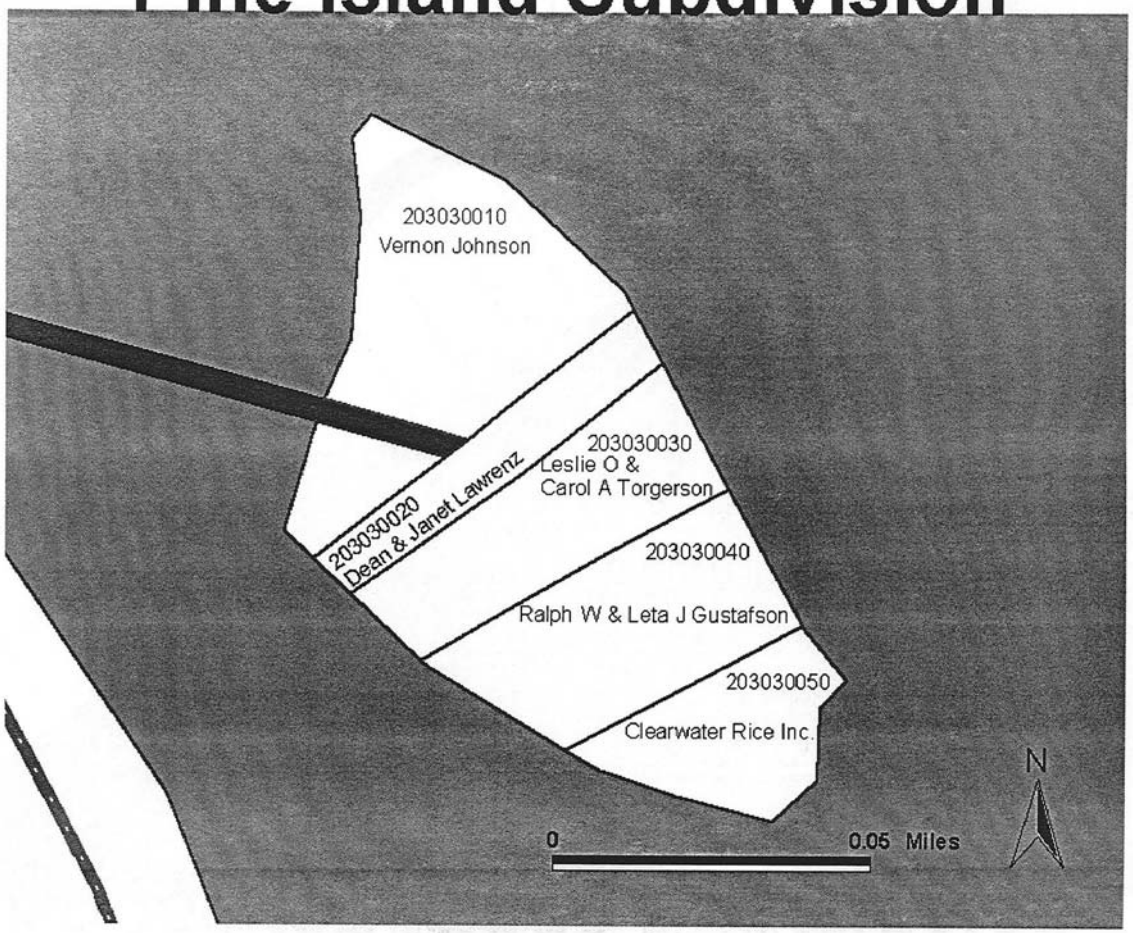

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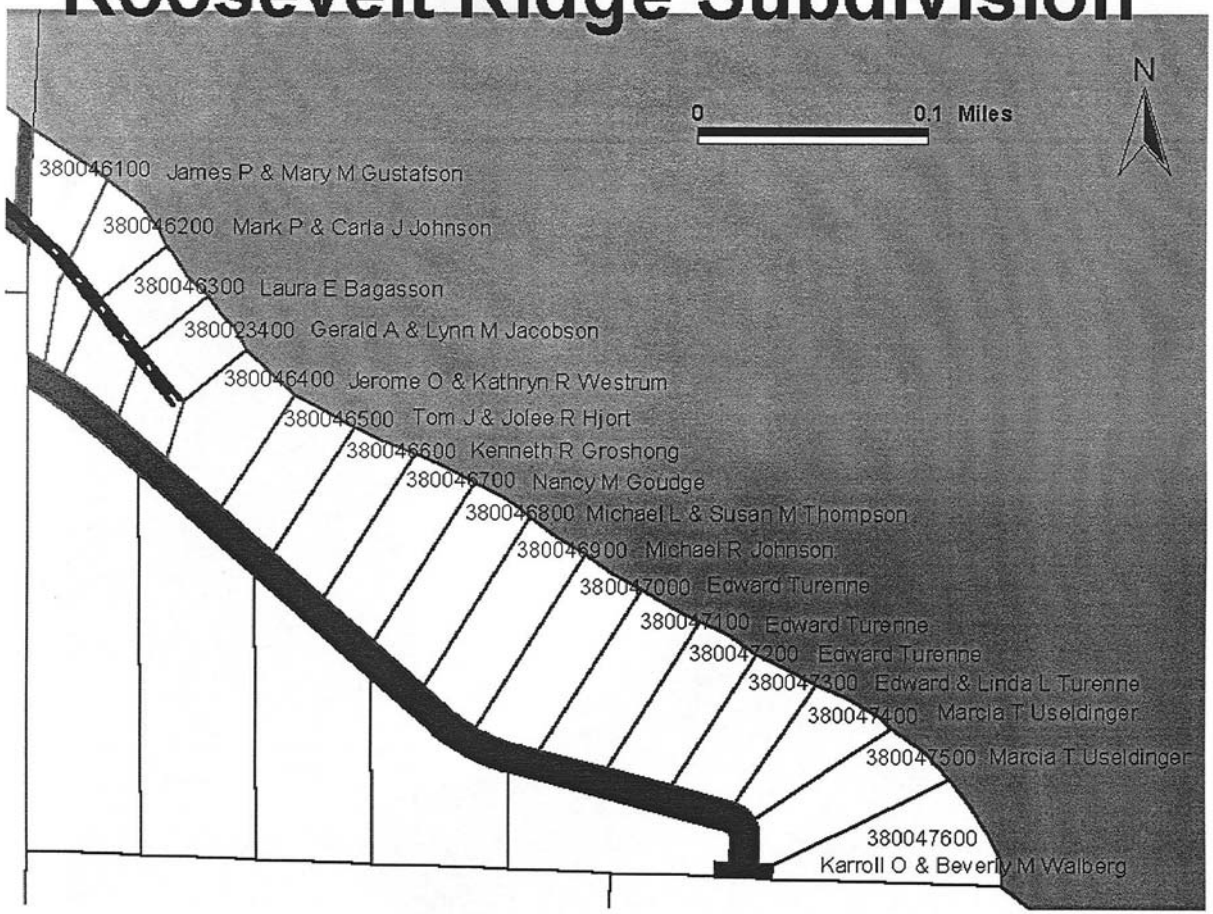

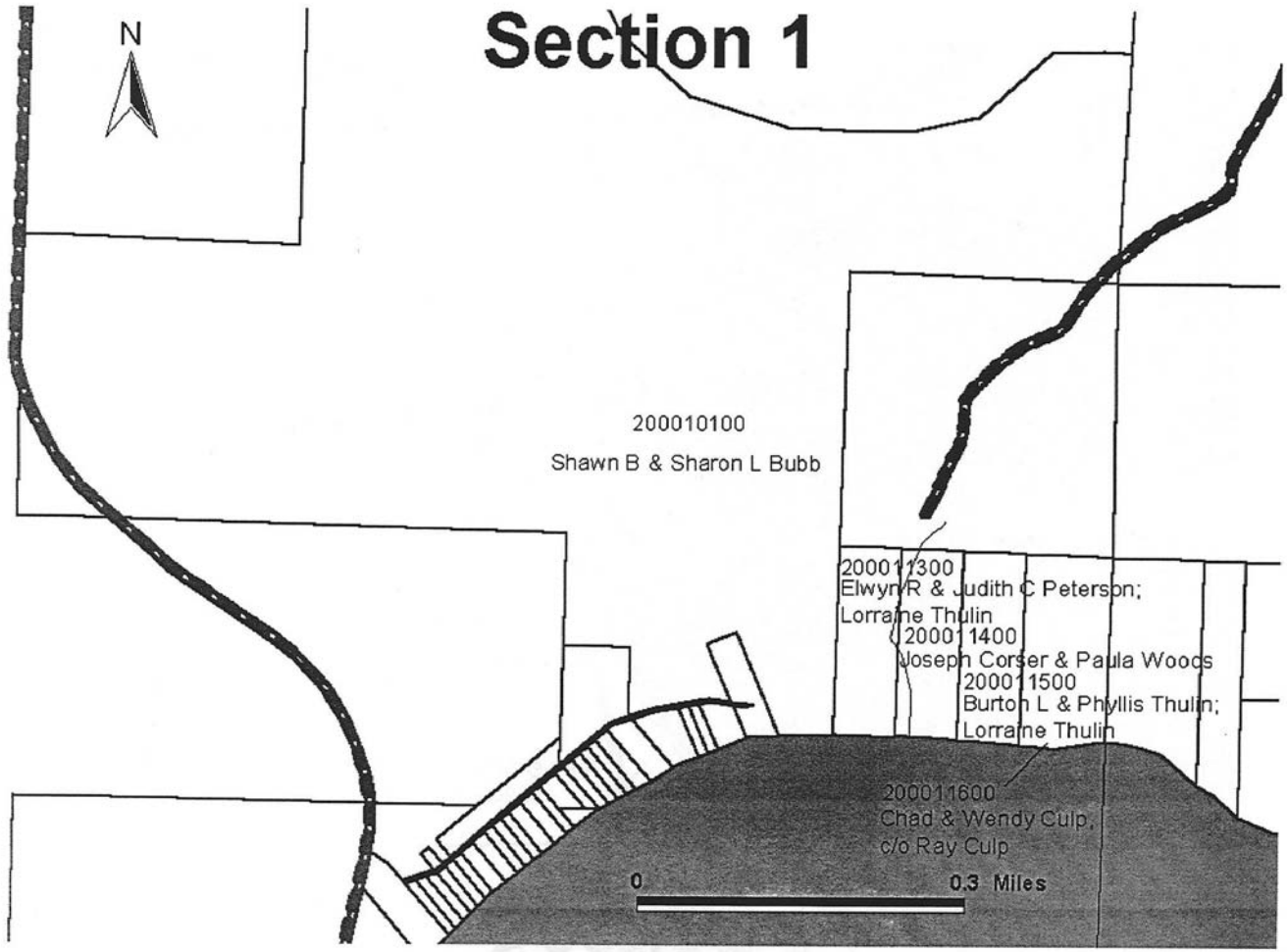
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Lorraine Thulin
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Joseph Corser & Paula Woods
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Lorraine Thulin
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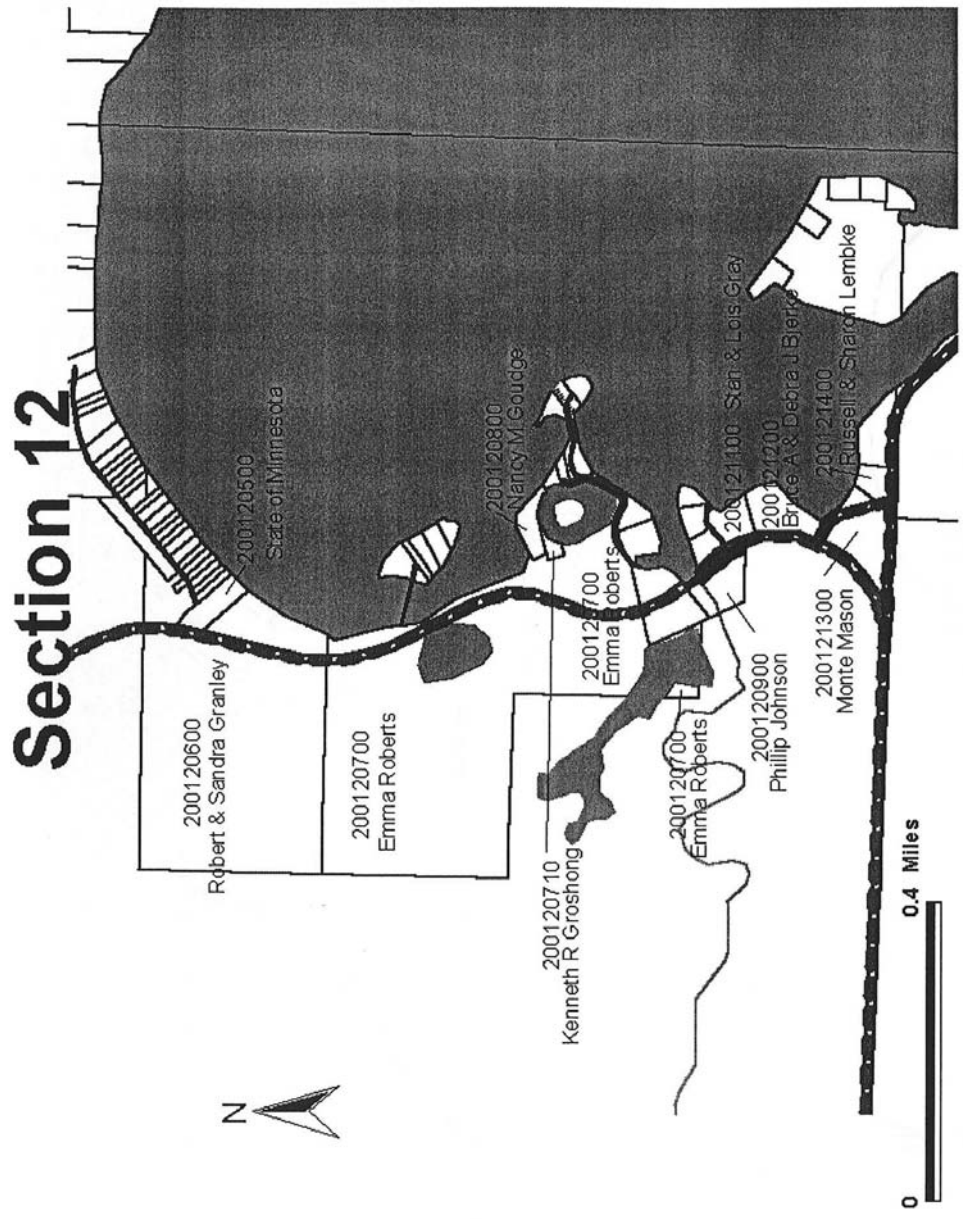
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Emma Roberts
200120700
Emma Roberts
200120900
Phillip Johnson
200121100
Stan & Lois Gray
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Russell & Sharon Lembke
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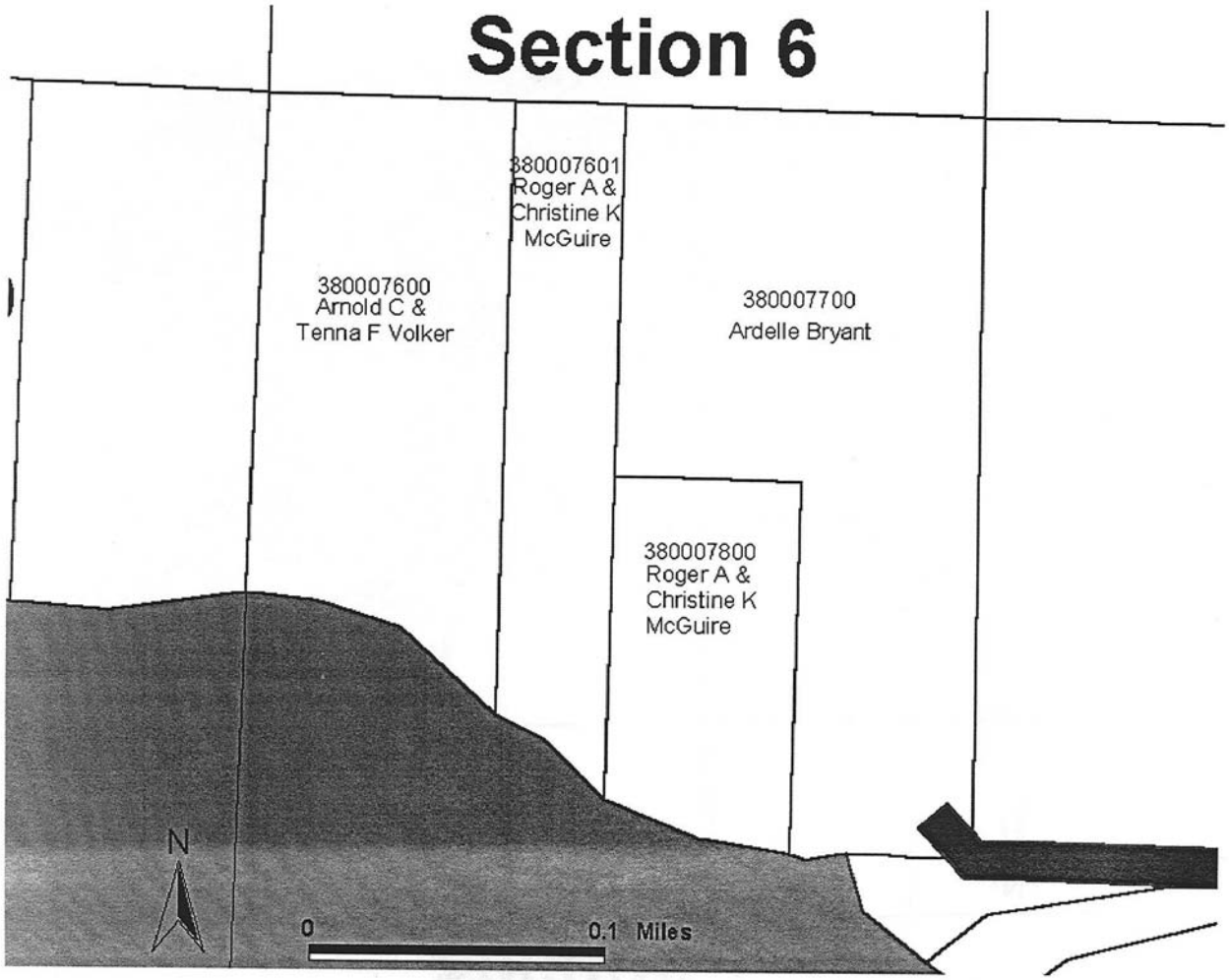
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Tenna F Volker
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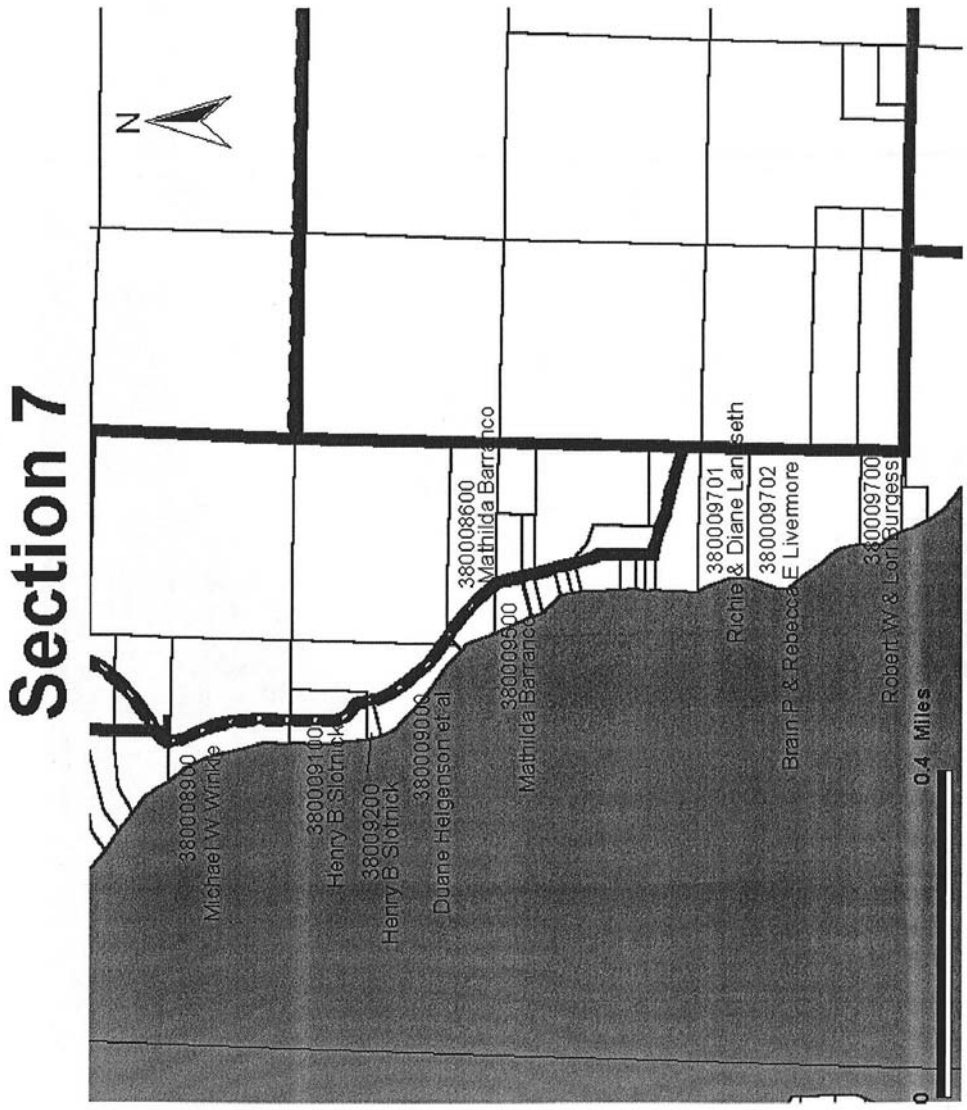
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Mathilda Barranco
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& Diane Lan seth
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E Livermore
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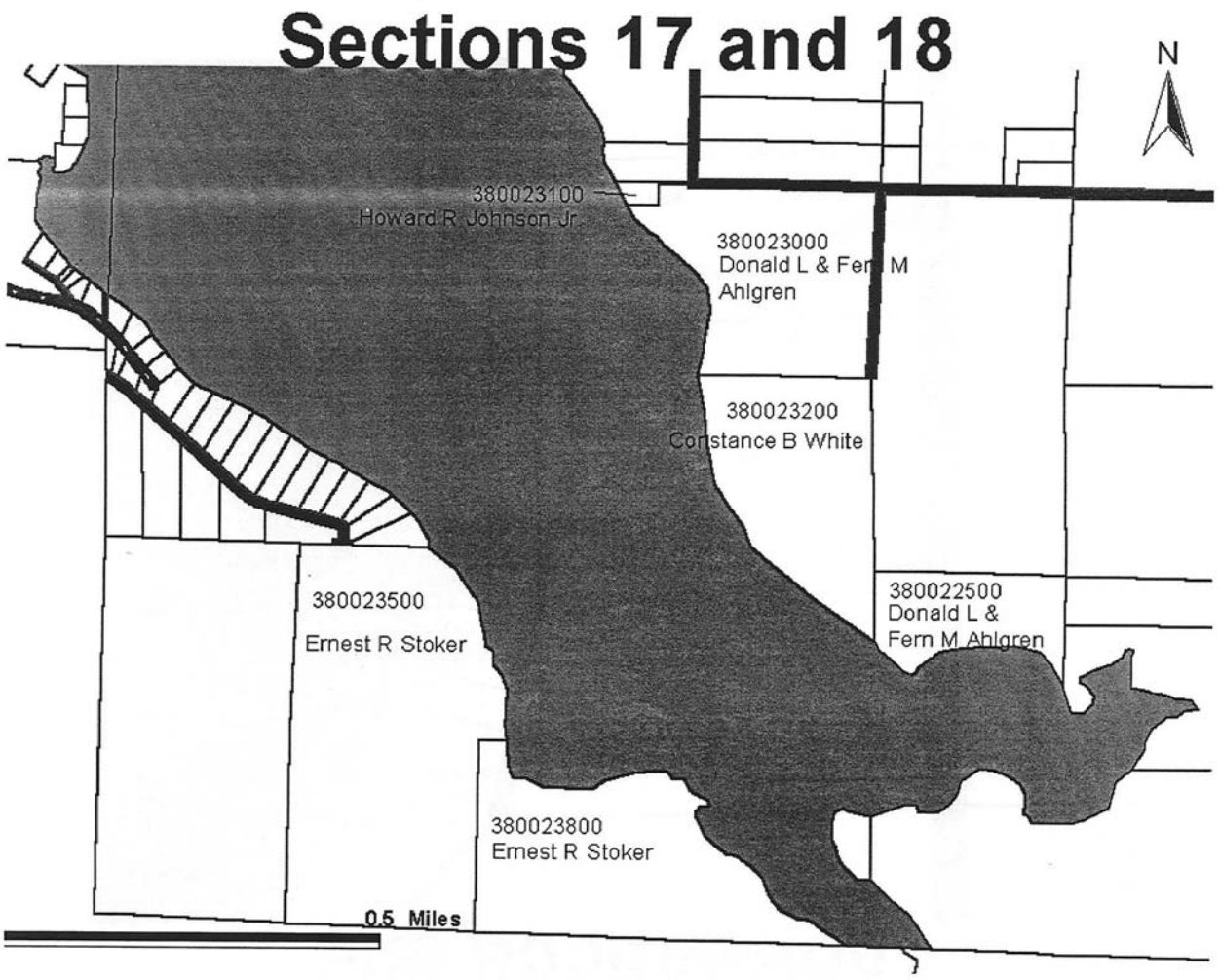
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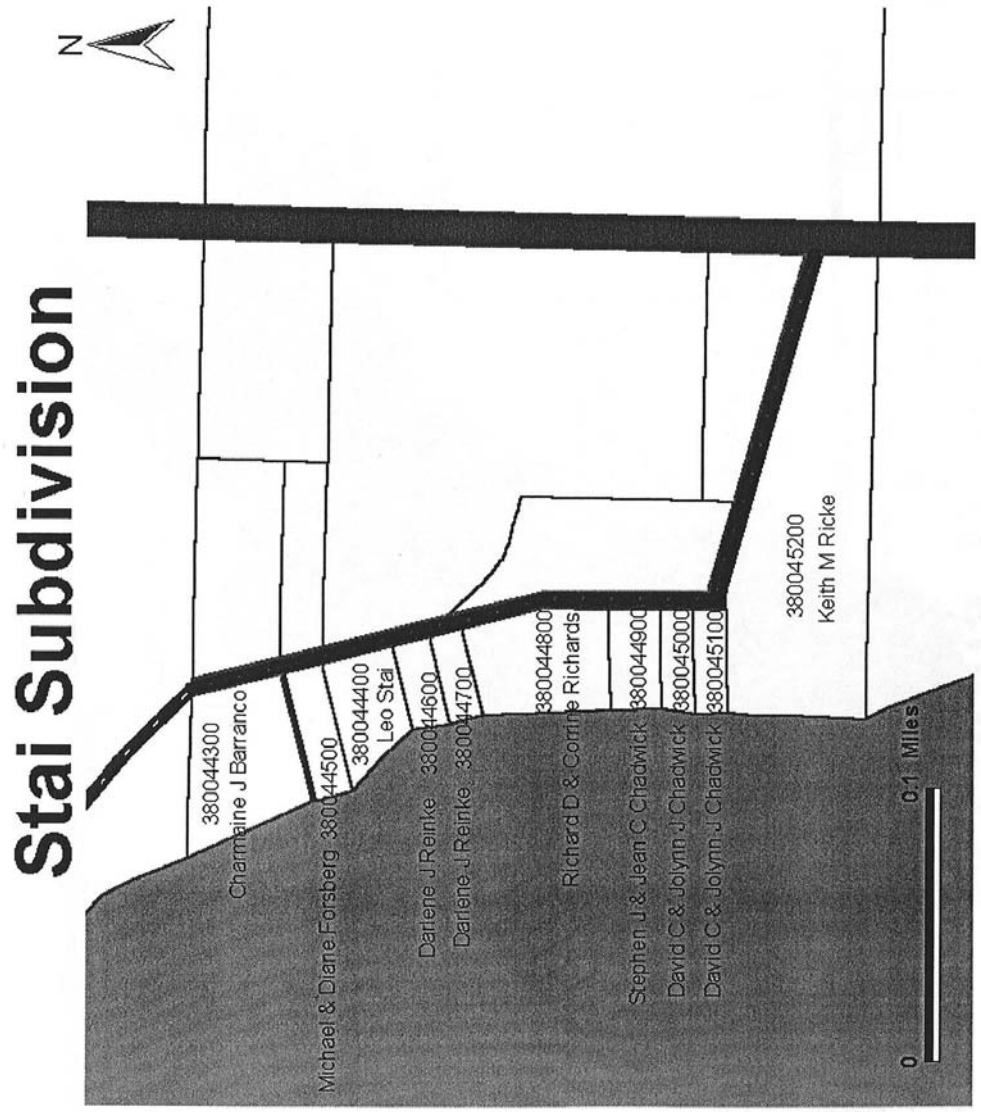
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380044800
Richard D & Corrine Richards
Stephen J & Jean C Chadwick 380044900
David C & Jolynn J Chadwick 380045000
David C & Jolynn J Chadwick 380045100
380045200
Keith M Ricke
0
0.1 Miles

Section E.
Watershed Maps

Clearwater Lake Watershed and Surrounding Area

Resource Assessment
February 2001

Produced by: The Science Museum of Minnesota and the
University of Minnesota's
Center for Urban and Regional Affairs

INTRODUCTION

The Lake-Watershed Connection

In the simplest terms, a watershed is the area of land that drains into a lake or river and is essentially the boundary in which lake management practices are conducted. The water quality of a lake depends largely on the conditions and dynamics of the watershed. Every watershed is unique and many factors interact to define a lake basin's characteristics. It is important to learn about the watershed when producing a lake management plan.

Watershed hydrology is the study of the route precipitation takes on its way to the lake. Some precipitation falls directly on the lake surface, some runs off the adjacent land surface into the lake, and some infiltrates into the land surface recharging the groundwater. As water flows over the surface of the land or beneath the ground, it can pick up nutrients, minerals, and organic matter and deliver them to the lake where they will influence the lake's characteristics. A basic understanding of the watershed's hydrology is important to lake management because modifications in the watershed, such as changes in forest through timber harvesting, wind and fire occurrences, and additional development of structures and roads and wetland modification can impact water flow patterns to lakes.

The maps and tables contained in this document attempt to organize in one location an information base of the natural resources of those minor watersheds surrounding the Clearwater River starting at its origin and extending north to Clearwater Lake's watershed. The maps and tables probably do not cover all the information useful for managing watersheds, but they do represent the most detailed set of information now widely available across the state.

Additional information is available for the Clearwater Lake area from local government and public land managers. Most resources and their use patterns are continually changing. Our knowledge of these patterns is continually changing as well.

We have created this report suggesting policy and issue items we discovered from studying the information on 21 Clearwater Lake area watershed maps. Information from this report may be considered in lake planning and management processes.

The watershed maps are organized into four sections:
1. General Orientation
2. Resource Characteristics
3. Land Use Activities
4. Public Management

General Orientation
General orientation maps provide familiar map images that help the viewer recognize resource and land use activities within the Clearwater Lake and surrounding area watersheds. Following is a list of General Orientation maps.
1. Topography
2. Aerial Photography

Resource Characteristics
Resource characteristics maps display resource conditions of the watershed and some of the natural limitations for preservation or development activities within that area. Following is a list of Resource Characteristics maps.
1. Soils
2. Groundwater Contamination Potential
3. Slope
4. Area Roughness
5. Shaded Relief
6. Erosion (Runoff) Susceptibility and Water Orientation
7. Water Features
8. Geomorphology

Land Use Activities
Land Use activities maps evaluate the suitability for various land use activities most likely to occur and impacts post-management decisions have on watershed resources. Following is a list of Land Use Activities maps.
1. Land Use
2. Forest Cover
3. Pre-Settlement Vegetation
4. Scenically Attractive Areas
5. Scenically Attractive Private Land Within ¼ Mile of a Road
6. Scenically Attractive Public Land Within ¼ Mile of a Road
7. Scenically Attractive Public Land Over ¼ Mile of a Road
8. Septic System Drainage Capacity and Suitability
9. Possible Agriculture Irrigation Areas on Private Land with Less than 8% Slope

Public Management
Public management maps depict public ownership patterns and local units of government having management responsibilities. Following is a list of Public Management maps.
1. Public Ownership
2. Government Political Boundaries

DATA REVIEW

In close examination of this document, you may see differences in some of the statistic calculations and totals that do not correspond between maps. Although the differences between map statistics are minor, understanding the basis for these differences will help when analyzing map information.
These differences are the result of two factors:

1. Different datasets
2. Different classification schemes

Many of the differences in statistics are the result of different datasets used in creating maps. Datasets often have different levels of accuracy and are stored in different forms that can cause slight shifts in spatial statistic calculations. All of the maps in the watershed atlas were produced from similar data, resulting in very few statistical differences.

No matter what type of data is being used to produce a particular map, the classification scheme used in displaying that information directs its interpretation. For example, what one map classifies as water may be different than what another map classifies as water. Looking at the Land Use map, the bog/marsh/fen classification totals 9,614 acres for all minor watersheds along the Minnesota River and 80 acres for the Clearwater Lake watershed. The water classification for the same areas is 3,823 acres and 1,011 acres. The total for the two classifications (bog/marsh/fen and water) is 13,437 acres and 1,091 acres respectively. One might deduce that the water/wetlands/marsh/peat/alluvial classification for the Soils maps would be the same or greater than the combination of the wetland and water classifications in the Land Use map, when in actuality the totals are less, at 8,765 acres and 452 acres. The combination of different datasets and classification schemes used in producing maps can produce endless statistic differences and display parameters, an issue to keep in mind when analyzing any map.

GENERAL ORIENTATION MAPS

Topography

The Topography map tailors the popular, long-standing United States Geological Survey maps usually supplied in the trapezoidal "quad sheet" format, in the context of the Clearwater Lake watershed area. Basic features such as roads, lakes, streams, forested areas, and elevation contours are present on this 1:250,000 rendering. Specific site features including granges and lookout towers are also included. This map helps identify specific features to orient oneself to the Clearwater Lake area.

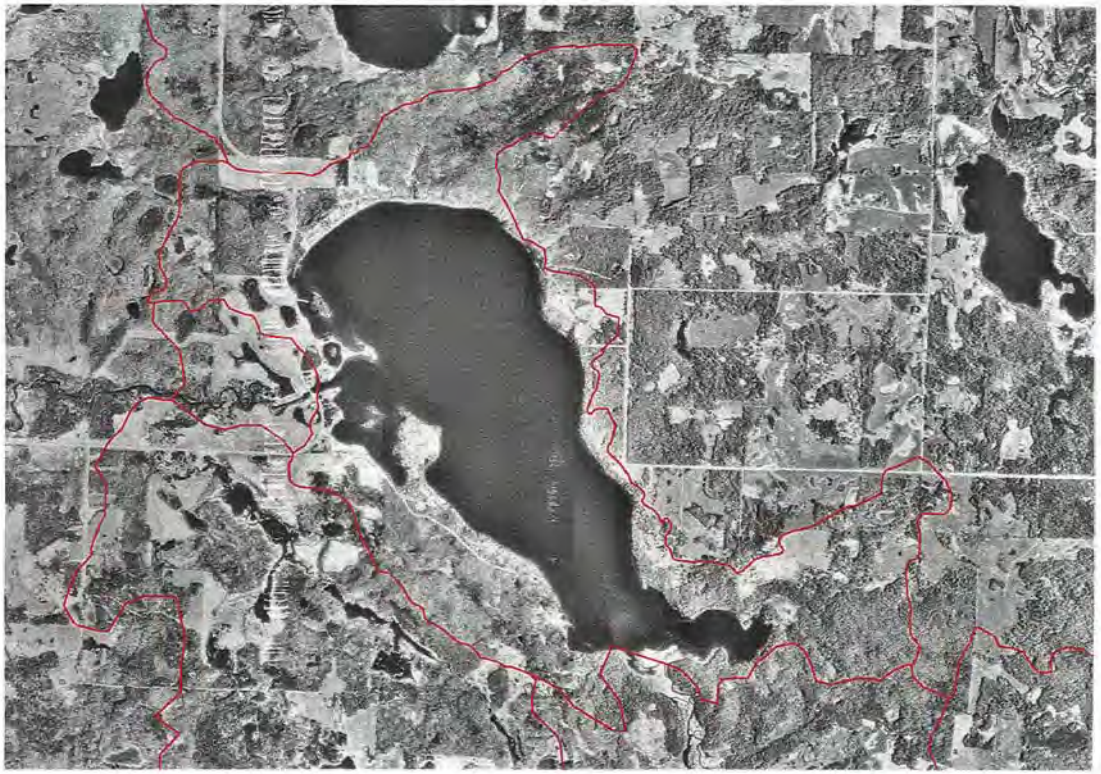
Aerial Photography

The Aerial Photography map is a digital picture rendered from a photograph taken from approximately 20,000 feet. This map offers a representative picture of the land area and allows for a unique perspective of the Clearwater Lake watershed. Similar to the Topography map, this map aids in identifying specific features and orienting oneself to Clearwater Lake and its surrounding area. It also serves as a vehicle for recognizing resource characteristics and land use practices of the watershed.

The best way to use the Aerial Photography map is to study familiar places on the map in order to realize how those places look from the air. Once able to identify familiar features, that knowledge can be spread to the remainder of the watershed. Soon, an understanding and recognition of resource characteristics and land use practices of the entire Clearwater Lake watershed will emerge. This map, used in conjunction with the Topography map, are good places to start learning and investigating your watershed area.

Clearwater Lake Watershed

Aerial Photography



Science Museum of Minnesota

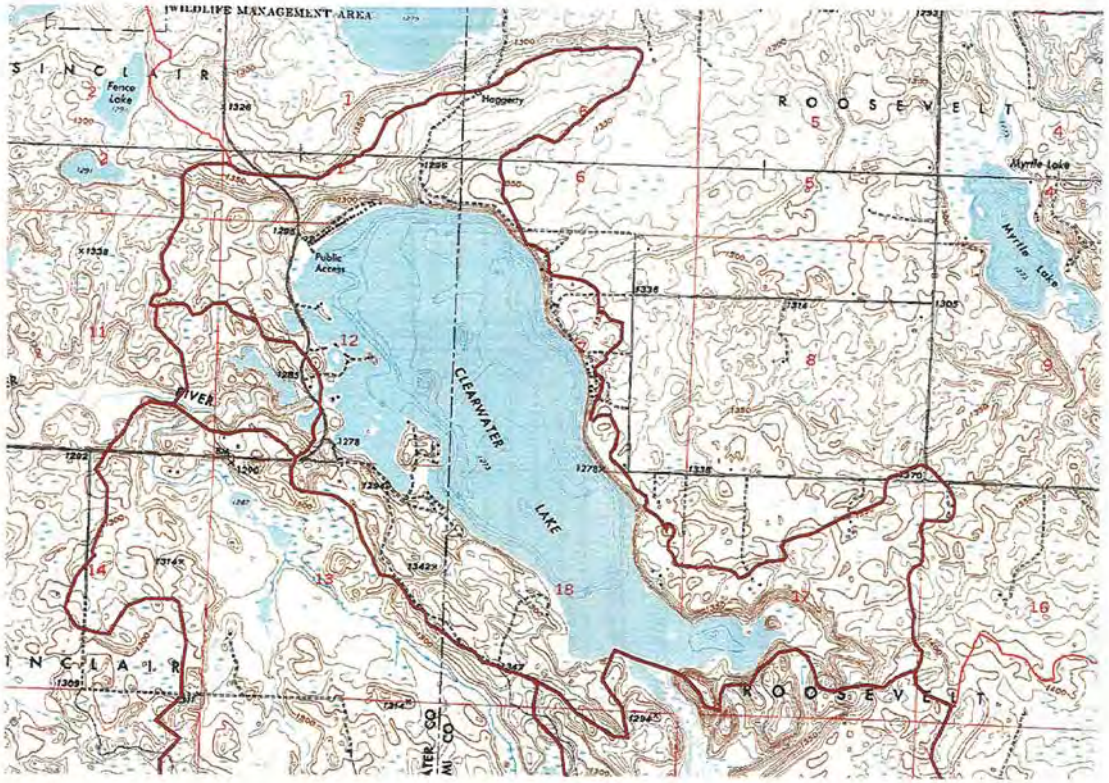
Minor Watersheds

0 0.5 1 1.5 2 2.5 3 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Clearwater Lake Watershed and Surrounding Area

Topography



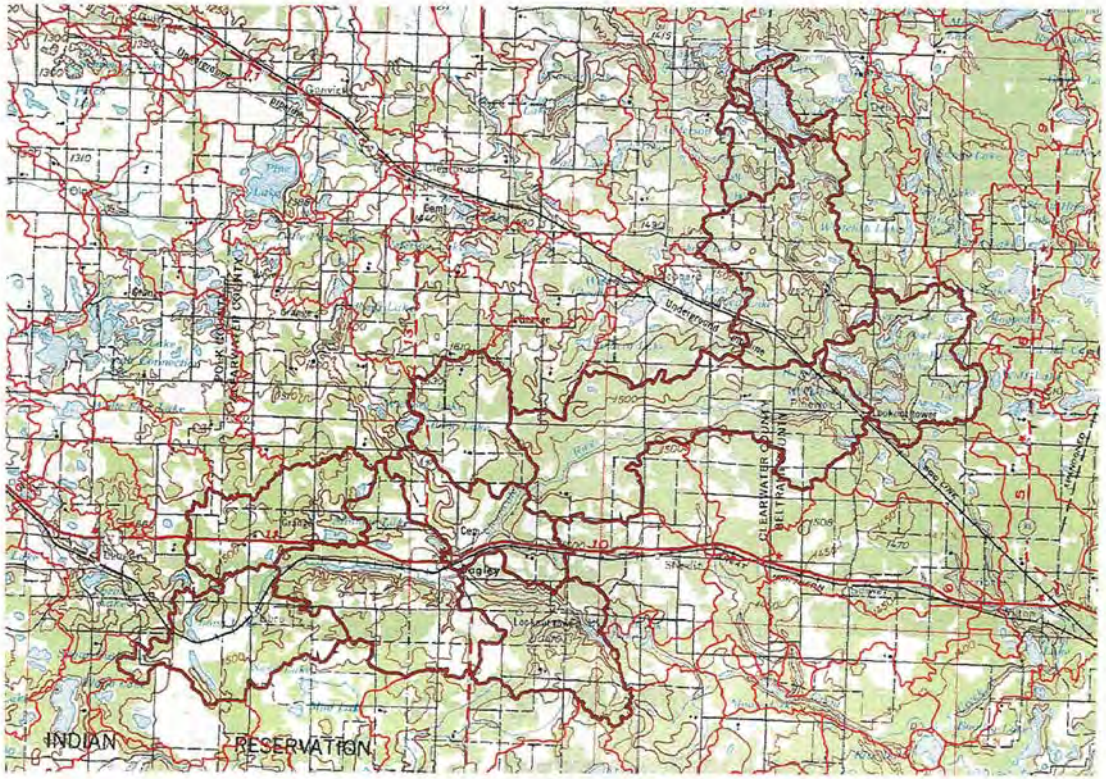
Science Museum of Minnesota

Minor Watersheds

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Clearwater Lake Watershed and Surrounding Area

Topography



N

Clearwater Lake Area

Science Museum of Minnesota

Minor Watersheds

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

RESOURCE CHARACTERISTIC MAPS

Soils

Soils have an impact on water contamination through surface runoff and groundwater. Differing in grain size and composition, some soils are more water absorbent than others. Sandy soils have relatively large pore spaces between sediment particles that allow water to percolate through at a rapid pace and enter the groundwater system. Clayey soils resist water drainage and are susceptible to surface water runoff, especially when found on steep slopes.

The generalized soil map available for the Clearwater Lake area shows loam over loam as the predominant soil type throughout Clearwater River's minor watersheds. Along the river itself, sand over sand soils predominate.

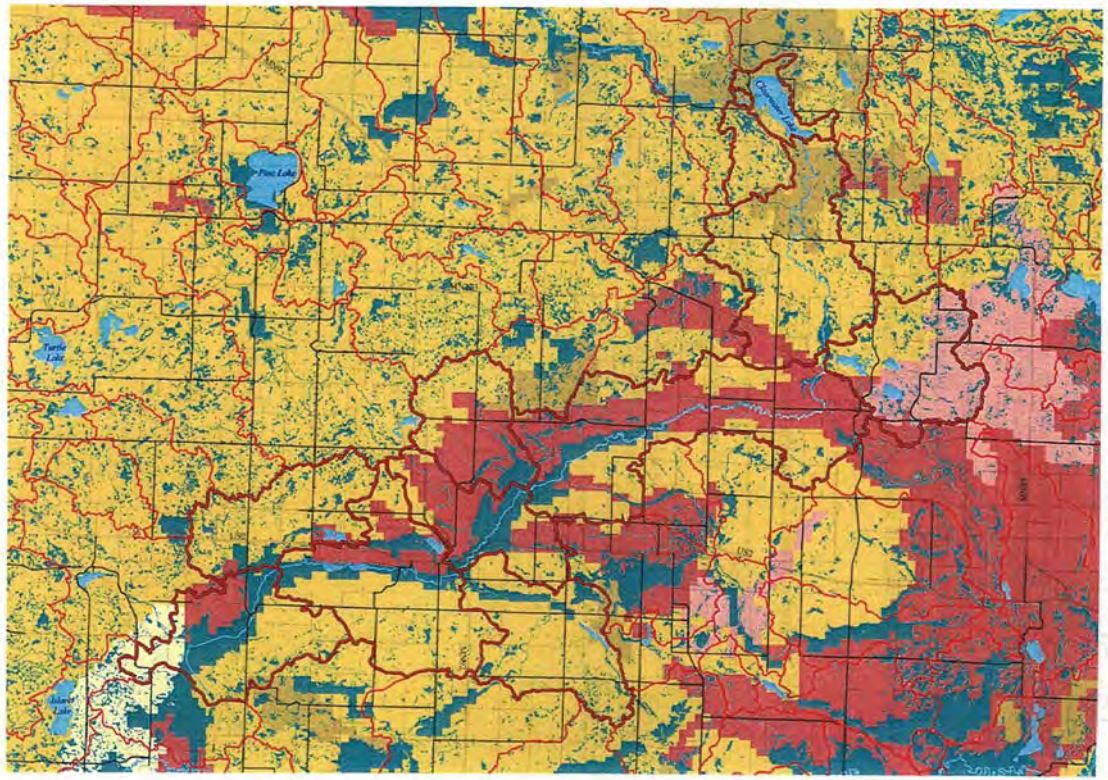
Sandy soils can be important areas of groundwater recharge because they have high infiltration rates and relatively flat topography, factors that minimize overland runoff. Steep sandy slopes can occur, however, next to water bodies. Surface land use management on sandy soils is particularly important to guard against groundwater contamination below flat areas, and excessive erosion on steep slopes.

Table 1: Soils Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Loam over clay	1,293	1%	0	0%
Loam over loam	62,509	57%	897	37%
Loam over sand	5,959	6%	1,050	44%
Sand over loam	5,438	5%	0	0%
Sand over sand	25,698	23%	0	0%
Water/wetlands/marsh/peat/alluvial	8,765	8%	452	19%
Total	**109,662**	**100%**	**2,399**	**100%**

Clearwater Lake Watershed and Surrounding Area

Soils



N

Science Museum of Minnesota

Minor Watersheds
Major Roads
County Roads
Township Roads
State Trails
Lakes
Rivers
Streams

Water,wetlands/marsh/peat/alluvial

Soils
Loam over clay
Loam over loam
Loam over sand
Sand over loam
Sand over sand

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Groundwater Contamination Potential

This map ranks areas sensitive to groundwater contamination based on soil type and water-table level. Well-drained soils (sands) extending from the surface to the water table and water-table levels near the surface (wetland areas) are locations where contaminants can easily enter groundwater.

Most of the area in the minor watersheds adjacent to the Clearwater River is classified as moderate for groundwater contamination. With the exception of the Clearwater Lake watershed and the watershed directly below it, most land area adjacent to Clearwater River is ranked high or classified as wetlands.

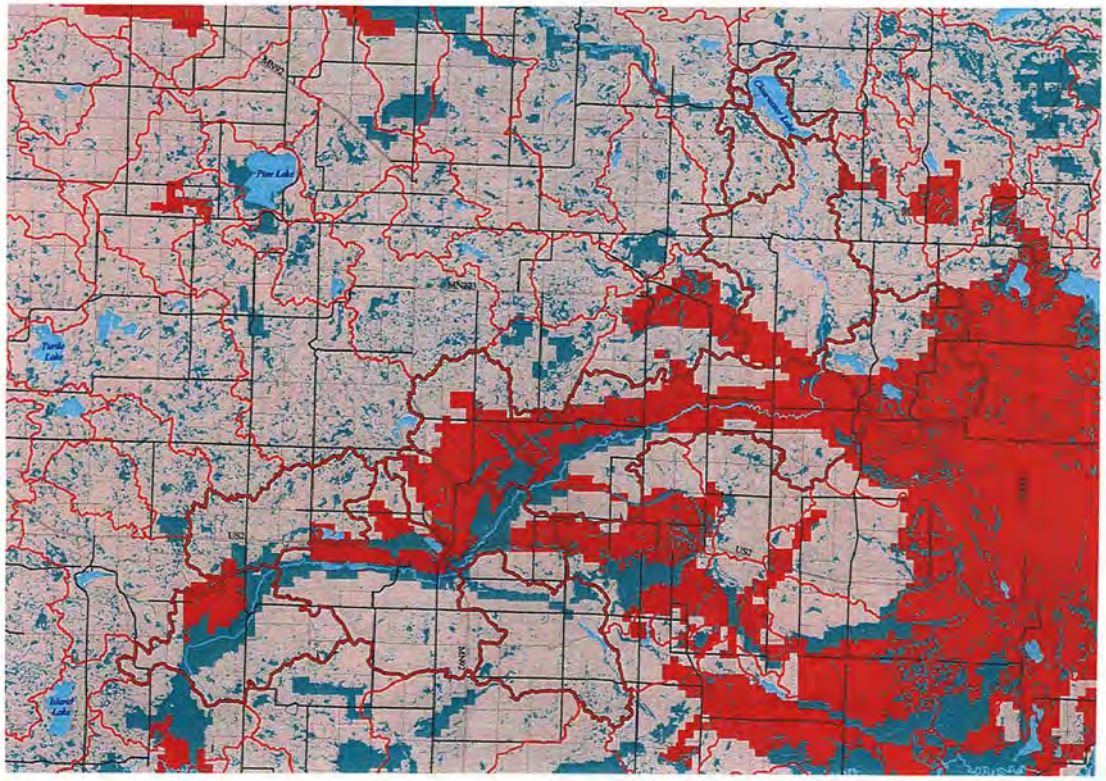
In reality, groundwater contamination potential surrounding the northern portion of Clearwater River may also be high. Detailed county soils maps and well logs could pinpoint these smaller areas of groundwater availability. You may want to protect areas where groundwater is available and set it aside as an alternate source of drinking water.

Table 2: Groundwater Contamination Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Low	0	0%	0	0%
Moderate	69,762	64%	1,947	81%
High	31,136	28%	0	0%
Water/wetlands/marsh/peat/alluvial	8,765	8%	452	19%
Total	**109,663**	**100%**	**2,399**	**100%**

Clearwater Lake Watershed and Surrounding Area

Groundwater Contamination Potential



Science Museum of Minnesota

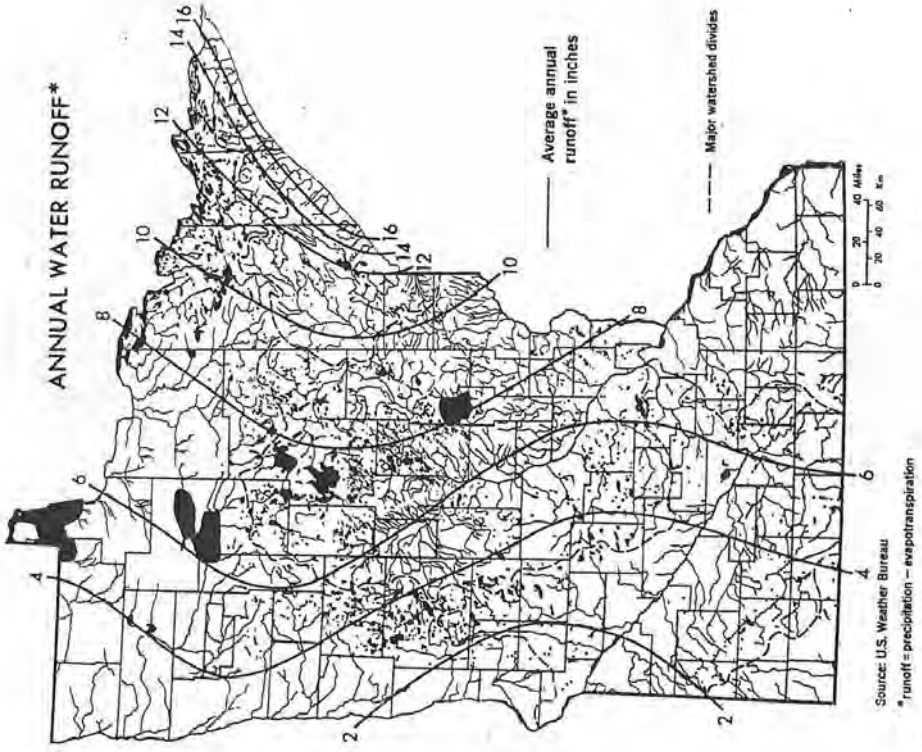
- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

Wetlands
- Wetlands/marsh/peat/alluvial

Groundwater Contamination Potential
- Low
- Moderate
- High

0 5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab


ANNUAL WATER RUNOFF*
Average annual runoff* in inches
Major watershed divides
Source: U.S. Weather Bureau
*runoff = precipitation – evapotranspiration

Slope

The Slope map depicts the percent slope of land areas. Steep slopes areas have a higher potential to erode than flat slopes. Steeper slopes also have desirable scenic qualities, leading to a higher demand for development.

The Clearwater Lake area encompasses the Clearwater River where steep slopes align its bank, especially along the northern portion of the river as it nears Clearwater Lake. Although very scenic, it must be watched for erosion. Careful management of timber harvesting in steep slope areas, especially near water is also important. Approximately seven percent of the Clearwater Lake watershed has over 8% slope, where rainfall and snowmelt can run off quickly.

Table 3: Slope Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
0-2%	74,814	68%	1,448	60%
2-5%	26,442	24%	596	25%
5-8%	5,705	5%	197	8%
8-12%	2,152	2%	92	4%
12-20%	539	0.75%	66.75	2.74%
20-27%	9	0.25%	0.25	0.26%
Total	**109,661**	**100%**	**2,400**	**100%**

Area Roughness

The Area Roughness map is created by comparing the height of land in contrast to its surroundings and depicts rolling hills as well as steep areas. Over half of the Clearwater Lake watershed is classified as gently rolling or steep. The predominance of these features is part of its scenic allure.

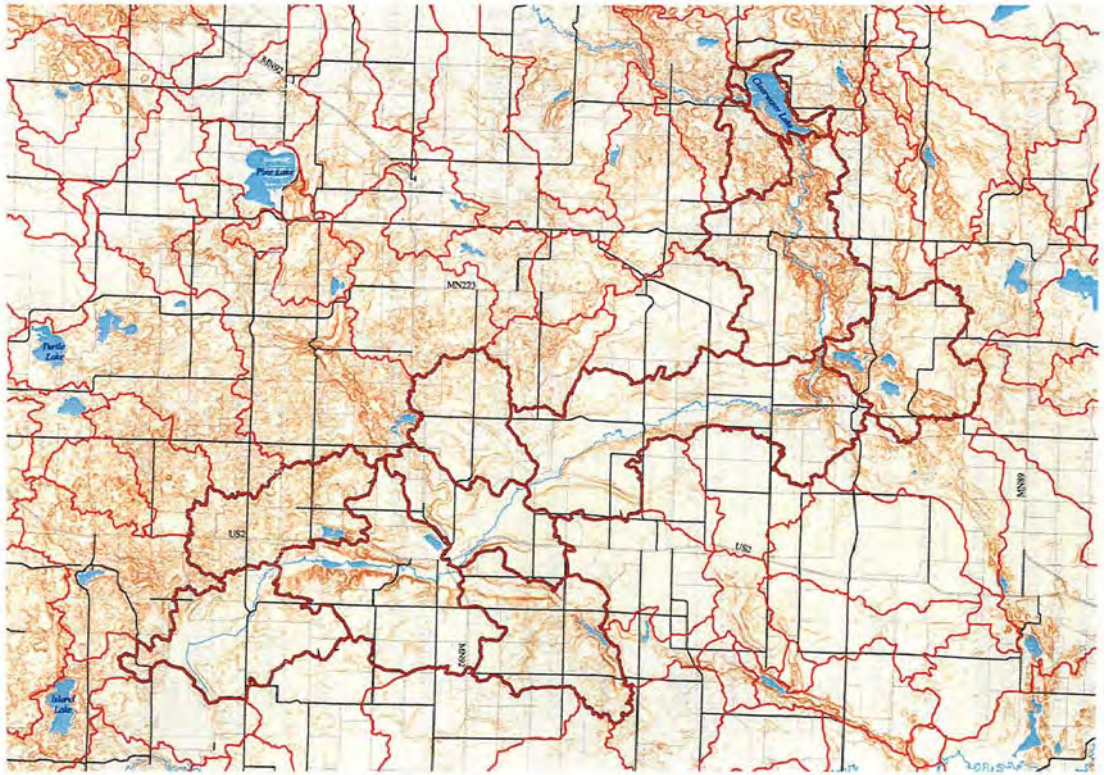
Areas under steep classification are visible from roads, lakes, and streams. Because of this, maintenance of scenic vistas is important (refer to the Scenically Attractive Areas map series).

Table 4: Area Roughness Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Flat	69,747	64%	983	41%
Gently Rolling	33,086	30%	1,020	43%
Steep	6,830	6%	396	16%
Total	**109,663**	**100%**	**2,399**	**100%**

Clearwater Lake Watershed and Surrounding Area

Slope



Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

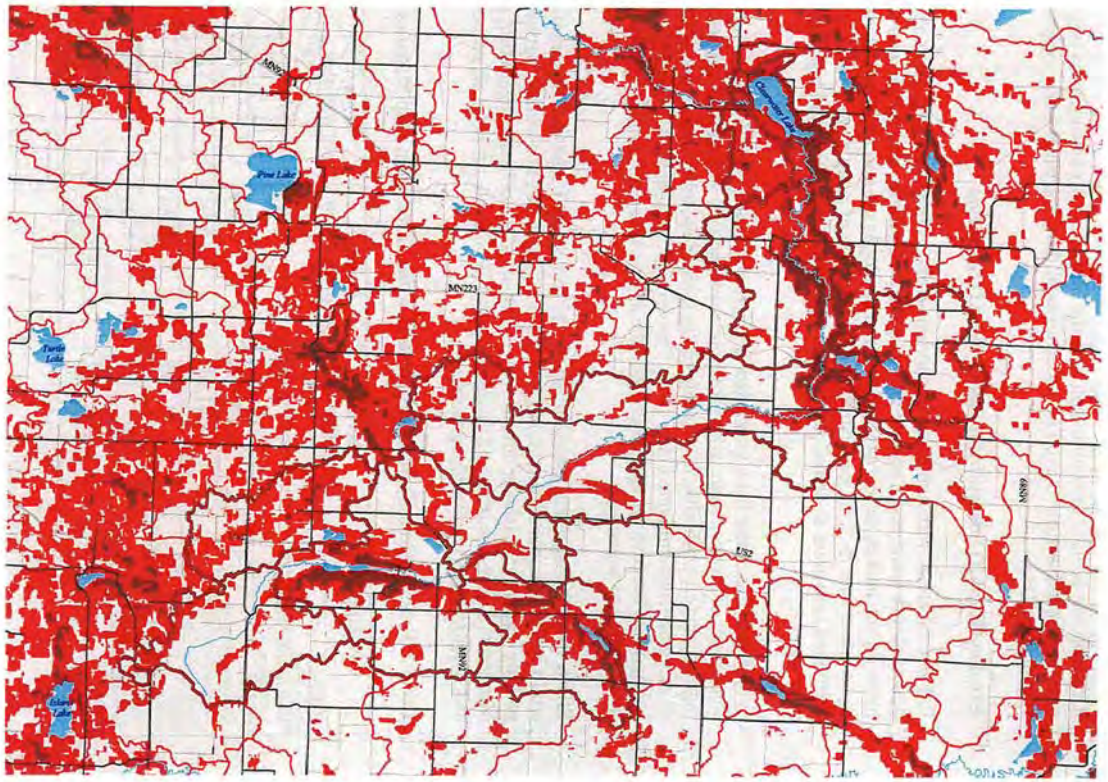
Slope
- 0 - 2%
- 2 - 5%
- 5 - 8%
- 8 - 12%
- 12 - 20%
- 20 - 27%

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Clearwater Lake Watershed and Surrounding Area

Area Roughness



Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

Area Roughness

- Flat
- Gently Rolling
- Steep

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Shaded Relief

The Shaded Relief map shows accentuated shaded elevation features that help actualize the rise and fall of the land and determine the flow of surface water within the Clearwater Lake watershed and surrounding area. It shows the same information as the Slope map, but in an attempt to make the information more pleasing to the eye and easier to interpret.

This map can be used in conjunction with the Slope and Area Roughness maps to locate environmentally sensitive and key scenic areas of the Clearwater Lake watershed and surrounding area.

Erosion (Runoff) Susceptibility and Water Orientation

Residential areas, with numerous impervious surfaces (e.g. buildings and concrete slabs) do not absorb water and therefore promote overland runoff. Cultivated land areas with loose topsoil and no natural vegetation on steep slopes are susceptible to erosion caused by overland runoff. This map combines the elements of steep slopes, residential, and cultivated land areas to define places most susceptible to erosion and highlights areas near water.

Within the Clearwater Lake watershed, high erosion susceptibility is concentrated in steep slope areas near water with lakeshore development. Along the Clearwater River, high erosion susceptibility is concentrated in steep slope areas near water where development and cultivated land exist. The careful management of runoff in these areas is important because the steepness limits the ability of the soil to infiltrate excess water from storms or snowmelt.

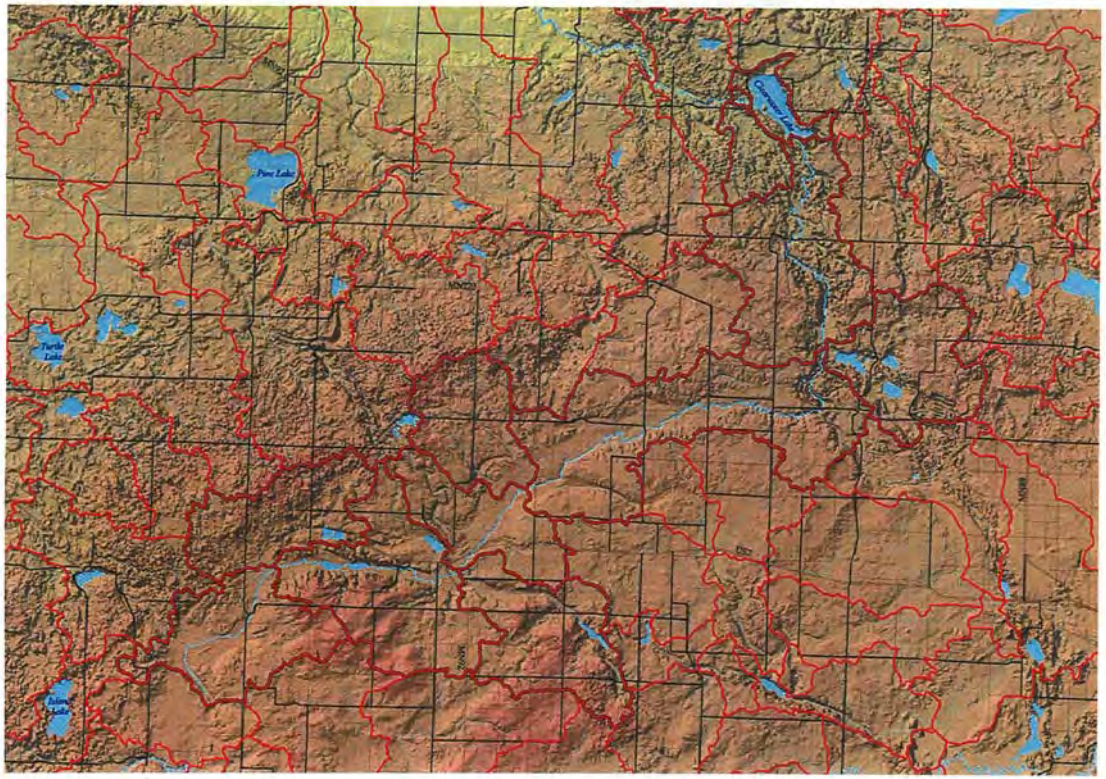
Storm water management plans for individual parcels are important. For example, this could include temporarily retaining runoff in holding ponds and ditches between a parking area and the lake or stream. Also, look at the parcel mapping section of the Minnesota Lakes Association Sustainable Lakes Workbook for ideas on parcel mapping and management (www.mnlakesassn.org).

Table 5: Erosion (Runoff) Susceptibility and Water Orientation Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Medium > 8% Slope	427	0.5%	18	1%
Medium Near Water > 8% Slope	1,956	2%	121	5%
Medium Cultivated or Urban	14,438	13%	66	3%
Medium Near Water Cultivated or Urban	11,743	11%	117	5%
High > 8% Slope, Cultivated or Urban	28	0.2%	2	0.5%
High Near Water > 8% Slope, Cultivated or Urban	131	0.3%	12	0.5%
None	80,940	73%	2,062	85%
Total	**109,663**	**100%**	**2398**	**100%**

Clearwater Lake Watershed and Surrounding Area

Shaded Relief



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Science Museum of Minnesota

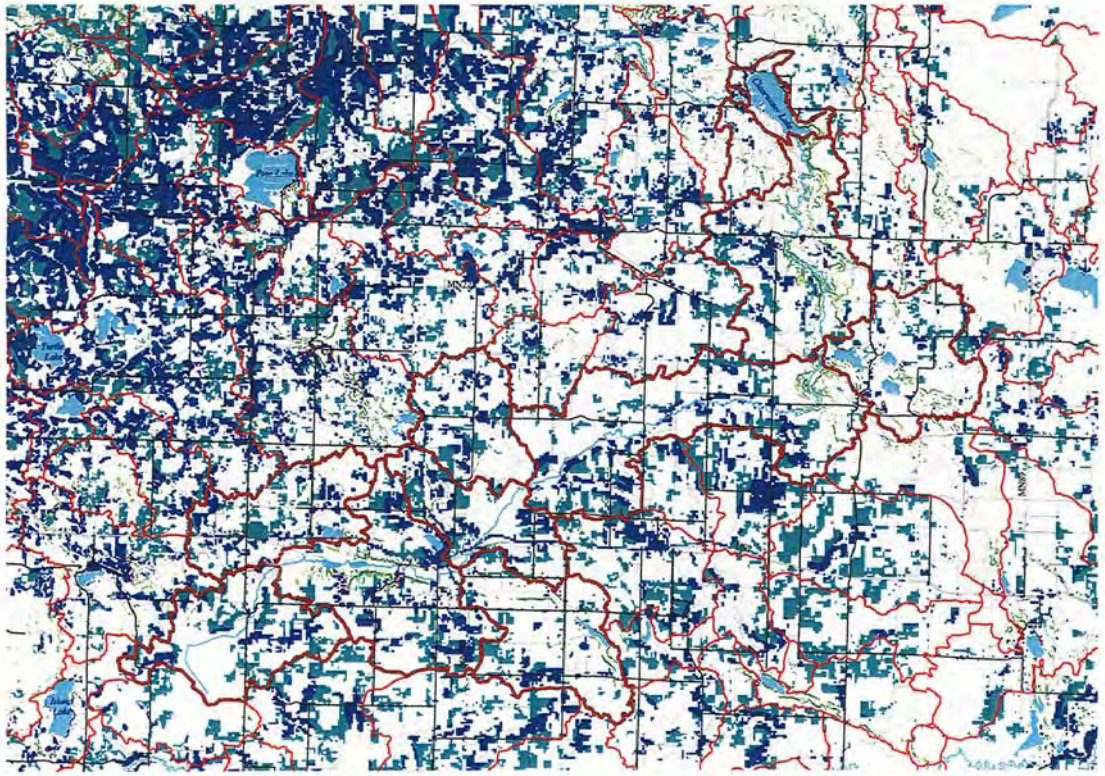
- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Clearwater Lake Watershed and Surrounding Area

Erosion (Runoff) Susceptibility



Science Museum of Minnesota

Minor Watersheds
Major Roads
County Roads
Township Roads
State Trails
Lakes
Rivers
Streams
Erosion (Runoff) Susceptibility and Water Orientation
Low (Non-Cultivated or Urban Land and < 8% Slope)
Medium (Cultivated or Urban Land)
Medium (Cultivated or Urban Land Near Water)
Medium (> 8% Slope)
Medium (> 8% Slope Near Water)
High (> 8% Slope and Cultivated or Urban Land
High (> 8% Slope and Cultivated or Urban Land Near Water)

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Water Features

Wetlands play an important role in controlling groundwater levels and water quality, acting as nutrient absorbers digesting many nutrients that would otherwise reach lakes. They also contain fish, wildlife, and open space benefits.

About forty percent of the 2,399 acre Clearwater Lake watershed is water, classified as shallow open water by the Fish and Wildlife Service. Another six percent is in various forms of wetlands (Table 6).

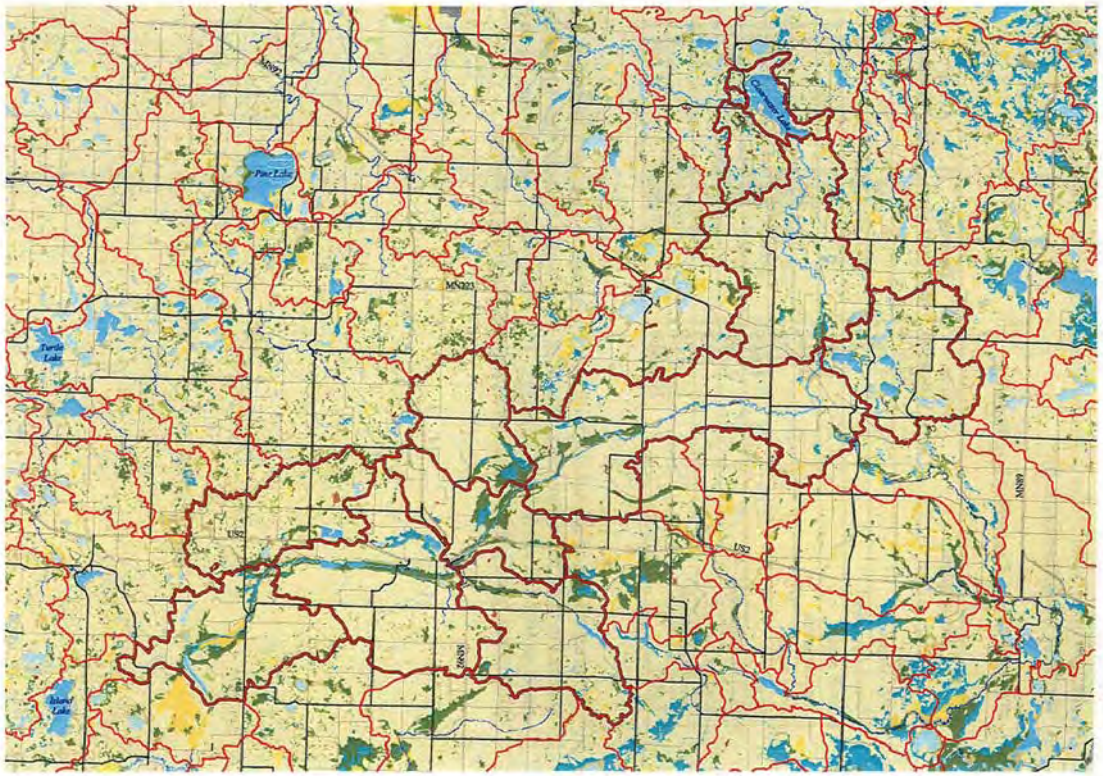
Table 6: Water Features Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Uplands	92,601	84%	1,302	54%
Wet meadow	1,163	1%	22	1%
Wooded swamps	835	0.75%	18	1%
Shrub swamp	6,872	6%	47	2%
Shallow marsh	2,542	2%	5	0.25%
Deep marsh	178	0.25%	20	1%
Bogs	1,666	2%	17	0.75%
Shallow open water	2,795	3%	967	40%
Riverine systems	820	0.75%	0	0%
Seasonally flooded	166	0.25%	0	0%
Total	**109,663**	**100%**	**2,399**	**100%**

The preservation of the wetlands directly connected to the major lakes and connecting streams in the Clearwater Lake watershed is important because they filter sediment and serve as fish and wildlife habitat areas. The county water and national forest planning process are good policy vehicles for implementing this protection.

Clearwater Lake Watershed and Surrounding Area

Water Features



Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

Water Features

- Uplands
- Wet meadow
- Wooded swamps
- Shrub swamp
- Shallow marsh
- Deep marsh
- Bogs
- Shallow open water
- Riverine systems
- Seasonally flooded
- Municipal and industrial activities

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Geomorphology

Natural resources are a function of the surrounding geology and geologic processes. Soils and vegetation, for example, are both dependent to varying degrees on the underlying geologic strata and how the landscape is shaped. The Geomorphology map provides geomorphic association descriptions of the Clearwater Lake area's landscape to better understand the landforms and processes that form those landforms within the watershed.

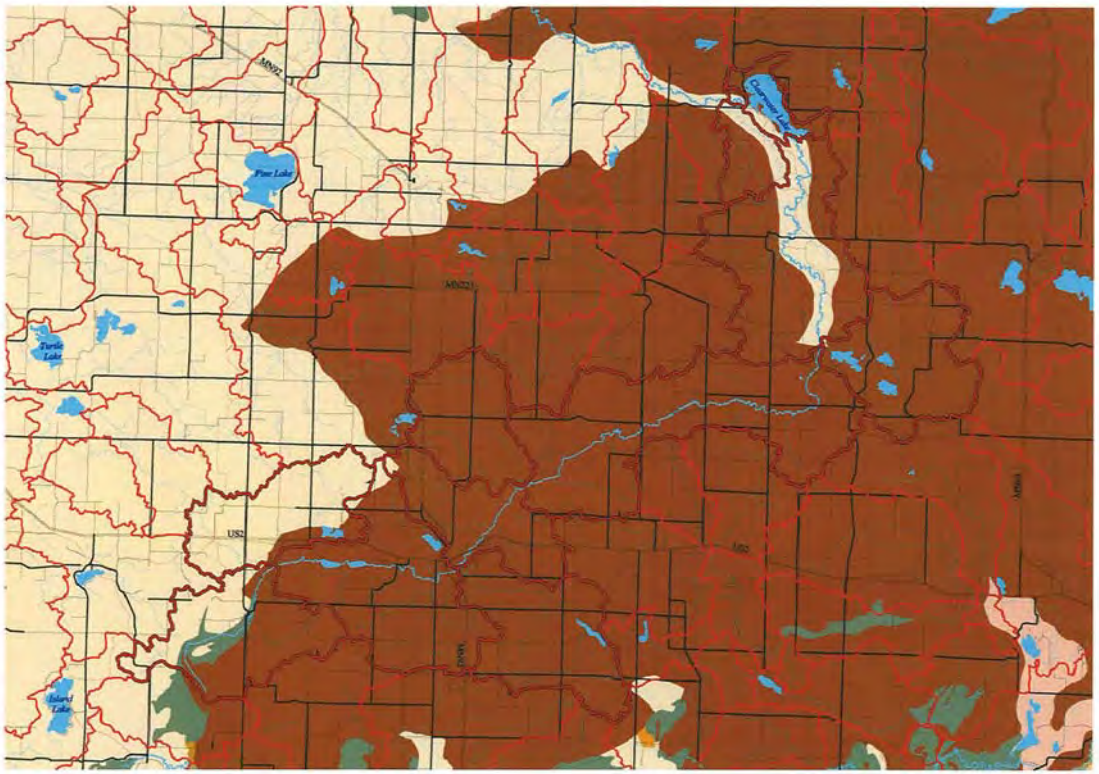
Lobe characteristics imply the glacial origins of deposits on the land which affect the land's mineralogy. Most of the Clearwater Lake watershed and surrounding area is classified under Koochiching Lobe (84% and 86% respectively). The remaining portion of Clearwater Lake watershed is classified under Red River Lobe (15%).

Table 7: Geomorphology Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Koochiching Lobe	91,600	84%	2,0630	86%
Organic Deposits	1,072	1%	0	0%
Red River Lobe	16,992	15%	336	14%
Total	**109,664**	**100%**	**2,399**	**100%**

Clearwater Lake Watershed and Surrounding Area

Geomorphology



LAND USE ACTIVITIES MAPS

Land Use

The Land Use map presents a visual representation of the land covering the Clearwater Lake watershed and surrounding area. It is one of the most important maps in the watershed series and is used in the production of many other maps. The map breaks down land attributes under eight categories: cultivated land, hay/pasture/grassland, brushland, forested, water, bog/marsh/fen, mining, and urban and rural development. Studying this map increases awareness of the development, activities, and natural vegetation present within the area (Table 8).

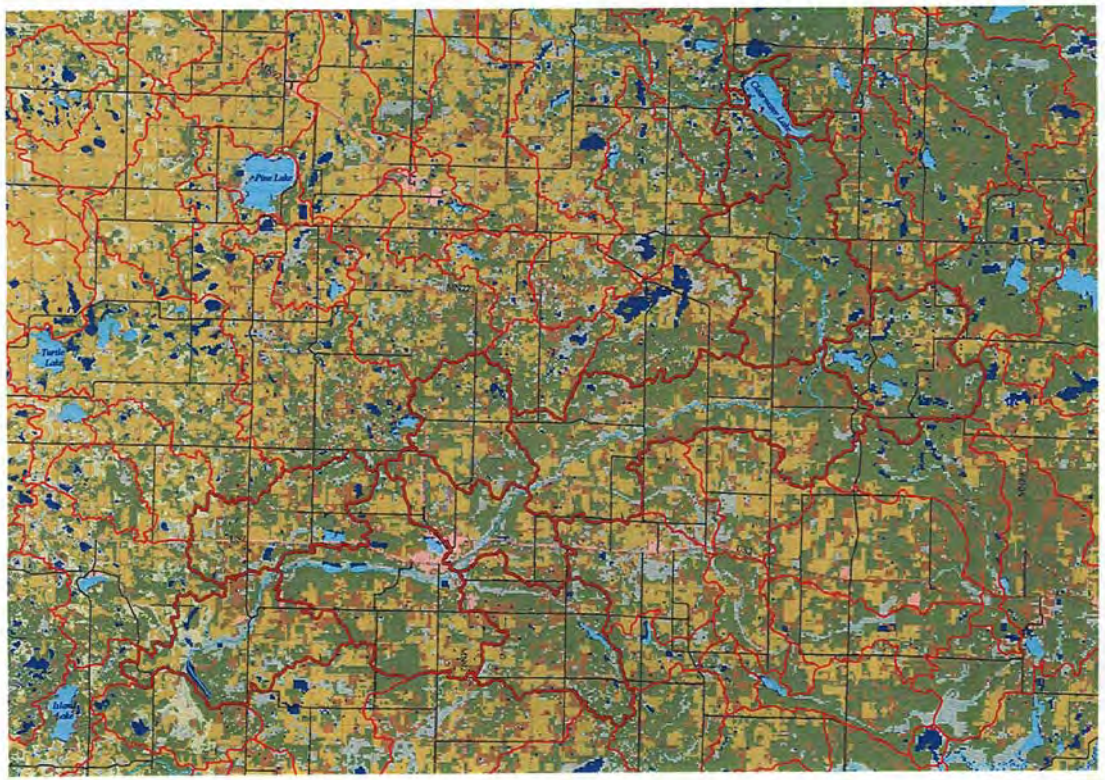
Table 8: Land Use Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Cultivated land	22,854	21%	128	6%
Hay/pasture/grassland	769	0.5%	0	0%
Brushland	15,568	14%	95	4%
Forested	53,140	49%	1,015	42%
Water	3,823	3%	1,011	42%
Bog/marsh/fen	9,614	9%	80	3%
Mining	401	0.5%	0	0%
Urban and rural development	3,494	3%	69	3%
Total	**109,663**	**100%**	**2,398**	**100%**

Forests cover a higher percentage of land area than any other land use classification in the Clearwater Lake watershed as well as in the total area of those watersheds encompassing the Clearwater River (1,015 acres and 53,140 acres respectively). Cultivated land ranks second in land coverage over the entire Clearwater River area at 22,854 acres (21%), while it ranks third in the Clearwater Lake watershed due to the size of Clearwater Lake (water ranks second).

Clearwater Lake Watershed and Surrounding Area

Land Use



Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

Land Use

- Cultivated Land
- Hay/Pasture/Grassland
- Brushland
- Forested
- Water
- Bog/Marsh/Fen
- Mining
- Urban and Rural Development

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Forest Cover

The forest classifications from the Land Use map are extracted to produce the Forest Cover map. Forested areas maintain the scenic character and wildlife population of watersheds. These advantages should be considered when applying sustainable forest management practices.

Land use policies, primarily forest management, impact the water quality, runoff, visual landscape, and local wildlife population of an area.

Table 9: Forest Cover Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Forested	53,140	49%	1,015	42%
Non-Forested	56,523	51%	1,383	58%
Total	**109,663**	**100%**	**2,398**	**100%**

Pre-Settlement Vegetation

The Pre-Settlement Vegetation map shows broad patterns of land cover during the 19th century, prior to European settlement based on General Land Office survey records of the time. This map offers a historical sense of the watershed's landscape.

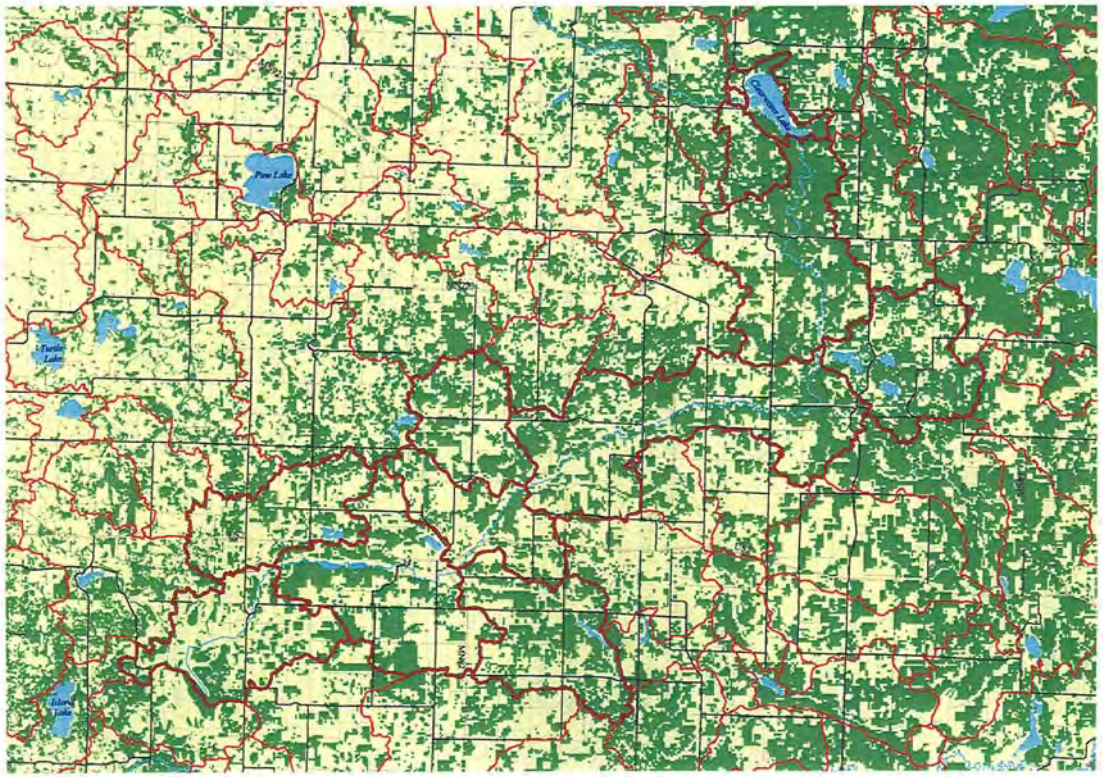
Most of the surrounding Clearwater River watershed area was mixed red and white pine during the 19th century, while most of he Clearwater River watershed was aspen-birch.

Table 10: Pre-Settlement Vegetation Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Wet Prairie	958	1%	0	0%
Aspen-Oak Land	27	0.1%	0	0%
Big/Hardwoods (Oak, Maple, Hickory)	11,919	11%	0	0%
Aspen-Birch (trending to hardwoods)	8,329	8%	715	30%
Mixed White Pine and Red Pine	36,517	33%	359	15%
Jack Pine Barrens and Openings	17,168	16%	355	15%
Aspen-Birch (trending to Conifers)	16,914	15%	0	0%
Conifer Bogs and Swamps	16,567	15%	67	3%
Lakes (open water)	1,264	0.9%	903	37%
Total	**109,664**	**100%**	**2399**	**100%**

Clearwater Lake Watershed and Surrounding Area

Forest Cover



N

Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

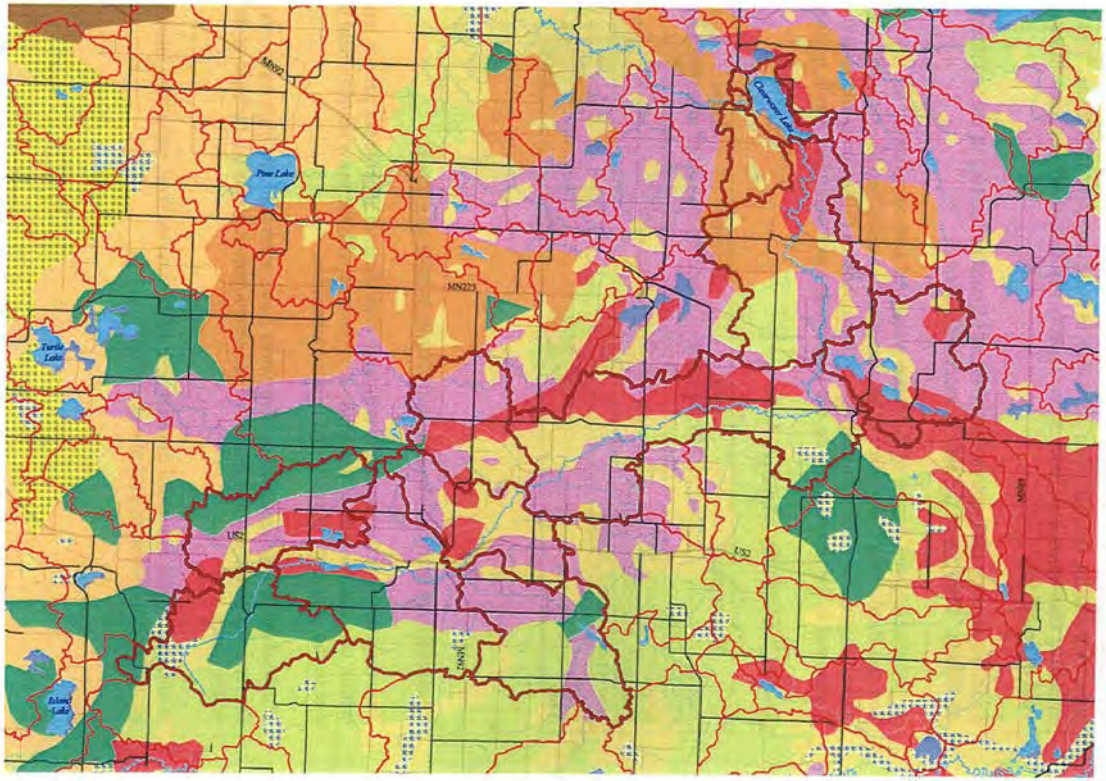
Forest Cover
- Forested
- Non-forested

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Clearwater Lake Watershed and Surrounding Area

Pre-Settlement Vegetation



N

Science Museum of Minnesota

Minor Watersheds
Major Roads
County Roads
Township Roads
State Trails
Lakes
Rivers
Streams

Pre-Settlement Vegetation
Undefined
Wet Prairie
Brush Prairie
Aspen-Oak Land
Aspen-Birch (trending to hardwoods)
Aspen-Birch (trending to Conifers)
Oak Openings and Barrens
Big Woods - Hardwoods (Oak, Maple, Hickory)
Mixed White Pine and Red Pine
Jack Pine Barrens and Openings
Conifer Bogs and Swamps
Lakes (open water)

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Scenically Attractive Areas

Recreation and housing research identifies landscape features most desirable for residential development and recreation sites. The Scenically Attractive Areas map combines the top three desired amenities (hilly lands, forested areas, and water bodies) to produce a ranking classification from least to most attractive land areas. The most attractive sites contain all three of the amenity variables while the least attractive sites are void of amenities.

From a statewide perspective, only 14% of Minnesota has two of the top three desired amenities. Only 3% of the state possesses all three.

Approximately one quarter of the entire watershed area surrounding the Clearwater River and one-third of the Clearwater Lake watershed are classified as scenically attractive, containing two or more scenically attractive amenities (hills, trees, and water). Compared to the rest of the state, the Clearwater Lake watershed area is quite scenic.

Table 11: Scenically Attractive Areas

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Forested, Rough	1,288	1%	65	3%
Near water, Forested, Flat	22,283	20%	417	18%
Near water, Non-forested, Rough	1,375	1%	126	5%
Near water, Forested, Rough	3,894	4%	200	8%
None	80,823	74%	1,592	66%
Total	**109,663**	**100%**	**2400**	**100%**

Scenically Attractive Private Land Within ¼ Mile of a Road

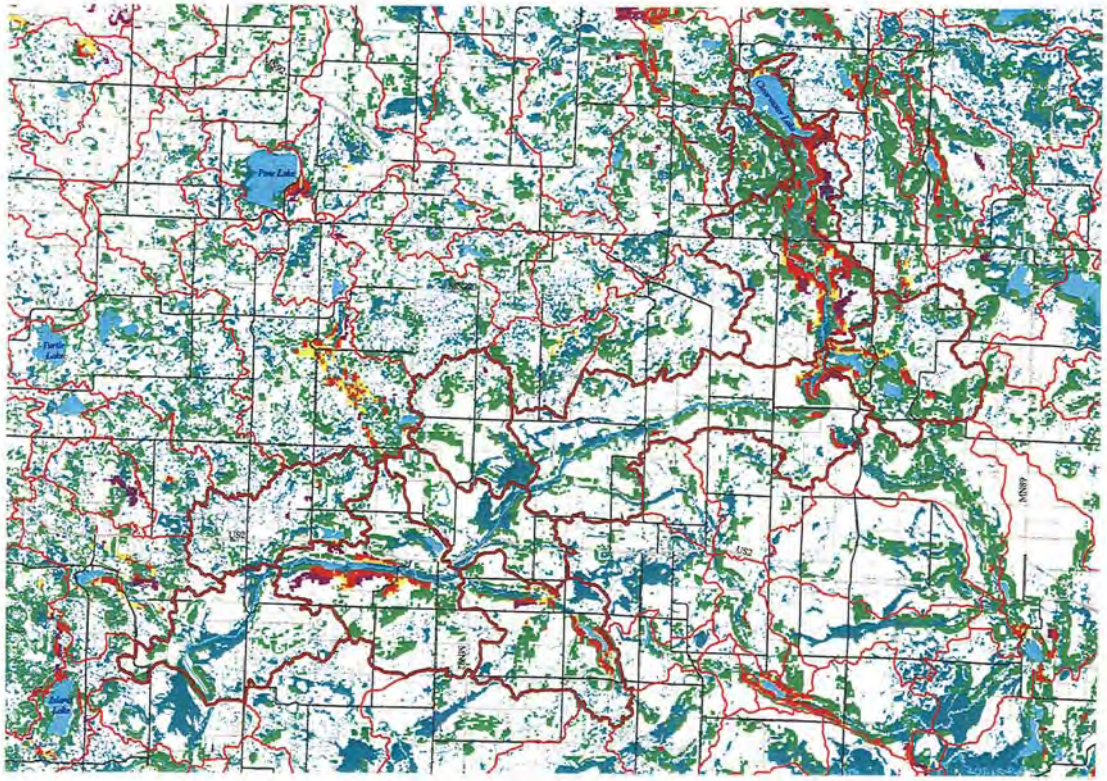
This map displays the scenically attractive classification scheme for private land areas within one-quarter mile of any road. It is the area with the most development pressure due to the proximity of roads and desired amenities.

Much of the private land within Clearwater Lake watershed has high scenic value. Even the land not directly on the lakeshore has development potential, because of its relief and water views.

A plan to manage or control development of this private land, especially lakeshore land, should be considered as part of a lake plan.

Clearwater Lake Watershed and Surrounding Area

Scenically Attractive Areas



N

Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

Wetlands

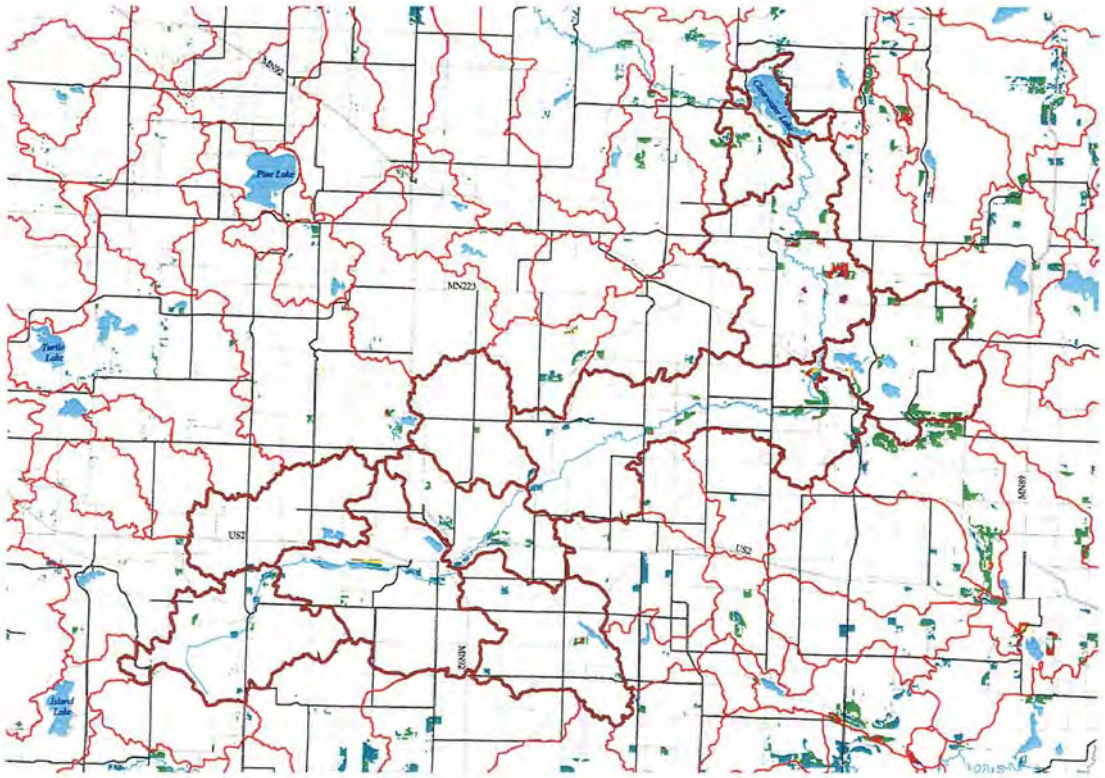
Scenically Attractive Areas
- Forested, Rough
- Near water, Forested, Flat
- Near water, Non-forested, Rough
- Near water, Forested, Reugh

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Clearwater Lake Watershed and Surrounding Area

Scenically Attractive Public Land Within 1/4 Mile of a Road



N

Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

Wetlands

Scenically Attractive Areas
- Forested, Rough
- Near water, Forested, Flat
- Near water, Non-forested, Rough
- Near water, Forested, Rough

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Scenically Attractive Public Land Within ¼ Mile of a Road

This map displays the scenically attractive classification scheme for public land areas within one-quarter mile of any road. Ideal locations for public recreational sites, such as trails and picnic areas, are in regions with natural amenities close to roads. This map can help determine easily accessible and scenically attractive public sites desirable for recreational development.

One major use is maximizing visual amenities from the road.

Scenically Attractive Public Land Over ¼ Mile of a Road

This map displays the scenically attractive classification scheme for public land areas over one-quarter mile of any road. Remote public lands require effort to reach and are prime locations for secluded recreational activities such as camping, cross country skiing, and biking. This map can help determine remote, scenically attractive public sites desirable for developing new and expanding existing public recreation locations.

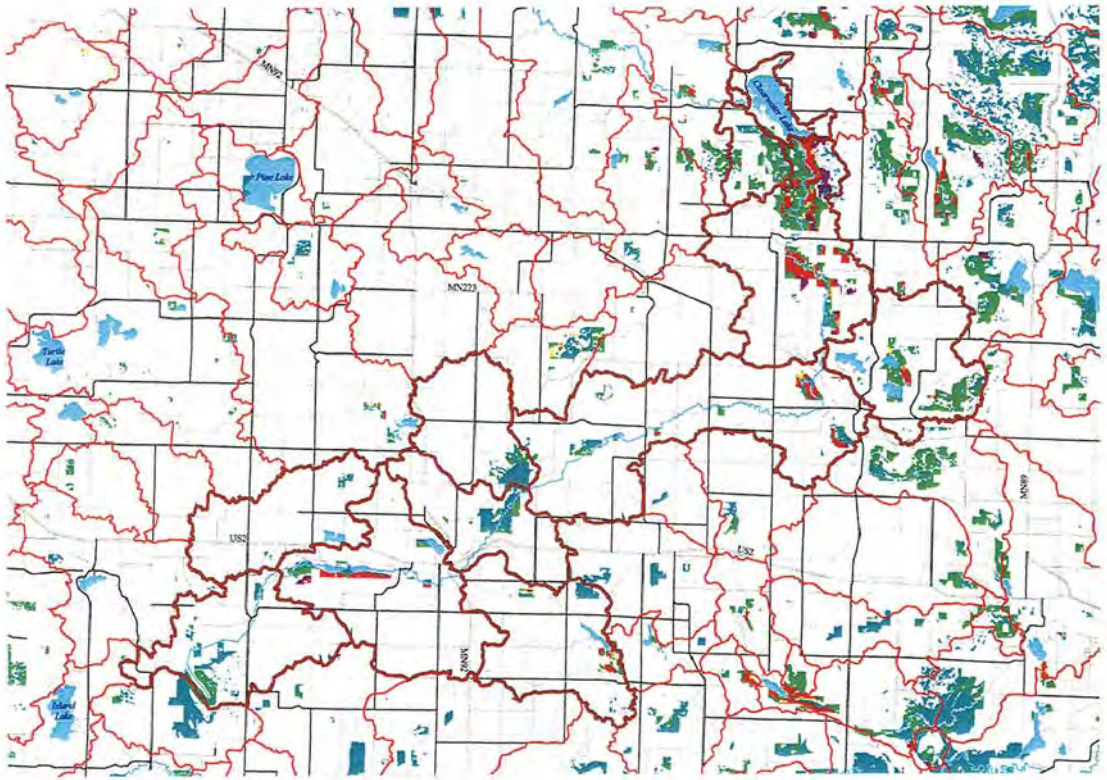
This land has a high value for off road recreation such as trails or hunting.

It serves as a highly accessible resource for short duration off-road recreation experiences.

Future road and trail networks can also be part of a lake plan.

Clearwater Lake Watershed and Surrounding Area

Scenically Attractive Public Land Over 1/4 Mile of a Road



N

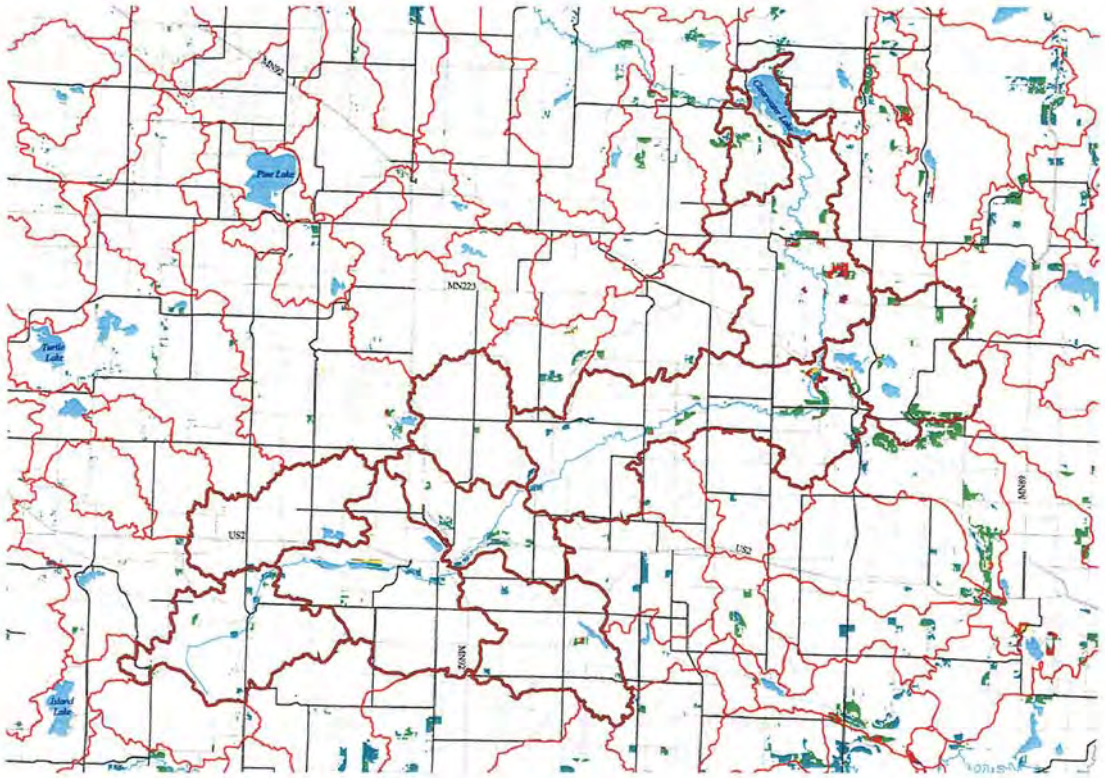
Science Museum of Minnesota

Minor Watersheds
Major Roads
County Roads
Township Roads
State Trails
Lakes
Rivers
Streams
Wetlands
Scenically Attractive Areas
Forested, Rough
Near water, Forested, Flat
Near water, Non-forested, Rough
Near water, Forested, Rough

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Clearwater Lake Watershed and Surrounding Area

Scenically Attractive Public Land Within 1/4 Mile of a Road



N

Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

Wetlands

Scenically Attractive Areas
- Forested, Rough
- Near water, Forested, Flat
- Near water, Non-forested, Rough
- Near water, Forested, Rough

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Septic System Drainage Capacity and Suitability

Septic systems, called Individual Sewage Treatment Systems (ISTS) in the regulatory literature, commonly consist of a septic tank, where solids settle, and a drain field, where fluids percolate into the soil. The suitability of a soil for a septic system depends in part on the permeability of the soil. A soil that is too fine-grained and tight may have inadequate drainage capacity, causing system failure from backing up and overflowing. A soil that is too coarse and permeable may have excessive drainage capacity, causing system failure from inadequate treatment of fluids discharged through the drain field.

This map shows Septic System Drainage Capacity and Suitability based on soil permeability. Most soils have moderate or high drainage capacity and are potentially suitable for septic systems. However, more detailed soils maps should be reviewed for those soils near water bodies, as excessive drainage and system failure in these locations could deliver inadequately treated wastes to streams or lakes. These can be obtained from the county. The pockets of suitable soil for sewage disposal should be monitored on both public and private land and possibly designated for that use. Cluster (more than one property) sewage disposal systems could then utilize these sites in the future. Also, alternate sewage disposal systems with treatment processes should be looked at.

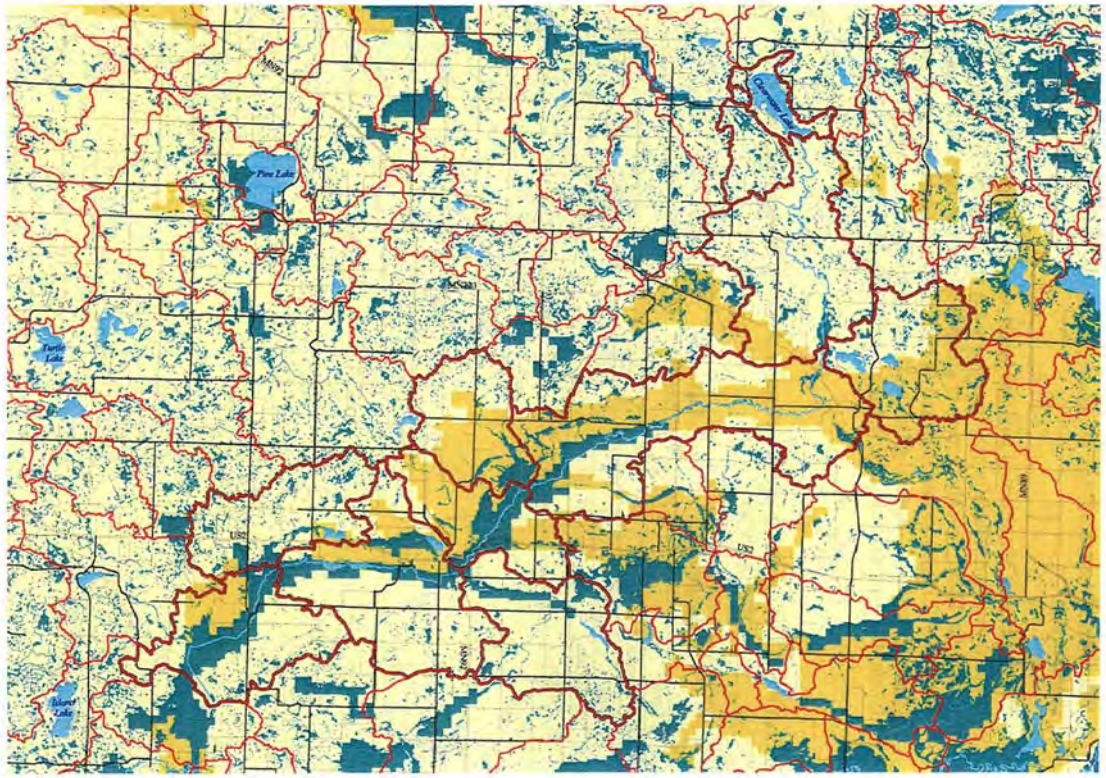
Another important factor that determines soil suitability for septic systems is vertical proximity of the drain field to seasonally high water-table levels. The map in this report does not incorporate this factor.

Table 12: Septic System Drainage Capacity and Suitability Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Moderate (Suitable)	69,762	64%	1,947	81%
High (Somewhat Suitable)	31,136	28%	0	0%
Very High (Possibly Unsuitable)	0	0%	0	0%
Wetlands	8,765	8%	452	19%
Total	**109,663**	**100%**	**2,399**	**100%**

Clearwater Lake Watershed and Surrounding Area

Septic System Drainage Capacity and Suitability



N

Science Museum of Minnesota

Minor Watersheds
Major Roads
County Roads
Township Roads
State Trails
Lakes
Rivers
Streams

Water/wetlands/marsh/peat/alluvial

Septic System Drainage Capacity
Moderate (Suitable)
High (Somewhat Suitable)
Very High (Possibly Unsuitable)

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Possible Agriculture Irrigation Areas on Private Land with < 8% Slope

Agriculture activities occur throughout Minnesota and dominate some watersheds. Based on slope and soil type, this map shows private land areas where intense agriculture utilizing irrigation is most likely. Low slopes are required for the placement of irrigation rigs which are predominantly located on sandy soils that quickly lose moisture due to rapid drainage. Large amounts of irrigation water applied to the land surface expedite the infiltration of herbicides and pesticides used in crop production through the soil and into groundwater.

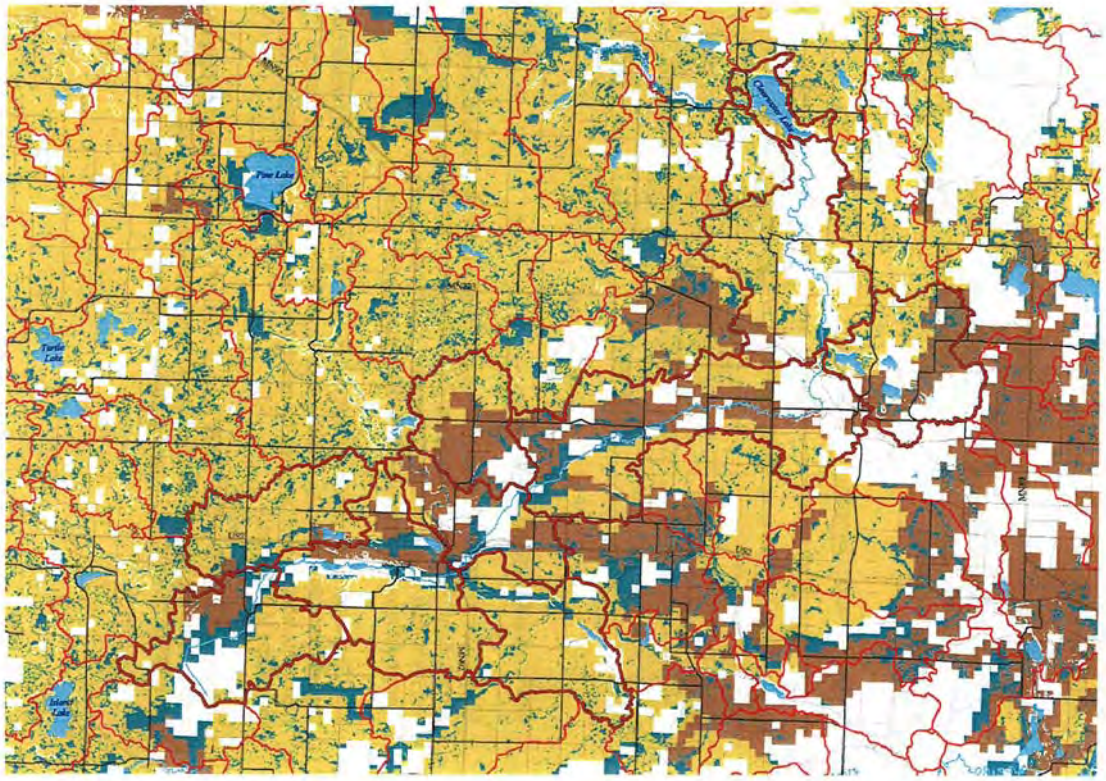
The dominance of cultivated land and sandy soils along the Clearwater River lends to concern over agriculturally contaminated water reaching the river and eventually Clearwater Lake. Twenty percent of the total minor watershed land area surrounding the Clearwater River is ranked high and 54 percent is ranked moderate for agriculture irrigation potential. Special attention should be paid to existing irrigation rigs as well as future irrigation rigs that are located in highly ranked areas.

Table 13: Possible Agriculture Irrigation Areas on Private Land with < 8% Slope Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Low	0	9%	0	0%
Moderate	58,774	69%	1,594	78%
High	21,296	25%	0	0%
Wetlands	5,151	6%	449	22%
Total	**109,663**	**100%**	**2,043**	**100%**

Clearwater Lake Watershed and Surrounding Area

Possible Agriculture Irrigation Areas on Private Land with Less than 8% Slope



N

Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams
- Wetlands, Rock

Agriculture Irrigation Potential
- Low
- Moderate
- High

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

PUBLIC MANAGEMENT MAPS

Public Ownership

The Public Ownership map displays the State or County government sector responsible for managing public land within the watershed. Public lands are valuable land areas, occupying approximately one-quarter of the state, and provide many benefits, such as recreation areas, wildlife preserves, and parks.

Twenty percent of land in the Clearwater River watershed area and fifteen percent of the Clearwater Lake watershed is in public ownership. Public management policies will drive the amount and quality of water runoff and determine the scenic amenity of an area. Public land should be managed, protected, and preserved in the best interest of the public, including lake users.

Table 14: Public Ownership Map Statistics

Description	Acres River Watersheds	Percent River Watersheds	Acres Lake Watershed	Percent Lake Watershed
Federal	40	0.1%	40	2%
State	2,886	3%	0	0%
County	18,548	17%	317	13%
Private	85,670	78%	2,044	85%
Unknown	1,852	1.9%	0	0%
Total	**109,663**	**100%**	**2,401**	**100%**

Government Political Boundaries

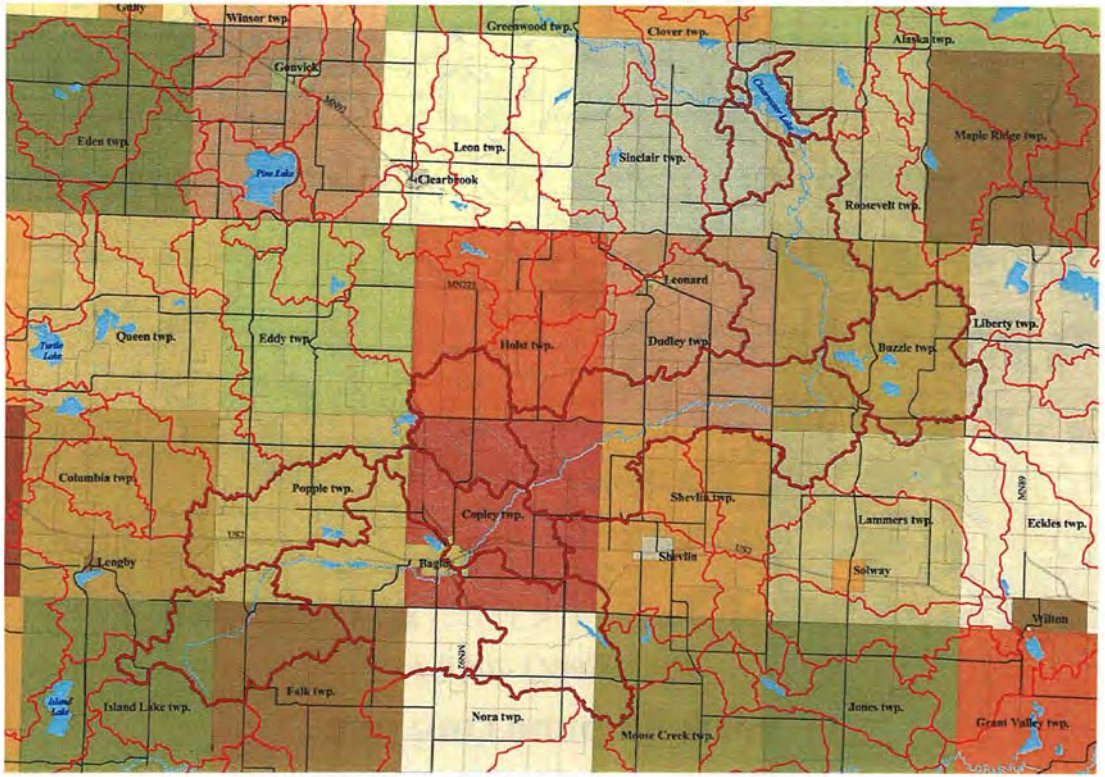
Most of the management issues affecting a lake community will be addressed by local planning entities. The Government Political Boundaries map delineates Minnesota cities and townships to help realize government departments that may need to be approached when acting toward the goals of the lake management plan.

The Clearwater Lake watershed lies within two Minnesota political jurisdictions for local government administration: Sinclair and Roosevelt townships. Because the Clearwater Lake watershed is split between these two boundaries, communication between the townships is important.

Throughout the entire Clearwater River watershed area, multiple townships and cities exist. Communication between these government departments and your local Clearwater River Watershed District (www.crwd.org/About.htm) is also important.

Clearwater Lake Watershed and Surrounding Area

Government Political Boundaries



Science Museum of Minnesota

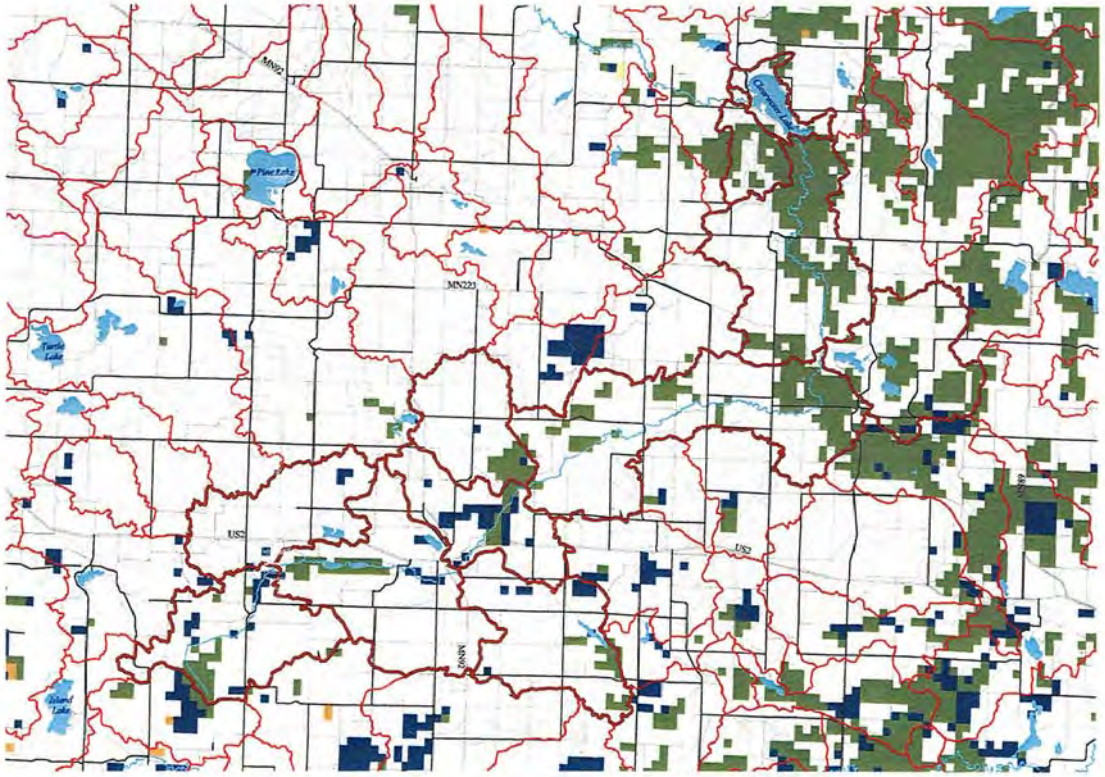
- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

Clearwater Lake Watershed and Surrounding Area

Public Ownership



N

Science Museum of Minnesota

- Minor Watersheds
- Major Roads
- County Roads
- Township Roads
- State Trails
- Lakes
- Rivers
- Streams

Public Ownership
- Federal
- State
- County
- Tribal

5 0 5 10 15 20 Miles

Data provided by the Minnesota Department of Natural Resources
Map created by the Science Museum of Minnesota's Map Lab

REFERENCES

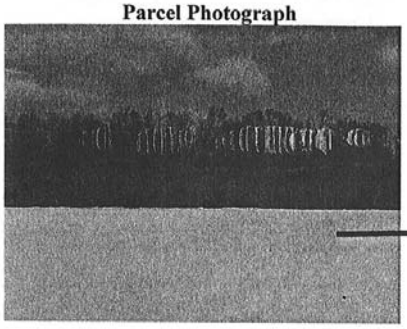
Borchert, Gustafson, University of Minnesota's Center for Urban and Regional Affairs and the Minnesota State Planning Agency, *Atlas of Minnesota Resources and Settlement. 1980.*

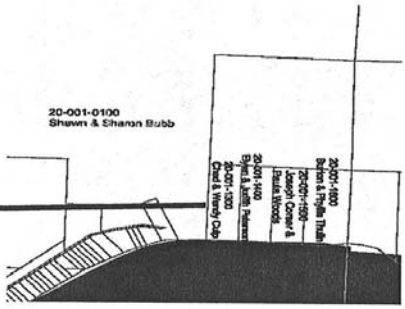
Minnesota Lakes Association and the University of Minnesota's Center for Urban and Regional Affairs, *Sustainable Lakes Planning Workbook: A Lake Management Model*, May, 2000.

Minnesota Lakes Association and the University of Minnesota's Center for Urban and Regional Affairs, *A Guidebook for Lake Association*, 1997.

20-001-1300 Chad & Wendy Culp

Parcel Photograph





Local Management Information

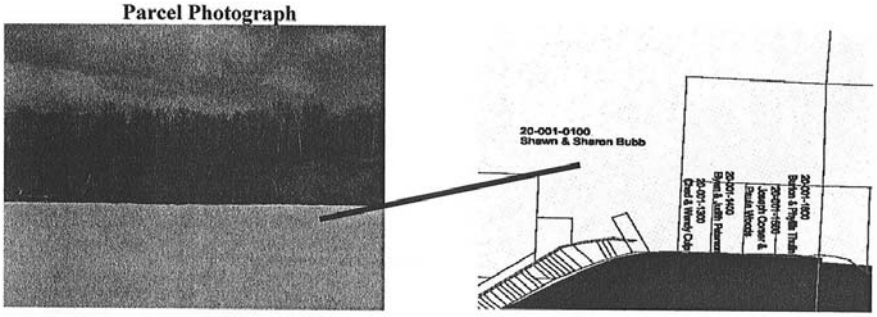
County: Clearwater
Township: Sinclair
Section: 1
Description: Section 1
Lot Type: Lake lot 300'/~6.5 Acres
Land Value: $22,400
Owner Address: c/o Ray Culp
PO Box 290476
Phelan, CA 92329
Fire#: Clearbrook S-275
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods with Jack Pine and barren ground
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-001-0100 Shawn & Sharon Bubb

Parcel Photograph



Local Management Information

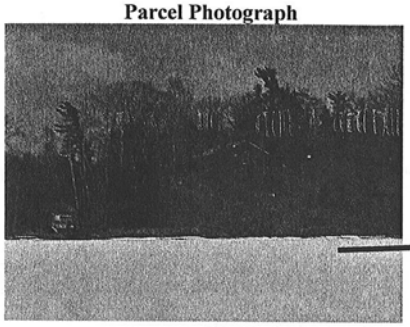
County: Clearwater
Township: Sinclair
Section: 1
Description: Section 1
Lot Type: ~250 feet of shore, 243.47 Acres
Land Value: $64,400
Owner Address: PO Box 744
Alvarado, MN 56710
Fire#: Clearbrook S-275
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

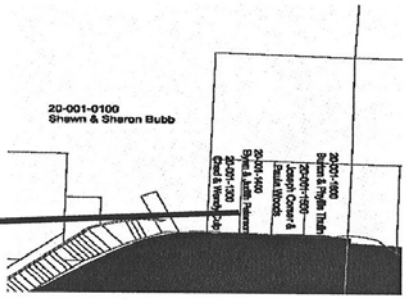
Resource Information

Dock: No dock
Boat/Boathouse: No boat or boathouse
PWC: None
Dwelling Setback: No dwelling
Slope: Steep Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Red/White Pine mix & Aspen/Birch mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

20-001-1400 Elwyn & Judith Peterson; Lorraine Thulin

Parcel Photograph





Local Management Information

County: Clearwater
Township: Sinclair
Section: 1
Description: Section 1
Lot Type: Lake lot 300'/~6.5 Acres
Land Value: $25,500
Bldg Value: $30,700
Owner Address: Elwyn & Judith Peterson
413 Hollett Street
Tracy, MN 56175

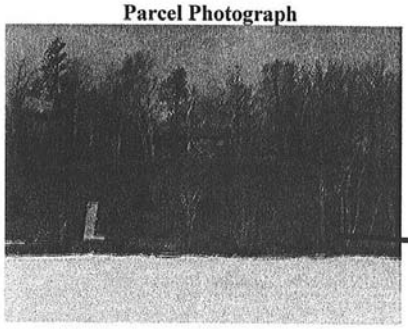
Lorraine Thulin
601 S Armstrong
Litchfield, MN 55355
Fire#: Clearbrook S-275
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, new system
Last Permit: 1996

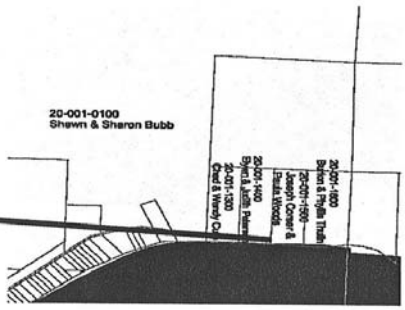
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-001-1500 Joseph Corser & Paula Woods

Parcel Photograph





Local Management Information

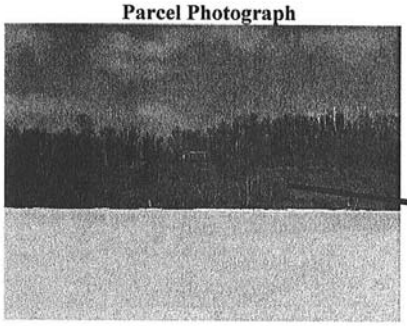
County: Clearwater
Township: Sinclair
Section: 1
Description: Section 1
Lot Type: Lake lot 300'/~6.5 Acres
Land Value: $25,200
Bldg Value: $19,900
Owner Address: PO Box U
Bagley, MN 56621
Fire#: Clearbrook S-275
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

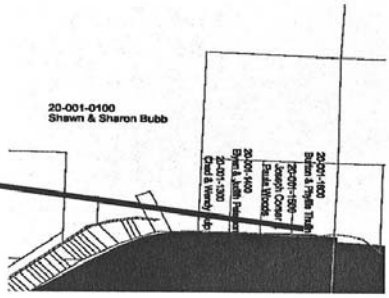
Resource Management

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-001-1600 Burton & Phyllis Thulin; Lorraine Thulin

Parcel Photograph





Local Management Information

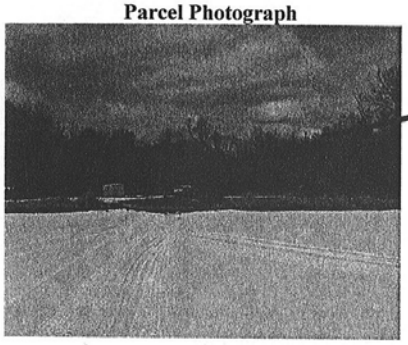
County: Clearwater
Township: Sinclair
Section: 1
Description: Section 1
Lot Type: Lake lot 420'/~6.5 Acres
Land Value: $32,000
Bldg Value: $87,900
Owner Address: 836 Elm Creek Circle
Champlin, MN 55316
Fire#: Clearbrook S-275
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1990

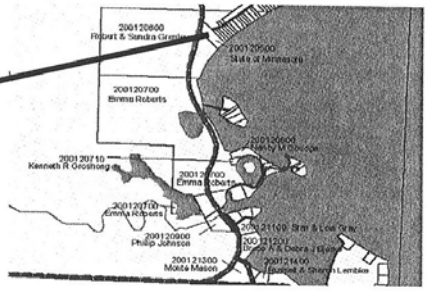
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-0500 State of Minnesota
Clearwater Lake Public Access

Parcel Photograph





Local Management Information

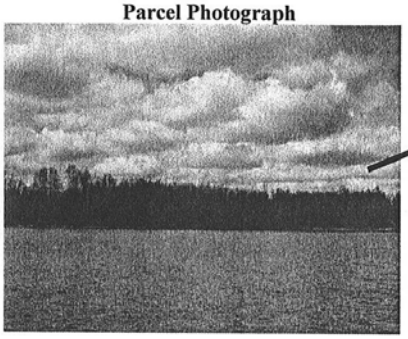
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: Lake lot ~1 Acre
Land Value: $29,800
Bldg Value: N/A
Owner Address: Comm of Natural Resources
Bur of Land
Box 30 500 Lafayette Rd
St. Paul, MN 55146
Fire#: Clearbrook S-280
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

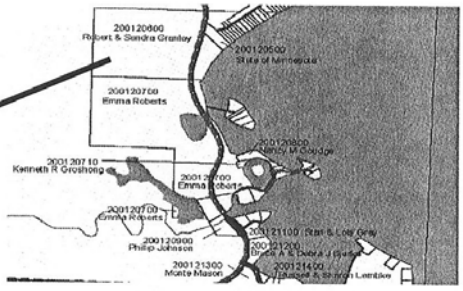
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: None
PWC: None
Dwelling Setback: No dwelling
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-0600 Robert & Sandra Granley

Parcel Photograph





Local Management Information

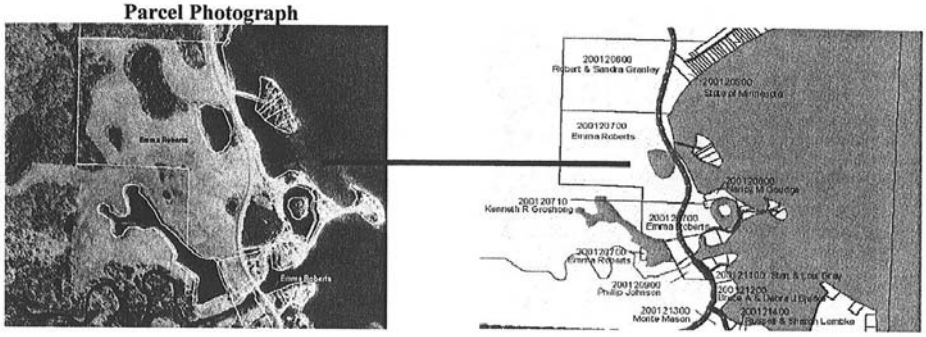
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: 61.39 acre swamp on lake
Land Value: $17,800
Bldg Value: N/A
Owner Address: P.O. Box 71
Clearbrook, MN 56634
Fire#: Clearbrook S-280
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

Resource Information

Dock: No dock
Boat/Boathouse: No boats or boathouse
PWC: None
Dwelling Setback: No dwelling
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-0700 Emma Roberts

Parcel Photograph



Local Management Information

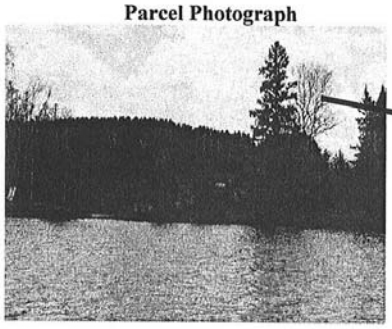
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: On lake ~69.3 Acres
Land Value: $45,500
Bldg Value: $81,500
Owner Address: P.O. Box 4
Clearbrook, MN 56634
Fire#: Clearbrook S-380
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

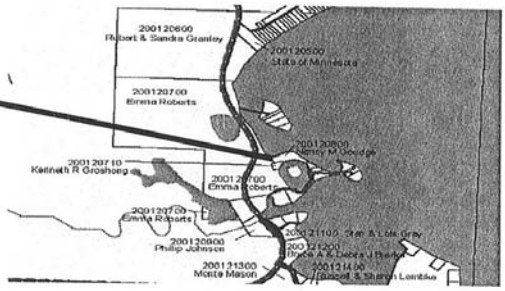
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-0710 Kenneth R. Groshong

Parcel Photograph





Local Management Information

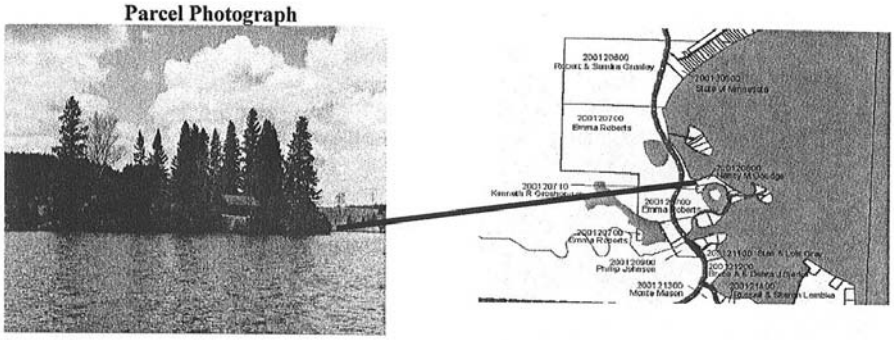
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: Lake lot ~0.51 Acres
Land Value: $8,300
Bldg Value: $4,900
Owner Address: 13426 Jeffry Way
Minnetonka, MN 55305
Fire#: Clearbrook S-282
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, 1,000 gal tank, 165 ft drainline
Last Permit: 1997

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-0800 Nancy M. Goudge

Parcel Photograph



Local Management Information

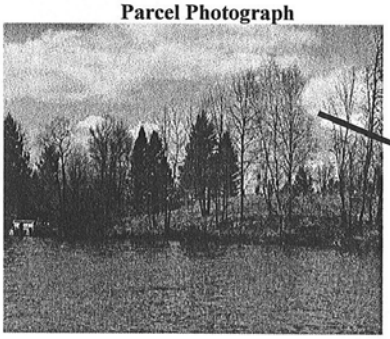
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: Lake lot ~1.3 Acres
Land Value: $31,700
Bldg Value: $11,700
Owner Address: RR 1 Box 20
Leonard, MN 56634
Fire#: Clearbrook S-282
Septic Compliance: Conforming
Sewage Treatment System Comments:
Holding tank in 1998, OHWL setback for 90 ft
Last Permit: 1998

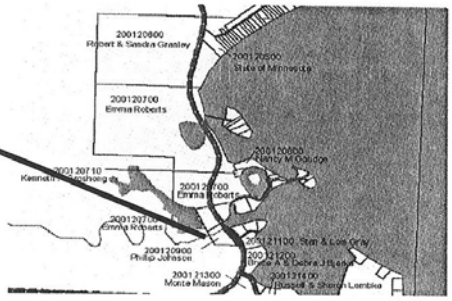
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-0900 Phillip Johnson

Parcel Photograph





Local Management Information

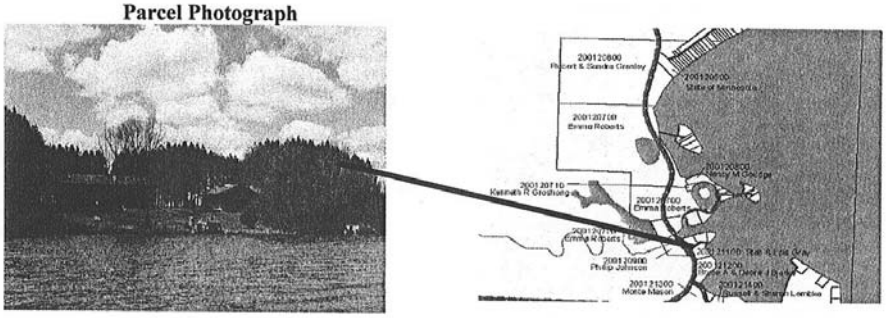
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: River Lot ~2.17 Acres
Land Value: $5,700
Bldg Value: $30,800
Owner Address: RR1 Box 115
Leonard, MN 56652
Fire#: Clearbrook S-285
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for garage and house
Last Permit: 1992

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-1100 Stan & Lois Gray

Parcel Photograph



Local Management Information

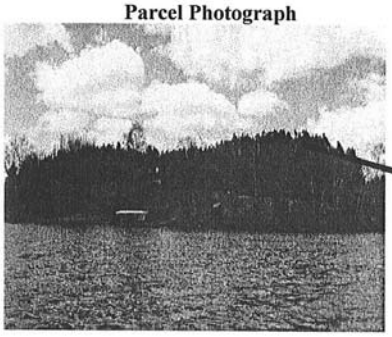
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: Lake lot ~1.85 Acres
Land Value: $29,300
Bldg Value: $81,100
Owner Address: RR 1 Box 115
Leonard, MN 56652
Fire#: Clearbrook S-285
Septic Compliance: No
Sewage Treatment System Comments: STS has seepage pit
Last Permit: 1987

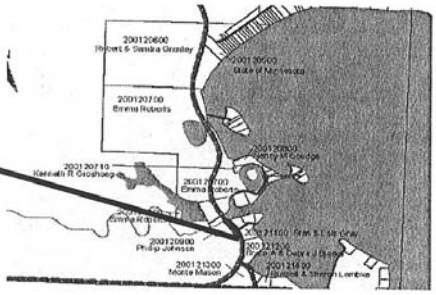
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-1200 Bruce & Debra Bjerke

Parcel Photograph





Local Management Information

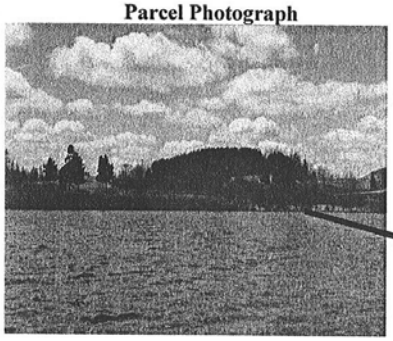
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: Lake lot ~3.0 Acres
Land Value: $30,600
Bldg Value: $77,300
Owner Address: RR 1 Box 116
Leonard, MN 56652
Fire#: Clearbrook S-285
Septic Compliance: Conforming
Sewage Treatment System Comments: Substandard in size
Last Permit: 1989

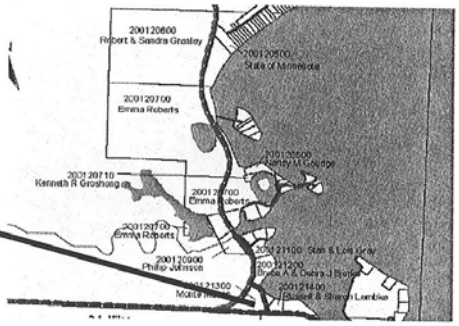
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-1300 Monte Mason

Parcel Photograph





Local Management Information

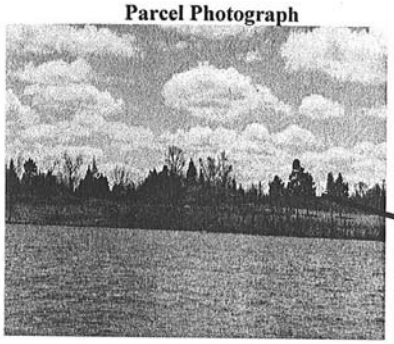
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: Lake lot ~ 4.9 Acres
Land Value: $22,300
Owner Address: 4542 Blaisdell Ave S
Minneapolis, MN 55409
Fire#: Clearbrook S-382
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

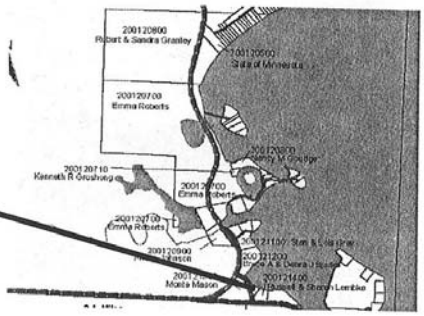
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-1400 Russell & Sharon Lembke

Parcel Photograph





Local Management Information

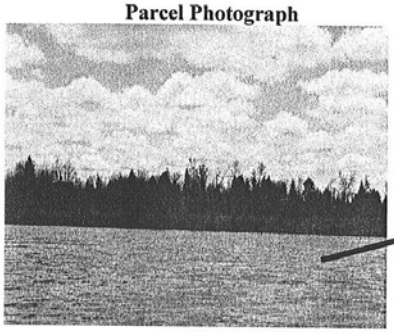
County: Clearwater
Township: Sinclair
Section: 12
Description: Section 12
Lot Type: Lake lot ~1.4 Acres
Land Value: $21,200
Bldg Value: $54,600
Owner Address: P.O. Box 172
Wrenshall, MN 55797
Fire#: Clearbrook S-381
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

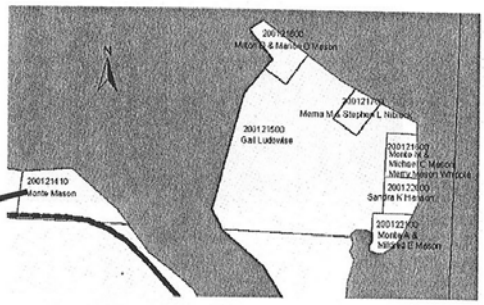
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-1410 Monte Mason

Parcel Photograph





Local Management Information

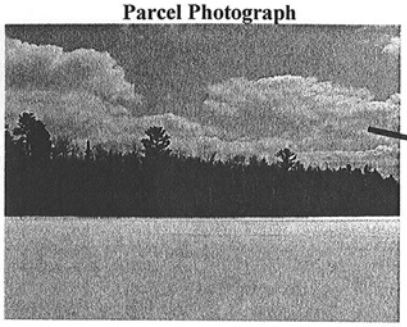
County: Clearwater
Township: Sinclair
Section: 12
Description: Mason's Point
Lot Type: Lake Lot, ~2.2 Acres
Land Value: $29,100
Owner Address: 4542 Blaisdell Ave S
Minneapolis, MN 55409
Fire#: Clearbrook S-383
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

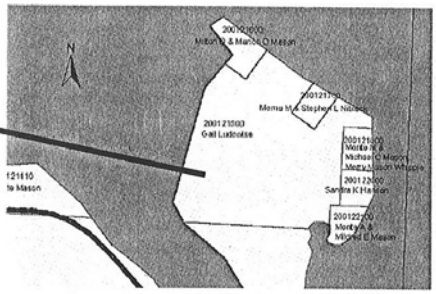
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-1500 Gail Ludowise

Parcel Photograph





Local Management Information

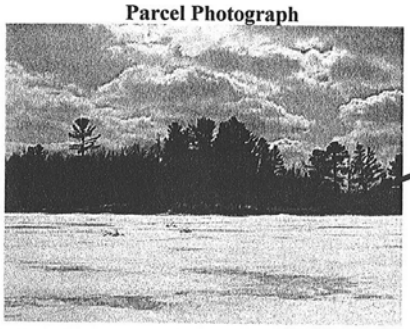
County: Clearwater
Township: Sinclair
Section: 12
Description: Mason's Point
Lot Type: Lake lot ~13.78 Acres
Land Value: $68,100
Owner Address: 6308 NE 12th Ave
Vancover, WA 98665
Fire#: Clearbrook S-383
Septic Compliance: N/A
Sewage Treatment System Comments: No buildings on property
Last Permit: N/A

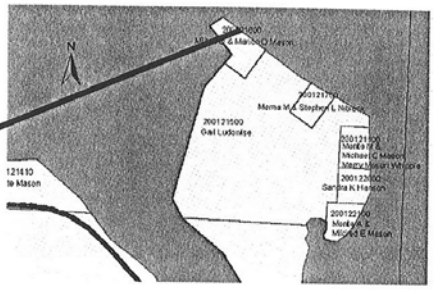
Resource Information

Dock: N/A
Boat/Boathouse: N/A
PWC: None
Dwelling Setback: None
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-1600 Milton & Marion Mason

Parcel Photograph





Local Management Information

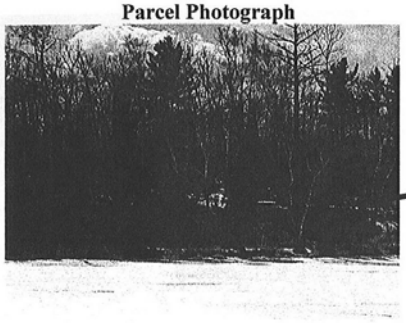
County: Clearwater
Township: Sinclair
Section: 12
Description: Mason's Point
Lot Type: Lake lot ~1.0 Acres
Owner Address: c/o James D. Mason
212 S Redwood Dr
Mankato, MN 56001
Fire#: Clearbrook S-383
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, drain field 100' from lake
Last Permit: 1995

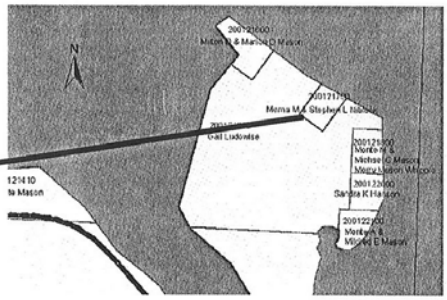
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-1700 Stephen & Merna Niblack

Parcel Photograph





Local Management Information

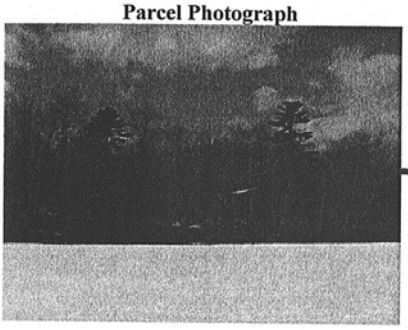
County: Clearwater
Township: Sinclair
Section: 12
Description: Mason's Point
Lot Type: Lake lot ~0.52 Acres
Land Value: $21,700
Bldg Value: $24,900
Owner Address: c/o Arthur & Karen Cardell
16121 Mustang Dr.
Springville, CA 93265
Fire#: Clearbrook S-383
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, increase from last STS
Last Permit: 1994

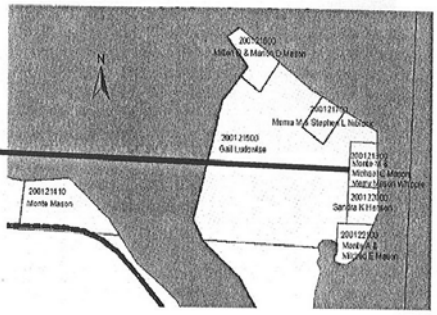
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: No boats or boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-1800 Monte & Michael Mason
Merry Whipple

Parcel Photograph





Local Management Information

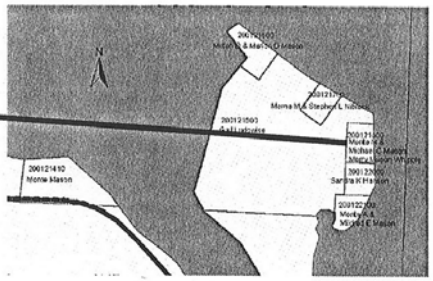
County: Clearwater
Township: Sinclair
Section: 12
Description: Mason's Point
Lot Type: Lake lot ~0.81 Acres
Land Value: $29,700
Bldg Value: $39,700
Owner Address: 1636 W Skillman Ave
St. Paul, MN 55113
Fire#: Clearbrook S-383
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1994

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-2000 Sandra Hanson

Parcel Photograph



Local Management Information

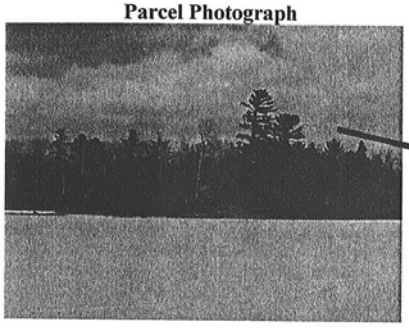
County: Clearwater
Township: Sinclair
Section: 12
Description: Mason's Point
Lot Type: Lake lot ~0.67 Acres
Land Value: $24,300
Bldg Value: $25,800
Owner Address: 2127 Albermarl Court
Roseville, MN 55113
Fire#: Clearbrook S-383
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1981

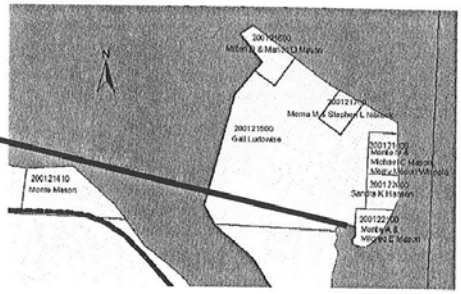
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-012-2100 Monte & Mildred Mason

Parcel Photograph





Local Management Information

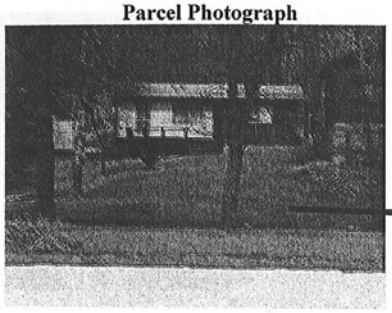
County: Clearwater
Township: Sinclair
Section: 12
Description: Mason's Point
Lot Type: Lake lot ~1.07 Acres
Land Value: $32,600
Bldg Value: $39,400
Owner Address: 1636 W Skillman Ave
St. Paul, MN 55113
Fire#: Clearbrook S-383
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, new system
Last Permit: 2000

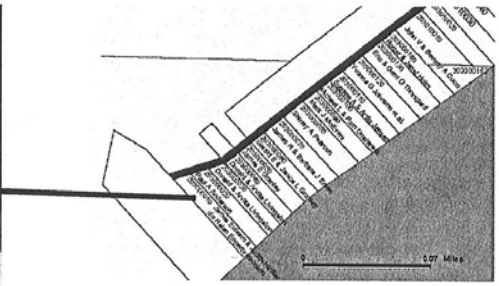
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0010 James Eideem & Judith Hirdler
c/o Helen Engrebretson

Parcel Photograph





Local Management Information

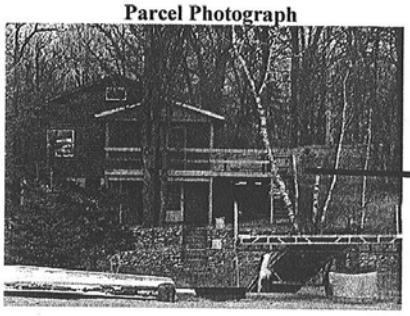
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 Acres
Land Value: $11,700
Bldg Value: $60,500
Owner Address: RR 1 Box 21
Clearbrook, MN 56634
Fire#: Clearbrook S-280
Septic Compliance: No
Sewage Treatment System Comments: Have septic system
Last Permit: 1977

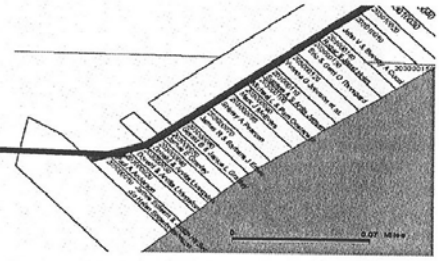
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0020 Paul A. Anderson

Parcel Photograph





Local Management Information

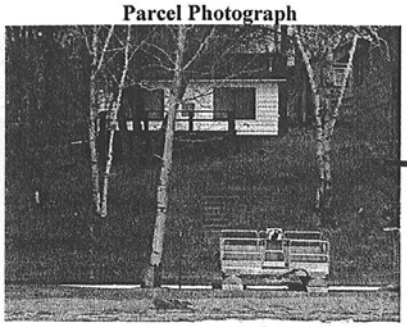
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 Acres
Land Value: $10,800
Bldg Value: $15,600
Owner Address: 1016 63rd Ave. N.
Moorhead, MN 56560
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: N/A

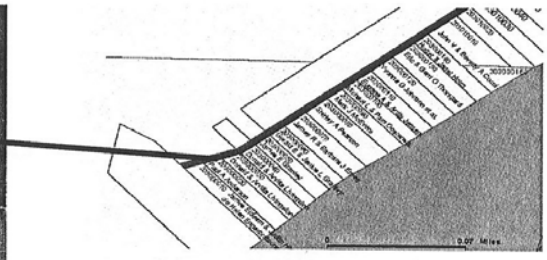
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0030 Donald & Arvilla Livingston

Parcel Photograph





Local Management Information

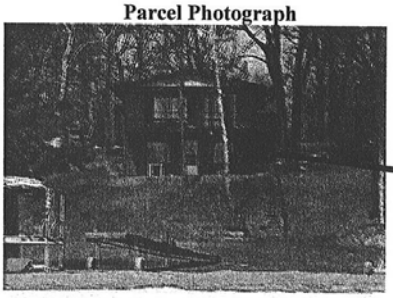
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 Acres
Land Value: $10,300
Bldg Value: $10,300
Owner Address: RR 1 Box 110 A
Leonard, MN 56652
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: Combined STS with parcel # 20-300-0040
Last Permit: N/A

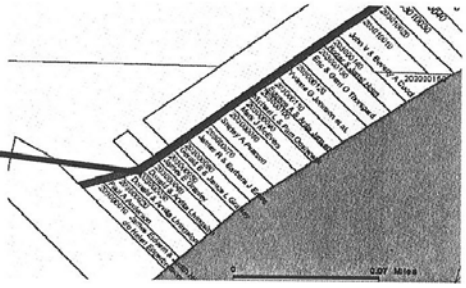
Resource Information

Dock: None
Boat/Boathouse: No boat but have a boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0040 Donald & Arvilla Livingston

Parcel Photograph





Local Management Information

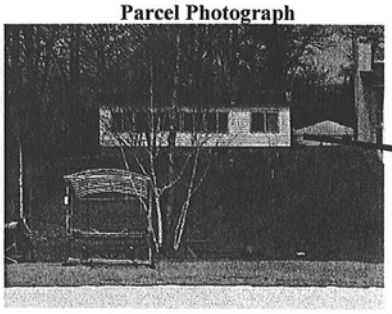
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 + 0.12 Acres
Land Value: $11,700
Bldg Value: $56,400
Owner Address: RR 1 Box 110 A
Leonard, MN 56652
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: N/A

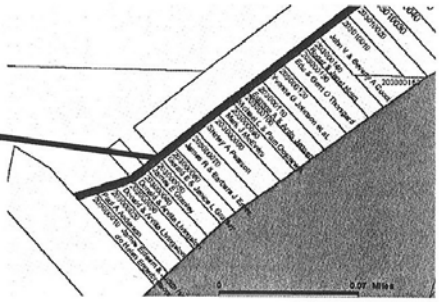
Resource Information

Dock: High profile dock (boat lift with cover)
Boat/Boathouse: 2 boats w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0050 James E. Granley

Parcel Photograph





Local Management Information

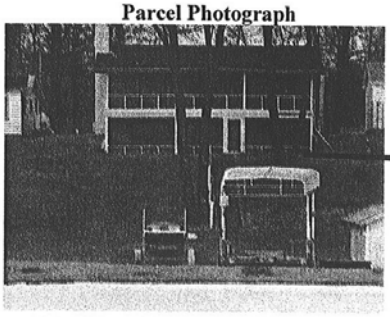
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 + 0.12 Acres
Land Value: $11,700
Bldg Value: $20,600
Owner Address: PO Box 71
Clearbrook, MN 56652
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, combined STS with parcel #20-300-0060
Last Permit: 1995

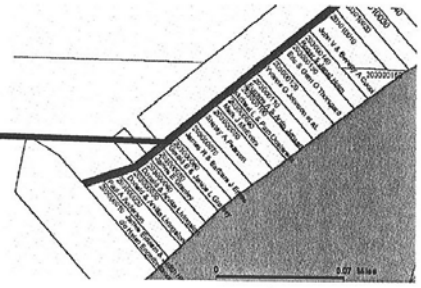
Resource Information

Dock: High profile dock (boat lift w/cover)
Boat/Boathouse: 2 boats w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0060 Gerald & Janice Granley

Parcel Photograph





Local Management Information

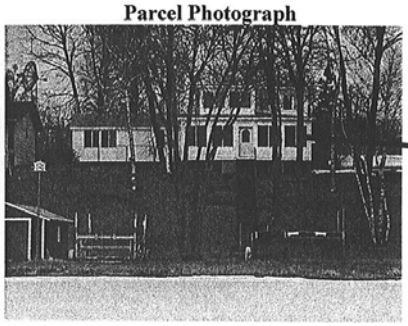
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 + 0.12 Acres
Land Value: $11,700
Bldg Value: $60,500
Owner Address: 11161 Zion St. NW
Coon Rapids, MN 55433
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments:
1,500 gallon combo STS with
parcel # 20-300-0050
Last Permit: 1995

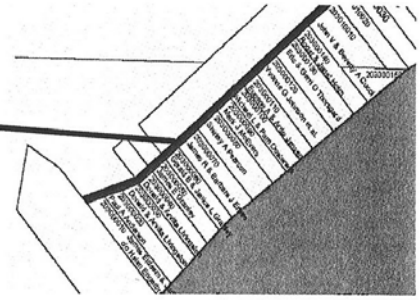
Resource Information

Dock: High profile dock (boat lift w/cover)
Boat/Boathouse: 2 boats w/boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0070 James & Barbara Erbes

Parcel Photograph





Local Management Information

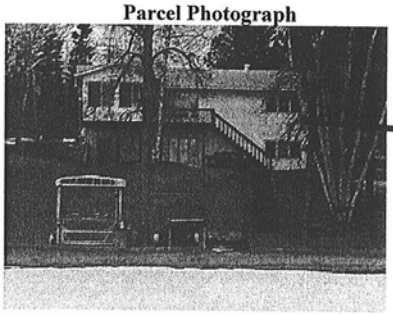
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 75 foot lake lot/~0.39 + 0.18 Acres
Land Value: $15,600
Bldg Value: $33,600
Owner Address: 3433 Thunder Rd
Alamogardo, NM 88310
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: 1,000 gallon tank, 75 foot drainfield, well located inside of 6' X 8' addition
Last Permit: 1991

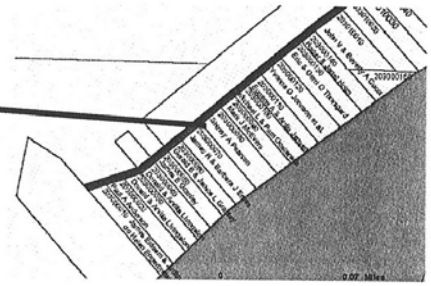
Resource Information

Dock: High profile dock (boat lift w/cover)
Boat/Boathouse: 1 boat w/boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0080 Shirley & Robert Pearson

Parcel Photograph





Local Management Information

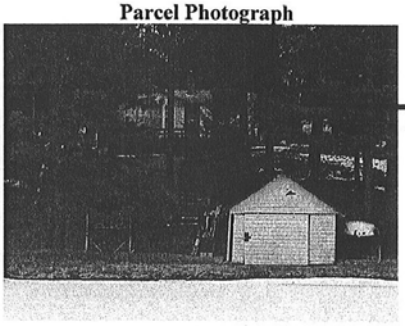
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 75 foot lake lot/~0.39 +0.18 Acres
Land Value: $11,700
Bldg Value: $60,500
Owner Address: RR 1 Box 109
Leonard, MN 56652-9735
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, 150' drain field
Last Permit: 1992

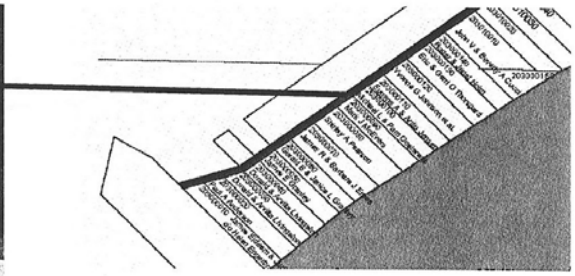
Resource Information

Dock: High profile dock (boat lift w/cover)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0090 Mark J. McEvers

Parcel Photograph





Local Management Information

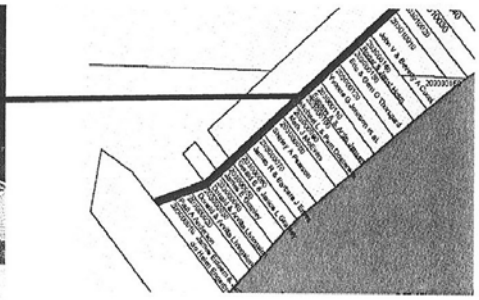
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 +).12 Acres
Land Value: $11,700
Bldg Value: $18,900
Owner Address: 1914 S 20th St. #16
Grand Forks, MN 58201
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: Joint with parcel 20-300-0100, new system 1999
Last Permit: 1999

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/boat house
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0100 Michael & Pam Oosterwijk

Parcel Photograph



Local Management Information

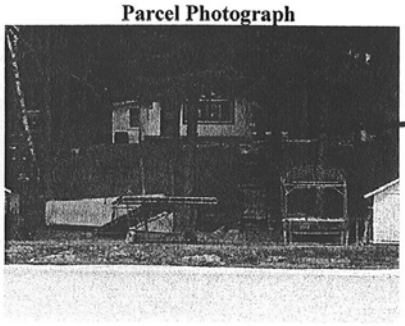
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 + 0.12 Acres
Land Value: $11,700
Bldg Value: $18,100
Owner Address: PO Box 123
Forest River, MN 58233
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: Joint with parcel 20-300-0090, New system 1999
Last Permit: 1999

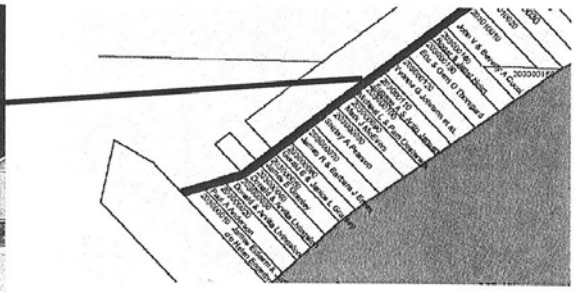
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0110 Eugene & Ardis Jensen

Parcel Photograph





Local Management Information

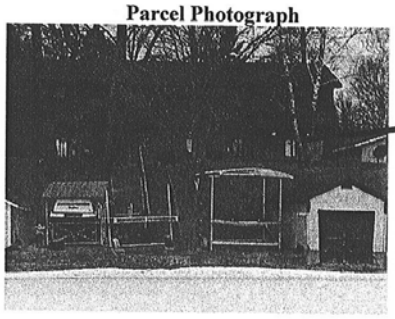
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 + 0.12 Acres
Land Value: $10,300
Bldg Value: $8,800
Owner Address: 23223 423rd Ave
Belgrade, MN 56312
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: N/A

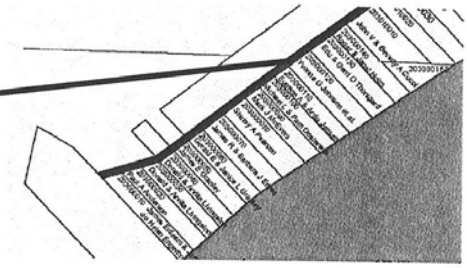
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0120 Yvonne G. Johnson et. al.

Parcel Photograph





Local Management Information

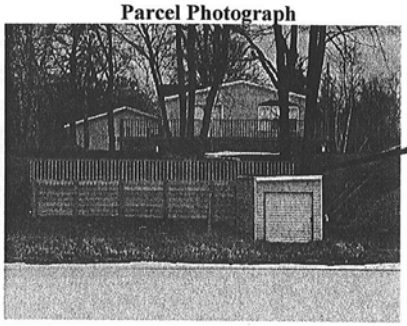
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 75 foot lake lot/~0.39 +).18 Acres
Land Value: $15,600
Bldg Value: $81,000
Owner Address: RR 1 Box 110
Leonard, MN 56652
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: Well 75 feet from STS
Last Permit: 1999

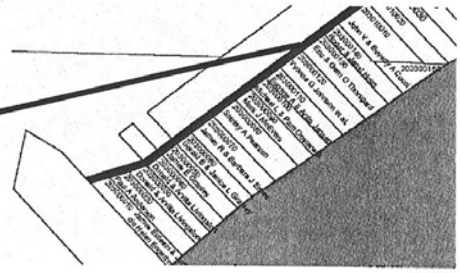
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0130 Eric & Gerri Thorsgard

Parcel Photograph





Local Management Information

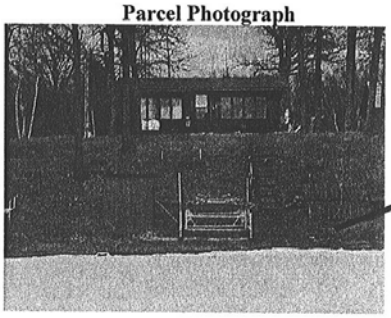
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 75 foot lake lot/~0.39 + 0.18 Acres
Land Value: $15,600
Bldg Value: $43,900
Owner Address: RR 1 Box 110AA
Leonard, MN 56652
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1998

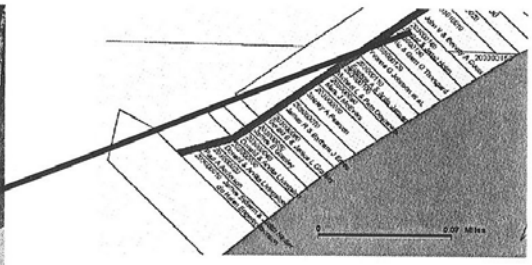
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-300-0140 Roger & Janet Holm

Parcel Photograph





Local Management Information

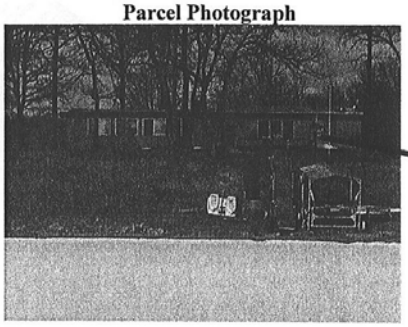
County: Clearwater
Township: Sinclair
Section: 12
Description: Eisenman's Subdivision
Lot Type: 50 foot lake lot/~0.26 + 0.12 Acres
Land Value: $11,700
Bldg Value: $42,300
Owner Address: RR 1 Box 110B
Leonard, MN 56652
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1995

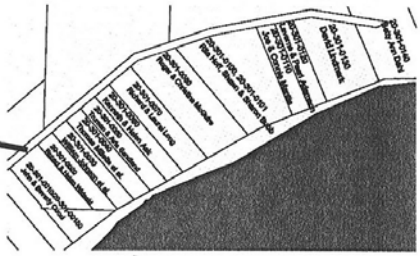
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0010 & 20-300-0150
John & Beverly Cucci

Parcel Photograph





Local Management Information

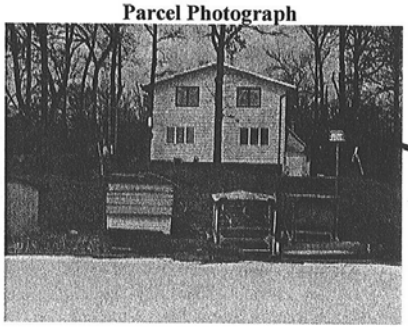
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: 2 lake lots, 50 feet each/~0.52 + 0.18 Acres and ~0.75 Acres
Land Value: $19,200
Bldg Value: $43,000
Owner Address: RR 1 Box 110C
Leonard, MN 56652
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1999

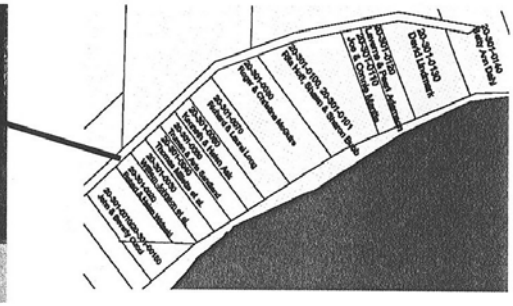
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0020 Robert & Helen Widerski

Parcel Photograph





Local Management Information

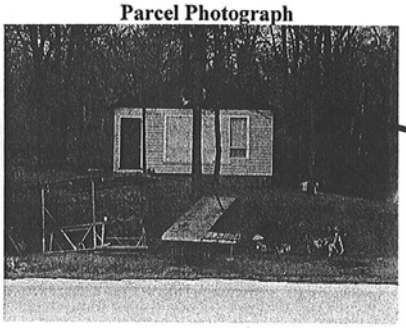
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 50 feet/~0.2 Acres
Land Value: $11,700
Bldg Value: $52,300
Owner Address: RR 1 Box 111
Leonard, MN 56652
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1992

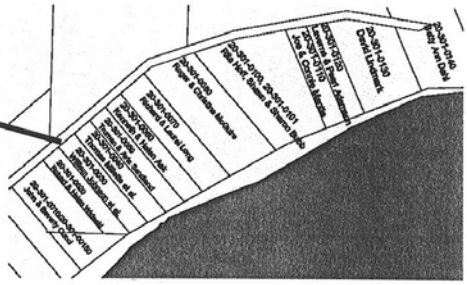
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0030 William L. Johnson et. al.

Parcel Photograph





Local Management Information

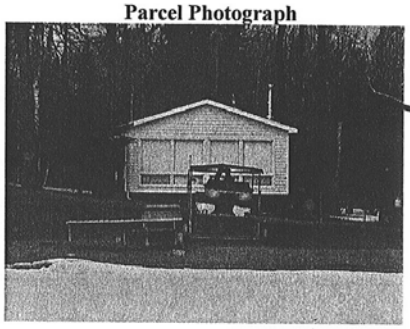
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 50 feet/~0.2 Acres
Land Value: $11,200
Bldg Value: $17,400
Owner Address: 785 Clearbrook Lane
Vadnais Heights, MN
55127
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments:
Joint STS with parcel # 20-301-0040
Last Permit: 1998

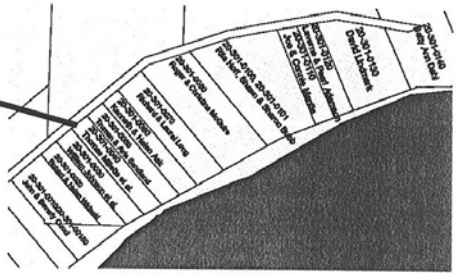
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0040 Thomas Millette et al.

Parcel Photograph





Local Management Information

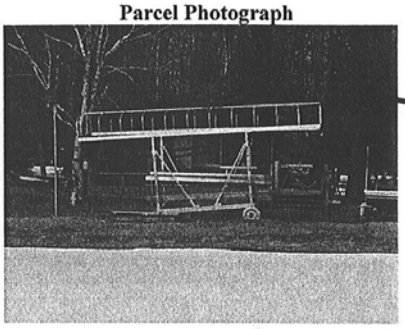
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 50 feet/~0.2 Acres
Land Value: $11,200
Bldg Value: $34,000
Owner Address: RR 2 Box 49
East Grand Forks, MN
56721
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, joint with parcel # 20-301-0030
Last Permit: 1998

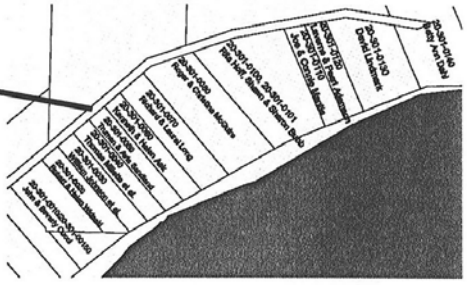
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0050 Truman & Avis Sandland

Parcel Photograph





Local Management Information

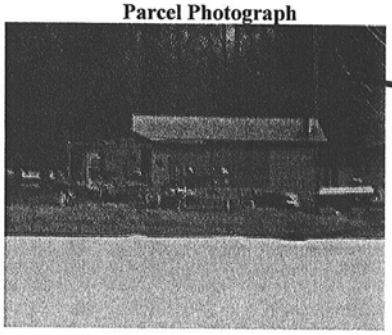
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 50 feet/~0.8 Acres
Land Value: $11,700
Bldg Value: $21,700
Owner Address: RR 2 Box 79
Clearbrook, MN 56634
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1985

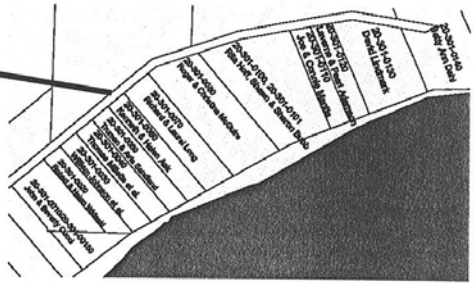
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0060 Kenneth & Helen Ask

Parcel Photograph





Local Management Information

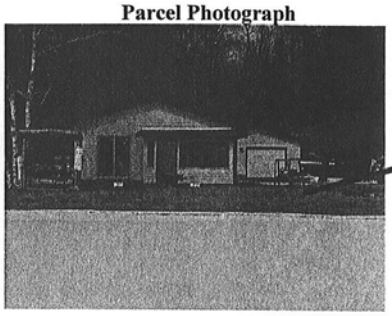
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 50 feet/~0.2 Acres
Land Value: $11,700
Bldg Value: $17,600
Owner Address: 6333 Steven's Ave S
Richfield, MN 55423-1609
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments:
Joint w/parcel # 20-300-0070, new system'97
Last Permit: 1997

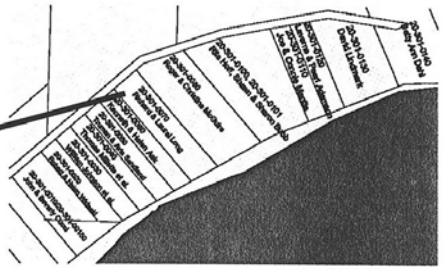
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0070 Richard & Laurel Long

Parcel Photograph





Local Management Information

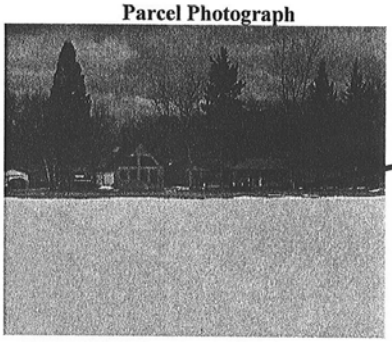
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 75 feet/~0.2 Acres
Land Value: $15,600
Bldg Value: $18,300
Owner Address: 5416 Claret Dr.
Steven's Point, WI 54481
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments:
1,000 STT Joint with parcel # 20-301-0060
Last Permit: 1997

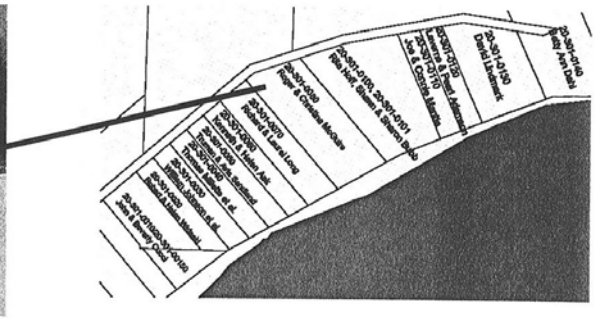
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0090/20-301-0080
Roger & Christina McGuire

Parcel Photograph





Local Management Information

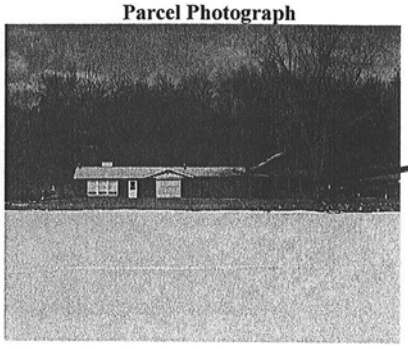
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 125 feet/~0.5 Acres
Land Value: $22,300
Bldg Value: $63,500
Owner Address: 26801 Baseline Av Ln
New Prague, MN 56071
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: New mound system in 1997
Last Permit: 1997

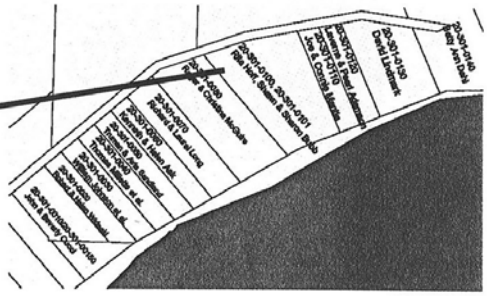
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Vegetation: Red/White pine and Aspen/Birch trending to hardwoods mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0100/20-301-0101
Rita Hoff, Shawn & Sharon Bubb

Parcel Photograph





Local Management Information

County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 150 feet/~0.75 Acres
Land Value: $14,800/$14,800
Bldg Value: $71,400/$30,400
Owner Address: Rita Hoff
PO Box 961
Alvarado, MN 56710-0971

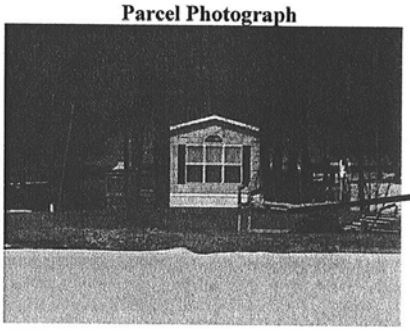
Shawn & Sharon Bubb
PO Box 744
Alvarado, MN 56710
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: New mound system in 1997
Last Permit: 1997

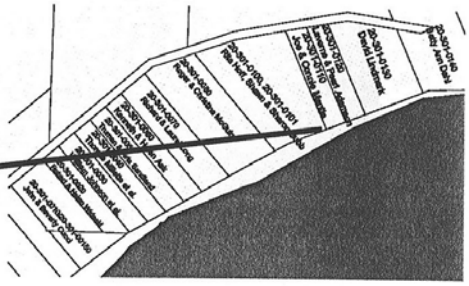
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Red/White Pine with Aspen/Birch mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0110 Joe & Connie Mantia

Parcel Photograph





Local Management Information

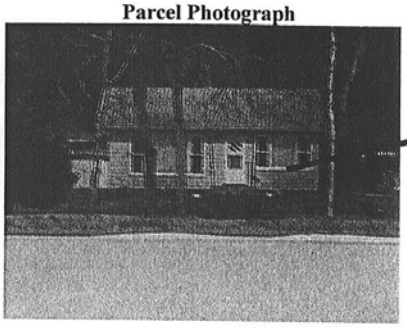
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 50 feet/~0.12 Acres
Land Value: $8,400
Owner Address: 2841 S Wisconsin
Berwyn, IL 60402
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for House (mound)
Last Permit: 2001

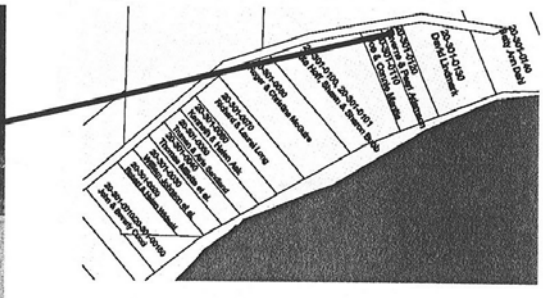
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Red/White Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0120 Laverne & Pearl M Adamson

Parcel Photograph





Local Management Information

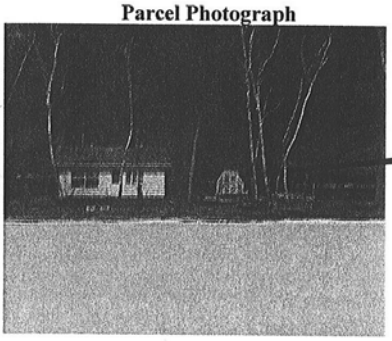
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 50 feet/~0.12 Acres
Land Value: $11,200
Bldg Value: $20,100
Owner Address: RR 1 Box 247
Thief River Falls, MN
56701
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: 500 gallon tank, 90 foot drainfield, well – 97 feet from OHWL
Last Permit: 1987

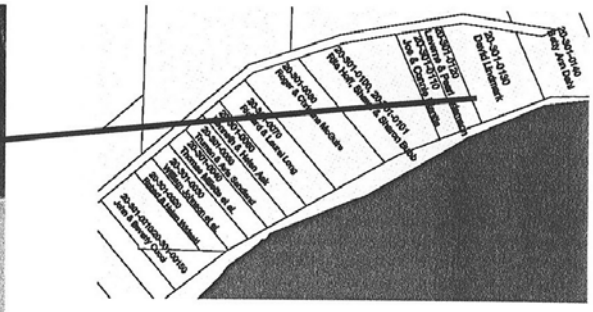
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
PresettlementVeg.: Red/White Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0130 David L. Lindmark

Parcel Photograph





Local Management Information

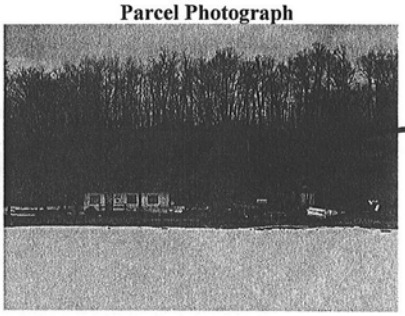
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 150 feet/~0.6 Acres
Land Value: $22,500
Bldg Value: $19,900
Owner Address: RR 1 Box 125
Leonard, MN 56652
Fire#: Clearbrook S-280
Septic Compliance: Conforming
Sewage Treatment System Comments: New system, not sure when put in
Last Permit: 1987

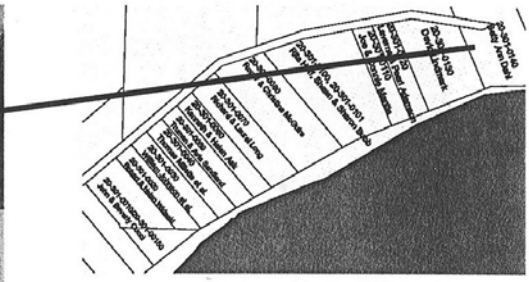
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Red/White Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-301-0140 Betty Ann Dahl

Parcel Photograph





Local Management Information

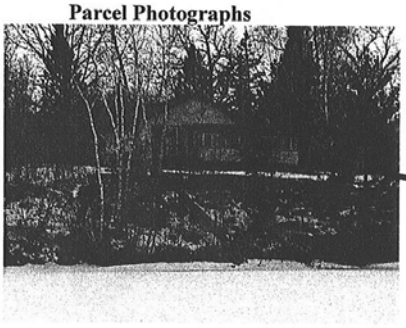
County: Clearwater
Township: Sinclair
Section: 12
Description: Arter's Subdivision
Lot Type: Lake lot, 150 feet/~1.8 Acres
Land Value: $23,700
Bldg Value: $8,700
Owner Address: 105 E Scribner Ave
Drayton, ND 58225
Fire#: Clearbrook S-275
Septic Compliance: No
Sewage Treatment System Comments: No records on file, letter about gray water discharge
Last Permit: N/A

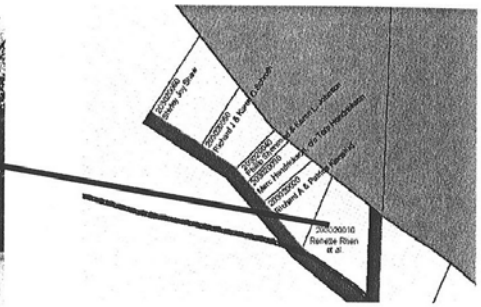
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Red/White Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-302-0010 Renetta Rhen et al.

Parcel Photographs





Local Management Information

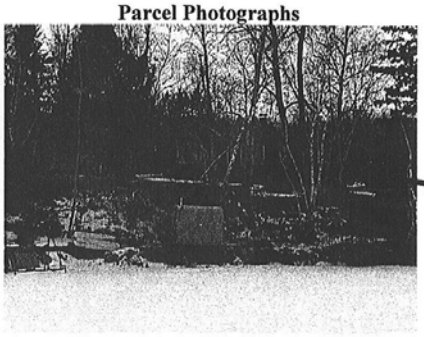
County: Clearwater
Township: Sinclair
Section: 13
Description: Mason's Subdivision
Lot Type: Lake Lot, ~100 feet/ ~0.5 Acres
Land Value: $16,700
Bldg Value: $24,100
Owner Address: PO Box 176
Clearbrook, MN 56634
Fire#: Clearbrook S-384
Septic Compliance: Complete new system
Inspected 8-96
Sewage Treatment System Comments: 50' from house, 79' from OHWL, well is attached to house
Last Permit: 1997

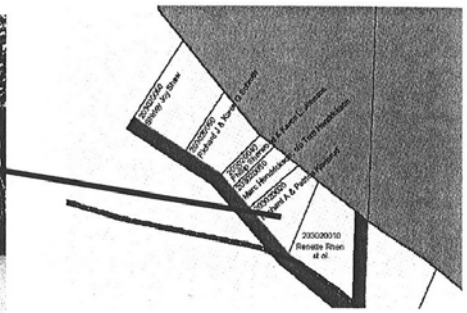
Resource Information

Docks: Unadorned (boat lift, uncovered)
Boats/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-302-0020 Richard Kjensrud

Parcel Photographs





Local Management Information

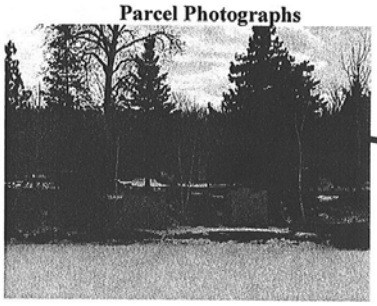
County: Clearwater
Township: Sinclair
Section: 13
Description: Mason's Subdivision
Lot Type: 100 foot lake lot/ ~ 0.3 Acres
Land Value: $10,700
Bldg Value: $14,500
Owner Address: Rt 1 Box 1348
Newfolden, MN 56738
Fire#: Clearbrook S-384
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1993

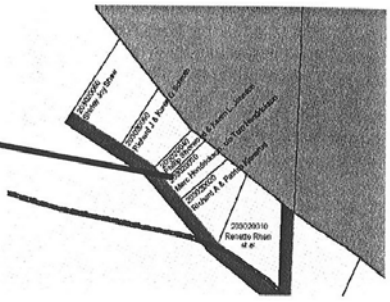
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

Marc Hendrickson 20-302-0030

Parcel Photographs





Local Management Information

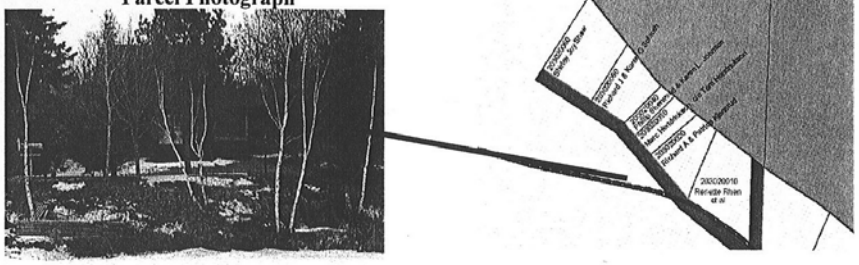
County: Clearwater
Township: Sinclair
Section: 13
Description: Mason's Subdivision
Lot Type: 65 foot lake lot/~0.25 Acres
Land Value: $12,200
Bldg Value: $37,000
Owner Address: RR 1 Box 118A
Leonard, MN 56652
Fire#: Clearbrook S-384
Septic Compliance: Conforming
Sewage Treatment System Comments: Mound STS, 15x25 drain field bed
Last Permit: 1991

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-302-0040 Phillip Sherwood
Karen Johnson

Parcel Photograph



Local Management Information

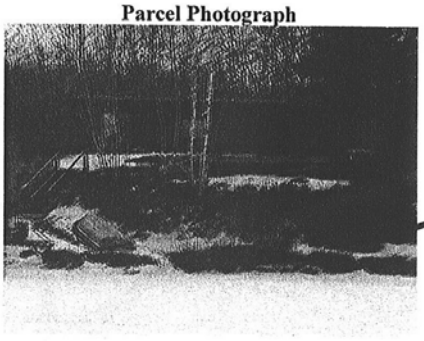
County: Clearwater
Township: Sinclair
Section: 13
Description: Mason's Subdivision
Land Value: $9,200
Bldg Value: $47,100
Lot Type: 50 foot lake lot/~0.12 Acres
Owner Address: PO Box 278
Clearbrook, MN 56634
Fire#: Clearbrook S-384
Septic Compliance: Conforming
Sewage Treatment System Comments: Well located 3' from NW corner of structure
Last Permit: 1981

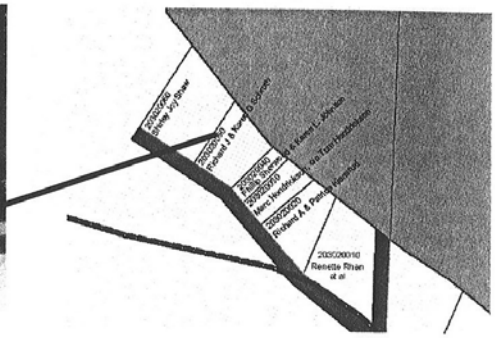
Resource Information

Docks: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-302-0050 Richard & Karen Shroth

Parcel Photograph





Local Management Information

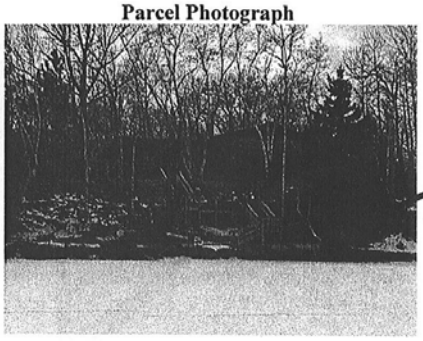
County: Clearwater
Township: Sinclair
Section: 13
Description: Mason's Subdivision
Lot Type: 150 foot lake lot/~0.25 Acres
Land Value: $19,200
Bldg Value: $16,200
Owner Address: 2936 15th St. NW
Bemidji, MN 56601
Fire#: Clearbrook S-384
Septic Compliance: Conforming
Sewage Treatment System Comments: Mound STS
Last Permit: 1994

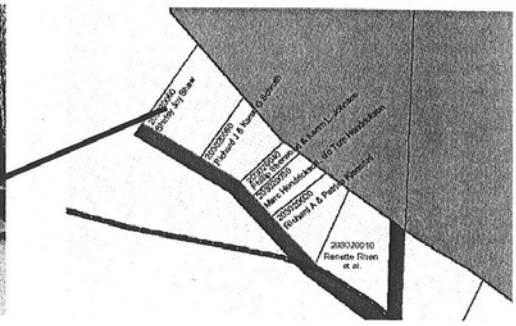
Resource Information

Docks: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-302-0060 Shirley Shaw

Parcel Photograph





Local Management Information

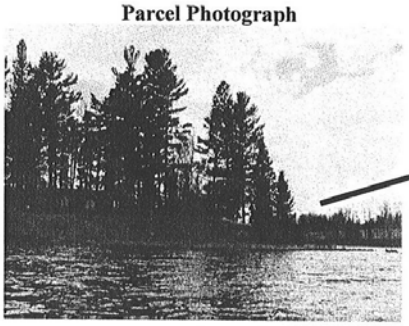
County: Clearwater
Township: Sinclair
Section: 13
Description: Mason's Subdivision
Lot Type: 150 foot lake lot/~0.5 Acres
Land Value: $22,900
Bldg Value: $55,300
Owner Address: RR 1 Box 117A
Leonard, MN 56652
Fire#: Clearbrook S-384
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1996

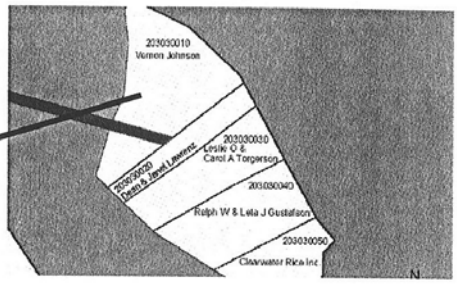
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-303-0010 Vernon Johnson

Parcel Photograph





Local Management Information

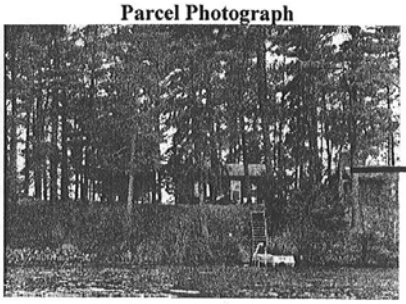
County: Clearwater
Township: Sinclair
Section: 12
Description: Pine Island Subdivision
Lot Type: 180 foot lake lot/~0.35 Acres
Land Value: $24,700
Bldg Value: $55,600
Owner Address: RR 2 Box 133
Clearbrook, MN 56634
Fire#: Clearbrook S-281
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, joint with parcel # 20-303-0020
Last Permit: 1990

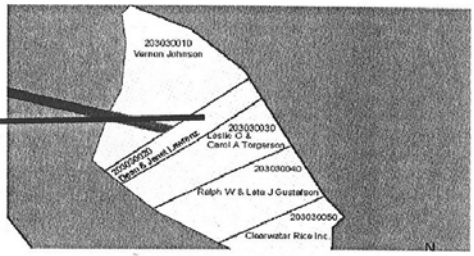
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-303-0020 Dean & Janet Lawrenz

Parcel Photograph





Local Management Information

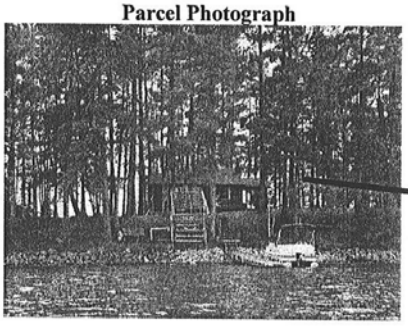
County: Clearwater
Township: Sinclair
Section: 12
Description: Pine Island Subdivision
Lot Type: 70 foot lake lot/~0.3 Acres
Land Value: $13,800
Bldg Value: $29,300
Owner Address: RR 6 Box 306A
Thief River Falls, MN
56701
Fire#: Clearbrook S-281
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, joint with parcel # 20-303-0010
Last Permit: 1979

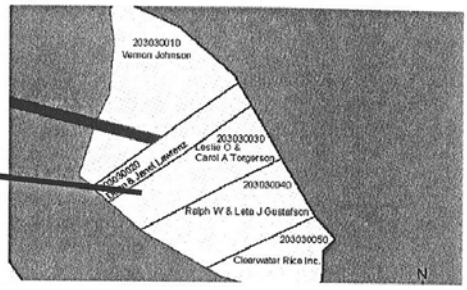
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-303-0030 Leslie & Carol Torgerson

Parcel Photograph





Local Management Information

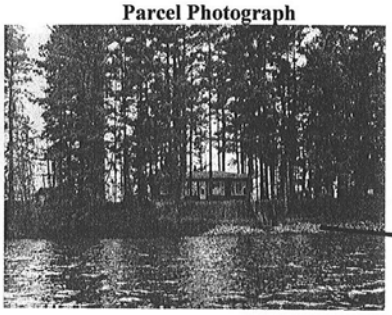
County: Clearwater
Township: Sinclair
Section: 12
Description: Pine Island Subdivision
Lot Type: 100 foot lake lot/~0.3 Acres
Land Value: $18,500
Bldg Value: $ 33,000
Owner Address: RR 6 Box 20A.
Thief River Falls, MN
56701
Fire#: Clearbrook S-281
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, joint with parcel # 20-303-0040
Last Permit: 1994

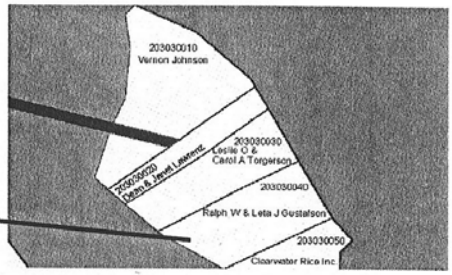
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-303-0040 Ralph & Leta Gustafson

Parcel Photograph





Local Management Information

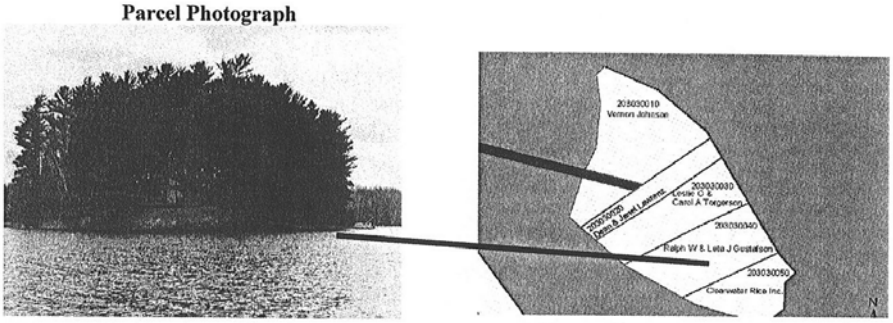
County: Clearwater
Township: Sinclair
Section: 12
Description: Pine Island Subdivision
Lot Type: 130 foot lake lot/~0.3 Acres
Land Value: $26,700
Bldg Value: $44,400
Owner Address: 12943 SW David Dr.
Lake Suzy, FL 34266
Fire#: Clearbrook S-281
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, joint with parcel # 20-303-0030
Last Permit: 1986

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-303-0050 Clearwater Rice, Inc.

Parcel Photograph



Local Management Information

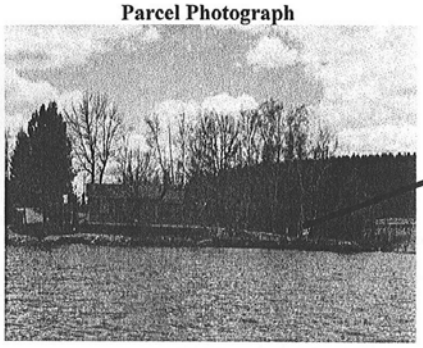
County: Clearwater
Township: Sinclair
Section: 12
Description: Pine Island Subdivision
Lot Type: 130 foot lake lot/~0.3 Acres
Land Value: $28,500
Bldg Value: $74,400
Owner Address: RR 2 Box 80
Clearbrook, MN 56634
Fire#: Clearbrook S-281
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, 103' lineal drain line
Last Permit: 1991

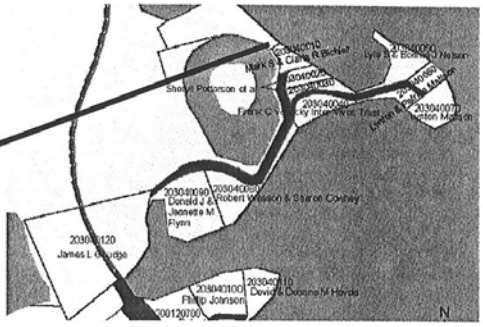
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0010 Mark & Carla Bichler

Parcel Photograph





Local Management Information

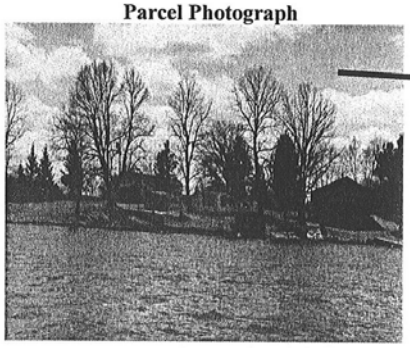
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~100 feet/~0.2 Acres
Land Value: $15,600
Bldg Value: $22,600
Owner Address: RR1 Box 99A
East Grand Forks, MN
56721
Fire#: Clearbrook S-283
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house
Last Permit: 1994

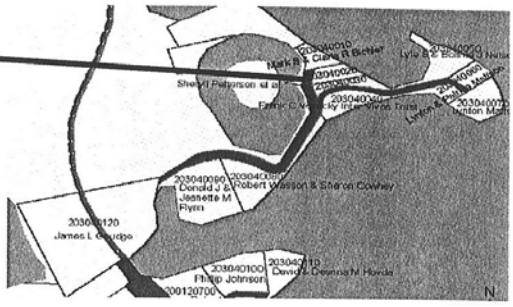
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0020 Sheryll Petterson et al.

Parcel Photograph





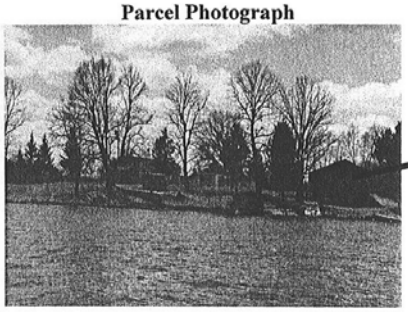
Local Management Information
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~100 feet/~0.12 Acres
Land Value: $10,600
Bldg Value: $23,800
Owner Address: RR1 Box 171
Gonvick, MN 56644
Fire#: Clearbrook S-283
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house and well
Last Permit: 1992

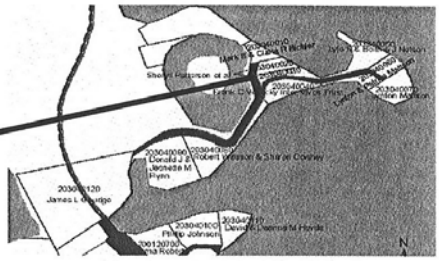
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0030 Sheryll Petterson et al.

Parcel Photograph





Local Management Information

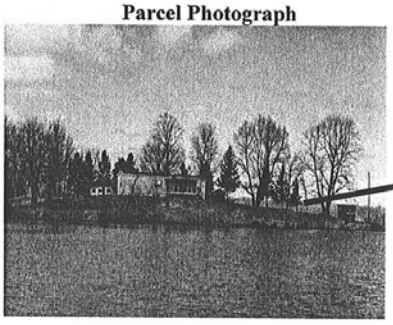
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~100 feet/~0.12 Acres
Land Value: $10,500
Bldg Value: $3,500
Owner Address: RR1 Box 171
Gonvick, MN 56644
Fire#: Clearbrook S-283
Septic Compliance: No
Sewage Treatment System Comments: Drywell discontinued, no ISB on site
Last Permit: 1980

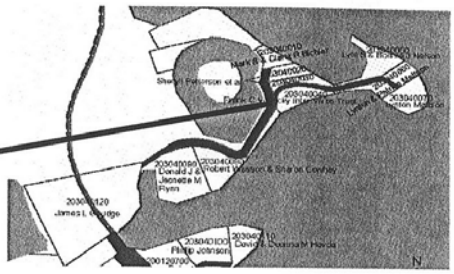
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0040 Frank C. Vesecky
Inter Vivos Trust

Parcel Photograph





Local Management Information

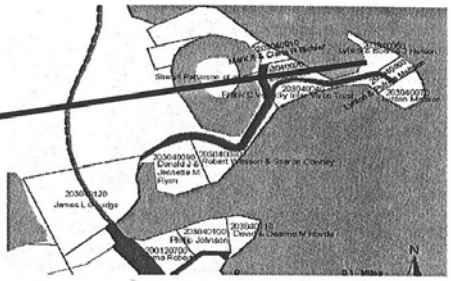
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~100 feet/~0.2 Acres
Land Value: $21,000
Bldg Value: $20,300
Owner Address: 607 S. Cedar Lake Drive
Columbia, MO 65203-9184
Fire#: Clearbrook S-283
Septic Compliance: No
Sewage Treatment System Comments:
Violation: greywater running into lake, new system may be in place as of 1995
Last Permit: 1994

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0050 Lyle & Bonnie Nelson

Parcel Information



Local Management Information

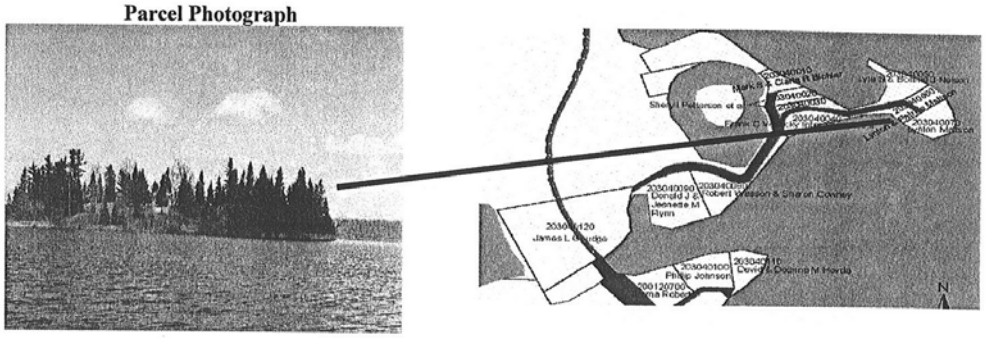
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~200 feet/~0.15 Acres
Land Value: $17,800
Owner Address: 1376 Whiskey Creek Drive
Ft. Myers, FL 33919
Fire#: Clearbrook S-283
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0060 Lynton & Patricia Mattson

Parcel Photograph



Local Management Information

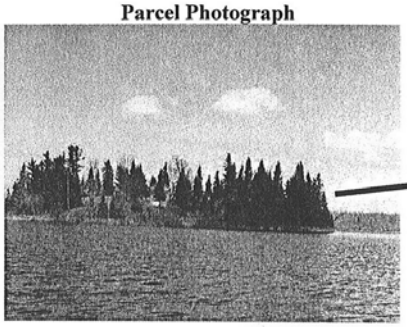
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~100 feet/~0.15 Acres
Land Value: $15,800
Bldg Value: $17,400
Owner Address: 24779 River Falls Ct. NW
Isanti, MN 55040
Fire#: Clearbrook S-283
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

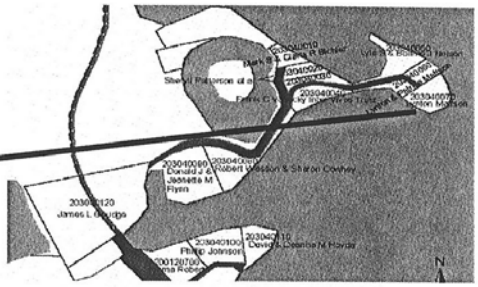
Resource Management

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0070 Lynton Mattson

Parcel Photograph





Local Management Information

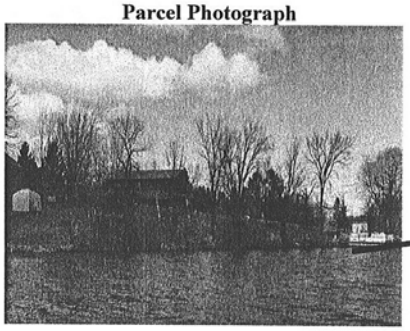
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~200 feet/~0.25 Acres
Land Value: $19,600
Owner Address: 24780 River Falls Ct. NW
Isanti, MN 55040
Fire#: Clearbrook S-283
Septic Compliance: N/A
Sewage Treatment System Comments: N/A
Last Permit: N/A

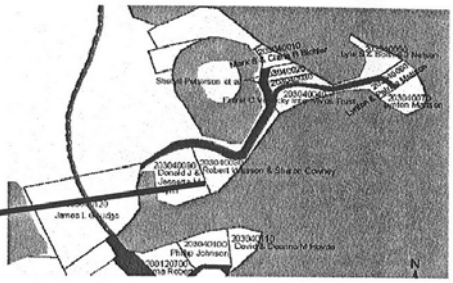
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0080 Robert Wasson & Sharon Cowhey

Parcel Photograph





Local Management Information

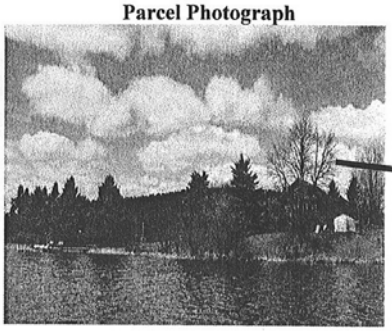
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~150 feet/~0.25 Acres
Land Value: $24,000
Bldg Value: $34,100
Owner Address: RR 1 Box 88A
Leonard, MN 56652
Fire#: Clearbrook S-283
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house, well hand pump 100' from STS
Last Permit: 1995

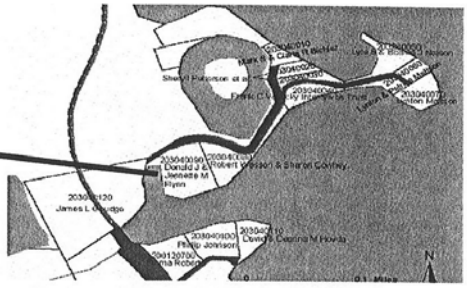
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0090 Donald & Jeanette Flynn

Parcel Photograph





Local Management Information

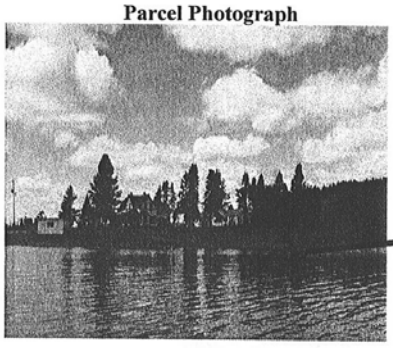
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~200 feet/~0.5 Acres
Land Value: $26,900
Bldg Value: $106,800
Owner Address: 1214 S. Everett Street
Stillwater, MN 55082
Fire#: Clearbrook S-283
Septic Compliance: Conforming
Sewage Treatment System Comments: STS for house 86' drain field
Last Permit: 1988

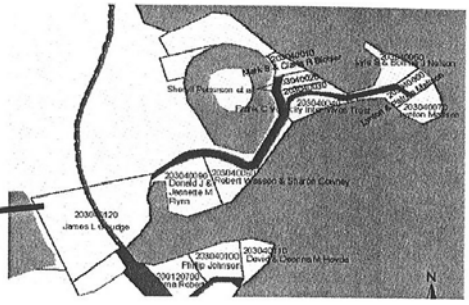
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0120 James L. Goudge

Parcel Photograph





Local Management Information

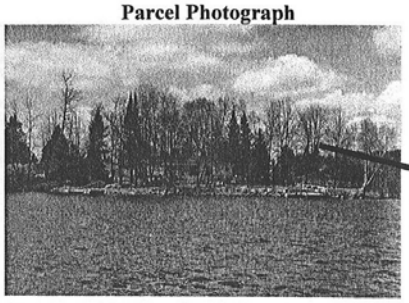
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake Lot, ~300 feet/~1 Acre
Land Value: $36,400
Bldg Value: $65,100
Owner Address: P.O. Box 28
Clearbrook, MN 56634
Fire#: Clearbrook S-284
Septic Compliance: No
Sewage Treatment System Comments: No records on file
Last Permit: N/A

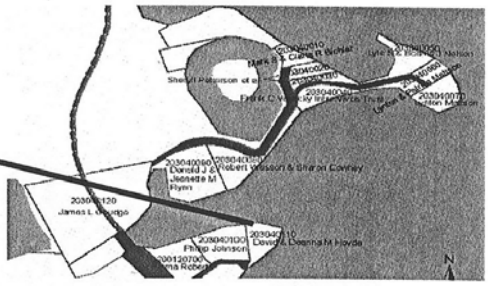
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0110 David & Deanna M. Hovda

Parcel Photograph





Local Management Information

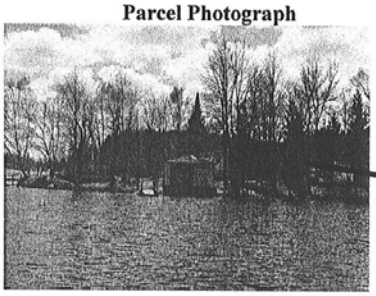
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake lot ~250 feet/~184.58 Acres
Land Value: $26,500
Bldg Value: $23,800
Owner Address: 111 Main Ave S
Roseau, MN 56751
Fire#: Clearbrook S-285
Septic Compliance: No
Sewage Treatment System Comments:
Violation: greywater discharging into lake, corrected by new owner
Last Permit: 1979

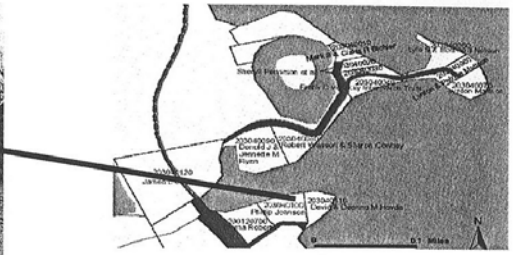
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

20-304-0100 Phillip Johnson

Parcel Photograph





Local Management Information

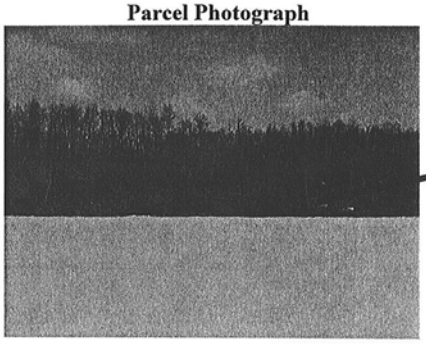
County: Clearwater
Township: Sinclair
Section: 12
Description: High Island Subdivision
Lot Type: Lake lot ~200 feet/~0.75 Acres
Land Value: $24,800
Owner Address: RR1 Box 114A
Leonard, MN 56652
Fire#: Clearbrook S-285
Septic Compliance: N/A
Sewage Treatment System Comments:
Structures removed, well 55' from N OHWL
Last Permit: N/A

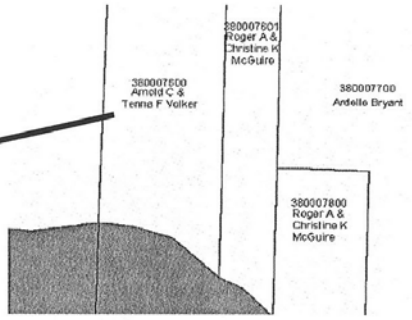
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00076-00 Arnold & Teena Volker

Parcel Photograph





Local Management Information

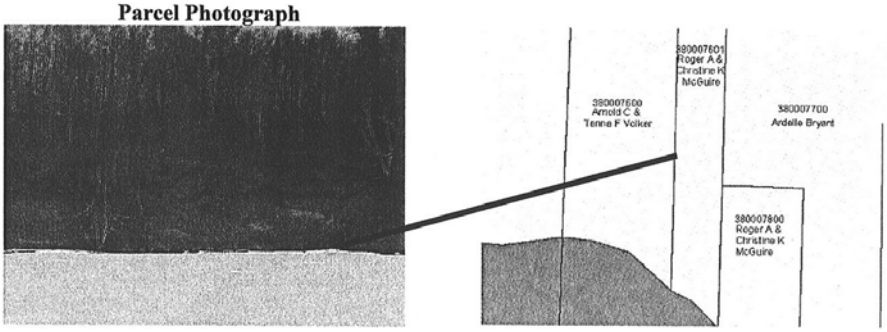
County: Beltrami
Township: Roosevelt
Section: 6
Description: Section 6
Lot Type: Lake lot ~10 Acres
Land Value: $28,700
Bldg Value: $132,400
Owner Address: 26497 Presidents Dr.
Pinewood, MN 56664
Fire#: N/A
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 2000

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle & flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00076-01 Roger & Christine McGuire

Parcel Photograph



Local Management Information

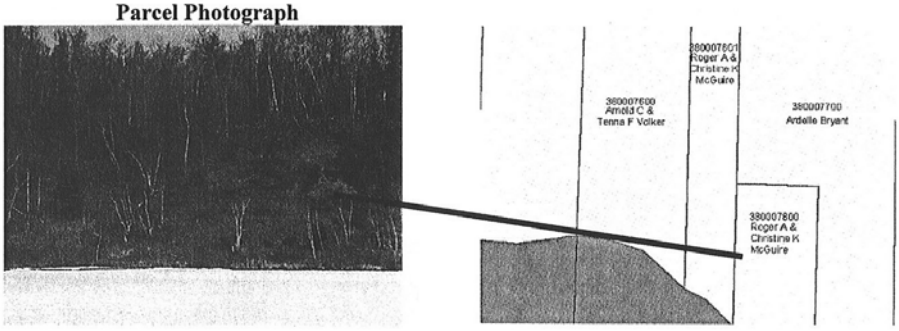
County: Beltrami
Township: Roosevelt
Section: 6
Description: Section 6
Lot Type: Lake lot ~4.28 Acre
Land Value: $20,000
Owner Address: 26801 Baseline Ave
New Prague, MN 56071
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00078-00 Roger & Christine McGuire

Parcel Photograph



Local Management Information

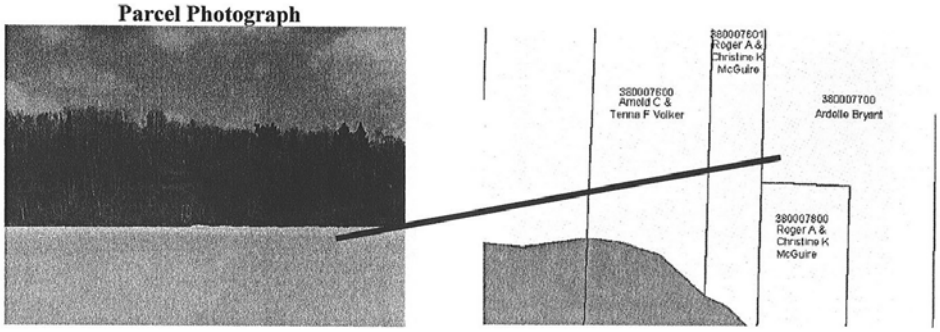
County: Beltrami
Township: Roosevelt
Section: 6
Description: Section 6
Lot Type: Lake lot ~3 Acres
Land Value: $18,700
Owner Address: 26801 Baseline Ave
New Prague, MN 56071
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00077-00 Ardelle Bryant

Parcel Photograph



Local Management Information

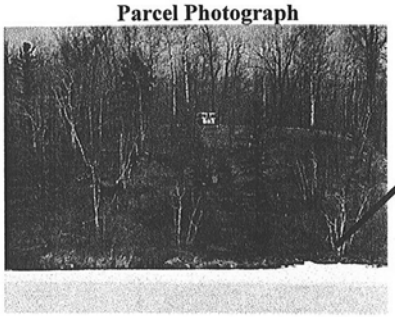
County: Beltrami
Township: Roosevelt
Section: 6
Description: Section 6
Lot Type: Lake lot ~13.10 Acres
Land Value: $20,600
Bldg Value: $7,600
Owner Address: 303 W 2nd St
Owasso, OK 74055
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

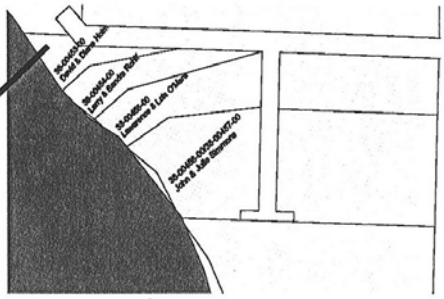
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00453-00 David & Diane Holm

Parcel Photograph





Local Management Information

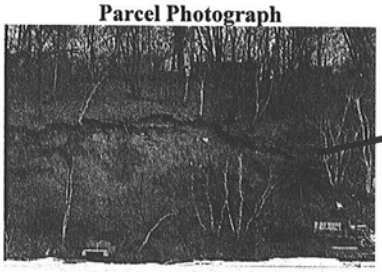
County: Beltrami
Township: Roosevelt
Section: 7
Description: Clearwater View
Lot Type: Lake lot ~0.25 Acres
Land Value: $8,600
Owner Address: 2081 142nd Lake NW
Andover, MN 53054
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

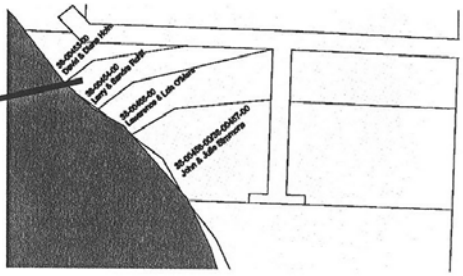
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00454-00 Larry & Sandra Rolf

Parcel Photograph





Local Management Information

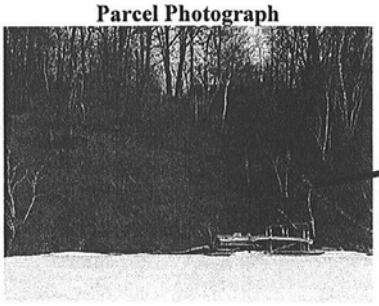
County: Beltrami
Township: Roosevelt
Section: 7
Description: Clearwater View
Lot Type: Lake lot ~0.50 Acres
Land Value: $8,600
Bldg Value: $ 1,700
Owner Address: 902 North Arnold Ave
Thief River Falls, MN
56701
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments:
N/A

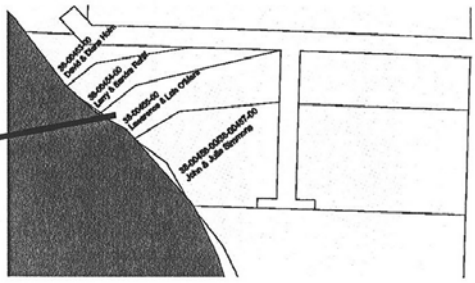
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat steep
Presettlement Veg.: Aspen/Birch trending to hardwoods w/Jack Pine barrens
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00455-00 Lawrence & Lois O'Mera

Parcel Photograph





Local Management Information

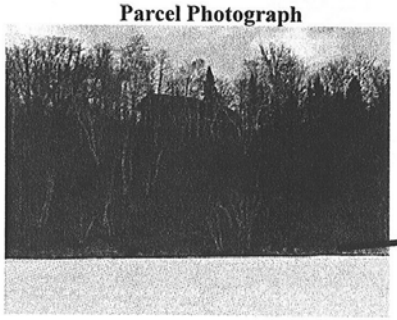
County: Beltrami
Township: Roosevelt
Section: 7
Description: Clearwater View
Lot Type: Lake lot ~0.50 Acres
Land Value: $8,500
Bldg Value: $5,100
Owner Address: RR 1 Box 259A
Pinewood, MN 56664
Fire#: Alaska 7R13
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1984

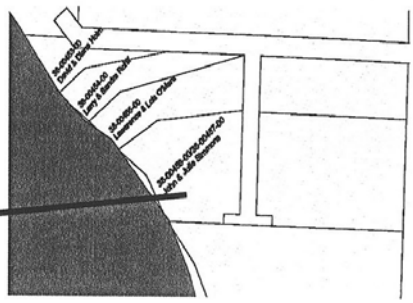
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat steep
Presettlement Veg.: Aspen/Birch trending to hardwoods w/Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00456-00/38-00457-00
John & Julie Simmons

Parcel Photograph





Local Management Information

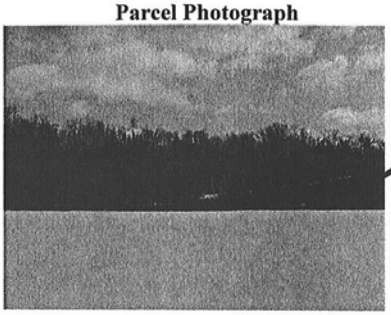
County: Beltrami
Township: Roosevelt
Section: 7
Description: Clearwater View
Lot Type: Two Lake lots ~0.50 Acres
Land Value: $22,500
Bldg Value: $69,000
Owner Address: 26189 Presidents Dr. NW
Shevlin, MN 56676
Fire#: Alaska 7R13A
Septic Compliance: Conforming
Last Permit: STS for house on 38-00456-00, STS not yet finished on 38-00457
Sewage Treatment System Comments: 1987

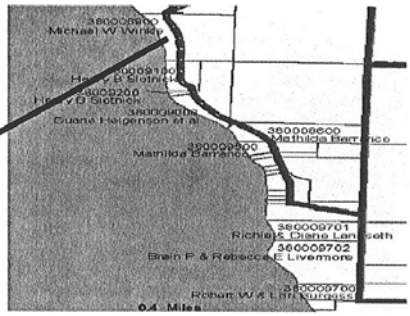
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat steep
Presettlement Veg.: Jack Pines with Aspen/Birch mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00089-00 Michael W. Winkle

Parcel Photograph





Local Management Information

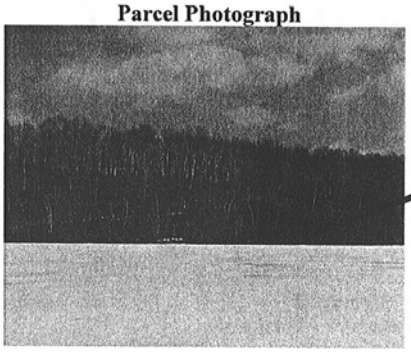
County: Beltrami
Township: Roosevelt
Section: 7
Description: Section 7
Lot Type: Lake lot ~14.55 Acres
Land Value: $50,900
Bldg Value: $85,400
Owner Address: 923 Reeves Dr.
Grand Forks, ND 58201
Fire#: Alaska 7R12
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1985

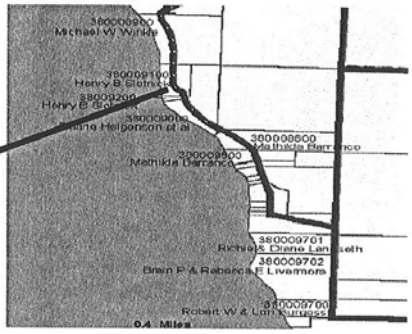
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00091-00/38-00092-00
Henry B. Slotnick

Parcel Photograph





Local Management Information

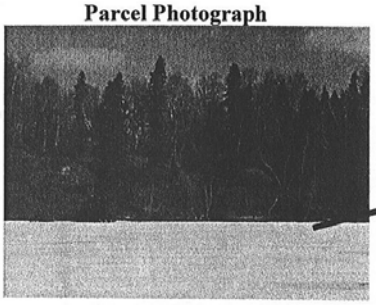
County: Beltrami
Township: Roosevelt
Section: 7
Description: Section 7
Lot Type: 2 Lake lots ~3.9 Acres & 0.40 Acres
Land Value: $34,200
Bldg Value: $4,400
Owner Address: 3221 Royal Dr.
Grand Forks, ND 58201
Fire#: Alaska 7R11
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1998

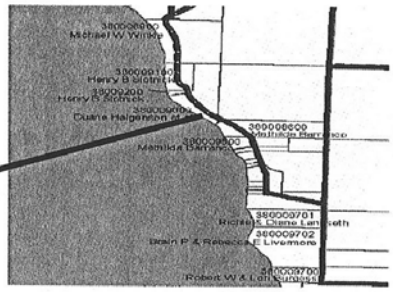
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00090-00 Duane Helgenson et. al.

Parcel Photograph





Local Management Information

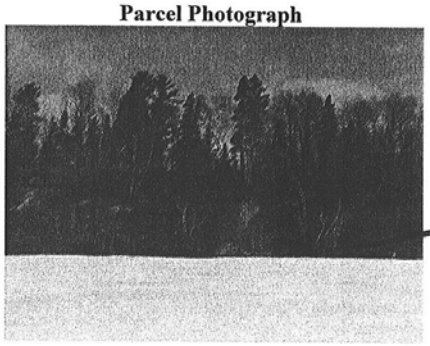
County: Beltrami
Township: Roosevelt
Section: 7
Description: Section 7
Lot Type: Lake lot ~8.3 Acres
Land Value: $34,200
Owner Address: Box 259B
Shevlin, MN 56676
Fire#: Alaska 7R9
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

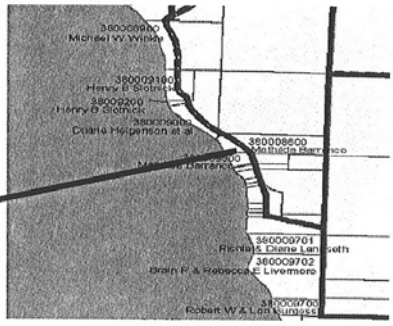
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00086-00 Mathilda Barranco

Parcel Photograph





Local Management Information

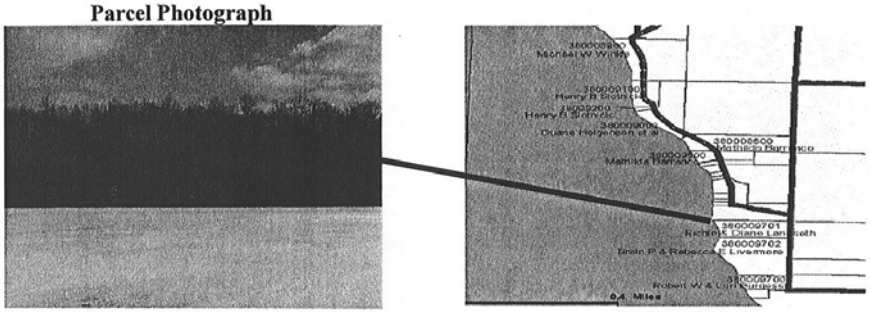
County: Beltrami
Township: Roosevelt
Section: 7
Description: Section 7
Lot Type: Lake lot ~8.85 Acres
Land Value: $26,100
Bldg Value: $44,700
Owner Address: RR 1 Box 259
Pinewood, MN 56676
Fire#: Alaska 7R10
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1992

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix w/Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00097-01 Richie & Diane Langseth

Parcel Photograph



Local Management Information

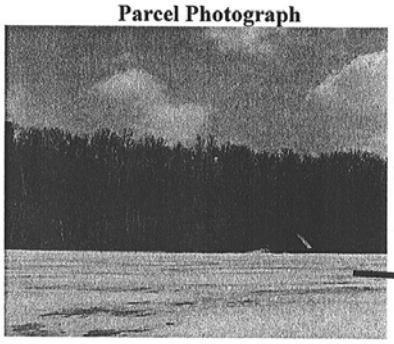
County: Beltrami
Township: Roosevelt
Section: 7
Description: Section 7
Lot Type: Lake lot ~7.23 Acres
Land Value: $18,900
Owner Address: Box 54 Maple Lane
Leonard, MN 56652
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

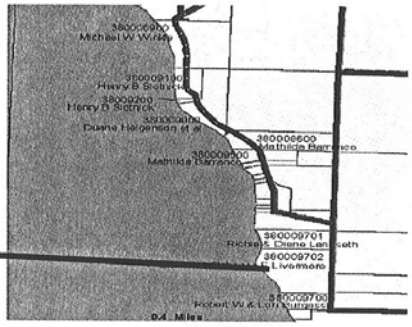
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00097-02 Brian & Rebecca Livermore

Parcel Photograph





Local Management Information

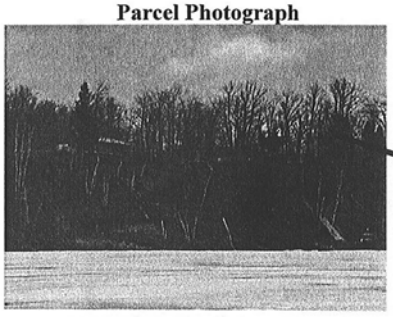
County: Beltrami
Township: Roosevelt
Section: 7
Description: Section 7
Lot Type: Lake lot ~17.68 Acres
Land Value: $25,900
Bldg Value: $9,200
Owner Address: 1760 15th St. SW
Bemidji, MN 56601
Fire#: N/A
Septic Compliance: Conforming
Last Permit: 1997
Sewage Treatment System Comments: STS for house

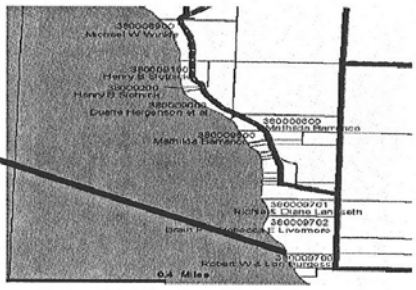
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00097-00 Robert & Lori Burgess

Parcel Photograph





Local Management Information

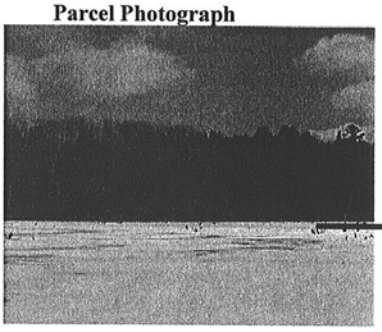
County: Beltrami
Township: Roosevelt
Section: 7
Description: Section 7
Lot Type: Lake lot ~3.50 Acres
Land Value: $24,000
Bldg Value: $46,100
Owner Address: RR 1 Box 248
Shevlin, MN 56676
Fire#: N/A
Septic Compliance: Conforming
Last Permit: 2001
Sewage Treatment System Comments:
STS for house

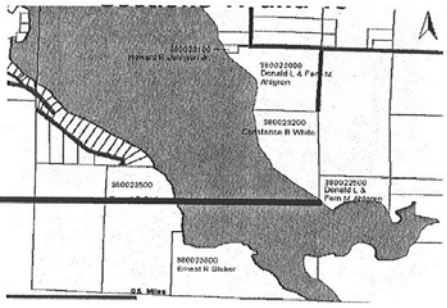
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat steep
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00225-00 Donald & Fern Ahlgren

Parcel Photograph





Local Management Information

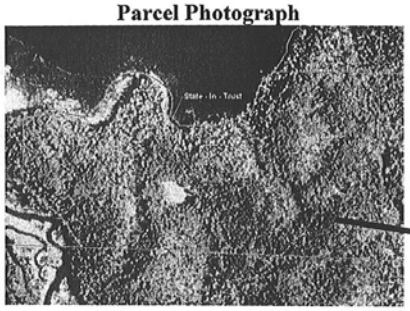
County: Beltrami
Township: Roosevelt
Section: 17
Description: Section 17
Lot Type: Lake lot ~37.55 Acres
Land Value: $21,800
Owner Address: RR 1 Box 246
Pinewood, MN 56664
Fire#: Alaska 18R2
Septic Compliance: N/A

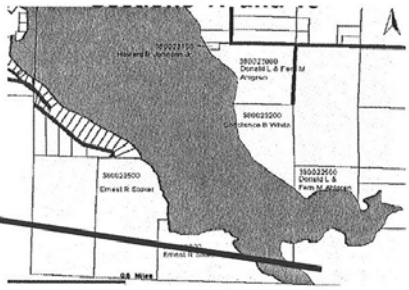
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00226-00 State – In -Trust

Parcel Photograph





Local Management Information

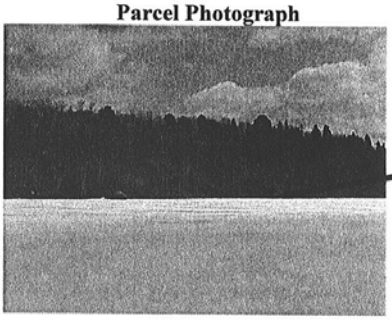
County: Beltrami
Township: Roosevelt
Section: 17
Description: Section 17
Lot Type: Lake lot ~66.40 Acres
Land Value: $69,400
Owner Address: N/A
Fire#: N/A
Septic Compliance: N/A

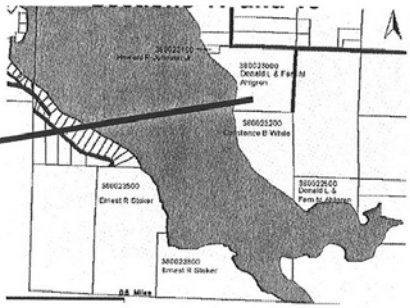
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00230-00 Donald & Fern Ahlgren

Parcel Photograph





Local Management Information

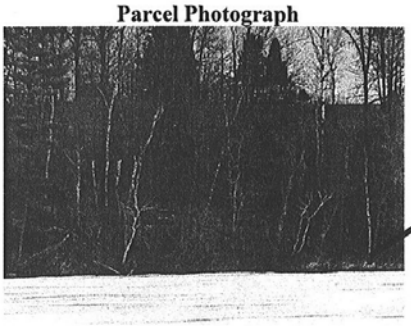
County: Beltrami
Township: Roosevelt
Section: 18
Description: Section 18
Lot Type: Lake lot ~37.5 Acres
Land Value: $45,500
Bldg Value: $49,800
Owner Address: RR 1 Box 246
Pinewood, MN 56664
Fire#: Alaska 18R2
Septic Compliance: Conforming
Last Permit: 1982
Sewage Treatment System Comments:
STS for house

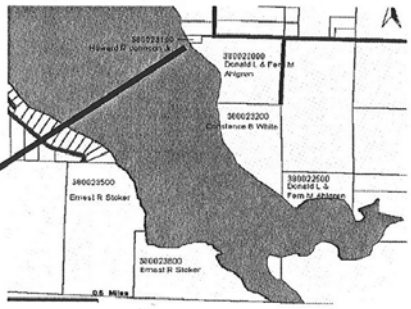
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00231-00 Howard R. Johnson Jr.

Parcel Photograph





Local Management Information

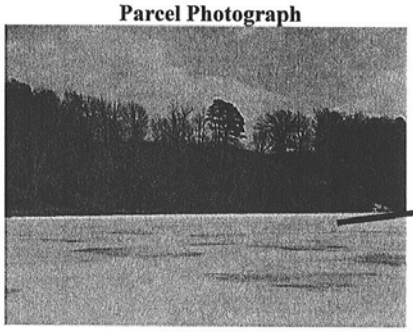
County: Beltrami
Township: Roosevelt
Section: 18
Description: Section 18
Lot Type: Lake lot ~1 Acres
Land Value: $12,500
Bldg Value: $200
Owner Address: 1805 E. Main Ave.
West Fargo, ND 58078
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

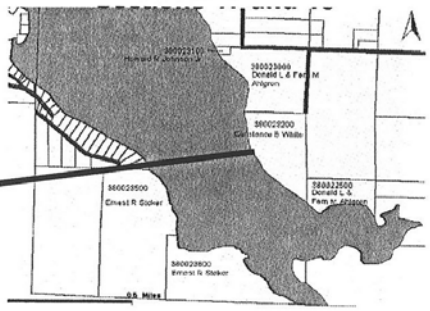
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00232-00 Constance B. White

Parcel Photograph





Local Management Information

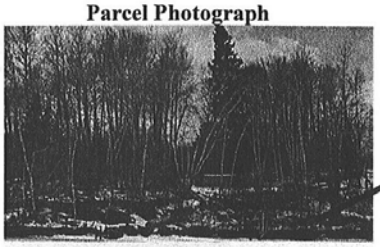
County: Beltrami
Township: Roosevelt
Section: 18
Description: Section 18
Lot Type: Lake lot ~30.1 Acres
Land Value: $41,000
Bldg Value: $37,800
Owner Address: RR 1 Box 244
Shevlin, MN 56676
Fire#: N/A
Septic Compliance: N/A
Last Permit: 1977
Sewage Treatment System Comments: N/A

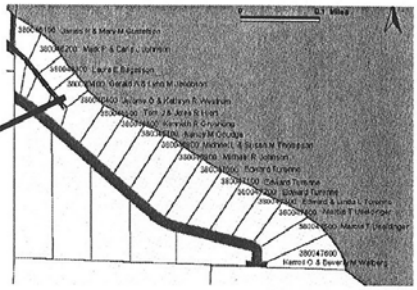
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00234-00 Gerald & Lynn Jacobson

Parcel Photograph





Local Management Information

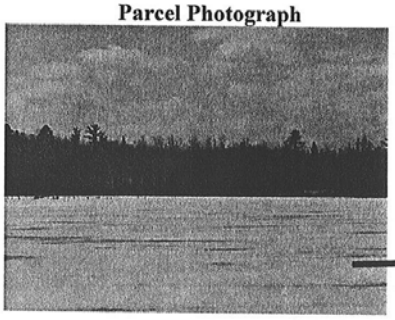
County: Beltrami
Township: Roosevelt
Section: 18
Description: Section 18
Lot Type: Lake lot ~0.50 Acres
Land Value: $16,000
Bldg Value: $4,900
Owner Address: Rural Route
Fertile, MN 56540
Fire#: Alaska RR3A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

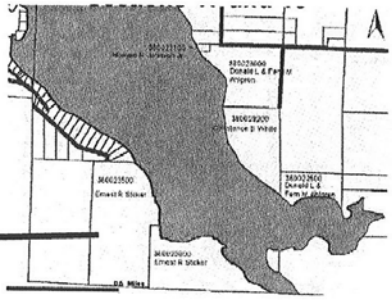
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00235-00 Ernest R. Stoker

Parcel Photograph





Local Management Information

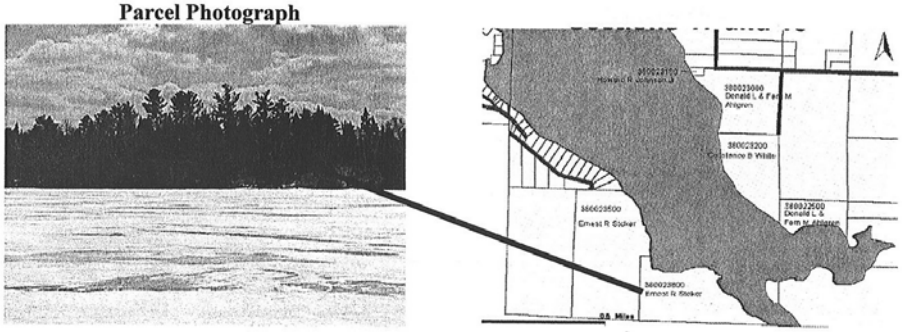
County: Beltrami
Township: Roosevelt
Section: 18
Description: Section 18
Lot Type: Lake lot ~78.6 Acres
Land Value: $15,300
Bldg Value: $15,600
Owner Address: RR 2 Box 115
Clearbrook, MN 56634
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods w/Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00238-00 Ernest R. Stoker

Parcel Photograph



Local Management Information

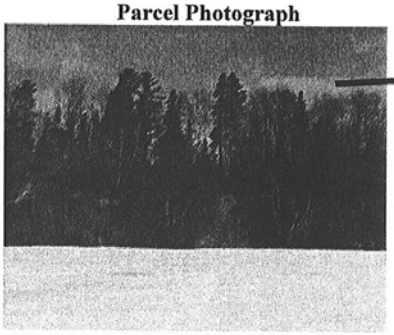
County: Beltrami
Township: Roosevelt
Section: 18
Description: Section 18
Lot Type: Lake lot ~44.85 Acres
Land Value: $26,000
Owner Address: RR 2 Box 115
Clearbrook, MN 56634
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

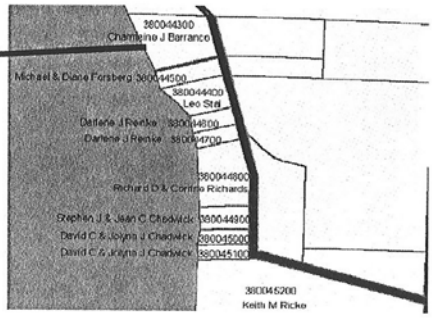
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00443-00 Charmaine J. Barranco

Parcel Photograph





Local Management Information

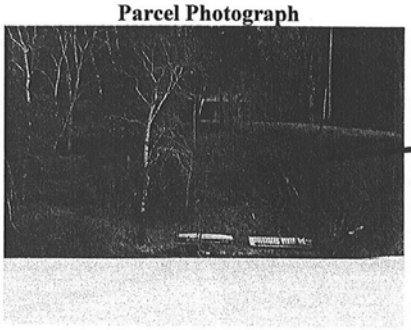
County: Beltrami
Township: Roosevelt
Section: 7
Description: Stai Subdivision
Lot Type: Lake lot ~0.5 Acres
Land Value: $14,500
Owner Address: RR 1 Box 259
Shevlin, MN 56676
Fire#: Alaska 7R10
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

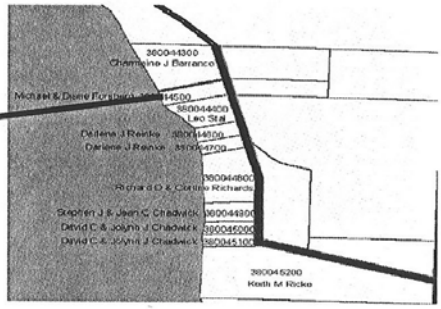
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix w/Conifer Bog/Swamp
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00445-00 Michael & Diane Forsberg

Parcel Photograph





Local Management Information

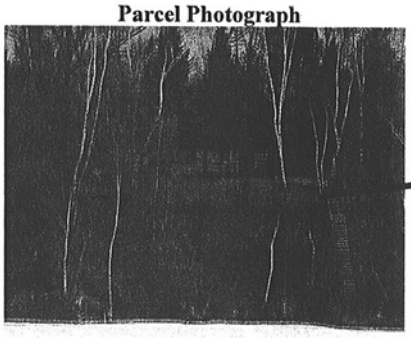
County: Beltrami
Township: Roosevelt
Section: 7
Description: Stai Subdivision
Lot Type: Lake lot ~0.2 Acres
Land Value: $12,900
Bldg Value: $29,300
Owner Address: 4007 Vincent Ave N
Minneapolis, MN 55412
Fire#: Alaska 7R8
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

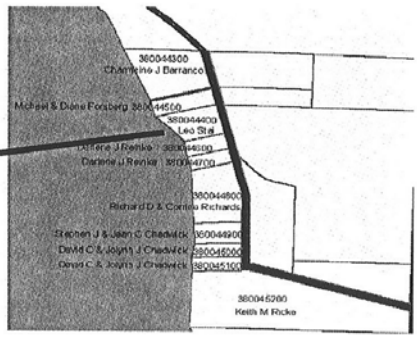
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00444-00 Leo Stai

Parcel Photograph





Local Management Information

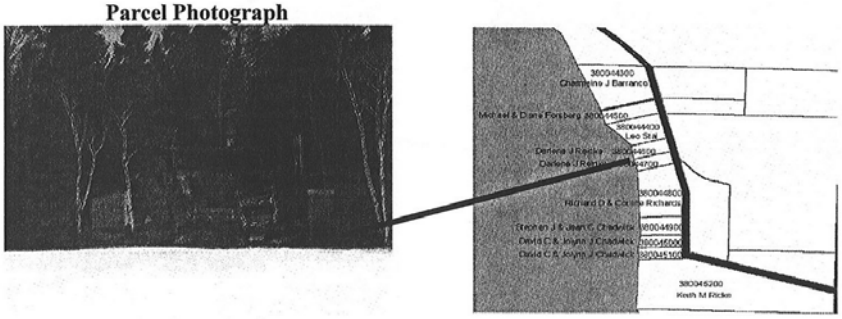
County: Beltrami
Township: Roosevelt
Section: 7
Description: Stai Subdivision
Lot Type: Lake lot ~0.2 Acres
Land Value: $13,500
Bldg Value: $21,600
Owner Address: RR 1 Box 254
Pinewood, MN 56664
Fire#: Alaska 7R7
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments:
1977

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00447-00/38-00446-00
Darlene J. Reinke

Parcel Photograph



Local Management Information

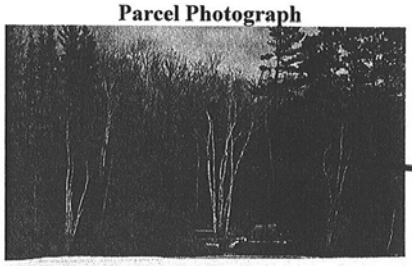
County: Beltrami
Township: Roosevelt
Section: 7
Description: Stai Subdivision
Lot Type: 2 Lake lots ~0.2 Acres/0.2 Acres
Land Value: $8,500/$5,600
Bldg Value: $61,200
Owner Address: 2004 East Broadway Ave.
Pierre, SD 57501
Fire#: Alaska 7R6
Septic Compliance: No
Last Permit: N/A
Sewage Treatment System Comments:
N/A

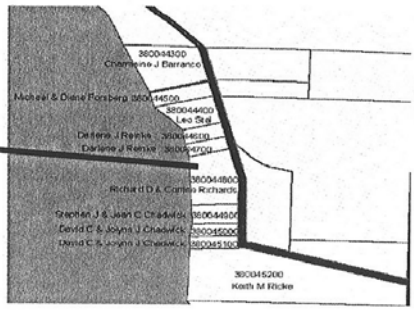
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00448-00 Richard & Corrine Richards

Parcel Photograph





Local Management Information

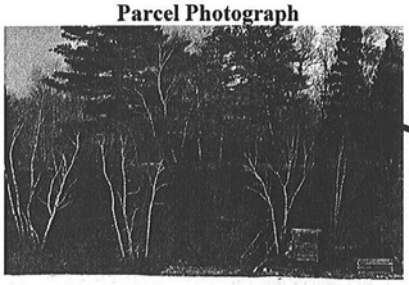
County: Beltrami
Township: Roosevelt
Section: 7
Description: Stai Subdivision
Lot Type: Lake lot ~1 Acres
Land Value: $28,100
Bldg Value: $12,800
Owner Address: PO Box 159
Gonvick, MN 56644
Fire#: Alaska 7R5
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1987

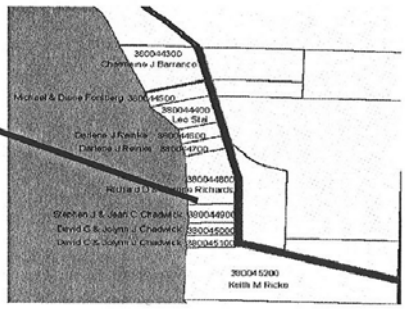
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00449-00 Stephen & Jean Chadwick

Parcel Photograph





Local Management Information

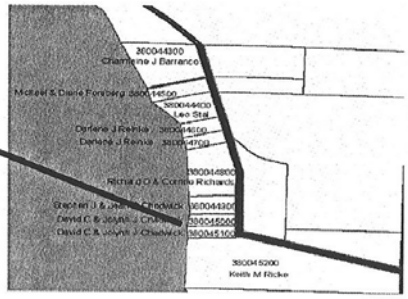
County: Beltrami
Township: Roosevelt
Section: 7
Description: Stai Subdivision
Lot Type: Lake lot ~2 Acres
Land Value: $10,900
Bldg Value: $22,200
Owner Address: 427 Dartt
Owatonna, MN 55060
Fire#: Alaska 7R4
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1995

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00450-00/38-00451-00
David & Jolynn Chadwick

Parcel Photograph



Local Management Information

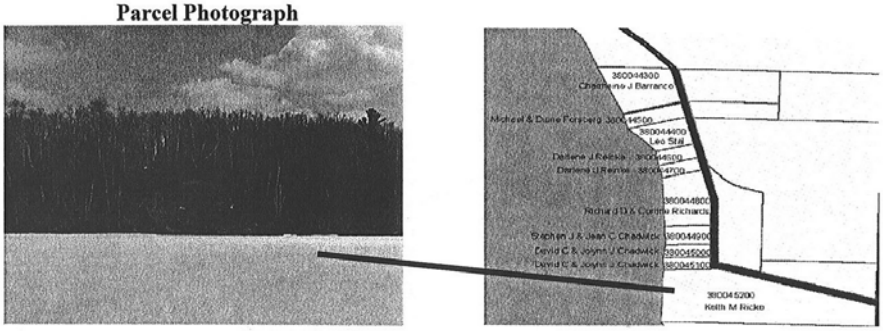
County: Beltrami
Township: Roosevelt
Section: 7
Description: Stai Subdivision
Lot Type: 2 Lake lots ~2 Acres each
Land Value: $7,700/$5,600
Bldg Value: $10,500
Owner Address: 626 S. Elm Ave.
Owatonna, MN 55060
Fire#: Alaska 7R3
Septic Compliance: Conforming
Last Permit: New STS in 2002
Sewage Treatment System Comments: 2002

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00452-00 Keith M. Ricke

Parcel Photograph



Local Management Information

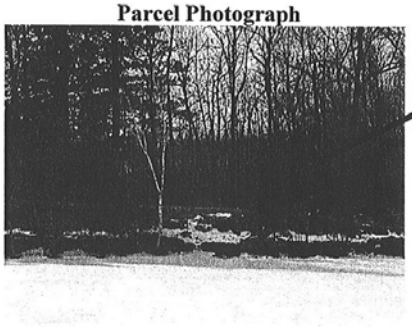
County: Beltrami
Township: Roosevelt
Section: 7
Description: Stai Subdivision
Lot Type: Lake lot ~3 Acres
Land Value: $16,800
Owner Address: 1413 14th Ave NE
Wilmar, MN 56201
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

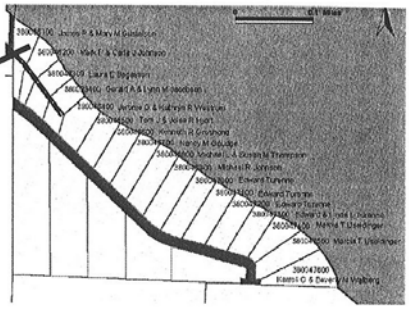
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Steep Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Jack Pine mix
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00461-00 James & Mary Gustafson

Parcel Photograph





Local Management Information

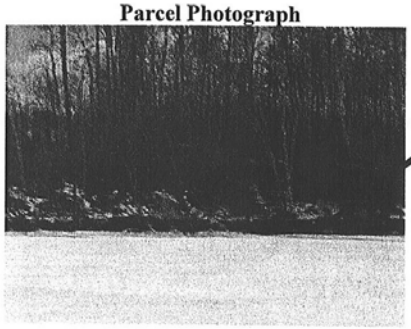
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake lot ~1 Acres
Land Value: $10,400
Owner Address: Box 143
Clearbrook, MN 56634
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

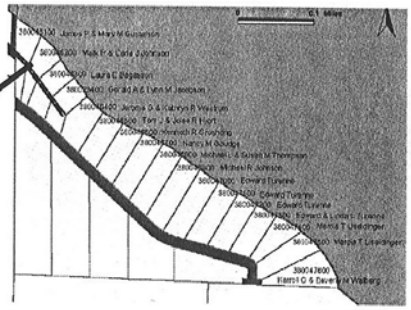
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00462-00 Mark & Carla Johnson

Parcel Photograph





Local Management Information

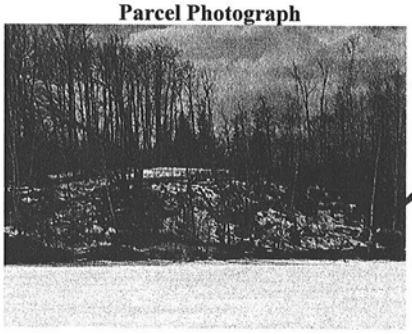
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake lot ~1 Acres
Land Value: $10,400
Owner Address: 304-B 7th Ave SE
Roseau, MN 56751
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

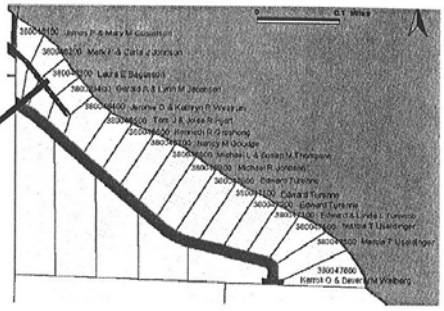
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00463-00 Laura E. Bagasson

Parcel Photograph





Local Management Information

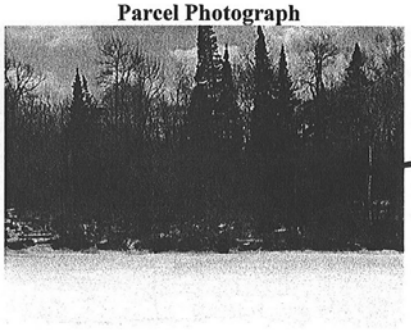
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake lot ~1 Acres
Land Value: $10,500
Owner Address: PO Box 82
Clearbrook, MN 56634
Fire#: N/A
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

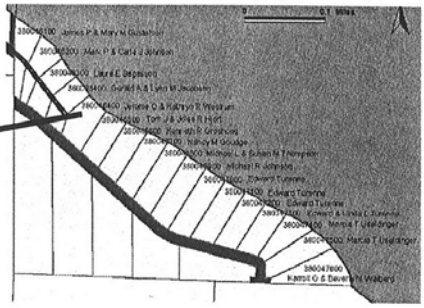
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00464-00 Jerome & Kathryn Westrum

Parcel Photograph





Local Management Information

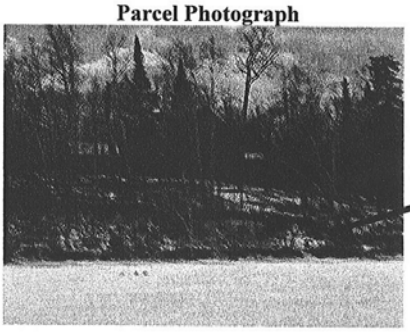
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake lot ~1 Acres
Land Value: $10,500
Owner Address: RR 1 Box 279
Clearbrook, MN 56634
Fire#: Alaska RR4
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

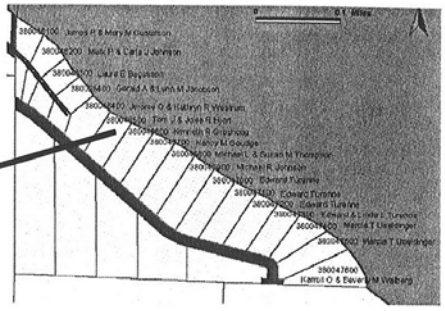
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: Many trees
Beach: No beach
Lawn: Lot entirely mowed

38-00465-00 Tom & Jolee Hjort

Parcel Photograph





Local Management Information

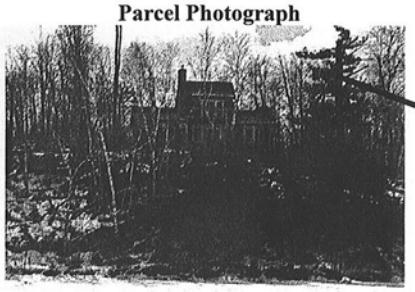
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake lot ~1 Acres
Land Value: $14,000
Bldg Value: $84,400
Owner Address: RR 1 box 118G
Leonard, MN 56652
Fire#: Alaska RR5
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1997

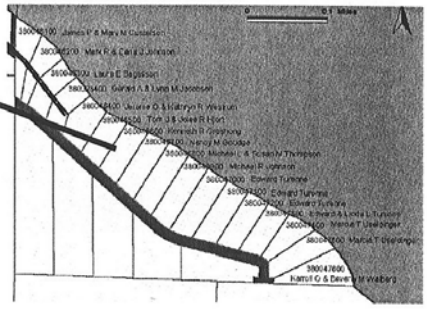
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00466-00 Kenneth R. Groshong

Parcel Photograph





Local Management Information

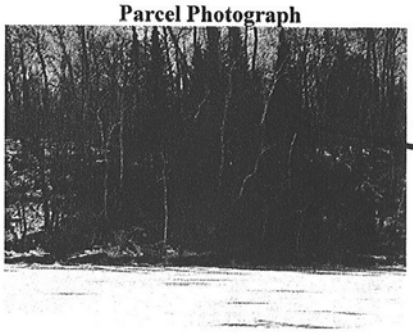
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake lot ~1 Acres
Land Value: $14,000
Bldg Value: $54,700
Owner Address: 1217 Hubbard Ave. W.
St. Paul, MN 55104
Fire#: Alaska RR6
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1997

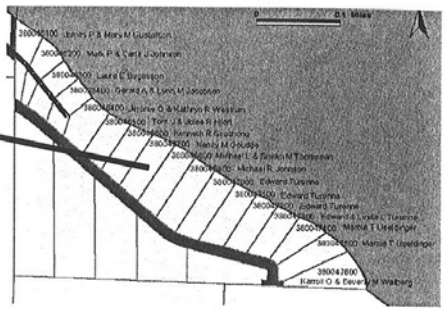
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00467-00 Nancy M. Goudge

Parcel Photograph





Local Management Information

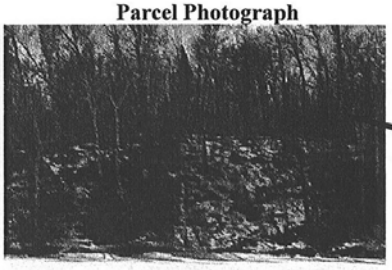
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake lot ~1 Acres
Land Value: $10,500
Owner Address: RR 1 Box 20
Clearbrook, MN 56634
Fire#: Alaska RR7
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

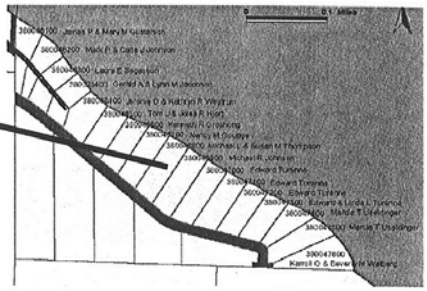
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00468-00 Michael & Susan Thompson

Parcel Photograph





Local Management Information

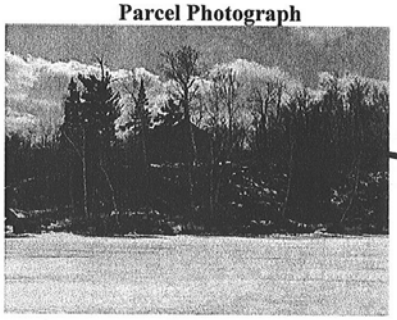
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake lot ~1 Acres
Land Value: $10,500
Owner Address: 8520 Wild Diamond Ave.
Las Vegas, NV 89143
Fire#: Alaska RR8
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

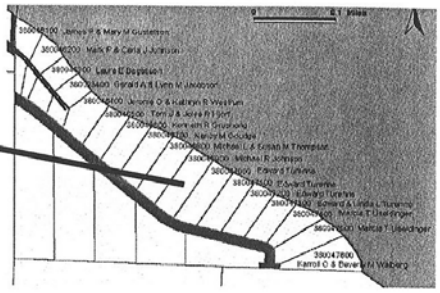
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00469-00 Michael R. Johnson

Parcel Photograph





Local Management Information

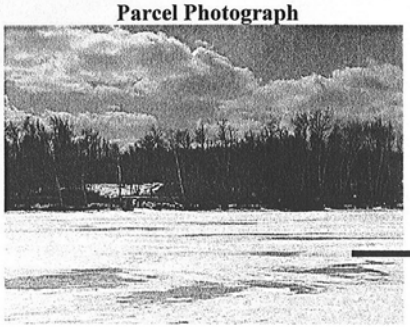
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake lot ~1 Acres
Land Value: $13,500
Bldg Value: $95,100
Owner Address: RR 1 Box 118B
Leonard, MN 56652
Fire#: Alaska RR9
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1987

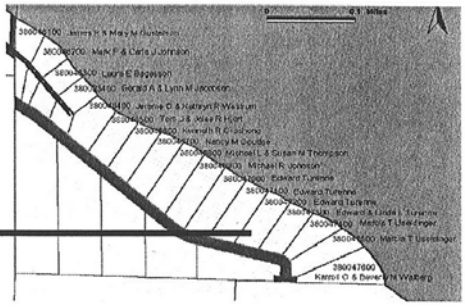
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat moderate
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00473-00/38-00472-00
38-00471-00/38-00470-00
Edward & Linda L. Turenne

Parcel Photograph





Local Management Information

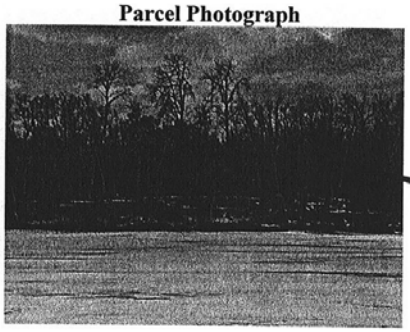
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: 4 Lake lots ~1 Acres each
Land Value: $13,600/10,500/10,500/11,300
Bldg Value: $71,500
Owner Address: 832 Alice Dr.
Thief River Falls, MN
56701
Fire#: Alaska RR13
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments:
1992

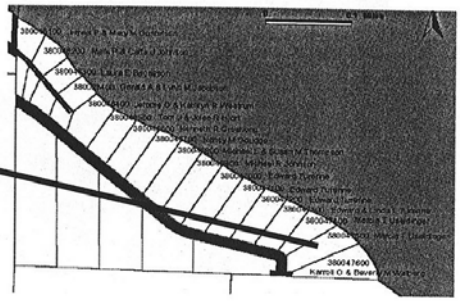
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00474-00/38-00475-00
Marcia T. Useldinger

Parcel Photograph





Local Management Information

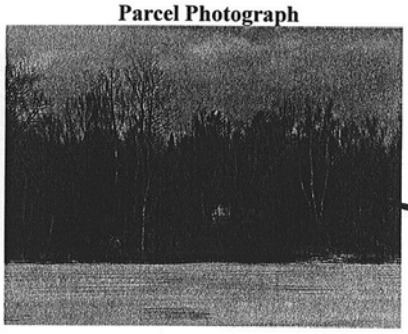
County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: 2 Lake lots ~1 Acres each
Land Value: $15,000/$11,300
Bldg Value: $101,000
Owner Address: RR 1 Box 118BB
Leonard, MN 56652
Fire#: Alaska RR15
Septic Compliance: Conforming
Last Permit: STS for house
Sewage Treatment System Comments: 1990

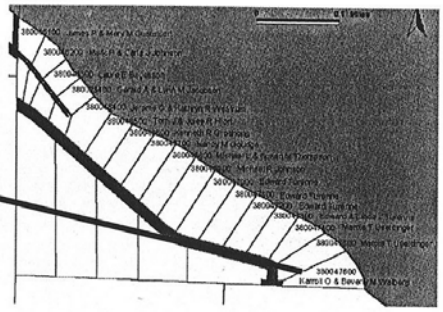
Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

38-00476-00 Karroll & Beverly Walberg

Parcel Photograph





Local Management Information

County: Beltrami
Township: Roosevelt
Section: 18
Description: Roosevelt Ridge
Lot Type: Lake Lot ~1 Acres
Land Value: $10,400
Owner Address: RR 1 Box 54
Clearbrook, MN 56634
Fire#: Alaska RR16
Septic Compliance: N/A
Last Permit: N/A
Sewage Treatment System Comments: N/A

Resource Information

Dock: Unadorned (boat lift, uncovered)
Boat/Boathouse: 1 boat w/o boathouse
PWC: None
Dwelling Setback: Over 100 feet
Slope: Gentle Slope
Slope of Setback Zone: Gentle/flat
Presettlement Veg.: Aspen/Birch trending to hardwoods
Aquatic Vegetation: Some aquatic plants
Trees: A few large trees
Beach: No beach
Lawn: Lot entirely mowed

Section F.
Lake Water Quality Assessment and Water Quality Recommendations

F Lake Water Quality Assessment and Water Quality Recommendations

Introduction

During the summer of 2002, the Red Lake Watershed District (RLWD), along with the Beltrami Soil and Water Conservation District (SWCD), and the Clearwater Lake Area Association (CLAA) collected water samples from within the Clearwater Lake watershed for the Clearwater Lake Water Quality Study. RMB Labs in Detroit Lakes performed the analysis of these samples. The samples were collected bi-weekly at 6 sites along the Clearwater River, and 2 in-pool sites within Clearwater Lake. The following is a description of the sites and in-pool sites:

- #52-Clearwater Dam, (Clearwater Lake outlet)-located on Clearwater County Road # 4, in section 12 of Sinclair Township.
- #131-Clearwater River (Clearwater Lake inlet)-located on Beltrami County Road #24, in section 31 of Buzzle Township and section 32 of Roosevelt Township.
- Buzzle Lake-Clearwater River (Buzzle Lake outlet)-located on a gravel township road northwest of Beltrami County Road # 5, north of Pinewood 2 miles, in section 20 & 21 of Buzzle Township.
- 3 mile Road-Clearwater River-located on a gravel township road, 1 mile north of Clearwater County Road #91, in section 10 & 11 of Copley Township.
- #133-Clearwater River (Walker Brook)-located on Clearwater County Road #19 southeast of Bagley, in section 29 & 32 of Copley Township.
- #128-Clearwater River-located on Clearwater County Road #25 southwest of Bagley, in section 25 of Popple Township.
- Two in-pool sites were sampled in Clearwater Lake and were named CL1 and CL2. CL1 was located in the deepest part of the lake, towards the northwest end of the lake, and CL2 was the shallower site located toward the southeast end of the lake. The sites were located in section 12 of Sinclair Township and section 7 of Roosevelt Township, respectively.

Samples were analyzed for: total phosphorus (TP), ortho phosphorus (OP), total suspended solids (TSS), total dissolved solids (TDS), ammonia (NH_3), nitrates/nitrites ($NO_2 + NO_3$), chemical oxygen demand (COD), total Kjeldahl nitrogen (TKN), and fecal coliform. Each site was also sampled for water temperature, dissolved oxygen (DO), conductivity, and pH. Additionally, chlorophyll-a samples were collected at the Clearwater Lake in-pool sites. Descriptions of parameters and some other terms that will be used in this report are listed on the following page.

- **TP (Total Phosphorus)** is the total amount of organic phosphorus (living materials such as algae) and inorganic phosphorus in a water sample. Elevated levels of TP in lakes cause eutrophication and algae blooms. Keeping the inflow of TP at acceptable levels will help maintain the health of a lake. Reducing the levels of TP flowing into a lake will help improve the water quality within the lake. TP levels are adversely affected by wastewater effluent, failing septic systems, urban stormwater runoff (especially from lawns and streets), industrial wastewater, plant material, and agricultural runoff. Phosphorus readily attaches to sediment particles, so the higher the levels of total suspended solids are, the higher the levels of total phosphorus will be.

- **OP (Ortho Phosphorus)** is the soluble reactive form of phosphorus that is readily used by algae and other plants.

- **TSS (Total Suspended Solids)** is the amount of material suspended in the water (either organic or inorganic materials). High levels of suspended solids can impair aquatic life and plant life by blocking sunlight. Suspended solids can enter waterways by means of erosion from cropland, roadways, ditches, building sites, stream banks, livestock grazing or confinement areas, urban areas, and forested lands. A portion of the suspended solids carried by a river comes from natural sources, but the level of total suspended solids in the river can be minimized by reducing the amount of human impact through the use of Best Management Practices (BMPs) such as vegetative cover, buffer strips and conservation tillage.

- **TDS (Total Dissolved Solids)** is the amount of material that is dissolved in the water (either organic or inorganic), in large amounts this can affect drinking water and corrode metals. Sources of dissolved solids include natural causes, erosion, sewage, urban runoff, and industrial wastewater.

- **NH_3 (Ammonia)** is a colorless gas with a strong odor mainly from fertilizers. This parameter can affect all forms of life (aquatic or terrestrial), along with plant life. Death can occur from large doses. It is produced in rivers by decaying organisms, industrial waste, and fertilizer.

- **NO_2 and NO_3 (Nitrates/Nitrites)** are inorganic forms of nitrogen that are abundant in the environment, while nitrate is one of the primary forms of nitrogen for plant uptake, it is a major concern in water quality because of the "blue baby syndrome" (high nitrate concentrations in drinking water that cut off blood supply to the body). Nitrogen levels greater than .5 mg/L are toxic to rainbow trout. Increased nitrogen concentrations can be caused by wastewater, low flow, failing septic systems, animal waste, atmospheric deposition, natural sources (dependant upon geology and soils of the area), and fertilizers applied to crops, lawns, and golf courses

- **COD (Chemical Oxygen Demand)** is a measure of the amount of oxygen required to degrade organic compounds in water. This is the equivalent of the organic matter content in a sample that is susceptible to oxidation by a strong chemical oxidant. Elevated levels of COD may reduce the amount of dissolved oxygen in the water.

- **TKN (Total Kjeldahl Nitrogen)** is the amount of organic nitrogen and ammonia nitrogen together in water. Total Kjeldahl nitrogen can come from decaying plant matter, decaying animal waste, industrial waste and fertilizer.

- **Fecal coliform bacteria** are microorganisms that are present inside the intestines of animals and humans. The presence of fecal coliform bacteria can indicate the presence of other disease-causing organisms. Sources of fecal coliform bacteria include animal waste (domestic animals and wildlife), sewage, and untreated urban stormwater runoff.

- **DO (Dissolved Oxygen)** is the amount of oxygen freely present in water. Dissolved oxygen is important for reproduction of aquatic life, natural degradation of pollutants in the water, and photosynthesis in plants. Decaying organic matter, warmer water temperatures, sediment in the river, and bacterial respiration are all potential causes of depleted dissolved oxygen levels. An average level of 5 mg/L, with levels not dropping below 4 mg/L is necessary for the survival of fish in a waterbody.

- **pH** is the negative log of the activity of hydrogen ions in a liquid. It is used to determine whether water is acid or alkaline. A pH of 7 is neutral. A pH of less than 7 is acid and a pH of greater than 7 is alkaline. Organic acids produced by decaying organic matter in wetlands and bogs can cause a decrease in pH (an increase in acidity). Algae introduce Carbon Dioxide to the water column, which in turn, lowers pH and increases the acidity of the water. Water with a low pH (high acidity) can have an increased availability and toxicity of metals and toxins such as mercury and ammonia.

- **Conductivity** is the measurement of the water's capacity for conveying electrical current and is directly related to the concentrations of ionized substances in the water. The conductivity of water increases with an increase in the level of dissolved solids in the water. Elevated levels of conductivity may be related to geology, flow conditions, groundwater sources, urban runoff, and runoff from fields.

- **Chlorophyll-A** is a molecule that absorbs sunlight, and is an important part of photosynthesis. Chlorophyll-a samples taken from a lake are used as a measure of the amount of algae present in the water. Chlorophyll-a test results are used along with total phosphorus levels and Secchi disk readings to calculate the trophic state of a lake.

- **Secchi Disk** readings are taken using a round disk approximately 8 inches in diameter that is either marked with alternating black and white quadrants or is completely white. The disk, attached to a rope, is lowered to the point at which it "disappears." The depth to this point is then measured using markings on the rope to obtain the reading.

- **Water Temperature** is the warmth of the body of water. Temperature can exert great control over aquatic communities, lake stratification and water chemistry.

- **Peak runoff** is the peak amount of overland flow that enters the river during a 5-year 24-hour storm event. For the Clearwater Lake watershed, this is equal to 2.69 inches of rain in 24 hours.

- **Peak discharge** is the volume of runoff during a storm event per inch of rain per mile.

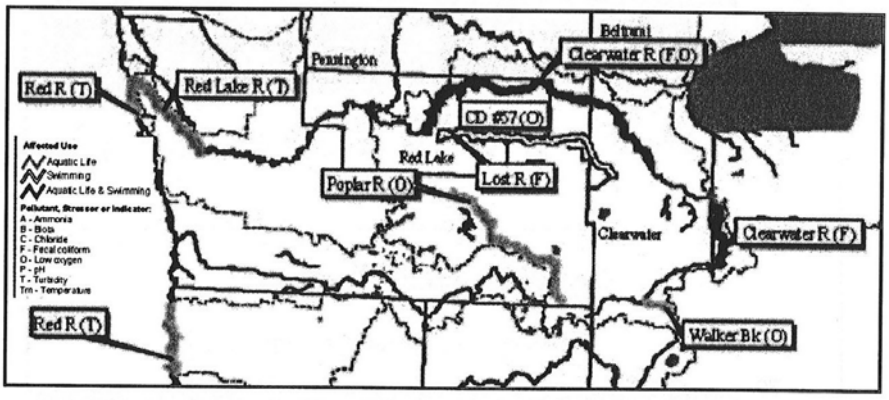
- **Load** is a term used to describe the total mass of sediments and/or nutrients being carried by a stream.

Stream Monitoring Results

There are two reaches within the Clearwater Lake watershed that are on the 2002 Impaired Waters List. These two reaches are Walker Brook from Walker Brook Lake to the Clearwater River, and the trout stream portion of the Clearwater River. Walker Brook is listed for low dissolved oxygen, which impairs the ability of the stream to support aquatic life. The trout stream portion of the Clearwater River, which begins at the Beltrami County line and ends at Clearwater Lake, is impaired for fecal coliform. This impairs the river for the designated use of swimming. The impairments are based upon Environmental Protection Agency standards for the State of Minnesota. During the RLWD's 2002 monitoring program in the Clearwater Lake watershed, only two potential impairments were found based upon the EPA standards. The Walker Brook sampling site and the 3-mile road sampling site were both impaired by low dissolved oxygen levels. Exceedances occurred at other sites as well, but at a lower frequency. These are noted in the following table.

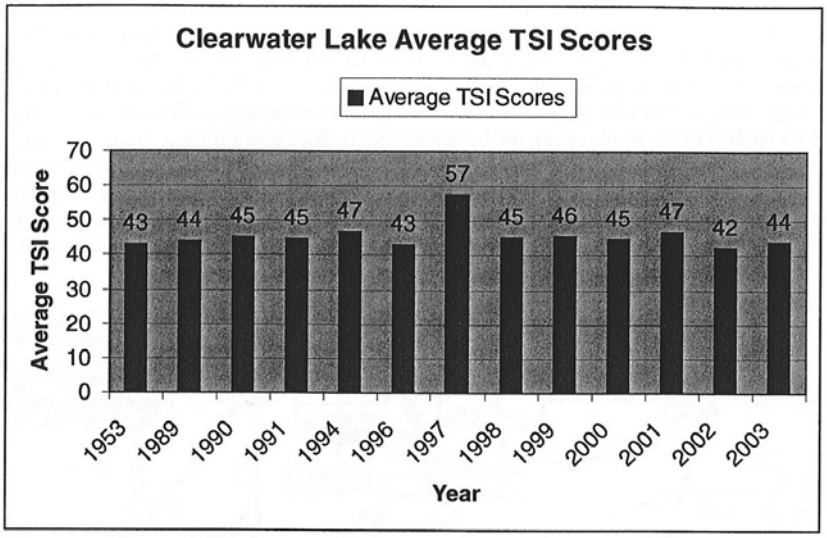
Percentage of 2002 Samples Not Meeting EPA Standards							
Site	**DO**	**Fecal Coliform**	**Conductivity**	**TSS**	**TDS**		
Co. Rd. 25	5.3%	7.1%	0.0%	0.0%	0.0%		
Walker Brook	26.3%	7.1%	0.0%	0.0%	0.0%		
3-Mile Road	15.8%	0.0%	0.0%	5.3%	0.0%		
Buzzle Lake	0.0%	0.0%	0.0%	0.0%	0.0%		
CL Inlet	0.0%	0.0%	0.0%	5.3%	0.0%		
CL Outlet	0.0%	0.0%	0.0%	0.0%	0.0%		
Percentage of 2002 Samples Exceeding Ecoregion Levels Minimally Impacted Streams							
Site	**TSS**	**Fecal Coliform**	**Conductivity**	**Ammonia**	**TP**	**Nitrates and Nitrites**	**Water Temp.**
Northern Lakes and Forests							
Co. Rd. 25	10.5%	26.3%	100.0%	15.8%	21.1%	0.0%	47.4%
Walker Brook	0.0%	57.9%	94.7%	21.1%	57.9%	0.0%	47.4%
Buzzle Lake	0.0%	5.3%	68.4%	0.0%	0.0%	0.0%	47.4%
CL Inlet	42.1%	31.6%	100.0%	15.8%	47.4%	42.1%	42.1%
North Central Hardwood Forests							
CL Outlet	0.0%	0.0%	94.7%	5.3%	0.0%	0.0%	26.3%
3-Mile Road	5.3%	0.0%	100.0%	10.5%	0.0%	0.0%	36.8%

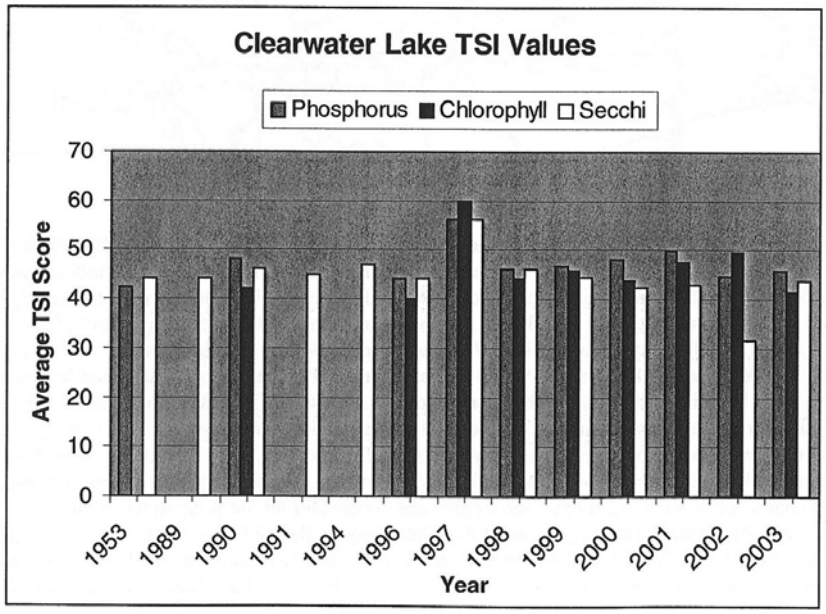
The Minnesota Pollution Control Agency also has a list of standards for minimally impacted streams for each ecoregion within the state. For the Clearwater Lake watershed, most of these standards are tougher since the water quality within the Northern Lakes and Forests ecoregion is expected to be better than the water quality within the Red River Valley based upon land use, geology, and position within the overall watershed. When compared to EPA standards (single values applied to the whole state), the Clearwater River does well for most parameters, but when compared with ecoregion standards, it is evident that there is room for improvement on reaches of the river. Although natural causes contribute to some of the impairments on the river such as the impairment for dissolved oxygen in Walker Brook, other impairments, such as suspended solids, are directly affected by human activities. Below is a map reaches within the RLWD that are listed on the 2002 Impaired Waters List.



Lake Monitoring Results

The monitoring site used to determine the trophic state of the lake is CL1 (also called site #204 by the MPCA), which is located at the deepest point of the lake. The trophic state index (TSI) is a score based upon total phosphorus, secchi disk, and chlorophyll-a readings used to classify the growth and productivity of a lake. Lakes may be oligotrophic (<30), mesotrophic (40-50), eutrophic (50-60), or hypereutrophic (>70). The average trophic state index score for Clearwater Lake in 2002 was 42.18. This score is on the lower end of the mesotrophic range and is better than it has been in several years. The average trophic state of the lake is normally around the middle of the mesotrophic range. This means that the lake has enough nutrients to support aquatic life but does not have an excessive amount of nutrients. This is a desirable condition for the lake. The lake is unable to support salmonids (trout), but walleye are able to predominate. The charts below show yearly average trophic state scores for all the years in which data was collected. Although the average score of the lake is around the mid-40's, there is a great range in scores throughout the year. During the summer of 2002, the TSI scores ranged from 31 to 47. In 2003, the TSI scores ranged from 40-54. The water in Clearwater Lake had been very clear at times. The lake had average secchi disk readings of 7.54 in 2002 and 9.5 in 2003. On June 9, 2003, the secchi disk reading was 16.5 feet.


Clearwater Lake Average TSI Scores
Average TSI Scores
Average TSI Score
70
60
50
40
30
20
10
0
43
44
45
45
47
43
57
45
46
45
47
42
44
1953
1989
1990
1991
1994
1996
1997
1998
1999
2000
2001
2002
2003
Year


Clearwater Lake TSI Values
Phosphorus
Chlorophyll
Secchi
Average TSI Score
70
60
50
40
30
20
10
0
1953
1989
1990
1991
1994
1996
1997
1998
1999
2000
2001
2002
2003
Year

How does the lake compare to other lakes within the same ecoregion? Based on the 1994 Minnesota Lake Water Quality Data Base Summary, Clearwater Lake has ranked at about the 18th percentile for area, at the 25th percentile for depth, between the 50th and 75th percentiles for TSI-phosphorus, between the 50th and 80th percentiles for TSI-chlorophyll-a, between the 50th and the 100th percentiles for TSI-Secchi, and between the 50th and the 60th percentiles for TSI-mean. Here is a comparison of 2002 monitoring results at CL-1 with average values for all lakes within the Northern Lakes and Forests ecoregion.

Parameter	Northern Lakes and Forests Ecoregion	Clearwater Lake 2002	Clearwater Lake 2003
Total Phosphorus	14-27	.03	.0224
Chlorophyll-a Maximum	<15	16	21
Chlorophyll-a Mean	<10	8.45	7.57
Secchi Disk (ft)	8-15	7.54	9.5
Total Kjeldahl Nitrogen	<0.75	.44	.42*
Nitrates and Nitrites	<0.01	.006*	.057*
pH	7.2-8.3	8.35	8.39
Total Suspended Solids	<1-2	2.06	2*
Conductivity	50-250	409.46	383.80
TN:TP ratio	25:1 – 35:1	14.8	21.28

*Concentrations are based on results from the Clearwater Lake outlet since no analysis for this parameter was conducted on lake samples.

The lake is mixed in the spring, stratified throughout the summer, and then mixed again in the fall. When a lake is stratified, it has three layers, the epilimnion (top layer), metalimnion or thermocline (middle, transitional layer), and the hypolimnion (bottom layer). The lake experiences its highest trophic state levels when it is mixed as nutrients are brought up from the bottom of the lake. Clearwater Lake experiences anoxia (no oxygen) in the hypolimnion during late summer. During anoxia, there is not enough oxygen for fish to survive, plus, phosphorus is released from the sediment on the bottom of the lake by bacteria. The phosphorus is isolated in the hypolimnion until the lake mixes or "turns over." It is then mixed into the rest of the water column and increases the levels of phosphorus in the upper water column where water quality samples are taken.

Through the monitoring of two sites on the lake, a gradient between two different zones of the lake became apparent. The shallower, more nutrient rich zone in the southeast end of the lake represents a transitional zone (CL2) between the river and the lacustrine zone (CL1). This explains the thick vegetation on that end of the lake that makes navigation difficult. This gradient and zone of sediment deposition are common on lakes and reservoirs that are located on rivers.

The lake has recovered from extreme eutrophication and resulting TSI levels that neared 60 during the summer of 1997. During the summer of 1997, the lake was eutrophic due to the influx of nutrients from flooding, and wastewater overflows from the city of Bagley. Since 1997, Bagley's sewage treatment plant has been upgraded and the City has recently constructed stormwater treatment ponds.

Modeling Results

The water quality modeling program FLUX was used to calculate total annual flow volume in cubic hectometers, total annual loads for all parameters in Kg/yr, as well as flow-weighted means for all stream monitoring sites. This program uses continuous flow data and available sampling data to determine yearly totals and averages for water quality parameters. The modeling completed for the Clearwater Lake watershed shows that, during the study period, the most water quality degradation on the Clearwater River came from two of the six subwatersheds that were monitored. The first is the immediate watershed of the Clearwater River between Clearwater County Road 25 (Site #128/CR #25) and 3-mile road (excluding the Walker Brook subwatershed) and other is the immediate watershed between 3-mile road and the Clearwater Lake inlet (excluding the Buzzle Lake outlet). Other subwatersheds either minimally contribute to the degradation of water quality in the Clearwater River or actually help improve the water quality in the river in some cases. Although some of the subwatersheds do not greatly contribute to sediment and nutrient loadings due to their low flows, they still have their own water quality problems in some cases.

Water from Walker Brook enters the Clearwater River on the southeast edge of the city of Bagley. When only looking at the flow weighted means before and after this confluence (at the 128 and 3-mile road water quality monitoring sites), water quality is degraded for TSS, TP, OP, TDS, Nitrates and Nitrites, and DO after the confluence and Walker Brook may appear to be the source. However, when loads from the Walker Brook watershed and the 3-mile road watershed are compared, the 3-mile road subwatershed is more likely to be the primary source of the degradation. Some parameters that appeared to be improved from CR #25 to 3-mile road include COD, TKN, Ammonia, and Fecal Coliform.

How do the watersheds of Walker Brook and CR #25 compare? Walker Brook has a slightly higher weighted average curve number, which means that a higher percentage of water will run off of the landscape during a storm. Walker Brook has higher total phosphorus levels but has lower total suspended solids concentrations, which says that much of the phosphorus at this site can is dissolved in the water. Walker Brook is also worse in terms of orthophosphorus, total dissolved solids, and peak discharge when compared to the CR #25 monitoring site on the Clearwater River. Walker Brook has lower concentrations of TSS, ammonia, fecal coliform, and a lower amount of peak runoff. Ammonia was not very high at either location when compared to the minimally impacted stream levels for the ecoregion.

The reason Walker Brook had higher average levels of phosphorus when compared to CR #25 may be attributed to a period of elevated concentrations in July and August of 2002 at the Walker Brook monitoring site. When examining sample results for individual dates, Walker Brook sometimes had lower concentrations of TP than CR #25. The lower values may be a result of the settling of sediment when beaver dams back up water and the velocity of the water is slowed. When there was a storm event, higher levels of flow, or the beaver dams are removed, sediment and nutrients that were settled out may have been swept downstream, causing a rise in concentrations.

A high spike in fecal coliform was recorded at the CR #25 monitoring site that may account for the higher average levels of fecal coliform for that watershed. This spike came during relatively high flows and there was precipitation occurring at the time the sample was collected. Walker Brook also experienced some spikes, although not quite as dramatic. Both sites experienced spikes that greatly exceeded the EPA standard of 200 col./100 ml. The channel of the Clearwater River has a relatively low slope in the upper reaches from the headwaters downstream to the confluence with water coming from the Buzzle Lake subwatershed. After this point, the channel grade increases significantly. The geology of the area, beaver dams, and beaver dam remnants act to keep the river in a relatively flooded state in the upper watershed of the Clearwater River and consequently help to increase the temperature of the water, increase the depth of the water, and reduce the velocity of the water. A beaver dam was present just downstream of the CR #25 monitoring site in the later summer and fall. Beaver dam remnants were found by RLWD and Clearwater SWCD staff downstream of the 3-mile road site as well. Relatively high stage levels and relatively low flows showed that water was backed up at the Walker Brook monitoring site in early June and in middle to late August of 2002, most likely because of downstream beaver dams. Fecal coliform bacteria grow better in warmer temperatures and in deeper, more stagnant water. Although they grow better in warm-water temperatures versus cold-water temperatures, fecal coliform bacteria do not survive when exposed to too much sunlight. Think of it as leaving potato salad out on a counter top overnight where it is warm and dark over night versus microwaving it. Leaving it sit out overnight at a lukewarm temperature will help grow lots of bacteria (like the ponded areas of the river), while microwaving it will help kill the bacteria (as the sunlight does in the shallower reaches). The deeper the water, the lower the amount of sun that can penetrate it. The shallower the water, the more sun can penetrate it. Prior to 3-mile road, the Clearwater River and Walker Brook are both very deep and ponded when compared to the trout stream portion of the Clearwater River, even though there is a lower volume of flow in the upper watershed. It is impossible to wade far from shore in the upper watershed of the Clearwater River due to ponded water and a mucky bottom. Most of the lower watershed is easily wadeable and has a firmer, sandier bottom. The fine sediment deposited in the upper watershed, of which the mucky bottom is composed, is most likely another factor contributing to the high growth rate of fecal coliform as well as the depletion of dissolved oxygen.

Another reason for the decrease in fecal coliform concentrations from the headwaters to Clearwater Lake could be time of travel. Fecal coliform only has a life span of 12 hours to 5 days. So, not all the fecal coliform traveling through the CR #25 monitoring site will make it downstream to Clearwater Lake. The shallower water (more sunlight) and time of travel within trout stream portion of the river would help minimize the fecal coliform concentrations at that monitoring site. According to the Clearwater River Time of Travel Study of April 1991, dye traveled at an average rate of about 1 mile per hour between the Clearwater Lake outlet and the beginning of the channelized portion of the Clearwater River. The flow during that study was similar to the flow recorded at the Clearwater Lake Inlet during the Clearwater lake Water Quality Model Study. However, the flow during the study was as much as 3 times as high as the flows in the upper watershed of the Clearwater at sites such as Walker Brook and CR #25. The limited life span of fecal coliform can explain the fluctuation of fecal coliform levels within the CR #25 and Walker Brook subwatersheds. The low flow from these two watersheds would minimize the amount of fecal coliform being swept downstream. So, much of the life cycles of the fecal coliform colonies in these two watersheds would be carried out before they get carried

past 3-mile road. The life cycle of fecal coliform, including its decomposition would also consume DO. This could be one more factor contributing to the low dissolved oxygen levels in these two subwatersheds.

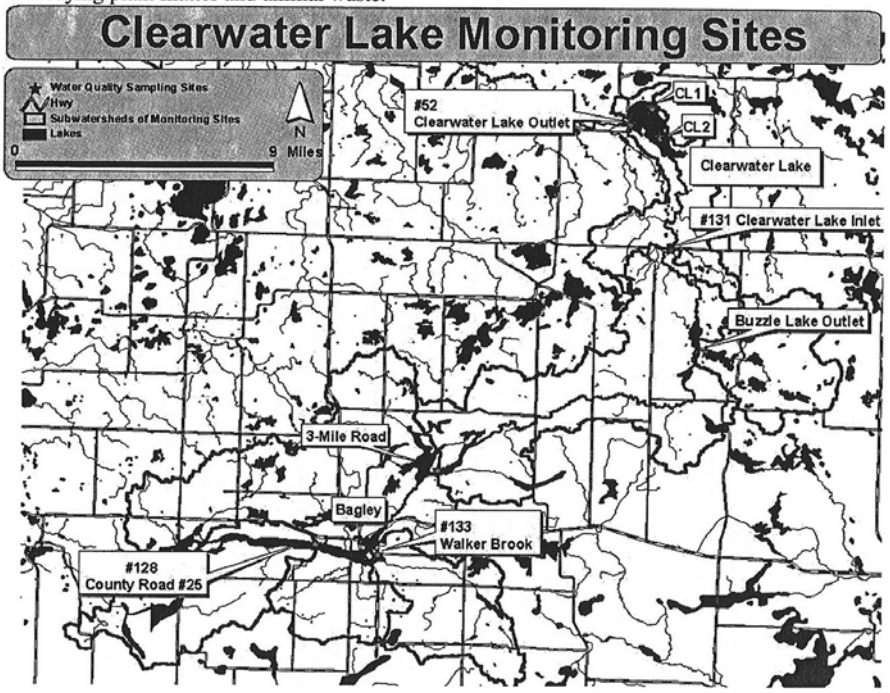
Construction activity within the Walker Brook watershed during the study period may have an exacerbating effect on the increase of sediment and nutrient levels during storm events. The TP levels within the Walker Brook watershed exceed the ecoregion value for minimally impacted streams. There is also a relatively high level of COD in Walker Brook, which consumes oxygen, which, in turn, leads to low dissolved oxygen levels, which then can lead to the release of phosphorus from sediment. Walker Brook also has a low DO problem due to organic soils, low flow and stagnant water, geologic factors such as the inflow of ancient oxygen depleted groundwater, and the highest chemical oxygen demand levels of all the monitoring sites.

Nitrates and nitrites were rarely detectable at most of the sites in the Clearwater Lake watershed with the exception of the Clearwater Lake Inlet site. The concentrations at the Clearwater Lake inlet monitoring site exceeded the standards for minimally impacted streams within the Northern Lakes and Forests ecoregion for 42.1% of the samples taken while the all of the other sampling sites did not once exceed the minimally impacted levels for their respective ecoregions. This site had a significantly higher amount of loading of nitrates and nitrites from its subwatershed. Since agricultural runoff is one of the sources of this pollutant, a buffer strip program and the implementation of other conservation practices would be necessary to alleviate this problem.

The 3-mile road subwatershed had the highest amount of peak runoff of all the subwatersheds. Much of this runoff may be attributed to the development around the city of Bagley. Now that the stormwater runoff from Bagley will be treated with stormwater retention ponds, the runoff from this subwatershed should have less of an impact upon the water quality of the Clearwater River.

The Buzzle Lake watershed had the least amount of peak runoff, which helps explain the good water quality coming from this subwatershed, along with the lack of development or agricultural activity within the subwatershed. Much of the watershed is well vegetated and wooded so there is minimal runoff of nutrients and sediments. Plus, part of what does run off the landscape is retained in Buzzle Lake. When spatially examining the average concentrations, Buzzle Lake appears to improve water quality in the Clearwater River for total suspended solids, total phosphorus, total dissolved solids, chemical oxygen demand, total Kjeldahl nitrogen, and dissolved oxygen concentrations. It has a high peak discharge when compared to the 3-mile subwatershed and the Clearwater Lake inlet subwatershed, but has the lowest peak runoff rate of all the subwatersheds. This indicates that, although a large amount of water may flow from this subwatershed during a storm event, there is not a lot of overland flow or erosion so there is a lower amount of sediment and nutrients being carried to the stream from the land, which results in lower concentrations of sediment and nutrients within the stream. The flow of this high quality water into the Clearwater River in between 3-mile road and the Clearwater Lake inlet may help explain the observed improvement in concentrations of certain water quality parameters in this reach of the river.

A comparison of modeling results for the Clearwater Lake inlet and the Clearwater Lake outlet shows that about 260 tons of sediment and over a ton of phosphorus are deposited in the lake each year. Since large amounts of suspended solids and phosphorus are deposited in the lake, determining how much phosphorus and suspended sediment is coming from the immediate watershed of the lake is not possible with the available data. One interesting fact, however, is that the amount of total dissolved solids increases from the inlet to the outlet. Dissolved solids entering the lake are less likely to be deposited in the lake than suspended solids. The annual dissolved solids load at the outlet exceeded the load at the inlet by 17,444 tons in 2002, even thought the concentration decreased. Some potential sources of dissolved solids on Clearwater Lake are sewage, wetlands, erosion and runoff from lake lots. Another possible explanation for the increase may be the fact that the stage (water surface elevation) recording device at the Clearwater Lake outlet retrieved more data during the heavy storm events in June of 2002 because it was safe and dry while the stage recorder at the inlet was flooded during this time period. The data at the outlet includes some of the high flows recorded during this time period. The loads of organic forms of nitrogen – Ammonia and TKN – also increase from the inlet of the lake to the outlet of the lake. The most likely source of these two constituents in Clearwater Lake is decaying plant matter and animal waste.



	TSS mg/L	TDS mg/L	COD mg/L	TKN mg/L	AMMONIA mg/L	OP mg/L	TP mg/L	Fecal Coliform col./100ml	DO mg/L	Nitrates and Nitrites mg/L
Minimally Impacted	6.40				0.20		0.05	20.00		0.09
EPA Standards	25.00	500.00						200.00	5.00	
Site #128, County Road 25										
Total annual flow	11.76	11.76	11.76	11.76	11.76	11.76	11.76	11.76	11.76	11.76
Total annual loads (tons)	44.28	2967.84	300.46	8.17	1.59	0.12	0.45	17615.24	121.40	0.31
Mean Conc	3.42	228.94	23.18	0.63	0.12	0.01	0.04	135.89	9.37	0.02
Site # 133 Walker Brook										
Total annual flow	9.23	9.23	9.23	9.23	9.23	9.23	9.23	9.23	9.23	9.23
Total annual loads (tons)	17.79	2842.64	239.93	6.40	0.87	0.34	0.71	7309.09	64.30	0.21
Mean Conc (mg/L)	1.75	279.39	23.58	0.63	0.09	0.03	0.07	71.84	6.32	0.02
3 Mile Road										
Total annual flow	38.51	38.51	38.51	38.51	38.51	38.51	38.51	38.51	38.51	38.51
Total annual loads (tons)	232.88	12184.07	938.89	36.14	4.05	1.86	2.77	11794.47	318.65	1.46
Mean Conc (mg/L)	5.49	287.02	22.12	0.85	0.10	0.04	0.07	27.78	7.51	0.03
Buzzle Lake Outlet										
Total annual flow	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76
Total annual loads (tons)	10.80	1377.10	79.74	1.85	0.49	0.04	0.07	655.03	63.28	0.13
Mean Conc (mg/L)	1.70	216.74	12.55	0.29	0.08	0.01	0.01	10.31	9.96	0.02
Site #131 Clearwater Lake Inlet										
Total annual flow	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20	46.20
Total annual loads (tons)	356.69	14163.01	882.98	19.93	5.74	0.75	2.73	13811.18	517.92	2.88
Mean Conc (mg/L)	7.00	278.11	17.34	0.39	0.11	0.01	0.05	27.12	10.17	0.06
Site #52 Clearwater Lake Dam										
Total annual flow	109.34	109.34	109.34	109.34	109.34	109.34	109.34	109.34	109.34	109.34
Total annual loads (tons)	201.88	31607.29	2091.64	47.89	14.44	0.86	3.43	1554.91	1262.17	4.40
Mean Conc (mg/L)	1.67	262.24	17.35	0.40	0.12	0.01	0.03	1.29	10.47	0.04

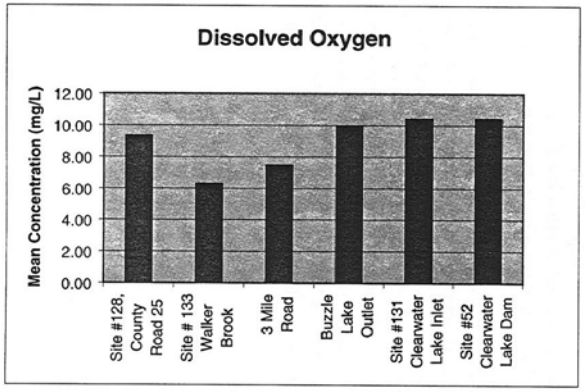
TSS
Mean Concentration (mg/L)
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Site #128, County Road 25
Site # 133 Walker Brook
3 Mile Road
Buzzle Lake Outlet
Site #131 Clearwater Lake Inlet
Site #52 Clearwater Lake Dam
TDS
Mean Concentration (mg/L)
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
Site #128, County Road 25
Site # 133 Walker Brook
3 Mile Road
Buzzle Lake Outlet
Site #131 Clearwater Lake Inlet
Site #52 Clearwater Lake Dam
COD
Mean Concentration (mg/L)
25.00
20.00
15.00
10.00
5.00
0.00
Site #128, County Road 25
3 Mile Road
Site #131 Clearwater Lake Inlet
TKN
Mean Concentration (mg/L)
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Site #128, County Road 25
Site # 133 Walker Brook
3 Mile Road
Buzzle Lake Outlet
Site #131 Clearwater Lake Inlet
Site #52 Clearwater Lake Dam

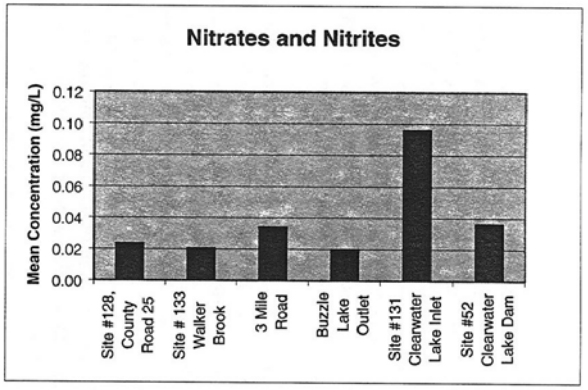
Orthophosphorous
Mean Concentration (mg/L)
0.05
0.04
0.03
0.02
0.01
0.00
Site #128, County Road 25
Site # 133 Walker Brook
3 Mile Road
Buzzle Lake Outlet
Site #131 Clearwater Lake Inlet
Site #52 Clearwater Lake Dam

Fecal Coliform
Mean Concentration (Col/100ml)
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Site #128, County Road 25
3 Mile Road
Site #131 Clearwater Lake Inlet

Ammonia
Mean Concentration (mg/L)
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
Site #128, County Road 25
Site # 133 Walker Brook
3 Mile Road
Buzzle Lake Outlet
Site #131 Clearwater Lake Inlet
Site #52 Clearwater Lake Dam

Total Phosphorous
Mean Concentration (mg/L)
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
Site #128, County Road 25
Site # 133 Walker Brook
3 Mile Road
Buzzle Lake Outlet
Site #131 Clearwater Lake Inlet
Site #52 Clearwater Lake Dam


Dissolved Oxygen
Mean Concentration (mg/L)
12.00
10.00
8.00
6.00
4.00
2.00
0.00
Site #128, County Road 25
Site # 133 Walker Brook
3 Mile Road
Buzzle Lake Outlet
Site #131 Clearwater Lake Inlet
Site #52 Clearwater Lake Dam


Nitrates and Nitrites
Mean Concentration (mg/L)
0.12
0.10
0.08
0.06
0.04
0.02
0.00
Site #128, County Road 25
Site # 133 Walker Brook
3 Mile Road
Buzzle Lake Outlet
Site #131 Clearwater Lake Inlet
Site #52 Clearwater Lake Dam

Conclusions

One goal of the Clearwater Lake Water Quality Model Study was to determine focus watersheds for water quality improvements. Total phosphorus loading was highest from the subwatersheds of the 3-mile road, Clearwater Lake inlet, and Cleawater Lake outlet monitoring sites. Something within the watershed between 3–mile road and the Clearwater Lake inlet is causing an increase in fecal coliform loads, even though the concentration decreases between these two sites. Dissolved oxygen levels are not of concern to the lake because the weighted averages were quite high for the inlet and outlet sites. However, the low levels in the upper reaches of the Clearwater River may have a negative impact upon aquatic life and water quality in the river.

In order to reduce the amount of sediment and nutrients flowing into Clearwater Lake, the amount of sediment and nutrients that are being carried into the stream via runoff should be reduced. The two subwatersheds with the highest contributions to the sediment and nutrient loads in the river are the 3-mile road subwatershed (Bagley) and the Clearwater Lake inlet subwatershed (excluding the Buzzle Lake watershed and everything upstream of 3-mile road. The sediment loads coming from the 3-mile road subwatershed should be decreased by the Bagley Urban Runoff Reduction Project, for which three stormwater treatment ponds have been constructed. This project was designed to reduce the amount of sediment entering the river from the watershed of the city of Bagley by up to 80%. In the Clearwater Lake inlet subwatershed, it appears that the areas with the highest runoff potential are located next to streams and ditches. This subwatershed should be targeted for the implementation of best management practices (BMPs) such as buffer strips. Buffer strips consist of land along rivers, streams, and lakes that is vegetated with grass and trees in order to filter sediment (soil particles and pollutants) from runoff before it enters the water. The vegetation in buffer strips also helps to reduce erosion from the stream channel by holding soil in place. Below is a list of other BMPs from the Clearwater River Nonpoint Study that may be considered for implementation within this subwatershed.

The Clearwater River does not violate EPA standards for total suspended solids at any of the sites, but is minimally impacted according to the ecoregion standards at the monitoring site near the inlet. Much of this sediment is deposited in the lake. This explains the shallower lake levels near the higher prevalence of weeds, higher levels of total phosphorus near the inlet. Making sure all septic systems are in compliance should be a priority for maintaining the water quality of the lake. This should help minimize the increase in dissolved solids and total Kjeldahl nitrogen from the lake's immediate watershed. Public education about lakescaping and other methods for minimizing the contribution of sediment and nutrients from individual lake lots should be implemented.

Best Management Practices	
Conservation Cover	Establishing and maintaining perennial vegetative cover to protect soil and water recourses on land retired from agricultural production.
Conservation Tillage	Conservation tillage includes a number of different planting, tilling, and cultivating methods designed to leave a vegetative residue on the soil.
Contour Farming	Farming around the slopes, which reduces erosion and increases infiltration. Erosion rates can be reduced up to 50% using this practice.
Cover and Green Manure Crop	A crop of close-growing grasses, legumes, or small grain grown primarily for seasonal protection and soil improvement.
Critical Area Planting	Planting vegetation, such as trees, shrubs, grasses, or legumes on highly erodible or critically eroding areas.
Crop Residue Use	Using plant residues to protect cultivated fields during critical erosion periods.
Diversion	A channel constructed across a slope to collect water and prevent damage to the area below the diversion.
Field Border	A strip of perennial vegetation established at the edge of a field by planting or converting it from trees to herbaceous vegetation of shrubs.
Filter (Buffer) Strip	A strip or area of vegetation intended to remove sediment, organic matter, and other pollutants from runoff and wastewater.
Grade Stabilization Structure	Grade stabilization structures involve pipe outlets or drop spillways and are used to allow water to drop to a lower elevation while protecting the soil from gully erosion or scouring.
Grassed Waterway	A natural or constructed channel that is planted with suitable vegetation to protect the soil from erosion by concentrated storm event flows.

Best Management Practices (continued)	
Grasses and Legumes in Rotation	Establishing grasses and legumes or a mixture of them and maintaining the stand for a definite number of years as part of a conservation cropping system.
Sediment Basin	Basins constructed to collect and store debris or sediment.
Contour Strip-Cropping	Growing crops in a systematic arrangement of strips or bands on the contour to reduce water erosion.
Field Strip-Cropping	Growing crops in a systematic arrangement of strips or bands across the general slope (not contour) to reduce water erosion.
Terrace	An earthen embankment, a channel, or combination ridge and channel constructed across the slope to intercept runoff.
Tile Intake Buffers	Tile intake buffers are intended to filter sediment and nutrients from cropland runoff prior to being discharged to ditches and streams.
Water and Sediment Control Basin	An earthen embankment or a combination ridge and channel constructed across gullies and watercourses with underground outlets. Effective for preventing gully erosion, trapping sediment, and reducing downstream peak flows.
Wetland Development/Restoration	Wetland Development involves creating an artificial wetland or restoring a previously drained wetland. Wetlands act as sediment and nutrient traps, and can also reduce peak flows.
Agricultural Waste/Feedlot Management	An agricultural waste management system is a combination of practices used to properly store manure and other wastes from feedlots until they can be properly applied to cropland. A runoff management system is designed to control polluted runoff from a feedlot.
Pasture Management/Livestock Exclusion	Livestock exclusion involves the fencing off of areas where grazing would cause erosion of stream banks or allow water quality to be lowered by livestock activity. The quality of pastureland can also be maintained.
Nutrient Management	Using proper rates, placement, and timing of fertilizer applications to reduce nitrogen and phosphorus losses from cropland.

Clearwater Lake Vegetation Mapping

On July 7th, 9th, and 15th, 2003, Red Lake Watershed District Water Quality Coordinator, Corey Hanson; the RLWD Water Quality Technician, Stephanie Hanson; the Beltrami Soil and Water Conservation District Aquatic Biologist, Melanie Johnson; and a graduate student in Aquatic Biology interning at the Beltrami SWCD, Anita Merritt identified and mapped aquatic vegetation in Clearwater Lake. GPS points were used to mark the boundaries of each vegetation community. The vegetation communities mapped in this project are defined as areas in which the plant species present and their relative concentrations are homogenous. For each community, samples were collected and the species present were identified. After identification, the biomass percentages for each of the dominant species were estimated. Each community included a percentage category of other to account for species that were present, but did not make up a significant portion of the biomass. Identification and mapping were performed on twenty-eight separate aquatic plant communities within the lake. Some separate communities had dominant plant species that were similar to each other. This report includes a map identifying all of the areas mapped and a map of the dominant plant species around the lake. The following paragraphs are a listing and description of each aquatic vegetation community that was identified and mapped.

This study showed that there is an abundance of aquatic vegetation in Clearwater Lake. Although there were no exotic invasive species found, there were some plant species that are becoming a nuisance and blocking access to parts of the lake, such as the *Ceratophyllum demersum* (coontail) and *Ranunculus aquatilis* (white water-crowfoot) in vegetation community number 26. *Elodea canadensis*, also called Canada waterweed, is a native plant that has the potential to grow abundantly and block access to the lake. In Clearwater Lake, however, it is present, but only found occasionally within certain areas of the lake so it is not a problem. This plant probably faces heavy competition from other plant species in the areas in which it is found. Although many species of pondweed (*Potamogeton spp.*) were found in Clearwater Lake, they were all beneficial natives and no Curlyleaf Pondweed (*Potamogeton crispus*, an exotic) was found.

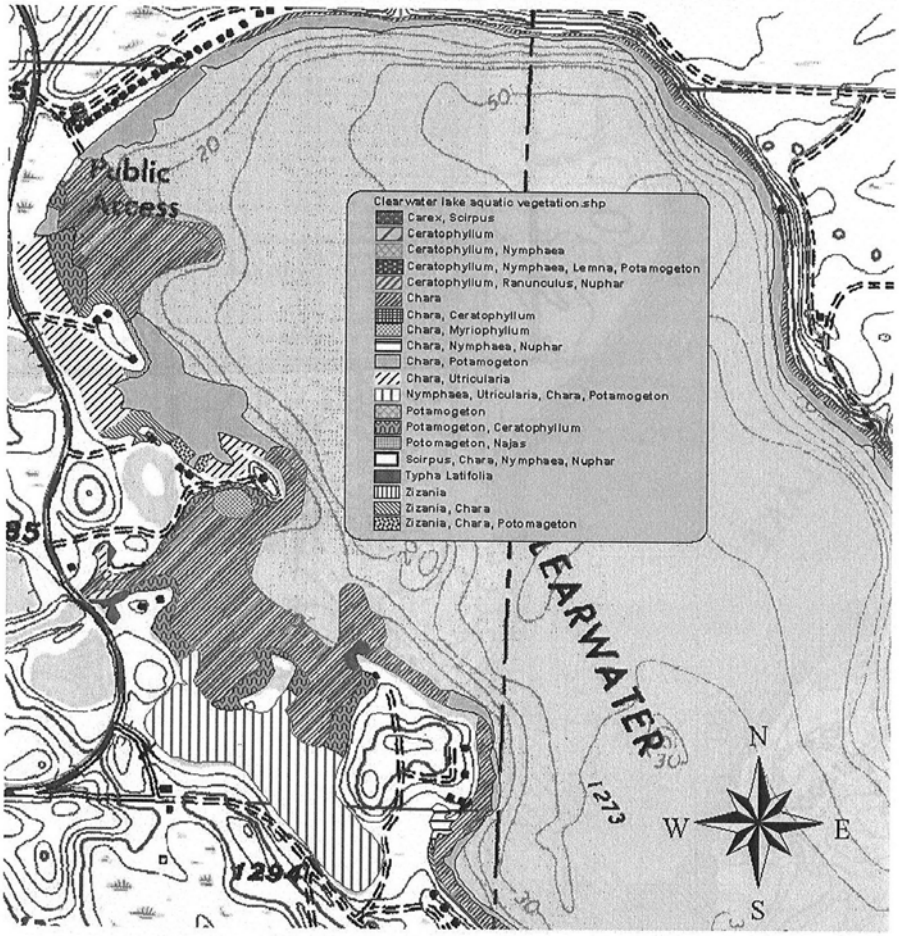
In 1997 there was a large influx of nutrients to the lake. While the nutrients were still in the water column, there was a massive algae bloom. The nutrients, most importantly Phosphorous, retained by the lake have since gone into the sediment and now provide nutrients for the abundant plant life in the lake. Phosphorus is the limiting nutrient in most aquatic ecosystems and is contained in organic matter. Too much of it can cause large algal blooms like the one in 1997. Since 1997 there has been an increase in the amount of weeds in the lake. This can be explained by the large amount of nutrients deposited in the sediment. The prolific plant growth can have negative impacts upon the recreational suitability of the lake, but it does also have positive effects. The Trophic State Index of the Lake has recovered from over 70 at times during 1997 (average of 56 for the year) to the 2002 average TSI of 43.95. One reason for this recovery could be the abundance of plants. The plants help keep the sediment in the lake from being stirred up, and thus minimize the release of phosphorus from the sediment. When plants hold sediment in place and stabilize shoreland, the water clarity also improves. A sign of high nutrient levels in the sediment may be the presence of the dense mats of *Chara spp.* blanketing much of the lake bottom. *Chara spp.* is a short, rooted species of algae, which thrives in phosphorus rich

environments. This *Chara spp.* is good for holding sediment in place since it is creates a dense mat and is low growing as to not interfere with boating.

The following is a listing of the plant species found within the lake. The species in bold are featured on the two maps that follow.

Asclepias incarnata - Milkweed
Carex spp. - Sedge
***Ceratophyllum demersum* - Coontail, Hornwort**
***Ceratophyllum echinatum* - Spiny Hornwort**
***Chara spp.* - Muskgrass, Stonewort**
Eleocharis spp. - Spike Sedge
Elodea canadensis - Canada Waterweed
Equisetum arvense - Water Horsetail
Hippuris vulgaris - Mare's Tail
***Lemna minor* - Lesser Duckweed**
***Lemna trisulca* - Star Duckweed**
***Myriophyllum verticillatum* - Whorled Water Milfoil**
***Najas flexilis* - Bushy Pondweed**
***Nuphar variegata* - Bullhead Pond Lily**
***Nymphaea odorata* - White Water Lily**
***Potamogeton amplifolius* - Largeleaf Pondweed**
***Potamogeton filiformis* - Threadleaf Pondweed**
***Potamogeton foliosus* - Leafy Pondweed**
***Potamogeton natans* - Floating Pondweed**
***Potamogeton pectinatus* - Sago Pondweed**
***Potamogeton richardsonii* -Clasping-leaved Pondweed**
***Potamogeton zosteriformis* - Flatstem Pondweed**
***Ranunculus aquatilis* - White Water-crowfoot**
Sagittaria spp. - Arrowhead
***Scirpus valadis* - Bulrush**
Sparganium americanum - Nuttall Bur-Reed
Spirodela polyrhiza - Greater Duckweed
***Typha latifolia* - Broadleaved Cattail**
***Utricularia vulgaris* - Common Bladderwort**
Vallisneria americana - Eel-grass, Tape-grass
***Zizania aquatica* - Wild Rice**

Clearwater Lake
Dominant Vegetation Species



Section G.
Shoreland Best Management Practices

Clearwater Lake Best Management Practices for Shoreland

Clearwater Lake has some specific natural features that influence the water quality and shoreland of the lake. Its surrounding landscape has many steep slopes, whose bases are susceptible to erosion and slumping due to the inundation that comes with the impoundment of water that forms the lake. Its flow-through stream has a relatively young geologic history that has left its slope subject to aggressive natural down-cutting and erosion that increases sedimentation into the impounded lake. With this natural susceptibility, it is important that each shoreland owner do all that is possible to protect their individual shoreland from erosion and take all reasonable measures to prevent further degradation of the water quality of the lake.

In addition, Clearwater Lake shares common concerns with other lakes in Minnesota that come with the development of the shoreland for buildings, roads, and septic systems. Much work has been done in Minnesota to identify these types of problems and develop practices to prevent damage to lakes. A series of best practices to protect shoreland has been developed, which can greatly reduce the detrimental effects of all these influences on water quality. General checklists and fact sheets are available from a number of sources to describe measures that can be taken. These have been included here to encourage their long-range implementation by each and every landowner around the Clearwater Lake.

It is recognized that it takes time to become aware of these issues, to learn the means and practices for dealing with them, and to develop the resources necessary to put them in place. In the future, new local initiatives by this Lake Association can encourage the implementation of Best Management Practices for Shoreland.

The material and references offered here provide a starting point for each landowner to become self-aware of specific problems that may be occurring on their land and what actions they can take to improve their shoreland. In addition, other specific technical assistance will be available through the local and regional resources identified in this Lake Management Plan, the Clearwater County Water Management Plan, and the Red Lake Watershed District Plan. This technical assistance can help identify and apply best management practices for individual properties on the shoreland on Clearwater Lake.

We encourage you to review this material, to go through the checklist provided in Leaflet Number 17, and then take action by implementing the practices that apply to your land or contacting agencies such as the Clearwater Soil and Water Conservation District and the Clearwater County Environmental Services Office in Bagley, the Red Lake Watershed District in Thief River Falls, or the Minnesota Department of Natural Resources in Bemidji for assistance in reviewing the checklist and developing appropriate resources to put practices in place.