

1-31-94

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AQUATIC PLANT MANAGEMENT PLAN

**PINE LAKE
HILES, WISCONSIN**

JANUARY 31, 1994

IN 80
TO
2009-10



NOTE: This form is authorized by s. 30.92, Wis. Stats. You must complete this form in order to apply for or receive financial assistance from the Department of Natural Resources under s. 30.92, Wis. Stats. Failure to complete this form will result in denial of financial assistance.

Date Prepared January 31, 1994	
LEAVE BLANK - DNR USE ONLY	
Received	Project Number
Acknowledged	

- Complete the suggested resolution on the reverse side, or submit a resolution conforming to s. NR 7.07(2)(a) or NR 7.08(2)(a), Wis. Adm. Code.
- Submit 2 copies of all forms and attachments. See reverse side for necessary attachments.
- Mail application to the appropriate DNR district office (address on reverse side).

1. Type of Project

Feasibility Study
 Development Project
 Channel Dredging
 Aids to Navigation and Regulatory Markers
 Weed Harvesting Equipment

2. Applicant's Name Pine Lake Protection & Rehabilitation Dist. Street or Route Rt. 2, Box 615 City, State, Zip Code Hiles, WI 54511	3. Name of Individual Authorized to Act on Behalf of Applicant Victor Burkey Title Chairman Business Telephone Number Home Telephone Number
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4. Project Title
Pine Lake Weed Harvester Acquisition

5. Name to Appear on Check(s)
Pine Lake Protection & Rehabilitation Dist.

6. List proposed work items for a feasibility study, development or channel dredging project, with schedule for completion. For development or channel dredging projects, provide proof of project's feasibility. Summarize the number and type of navigational or regulatory markers. For weed harvesting equipment, list the pieces of equipment, how they are to be utilized and maintained. Plans submitted for the development of launching ramps should indicate percentage slope of the ramp and the width of the existing or proposed boarding dock. (Attach additional sheets if necessary.)

Pine Lake Dist. is seeking to purchase an Aquarius Systems model H-420 weed harvester "Silent Pack Engine" and TRC-12 Trailer-Conveyor.

This equipment will be used to accomplish the goals of the aquatic plan management plan outlined in the attached Pine Lake Management Plan. The District is seeking to improve the lake's recreational use, fish population and aesthetic appearance as well as remove nutrients.

Upkeep of the equipment will involve a daily maintenance check and log as well as a routine and required maintenance including oil changes and parts replacement. The Pine Lake Dist. will be responsible for routine and required maintenance. Daily maintenance will be performed by the harvester operators. A daily maintenance plan will cover inspection of the equipment, checking for proper fluid levels and recording operation, fuel and oil use in a daily log.

Estimated Costs		LEAVE BLANK - DNR USE ONLY	
		Eligible Costs	
State Share	\$41,025.00 ²⁷⁵	State Share	
Applicant's Share	\$41,025.00 ²⁷⁵	Applicant's Share	
Total	\$82,050.00	Total	

Handwritten note: plus interest 500 32,550.00 5/15/94

8. Check here if the applicant conducts a boating safety enforcement and education program approved by the Department.
9. List any other state or federal aid, grant or loan program that have been, are, or may be involved in this project.
 If none, check here

I, Victor Burkey, the applicant's authorized official, certify that to the best of my knowledge, the information in this application is true and correct.

11. Typed Name of Authorized Official Victor Burkey	Signature of Authorized Official <i>Victor Burkey</i>
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REQUESTING WISCONSIN WATERWAYS COMMISSION
FINANCIAL ASSISTANCE TO ACQUIRE
WEED HARVESTING EQUIPMENT

WHEREAS, The Pine Lake Protection and Rehabilitation District exists and is operational pursuant to Chapter 33 of the Wisconsin Statutes and;

WHEREAS Pine Lake located in the Town of Hiles, in the County of Forest in the State of Wisconsin, is desirous of obtaining weed harvesting equipment to help control the weed problems developing in Pine Lake, and;

WHEREAS the voting members of the Pine Lake Protection and Rehabilitation District have voted to request financial assistance to acquire said weed harvesting equipment at a special meeting held on October 30, 1993, and;

WHEREAS, the Pine Lake Protection and Rehabilitation District has budgeted a sum sufficient to complete this acquisition and management plan;

THEREFORE THE DISTRICT AUTHORIZES, Victor R. Burkey, Chairperson, to act on behalf of the Pine Lake Protection and Rehabilitation District as follows;

- a) Submit an application to Wisconsin Waterways Commission for financial assistance.
- b) Sign documents and take whatever steps necessary to secure a loan for the matching funds.
- c) Sign any documents that are necessary to complete the approved project and application to acquire the needed weed harvesting equipment.

THEREFORE BE IT RESOLVED, The Pine Lake Protection and Rehabilitation District respectfully requests the Wisconsin Waterways Commission grant financial assistance to acquire weed harvesting equipment and;

BE IT FURTHER RESOLVED, that the Pine Lake Protection and Rehabilitation District will at all times comply with State and Federal rules for this program.

PINE LAKE DISTRICT AQUATIC PLANT MANAGEMENT PLAN

This plan has been prepared by the Pine Lake Protection and Rehabilitation District

January 31, 1994

STATEMENT OF HARVESTING GOALS AND OBJECTIVES

The goals and objective of the Pine Lake Protection and Rehabilitation District are as follows:

1. To effectively control the quantity and density of nuisance aquatic plant growth in portions of Pine Lake to better facilitate the conduct of water-related recreation, improve the aesthetic value of the resource to the community and enhance the resource value of the waterbody.
2. To manage in the lake, in an environmentally sound manner, pursuant to the standards and requirements set forth in Administrative Codes NR 103, Water Quality Standards for Wetlands, and NR 107, Aquatic Plant Management, to preserve and enhance its water quality and biotic communities, their habitats and essential structure and function in the waterbody and adjacent areas as determined through our overall lake management plan.
3. To protect and maintain public health, and promote public comfort, convenience, necessity and welfare, in concert with the natural resource, through the environmentally sound management of native vegetation, fishes and wildlife populations in and around Pine Lake.
4. To promote quality, water-based experience for residents and visitors to Pine Lake consistent with the policies and objective of the Wisconsin Department of Natural Resources.

BASELINE INFORMATION

LAKE MORPHOMETRY

Pine Lake is a beautiful body of water approximately 1660 acres, located in the Heart of Nicolet Forest, in Forest County, Wisconsin. On the northern end of the lake is the Town of Hiles, with a population of approximately 300 people. A beach, campground, and public access boat launch are located on the northwest shore of the lake. Public boat access is in close proximity to the campground but is separate and distinct from the campground itself. It has two campgrounds, one public and one private and is the head of the Wolf River. Being the head of the Wolf River, the lake is especially valuable to not only northeastern Wisconsin but also central Wisconsin. The counties that enjoy the beautiful pristine Wolf River with its rapids and picturesque waters flowing out of Pine Lake are Langlade, Menominee, Shawano, Outagamie, Waupaca, and Winnebago County, where it merges into Lake Poygan, then Butte des Morts and eventually into Lake Winnebago. The waters that emanate from Pine Lake flow through all of these counties and affect the lives of numerous Wisconsinites as the water journeys from Pine Lake to Lake Winnebago. Pine Lake is one of the most valuable water resources in the State of Wisconsin and it is important to protect its resources and maintain its weed control.

The depth of the lake varies from 1 foot to a maximum depth somewhere between 18 and 20 feet. Being a shallow lake, it is conducive to many varieties of aquatic plants. Pine Lake is a good fishing lake known for its pan fish and northern pike. In recent years the DNR has also stocked walleye pike. It is a popular fishing lake and has an annual fishing contest in February. The lake is also used extensively in the summer months for boating and other water sports.

The Pine Lake Protection and Rehabilitation District is a legal entity unto itself and was created to enhance the quality of the lake for the people utilizing Pine Lake and protect and preserve the quality of the lake. Pine Lake Protection and Rehabilitation District operates under Chapter 33 of the Wisconsin Statutes. A copy of the by-laws are included herein as Appendix "A".

RECREATIONAL USES

Pine Lake is a multi-purpose body of water serving all forms of recreation, including boating, swimming, skiing and fishing during the summer months as well as ice-fishing, ice-skating, snowmobile, and cross country skiing, and is the home of the annual Hiles volunteer fire department fishery.

its designee. Reports will be provided on a regular basis to the Lake Association Board of Commissioners regarding the weed harvester maintenance and operational activities of the equipment.

HARVESTED PLANT MATERIAL TRANSFER SITE(S)

The Lake Association has at least two sites that it will be able to transfer plant materials harvested from the lake. (See Map II) In addition to these two sites there are several others that are under consideration. The plant material will be transferred to the trailer using the conveyor system and then on to a dump truck to be transported to the disposal site. The plant materials will be transferred to a 32 acre site owned by Alois Bukovic located just off the northwest shore of Pine Lake. (Legal description T-37 N north range 12 east section 9). Mr. Bukovic has given permission to the Lake Association to transfer the materials to his 32 acres. Aquatic plants make good fertilizer for fields and gardens so there may be other alternative means of disposing of the aquatic plants if people want them for gardening. The drop off sites that have been selected by the Lake Association will provide minimal interruption to people using the lake for recreational purposes and will cause no inconvenience to any persons who are in the immediate area.

The vehicle that will be used to transport the materials will be leased for the first couple of summers until the Lake Association can determine whether it is cost efficient to purchase its own vehicle. Leasing arrangements through one of the local car dealers in Crandon, Rhinelander, or Three Lakes, is cost efficient at this juncture and can be incorporated into the existing budget without any increase in the levy limit.

MAINTENANCE SCHEDULE AND STORAGE

The Lake Association will contract for routine maintenance of the harvester in accordance with the manufacturer's recommendation. The Pine Lake Association is fortunate to have an excellent maintenance opportunity through the services of Bob's Garage located just off Pine Lake in the Town of Hiles. Robert Foltz is a life-long resident of Pine Lake and owns and operates his own automotive garage. His expertise and maintenance of this type of equipment will be beneficial to the Lake Association.

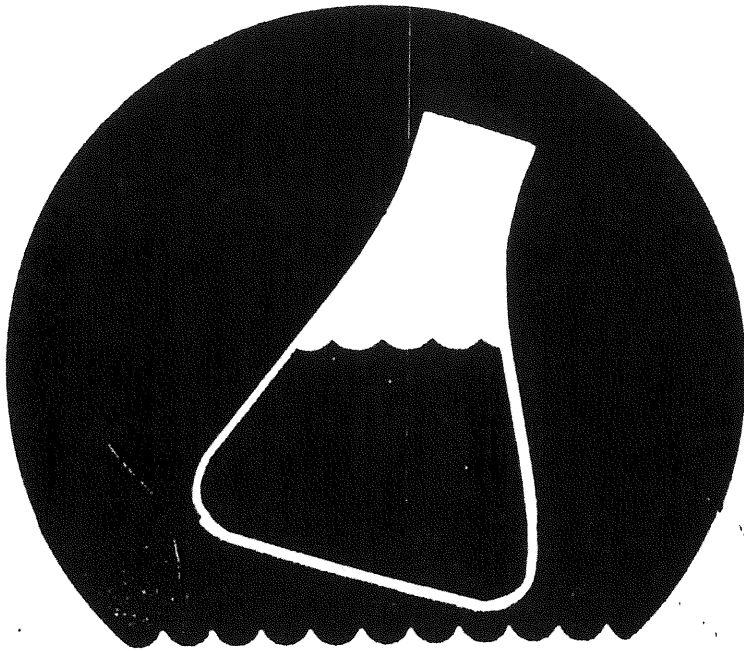
For storage, the Lake Association will be utilizing the property of Lake Association Chairman, Victor Burkey. Chairman Burkey has agreed to store the equipment at his residence and oversee the maintenance and day-to-day operation of the equipment. As of this writing, the Association is guaranteeing that the harvester will be covered or under an overhang, however, the Association is currently reviewing several other spots where indoor storage would be viable. The Association's number one goal is to find a indoor place of storage for the winter and feels comfortable that this will be accomplished.

Lake Harvesting Information

Pine

Date	Location	Number of Loads	Time Spent	Plant Type	Cutting Depth	Problems or Observations	Fish Observations			Operator	No. of Hours
							Type	Estimated Number	Game Fish Returned		

Limnological Study
of Pine Lake
Forest County
April 1992 - March 1993



NORTHERN LAKE SERVICE, INC.

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general macrophyte survey was performed. For a description of this survey see appendix A.

Samples were analyzed by Northern Lake Service for alkalinity, chloride, chlorophyll α , nitrogen (Kjeldahl, ammonia, and nitrate + nitrite) and phosphorus. These parameters are described on the following pages and all data can be found in appendix B.

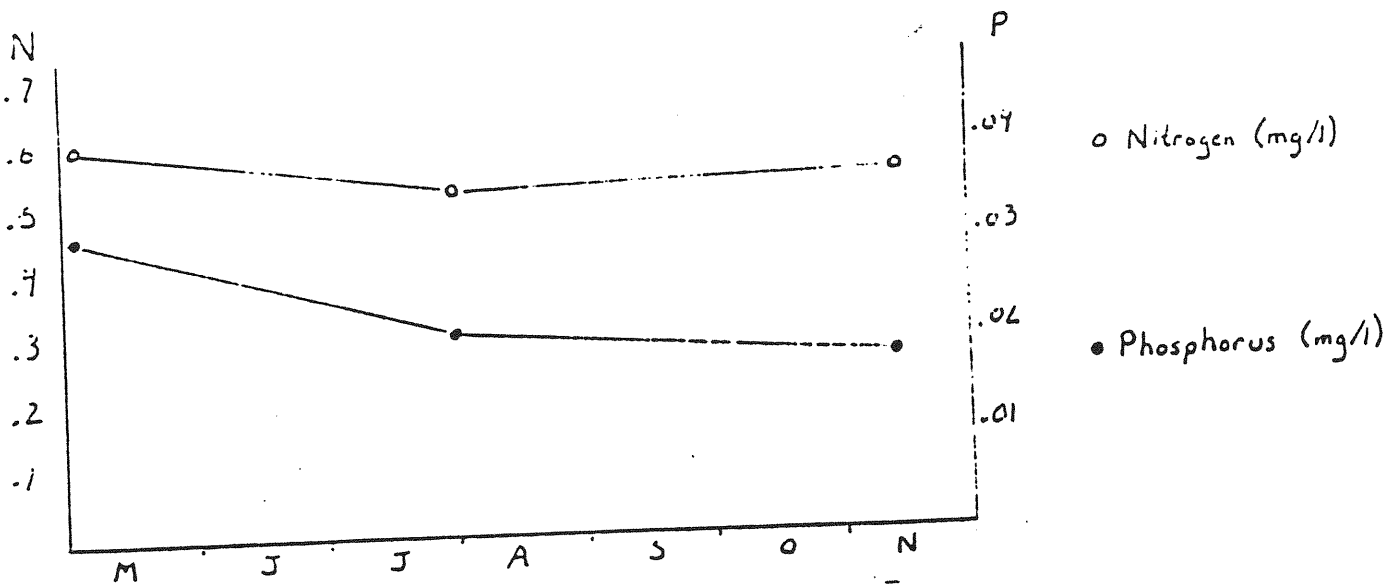
During the winter visits dissolved oxygen/temperature profiles were generated but no samples were collected.

Survey Findings

pH and Buffering Capacity: pH and total alkalinity or acid neutralizing capacity (ANC) are indications of a lake's susceptibility to the effects of acid rain. pH is the measure of acidity on a logarithmic scale from 1 to 14. A pH factor of 1 is most acidic, 14 most basic and 7 neutral. Alkalinity measures the ability of water to neutralize substances on the upper and lower ends of the pH scale. This process, called buffering, is performed by salts, mainly calcium carbonate salts. The more of these salts present, the higher the alkalinity and the more resistant to pH changes the water is. The pH on Pine Lake ranged from 5.9 to 7.4, indicating near-neutral conditions. Alkalinity was very stable, ranging from 34 mg/l to 38 mg/l, which indicates good buffering potential. According to Surface Water Resources of Forest County (WDNR-1977), the alkalinity of Pine Lake was 37 in 1963, so there

Nutrients: A nutrient is any element, ion or compound necessary for the growth and other life processes of an organism. Most nutrients are required in only trace amounts, but some, the macronutrients, are required in large enough amounts to dictate the productivity of a system. The macronutrients are carbon, nitrogen and phosphorus. Since carbon is so prevalent in a lake its levels do not get low enough to make it a limiting factor. (The limiting factor is the nutrient or energy source that exists in a quantity such that it dictates the extent of growth.) Therefore, nitrogen and phosphorus are considered the most important in terms of potential productivity of a lake.

The ratio of nitrogen to phosphorus remained at about 20:1 during this study. A ratio of 13:1 is generally considered the point above which phosphorus is considered the limiting factor. Graph 1 shows nitrogen and phosphorus levels on Pine Lake during the study. (Note: On this graph nitrogen values are 10 times that of phosphorus.)



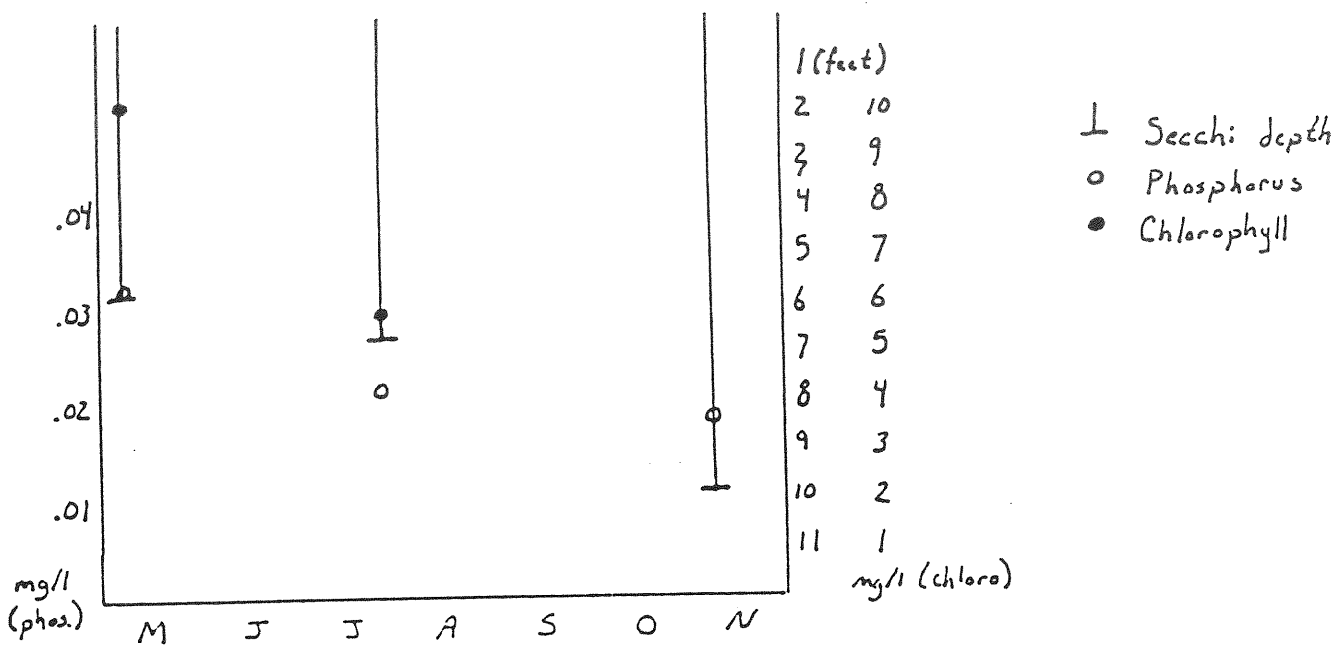
According to WDNR-1977 total nitrogen levels in 1963 were about .4 mg/l. This is not a significant difference from current levels. (A total phosphorus value is not given for the 1963 sampling.)

Dissolved Oxygen - Dissolved oxygen is critical to the survival of fish. In the spring, when a lake turns over, dissolved oxygen levels will be at or near saturation throughout the water column. Over the course of the summer, levels near the surface will fluctuate slightly with variations in temperature and mixing. In shallow, productive lakes such as Pine, oxygen levels will remain fairly constant throughout the water column during open water periods, but can be depleted very rapidly during the winter when production (by plants) ceases but consumption (by animals) continues. If oxygen levels are depleted enough, fish begin to suffocate causing a phenomenon called "winter kill". Total oxygen depletion also provides a more favorable environment for nutrient recycling from the sediments, meaning more nutrients available for macrophyte or algae growth in the spring.

The following page includes all dissolved oxygen/temperature profiles that were generated during the study. Numbers on the vertical axis are depths in meters. Those on the horizontal axis represent both temperature in °C and dissolved oxygen in mg/l or parts per million. The last three graphs show that oxygen levels were not dramatically depleted during the winter. Dissolved oxygen and temperature data is included in appendix B.

Chlorophyll

Chlorophyll α , a pigment found in algae, is used as an indicator of algal growth. It is often closely associated with water clarity and phosphorus levels. Phosphorus is necessary for algal growth and the more algae, the lower the visibility, thus the relationship. The following graph shows that relationship on Pine Lake.



For complete chlorophyll results see appendix 2.

Macrophytes

Aquatic plant growth occurred throughout most of Pine Lake to a depth of 13 feet. Twenty-eight different species were observed during the July 30, 1992 study. Of these, four were floating-leaf plants, three were emergent, and the remaining 21 were submergent species. A separate report on this study, including field sheets, maps and species descriptions, is included as appendix A.

Trophic Level	Total Phosphorus	Secchi Disc	Chlorophyll
Eutrophic	20	2.0	8.5
Mesotrophic	10	4.0	2.3
Oligotrophic			

(Carlson, R.E., 1977, A trophic state index for lakes: *Limnology and Oceanography*, March, v. 22(2), p. 361-369)

Water quality index	Total Phosphorus (mg/l)	Chlorophyll α (ug/l)	Secchi (ft)
Excellent	<0.001	<1	<19.7
very good	.001-.010	1-5	9.8-19.7
good	.010-.030	5-10	6.6-9.8
fair	.030-.050	10-15	4.9-6.6
poor	.050-.150	15-30	3.3-4.9
very poor	>.150	>30	>3.3

(Lillie, R.A., and J.W. Mason, 1983, *Limnological characteristics of Wisconsin lakes: Wisconsin Dept. of Natural Resources Technical Bulletin No 138, 1116 p.*)

A number of actual and potential problems exist due to this situation. Eutrophic conditions often mean extensive weed growth, which can limit recreational activities and adversely affect aesthetics. Macrophytes also provides cover for small fish which is necessary to an extent, but if it becomes too thick and widespread, larger predators are not able to hunt effectively, and

Table 1. Common aquatic weed species and their responses to herbicides (modified from Pickerel/Crane Lake A Phase 1 Diagnostic & Feasibility Study 1992)

	Diquat	Endothal	2,4-...	Glyphosate (Rodeo)	Fluridone (Sonar)
EMERGENT SPECIES					
<i>Sagittaria</i> spp (arrowhead)	NO	NO	YES		YES
<i>Scirpus</i> spp (bulrush)	NO	NO	YES	YES	YES
<i>Typha</i> spp (cattail)	YES	NO	YES	YES	YES
<i>Lythrum salicaria</i> (purple loosestrife)				YES	
FLOATING SPECIES					
<i>Brasenia schreberi</i> (watershield)	NO	YES	YES		NO
<i>Lemna minor</i> (duckweed)	YES	NO	YES		YES
<i>Nuphar</i> spp (cowlily)	NO	YES	YES	YES	YES
<i>Nymphaea</i> spp (water lily)	NO	YES	YES	YES	YES
SUBMERGED SPECIES					
<i>Ceratophyllum demersum</i> (coontail)		YES	YES	YES	YES
<i>Chara</i> spp (stonewort)	NO ²	NO ²	NO ²	NO ²	
<i>Elodea canadensis</i> (elodea)	YES	?	NO		YES
<i>Myriophyllum spicatum</i> (milfoil)	YES	YES	YES	NO	YES
<i>Najas flexilis</i> (najad)	YES	YES	NO	NO	YES
<i>Najas guadalupensis</i> (southern najad)	YES	YES	NO		YES
<i>Potamogeton amplifolius</i> (large-leaf pondweed)	?	YES	NO		
<i>P. crispus</i> (curly-leaf pondweed)	YES	YES	NO		
<i>P. natans</i> (floating leaf pondweed)	YES	YES	YES		YES
<i>P. pectinatus</i> (sago pondweed)	YES	YES	NO		YES
<i>P. illinoensis</i> (Illinois pondweed)					YES
<i>Ranunculus</i> spp (buttercup)	YES		YES		

YES Controlled
 NO Not controlled
 BLANK Information unavailable
 ? Questionable control
² controlled by copper sulfate

16/c

	Mechanical Harvesting	Aquatic Herbicides	Dredge	Rototill	SCUBA	Bottom Screens	Drawdown	Biological
Effect on Ecosystem	Remove plant material, some small fish	possible residual effects	removes littoral zone, disturbs sediments	disturbs sediments	removes aquatic vegetation	creates clear-cut	downstream water quality effects, possible fishery effects	needs research
Effective Large-scale	yes	yes - but possible residual effects	yes	yes	no - very labor intensive	no	yes	yes
Effective Small-scale	no - difficult to maneuver	yes	yes	no	yes	yes	no	no
Species Selective	no	yes - if applied properly	yes	no	yes	no	no	yes with fungi and insects
Removes Nutrients	yes	no	yes	no	yes	no	no	no
WHR Acceptability	high - minimal environmental impact	low - permit required	low - many environmental impacts	medium - prefer harvesting	high - proven effective in southern WI	high - for small areas, permit required	low - physical features of dam prevents drawdown	low - many unknowns
Public Acceptability	high	medium - more public info needed	medium - many environmental impacts	medium - new technology	high - has been demonstrated to maintain channels up to 2 years	medium - effective but difficult to maintain	medium - depends on many factors, may have to coordinate with utility company	medium - more research and public info needed
Per acre cost	\$200 to \$600	\$75 to \$600	\$15,000 to \$20,000	\$1500	varies depending on volunteers	\$10,000 to \$15,000	nominal	N/A

format taken from "Minnesota Aquatic Plant Control Draft Reconnaissance Report," August 1989

MACROPHYTE SURVEY

PINE LAKE
FOREST COUNTY, WISCONSIN

PERFORMED BY: R.T. KRUEGER & G.A. KRUEGER

NORTHERN LAKE SERVICE, INC.
400 NORTH LAKE AVENUE
CRANDON, WISCONSIN 54520
JULY 30, 1992

PREPARED:
AUGUST 14, 1992

indicates the presence of more than one unidentified species of the given genus). Water depth, depth to vegetation, percent open water, and bottom type (if depth permits) are also recorded at each station.

Bottom type descriptions are as follows: D=detritus, G=gravel, H=hard, clay like, M=muck, r=rocks, S=sands.

Survey Finding

Pine Lake continues to support abundant and diverse plant growth. Vegetation was collected at all but 6 stations, and even these areas probably support some macrophyte growth albeit extremely sparse.

The most diversity was exhibited at station 2 with 15 species present. Three stations along the west shore share (9, 19, & 32), and three on the south end (53, 54, & 55) support at least 10 species. Most other stations with depths of under 10 ft supported 3 to 7 species.

The most abundant species were *Ceratophyllum demersum* or coontail which was present in about 75% of the lakes and *Elodea canadensis* which was present at about 45% of the stations. In combination these plants were present at all but one vegetated station, from depths of 2.5 ft. to 13 ft. *Ceratophyllum* and *Elodea* generally produce low but dense growth - sometimes to nuisance proportions.

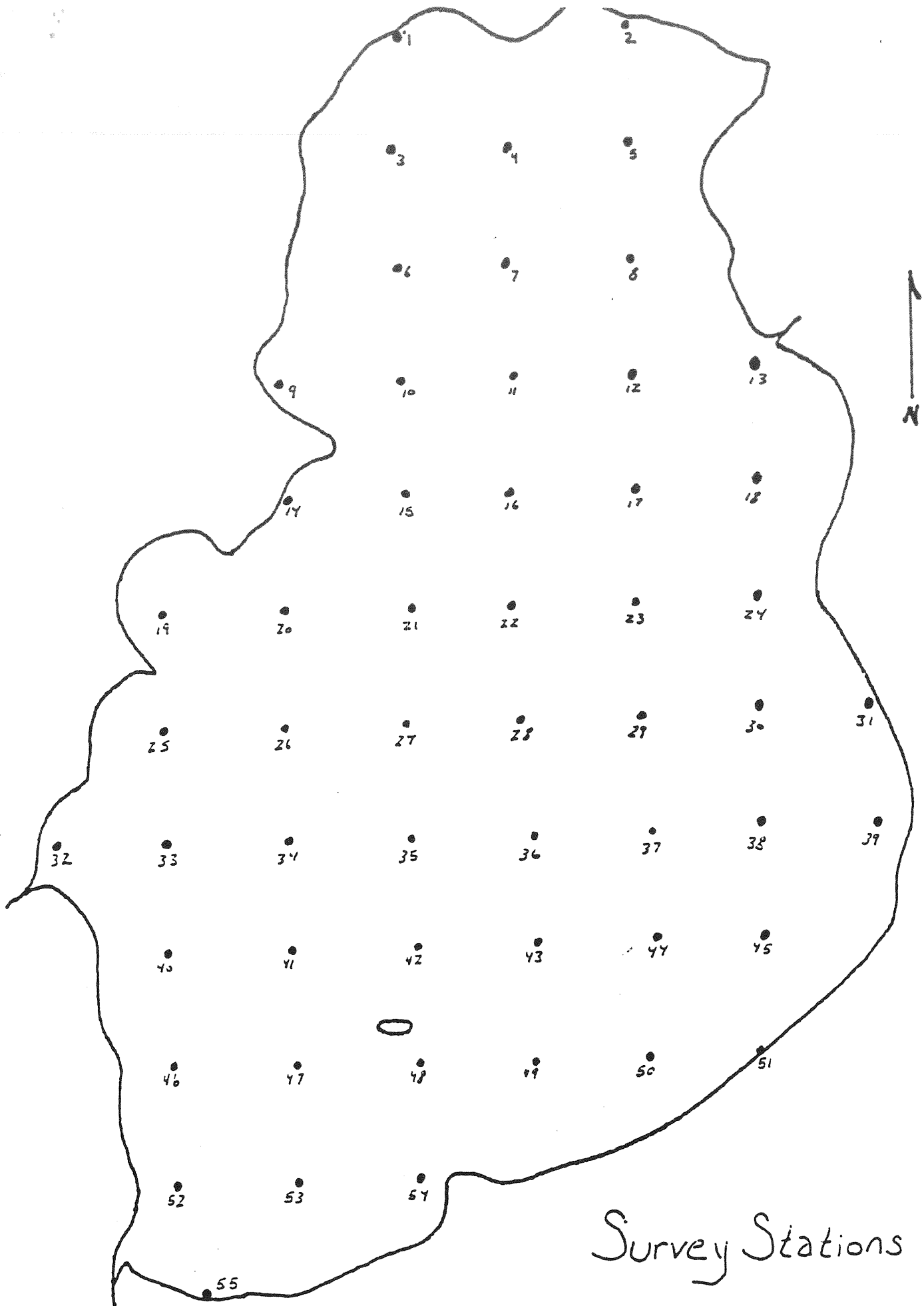
sandy bottom without much muck accumulation. Other emergents included *Typha latifolia* or cattail near the north and south shores and *Pontederia cordata* found at the mouth of Wildcat Creek. Emergents grew at depths of 3 to 5 ft.

Floating leaf vegetation was also present over about 5% of Pine Lake. The largest beds were near stations 2 and 32. The bed at station 2 consist of *Nuphar variegatum* and *Nymphaea odorata* while the one at 32 consisted of these two species along with *Brasenia shreberi*.

Summary

At the time of this survey, Pine Lake supported macrophyte growth nearly throughout. Plant growth extended to 13 ft deep and grew to an average of approximately 5.9 ft below the water's surface. (The average at the 13 stations 7 ft deep or less was 2.1 ft, while the remaining vegetated stations averaged 8 ft to growth.) Twenty-eight species were noted: 4 floating leaf, 3 emergents, and 21 submergents, two of which are actually large colonial algae. The vast majority of the plant biomass was accounted for by the submergent species, especially *Ceratophyllum demersum*, *Elodea canadensis*, and the *Potamogetens*.

As the macrophyte community maps indicate, distribution of community types and extent of growth have changed very little over the last 15 years. The species list and corresponding numbers are



MACROPHYTE SURVEY OF: *Pine*

BY: *RCK & GAK*

ON: *7-30-92*

TAXA	STATION	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<i>Brasenia Shreberi</i>																
<i>Myriophyllum demersum</i>		2	2	1		3	2	2			2	4	3	1	2	1
<i>Chara</i>																
<i>Eleocharis acicularis</i>																
<i>Elodea canadensis</i>		1						1			2					
<i>Heteranthera dubia</i>																
<i>Juncus pelocarpus</i>																
<i>Lemna minor</i>																
<i>Lemna trisulca</i>																
<i>Megalodonta Beckii</i>											3					
<i>Myriophyllum exallescens</i>																
M.																
M.																
Musci																
<i>Najas flexilis</i>			1										2			
N.																
<i>Nitella</i>																
<i>Nuphar variegatum</i>																
<i>Nymphaea</i>																
<i>Pontederia cordata</i>																
<i>Potamogeton amplifolius</i>					2					2						
<i>P. gramineus</i>																
<i>P. praelongus</i>		2	1		3	2	3					1				
<i>P. zosteriformes</i>					3						1					
<i>P. richardsonii</i>					4	2						3				
<i>P. illinoensis</i>				1	1											
<i>P. sp. variegatus</i>						2						1	4			
<i>Scirpus validus</i>											1					
<i>Sagittaria eurycarpa</i>																
<i>Sparganium polycarpum</i>																
<i>Typha latifolia</i>																
<i>Utricularia</i>																
<i>Vallisneria spiralis</i>											3					
<i>Wolffia columbiana</i>																
<i>W. sp. III</i>				1												
Change to vegetation		10.5	11	11.5	bin.	2	2	10.5			1.5	7 1/2	11	11.5	11.5	12.5
% Open water @ 0.5' depth																
Water depth (ft)		11	11.5	12	6	10	12	11	11.5	12	5	9	12	12	12	13
Bottom type		m	m		m	m	m	m	m		m	m	m	m	m	m

NORTHERN LAKE SERVICE, INC.

MACROPHYTE SURVEY OF: PINE

BY: RK GAK

ON: 7-30-92

TAXA	STATION	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
<i>Potamogeton amplifolius</i>																
<i>Potamogeton amplifolius</i>			1	3	2	2	1			4	1					
<i>Chara</i>								2			2					
<i>Eleocharis acicularis</i>																
<i>Elodea canadensis</i>		3	1	3	2		3	2	3	3	2					
<i>Heteranthera dubia</i>																
<i>Juncus pelocarpus</i>										1						
<i>Lemna minor</i>																
<i>Lemna trisulca</i>																
<i>Megalodonta Beckii</i>																
<i>Myriophyllum exalbescens</i>																
M.		P	2				1	P	4	1						
M.																
Musci																
<i>Najas flexilis</i>				3	2	1		2		3	3					
N.																
<i>Nitella</i>																
<i>Nuphar variegatum</i>																
<i>Nymphaea</i>											P					
<i>Potamogeton cordata</i>											P					
<i>Potamogeton natans</i>																
<i>Potamogeton amplifolius</i>									2	1						
<i>P. gramineus</i>							2	1	2	3						
<i>P. praelongus</i>		2	3	1					1							
<i>P. rostriformis</i>		2	3	2			1	1	2	1	1					
<i>P. robbinsii</i>		4	4	1												
<i>P. richardsoni</i>		P	P				2		2		1					
<i>P. illinoensis</i>																
<i>P. sp. 2 w/4</i>									1							
<i>Scirpus validus</i>									P	P	1					
<i>Sagittaria eurycarpum</i>																
<i>Spirodella polycarpum</i>																
<i>Typha latifolia</i>								P								
<i>Utricularia</i>																
<i>Vallisneria americana</i>							2	2	2	4	2					
<i>Wolffia columbiana</i>																
<i>Isaetes</i>							3									
Distance to vegetation		2	1	6	10	11	1.5	3	1	3	3.5					
% Open water @ 0.5' depth											95					
Water depth (ft)		4.5	3	4	10.5	11.5	4	5	6.5	5	2.5					
Bottom type		m	m	m	m	m	S	S	S	SR	S					

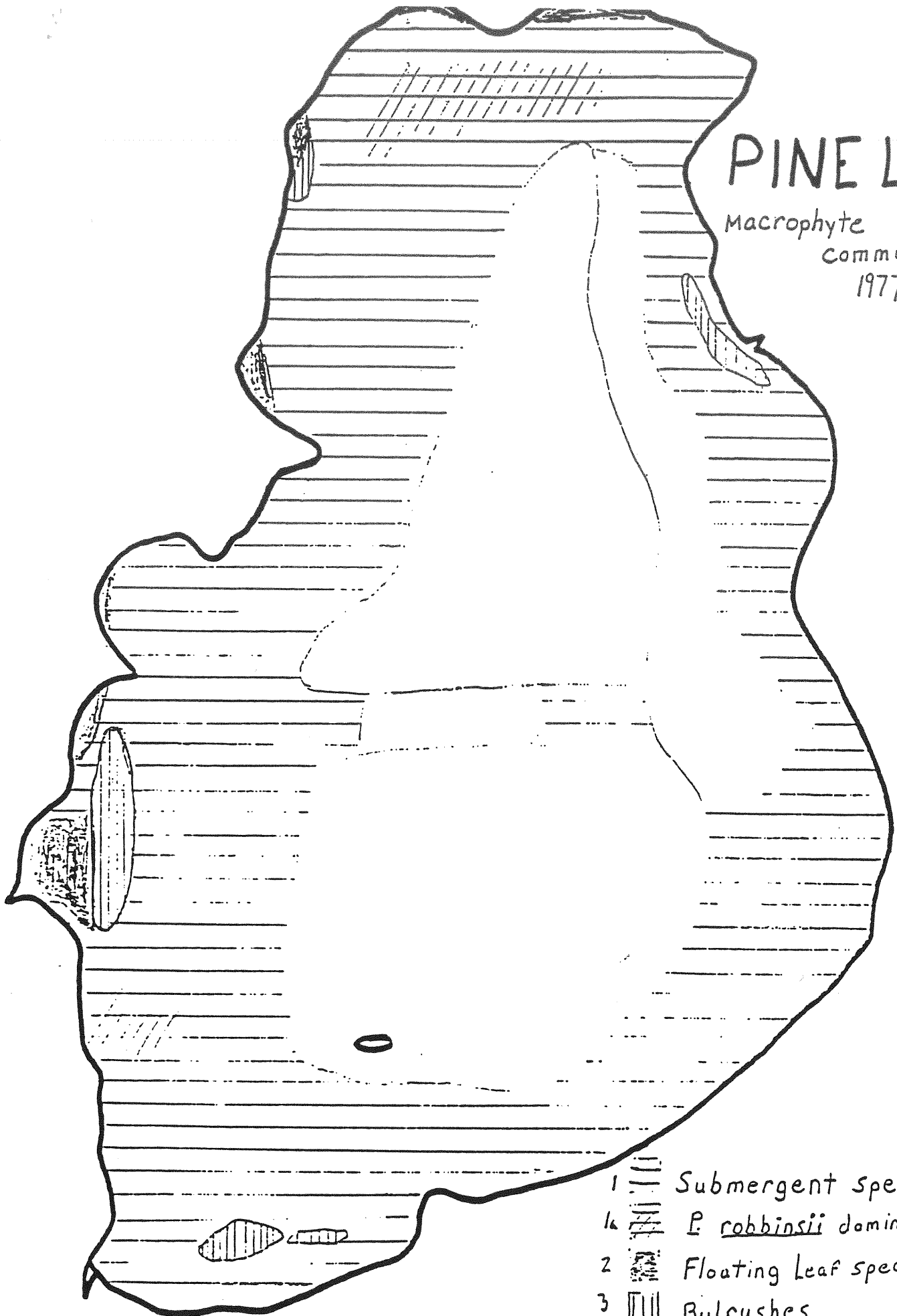
PINE LAKE MACROPHYTE SPECIES LIST

<u>Species (common name)</u>	<u>Relative Frequency(%)</u>	<u>Average Density</u>	<u>Depth of Growth(ft.)</u>
P. illinoensis (Illinois pondweed)	5.5	2.3	7 - 8.5
P. praelongus (white stem pondweed)	40.0	1.8	3 - 12
P. richardsoni (Richardson's pondweed)	25.5	1.6	2.5 - 12
P. robbinsii (Robbin's pondweed)	29.1	3.2	3 - 12
P. zosteriformes (flat-stem pondweed)	40.0	1.7	2.5 - 10.5
Scirpus heterochaetus (slender bulrush)	3.6	2	2.5 - 3
Typha latifolia	p	p	---
Utricularia vulgaris (bladderwort)	1.8	1	3
Vallisneria americana (eelgrass, wild celery)	p	p	---

Note: p=present, but not found at any numbered station.

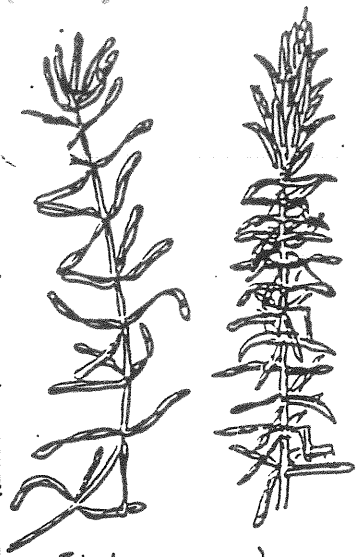
PINE LAKE

Macrophyte
Communities
1977



- 1 Submergent species
- 1a *P. robbinsii* dominant
- 2 Floating leaf species
- 3 Bulrushes

- Naja flexilis* - Slender naiad; leaves 1-3.5 cm long, opposite on stems, tapering to a slender pointed tip; leaf bases clasping; stems slender, flexible; plant ext. limp out of water.
- Nitella* sp. - large limp algae; dark green, almost transparent; "leaves" whorled on stems, with forked tips.
- Nuphar variegatum* - Yellow pond lily, spatterdock; leaves large (to 50 cm) oval, basal lobes rounded; stem stout, attached to leaf between basal lobes; flowers large (to 10 cm), yellow spherical.
- Nymphaea odorata* - white water lily; leaves large (to 40 cm) nearly circular; basal lobes pointed; stem stout attached to leaf between basal lobes; flower large (to 20 cm) with 25-50 waxy white petals surrounding yellow center.
- Pontedaria cordata* - Pickeral weed; leaves large (to 30 cm) heart-shaped, held upright above water; flowers numerous \approx 2 cm, usually purple, held above water in a spike-like arrangement (to 10 cm).
- Potamogeton amplifolius* - Large-leaf pondweed; leaves to 20 cm, folded along midrib and recurved (banana-shaped); plants often turning brown; flowers on dense spike (to 8 cm) held above the water; stipules rigid, persistent (to 4 cm); often with elliptical floating leaves.
- P. berchtoldi* - Berchtolk's pondweed; inconspicuous small-leaved pondweed; leaves 1-5 cm x 1 mm, linear with 3 veins, paired glands at leaf bases; stems very slender with little or no branching.
- P. gramineus* - Variable pondweed; leaves variable usually to 7 cm x 8 mm somewhat bluntly tapered; veins 3-7, often several erect branching stems on runner-like horizontal stem; stipules persistent \approx 2 cm long; fruits dense on 1-3 cm spike.
- P. foliosus* - Leafy pondweed; leaves usually 2-5 cm x 2 mm, linear 3-5 veins; stem slender with much branching; fruit spike spherical.



Elodea canadensis



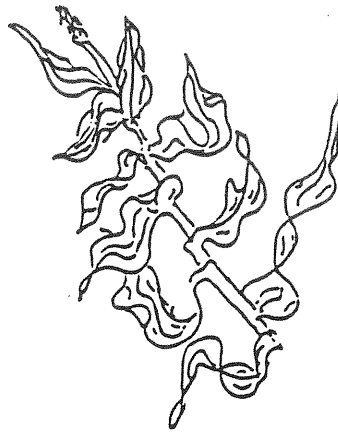
Najas flexilis



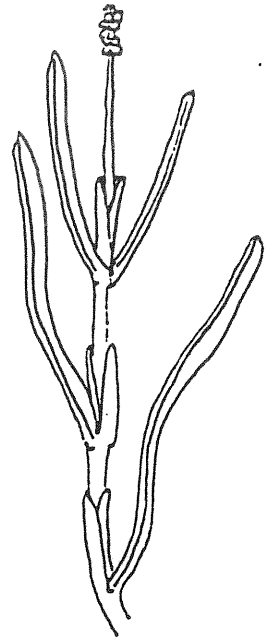
Potamogeton praelongus



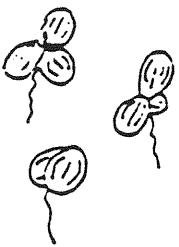
Potamogeton amplifolius



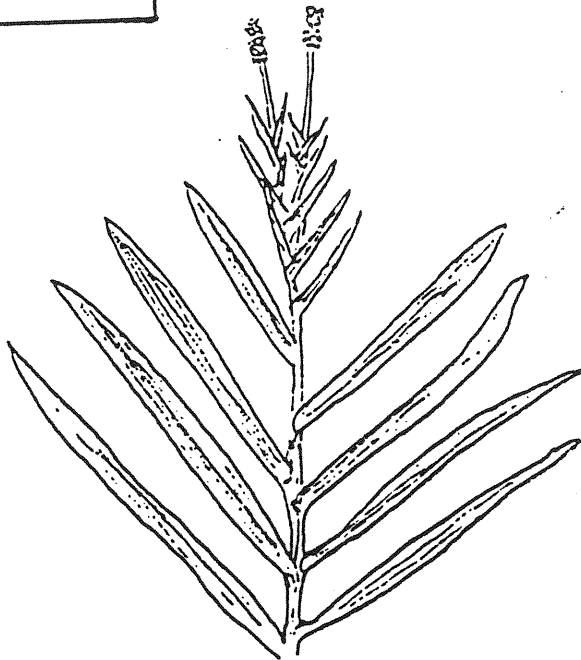
Potamogeton richardsonii



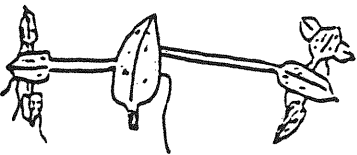
Potamogeton zosteriformes



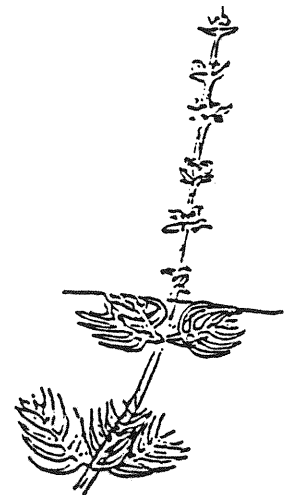
Lemna minor



Potamogeton robbinsii



Lemna trisulca



*Myriophyllum
exalbescens*

Analytical Results

Appendix B

	<u>5/8</u>	<u>7/30</u>	<u>11/11</u>
Conductivity umbo (@25c)	85	90	87
pH (s.u.)	7.4	7.4	5.9
Alkalinity (mg/l)	34	38	36
Chloride (mg/l)	< 1	< 1	3
Nitrogen, ammonia (mg/l)	< 0.05	0.08	< 0.05
Nitrogen, NO ₂ & NO ₃ (mg/l)	(0.05	0.08	0.11
Nitrogen, Kjeldahl (mg/l)	0.62	0.46	0.45
Phosphorus, total (mg/l)	0.032	0.022	0.018
Secchi disc (ft.)	5.7	7.7	9.9

Chlorophyll	CCa α	Pheo α	TC α	TCb	TCc
05/08/92	10.12	3.82	12.76	0.666	1.72
07/30/92	5.70	0.73	6.34	0.15	0.72

CC α = Corrected Chlorophyll

Pheo α = Pheophytin α

TC α = Trichromatic Chlorophyll α

TCb = Trichromatic Chlorophyll b

TCc = Trichromatic Chlorophyll c

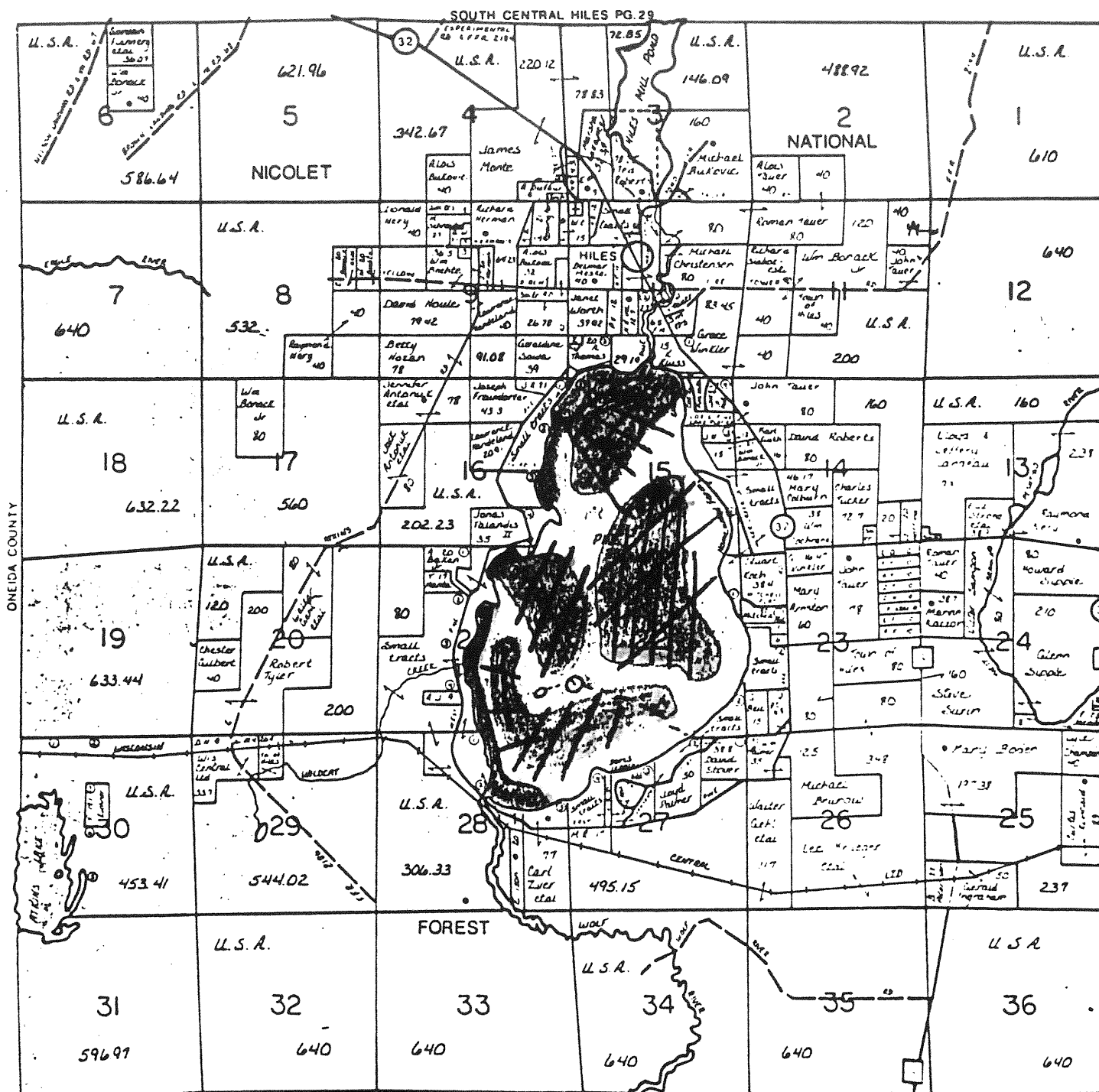
unit = ug/l

MAP I

Weed areas are designated in green and channels to be cut are designated by straight lines. This map also shows the island and rock ledge which will be precluded from any harvesting to avoid damage to fish spawning or migratory bird nesting.

SOUTH PART HILES

T.37N. - R.12E



MAP III

RESORTS

P. Thomas Campground

Sunset Resort

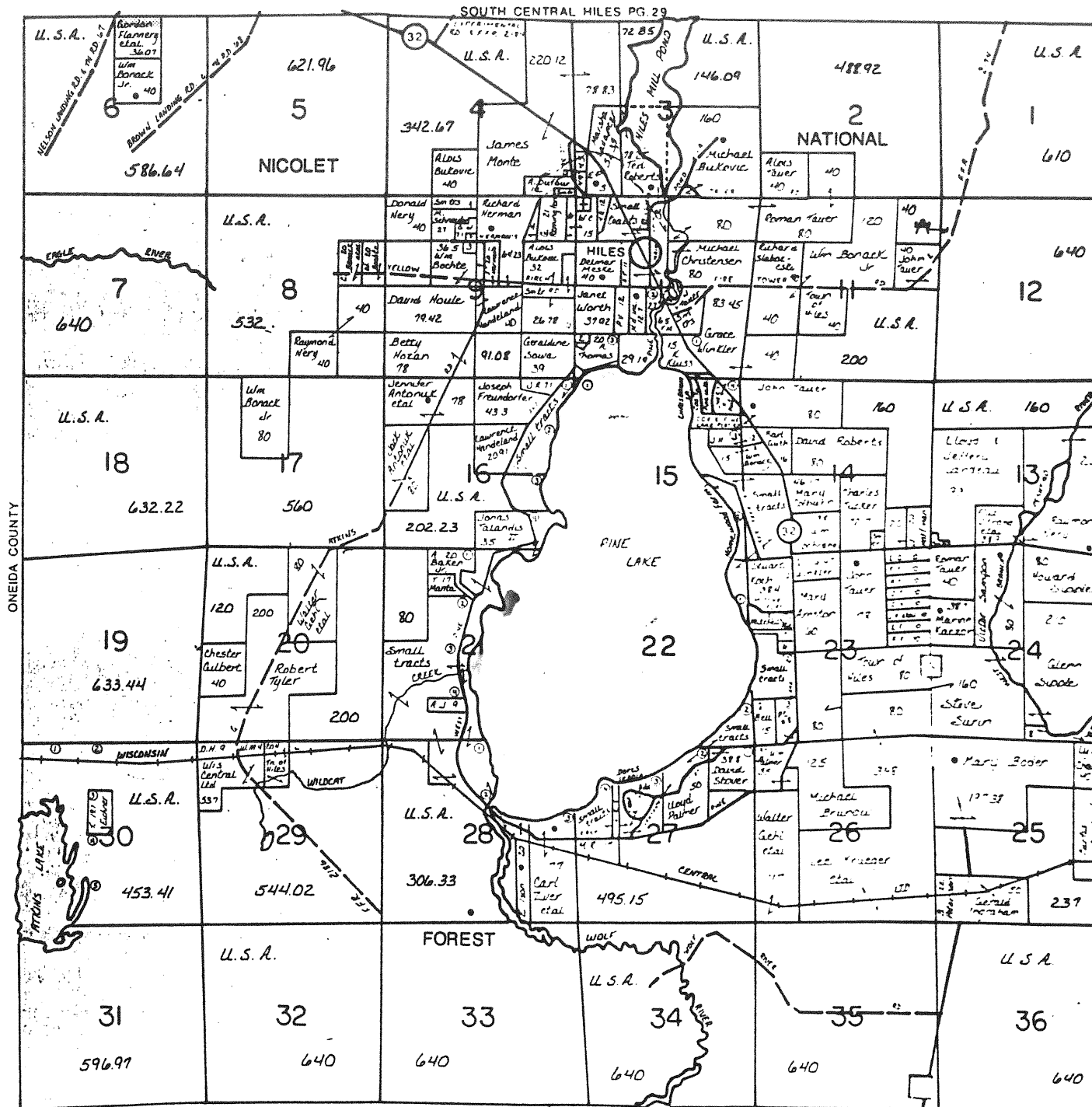
Stoney Point Resort

Deans Lake Forest Resort

Federal Campground

SOUTH PART HILES

T.37N. - R.12



FOREST COUN

Map No.

2124

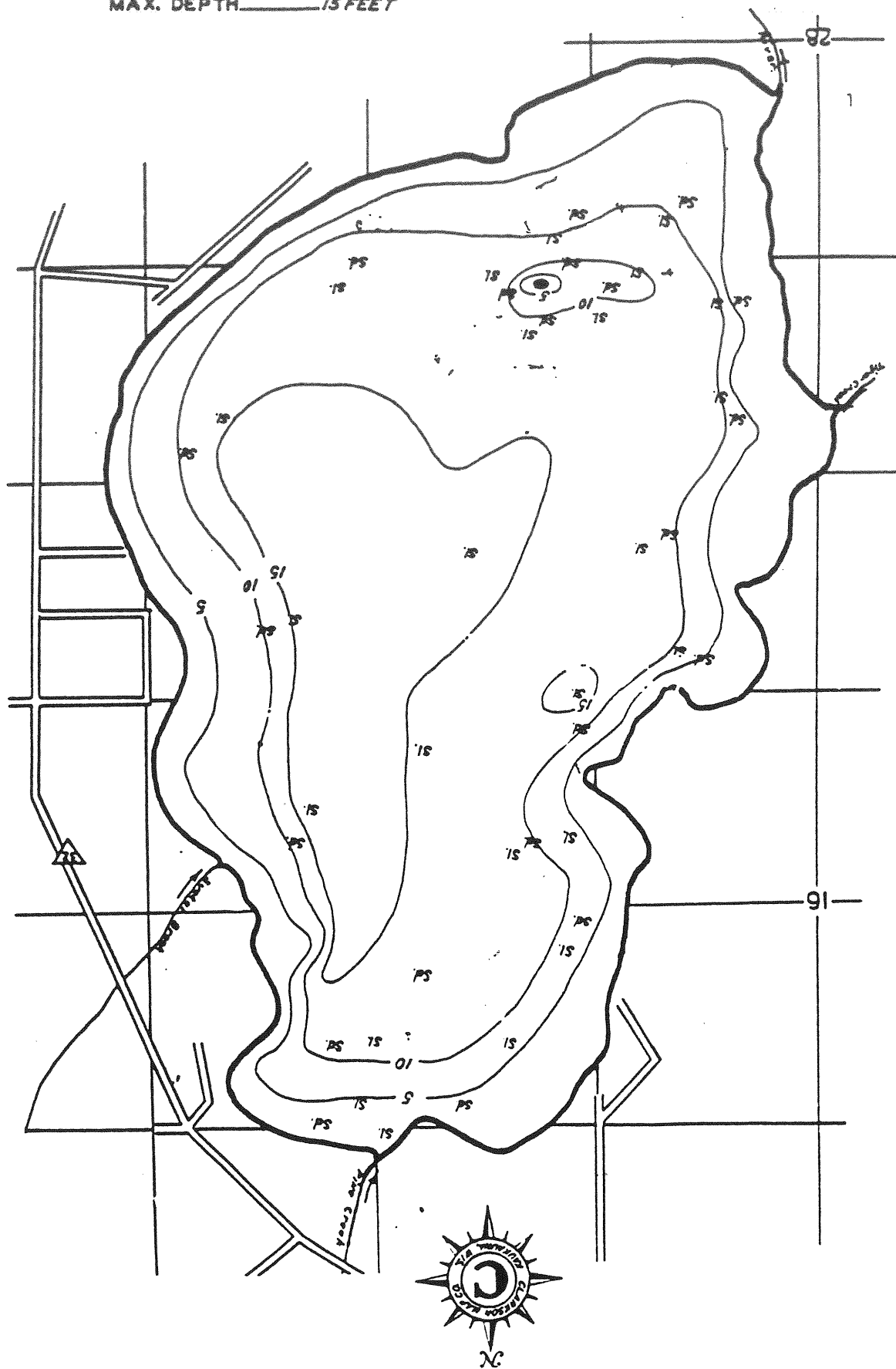
Clarkson Lake Survey Map

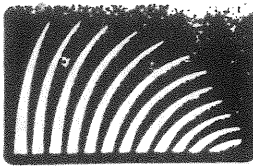
This is the only hydrographic map of this lake available, produced from original charts of Dept. of Natural Resources — Madison

A U. S. Geological Survey Map is available from us showing the area (approx. 12 square miles) adjacent to this lake.

To order specify Argonne Quadrangle

AREA _____ 1500 A
TOTAL SHORELINE _____ 7.5 MILES
MAX. DEPTH _____ 15 FEET





AQUARIUS SYSTEMS

A Division of D&D Products Inc.

P.O. BOX 215
220 N. HARRISON
NORTH PRAIRIE, WI 53153 U.S.A.
PHONE: (414) 392-2162
TELEX: 9102408406
FAX: (414) 392-2984

PROPOSAL FOR PINE LAKE, FOREST COUNTY

PRICING:

(1) HM-420 HARVESTER	\$52,500
(1) H-420 HARVESTER	57,500
STAINLESS STEEL HULL	6,000
"SILENT PACK" DIESEL ENGINE, MODEL 2L40C	800
STAINLESS STEEL MESH, NO. 1 CONVEYOR	950
CANVAS SUN/RAIN CANOPY	N/C
FOOD GRADE HYDRAULIC FLUID	300
(1) TRC-12 TRAILER-CONVEYOR	16,500
(1) S/C-12 SHORE CONVEYOR	12,500
(1) TR-12 TRAILER	6,500
(1) T-12 TRANSPORT, WITH POWER	\$39,500

TERMS OF PAYMENT:

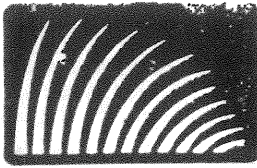
15% Deposit of total purchase price down with order, balance due upon delivery. No sales tax or use taxes included in prices. Any applicable taxes are responsibility of purchaser.

SIGNED:

Gene Duffenbach (Name) *Sept 9, 1993* (Date)
Manager (Title)

Proposal accepted by:

_____ (Name) _____ (Date)
 _____ (Title)
 _____ (Name) _____ (Date)
 _____ (Title)



GUARANTEE

PAGE 1 OF 2

This guarantee applies to new Aquatic Plant Harvesters, Trash Hunters and Support Equipment. D&D Products Inc. warrants the equipment to be free from defects in material and workmanship for a period of one year from the date of delivery of the equipment to customer.

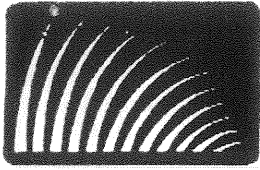
Any parts of the above mentioned machine will be either replaced or repaired free of charge if there is sufficient proof that the cause of breakage during the period of guarantee is due to defect in the material or manufacturing. Parts replaced will be our property. dissembling and reassembling cost will be charged to the customer.

In every instance where an original supplier's guarantee exists (E.G. engines, pumps, hydraulics, gear box, etc.), our liability will not exceed the duration of the original supplier's guarantee.

D&D Products Inc. responsibilities does not extend to any condition caused by or arising from neglect, misuse or abnormal use in any manner, or caused by an accident, sabotage, or force majeure; or from failure to properly maintain and service the product or regularly inspect it; or where it has been modified or altered in any way so as to affect its stability or reliability.

As a condition of this guarantee, the customer shall, promptly upon its determination of its intention to make any claim against D&D Products arising under this guarantee, so notify D&D Products in writing specifically describing the part alleged to be defective and the specific manner in which it is alleged to have been defective; and further, upon request of D&D Products shall ship such part to D&D Products at the address of D&D Products, carriage paid, for inspection by D&D Products, and or by the original supplier or manufacturer of the alleged defective part.

D&D Products' obligation under this guarantee, upon determination to its satisfaction that such defectiveness, did in fact exist within the period provided, shall be limited to, at its option, either repairing or replacing such defective part; but in no event shall D&D Products be



AQUARIUS SYSTEMS

A Division of D&D Products Inc.

P.O. BOX 215
220 N. HARRISON
NORTH PRAIRIE, WI 53153 U.S.A.
PHONE: (414) 392-2162
TELEX: 9102408408
FAX: (414) 392-2984

January 31, 1994

Mr. Charlie Struebing
Pine Lake
6015 Highway V
Caledonia, Wisconsin 53108

Dear Charlie,

Thank you for your call today to update us on your grant application. Enclosed are two catalogs with specs on the H-420 and HM-420 Harvesters, and support equipment.

The difference between the two harvesters is this: The H-420 has a hydrostatic hydraulic system. Two hydrostatic pumps are in tandem off the engine, one to power each paddle wheel. A gear pump in line powers the balance of the system (cutters, conveyors and cylinders). The paddle wheels are activated by engaging twin Morse Controls, and the other harvester functions are activated by engaging electrical toggle and foot switches. These controls may be located where ever you want at the operator platform for maximum comfort. The deluxe hydrostatic system operates at a lower temperature, requires less horsepower, and offers infinite speed control, forward and reverse.

The HM-420 has been modified with a simpler hydraulic system. It has a single variable volume pressure compensated demand pump to power all the hydraulic functions. The operator engages levers and foot pedals to directly activate the hydraulic operations. Again, these may be located where ever you prefer at the console.

Except for the hydraulic systems, the performance of the two machines is similar. You may be able to understand it better from the video; the two larger machines come with the H-Series Hydraulics as standard equipment, and we try to briefly explain the difference.

If you decide to get a transport you will have an excellent set-up. You may want to call Pete Donoghue from Lauderdale Lake in Walworth County. Lauderdale has two seasons of use on their HM-420 and Transport, and can give you some good insight for your own program.

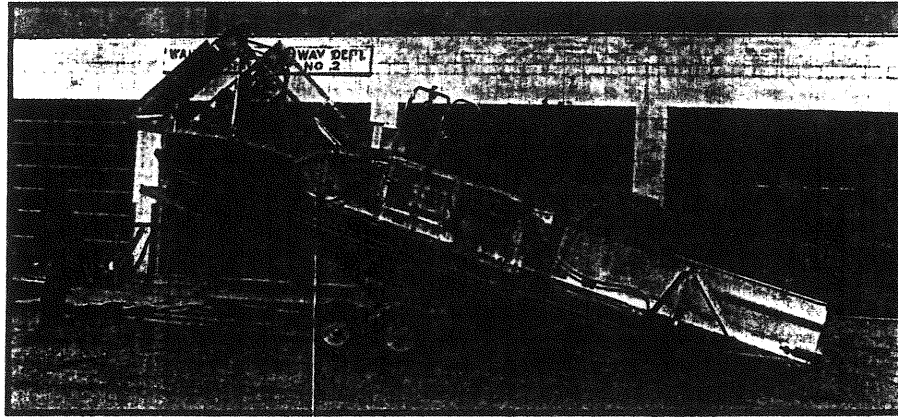
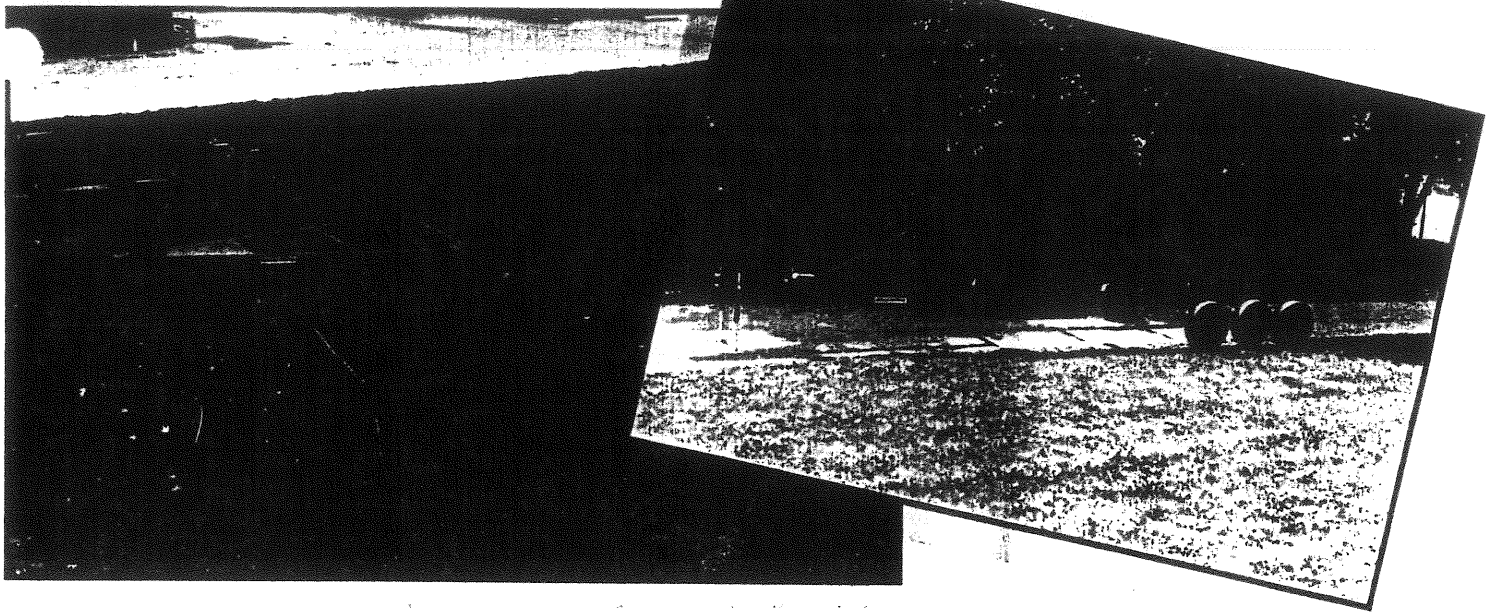
Not to complicate matters, but we do have a new way to power the transports. It is with hydraulically powered propellers instead of the outboard motor. A diesel engine runs a hydraulic system (similar to the harvester) to power the props. It costs about \$5,000 more up front, but will save money in the long run on fuel consumption and maintenance of the outboard engine. We just delivered a unit like this to Pinellas County, Florida and it works great. It is very maneuverable, and does have an advantage over the standard transport. We can discuss this option further if you are interested.

FEB 84 04 11:50AM YELL PRINTING 414 700 1070

MAINTENANCE KIT PROVIDED BY AQUARIUS SYSTEMS

Hydraulic oil filter
5 replacement blades for cutter bar
2 vertical shear fingers
2 horizontal shear fingers
2 rod end bearings--cutter drive
fire extinguisher
miscellaneous fasteners
engine oil filter
2 spring loaded hold-downs
1 hydraulic gauge
Hydraulic motor seal kit
Grease gun with grease
Tool Box with tools

TRAILERS



Several Trailer options are available for hauling the Harvesters and Transports. For most applications, the **Standard Trailer** manufactured in our plant is the best choice. A heavy-duty road legal trailer, it is designed to assure stability when hauling equipment at moderate highway speeds. It is equipped with electric brakes, winch, and lighting. To aid in launch and retrieval, the Standard Trailer has guide rails to properly locate the barge on the trailer bed.

The **Tilt-Deck Trailer** is a standard trailer which has a tilting function to aid in launch and retrieval of equipment in shallow water.

It can also set the harvester down on land and pick it up again. The **Tilt-Deck Trailer** has its own engine and hydraulic system to facilitate the tilting action and hydraulic winch. It is equipped with electric brakes and lighting, and has guide rails to properly locate the barge on the trailer bed.

As a multi-purpose unit, the **Trailer-Conveyor** is the most preferred model. First it is a road legal trailer to haul, launch and retrieve the harvester. Secondly, after installing sidewalls, it loads and stores plant material discharged from the harvester. Tow it to the dumping site and it

will self unload vegetation from the live conveyor bed. The **Trailer-Conveyor** has an engine and hydraulic system to power the conveyor bed in both directions. The **Trailer-Conveyor** features electric brakes, winch, and lighting, with guide rails to locate the barge on the trailer bed. Most Lake Managers choose the **Trailer-Conveyor** because it eliminates the need for a **Shore Conveyor** and **Dump Truck**.

Some options available for the trailers include surge brakes, spare tire, and other custom accessories.

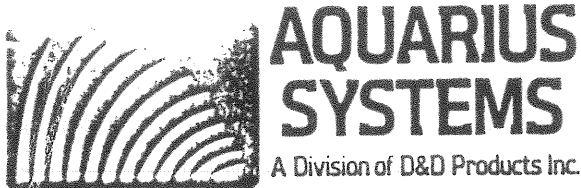


AQUARIUS SYSTEMS

A Division of D&D Products Inc.

P.O. Box 215
220 N. Harrison
North Prairie, Wisconsin
53153 U.S.A.

(414) 392-2162
TELEX: 9102408406
FAX: (414) 392-2984



P.O. BOX
220 N. HARR
NORTH PRAIRIE, WI 53153
PHONE: (414) 392-
TELEX: 91024C
FAX: (414) 392-

PROPOSAL FOR PINE LAKE REHABILITATION & RECREATION DISTRICT

PROVISIONS:

1. D&D will furnish one new H-420 Aquatic Plant Harvester.
2. D&D will furnish one new TRC-12 Trailer-Conveyor combination.
3. D&D will furnish the attached warranty.
4. Equipment will be delivered 90 - 120 days after receipt of order, FOB Pine Lake, Wisconsin.
5. D&D will furnish a basic tool kit and spare parts kit for the equipment, including complete operating manuals and engine manuals.
6. D&D will furnish an hour meter along with standard instrumentation provided by engine manufacturer. Engine will be a Hatz Diesel model 2L40C.
7. A certificate of product liability insurance will be sent directly to the District by Sentry Insurance Company upon delivery of equipment.
8. D&D will furnish on-site training for the operation and maintenance of the equipment, up to two days as needed.
9. D&D agrees that this sale is contingent upon Pine Lake Rehabilitation and Recreation District receiving harvester grant funding at the Waterway Commissioner's 1994 July Meeting. The District agrees to apply for funding at this same meeting with a DNR approved application.
10. This Proposal is valid through June 30, 1994.



**AQUARIUS
SYSTEMS**

A Division of D&D Products Inc.

P.O. BC
220 N. HARI
NORTH PRAIRIE, WI 53153
PHONE: (414) 392
TELEX: 91024
FAX: (414) 392

MAINTENANCE KIT PROVIDED BY AQUARIUS SYSTEMS

- 1 Hydraulic oil filter
- 5 replacement blades for cutter bar
- 2 vertical shear fingers
- 2 horizontal shear fingers
- 2 rod end bearings--cutter drive
- 1 fire extinguisher
- miscellaneous fasteners
- 1 engine oil filter
- 2 spring loaded hold-downs
- 1 hydraulic gauge
- 1 Hydraulic motor seal kit
- Grease gun with grease
- Tool box with tools



AQUARIUS SYSTEMS

A Division of D&D Products Inc.

P.O.
220 N. I
NORTH PRAIRIE, WI 53
PHONE: (414
TELEX: 9
FAX: (414

D&D Products Inc.
Manufacturer's Limited Warranty Continued
Page 2 of 2

Products will provide verbal and written maintenance instructions to customers, as requested.

D&D Products Inc. liability does not extend to any condition caused by or arising from neglect, misuse, or abnormal use in any manner, or caused by an accident, sabotage, or force majeure; or from failure to properly maintain and service the product or regularly inspect it; or where it has been modified or altered in any way so as to affect its stability or reliability.

This warranty is expressly in lieu of all other warranties expressed, implied, or statutory in origin, including any implied warranty of merchantability or fitness on the part of D&D Products. No representative of D&D Products has the authority to change the terms of this warranty in any manner whatsoever, and no assistance by D&D Products has the authority to change the terms of this warranty in any manner whatsoever, and no assistance by D&D Products or its representative in the repair or operation of the products covered by the agreement shall constitute a waiver of this warranty, nor shall such assistance extend or revive it.

Any claims against this warranty will be declined if repairs are carried out by any unauthorized repair person, or if a machine is sold to a third party without the consent of the company. Pending warranty claims do not entitle the buyer to delay payments due and owing to the company or any of its sales representatives.

PROPOSAL FOR PINE LAKE, FOREST COUNTY

PRICING:

(1)	H-420 HARVESTER	\$57,500.00
	STAINLESS STEEL HULL	\$ 6,000.00
	"SILENT PACK" DIESEL ENGINE MODEL 2L40C	\$ 800.00
	STAINLESS STEEL MESH,NO.1 CONVEYOR	\$ 950.00
	CANVAS SUN/RAIN CANOPY	N/C
	FOOD GRADE HYDRAULIC FLUID	\$ 300.00
(1)	TRC-12 TRAILER-CONVEYOR	\$16,500.00
TOTAL:		<u>\$82,050.00</u>
	WISCONSIN GRANT ASSISTANCE	<u>\$41,025.00</u>
	PINE LAKE DISTRICT SHARE	<u>\$41,025.00</u>

TERMS OF PAYMENT:

15% Deposit of total purchase price down with order, balance due upon delivery. No sales tax or use taxes included in prices. Any applicable taxes are responsibility of purchaser.

*sales tax is not required on the above purchase.

TENTATIVE BUDGET

The Lake Association has enacted a tentative budget for 1993-1994, a copy of which is included herein as Schedule "A". The Association was required to prepare a budget in 1993 prior to its annual meeting. The budget sets forth \$18,000 for cutting and chemical treatment of weeds. This money currently remains in the budget and, at the writing of this grant, with interest, is approximately a \$19,000 surplus. Effective January 1, 1994 the additional monies from tax revenue generated for 1994, will flow into this account. It is anticipated that \$24,000 will be raised by the tax levy which has been constant since 1992 at 2 Mills. With this additional revenue added to the surplus, it is anticipated that there will be approximately \$40,000 in the account by the summer of 1994. The Lake Association has talked to Associated Bank of Crandon regarding a 5 year note to produce its 50% matching share of the grant. By obtaining a 5 year note from Associated Bank, the Lake Association will be able to maintain a sufficient surplus of funds in the event that any unforeseen expenses occur. Additionally, in order to prepare for obtaining the weed harvesting equipment, the Association has prepared a proposed budget for 1994 relating to operating, maintenance and upkeep of the harvester. The proposed budget is less than expected revenues for 1994 resulting in a surplus and no levy increase. (See Schedule "B")

SCHEDULE "B"

PINE LAKE PROTECTION & REHABILITATION DISTRICT
PROPOSED BUDGET

1994

BUDGET EXPENSES:

WEED MANAGEMENT

Consultant Fee.....\$ -0-

WEED HARVESTING

Equipment Purchase (1).....\$10,600.00

Equipment Maintenance &
Operating Costs (2).....\$ 3,000.00

Employee Expense (3).....\$ 6,000.00

Insurance (4).....\$ 2,000.00

Transportation.....\$ 1,500.00

TOTAL \$23,100.00

- (1) Annual payment (one of five) on a bank loan from Associated Bank North in Crandon, Wisconsin, for purchase of weed harvester and trailer conveyer.

Representatives of Associated Bank have been contacted by the Lake Association and there is no problem with obtaining a loan once the exact numbers have been ascertained and the grant has been awarded.

- (2) Operating costs for approximately 12 weeks of operation, weather and other conditions permitting.
- (3) Six thousand dollars has been allocated for employee wages establishing a full-time employee at \$8.00 per hour, averaging 40 hours per week. The remaining monies will be used towards part-time employees at \$6.00 per hour and any overtime that may occur as a result of an employee working over 40 hours per week, which overtime rate will be at time and one-half.
- (4) Equipment insurance, worker's compensation insurance, liability insurance, etc.

BY-LAWS OF THE PINE LAKE
PROTECTION AND REHABILITATION DISTRICT

In keeping with the resolution of the Forest County Board that created the Pine Lake Protection and Rehabilitation District, the electors of the said Pine Lake District do adopt these By-Laws. The purpose of these By-Laws is to define and regulate the activities of the Pine Lake District, its officers and committees. These By-Laws shall at all times be interpreted in a manner consistent with the laws of the State of Wisconsin and Chapter 33 of the Wisconsin Statutes under which the District was created and operates.

Article I - Voting Eligibility

Section 1 - RESIDENT ELECTORS -- Every resident of the District who is eligible to vote in general elections shall be an eligible elector of the District. (Sec. 33.30 (2))

Section 2 - NON-RESIDENT PROPERTY OWNING ELECTORS -- Every person 18 years of age or older who owns real property in the District shall be an eligible elector of the District. Any corporation, partnership, or association that owns real property in the District may appoint an official representative who shall be an eligible elector of the District. (Sec. 33.30(2)) Real property owner is defined as a holder of a fee simple title or land contract on land or the owner of buildings on land which is leased for 20 years or more.

Article II - VOTING - Number of Votes Allowed

Section 1--MULTIPLE VOTING--Any elector may cast only one vote on any question called to a vote.

Comment: An owner of real property in the District who is also a resident of the District may cast only one vote. Likewise, a resident of the District who is also the official representative of a corporation may cast only one vote, and an owner of several separate parcels of land may cast only one vote.

Section 2 -- NON-RESIDENT MULTIPLE OWNERS-- Each spouse of a married couple may cast one vote if one or both of them own real property within the District. Other joint tenants or tenants-in-common shall select no more than two of the co-owners who shall represent them and shall each cast one vote.

Comment: This section only applies to non-residents since all residents automatically have a full vote. This option would allow husband and wife to both vote if either of them is the legal owner of real property and would allow other co-owners such as four brothers or a mother and two children to select two members of the family to vote.

Section 3--NOMINATING COMMISSIONERS--The Board shall nominate candidates to fill all vacancies on the Board. If none of the commissioners whose terms do not expire, are resident electors, two of the candidates shall be resident electors. The minimum number of candidates nominated by the Board shall be equal to the number of vacancies plus one. Any three electors may nominate additional candidates by submitting written nomination papers to the secretary at least 70 days prior to the annual meeting. The names of all nominated candidates shall appear on the written and published notices of the annual meeting.

Section 4--ELIGIBILITY OF COMMISSIONERS--The annual meeting can elect to the office of commissioner any elector. [Sec. 33.28(2) and 33.285]

Section 5--ELECTING COMMISSIONERS--At the first annual meeting the electors shall elect three commissioners to the Board. The candidate receiving the greatest number of votes shall be elected to a three-year term. The candidate receiving the second greatest number of votes shall be elected to a two-year term. The candidate receiving the third greatest number of votes shall be elected to a one-year term. At subsequent annual meetings, the electors shall elect one commissioner to fill each vacancy on the Board. [Sec. 33.30(3)(a)] When a commissioner's term of office has expired, his successor shall be elected to a three-year term. [Sec. 33.28(2)] If a commissioner leaves office before the expiration of his term, his elected successor shall serve only for the remainder of the unexpired term. In any year in which more than one vacancy exists, the candidate receiving the greatest number of votes shall be elected to the three year term; the candidate receiving the second greatest number of votes shall be elected to the next longest; and the candidate receiving the third greatest number of votes shall be elected to the shortest term vacancy, if any. One of the three elected commissioners must be a resident of the District. [Sec. 33.28(2)] If none of the commissioners, whose terms do not expire, are resident electors, the resident elector receiving the greatest number of votes shall be elected to the three year term. All elections for the office of commissioner shall be conducted by secret, written ballot. Commissioners shall assume their office immediately following the annual meeting at which they are elected.

Section 6--ANNUAL BUDGET AND TAX-- At the annual meeting and budget hearing the Board shall present a proposed budget and tax for the coming fiscal year beginning October 1. The electors of the District shall approve the budget and vote the tax as proposed or modify the budget and change the tax accordingly. The property tax shall not exceed a rate 2.5 mills of equalized valuation as determined by the Wisconsin Department of Revenue. (Sec. 33.30(3)(c))

Section 5--(Option B)--COMPENSATION-- The commissioners shall receive a per diem remuneration of \$15, for service in office and shall be paid for actual and necessary expenses incurred while conducting the business of the District. This provision shall not apply to commissioners who receive remuneration by virtue of their position on town boards, village boards, city councils, and county boards.

Section 6--POWERS AND DUTIES--The Board shall be responsible for:

1. Initiating and coordinating research and surveys for the purpose of gathering data on the lake, related shorelands and the drainage basin. [Sec. 33.29(1)(a)]
2. Planning lake rehabilitation projects. (Sec. 33.29(1)(b)) .
3. Contacting and attempting to secure the cooperation of officials of units of general purpose government in the area for the purpose of enacting ordinances deemed necessary by the Board as furthering the objectives of the District. [Sec. 33.29(1)(c)]
4. Adopting and carrying out lake protection and rehabilitation plans and obtaining any necessary permits therefor. [Sec. 33.29(1)(d)] and
5. Maintaining liaison with those officials of state government involved in lake protection and rehabilitation. [Sec. 33.29(1)(e)]

The Board shall have control over the fiscal matters of the District, subject to the powers and directives of the annual meeting. The Board shall annually, at the close of the fiscal year, cause an audit to be made of the financial transactions of the District, which shall be submitted to the annual meeting. [Sec. 33.29(2)] A majority of the commissioners plus one must be present when a resolution is passed to commit the District to borrowing money or to using any other financing method prescribed by law. [Sec. 33.31] The Board may use special assessment or charges for the purpose of carrying out District protection and rehabilitation projects, or for other lake management (or sanitary service) activities undertaken by the District. [Sec. 33.32(1)]