



PERMIT TO DESTROY AQUATIC VEGETATION

Permit No.: 10F-3A756

Device No.:

The Commissioner of the Natural Resources, pursuant to authority by law, hereby grants this permit to the person whose name appears below, for the purpose specified, dates inclusive as shown, in the conditions hereinafter set forth:

Permittee's Name JOHN STEINWORTH WBL CONSERVATION DIST. 4701 HIGHWAY 61 WHITE BEAR LAKE MN 55110	Fire Number Lake Address (if different) 4701 HIGHWAY 61 WHITE BEAR LAKE MN 55110	Telephone Number 651-429-8520
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INCLUSIVE DATES OF PERMIT:

FROM: June 08, 2010	TO: September 01, 2010	TYPE OF PERMIT: 1 Season
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THIS PERMIT APPLIES ONLY TO THE WATER AREA AS DESCRIBED AS FOLLOWS:

Name of Lake White Bear	Acres 82016700	County Washington
Extending _____ feet along shore and lakeward a maximum distance of _____ feet and 60 acres.		
Treatment by permittee or: LM - Lake Management		
<u>Location of Treatment Area:</u> Adjacent to permittee's property only as illustrated on the attached map with delineated areas by Brittany Hummel (DNR Ecological Services).		

Type of Control:

Chemical control of Emergent vegetation (Eurasian Watermilfoil).

Means and Methods Allowed:

Up to one (1) treatment with an Auxin-mimic herbicide to be applied per label instructions for selective EWM control.

THE PERMITTEE OR AGENT SHALL GIVE NOTICE OF COMMERCIAL MECHANICAL CONTROL OR CHEMICAL TREATMENT DATE TO THE FOLLOWING PERSON WHICH SHALL BE RECEIVED BEFORE BEGINNING ANY WORK HEREUNDER. FAILURE TO NOTIFY PRIOR TO BEGINNING WORK OR VIOLATION OF OTHER TERMS AND CONDITIONS OF THIS PERMIT SHALL BE GROUNDS FOR REVOCATION OF THIS PERMIT OR REFUSAL TO RENEW.

Aquatic Plant Treatment Notification System, 1200 Warner Rd. St. Paul (651) 296-9242

The Minnesota Department of Natural Resources does not vouch for the effectiveness of any control method or operation nor does it stand as arbiter whether or not any such method or operation has been satisfactory. This permit is permissive only and no liability shall be incurred by the State or by any of its offices, agents, or employees by reason of the issuance of it or by reasons of acts or operations of the permittee. The permittee shall be solely responsible for any damage or injury to persons, domestic or wild animals, waters, or property, real or personal of any kind, resulting from the permittee's acts or operations, and at all times the State of Minnesota, its officers, agents, and employees, shall be held harmless from any liability for such damage or injury.

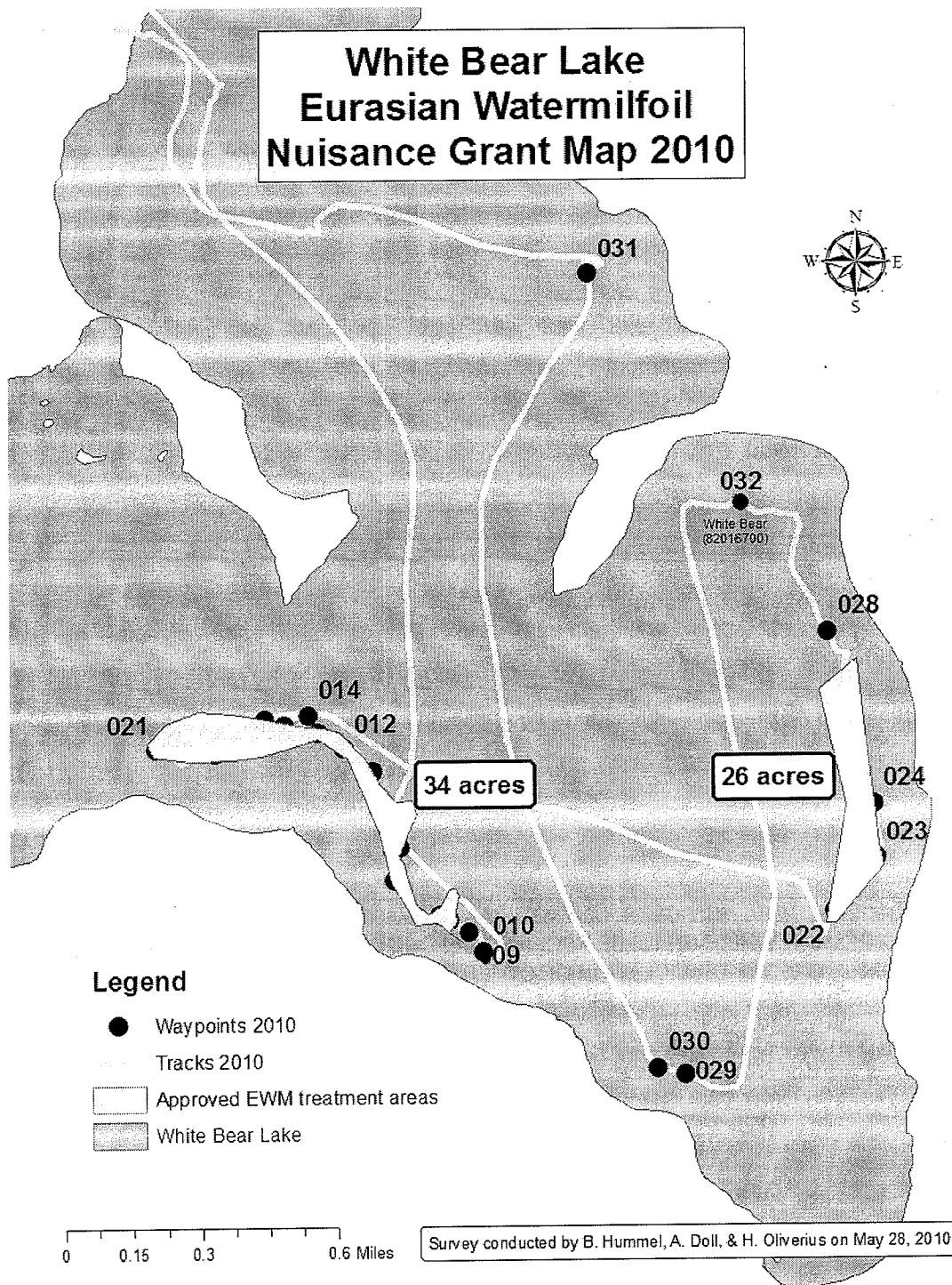
AFS: 610 EAST METRO
CO: 374
Other:

Authorized Signature for Commissioner

Date

10 June 2010

Figure 2: DNR map of May 28th, 2010 inspection. The yellow line represents the boat track taken during the survey. The black dots are surveyed waypoints. The beige polygons are the DNR recommended EWM treatment areas for the nuisance grant. The two polygons on this map (34 acres & 26 acres) should be reimbursed through the nuisance grant program.



Sisler, Sean (DNR)

From: Hummel, Brittany (DNR)
Sent: Tuesday, June 01, 2010 8:25 PM
To: Sisler, Sean (DNR); Ohmann, Tim (DNR); Levitt, Jim (DNR)
Cc: Welling, Chip H (DNR); Crowell, Wendy J (DNR)
Subject: FW: White Bear Nuisance Grant delineation report
Attachments: White Bear Delineation May.28.2010.doc

Follow Up Flag: Follow up
Flag Status: Flagged

Hello APMs,

Please see the attached report regarding the areas we've delineated as qualifying for the nuisance grants. Of course, the grant approval is contingent on your approval of their permit. As you can see from the report, I've modified the requested areas (1 & 2) and denied the areas the applicants labeled #3.

Please let us know if you will approve the permit for White Bear Lake (utilizing the delineation in the attached report).

Email me with any questions.

-Brittany

From: Hummel, Brittany (DNR)
Sent: Tuesday, June 01, 2010 1:44 PM
To: Crowell, Wendy J (DNR); Welling, Chip H (DNR)
Subject: White Bear Nuisance Grant delineation report

Hello,

Please see the attached report. We recommend funding areas 1 & 2 (with modified acreages as shown on the DNR delineation map). Total acres to be reimbursed = 60.

If you have questions, please email me.

More reports to come tomorrow. We've finished delineating several lakes.

Sincerely,

Brittany Hummel
Invasive Species Specialist
Central Region - MN DNR
651-259-5828

Inspection by the Invasive Species Program

Division of Ecological Resources
Minnesota Department of Natural Resources

Lake: White Bear

DOW Number: 82016700 Date of inspection: May 28, 2010

County: Washington

Observer[s]: B. Hummel, A. Doll, H. Oliverius

Time - On Water: 1030h

Off water: 1300h

Type of inspection: Delineation of EWM for Nuisance Grant Program

Author[s] of report: Brittany Hummel

Date of report: June 1, 2010

Overall: Two areas are recommended for reimbursement (1 & 2). Other areas requested (#3) were along undeveloped shoreline or did not exhibit nuisance conditions. Nuisance conditions are defined as areas of thick/matted EWM that significantly interferes with recreation. The areas designated as #3 in the grant application were found to be avoidable by recreationists and/or were located along undeveloped shoreline (no docks, houses, etc...). Secchi disk was 15 feet at 1:15pm and the water temperature was 72 degrees F at the time of the inspection. Other species observed include coontail, curly-leaf pondweed, Robbin's pondweed, flatstem pondweed, elodea, muskgrass (*Chara* spp.), and filamentous algae. Most EWM seen during the survey was hybrid EWM.

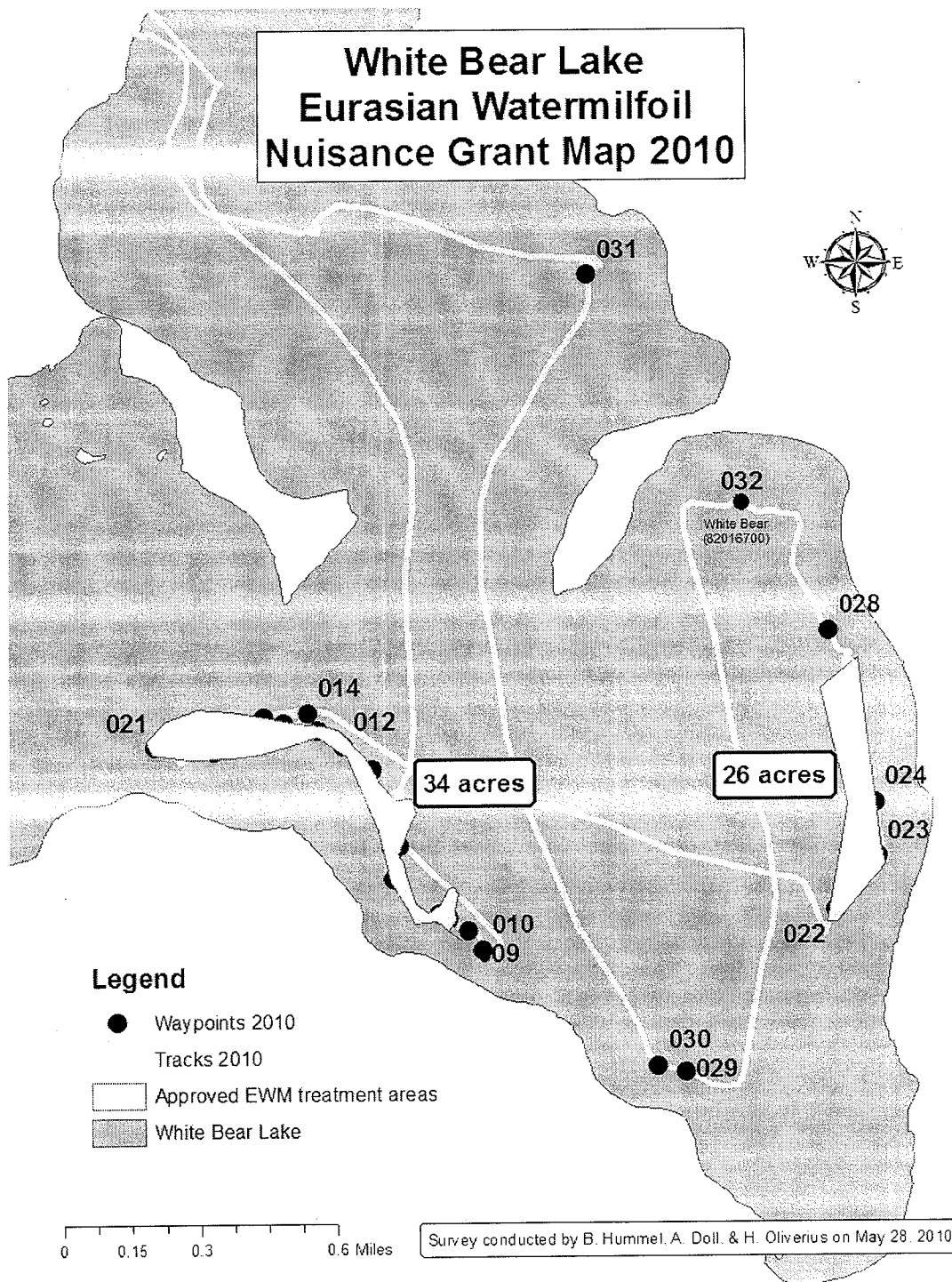
Files relating to this delineation, such as scanned datasheets and treatment maps, can be found at:
I:\FAW\SHRDATA\EXOTICS\Grant- Milfoil Nuisance\2010\Lakes\White Bear

Area	Waypoints	Acres proposed	Acres allowed	Observations	Recommend that treatment be allowed?	Recommend reimbursement?
1	001-008, 011-021	23 & 30	34	EWM (hybrid) common to abundant	yes	yes
2	22-27	58	26	EWM (hybrid) common to abundant	Yes	Yes
3	029-032	9, 9, & 13	0	Small patches of common EWM – avoidable or undeveloped.	No	No

Figure 1: Requested treatment area map provided by the applicant. Requested areas are represented by yellow polygons. "Area 1" = 23 ac. & 30 ac. polygons, "Area 2" = 58 ac. polygon, and "Area 3" = 9 ac., 9 ac. & 13 ac.



Figure 2: DNR map of May 28th, 2010 inspection. The yellow line represents the boat track taken during the survey. The black dots are surveyed waypoints. The beige polygons are the DNR recommended EWM treatment areas for the nuisance grant. The two polygons on this map (34 acres & 26 acres) should be reimbursed through the nuisance grant program.



Picture 1: EWM conditions as seen throughout Area 1.





APPLICATION FOR A PERMIT TO CONTROL: AQUATIC PLANTS, ALGAE, SWIMMER'S ITCH, AND LEECHES

(This application does not constitute a permit)

(Print or type)

063A7560/Check #: 7441 / \$35.00

I. APPLICANT INFORMATION	
(First, MI, Last) White Bear Lake Conservation District	Day Time Telephone Number 651 429-8520
Lake Home Address (# and street, RFD, Box #, City, State, Zip Code) 4701 Highway 61 WBL MN 55110	Fire # or 911 # Lake Residence Telephone Number
Permanent Mailing Address (Indicate if it is the same as above)	Email Address wblcd@msn.com
Have you ever applied for an Aquatic Plant Control Permit at this address before? No ☐ Yes ☒ If yes, Permit #: _____	

II. LAKE INFORMATION	
Lake Name (and bay if applicable) White Bear Lake	County Ramsey/Washington
Length of Shoreline Owned. I own 0 feet of shoreline on the above lake.	

III. TREATMENT INFORMATION	
1. Type of Treatment Proposed. (check all that apply)	
Mechanical Tools/Harvester ☐	Chemical ☒
An Automated Device: WeedRoller ☐ Beach Groomer ☐ Lakemaid ☐ Other ☐ Explain: _____	
2. Type of Vegetation / Organism to be Treated (check all that apply)	
Submerged Vegetation ☒	Filamentous Algae ☐
Floating-leaf Vegetation ☐	Chara ☐
Emergent Vegetation ☐	Plankton Algae ☐
Floating Bog ☐	
Snails (swimmer's itch) ☐	
Leeches ☐	
Duckweed ☐	
3. Dimensions of Proposed Treatment Area. I propose to control vegetation in an area that extends: See Attached WBL M. Pool Assessment	
feet along shore and into the lake a distance of feet where the lake is approximately feet deep, and/or a channel which is feet wide and extends feet into the lake to open water. May 26 2010 Page 5	
4. Who will be doing the treatment? The Applicant ☐ A Commercial Applicator/Harvester ☒	
If the applicant is treating, what chemical(s) or mechanical device (give brand name) - do you intend to use? Triclopyr	
If a commercial applicator / harvester will be treating, what is the name and address of the company? Lake Management, Inc	
10400 185th St N Marine on St. Croix MN 55047 651 433-3283	

IV. JUSTIFICATION: (explain reason for control) Control of Eurasian water milfoil to reduce interference with recreation

V. FEE INFORMATION: If two or more treatment types are requested, only the largest fee applies. Make checks payable to: Minnesota Department of Natural Resources	
Individual property applications.	Fee Total
Submerged, emergent or floating leaf control \$35.00	35.00
Duckweed \$20.00 per property (\$200.00 maximum)	
Snails, Filamentous Algae, Chara, or Leech control. \$4.00 per 100 feet of shoreline, or any portion thereof. (\$200.00 maximum Fee) (Fee for 150 feet = \$8.00)	
Multiple party applications	
Plankton Algae \$20.00 plus \$0.40 per acre, \$200.00 maximum fee. (Acres to be treated x \$0.40) + \$20.00 = Fee	
All other types of control \$35.00 per property (maximum fee \$750.00). \$35.00 x number of properties to be treated = Fee	
Offshore Harvest of Submerged Vegetation (Offshore >150 feet from shore)	
Mechanical Control of Submerged Vegetation \$35.00 for the first acre plus \$2.00 each additional acre to a maximum of \$750.00 (Total # acres to be harvested - 1) x 2 + \$35.00 = Fee	

This application is two-sided. Please complete both sides.

RECEIVED

JUN - 4 2010

REGION 3 FISHERIES

Sketch of treatment area. Include: North arrow, treatment area location, dock – distance from nearest property boundary or nearest identifiable land mark.

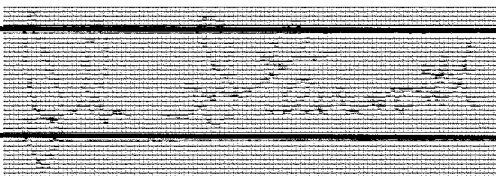
See Attached White Bear Lake Milfoil Assessment
May 26, 2010
Page 5

Please provide clear driving directions and show the location of your property on the lake with any significant intersections or landmarks:

See attached WBL Milfoil Assessment

VI. ENCLOSURES	☒ Sketch/Map	☐ Signature	☒ Check or Money Order for Fee	☒ Other <u>WBL Milfoil Assessment</u>
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I hereby make application for a permit to destroy or control aquatic vegetation or aquatic nuisance as described above. I understand that the control of aquatic nuisances, including destruction of aquatic plants and algae, is subject to rules of the Commissioner of Natural Resources. I understand that an Aquatic Plant Management Specialist may wish to inspect the proposed treatment area before, during, and/or after work is completed and that by making this application I give permission to the specialist to enter my property to make such inspection at reasonable times. I understand that an annual report will be required on results achieved. Completion of this form and processing of the accompanying application fee does not constitute obtaining a permit.

Applicants Signature		John Steinworth	Date 6-4-10
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White Bear Lake Milfoil Assessment – May 26, 2010

Prepared by Steve McComas, Blue Water Science, St. Paul, MN

On May 26, 2010 status of Eurasian watermilfoil growth was assessed in White Bear Lake. Approximately 100 acres of milfoil were evaluated and eleven sites were delineated and areas within a site are listed in Figure 1. Milfoil was generally growing 2-3 feet from the water surface although it was sometimes found deeper and sometimes closer to the surface.

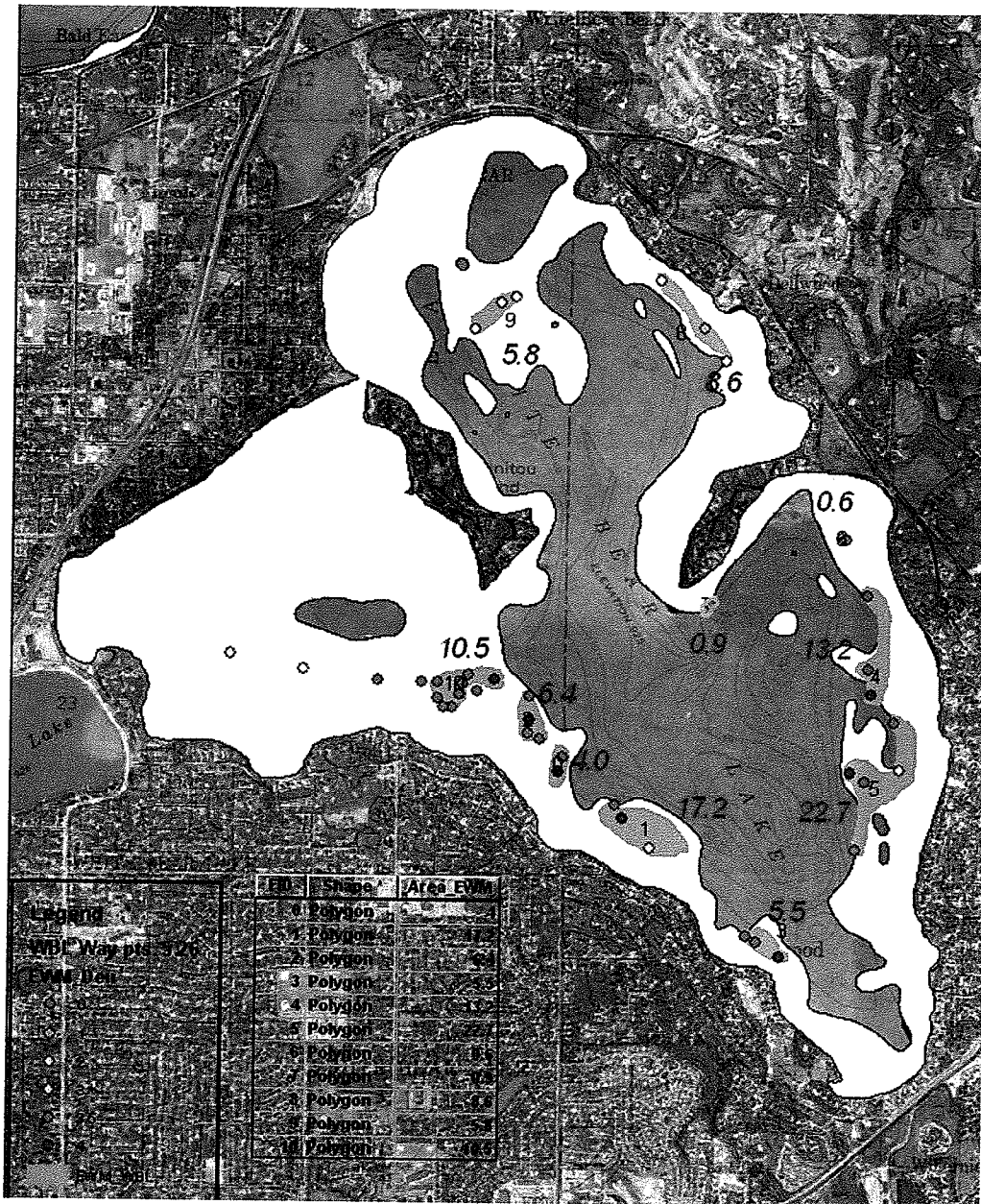


Figure 1. Eurasian watermilfoil coverage in assessed areas on May 26, 2010 is shown in green shading. In 2010, the yellow shading represents an 11-foot water depth contour. At normal lake levels, the yellow shading represents a 15-foot contour (based on the MnDNR lake map).

Eurasian Watermilfoil Density Definitions Used in the Milfoil Assessment of May 26, 2010

Light Growth Conditions

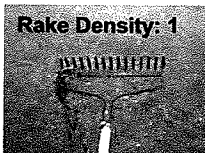
Plants rarely reach the surface.

Navigation and recreational activities generally are not hindered.

Stem density: 0 - 40 stems/m²

Biomass: 0 - 51 g-dry wt/m²

MnDNR rake sample density equivalent for light growth conditions: 1 or 2.



Moderate Growth Conditions

Broken surface canopy conditions. However, stems are usually unbranched.

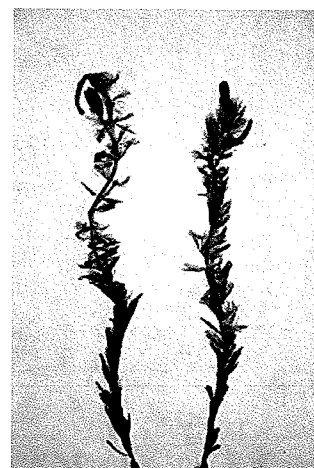
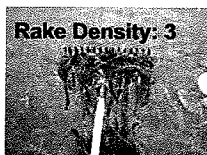
Navigation and recreational activities may be hindered.

Lake users may opt for control.

Stem density: 35 - 100 stems/m²

Biomass: 30 - 90 g-dry wt/m²

MnDNR rake sample density equivalent for moderate growth conditions: 3.



Heavy Growth Conditions

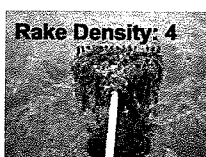
Solid or near solid surface canopy conditions. Stems typically are branched near the surface.

Navigation and recreational activities are severely limited.

Control is necessary for navigation and/or recreation.

Stem density: 250+ stems/m²

Biomass: >285 g-dry wt/m²



MnDNR rake sample density equivalent for heavy growth conditions: 4. Where plants top out at the surface, the scale has been extended: 4.5 is equivalent to a near solid surface canopy and a 5 is equivalent to a solid surface canopy.

Table 1. Summary of EWM density found at 43 sites and grouped into 11 polygons.

Way Point #	Polygon	Water Depth	Depth to Plants	EWM	Chara	Coontail	Curlyleaf Pond-weed	Elodea	Fern Pond-weed	Flatstem Pond-weed	Naiads	Whitestem Pond-weed	UTM 83 NAD	
													Y PROJ (East)	X PROJ (North)
001	—	9	3.5	0		1			3			2	4991070	500508
002	—	10	4.5	0			3	1					4991083	500298
003	—	9	3.0	2			1	1	2	1			4991131	499934
004	—	5	2.5	2	2						2		4991199	499581
005	8	9	5.5	2			2						4993016	501653
006	8	7	5.5	1		1			2				4992785	501866
007	8	9	4.5	2		1			1				4992629	501977
008	9	8	4.5	2		1			1				4992932	500950
009	9	9	4.5	3		1			2				4992900	500882
010	9	9	4.5	3		1	1						4992770	500754
011	7	6	1.0	4									4991425	501890
012	7	7	2.0	3									4991463	501901
013	6	10	3.5	3									4991786	502540
014	6	9	3.0	2									4991780	502562
015	4	11	4.5	4									4991505	502669
016	4	10	2.5	4									4991148	502679
017	4	10	4.5	4									4991030	502695
018	5	9	3.0	2									4990895	502804
019	5	11	3.0	2									4990670	502832
020	5	8	3.0	3									4990610	502666
021	5	8	3.0	4									4990651	502590
022	5	11	3.0	3									4990285	502618
023	3	8	3.0	3									4989766	502262
024	3	7	2.5	4									4989835	502142
025	3	8	3.0	3									4989869	502095
026	1	7	3.5	3									4990286	501627
027	1	9	2.5	4									4990427	501492
028	1	14	6.0	3									4990492	501452
029	0	9	2.0	4		1						1	4990645	501178
030	0	9	2.0	3									4990718	501197
031	2	9	2.0	2		1						1	4990805	501084
032	2	8	2.0	3									4990834	501028
033	2	7	<2.0	4									4990896	501038
034	2	11	2.0	3									4991009	501039
035	10	11	2.0	4									4991090	500869
036	10	10	2.0	4									4991030	500780
037	10	10	2.0	4									4990950	500660
038	10	11	2.0	3									4990951	500616
039	10	11	2.0	4									4990992	500591
040	10	11	2.0	4									4991071	500589
041	—			0									4991020	500694
042	10	11	2.0	4									4991069	500713
043	10	10	2.0	4									4991109	500737



Figure 2. Location of waypoints from the May 26, 2010 milfoil assessment.

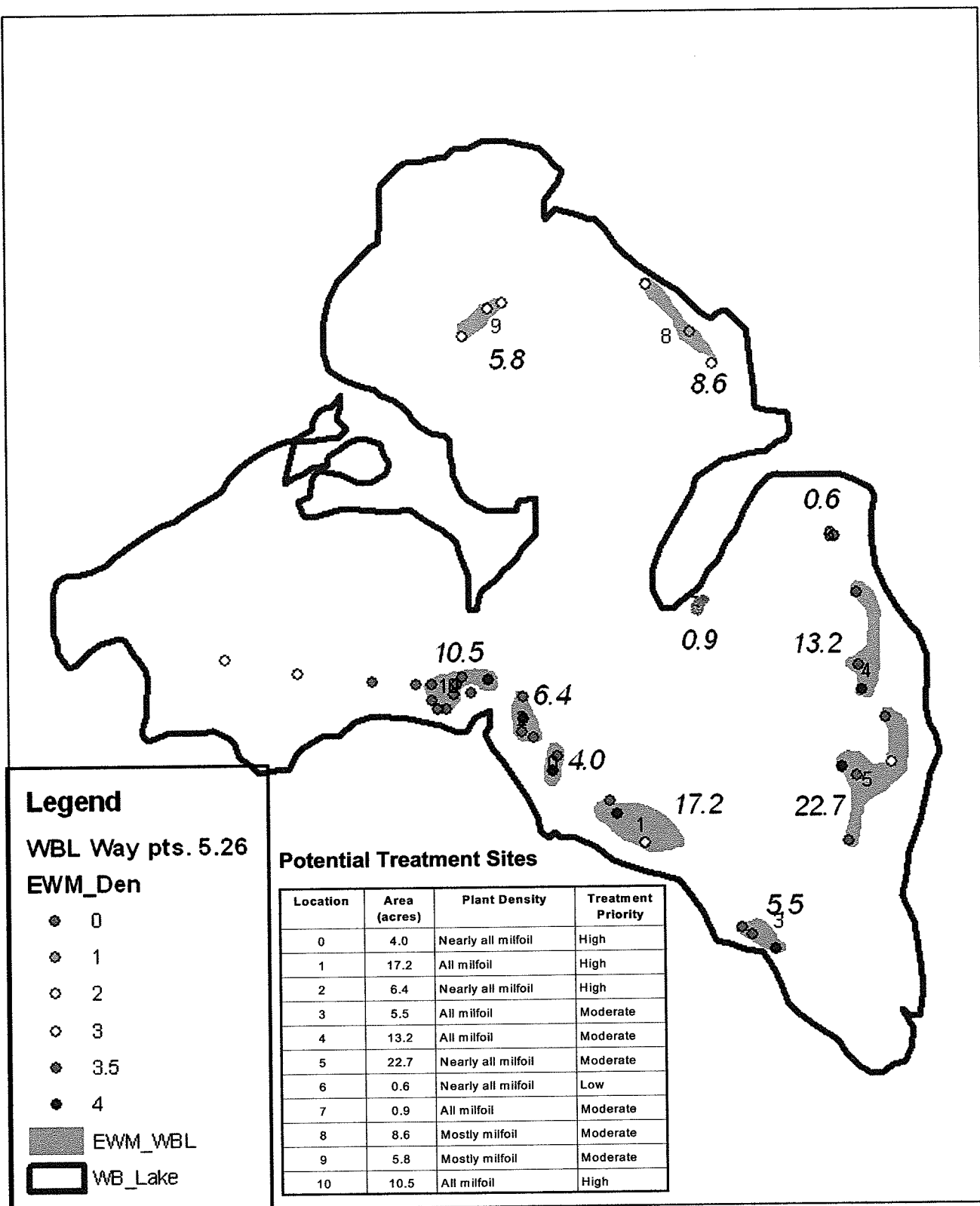


Figure 3. Map of eleven locations where milfoil was assessed. The area of the eleven locations totaled 95.4 acres.

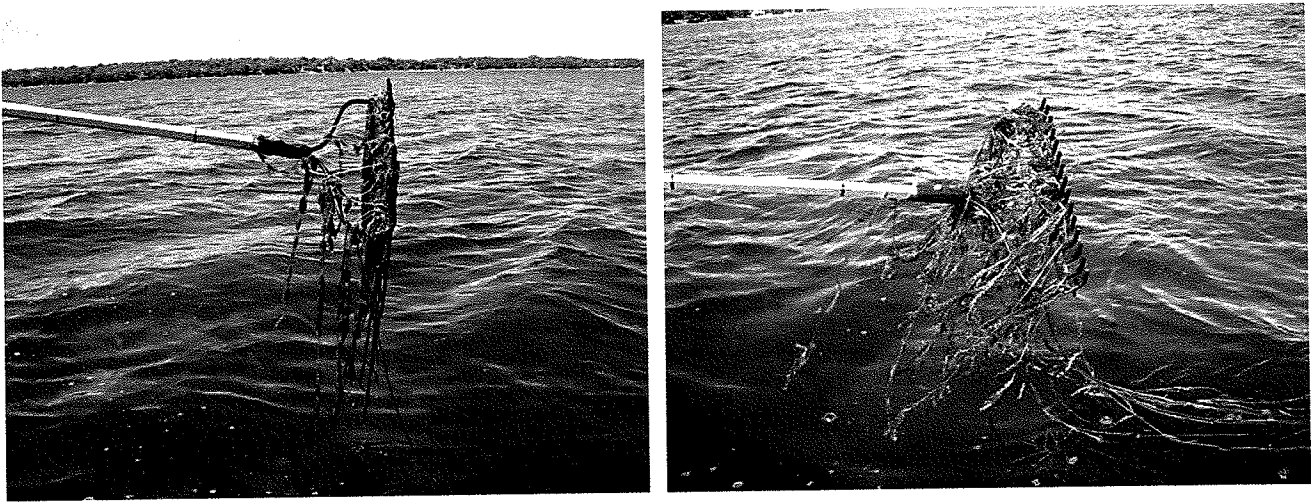


Figure 4. (Left) Eurasian watermilfoil found at a density of a "3". (Right) Curlyleaf pondweed, although rare in White Bear Lake, was present and found at a density of a "3" at point 2.

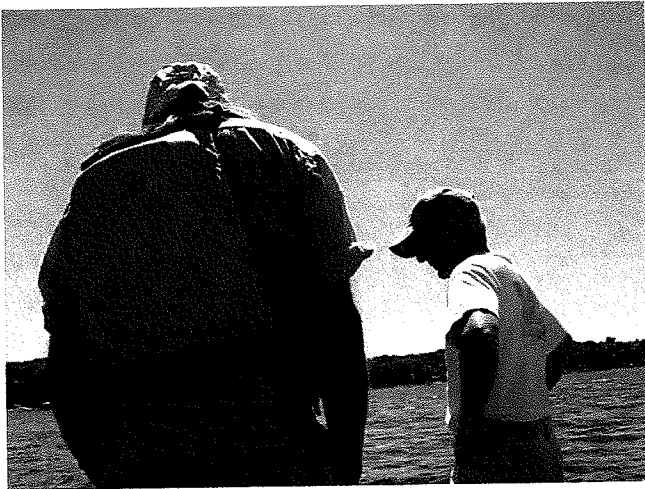
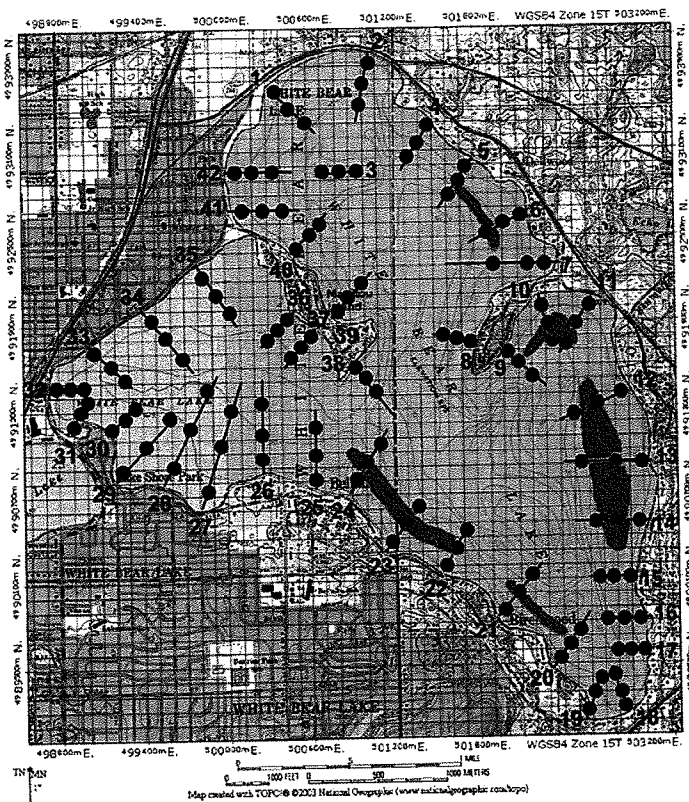


Figure 5. Observers on the milfoil assessment included John Steinworth (left) and Mike Parenteau (right).

2009



2010

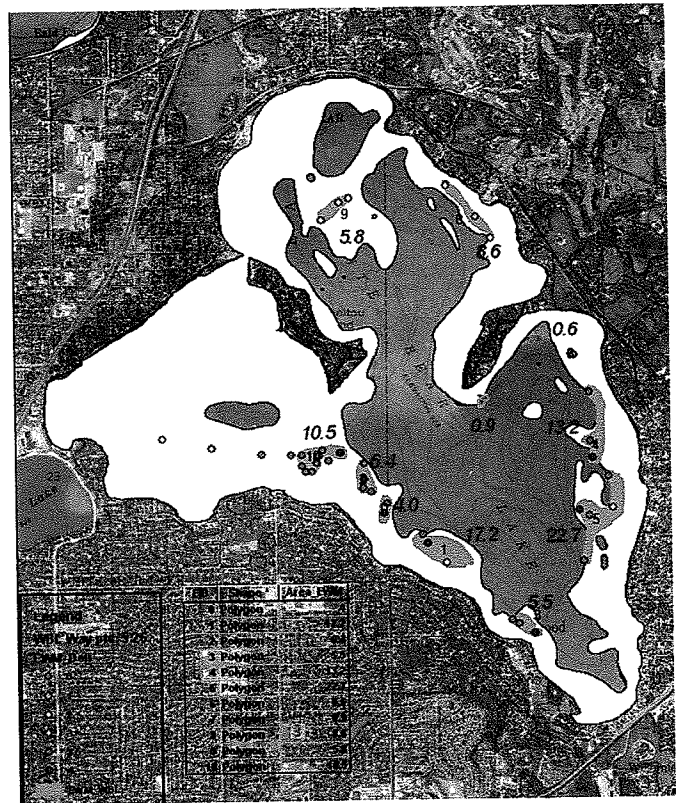


Figure 6. Eurasian watermilfoil areas of significant growth in 2009 (left) and in 2010 (right).