EAGLE LAKE SUMMARY AND CONCLUSIONS

Overall, the 2008 treatment caused a reduction of EWM within this lake. The treatment caused a density reduction of EWM within all the sites (Maps 5 and 15). Only at one site, Eagle –D, (Map 15) did the size of the treatment area increase slightly. Two new sites are proposed for treatment in 2009, (Map 15, Eagle-A and Eagle B). It is important to note that these are not new infestations, but rather known locations that have increased in density to a level that warrants treatment. Figure 16 shows that a reduction of EWM was observed in all treatments sites, but only in Eagle-D was the reduction found to be statistically significant (Figure 16). However, the qualitative success criteria was not met for this treatment area and is therefore recommended to be treated a slightly higher dosage (175 lbs/acre) in 2009 (Map 15). Lake-wide, 51.9% of the point-intercept locations contained EWM and 17.3% contained EWM after the treatment leaving a statistically significant 66.7% reduction in EWM occurrence (Figure 16). All treatment sites that contained sufficient sub-sample locations for analysis met the quantitative success criteria standards (Table 6). However, the results were only shown to be statistically significant on one treatment site (Eagle-D). Figure 17 displays the number of point-intercept locations exhibiting each of the rake fullness ratings within the areas treated on Eagle Lake. The figure shows that after the treatment, the few sample locations (9 locations) that yielded EWM all displayed a rake fullness rating of one.

Only one native plant, Illinois pondweed, reduced in frequency with the 2008 treatment areas (Figure 18). Six native monocots were found to have significantly increased within the treatment areas during the same time period; including Vasey's pondweed, a species of special concern in Wisconsin (Figure 18). Large-leaf pondweed also increased in frequency within the treatment areas and is of particular interest to muskellunge fisherman on the chain.

Table 6. Evaluation of 2008 EWM treatment on Eagle Lake following success criteria standards. N= Number of point-intercept sub-sample locations.

			EWM Occurrence			EWM Density			
Site	Acres	Dose	N	% Change	Criteria Met	Before	After	Criteria Met	Notes
Eagle - B	1.4	150	4	25.0	ISS	D=1	D=1 & Few	No (?)	D=1 area reduced.
Eagle - C	2.2	150	8	75.0	Yes - NSS	D=2	Scat	Yes	Scattered colony is much smaller that original D=2 colony.
Eagle - D	5.1	150	20	69.2	Yes	D=2	D=2 & Scat	No	Much of area is still D=2, but center is mostly scattered EWM.
Eagle - E	3.8	150	12	75.0	Yes - NSS	D=1 & Scat	None	Yes	Some EWM located slightly outside of '08 TA to east and west.
Eagle - F	2.3	150	8	100.0	Yes - NSS	D=1	Few	Yes	

ISS = Insuficient Sample Size
NSS = Not Statistically Significant

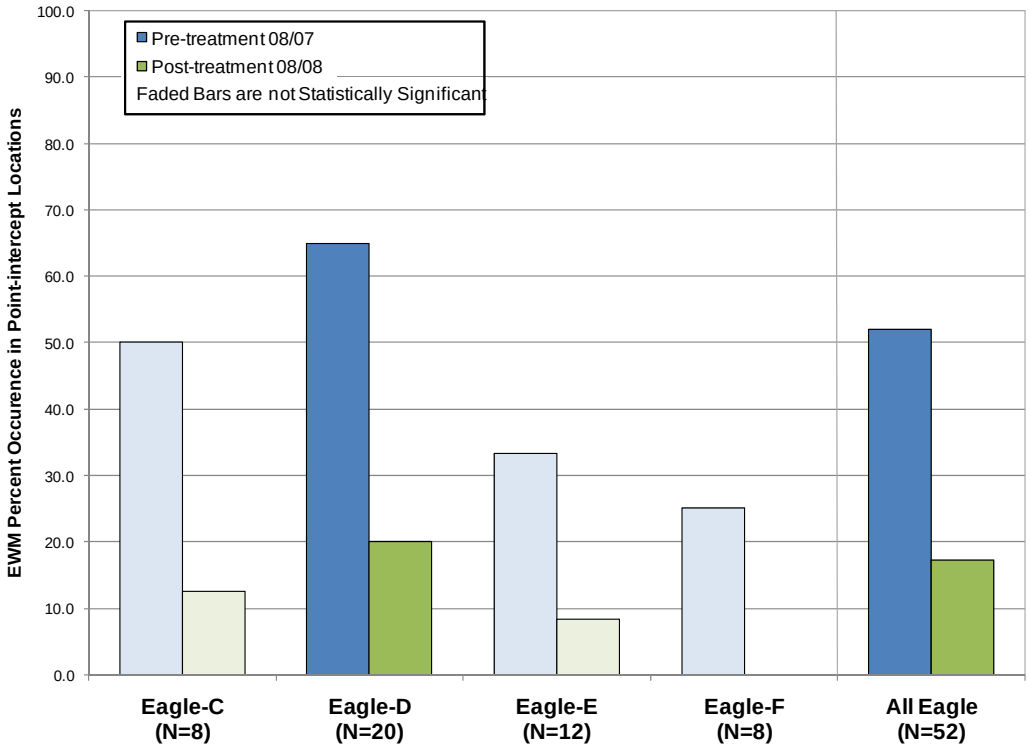


Figure 16. EWM percent occurrence in point-intercept locations displayed by treatment site on Eagle Lake. Please note only those treatment sites with eight or more point-intercept locations are displayed on the graph. Statistical significance is determined by Chi-square distribution analysis (alpha = 0.05).

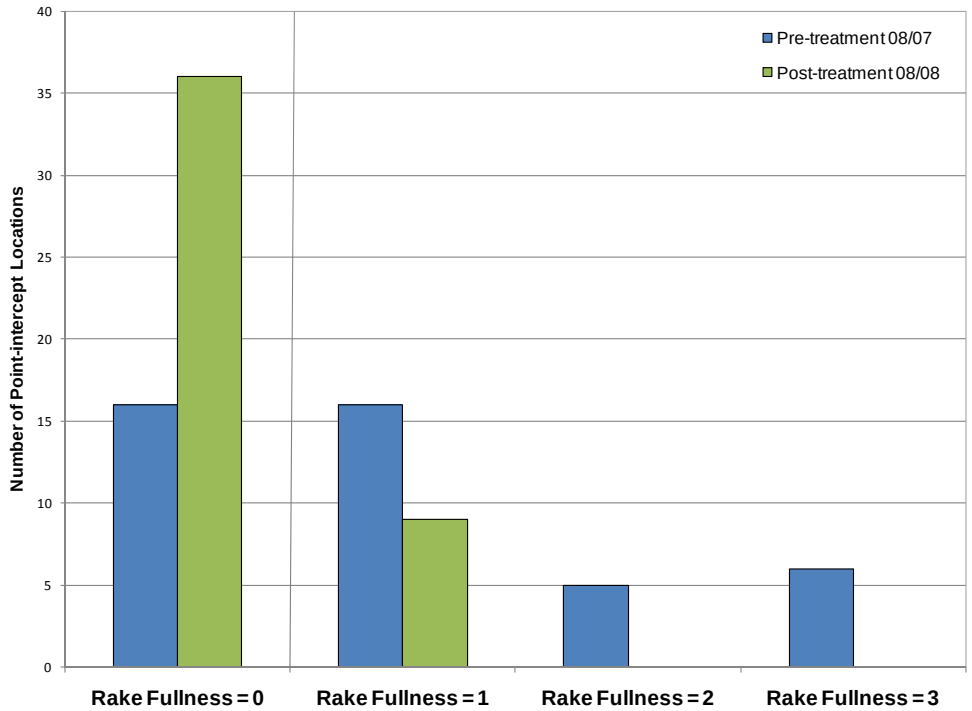


Figure 17. EWM rake fullness distribution within treated areas on Eagle Lake.

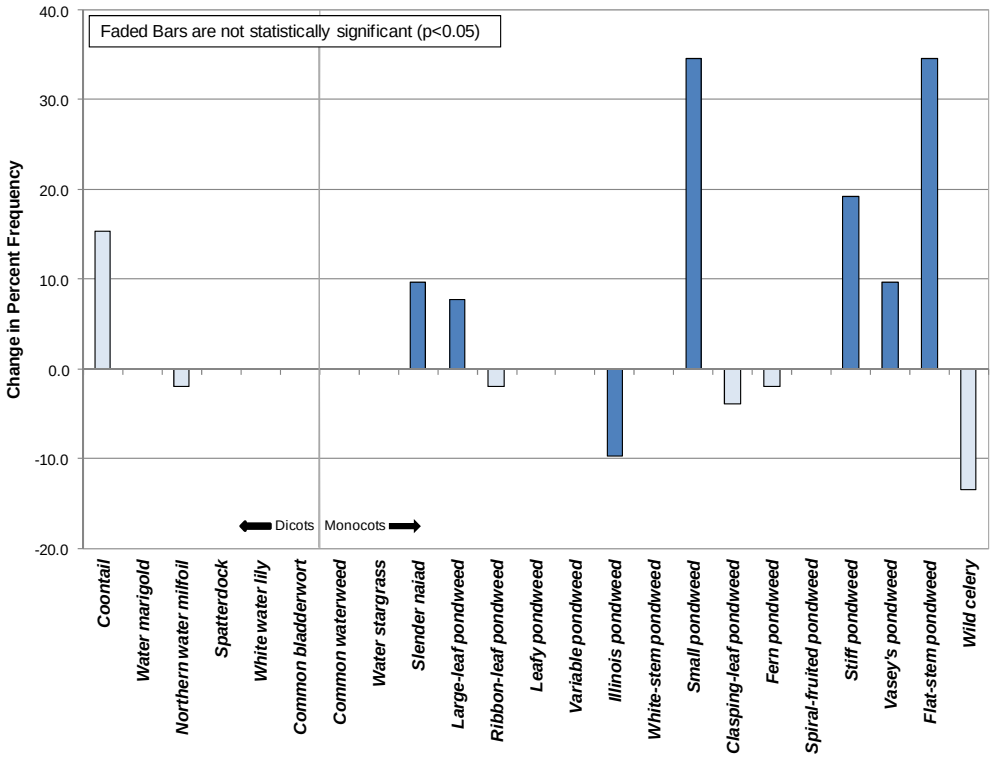
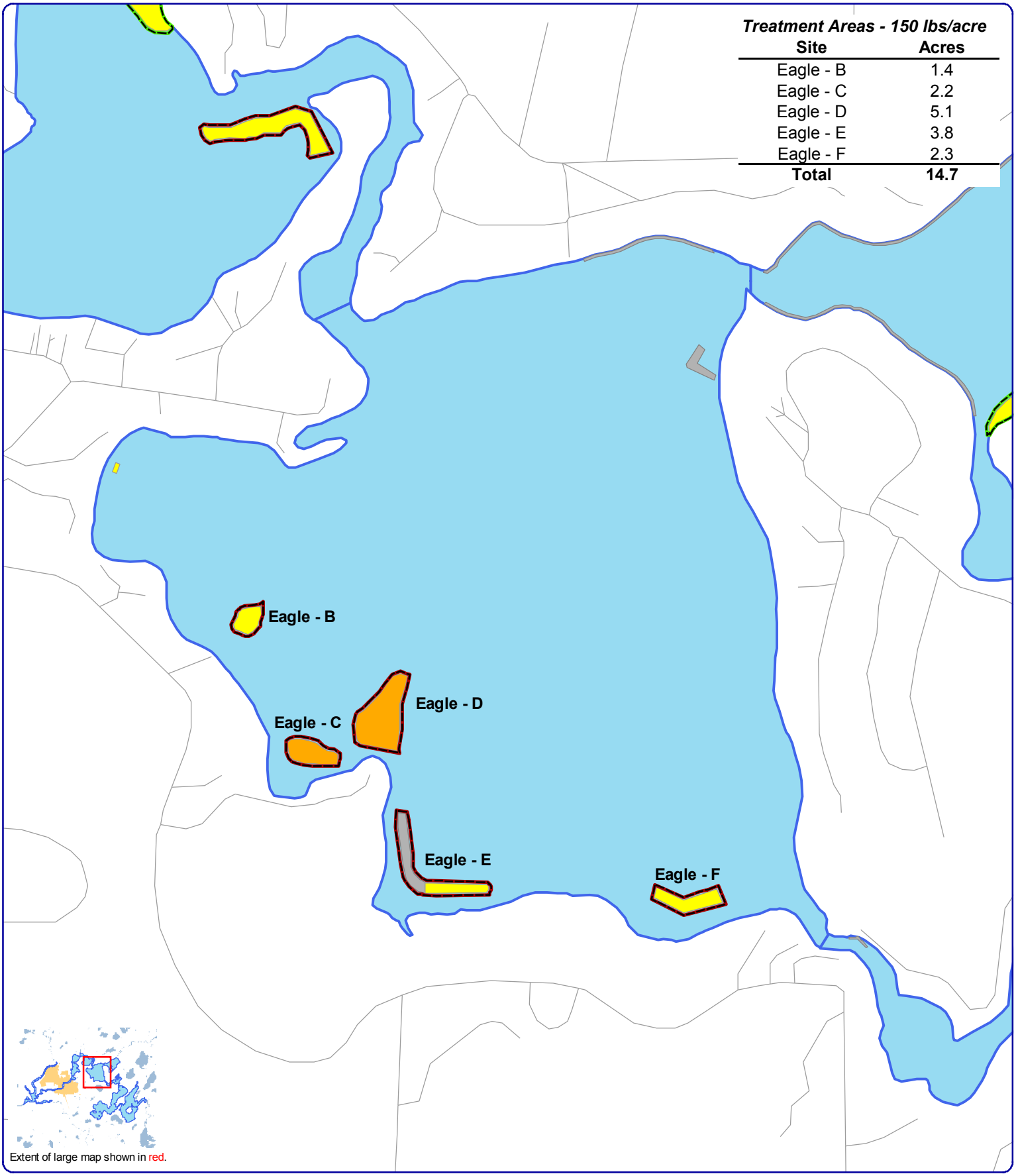


Figure 18. Native plant change in percent frequency from 2007 to 2008 within treatment areas on Eagle Lake.



Treatment Areas - 150 lbs/acre

Site	Acres
Eagle - B	1.4
Eagle - C	2.2
Eagle - D	5.1
Eagle - E	3.8
Eagle - F	2.3
Total	**14.7**

Extent of large map shown in red.

N
W E
S

1,125
Feet

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Source:
Roads & Hydro: WDNR
Aquatic Plants: Onterra, 2008
Map Date: December 31, 2008
File Name: ERC_2008Treat_Eagle.mxd

Legend

2007 EWM Colonies
- Highly Scattered *(none found)*
- Scattered
- Dominant
- Highly Dominant
- Surface Matting *(none found)*

2008 Treatment Areas
- Proposed Treatment Area (150 lbs/acre)
- Proposed Treatment Area (100 lbs/acre)

Map 5
Eagle Lake
Vilas County, Wisconsin

2008 EWM Final Treatment Areas

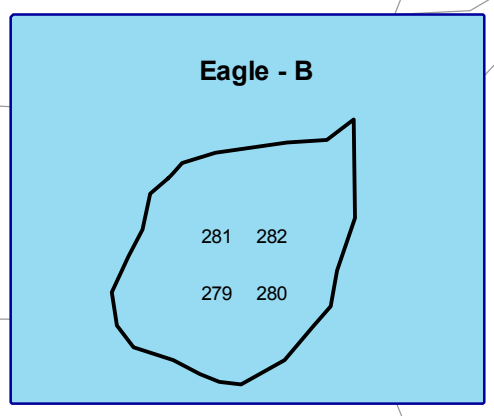
Eagle - B

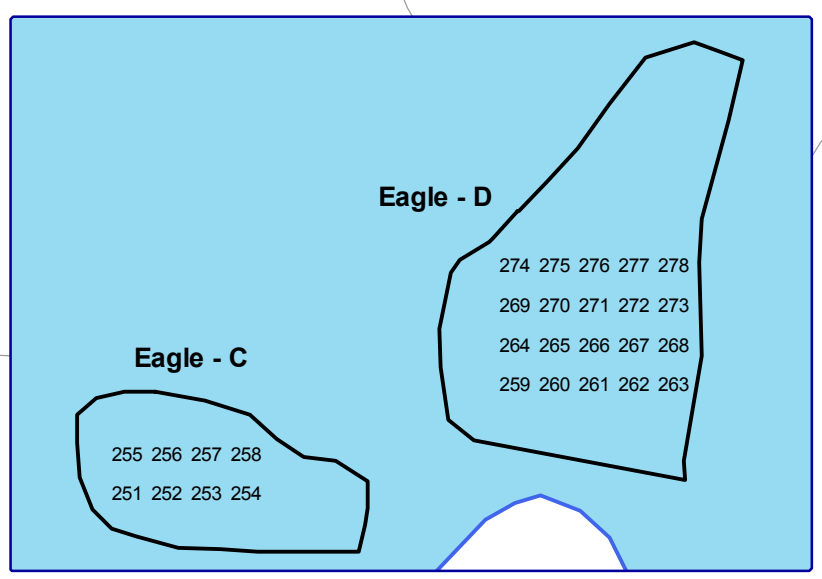
Eagle - C

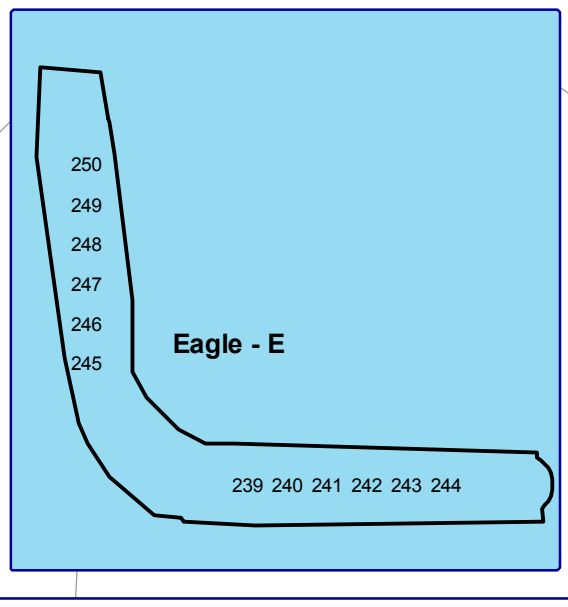
Eagle - D

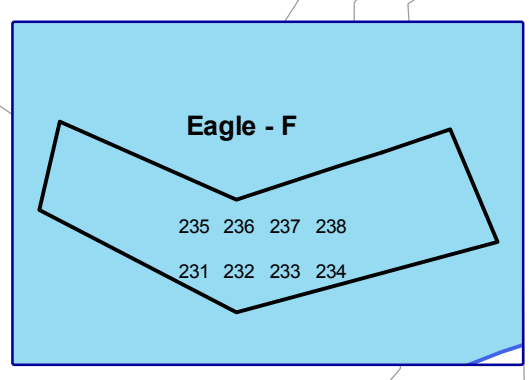
Eagle - E

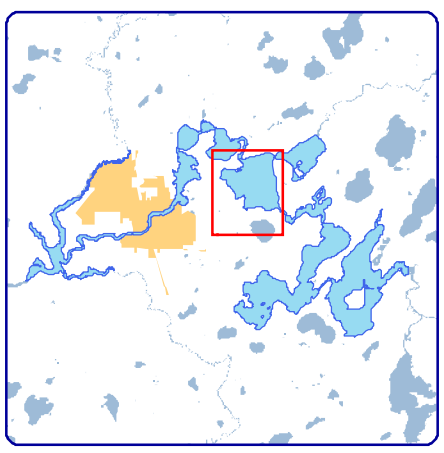
Eagle - F











Extent of large map shown in red.

Sources:
Roads & Hydro: WDNR
Bathymetry: WDNR - Digitized by Onterra
Aquatic Plant Data: Onterra, 2008

Map Date: December 30, 2008

File Name: ERC_Eagle_EWM_Treat_T08_PI.mxd

Legend

\# EWM Point-Intercept Location

2008 Treatment Area

Appendix A

Eagle Lake

Vilas County, Wisconsin

2008 Eurasian Water Milfoil Treatment Point-Intercept Monitoring Locations

N W E S

750

Feet

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