

Manual Removal of Eurasian Watermilfoil: Tools and Strategies



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Green Lake, Marathon, Marquette, Taylor, & Wood Counties
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Coordinator

Outline

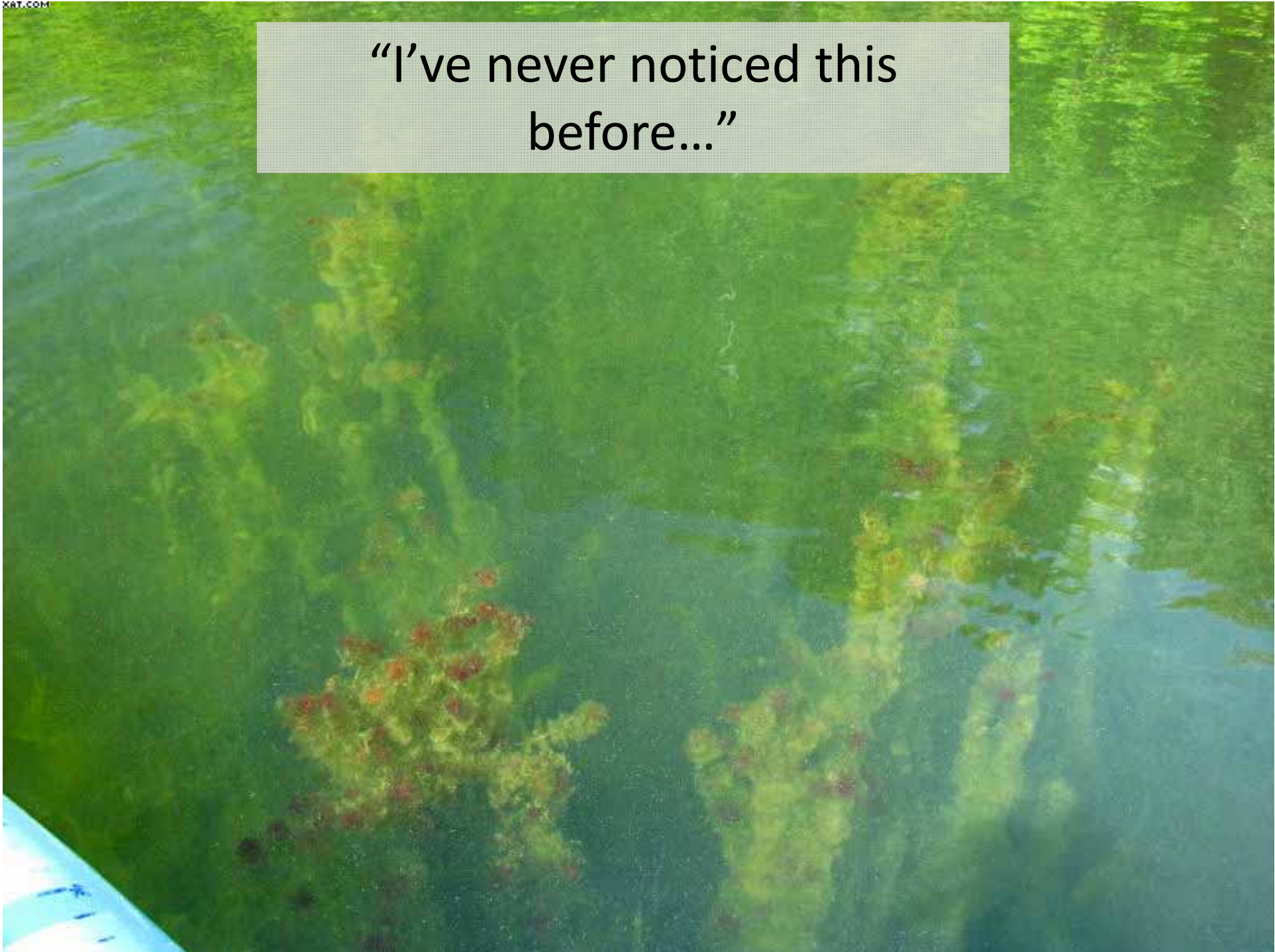
- ✓ **Slideshow** outlining EWM early detection, planning, removal, and disposal.
- ✓ **BREAK** – tools/resources on display
- ✓ **25-minute video** with above-water and underwater footage of EWM removal strategies.
- ✓ **Discussion and questions**



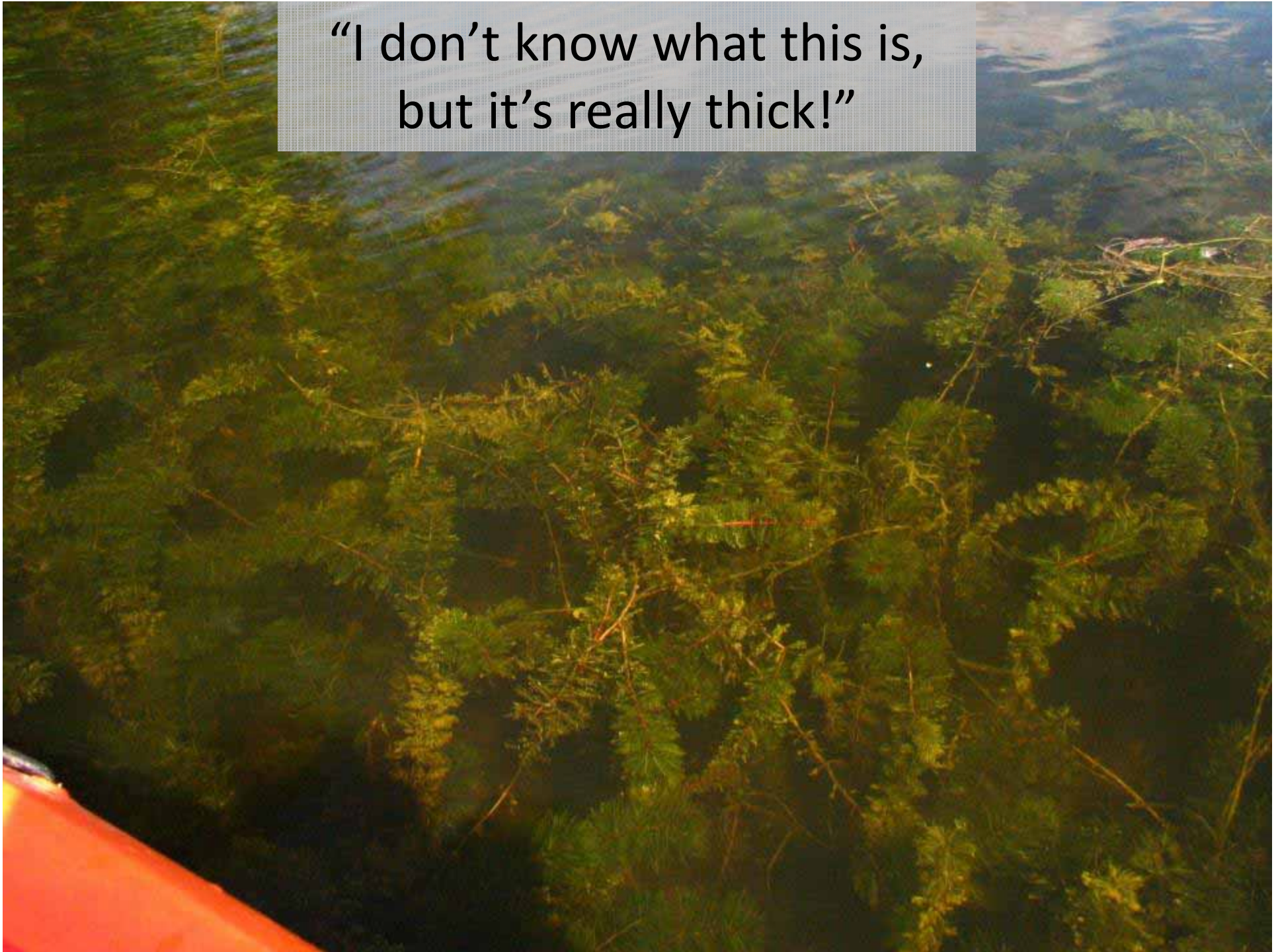
Know your lake – learn to recognize when something is “different”



“I’ve never noticed this before...”



“I don't know what this is,
but it's really thick!”



Watermilfoils have distinct flowers



Color can be helpful

Northern watermilfoil

Eurasian watermilfoil







Eurasian watermilfoil
Myriophyllum spicatum

Leaves in whorls
of 4 or more





12 or more pairs of leaflets per leaf



Eurasian watermilfoil
M. spicatum



Northern watermilfoil
M. sibiricum

Northern watermilfoil

M. sibiricum



Eurasian watermilfoil
M. spicatum



Northern watermilfoil
M. sibiricum

6 other native watermilfoils, 5 look
similar to EWM/NWM

Where should I look for Eurasian watermilfoil?









Figure Collins Lake
Eurasian Water Milfoil

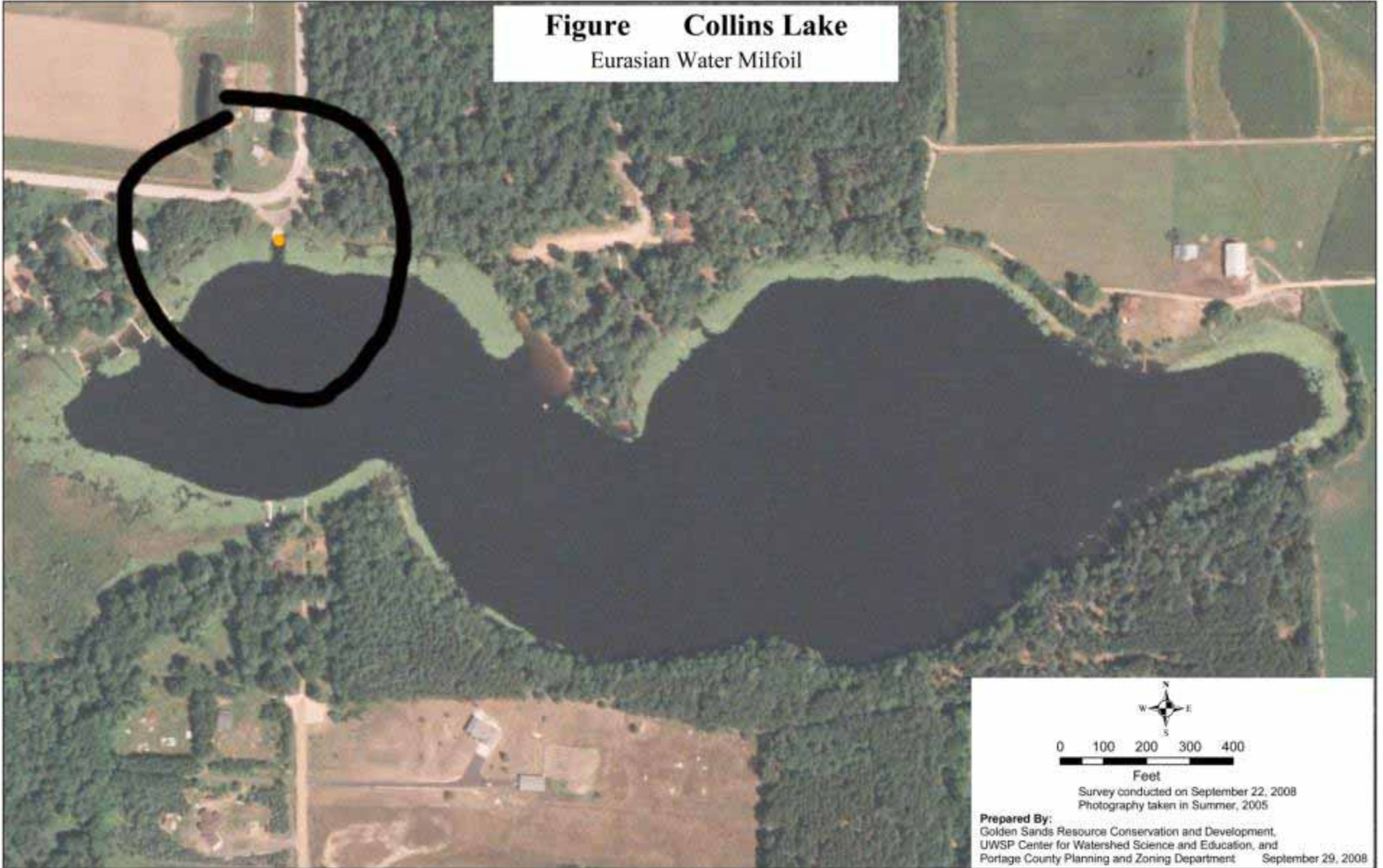


Figure Lime Lake
Eurasian Water Milfoil



0 100 200 300 400
Feet
Survey conducted on September 22, 2008.
Photography taken in Summer, 2005.
Prepared By:
Golden Sands Resource Conservation and Development,
UWSP Center for Watershed Science and Education, and
Portage County Planning and Zoning Department September 29, 2008

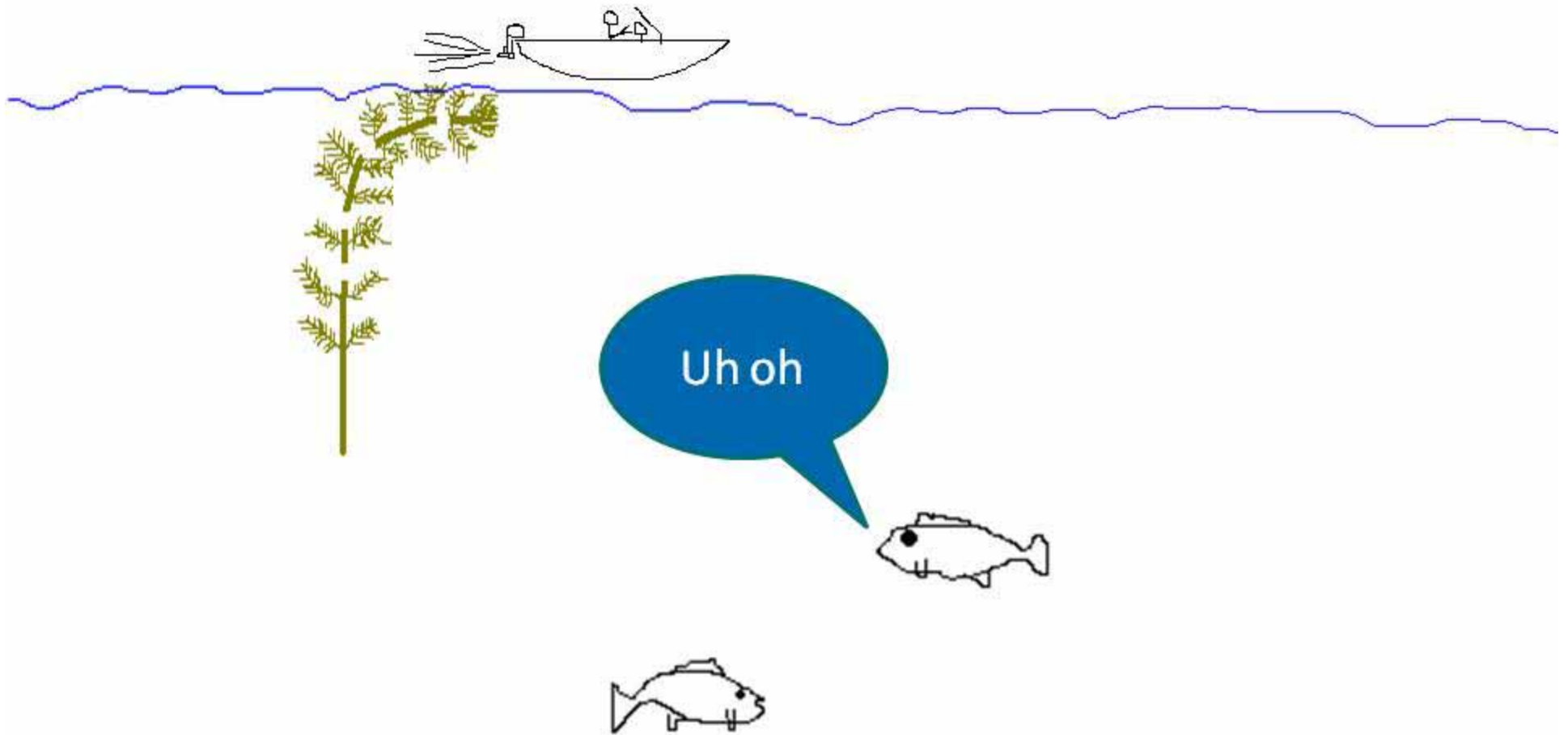
Moon Lake
Marquette County T-15-N, R-9-E, S-1



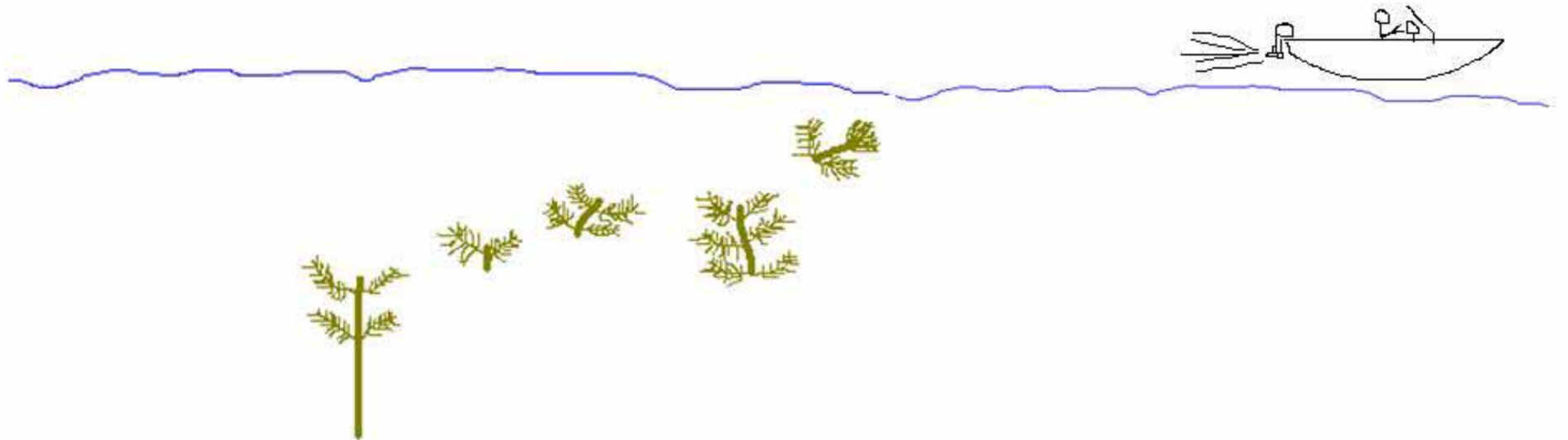
Eurasian Watermilfoil Spread



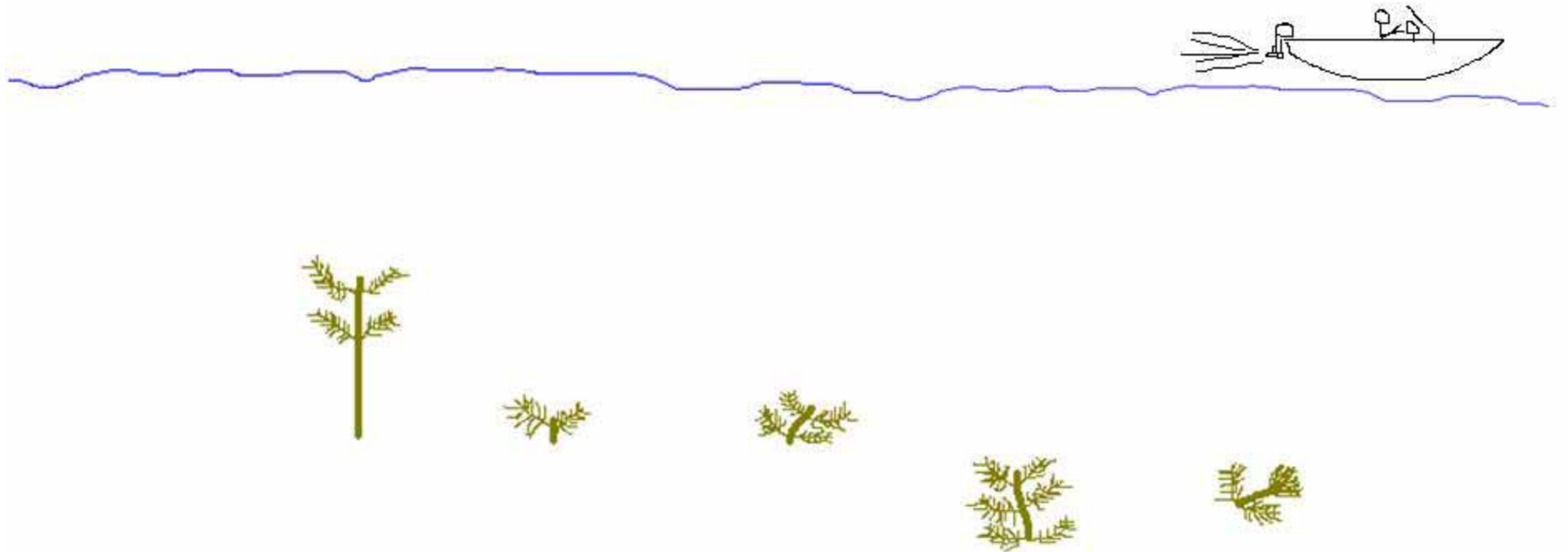
Eurasian Watermilfoil Spread



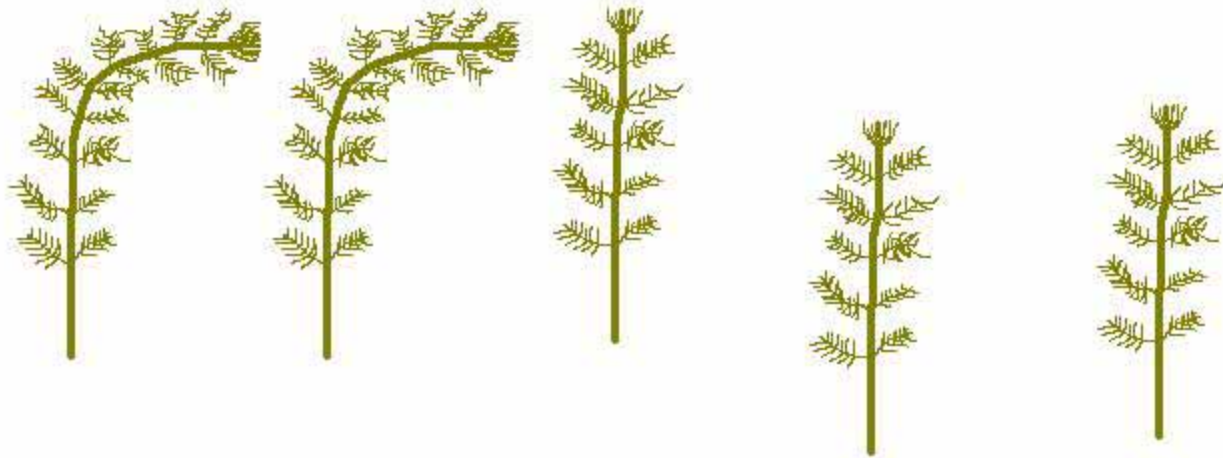
Eurasian Watermilfoil Spread



Eurasian Watermilfoil Spread



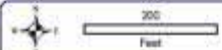
Eurasian Watermilfoil Spread







46-424233
 45-424833
 46-474233
 45-42445
 46-474233



Onterra LLC
 Lake Management Planning
 131 South Broadway, Suite C
 St. Paul, MN 55102
 651.281.8864
 www.onterra-llc.com

Source:
 USGS and NOAA, N1914
 Orthorectification: USGS, 2008
 1987 Timpanog Lake, Southwest Aquatic Plant Control
 Aquatic Plant Survey, N1914, 2005
 Map Date: April 21, 2009



Legend

- EWM Location
SLA and Lakesack, 2011
- EWM Location
MDS&P Survey, 2005
- 2005 EWM Treatment Area
47 acres of Napeish (150 Babcock) on 8/20/05

Seven Island Lake
 Lincoln County, Wisconsin
**EWM
 Locations**

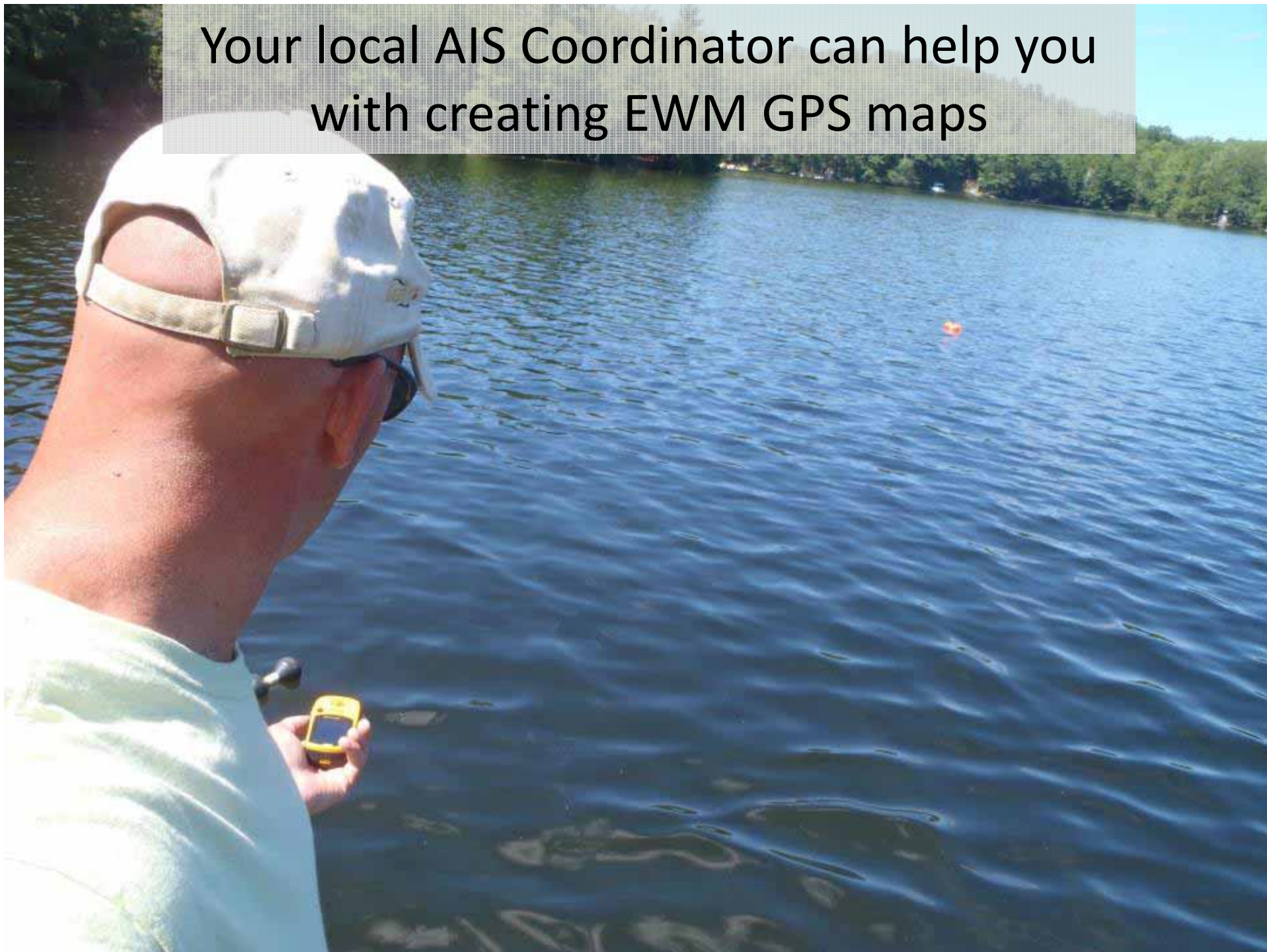
Extent of large map shown in red.

If you see a suspicious plant, contact your
local AIS Coordinator or DNR Water
Resources Specialist





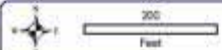
Your local AIS Coordinator can help you
with creating EWM GPS maps







46-424273
 45-424833
 46-474233
 45-42445
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Source:
 USGS and NOAA, N1914
 Orthorectification: USGS, 2008
 1987 Timpanog Falls, Schwindele Airport, Plant Forest
 Aerials Photo Survey: N1914, 2005
 Map Date: April 21, 2009

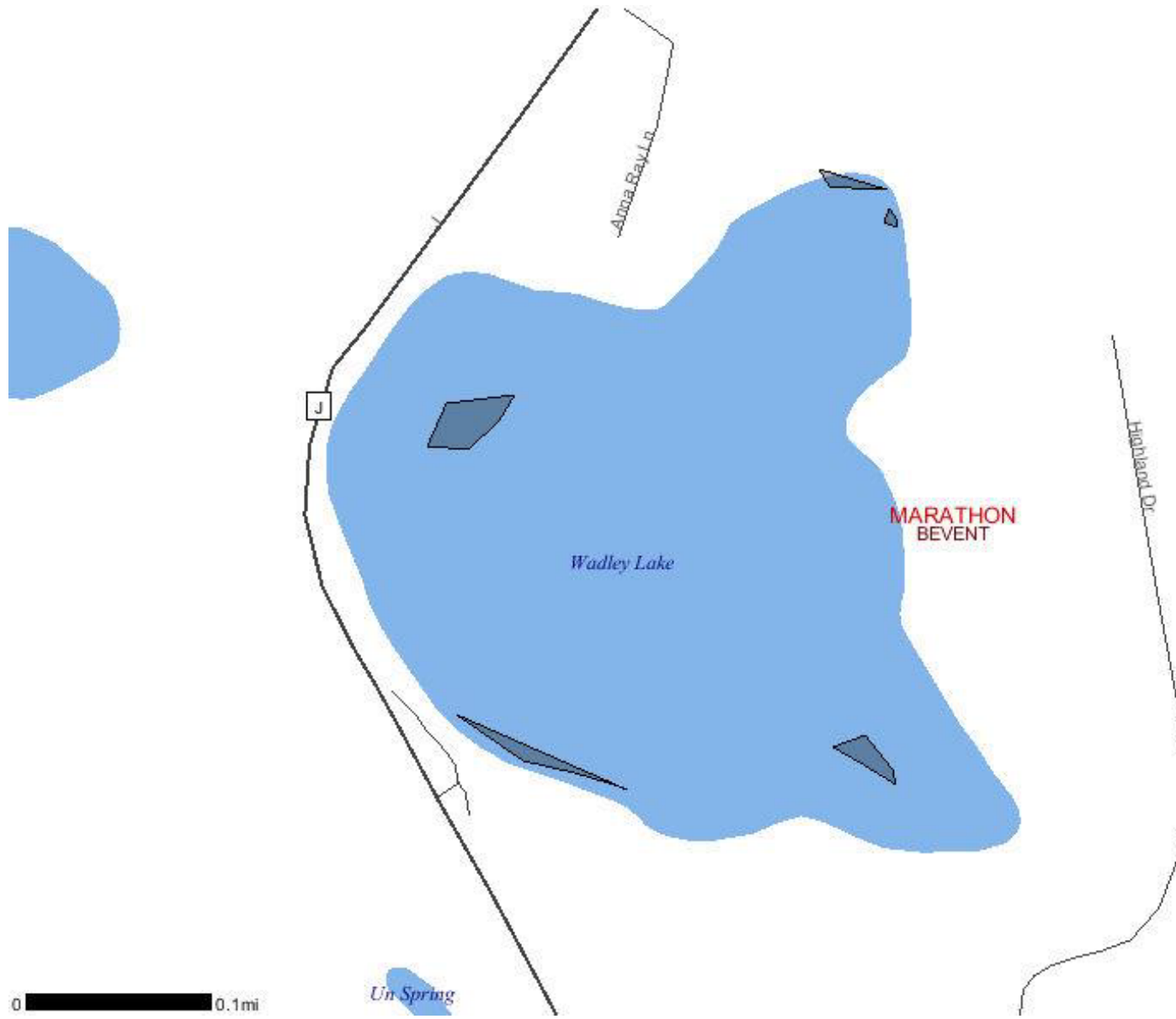


Legend

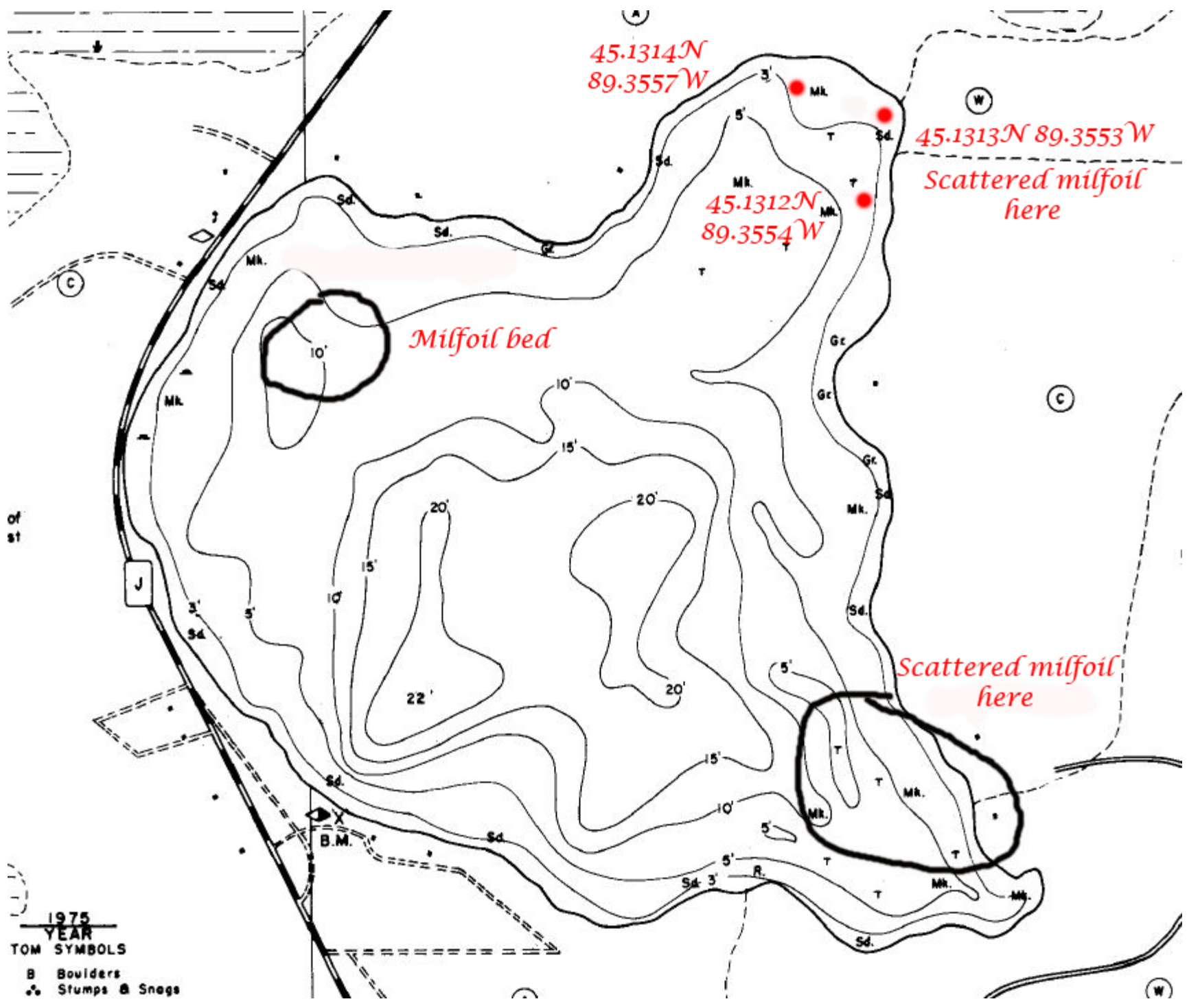
- EWM Location
SLA and Lakesack, 2011
- EWM Location
M2568 PT Survey, 2005
- 2005 EWM Treatment Area
47 acres of Neogata (150 Babcock) on M2568

Seven Island Lake
 Lincoln County, Wisconsin
EWM
Locations

GPS units and aerial photos are useful, but not essential



WDNR Surface Water Data Viewer Application



45.1314N
89.3557W

45.1313N 89.3553W
Scattered milfoil
here

45.1312N
89.3554W

Milfoil bed

Scattered milfoil
here

1975
YEAR
TOM SYMBOLS
B Boulders
♣ Stumps & Snags

Submit A Voucher Specimen



What is manual removal?
Do I need a permit?

Manual removal is:

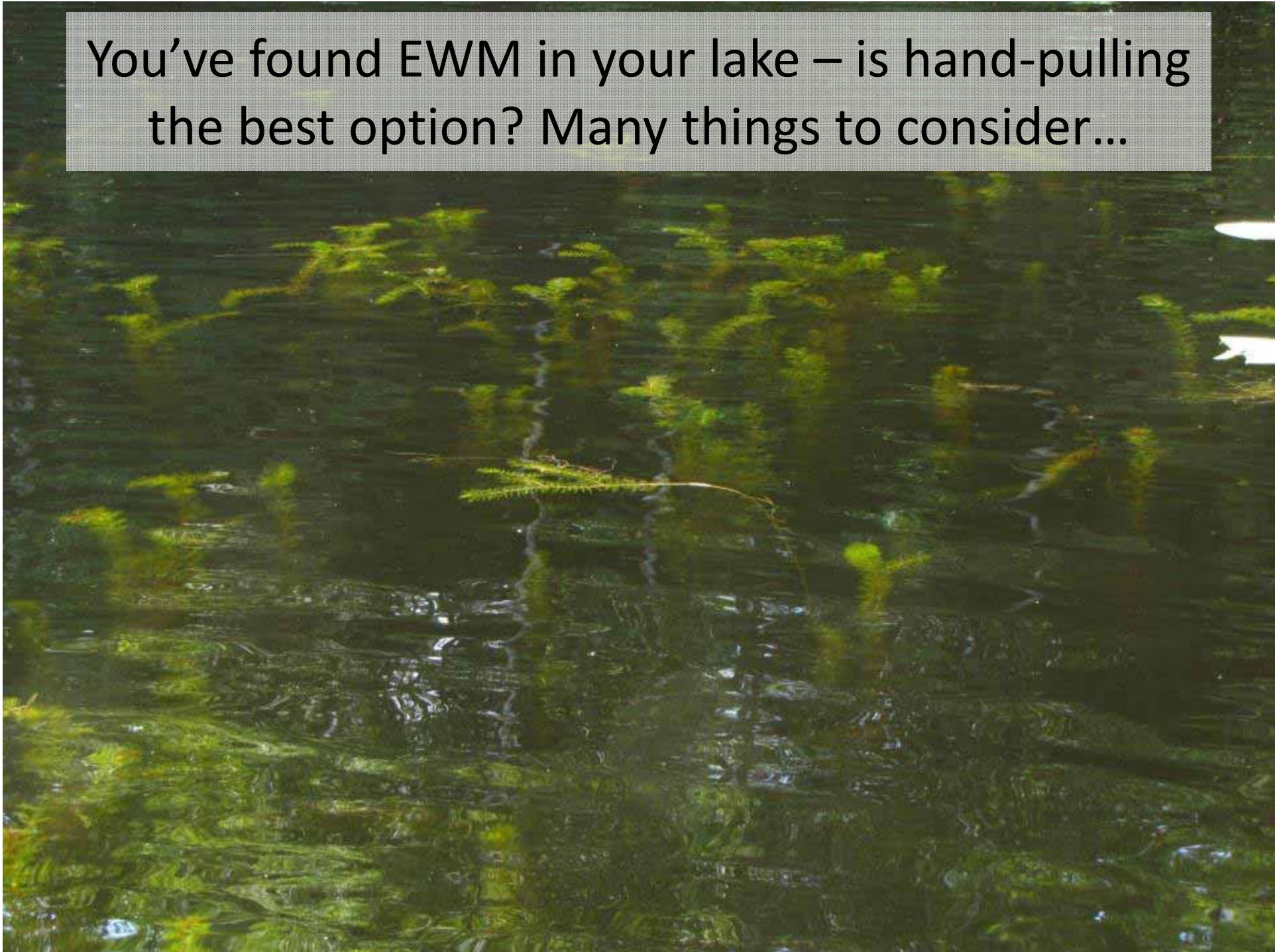
- **Pulling by hand or with handheld devices that do not use external or auxiliary power sources (e.g. rake, hands).**

*Suction-type devices are considered dredging and require a permit.

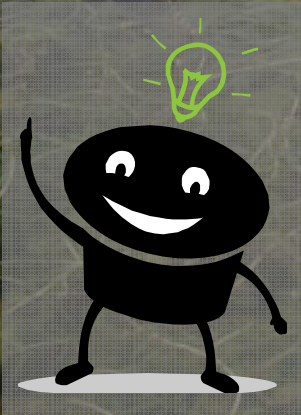
Do I need a permit?

- **Manual removal does not require a permit when targeting non-native plants.**
- Contact with local DNR and/or local AIS Coordinator is always recommended before starting a manual removal project.

You've found EWM in your lake – is hand-pulling the best option? Many things to consider...

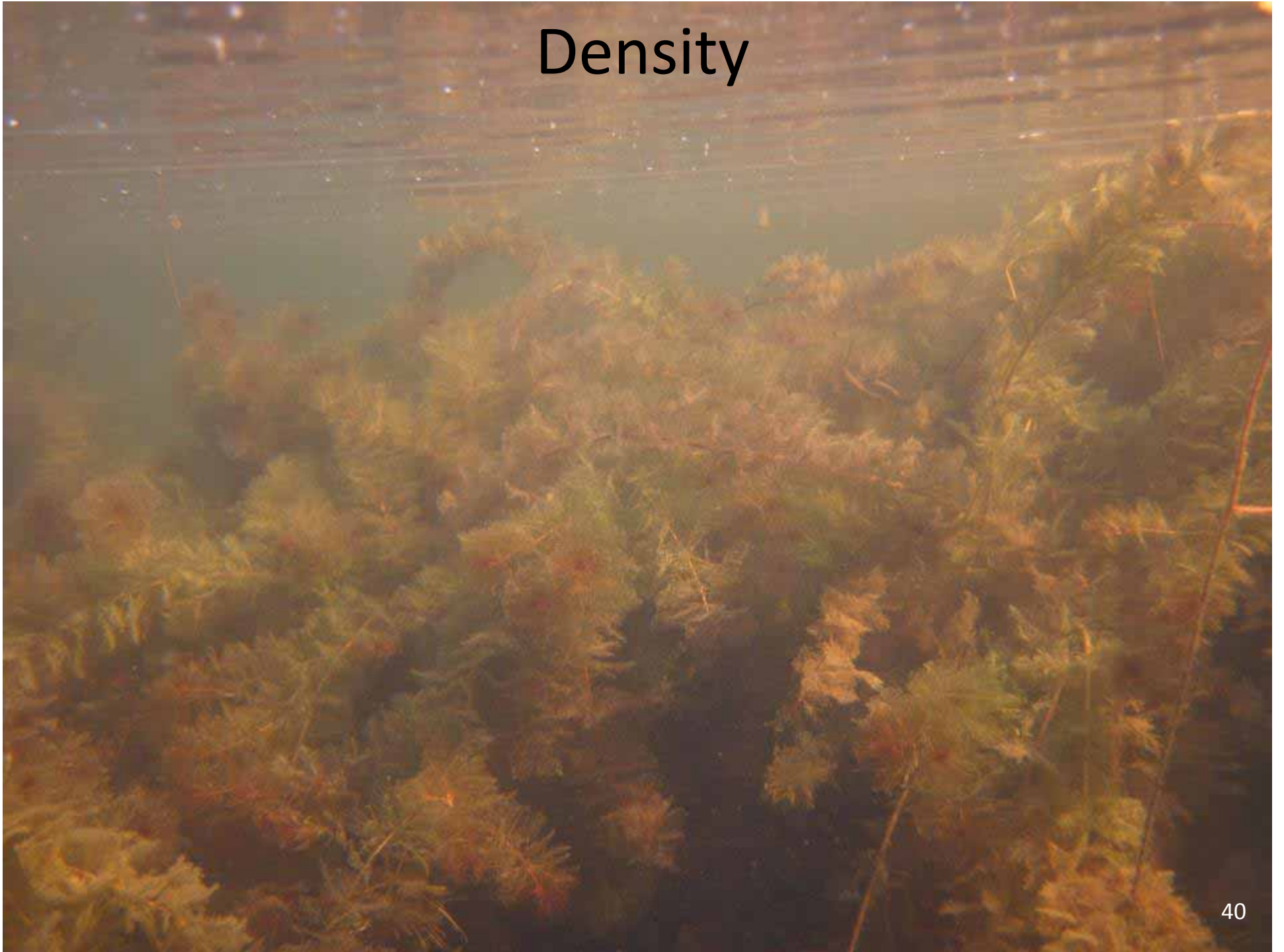


Set realistic goals



I'm going to remove all of
the EWM in this lake!

Density



Depth,
Sediment type

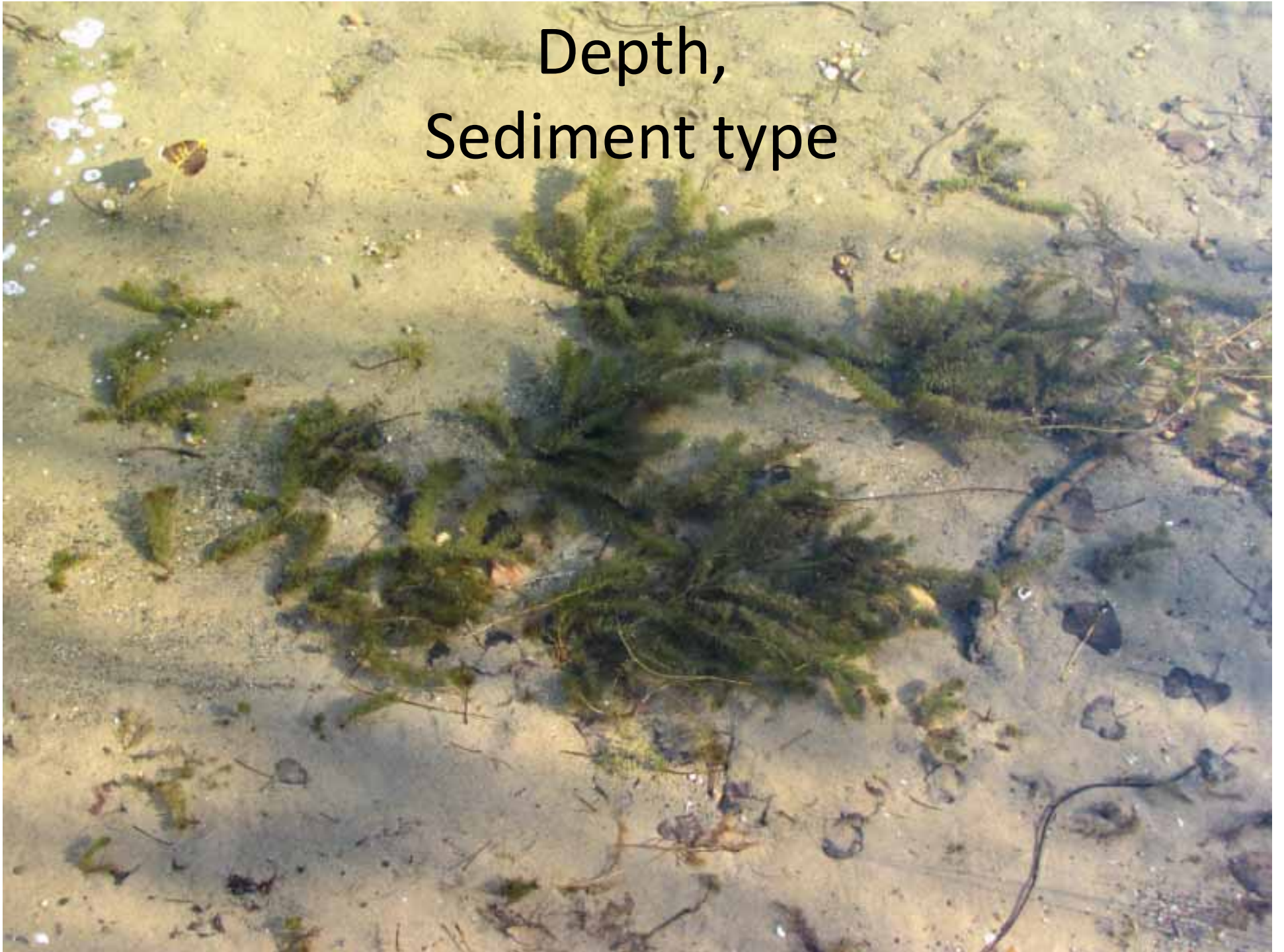
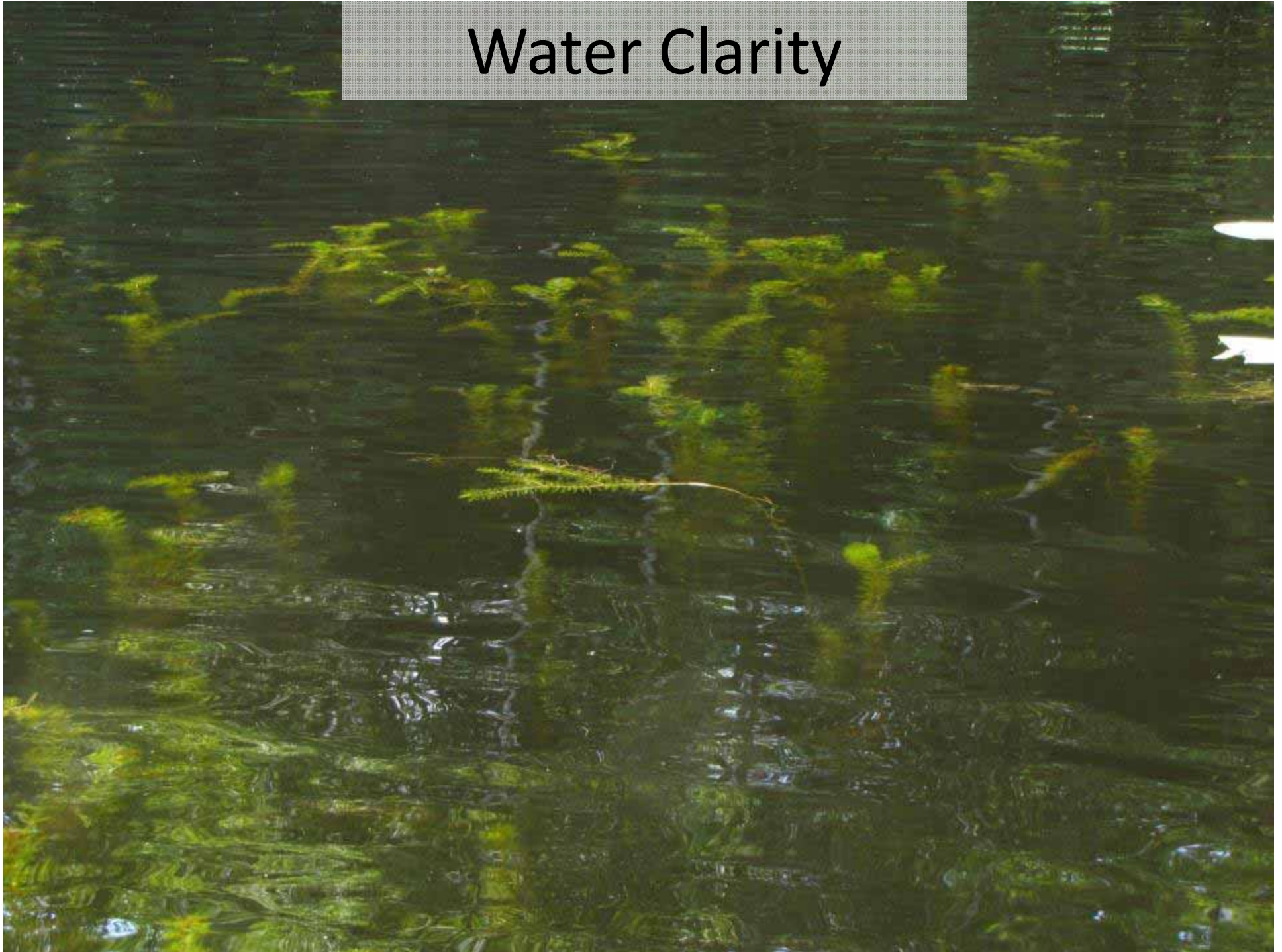




Photo courtesy of Chris Hamerla

Water Clarity



How many people are
willing to help?

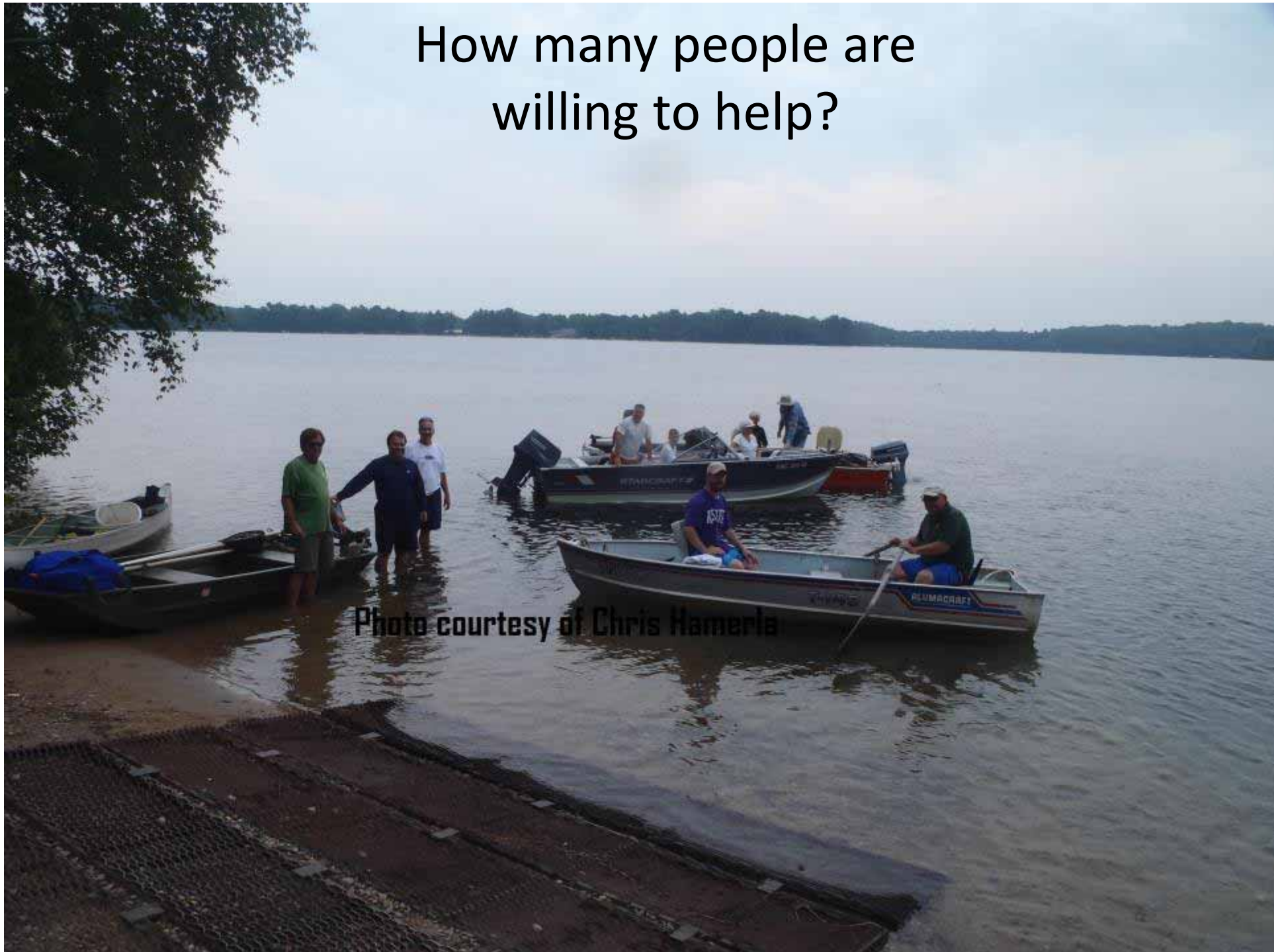


Photo courtesy of Chris Hamerla



???

Density

Depth

Sediment type

Water clarity

Size of work party

Spring is a great time to pull EWM





Let's get to work!



Buoys make life easy for
divers/snorkelers



Close, but not
too close!

Pull the plant(s);
Leave the buoy
for re-check

Be visible! Use at least one
dive flag



Required when more than 150ft from shore.
Diver must stay within 50ft of flag.
Other watercraft are required to stay 100ft from
dive flags.

Partner Responsibilities



Stay close, but not too close

Help point out EWM

Hold tools

Collect/store EWM

Resting spot for diver

Watch for boats, hazards to diver



Stay close and watch the diver!







Burlap/mesh containers

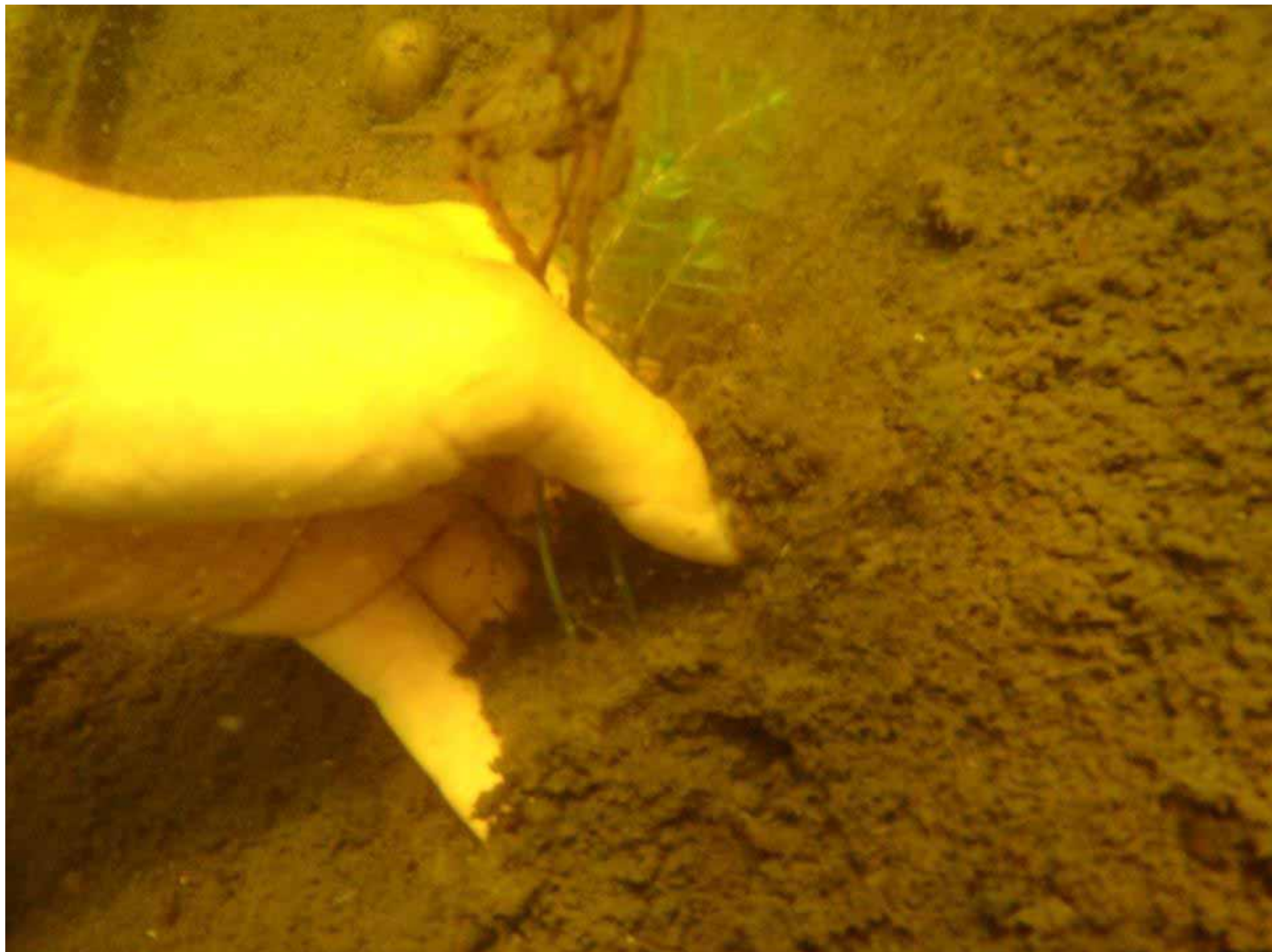
- Drain water
- Hold EWM outside of boat



A close-up photograph showing a hand wearing a bright yellow nitrile glove. The hand is pulling a thin, green, feathery plant stem out of a dark, granular sediment. The sediment is dark brown or black and has a fine, pebbly texture. The lighting is focused on the hand and the plant, creating a high-contrast scene against the dark background.

Pulling

Reach into the
sediment



Wrap/ball up long plants





Remember – stay close and watch the diver



Easy, clean
disposal



Things aren't always
this easy...





Collection without a
boat?





Big Projects, Big Groups,
Big Ideas



Snorkeling/diving is not for everyone









Keep your lake residents and community members informed and involved.



Disposal



Know your disposal site before you begin pulling!



Go with[out] the flow! Let it drain

Aquatic plants may be legally transported for disposal or identification.



You must cover the load



Gardens or farm fields are excellent EWM disposal sites



Keep an eye out





50T.COM





Building a floating
collection device

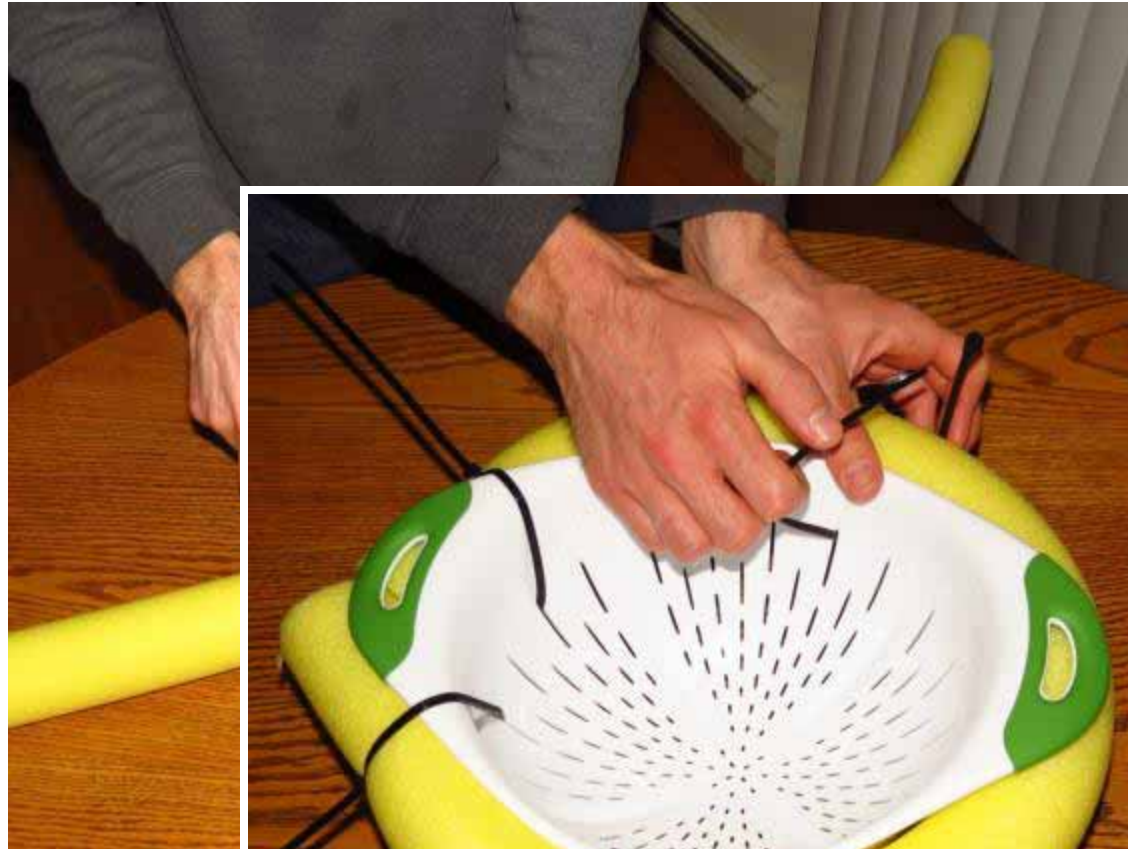


Building a floating collection device

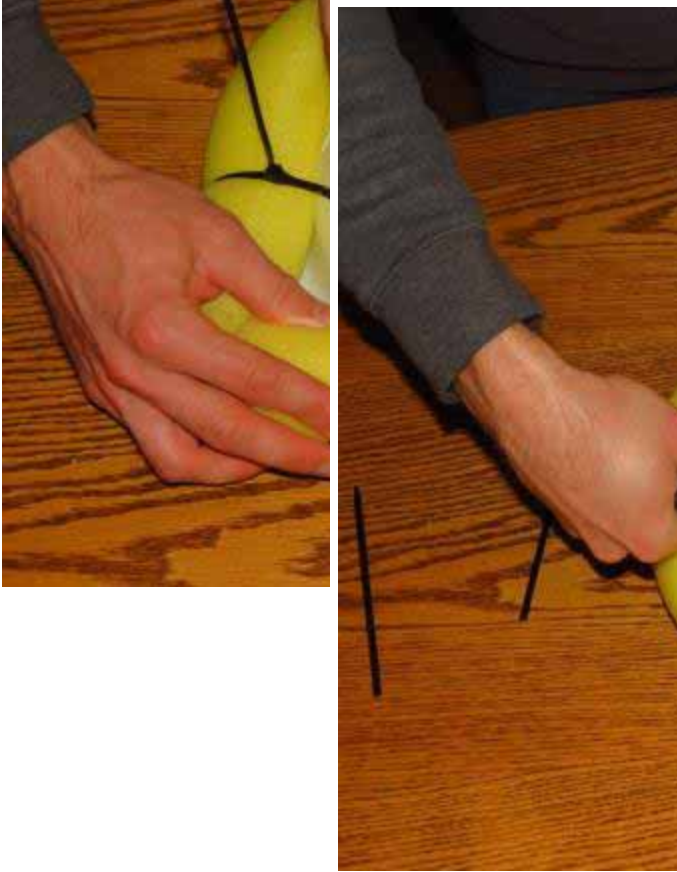
Building a floating collection device



Building a floating collection device



Building a floating collection device





Moving on...

Archibald Lake, Oconto County (Steve Fleming)

Post-hole fork



Steel Bushel Basket

Archibald Lake, Oconto County (Steve Fleming)



Comstock Lake Association volunteers



Moon Lake, local Boy Scouts involvement.



Dick Hansen, Porters Lake, Waushara Co.

August
2012

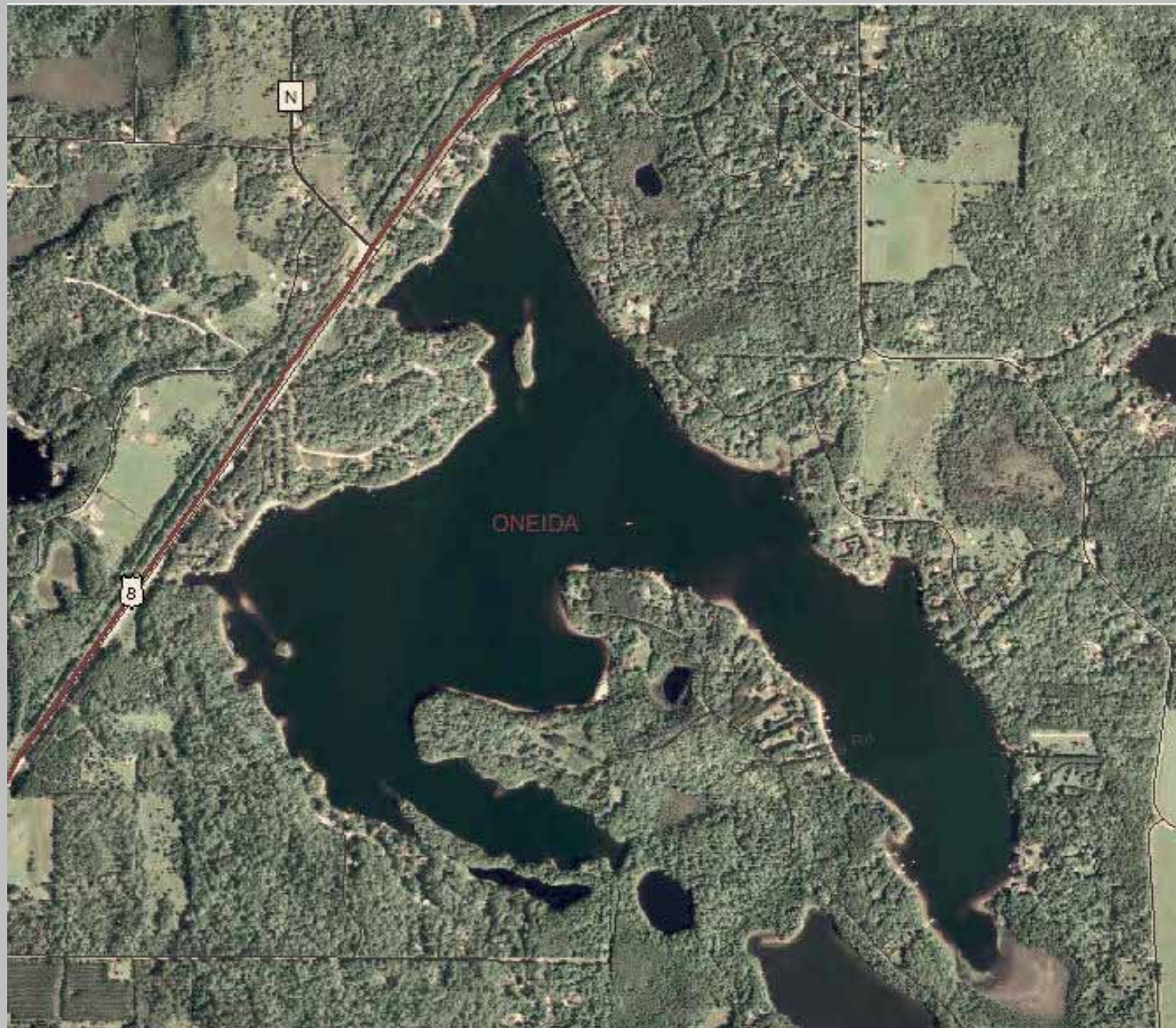


Dick Hansen, Porters Lake, Waushara Co.

September
2012



Stephanie Boismenu, Squash Lake, Oneida Co.



Kilby Lake, Depth & Plant Growth



Kilby Lake, Depth & Plant Growth



New EWM found.

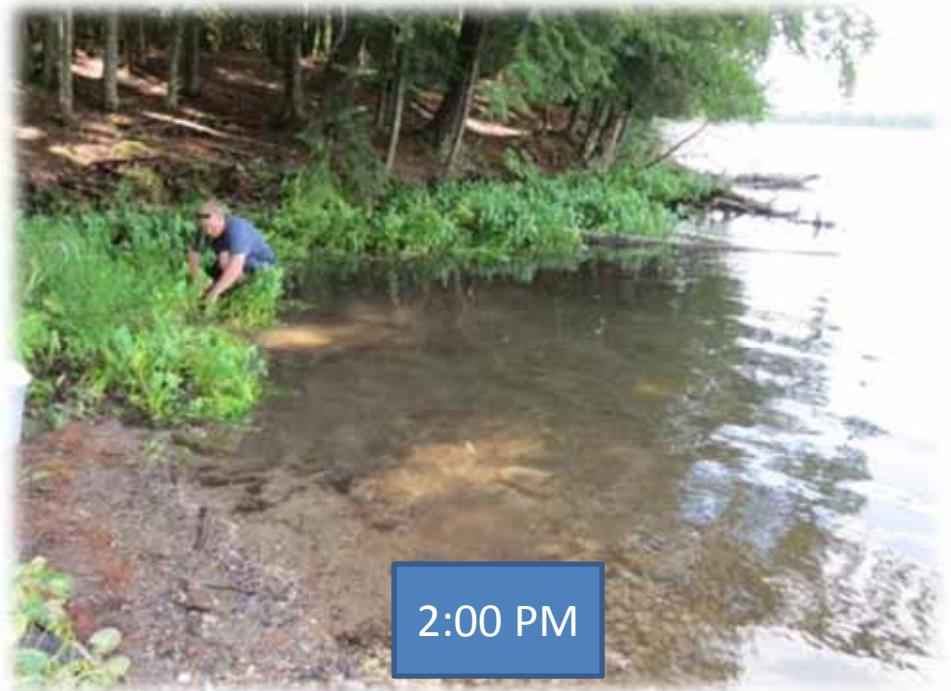
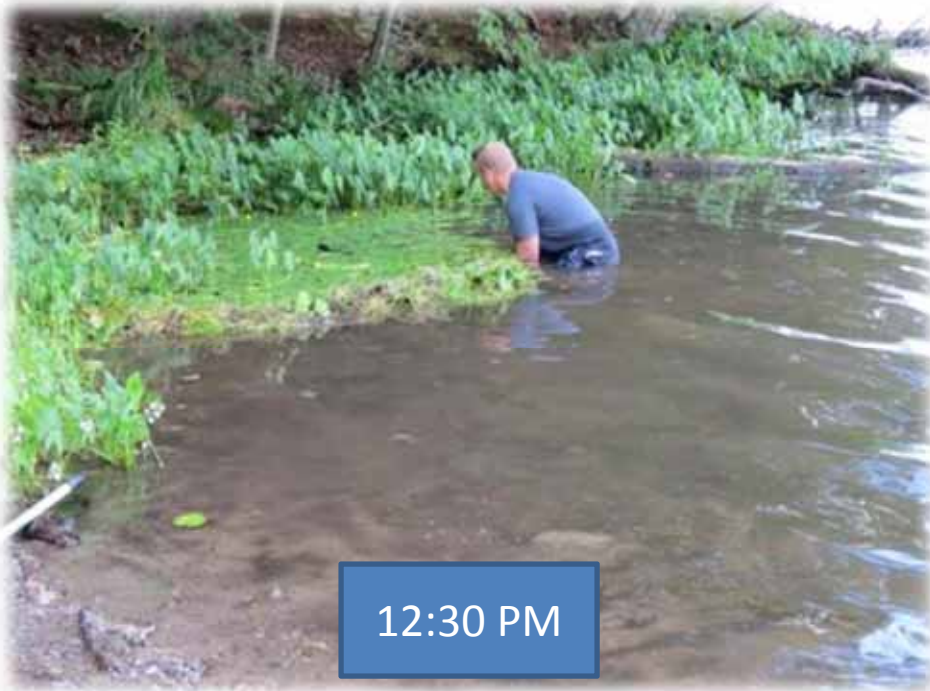
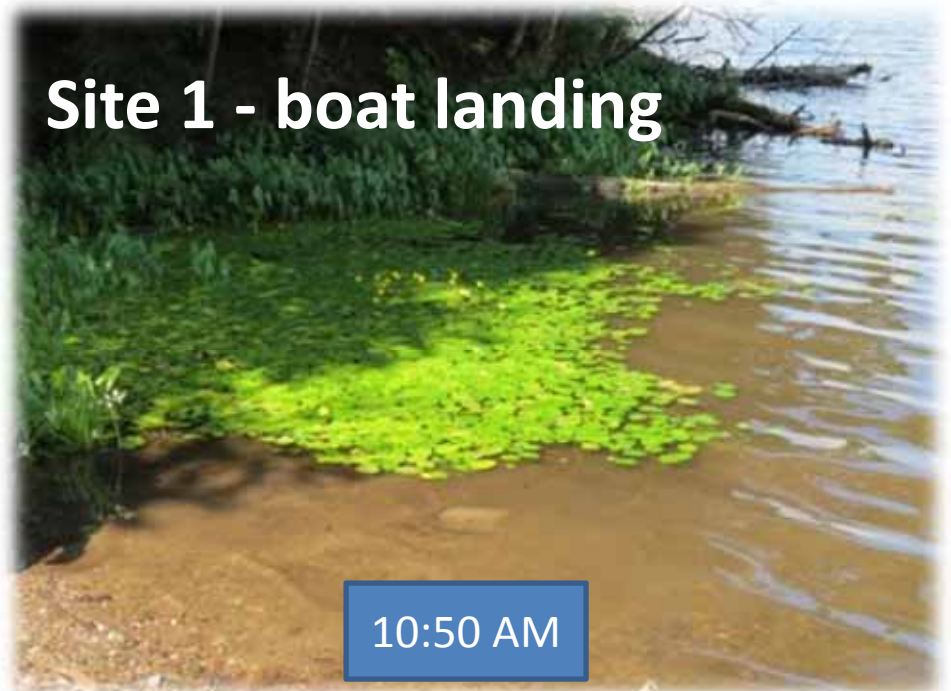
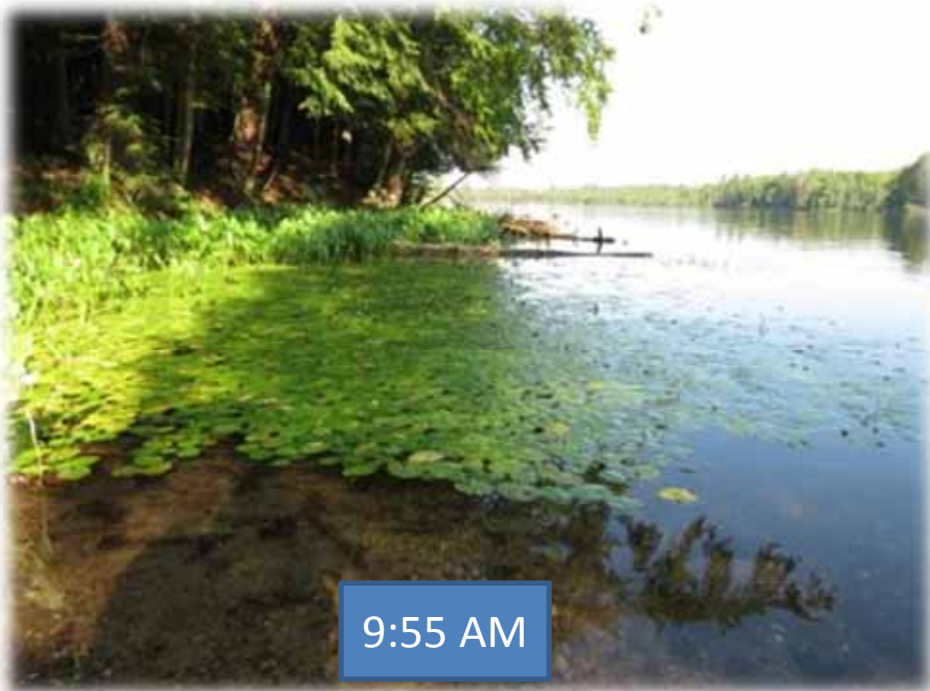
Too deep to snorkel
and native plants made
pulling difficult.

Lake Gordon, Forest County

Yellow floating heart locations 2013. Boat landing at end of Gordon Lk Landing Rd (●) and upper west side of point (●).



As of October 2014, no YFH has been observed.





2:25 PM

A fine meshed net works well to collect smaller floating plant fragments.

Site 2 – the point

2:45 PM

Questions?



Chris Hamerla Regional AIS Coordinator

Golden Sands RC&D (Green Lake, Marathon, Marquette, Taylor, & Wood Counties)

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715-343-6278