



Manual Removal of Eurasian Watermilfoil: Tools and Strategies



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Marathon, Taylor & Wood Counties

Chuck Druckery – Water Resource Specialist
Marinette County



Manual Removal of Eurasian Watermilfoil: Tools and Strategies



9-9:10 Introduction

Who we are & what we'll be covering.

9:10-10:15 Chris – EWM

ID, mapping, planning, & basic removal concepts.

10:15-10:25 Break

10:25-11:15 Chuck – DASH

What is it, how it works

11:15-11:25 Break

(transition or remain for EWM questions/video)

11:25-Noon DASH Pontoon

Show and tell



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

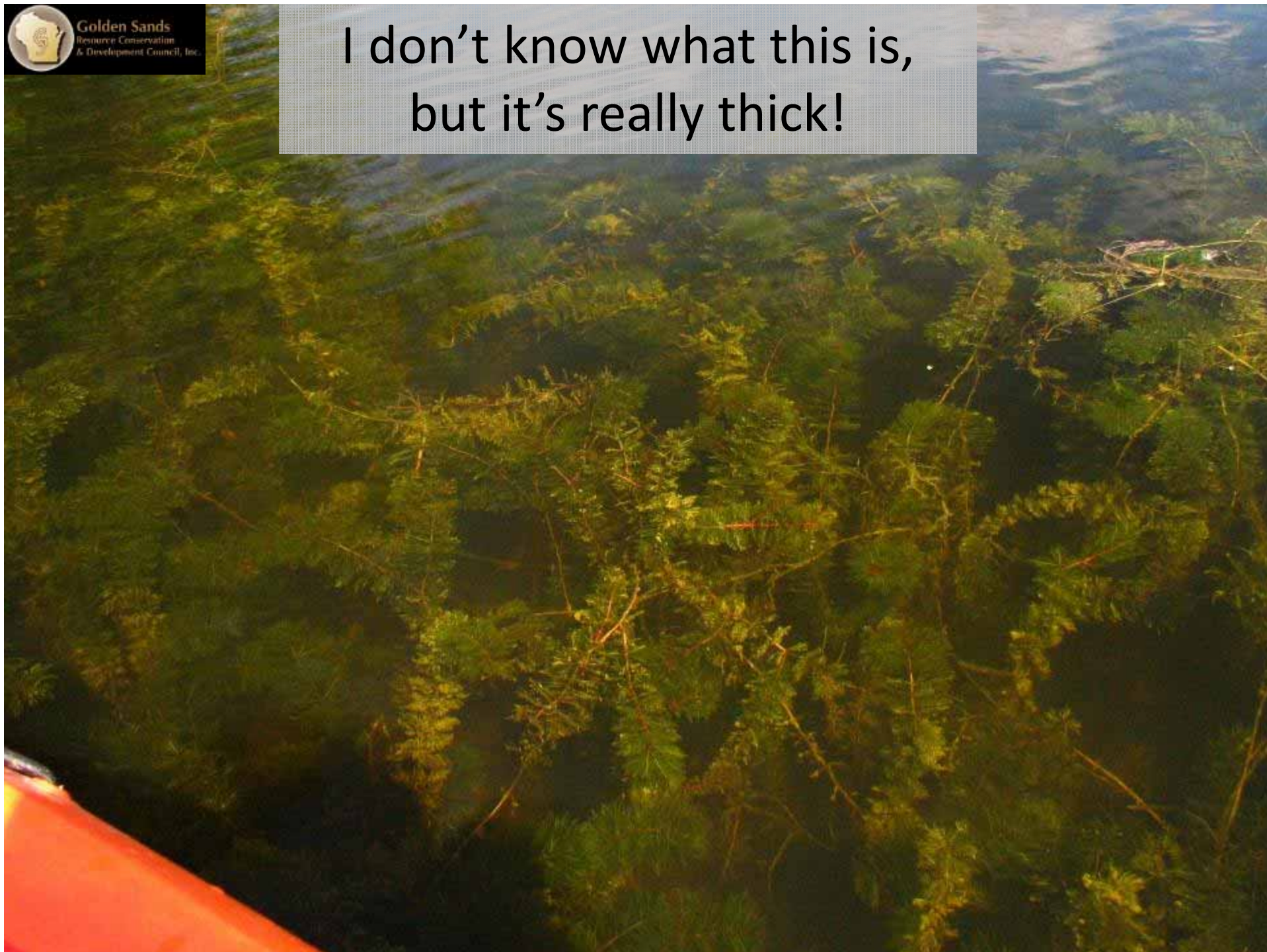


Something looks different...





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



Watermilfoils have distinct flowers



Color can be helpful

Northern watermilfoil

Eurasian watermilfoil





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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



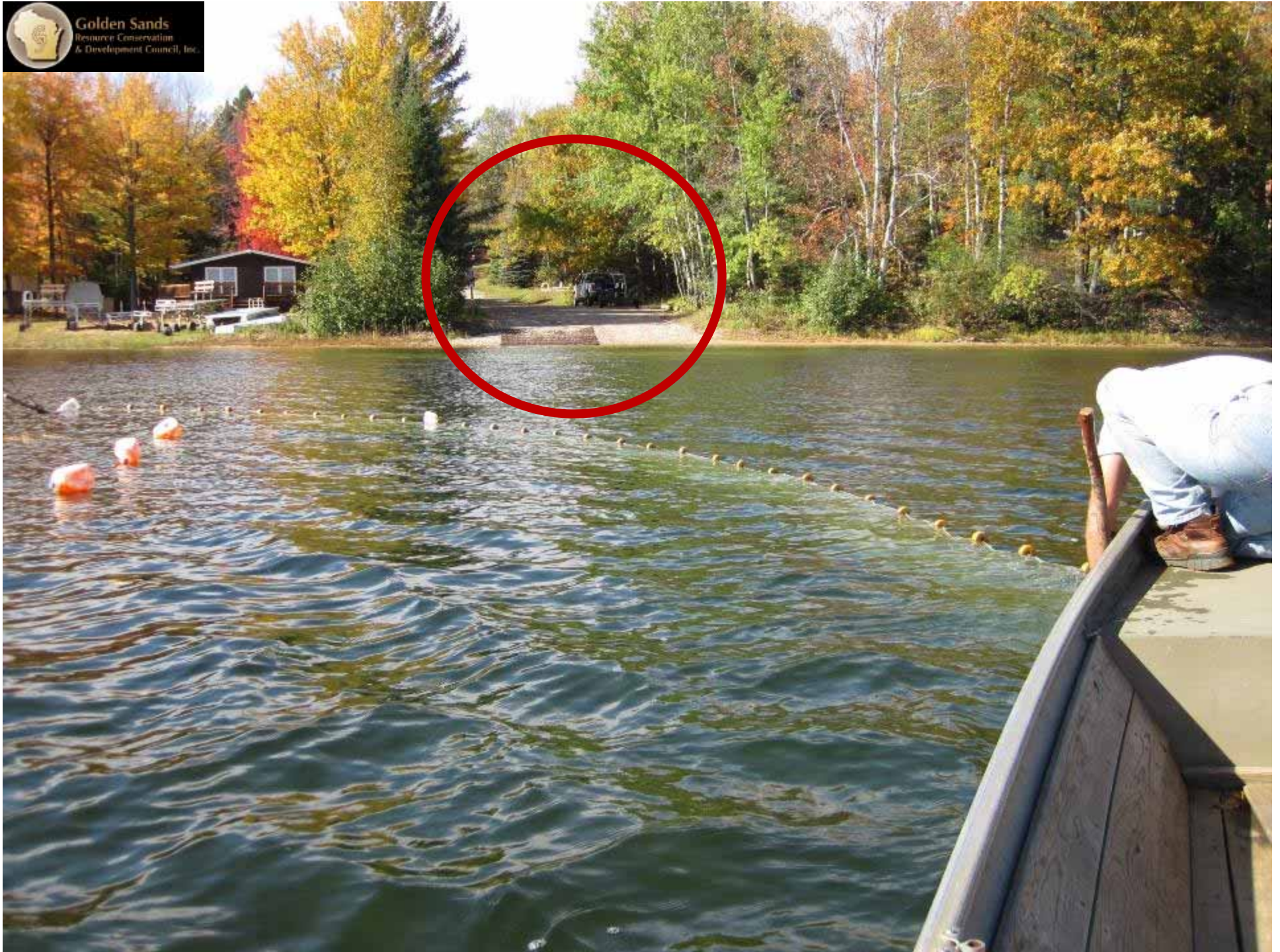
Northern watermilfoil
M. sibiricum

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



Where should I look for Eurasian watermilfoil?







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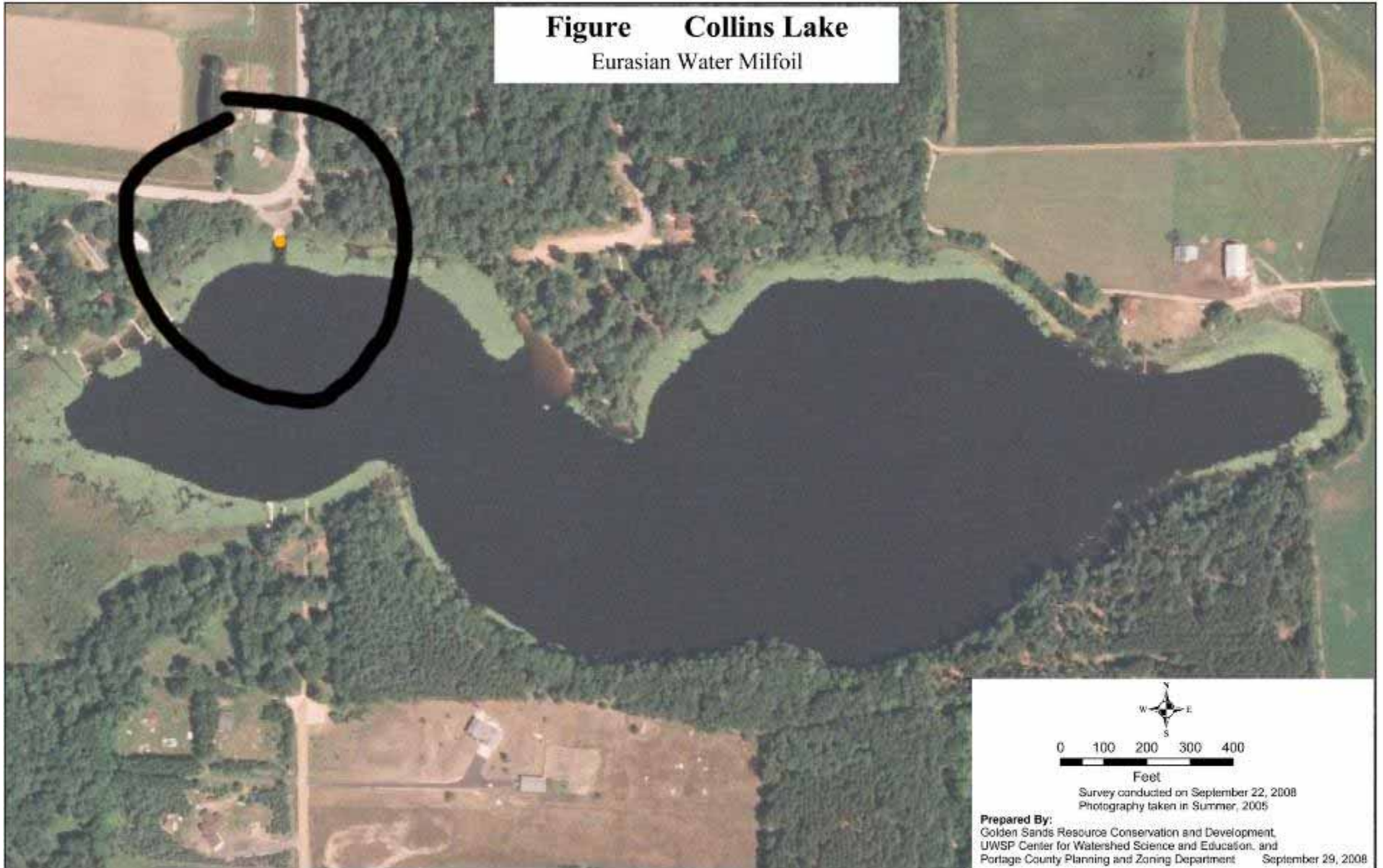




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Figure Collins Lake
Eurasian Water Milfoil

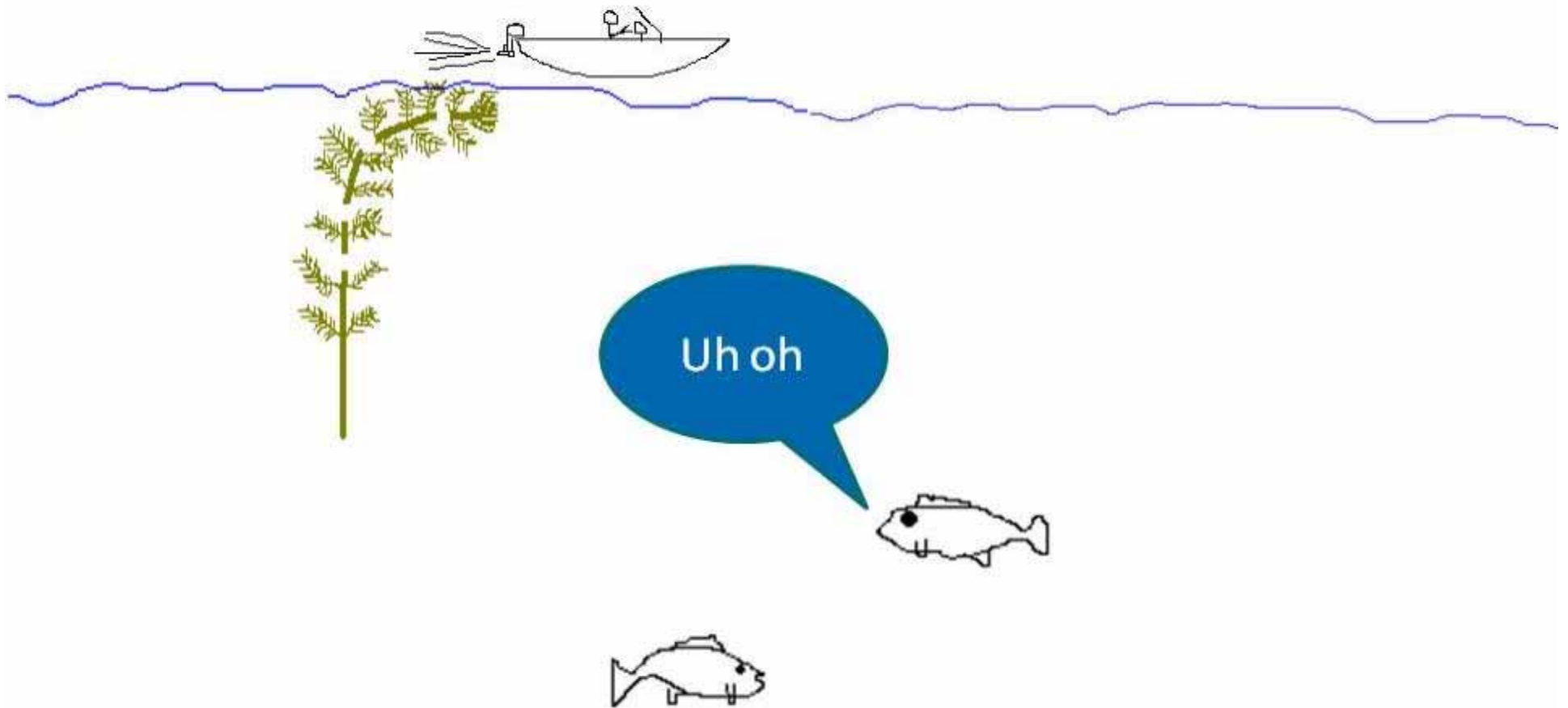




Eurasian Watermilfoil Spread

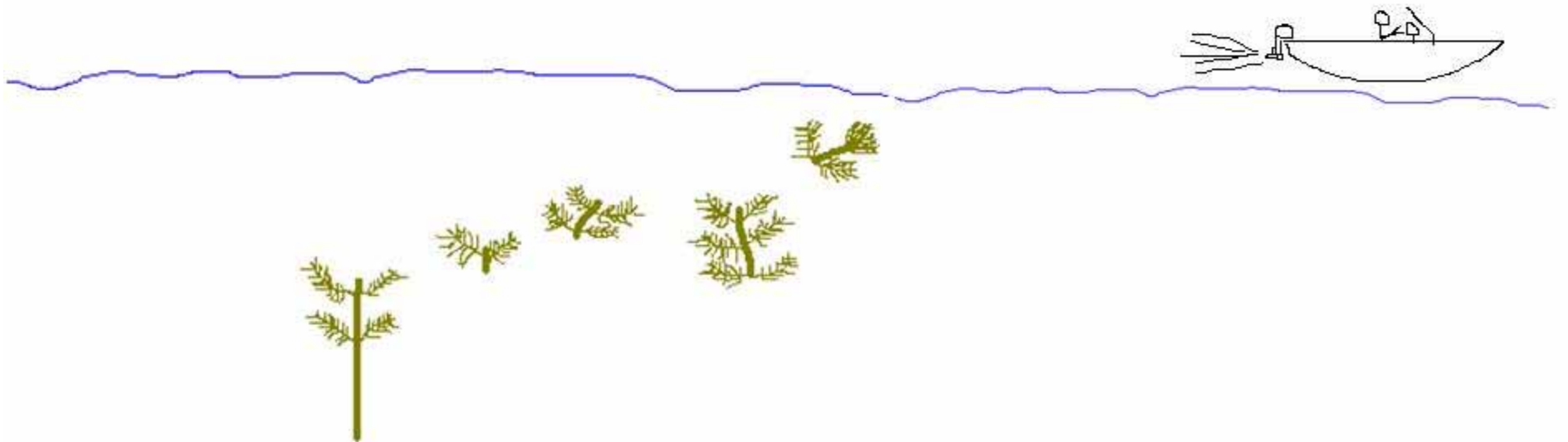


Eurasian Watermilfoil Spread





Eurasian Watermilfoil Spread



Eurasian Watermilfoil Spread



Eurasian Watermilfoil Spread





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Onterra LLC
 Lake Management Planning
 117 South Broadway, Suite C
 De Pere, WI 54117
 920-244-8869
 www.onterra.com

Source:
 2005 and 2006 NLSR
 2006 Survey
 2007 Treatment Area Survey by James P. Gierke
 2008 Treatment Area Survey by James P. Gierke
 2009 Survey by James P. Gierke
 2010 Survey by James P. Gierke

Date of last map shown in red

Legend

- EWM Location
SIA and LMS 2010
- EWM Location
BOGA Survey, 2005
-  2005 EWM Treatment Area
*Excludes of Neighbors (NLS) located on N2059

Seven Island Lake
 Lincoln County, Wisconsin
EWM
Locations



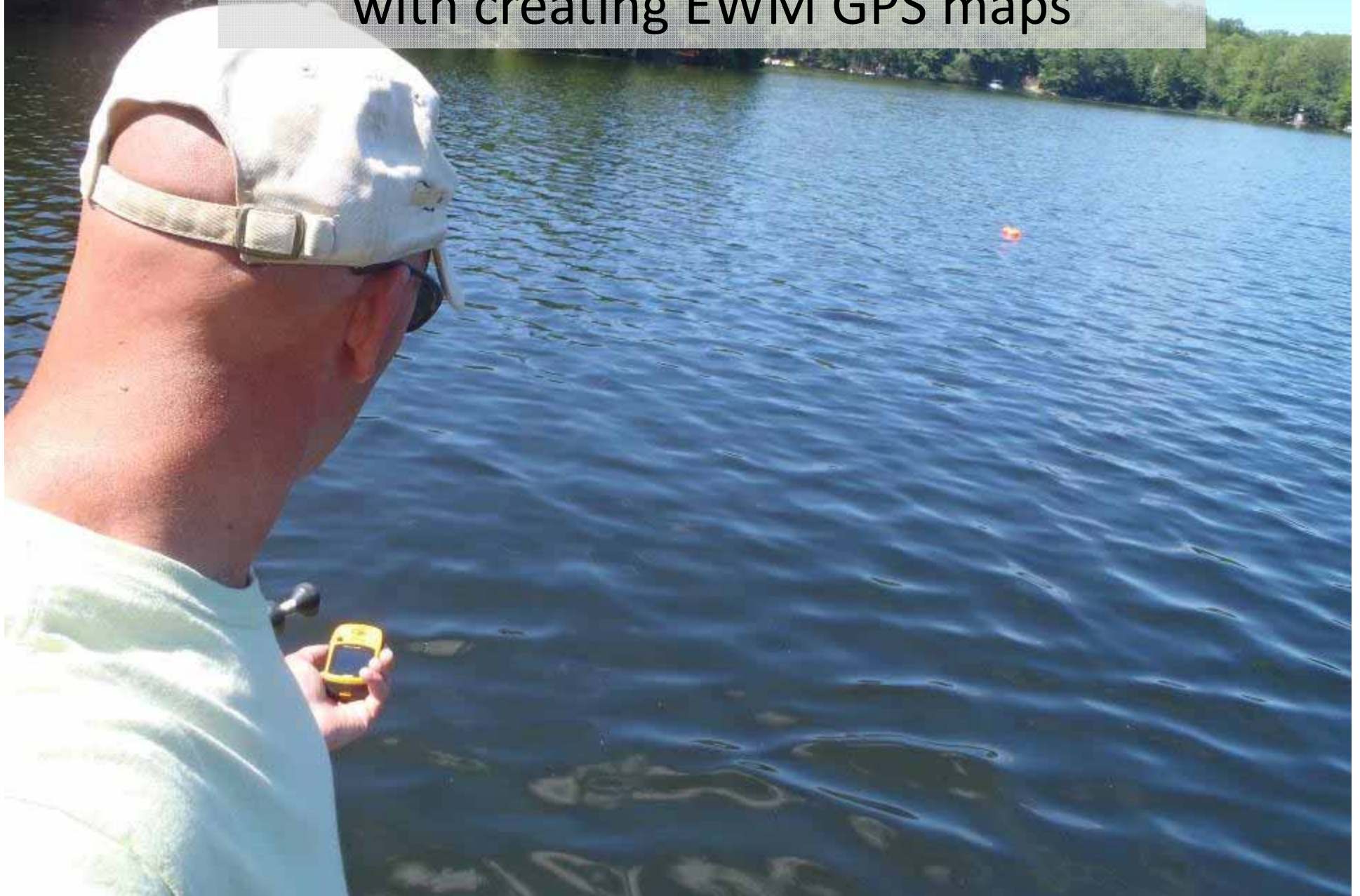
If you see a suspicious plant, contact your local AIS Coordinator or DNR Water Resources Specialist







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





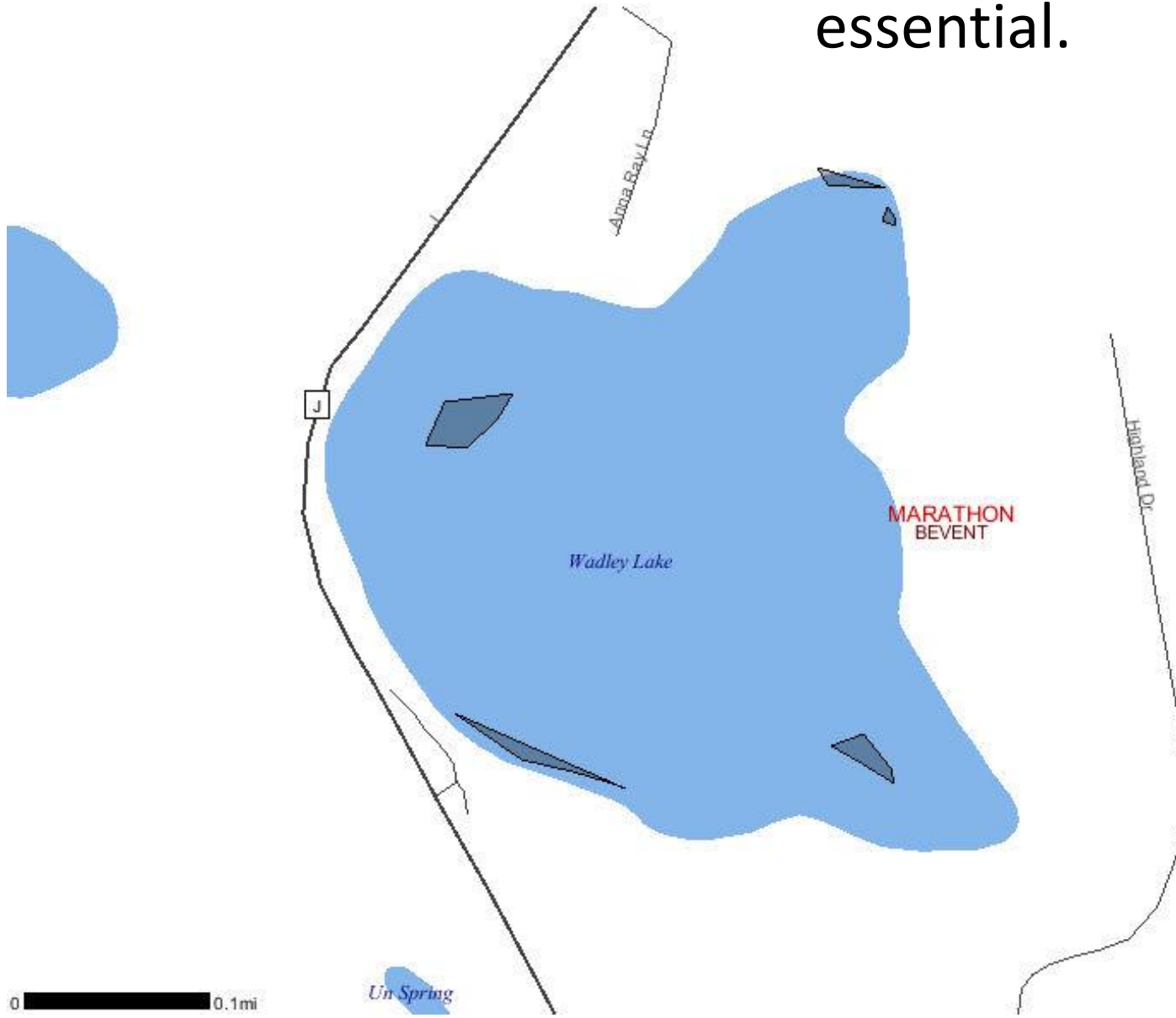


48-424733
 89-472233
 48-424633
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 48-424461
 89-472233

 Onterra LLC <i>Lake Management Planning</i> 117 South Broadway, Suite C De Pere, WI 54117 920-244-8869 www.onterra.com	<p>Source: 1987 and 1988: N12W 1989-1990: N12W, 2008 1987 Township (see Section 35 General Plan Correl.) 1988-89: Section Survey N12W, 2008 1987-88: April 21, 2009</p> <p>www.onterra.com</p>	 Project of Lake Map shown in red	<p>Legend</p> <ul style="list-style-type: none"> ● EWM Location SIA and Landscape, 2011 ● EWM Location BOEM-A Survey, 2005 2005 EWM Treatment Area -Review of Neighbors (SIA) conducted in 2009 	<p>Seven Island Lake Lincoln County, Wisconsin</p> <p>EWM Locations</p>
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GPS units and aerial photos are useful, but not essential.



WDNR Surface Water Data Viewer Application

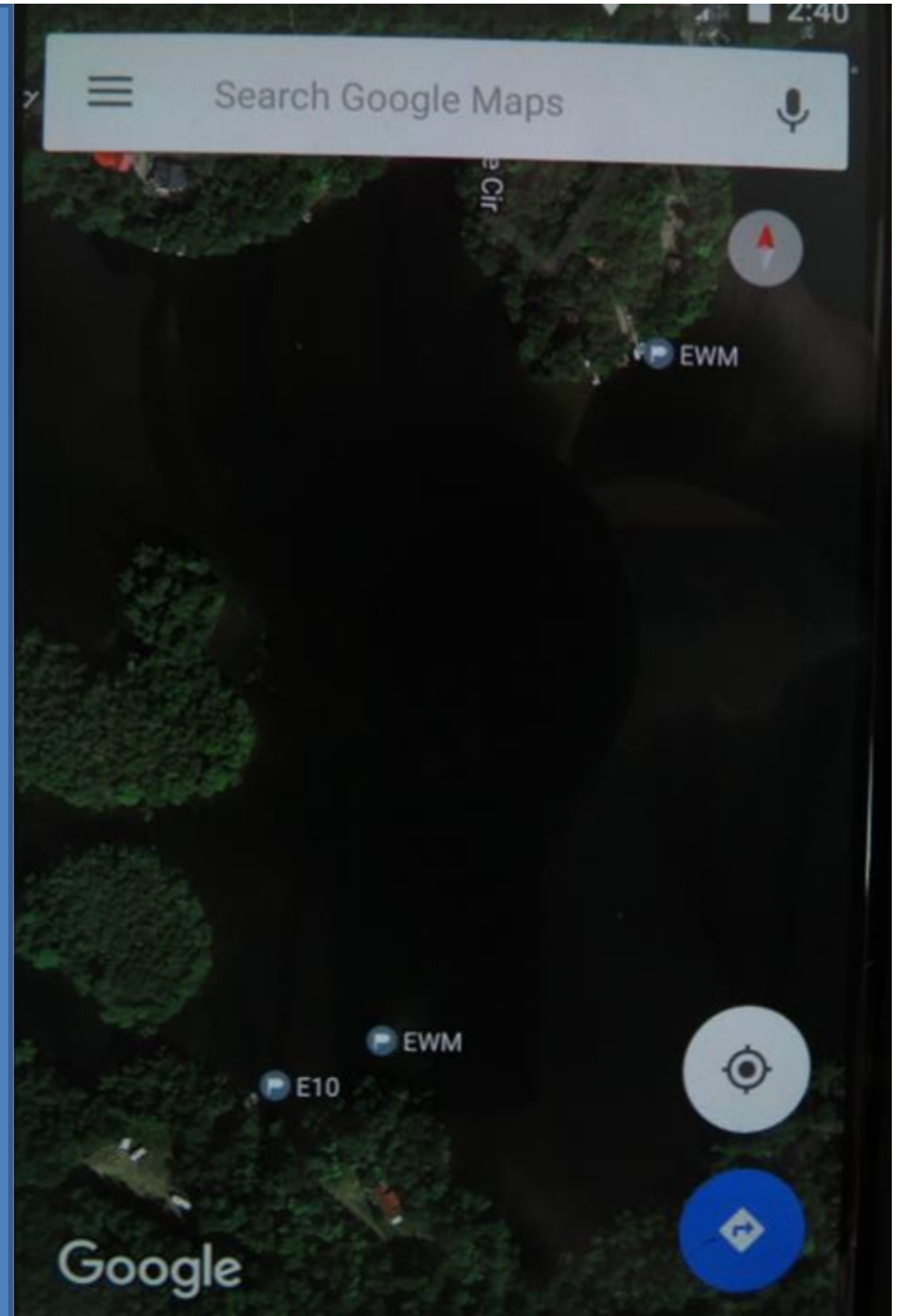


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-Smart phones can be used to mark points of interest and shared with others.

This can be covered later for those interested.



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.

**DASH SYSTEMS are not considered dredging, this will be covered during the DASH presentation.

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.

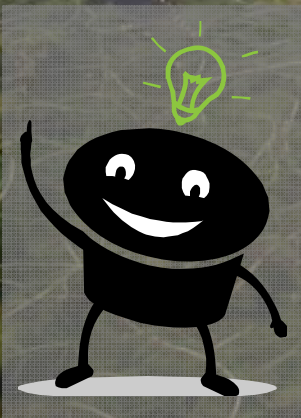


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You've found EWM in your lake – is hand-pulling the best option? Many things to consider...



Set realistic goals



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

Density



Sediment type



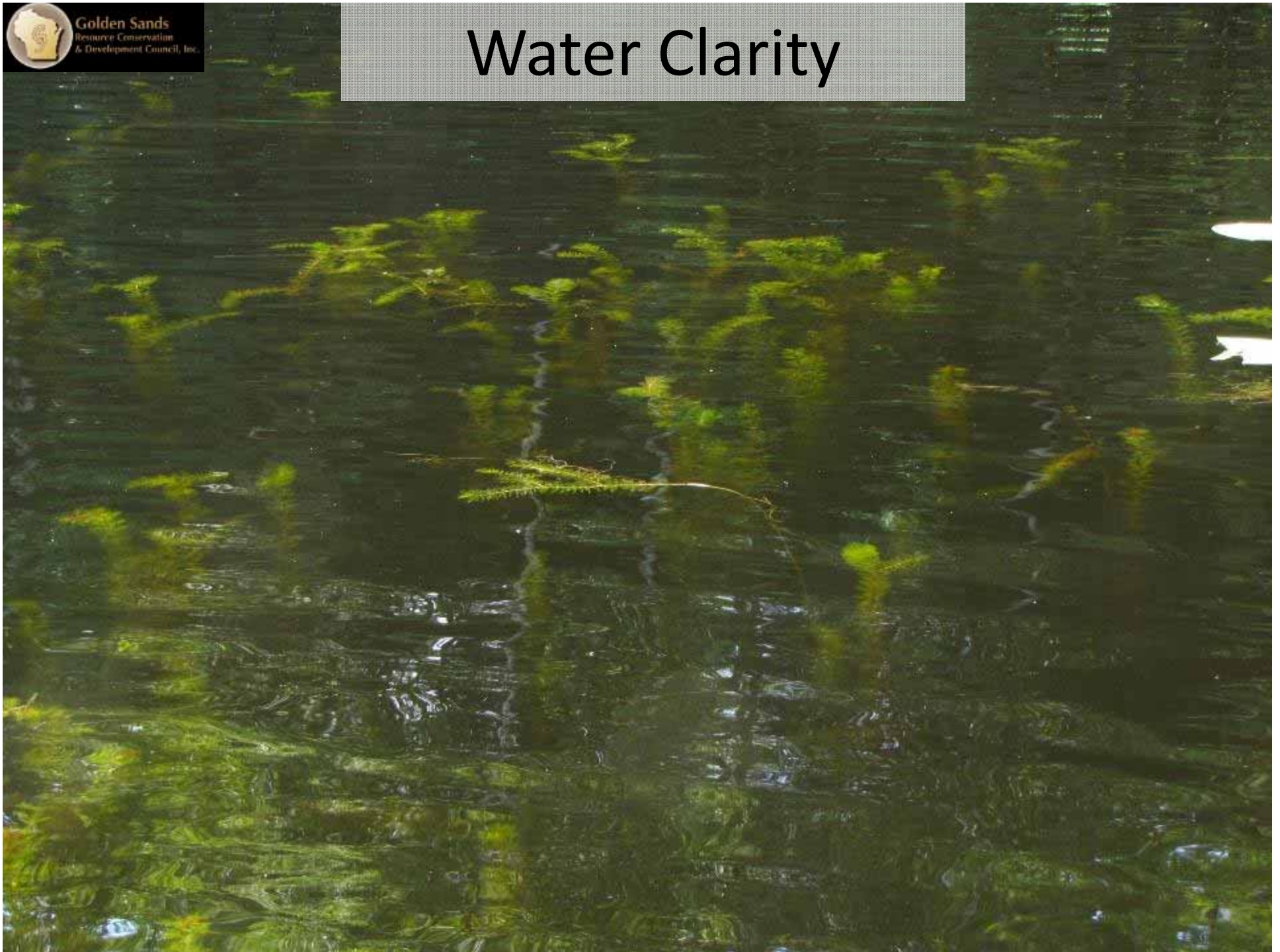
Water depth

Photo courtesy of Chris Hamerla



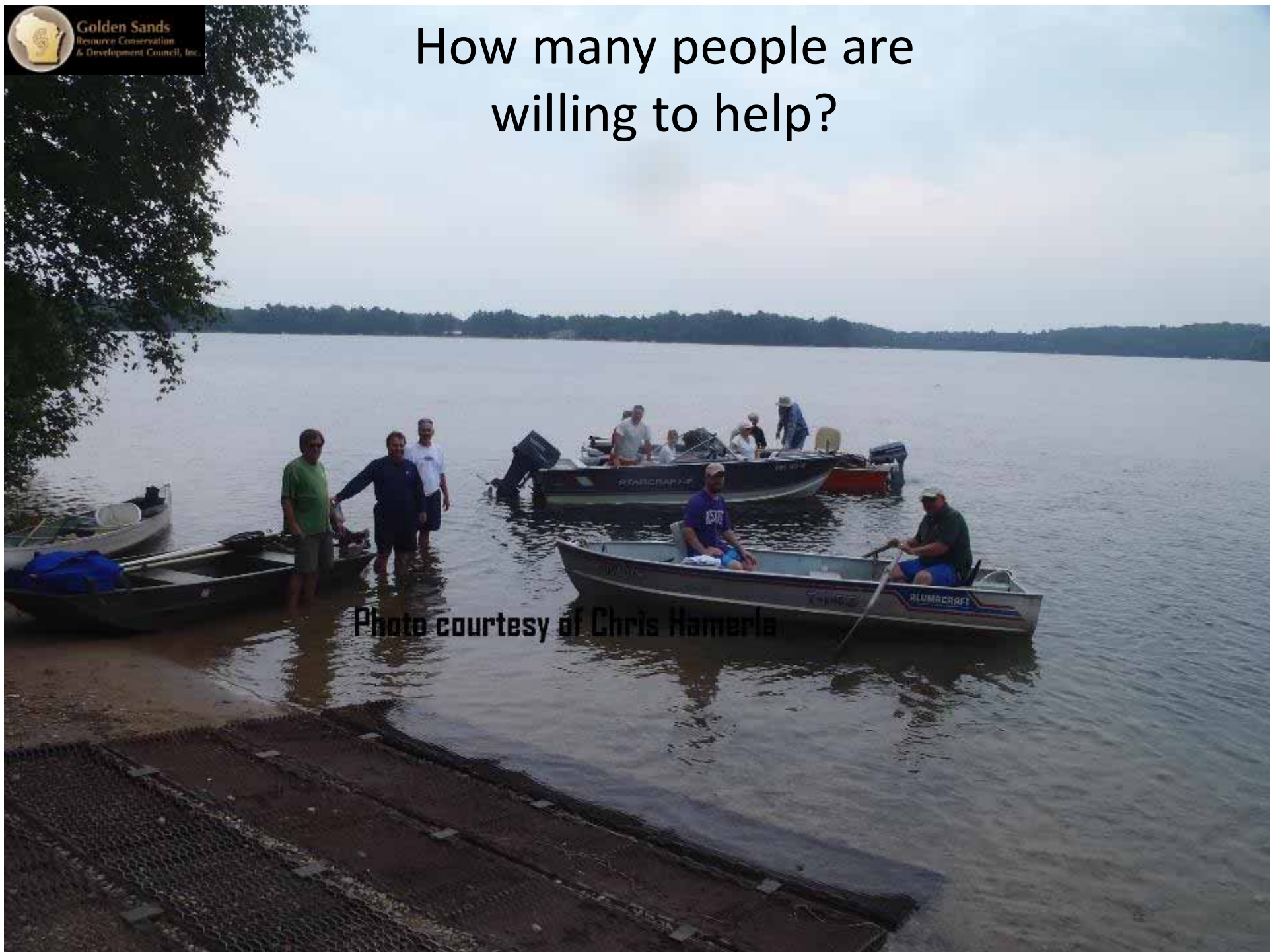
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Water Clarity



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



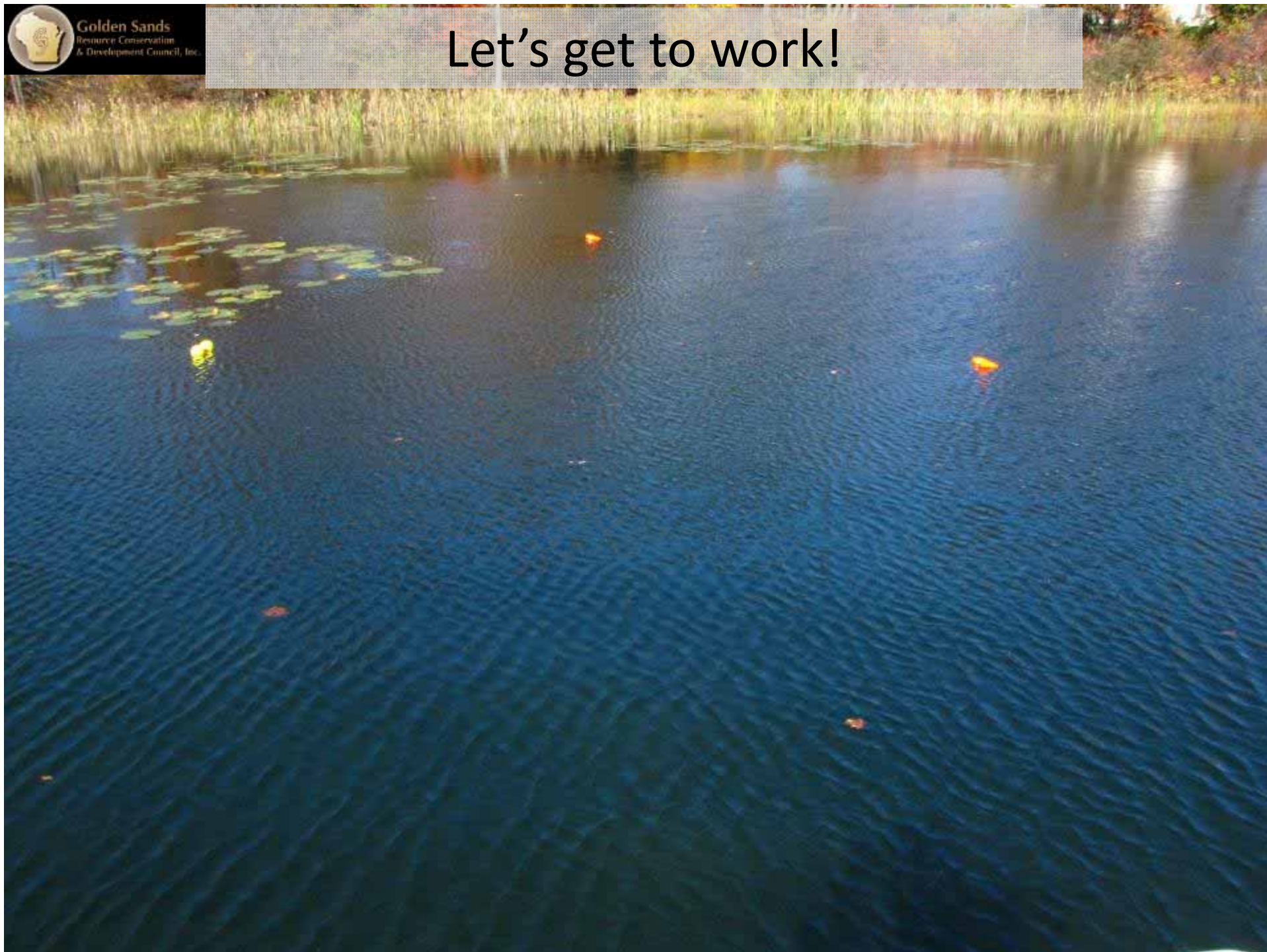
Start early before plants are
established and bigger.
Native plants aren't as
abundant.





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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.

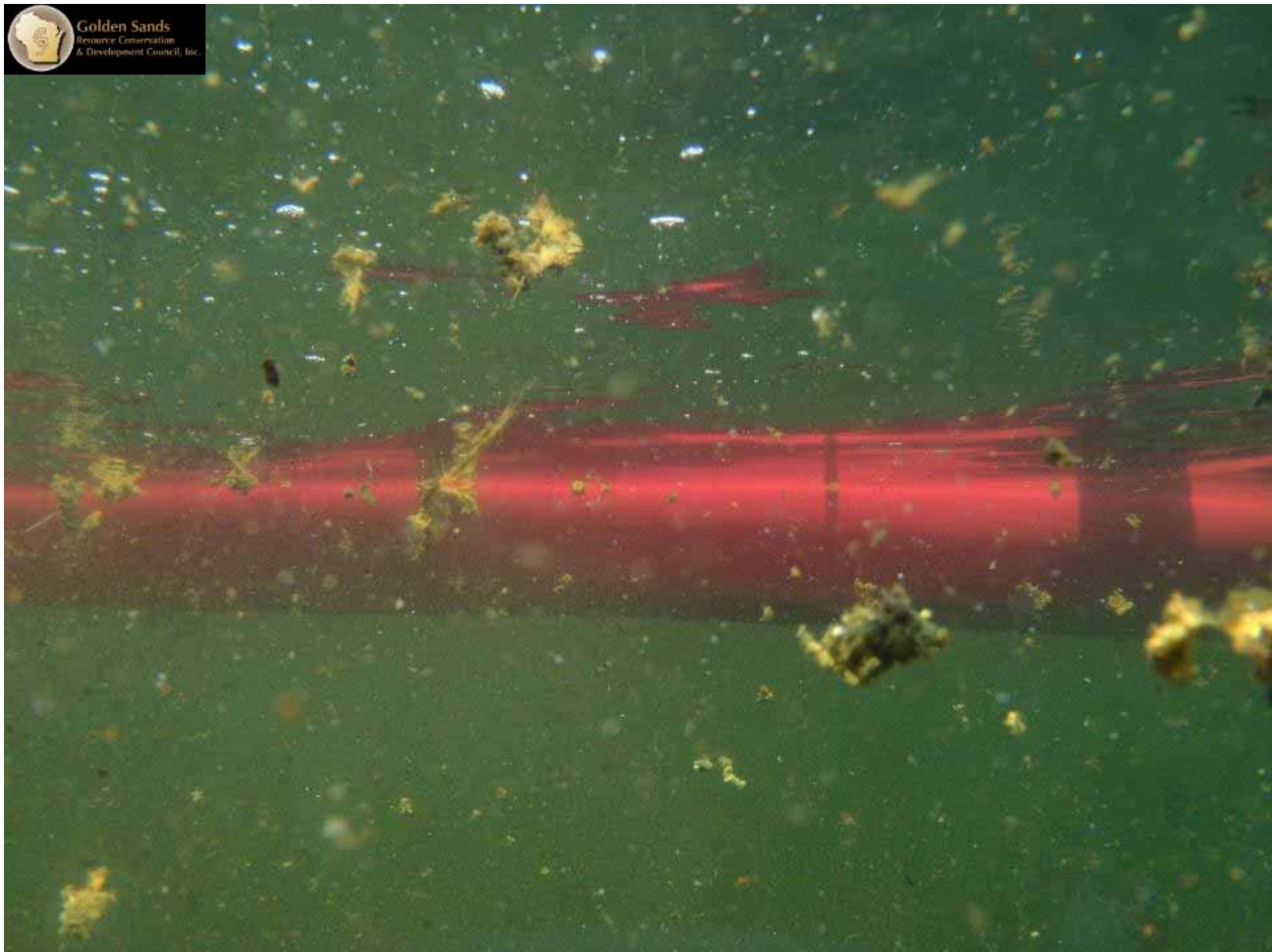
Partner Responsibilities



Collect/store EWM
Stay close, but not too close
Resting spot for diver
Help point out EWM
Watch for boats, hazards to
Hold tools
diver



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Stay close and watch the diver!





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Burlap/mesh containers

- Drain water
- Hold EWM outside of boat

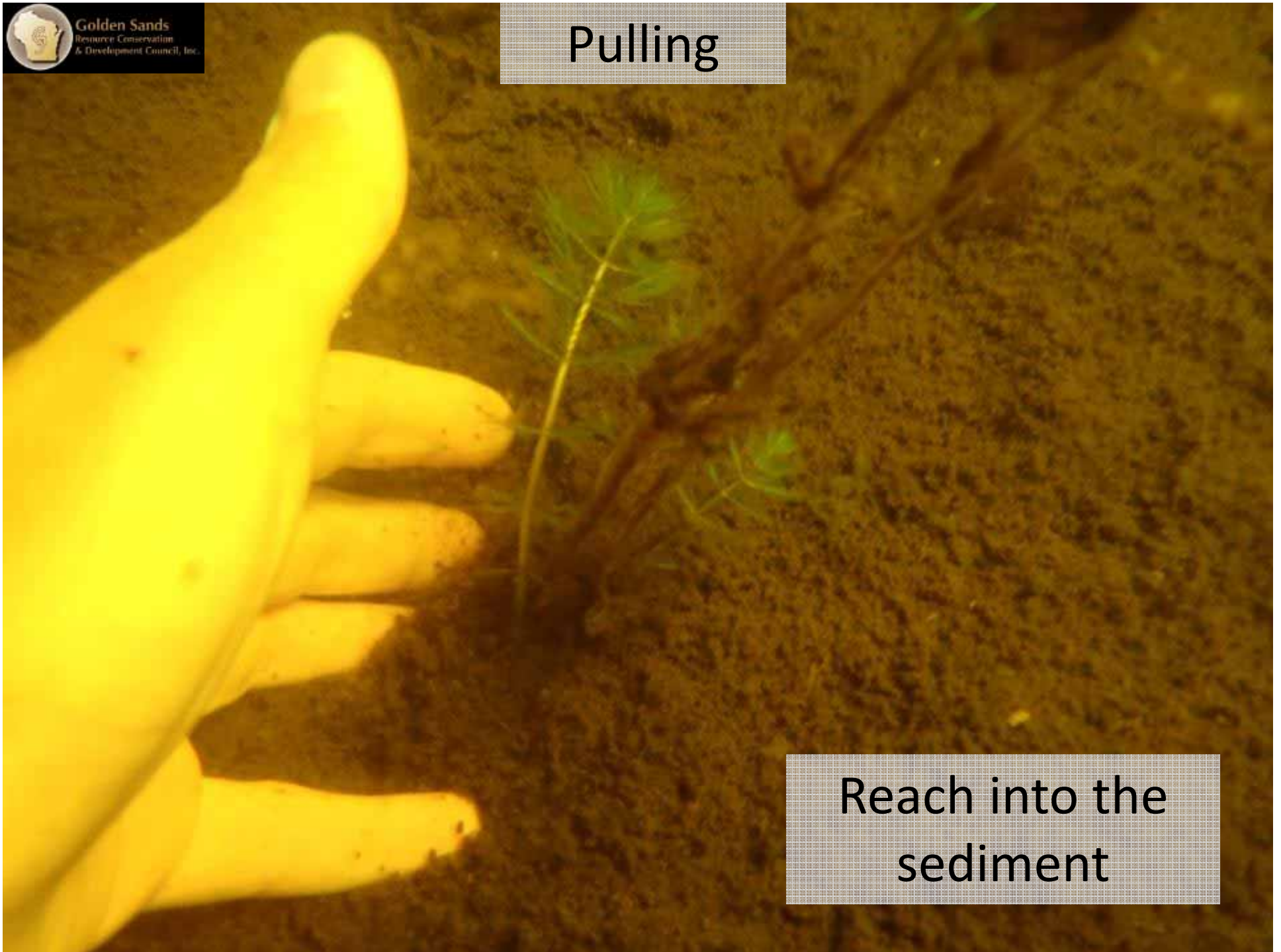


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Pulling

Reach into the
sediment





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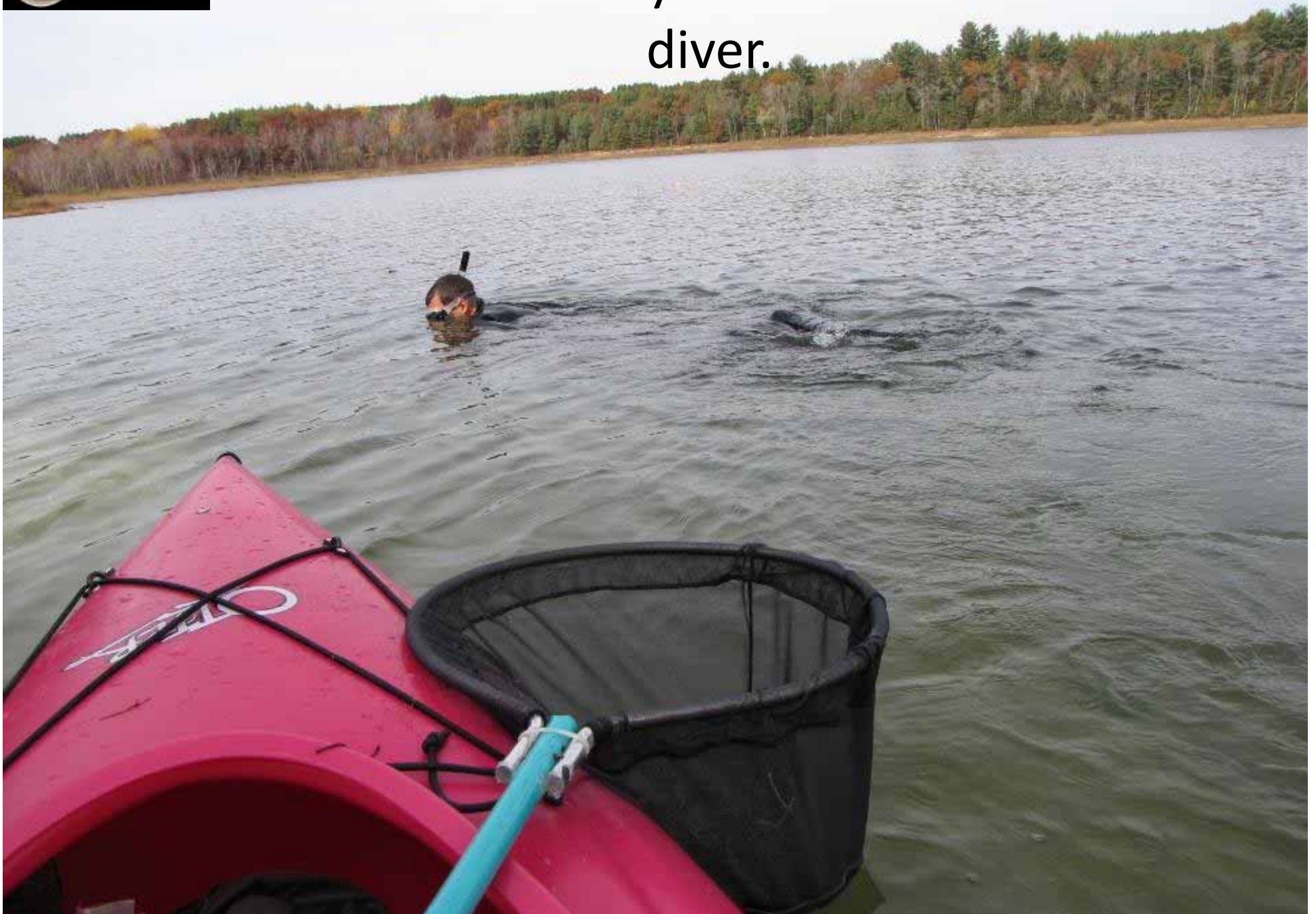
Wrap/ball up long plants







Remember – stay close and watch the diver.



Easy, clean disposal
Things aren't always this
easy...





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Collection without a
boat?



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Big Projects, Big Groups, Big Ideas



Snorkeling/diving is not for everyone.





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**What if plants are too deep?
SCUBA divers can be used too!**

Keep your lake residents and community members informed



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





Manual removal on other species.

Curly leaf pondweed



Water hyacinth



Yellow floating heart



Flowering rush

Site 1 - boat landing



9:55 AM

10:50 AM

12:30 PM

2:00 PM

Tools: Use your imagination



Building a floating collection device





Building a floating collection device





Questions?



Chris Hamerla Regional AIS Coordinator

Golden Sands RC&D

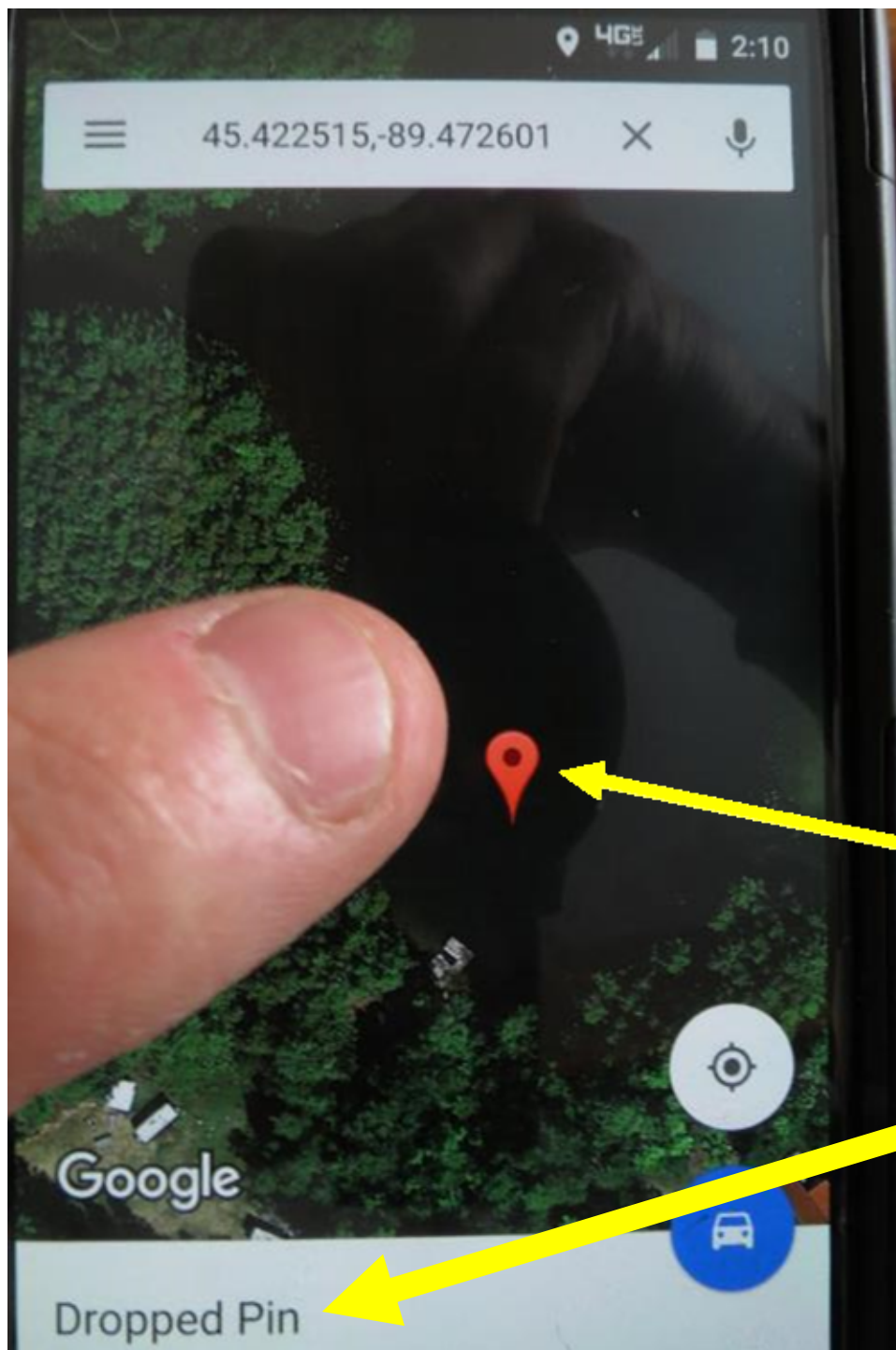
715-343-6215

Chris.Hamerla@goldensandsrcd.org



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Moving on...



Mark locations using a smart phone.

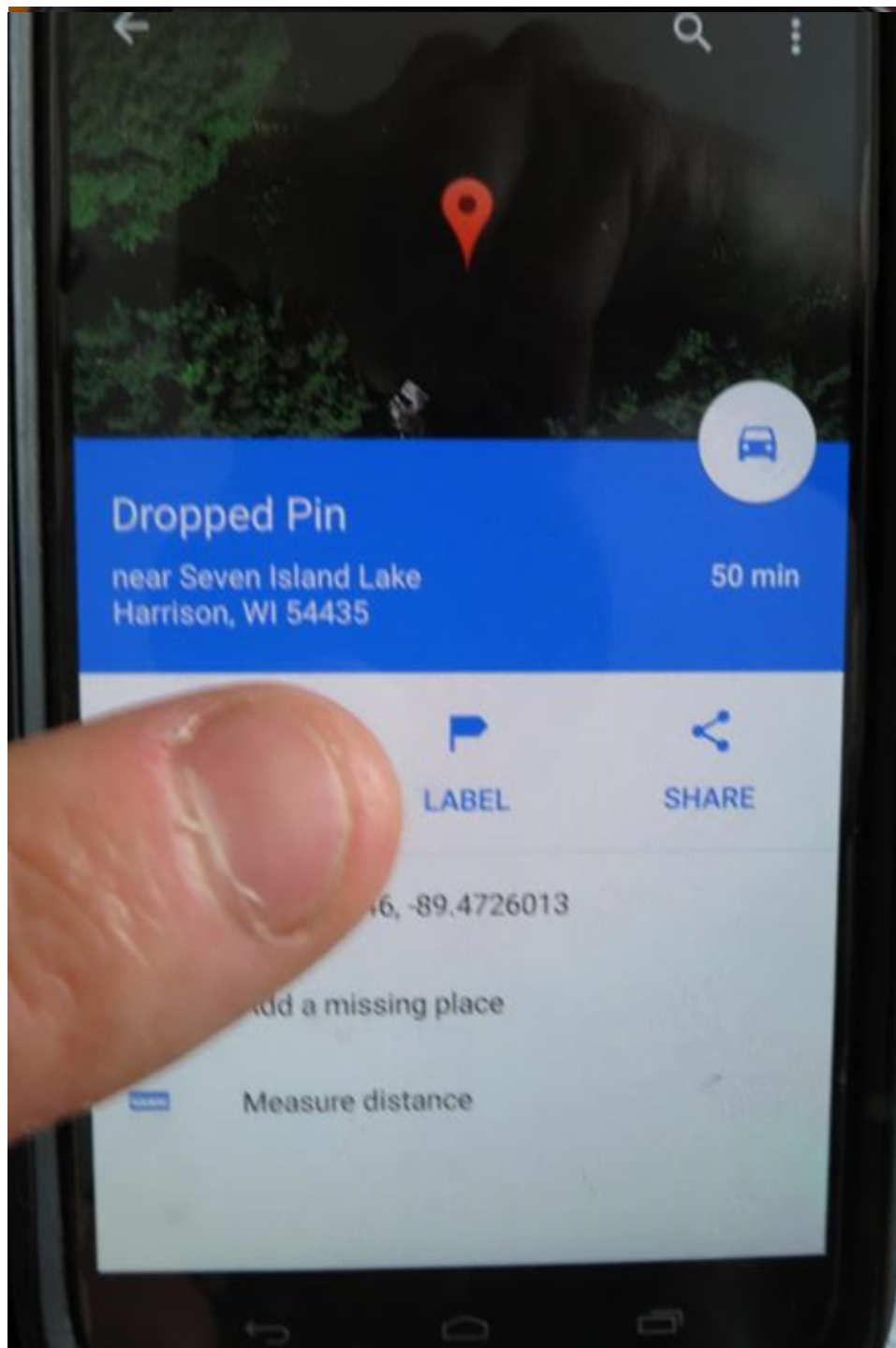
-GPS must be enabled.

-Open Google Maps

-Icon should indicate your current location, if not press the locator icon.

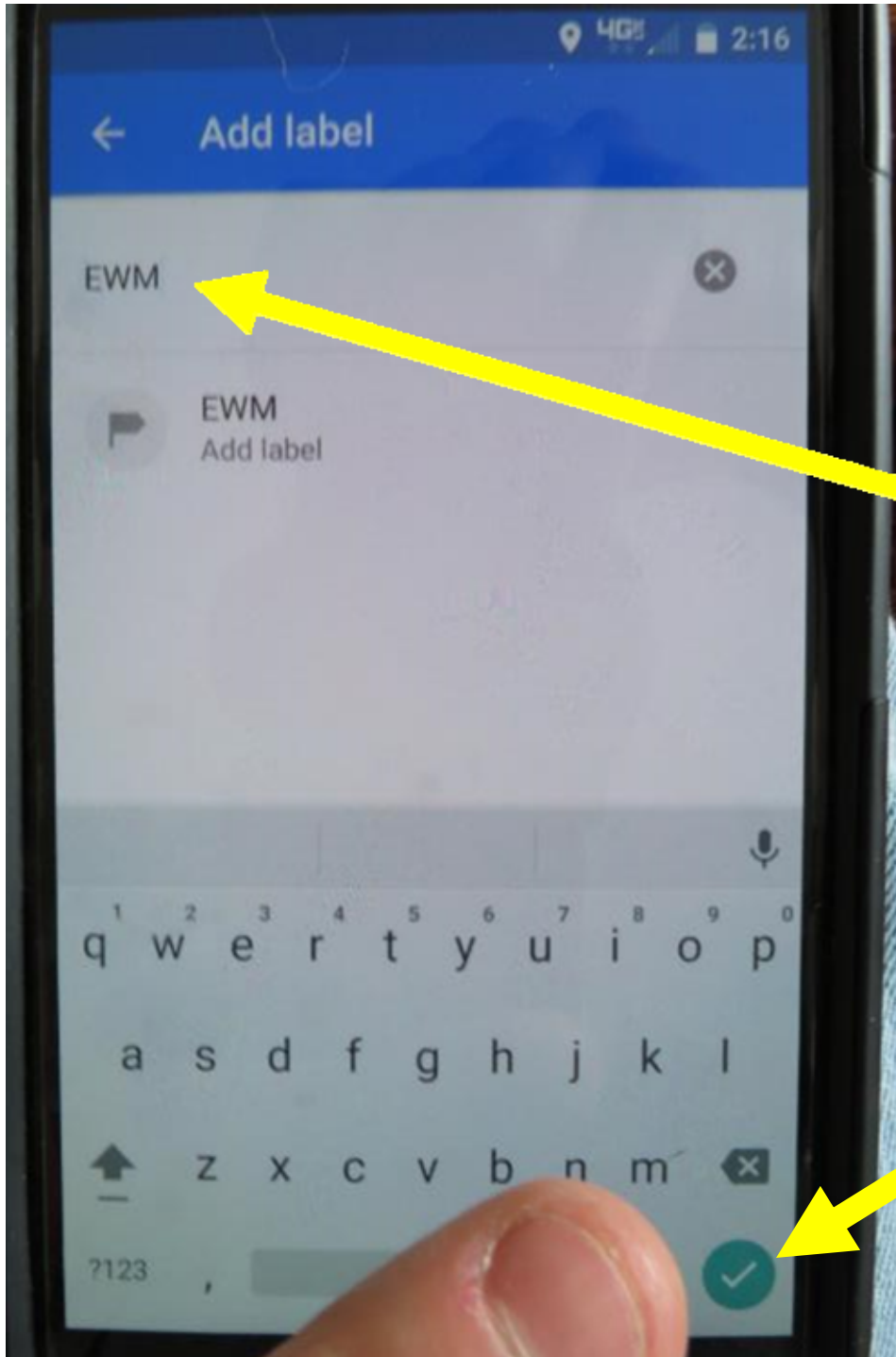
-When you want to mark something press screen on that spot. A pin should show up and “Dropped Pin” message will appear.

-Press the “Dropped Pin” message.



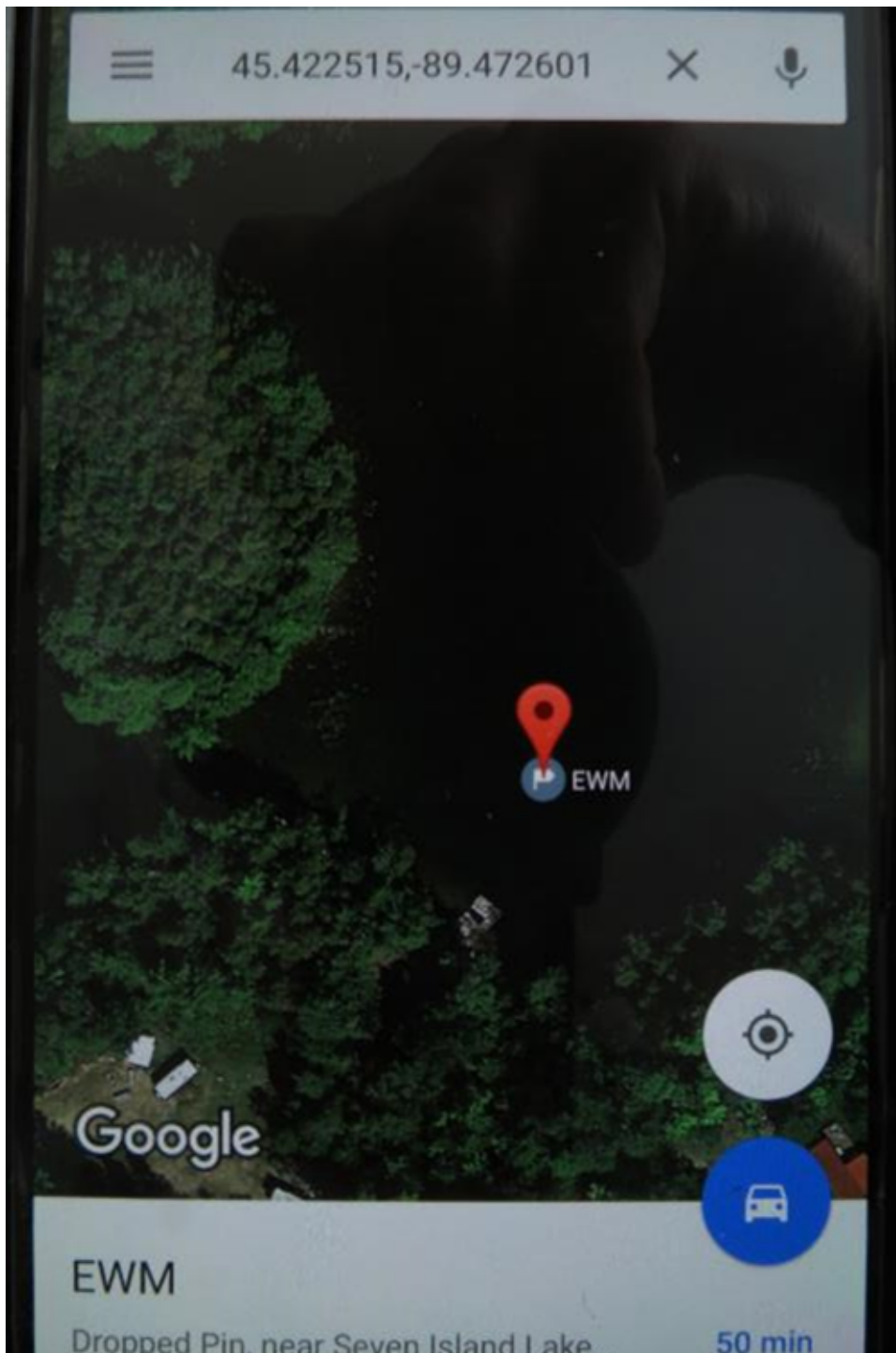
-Once the “Dropped Pin” message is pushed it will expand.

-Press “Label”



-After pressing "Label" a key board will appear and the location can be named.

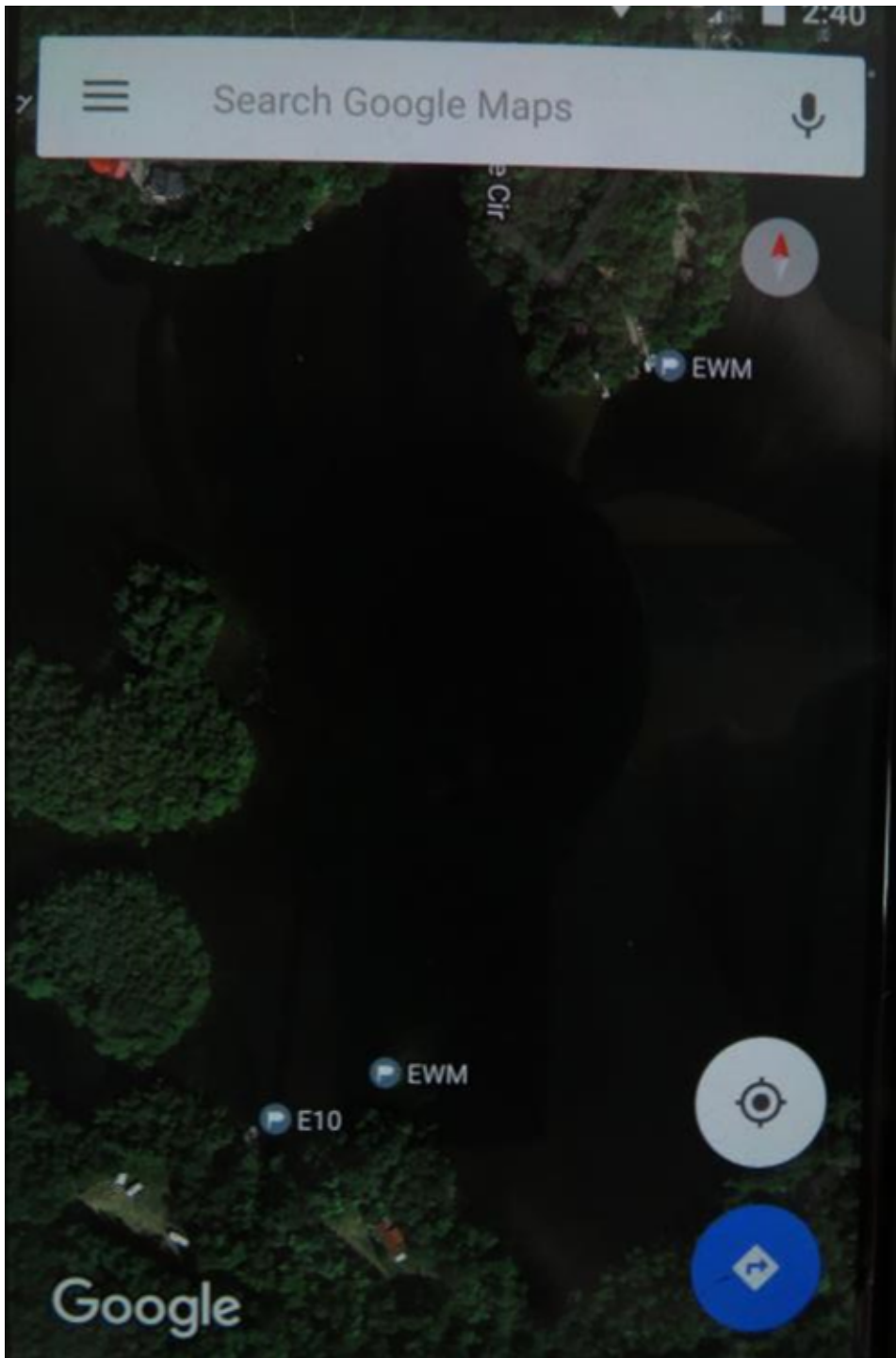
-When finished press the save button.



-The location is now labeled and saved.



-Mark multiple spots to show the size and shape of a bed of EWM.



-Continue to mark spots to get a visual of where all the EWM is.