

A photograph of three people in a white inflatable motorboat on a calm lake. The boat has a white outboard motor. A man in a light blue shirt is at the helm, a man in a dark shirt and cap is in the middle, and a woman in a red sleeveless top is at the back. The background shows a dense line of green trees under a clear blue sky. The water is dark blue and reflects the boat and the people.

THE HUNT FOR AQUATIC INVADERS

10 Tips for Getting the Most Out of
Your Screening Surveys

Your Mission...

Rule Out Presence of Target Invaders



The more thorough the survey; the higher one's
confidence in the "NO IAP DETECTED" result



The Challenge

It is virtually impossible to be 100% thorough in
ones search

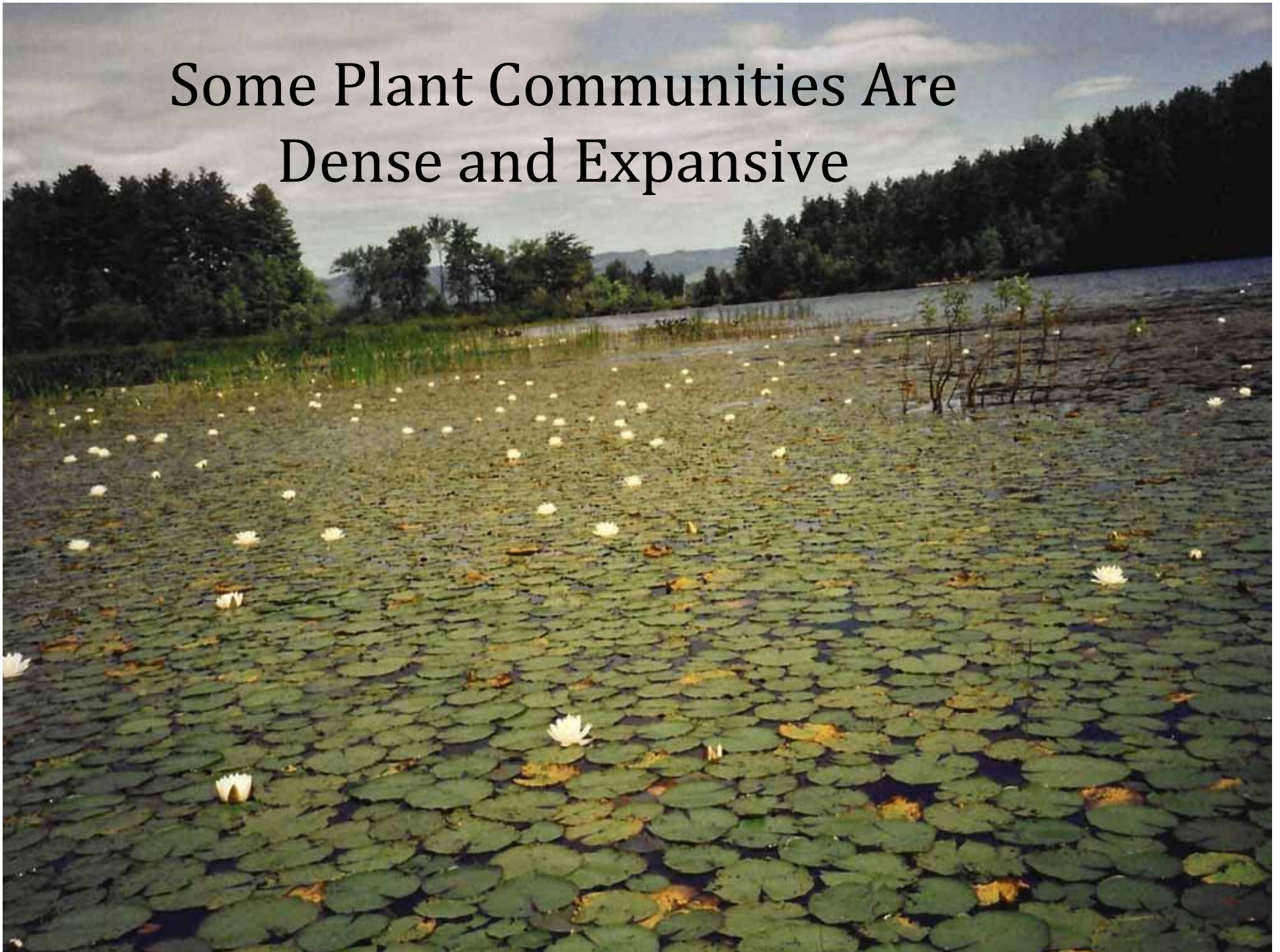


Weather and Light Conditions
Are Not Always Conducive



Limits of Time and Energy

Some Plant Communities Are Dense and Expansive





Some Lakes are Entirely
Littoral



You may not be able to see it all . . .

But there are ways to maximize
the efficiency and accuracy of you
surveys



Tip # 1

Ready, Set, Wait!
Before You Go!

Reality Check!



Take stock of existing resources . . .

- Time
- Equipment
- Help
- Familiarity with procedures, native & invasive plants

Take stock of the challenge before you . . .

- How large is the body of water to be surveyed?
- How much of the waterbody is littoral ?
- (depth maps help!)



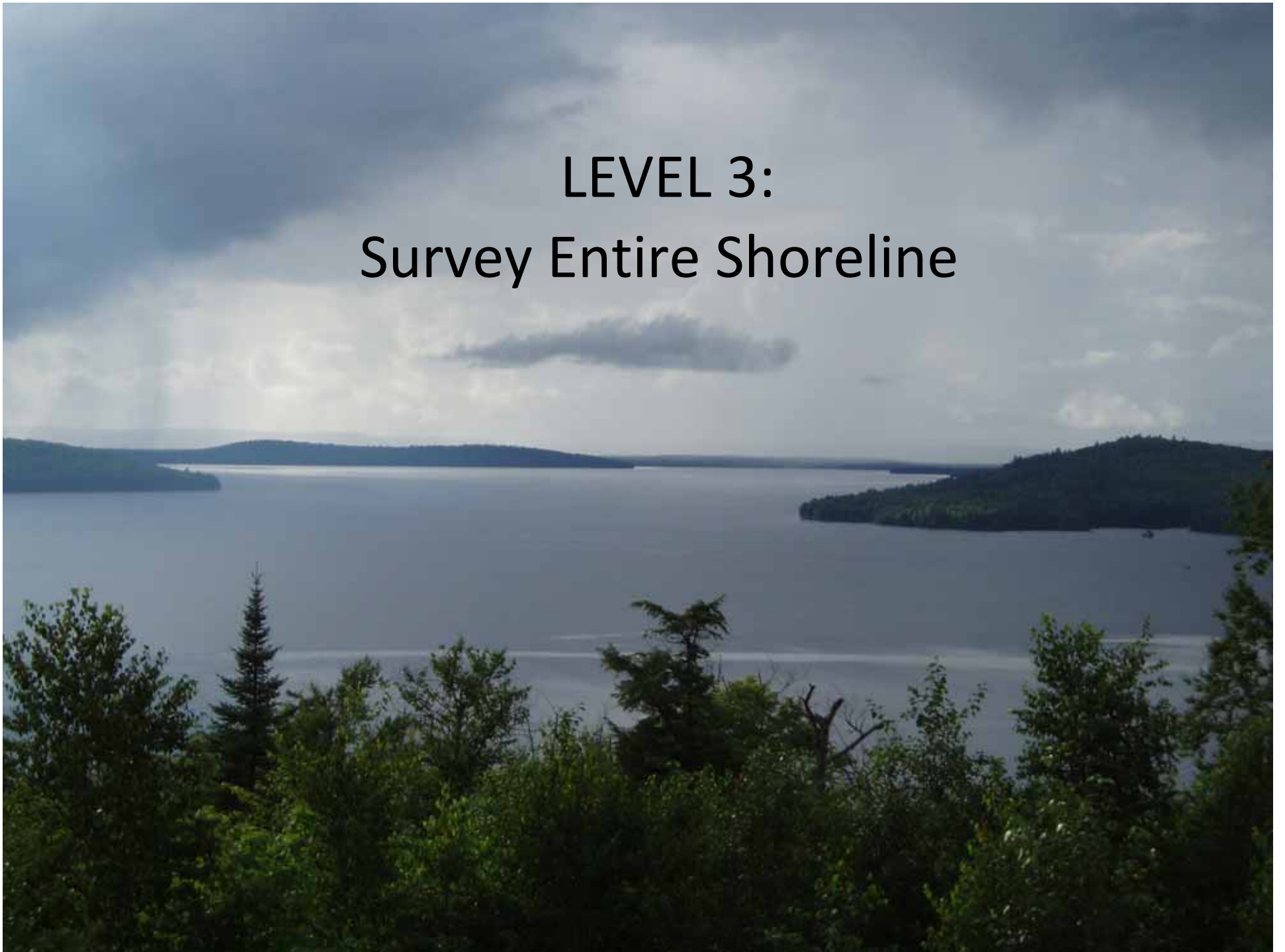
Use this Information to Determine Scope of Survey

LEVEL 1: High Risk Areas

**LEVEL 2: Level 1 Areas Plus
Existing Aquatic Plant Communities**



**LEVEL 3:
Survey Entire Shoreline**



Tip # 2

Go While the Going is Good

Factors that Impede Your Ability to See Below the Water Surface

- not enough light
- too much light (in the form of surface glare or backlighting)
- wind causing disturbance of the surface
- reduced water clarity due to algal blooms
- turbidity caused by a recent storm event or excessive boat traffic
- etc.



Time your survey to coincide with the most favorable viewing conditions

Optimal Conditions

- Good light
- Minimal reflection and glare
- Peak water clarity
- Dead calm



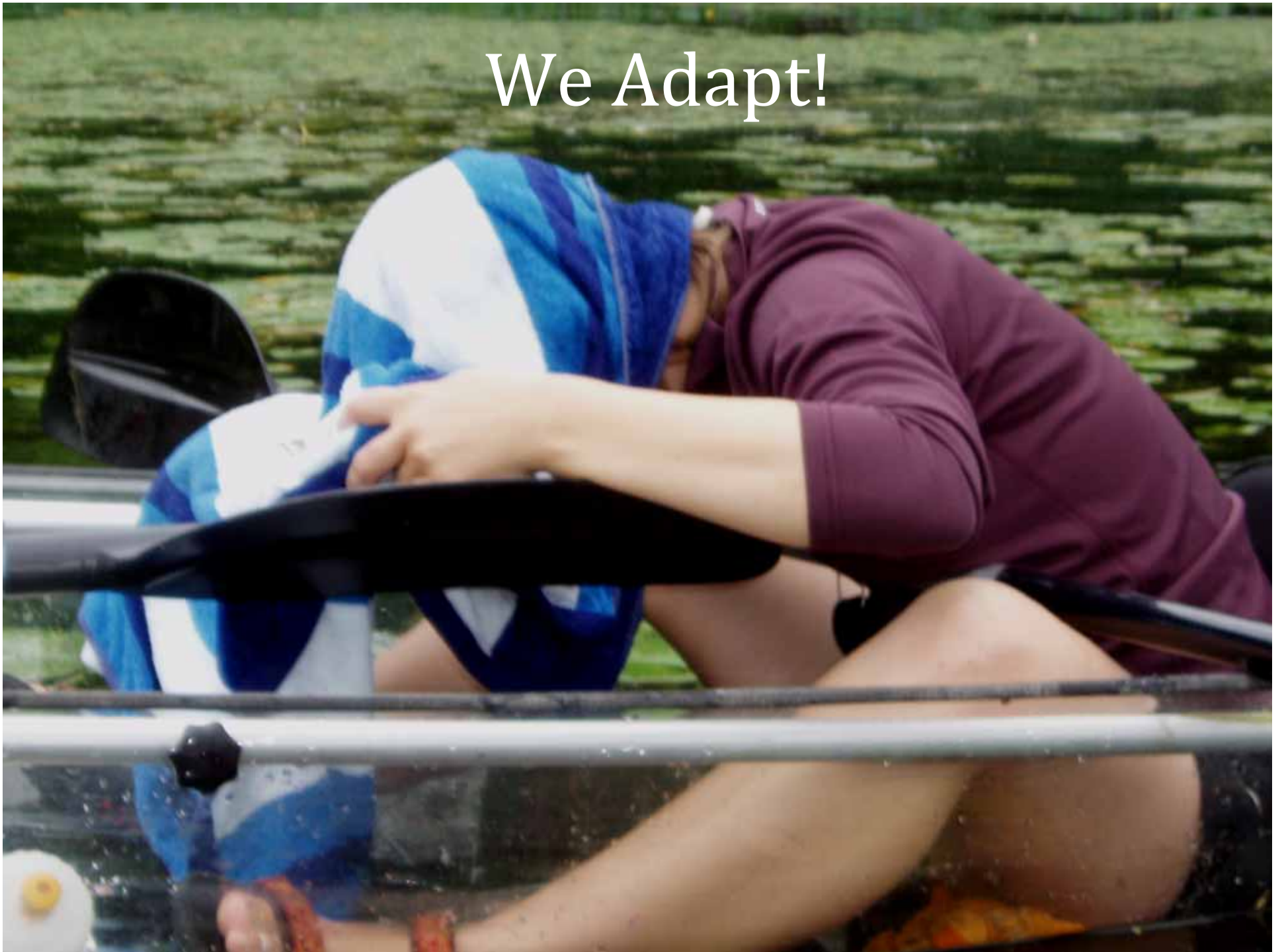
Tip # 3

Work Arounds

Perfect Survey Conditions Do Not
Often Last Long



We Adapt!



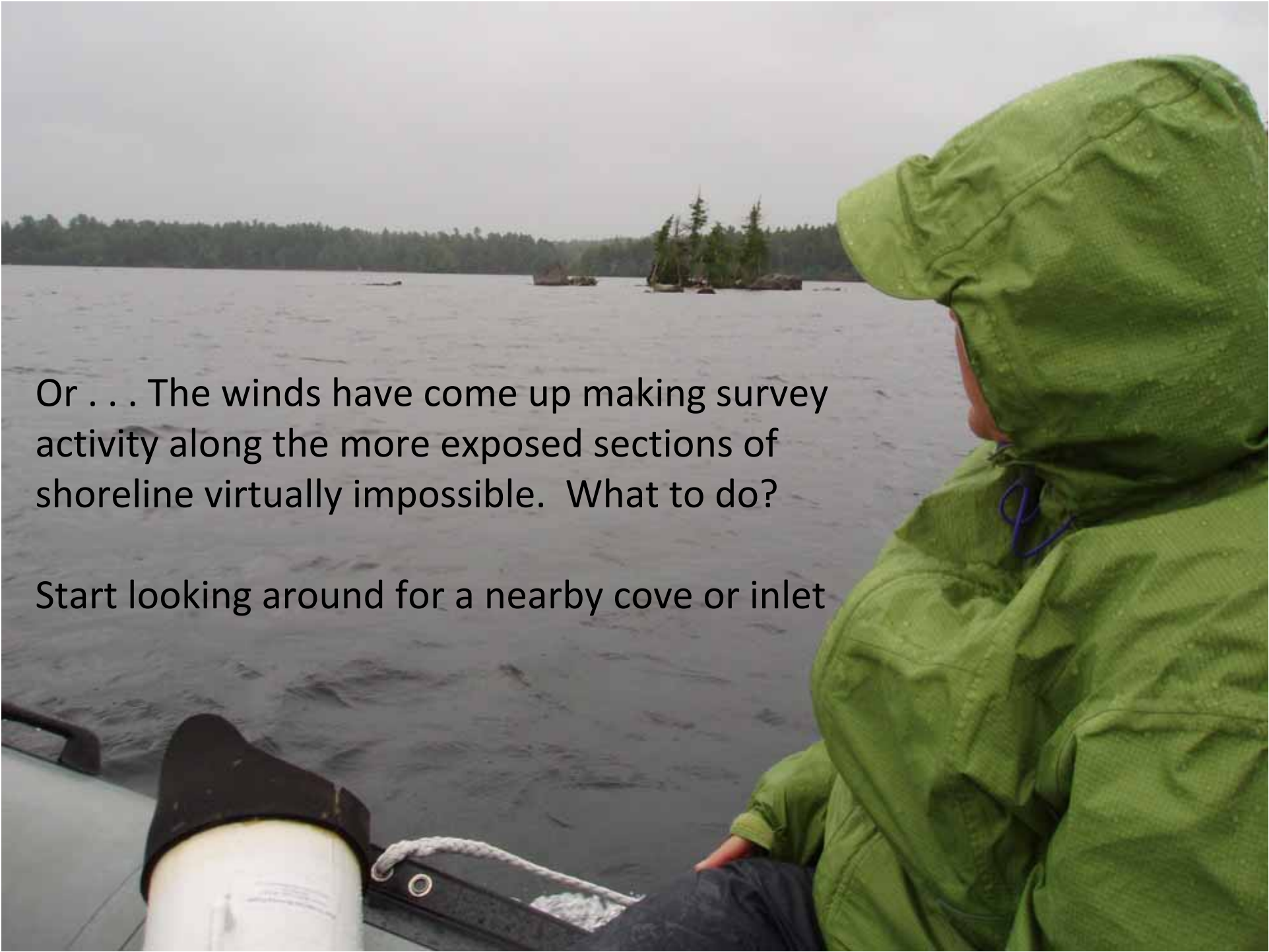
Change your location within the intended survey area to take advantage of the most favorable conditions available at that moment





It is early morning; the air is still and the surface of the water is dead calm, but the easterly shore (where you happen to be right now) is still in shadow . . . How to adapt?

Paddle over to the sunlit westerly shore and work that section of the shoreline until the light is better along the east shore

A person wearing a bright green rain jacket is seated on a boat, looking out over a large body of water. The water is dark and choppy, suggesting wind. In the distance, a shoreline is visible with a dense forest of evergreen trees. A small island or rocky outcrop with a few trees is also visible in the middle ground. The sky is overcast and grey. The person's jacket has a blue drawstring at the hood. A white cylindrical object, possibly a fuel tank or container, is visible in the lower-left foreground.

Or . . . The winds have come up making survey activity along the more exposed sections of shoreline virtually impossible. What to do?

Start looking around for a nearby cove or inlet

Tip # 4

Scopes

How They Work



What Makes a Good Scope?

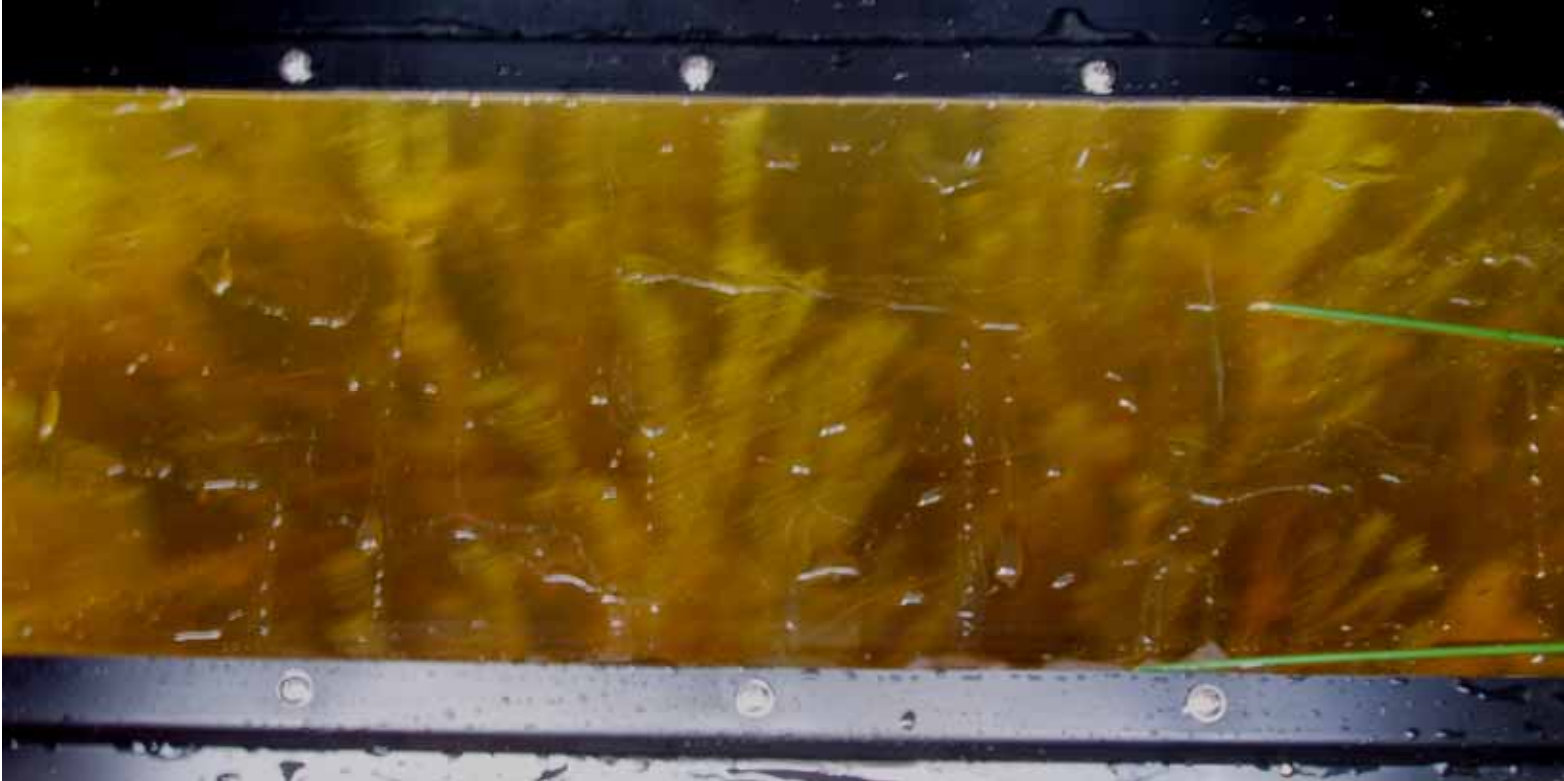
- easy and comfortable to use
- provides the widest possible angle of view
- constructed of opaque materials to shield out as much side and back light as possible
- being relatively cheap and easy to construct is a plus

Bucket Scope with Cover



Wide Angle View Scope





Trunk Scope



View Canoe



Diver's Mask, Snorkel and Fins



Tip # 5

Teamwork

Two-Person Survey Team

- *Safer, and better from a quality assurance standpoint*
- Observations will be more thorough
- Two person canoes, row boats, skiffs, and inflatables are all well suited to the two-person survey team
- Both team members keep a keen eye out for hazards
- The division of labor between captain and lead surveyor should be fairly well defined. You can always swap roles mid-way

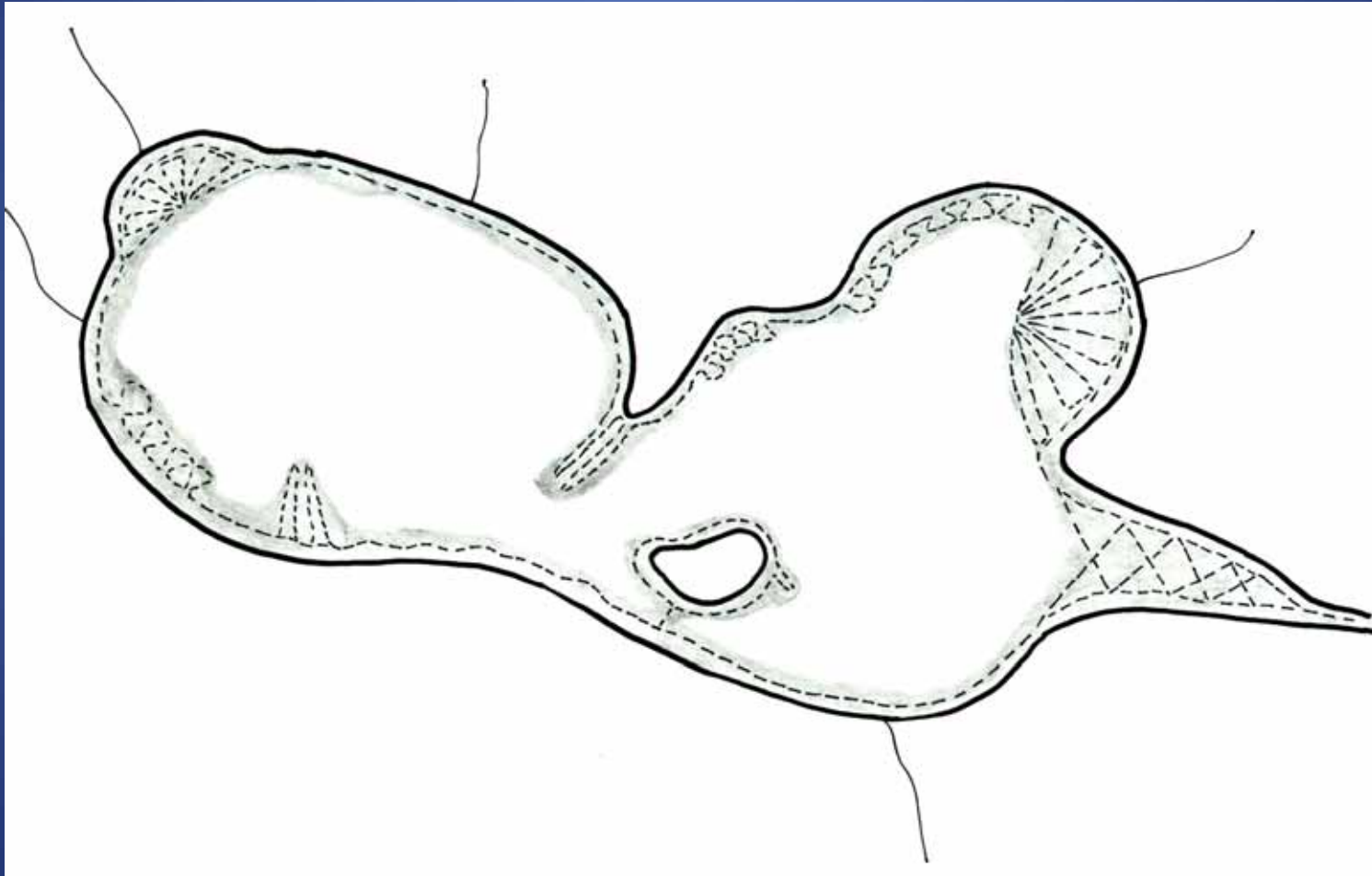
Kayak Teamwork



Tip # 6

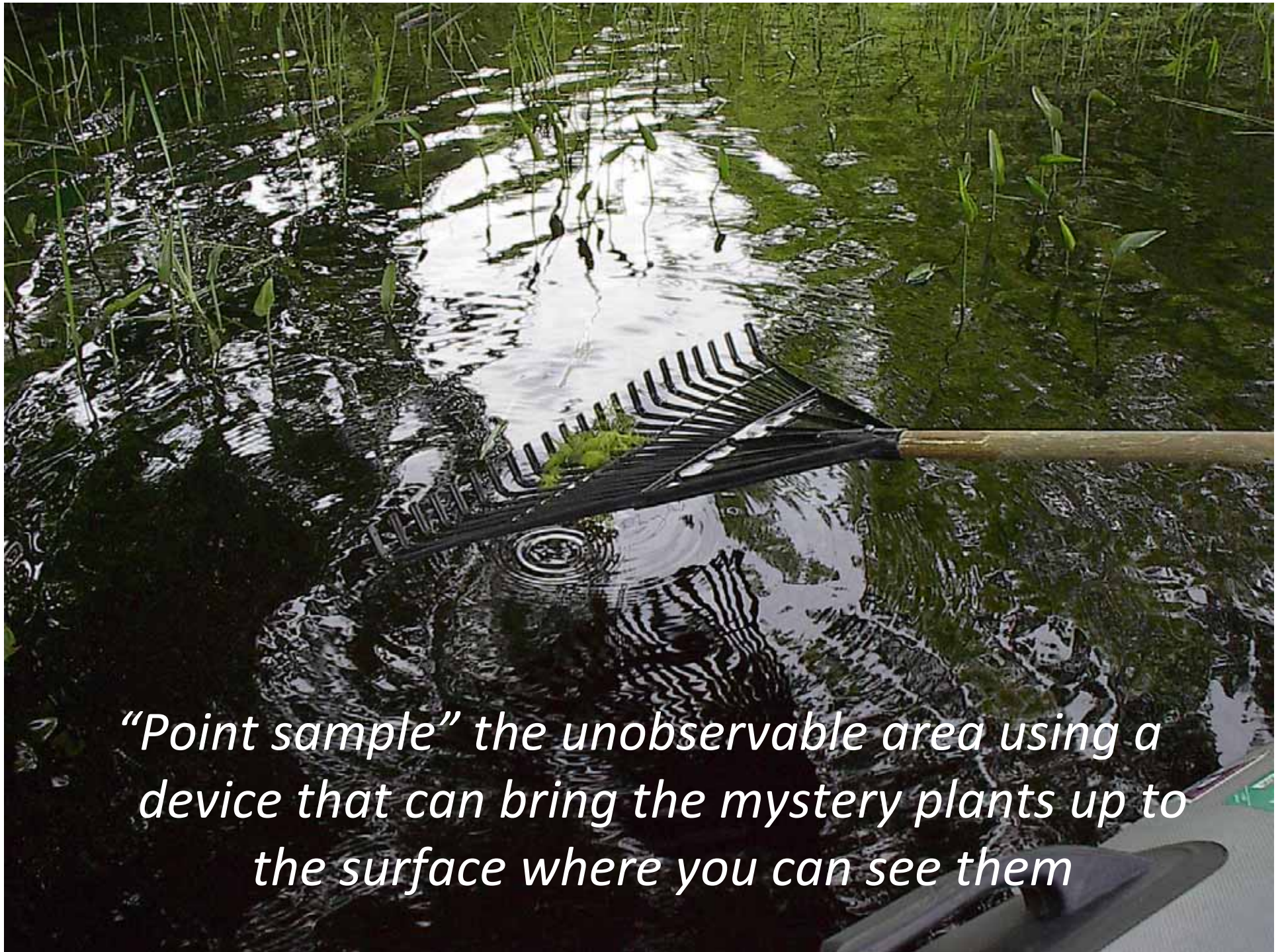
Charting Course

Setting & Adjusting Course



Tip # 7

*Rakes, Potato Hooks, and Weed
Weasels*



“Point sample” the unobservable area using a device that can bring the mystery plants up to the surface where you can see them

USE
CAUTION!!



Develop a methodical approach that balances the need to “see” with the need to “minimize harm.”



Example . . .

- Shallow pond or area (maximum depth 20 feet)
- Potentially littoral from shore to shore
- With scopes plants visible to a depth of 12 feet
- Anything growing out beyond the visible zone?
- Set up parallel transects down the middle portion of the pond
- Every 20 or 30 or 50 paddles toss the weed weasel, pull it up record findings
- Interval dependent upon conditions, time, plant density, etc
- If using a motor, sample at regular time intervals instead

Tip # 8

Getting to Know the Natives

See More *Knowledgably* as Opposed
to Simply Seeing More . . .



Be Forewarned . . .

- Is your refrigerator is full of plastic bags containing samples of plants you intend to key out later?
- Do you have more photos of aquatic plants on your camera than family members?
- You just can't wait to get back out there tomorrow to explore that next little cove?
- *Welcome!*

Tip # 9

Zen and the Art of Plant Patrolling

Being in the Moment



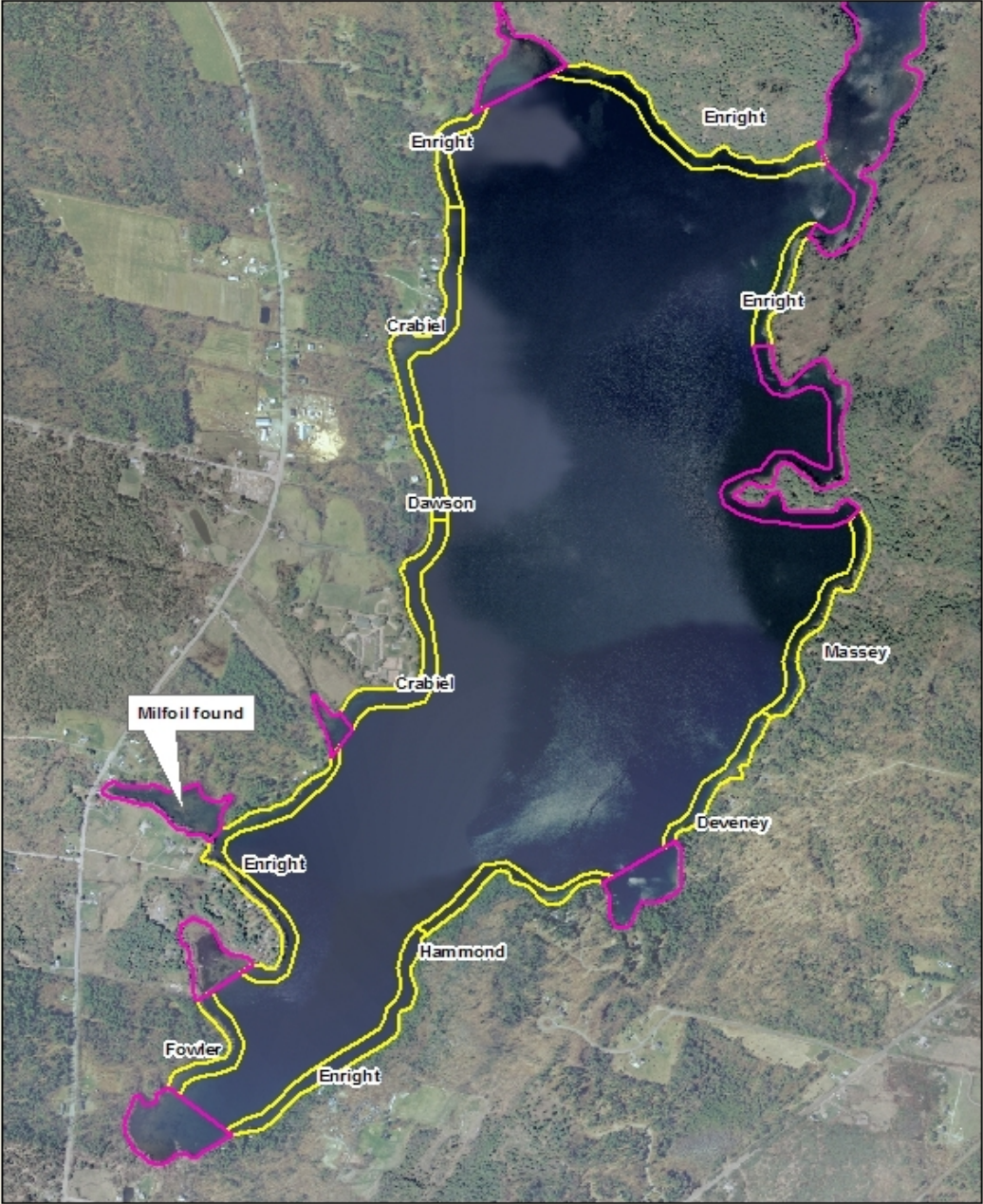
Tip # 10

Many Trained Eyes Make Light Work

Recruit Some Help!



Salmon Lake Milfoil Surveys



DEP surveys Volunteer surveys

So There You Have It!



A close-up photograph of a frog with large, prominent eyes, resting on a green, textured surface. The frog's body is dark brown and appears wet. The background is a soft, out-of-focus green. The text "Happy Hunting!!" is overlaid in white, serif font in the upper center. A blue banner at the bottom contains the text "May you never find what you are looking for!" in white, italicized, serif font.

Happy Hunting!!

May you never find what you are looking for!