

## The Hunt for Aquatic Invaders



Invasive Aquatic Plant  
Screening Survey Procedures

## Your Mission . . . Rule Out Presence of Target Invaders

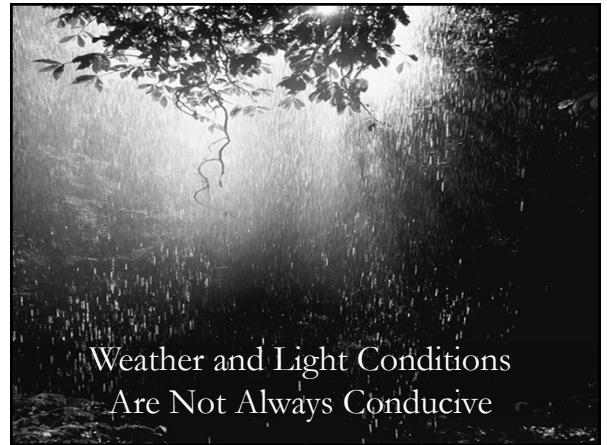


The more thorough the survey; the higher one's  
confidence in a "NO IAP DETECTED" finding



## The Challenge

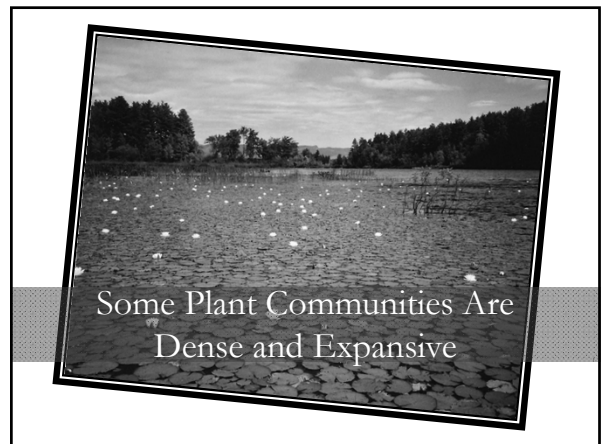
It is virtually impossible to be 100% thorough in  
ones search



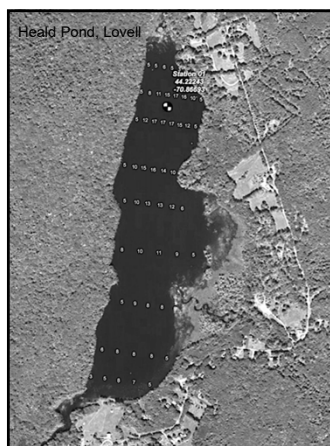
Weather and Light Conditions  
Are Not Always Conducive



Time and Energy Limitations



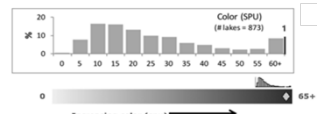
Some Plant Communities Are  
Dense and Expansive



Some  
Lakes are  
Almost  
Entirely  
Littoral



Some  
Lakes Have  
Water  
Clarity  
Issues

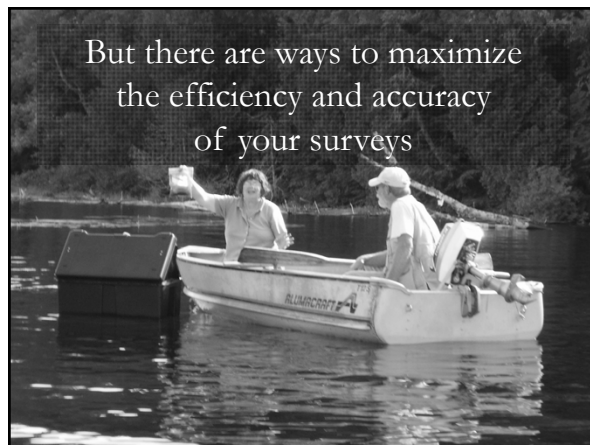


Sewall Pond, Arrowsic  
High Level of Natural Color



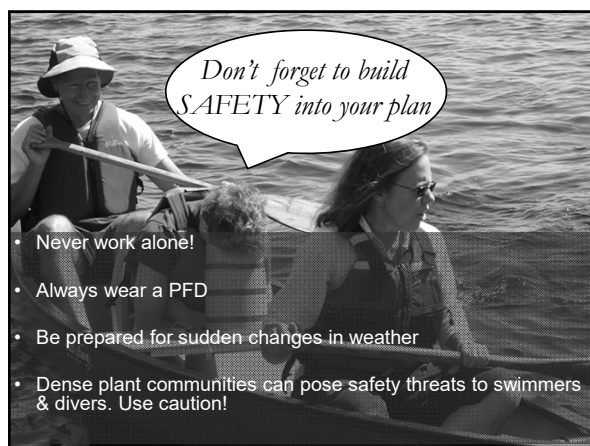
You may not be able to see it all . . .

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



# 1

*Get Organized,  
Develop a Plan of Action*



## Reality Check!

### *Take stock of existing resources . . .*

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

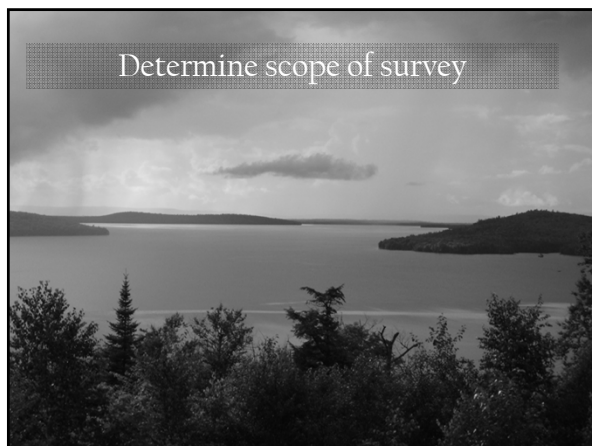
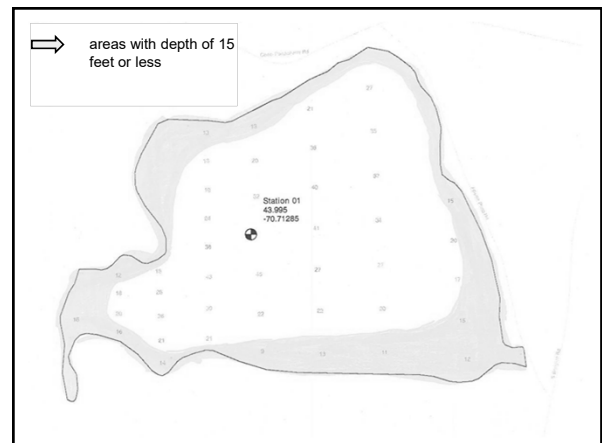
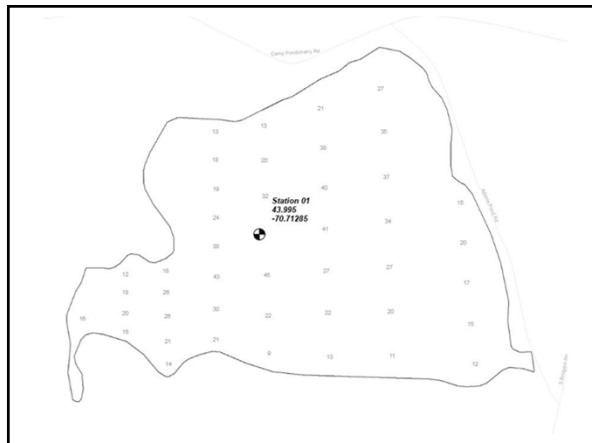


### *Take stock of the challenge before you . . .*

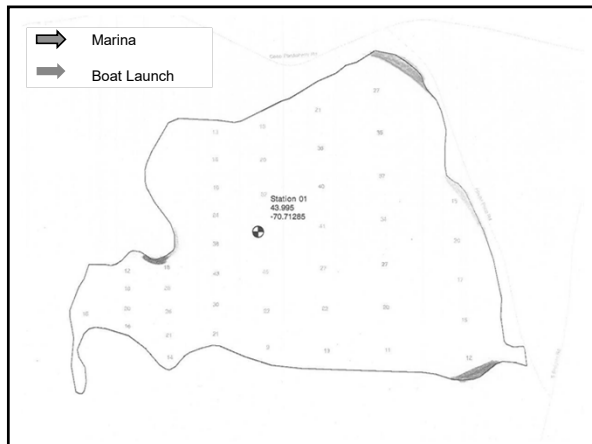
- How large is the body of water to be surveyed?
- How much of the waterbody is littoral ?
- (depth maps help!)

## Determine likely outside depth of littoral zone

- Area where light penetrates to the bottom, supporting rooted aquatic plants
- Water clarity is determining factor
- Depth maps are helpful

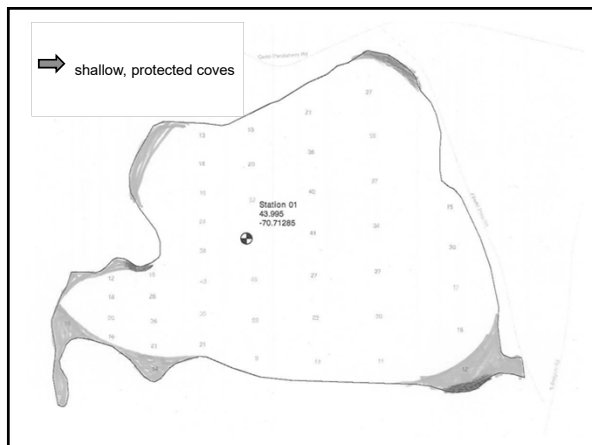


- Boat launch sites, marinas and high traffic areas
- Check a minimum of 300 feet on each side
- Extend to a depth where native plants do not grow



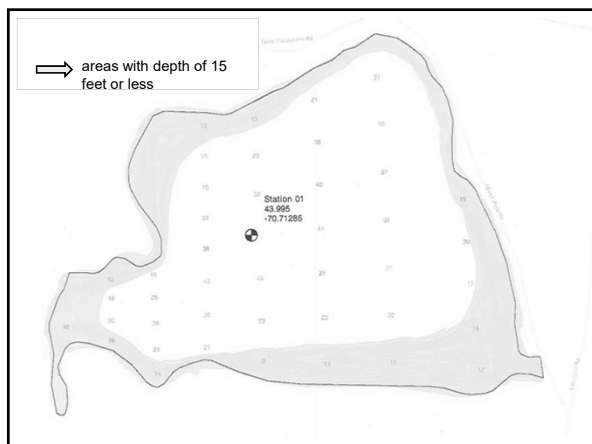
## LEVEL 2: Existing Aquatic Plant Communities

- All level 1, plus areas where *native* plant communities occur
- Typically shallow areas and sheltered coves
- Amount of potential habitat varies greatly



## LEVEL 3: Survey Entire Shoreline

- Most time consuming, but highest degree of assurance
- Entire littoral area is screened
- Some lakes are entirely littoral



# # 2

## *Build & Organize Your Team*



## Many Eyes Make Light Work



## Divide Survey Area into Doable Sectors

### Considerations:

- plant density in each sector
- number of surveyors on your team
- proximity
- landmarks
- etc.



## Role of the Lake Association



- Financially supports, helps recruit and organize the team.
- Helps outfit team members with equipment
- Funds to support the team are raised by an optional donation check off in the annual lake association dues appeal
- Appreciation and social events

Hold a meeting to discuss the plan, recruit volunteers, determine sector assignments, etc.



Panther Pond Invasive Plant Patrol (PPIPPers!)



Team trained IPPs with novices  
or untrained "paddlers"

## Two-Person Survey Unit

- *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

## The Multi-Kayak Unit



## Every Team Needs a Captain!



- Helps recruit team members
- Organizes the survey team
- Provides local technical support
- Collects, checks, summarizes & submits data

LSM has developed resources  
to help you build and coordinate your  
IPP Team



LSM's IPP Leaders Page . . .

## IPP Leadership Training & Roundtable Events

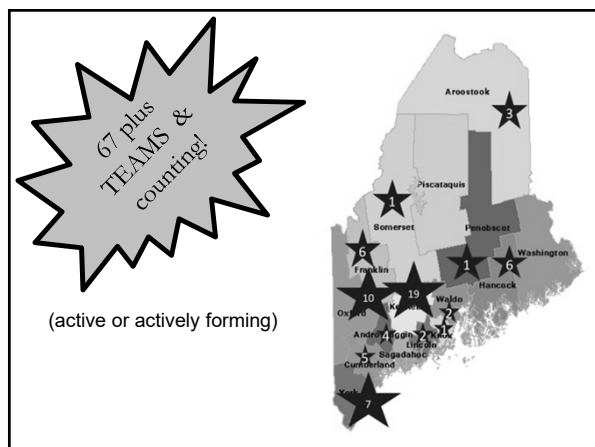
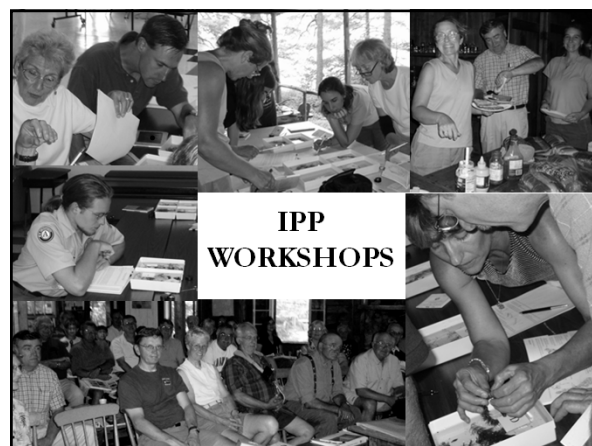


## The IPP Plant Paddle



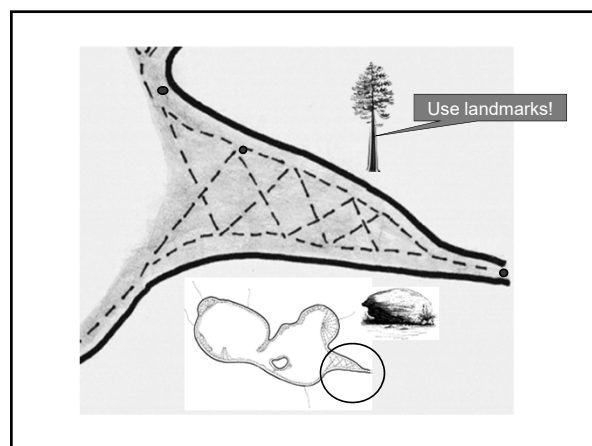
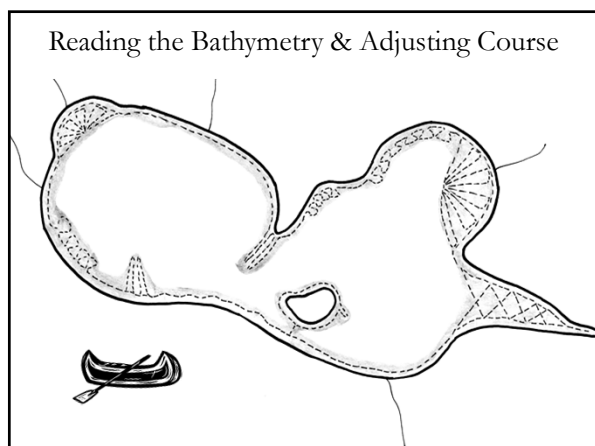
## What is a Plant Paddle?

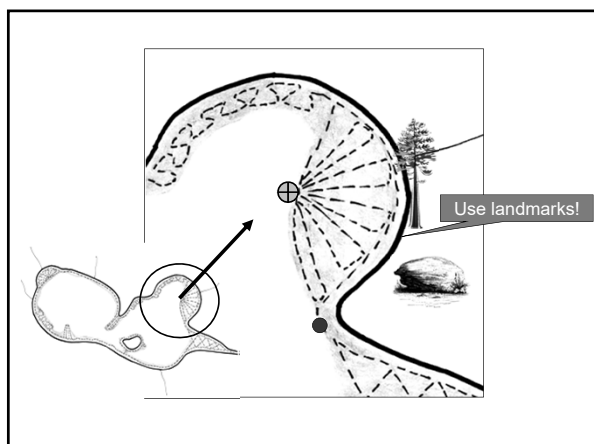
- Plant Paddles are short (2 - 3 hour) events that take place on shore and on the water
- Fun, informal way to introduce community members to the threat of IAP and the importance of early detection
- Guided learning experiences, well suited to community events, i.e., lake days, civic group meetings, school outings, lake association meetings, etc.



## # 3

### *Charting Course to Maximize Direct Observation*

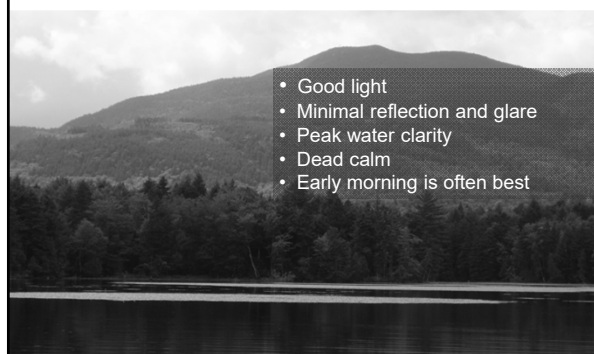




# # 4

*Go While the Going is Good*

Time Your Survey to Coincide with the Most Favorable Viewing Conditions



Time Survey to Coincide with Plant Maturity

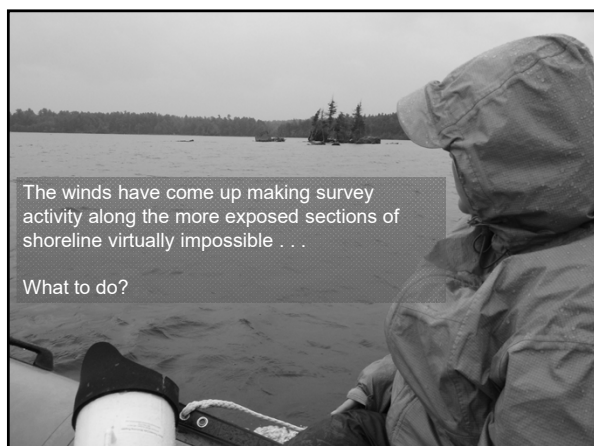


Sometimes Perfect Survey Conditions Give Way to Less Than Perfect Conditions



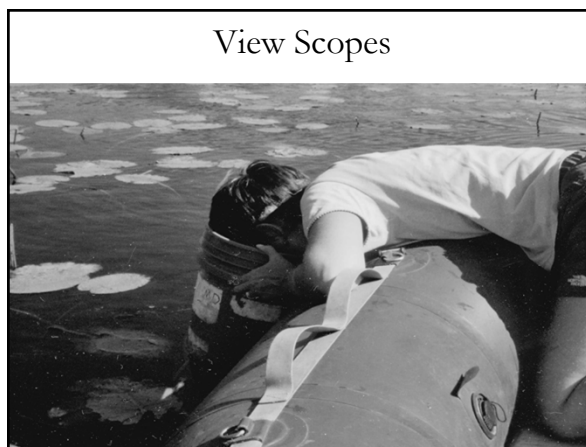
Well sometimes . . . but often we can adapt!





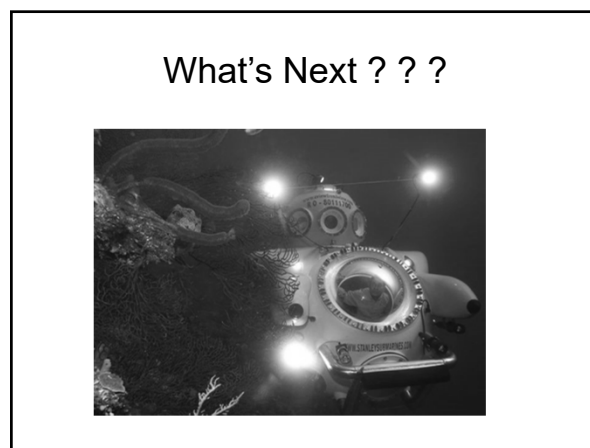
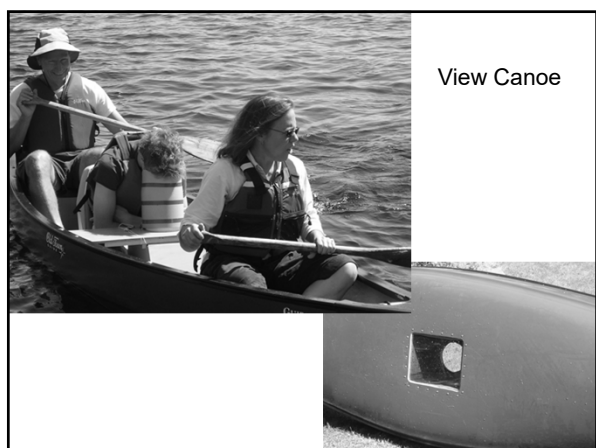
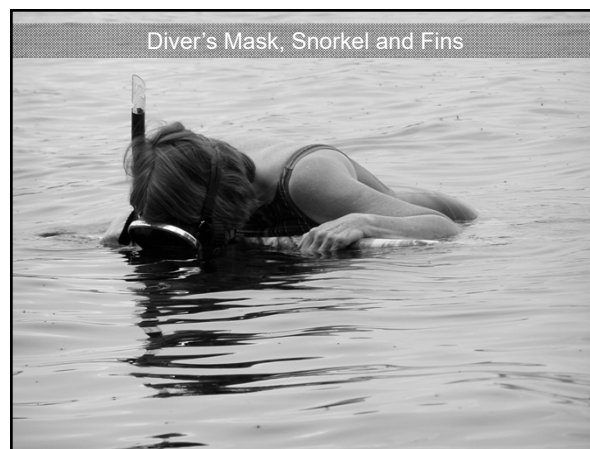
# # 5

## *Your Toolbox*

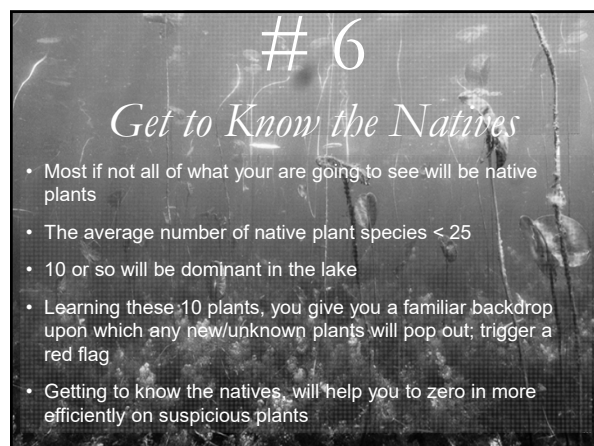
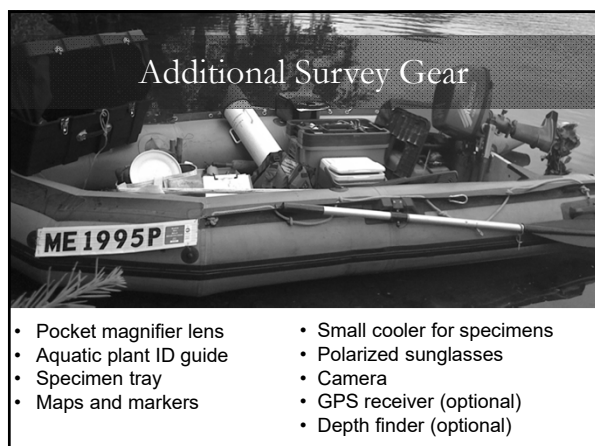
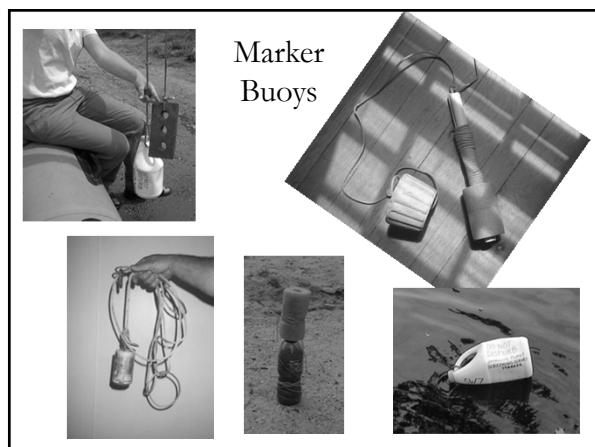
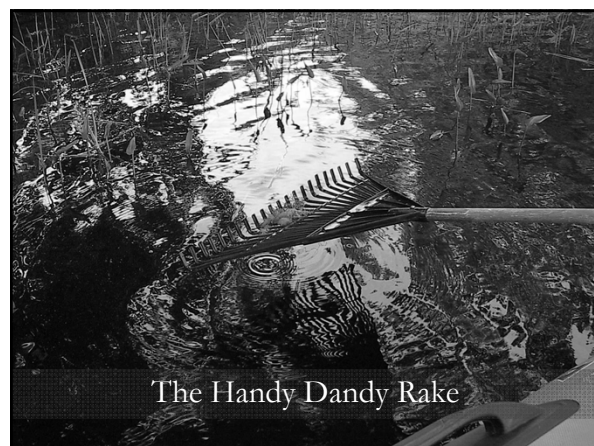


- ### What Makes a Good Scope?
- easy and comfortable to use
  - provides the widest possible angle of view
  - constructed of opaque materials to shield out as much side and back light as possible
  - being relatively cheap and easy to construct is a plus

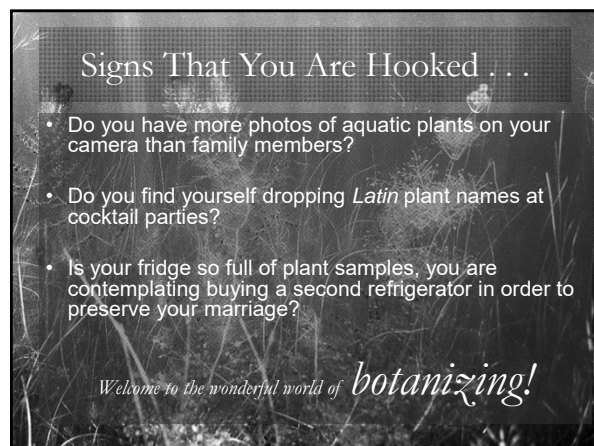












[illegible]

# # 7

*Become a Certified  
Invasive Plant Patroller!*

[illegible]

Figure 1 is a composite image showing a map of the M7 corridor in the San Francisco Bay Area. The map includes a small inset map of the entire Bay Area, a larger map of the M7 corridor with a grid overlay, and a table of data for the M7 corridor. The table lists various data points for the M7 corridor, including the number of vehicles, the number of vehicles per hour, and the number of vehicles per mile. The map also shows the location of the M7 corridor relative to the San Francisco Bay Area and the Golden Gate Bridge.

NO.	NAME	NO. VEH.	NO. VEH. PER HOUR	NO. VEH. PER MILE
1	San Francisco Bay Area	1,000,000	1,000,000	1,000,000
2	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
3	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
4	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
5	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
6	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
7	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
8	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
9	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
10	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
11	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
12	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
13	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
14	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
15	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
16	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
17	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
18	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
19	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
20	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
21	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
22	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
23	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
24	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
25	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
26	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
27	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
28	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
29	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
30	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
31	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
32	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
33	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
34	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
35	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
36	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
37	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
38	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
39	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
40	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
41	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
42	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
43	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
44	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
45	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
46	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
47	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
48	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
49	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
50	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
51	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
52	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
53	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
54	Golden Gate Bridge	1,000,000	1,000,000	1,000,000
55	Golden Gate Bridge	1,000,000	1,000,000	1,000,000</

Certification forms are at the registration table.

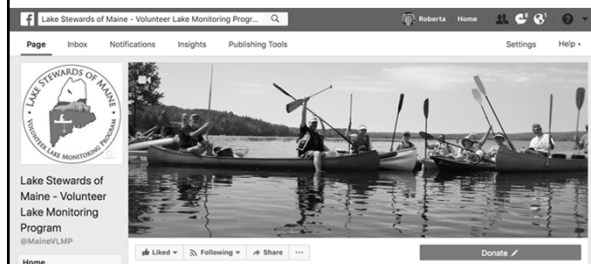


Please don't forget to fill out your evaluation forms!!



*Your feedback is greatly appreciated  
AND ....*

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Happy Hunting!!



*May you NEVER find what you are looking for!*