

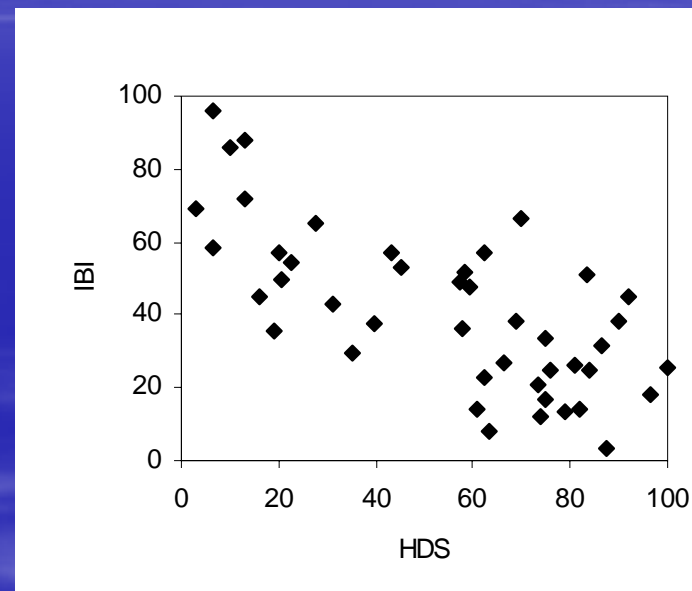
WHEP PLANT FIELD TRAINING



Minnesota Pollution Control Agency

Why Plants?

- Important to wetland ecology
- Permanent residents
- Readily identified
- Responsive to their environment



WHEP Veg Sampling Resources

A Citizen's Guide to Biological Assessment of Wetlands

The Vegetation Index
of Biological Integrity (IBI)

*Field and Laboratory protocols,
Pictorial Key to the Common Wetland Plants*



Minnesota Pollution
Control Agency

wq-bwml-01

January, 2005

<http://www.pca.state.mn.us/water/biomonitoring/bio-citizenmonitoring.html>

WHEP Veg Sampling Resources

Resources and Presentations - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.mnwhep.org/id63.html>

Wetland Health Evaluation Program (WHEP)

Training Resources and Presentations

The attachments listed below require the use of Adobe Acrobat Reader. If you do not already have it installed, click the link below to download.
PDF (.pdf): [Adobe Acrobat Reader](#)

Presentations & Training Videos

The presentation documents listed below were created using PowerPoint and converted to PDF files for viewing from the website. The videos are listed on the Hennepin County website, the link below will take you to the appropriate page.

Field Methods Training Presentations

- [WHEP Introduction and Welcome](#)
- [How to Conduct a Vegetation Survey](#)
- [How to Collect a Macroinvertebrate Sample](#)

Field Methods and Safety Training Videos

View how to collect a macroinvertebrate sample using both a dipnet and bottletrap, and how to conduct a vegetation survey following WHEP protocols.

[Click here to access training videos on Hennepin County website](#)

Home

Why Wetlands?

What is an IBI?

Invert. Sampling (spineless critters)

Vegetation Sampling

Get Involved

Testimonials

Training and Events

Resources and Presentations

Wetlands Monitored

WHEP Mapper (Dakota)

Reports and Data

Frequently Asked Questions

Contact Us

Links

start | Inbox - Microsof... | 2 Windows Ex... | Microsoft Power... | part1_intro.doc ... | Resources and P... | Windows Media ... | 1:36 PM

Training Videos

Vegetation Field Protocol

1. Record site information
2. Determine the major plant communities in the wetland
3. Locate a spot for a representative plot
4. Determine the plot shape
5. Lay out the 100 m² plot
6. Record releve information
7. Identify plants within the plot
8. Estimate cover

Necessary Equipment

- Clipboard with site & releve datasheets
- Pencil
- Compass
- 4 tall garden stakes with colorful flagging
- 1 or 2 30-50m measuring tapes
- Plant ID guides
- Waders

Record Site Info

- Some basic site information

MN WHEP VEGETATION SURVEY FIELD SHEET: SITE INFORMATION

Site Name: _____ Date/Time: _____
Team Leader/Observer: _____ Team Name: _____
Local Sponsor: _____ County: _____

Location Information (UTM coordinates from GPS unit, Township Range Section coordinates, or street directions):

Site Description (Include vegetation, water pathway, and immediate land use descriptions. Note any unique plants or plant communities within the wetland but occurring outside of the relevé. Did you observe any wildlife while at this site?):

Site Sketch (Include vegetation zones, water inlets and outlets, point source pollution inputs such as stormwater pipes, immediate land use practices, any landmarks, and the location of the relevé in the wetland):



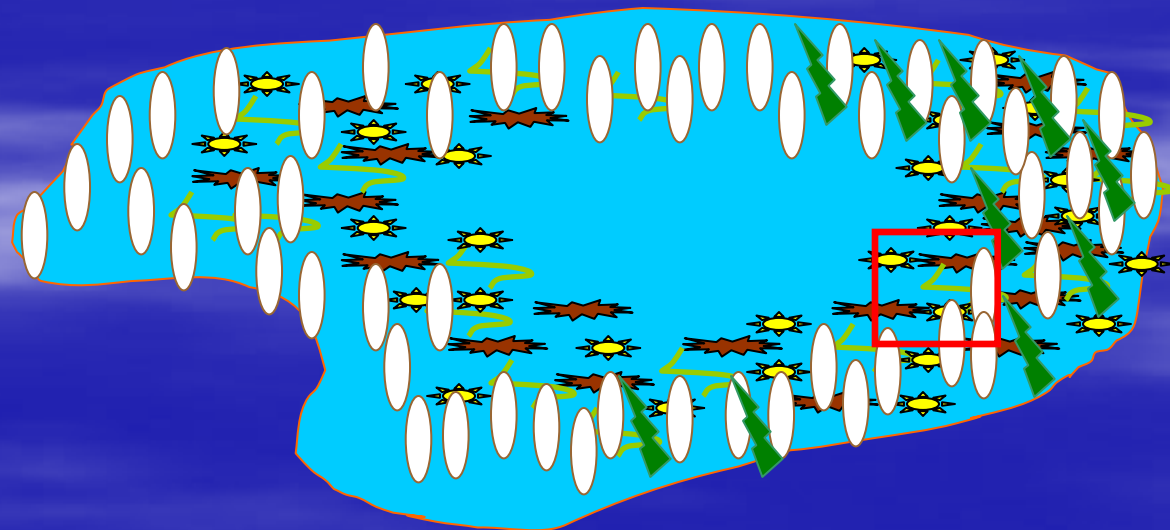
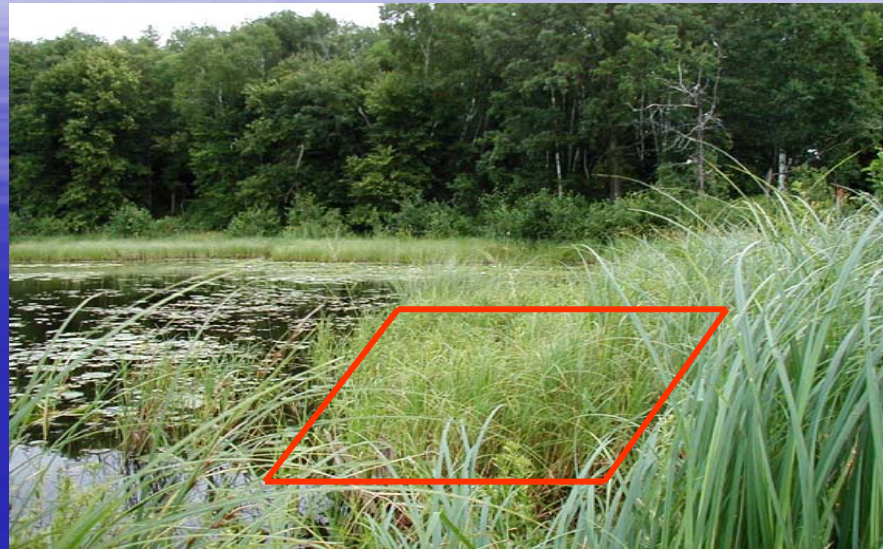
Determine Major Plant Communities

- Need to locate the sampling plot in a 'representative' location

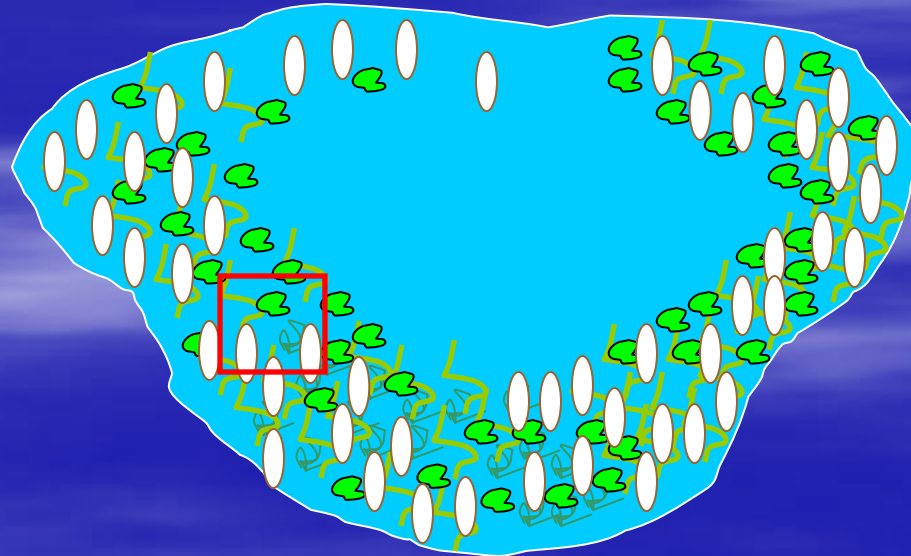
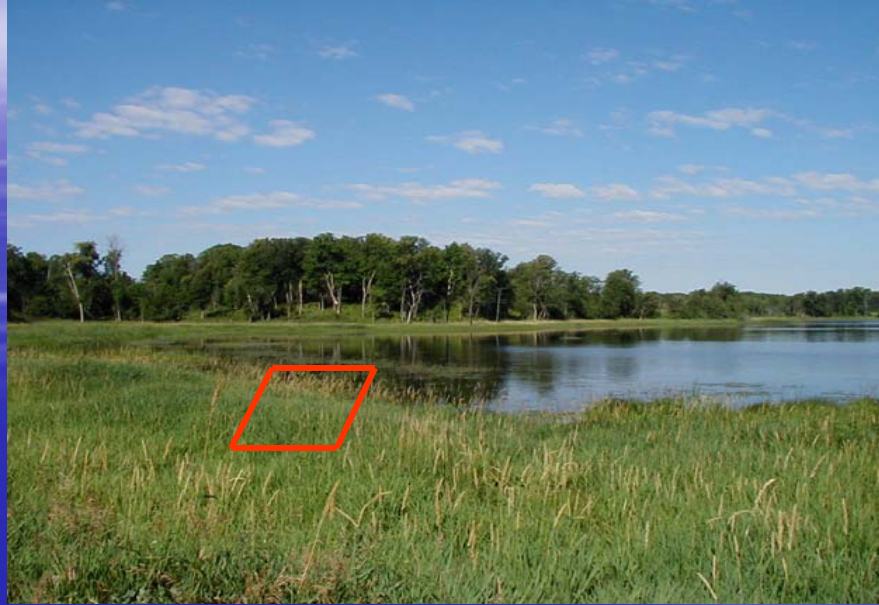


Locate Sampling Plot

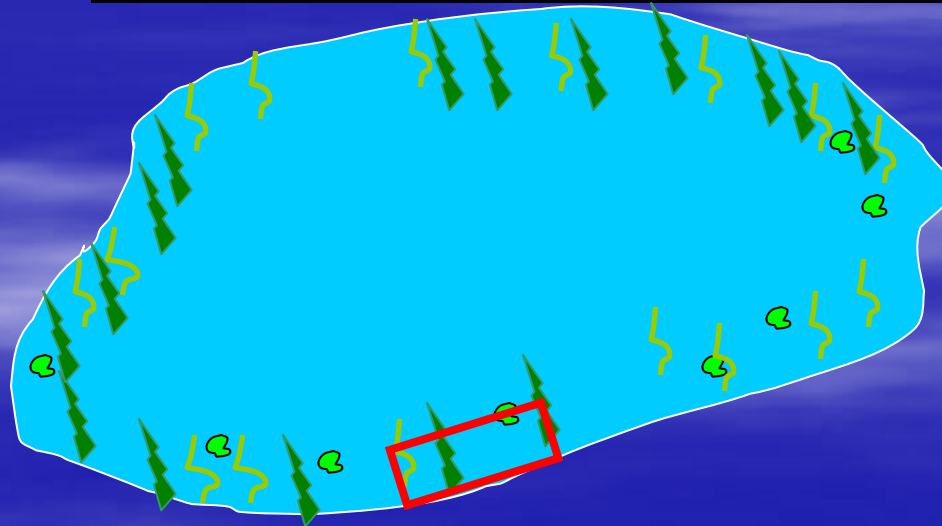
- Emergent/aquatic vegetation interface



Locate Sampling Plot



Locate Sampling Plot

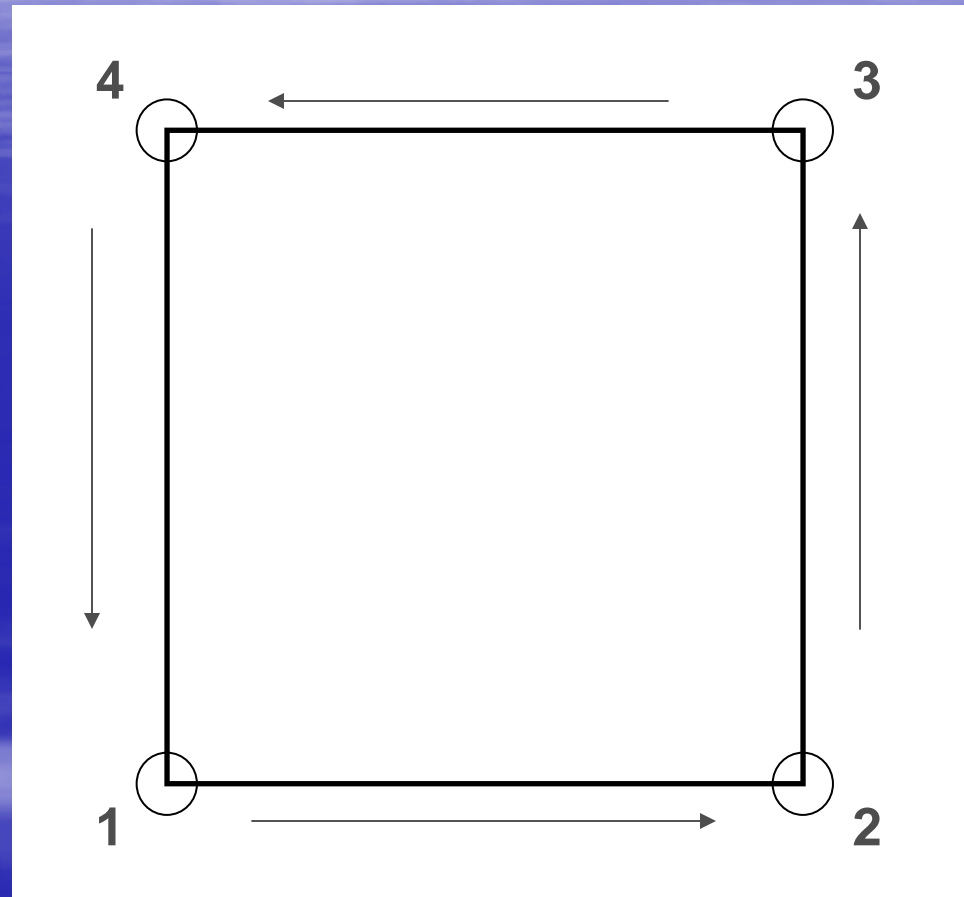


Determine Plot Shape

- Plot size is standard (100m²)
- Plot shape can be altered depending on the wetland vegetation
 - Well developed emergent fringe
 - 10 x 10m plot
 - Narrow fringe (less than 5m wide)
 - 5 x 20m plot

Lay-Out the Plot

- Aquatic/ emergent interface
- Establish corner #1
- Measure off 1st side w/tape
- Establish corner #2
- Turn 90° measure 2nd side
- Repeat



Record Releve Info

- Some basic information about the releve

MN WHEP VEGETATION SURVEY FIELD SHEET: RELEVE DATA

Site Name: _____	Date/Time: _____
Team Leader/Observer: _____	Team Name: _____
Local Sponsor: _____	County: _____

Releve Dimensions (circle one): 10 m x 10 m or 5 m x 20 m = 100 m²
 Is the releve typical of the wetland plant community? (circle one): Yes or No (explain below)
 Water depth in the plot (meters): Shallowest: _____ m Deepest: _____ m
 Substrate/bottom description: _____

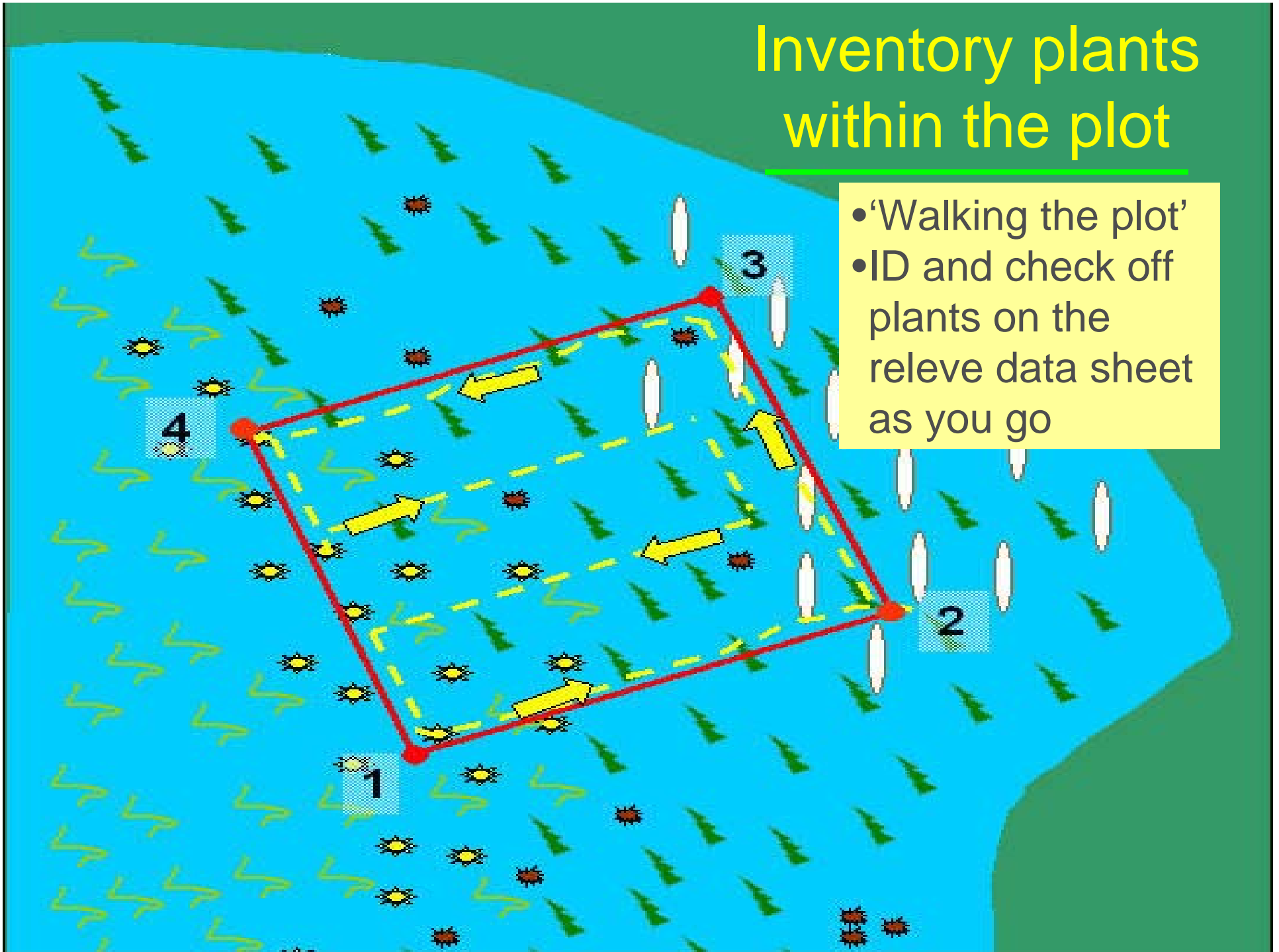
Comments: _____

Note: Numbers in () refer to the metrics where the data are used

<p>Pres CC NONVASCULAR (2, 6)</p> <table border="1" style="width:100%"> <tr><td><input type="checkbox"/></td><td>Chara (Muskgrass)</td></tr> <tr><td><input type="checkbox"/></td><td>Lichen</td></tr> <tr><td><input type="checkbox"/></td><td>Moss</td></tr> <tr><td><input type="checkbox"/></td><td><i>Riccia fluitans</i> (Slender Riccia)</td></tr> <tr><td><input type="checkbox"/></td><td><i>Rocciocarpos natans</i> (Purple-Fringed Riccia)</td></tr> </table> <p>Pres CC LOW VASCULAR (1)</p> <table border="1" style="width:100%"> <tr><td><input type="checkbox"/></td><td><i>Equisetum</i> (Horsetail)</td></tr> <tr><td><input type="checkbox"/></td><td><i>Onoclea sensibilis</i> (Sensitive Fern)</td></tr> <tr><td><input type="checkbox"/></td><td><i>Osmunda</i> (Osmunda)</td></tr> <tr><td><input type="checkbox"/></td><td><i>Thelypteris palustris</i> (Marsh-Fern)</td></tr> </table> <p>Pres CC WOODY (1)</p> <table border="1" style="width:100%"> <tr><th colspan="2">Vines</th></tr> <tr><td><input 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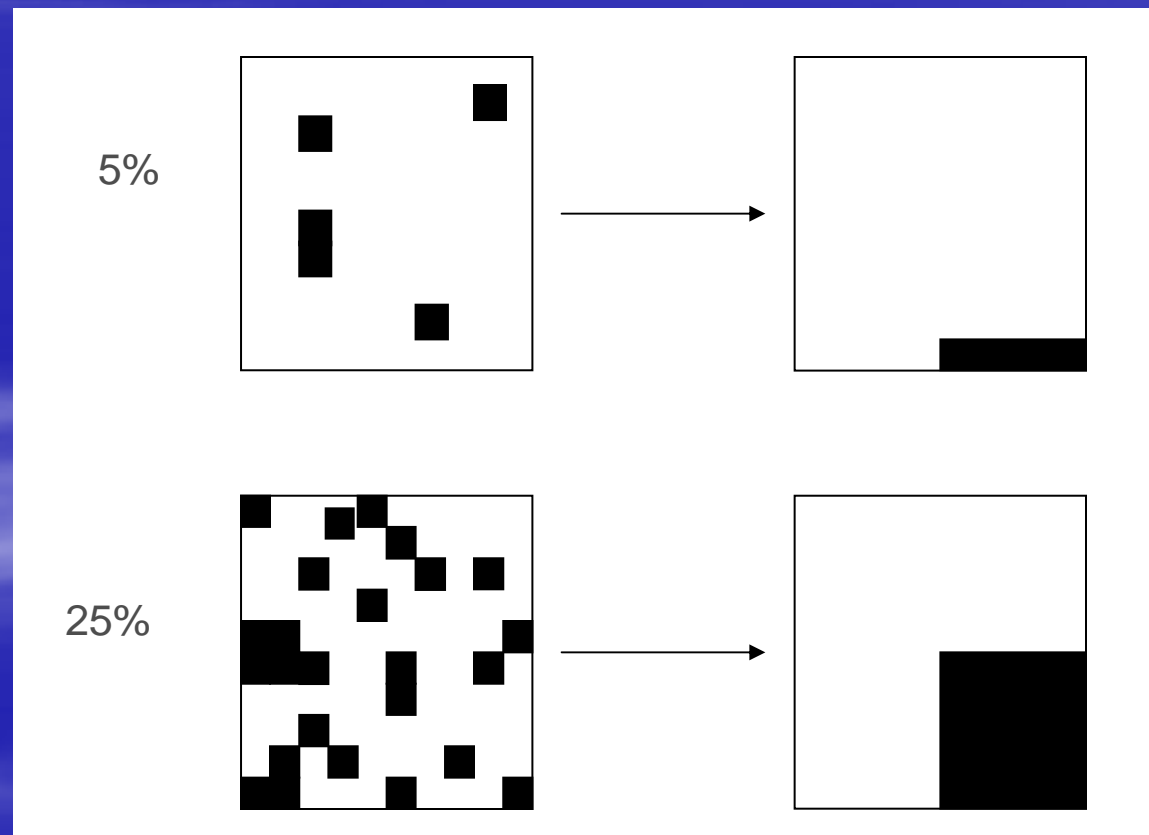
Inventory plants within the plot

- 'Walking the plot'
- ID and check off plants on the releve data sheet as you go



Estimate Cover

- Proportion or percentage of plot taken up by specific plant when looking straight down on the plot

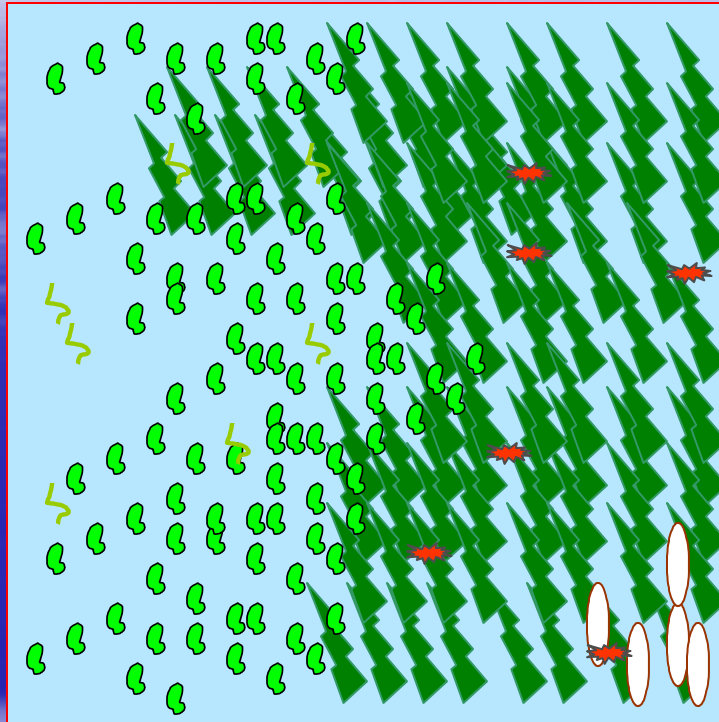







Estimate Cover

- Cover Classes (CC)

Cover Class (CC)	Percent Cover Range
6	75-100%
5	50-75%
4	25-50%
3	5-25%
2	1-5%
1	0-1%

Estimating Wetland Plant cover class



Plant	CC
	2
	4
	1
	1
	5

Cover Class (CC)	Percent Cover Range
6	75-100%
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Plant Metrics

1. Vascular genera
2. Nonvascular taxa
3. Grasslike genera
4. *Carex* cover
5. Bladderwort (*Utricularia*) presence
6. Aquatic Guild
7. Persistent litter

*Remember to have fun, be
safe, and enjoy your wetland
experience.....*



Thanks for your time!!