Update on the National Wetland Plant List

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US Army Corps of Engineers

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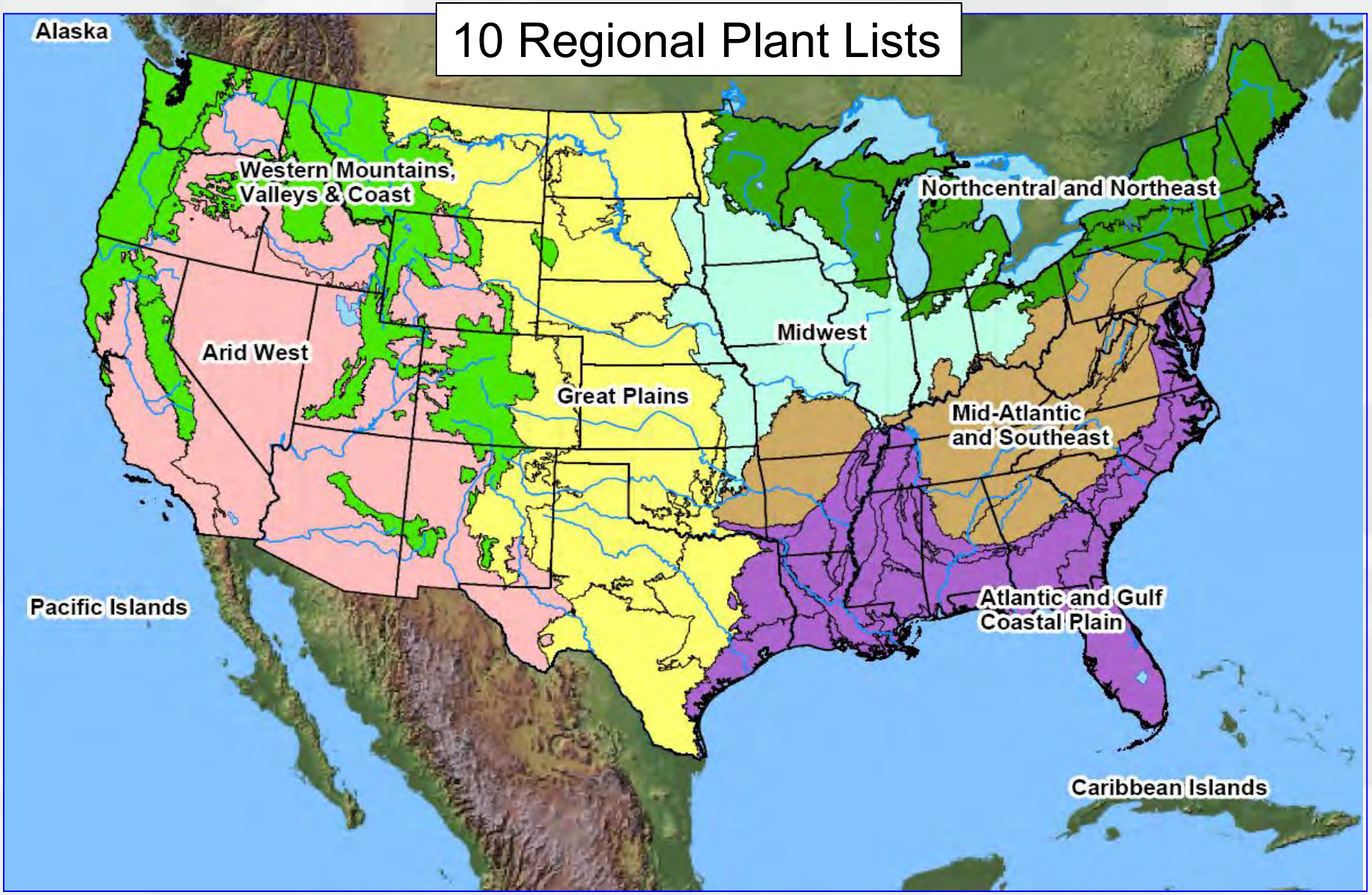
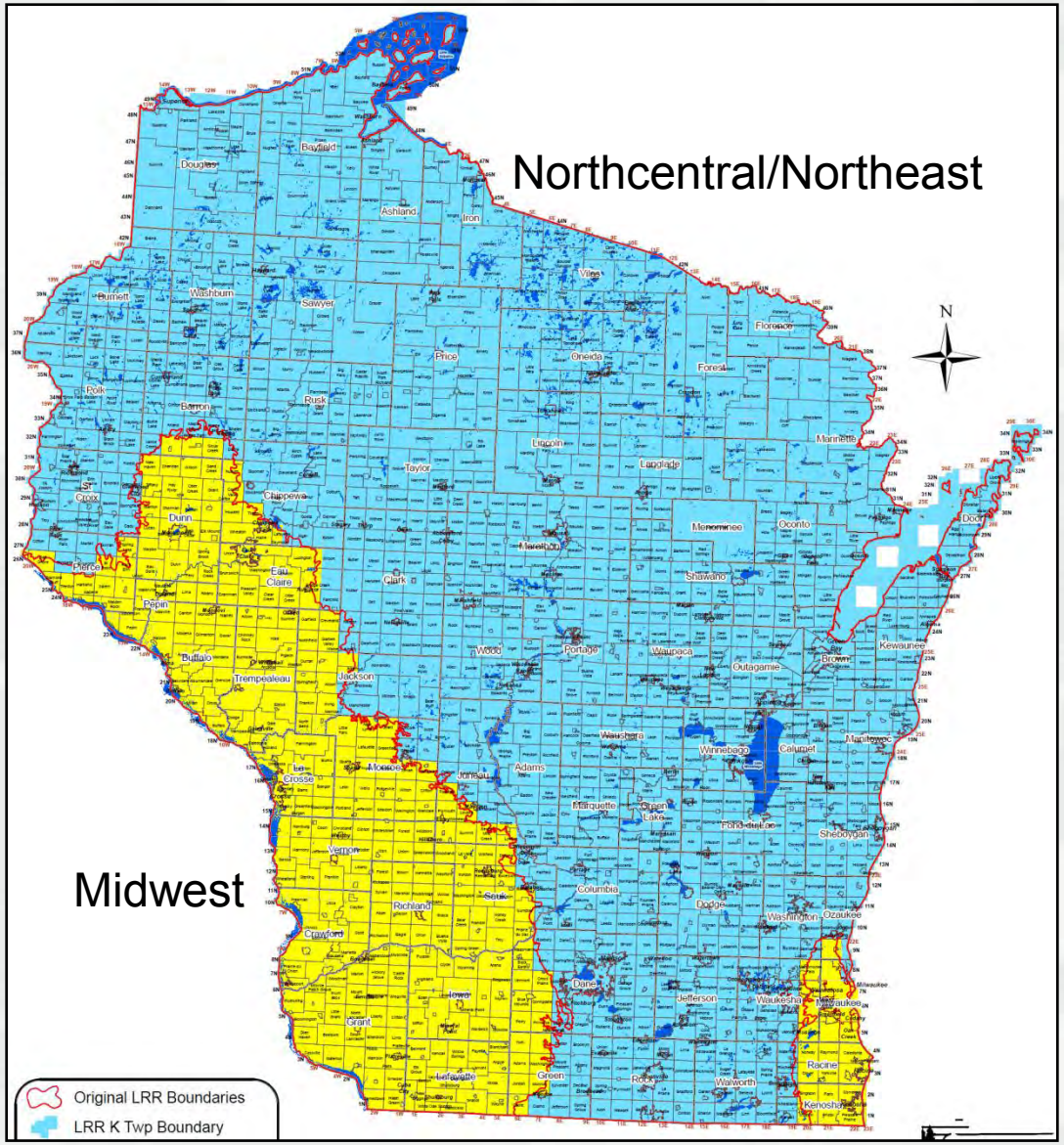
http://wetland_plants.usace.army.mil

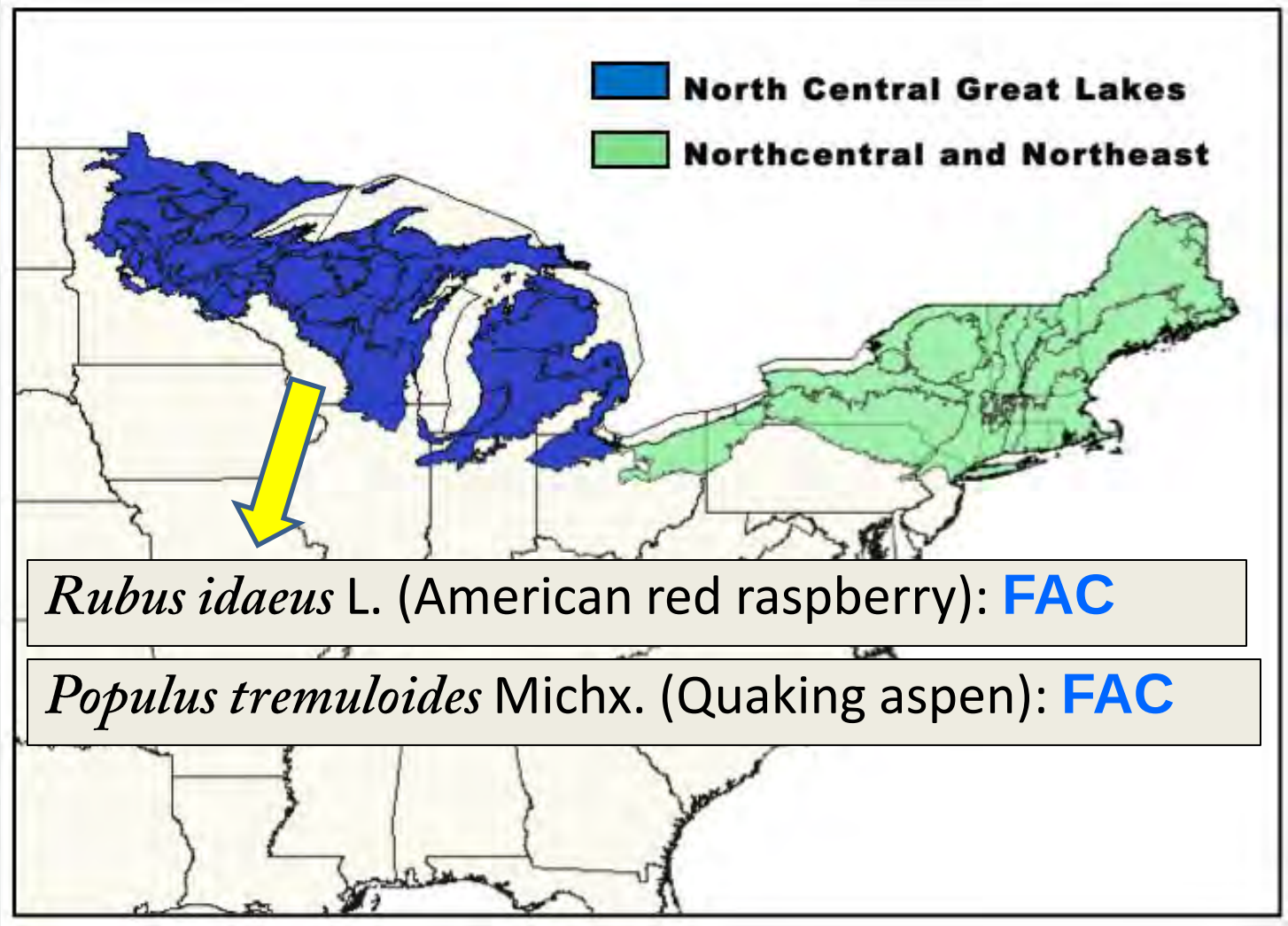
10 Regional Plant Lists





Supplement Regions in Wisconsin

Subregions for NC/NE



Rubus idaeus L. (American red raspberry): **FAC**

Populus tremuloides Michx. (Quaking aspen): **FAC**

Examples of Changes in Indicator Status for Some Common Species

Species	1988 List Region 3	2012 NWPL		
		NC/NE	MW	GP
Abies balsamea (Balsam Fir)	FACW	FAC	FACW	FAC
Alnus incana (Speckled Alder)	OBL	FACW	FACW	FACW
Andropogon gerardii (Big Bluestem)	FAC-	FACU	FAC	FACU
Eurybia macrophylla (Large-leaved Aster)	UPL	UPL	FACU	FACU
Frangula alnus (Glossy Buckthorn)	FAC+	FAC	FACW	FAC
Poa pratensis (Kentucky Bluegrass)	FAC-	FACU	FAC	FACU
Rhamnus cathartica (Common Buckthorn)	FACU	FAC	FAC	FACU
Rubus idaeus (American Red Raspberry)	FACW-	FAC	FACU	FACU

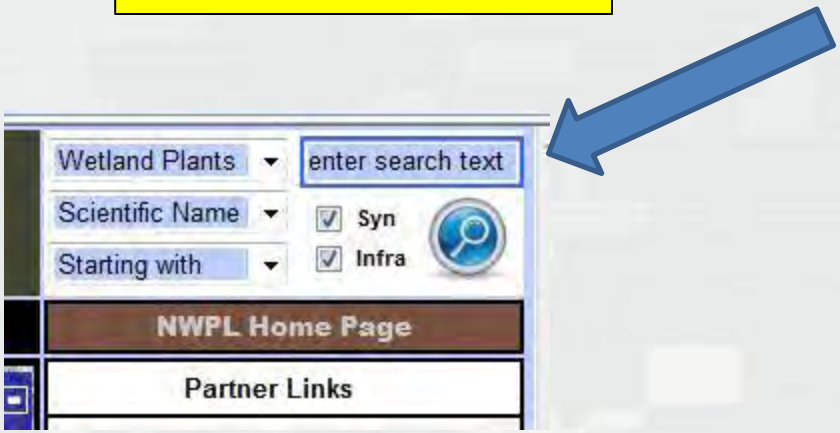
Nomenclature

- Uses Biota of North America Program (BONAP) http://www.bonap.org
- To determine current scientific name, use search feature in upper right hand corner of NWPL home page
- Can use scientific name or common name for search
- NWPL nomenclature will be updated annually

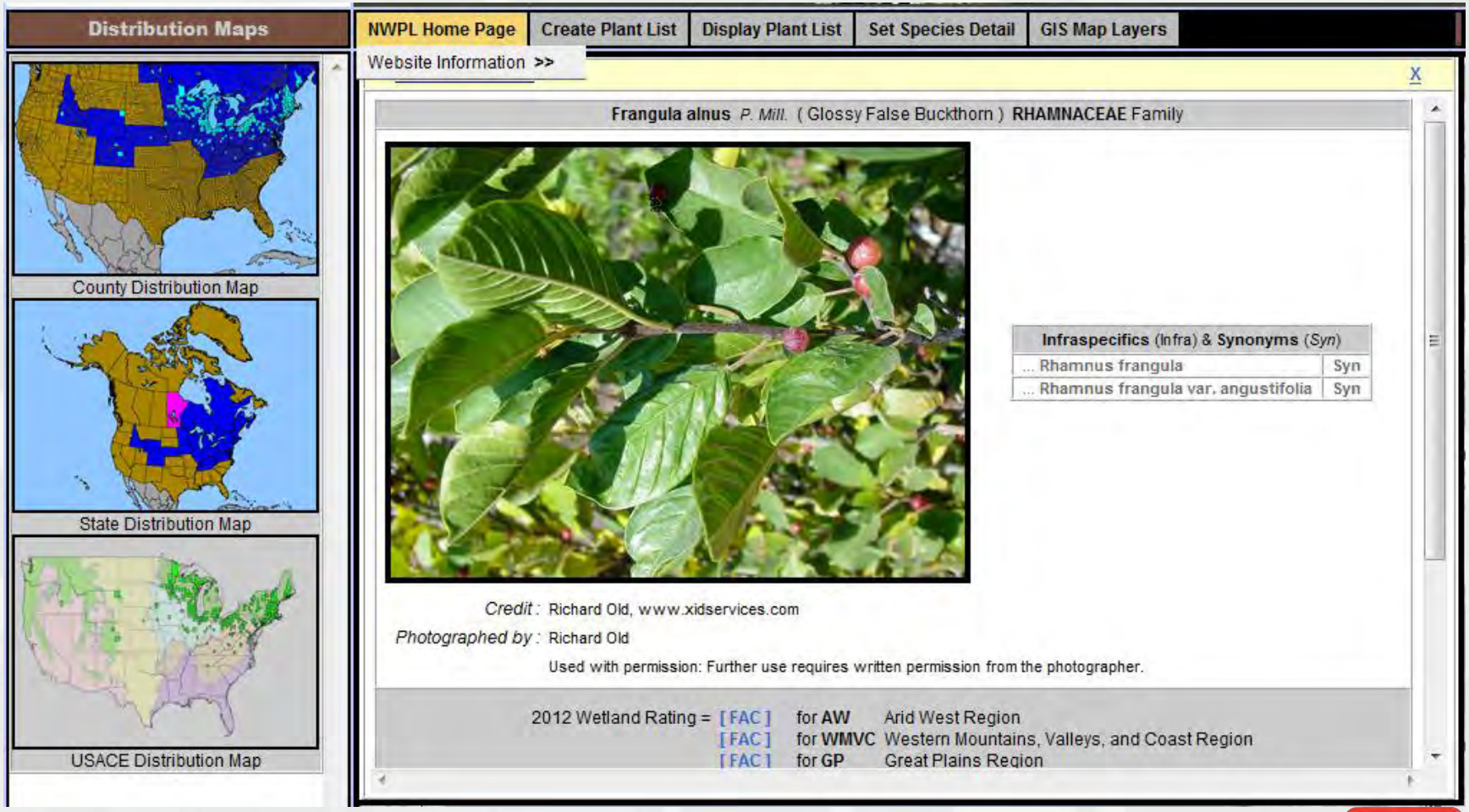
Nomenclature Changes - Example

- Glossy buckthorn (*Rhamnus frangula*) is not on the 2012/2013 List!!

Frangula alnus



Glossy Buckthorn



Nomenclature

- Red-osier dogwood (*Cornus alba*)
  (*C. sericea*)
  (*C. stolonifera*)
- Silky dogwood (*Cornus obliqua*)
  (*C. amomum*)
- Penn Sedge (*Carex pensylvanica*) = UPL

Nomenclature

- No more genus *Aster* in North America!

Aster puniceus = *Symphyotrichum puniceum*

Aster lanceolatus = *S. lanceolatum*

Aster novae-angliae = *S. novae-angliae*

Aster umbellatus = *Doellingeria umbellata*

Aster macrophyllus = *Eurybia macrophylla*

2012/2013 NWPL Doesn't Recognize Varieties/Subspecies

- Insufficient data to consider different indicator status within a species
- Examples:

Speckled alder

Alnus incana ssp. *rugosa* = *A. incana*

American red raspberry

Rubus idaeus var. *strigosus* = *R. idaeus*

Nomenclature

- If a plant species is not on the 2012/2013 List,

<u>and</u>

is not a synonym, consider it as UPL

Wetland Determinations and Delineations on Agricultural Lands

- Be sure to apply the 1998 Wisconsin Interagency Mapping Conventions
  - * FSA annual crop slides (1979 on)
  - * Wet signatures
  - * In context of antecedent precipitation (Woodward et al. 1997)

KEY:

Project Site

A Hydric soil basins and drainageways

WETLAND MAPPING CONVENTIONS REVIEW RECORD			
Project Name: Joe's BBQ	**Date:** August 10, 2010	**County:** Racine, WI	
Investigator: SDE	**Legal Description:** Sec. 25, T. 3 N., R. 3 E.		
Weather Station: Racine, WI			
YEAR	**CLIMATE***	**AREA/FIELD: 3**	**AREA/FIELD: 4**
1979	Normal	CNW	CNW
1980			
1981	Normal	AC (plowed with no visible crop); VV	AC, VV
1982	Normal	VV in ditches	VV in ditches
1983	Normal	Cropped; 25% DO, VV	Cropped; 70% DO, CS, VV
1984	Normal	CNW except DO in ditches	50% CS
1985	Normal	WS, VV	AC
1986	Normal	AC (30% exposed soils); WS, VV	AC; WS 10%
1987	Wet	NC, VV	NC, VV
1988	Dry	Plowed, no visible crop; drought	Cropped; drought
1989	Normal	Cropped; 30% CS	Cropped; minor CS
1990	Normal	Cropped; 40% CS, VV	NC
1991	Normal	CS	NC
1992	Dry	CNW	CNW except ditches
1993	Wet	NC, VV	NC, VV
1994	Normal	Poor Slide	Poor Slide
1995	Dry	CNW	CNW
1996	Normal	CS	Cropped in E 10%; rest is NC
1997	Normal	NC	CNW except ditch
1998	Normal	NC	NC
1999	Wet	NC	NC
2000	Wet	NC	NC
2001	Wet	NC	NC
2002	Wet	NC	NC
2003	Normal	NC	NC
2004	Wet		
2005	Normal	NC, VV	NC, VV
2007	Normal		NC; hayed
2009			WS
2010			DO, CS, VV
% Normal Years with Wet Signature		13/15 = 87%	13/16 = 81%
% Normal and Equal No. of Wet, Dry Years with Wet Signature		15/19 = 79%	15/20 = 75%
*Precipitation three months antecedent to date of aerial photograph			
KEY: DO = drown out; CS = crop stress; NC = not cropped; AC = altered cropping pattern; VV = volunteer vegetation (e.g., weeds); LP = late planting; WS = wet soil signature; CNW = cropped, no wetness signature; E = east; W = west			

EXAMPLE

Antecedent Precip for July 2013 at La Crosse, WI

		Long-term rainfall records							
	Month	3 yrs. in 10 less than	Normal	3 yrs. in 10 more than	Rain fall	Condition dry, wet, normal	Condition value	Month weight value	Product of previous two columns
1st prior month*	Jun	2.46		4.50	5.82	W	3	3	9
2nd prior month*	May	2.30		4.04	8.49	W	3	2	6
3rd prior month*	Apr	2.26		3.83	5.92	W	3	1	3
								Sum	

* Compared to photo date

Note: If sum is

6 - 9	then prior period has been drier than normal
10 - 14	then prior period has been normal
15 - 18	then prior period has been wetter than normal

Condition value:

Dry	=1
Normal	=2
Wet	=3

18 = Wetter Than Normal

How many transects and sample points are needed?

It depends on complexity of the site and the purpose for which the site is being delineated

Bottom line is that all variations in vegetation/soils/hydrology/topography/ land use need to be sampled

Monotypic vegetation, flat topography, one soil series, same land use = minimal sampling needed to document

Complex vegetation, hummocky microtopography, gradual slope to uplands = more sampling needed to document

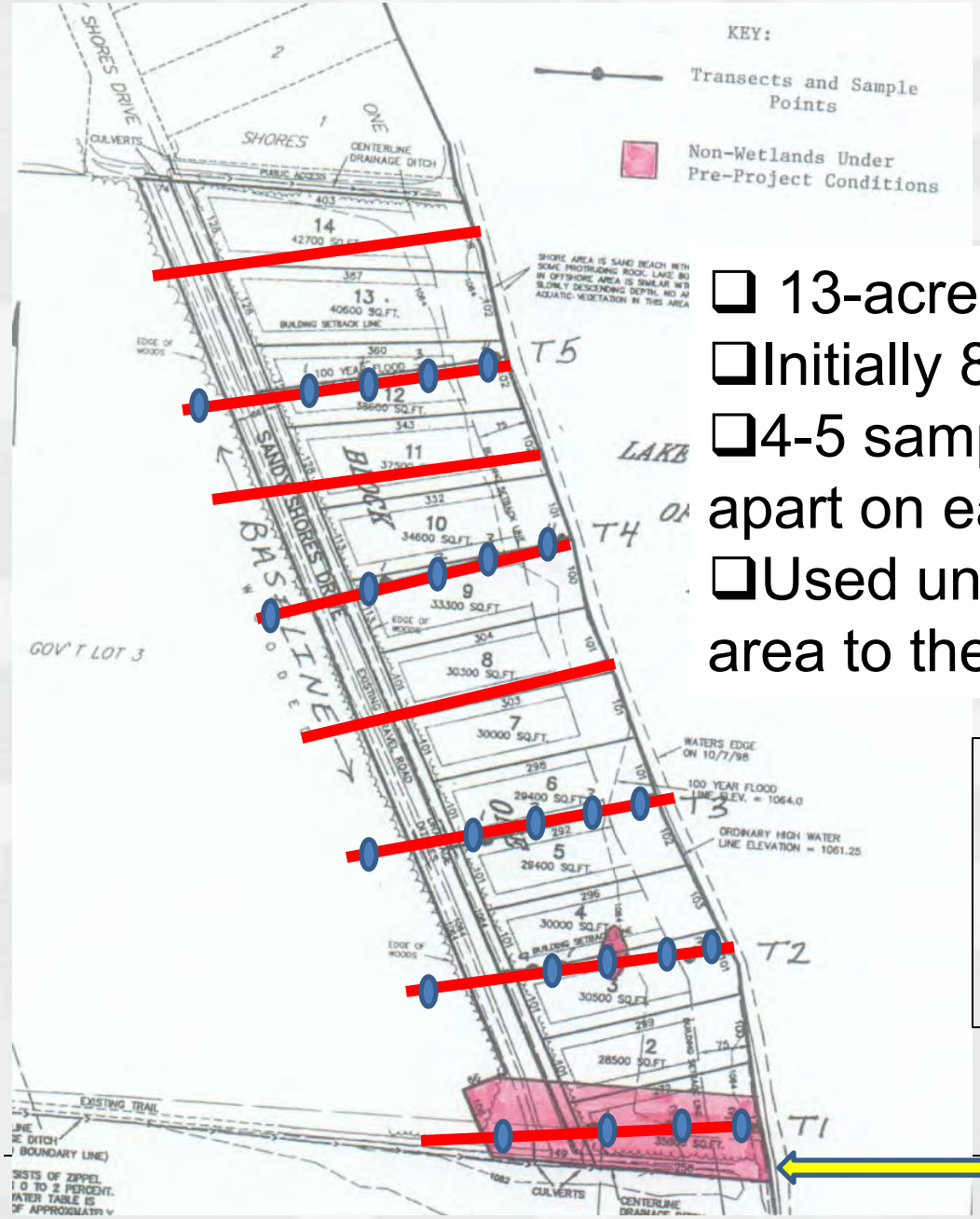
Case Study: Lake of the Woods, MN

U.S. v. Gary Bailey

Road Construction in Black Ash Swamp

State and Federal wetland regulatory violation

Unauthorized road fill and associated ditch



- 13-acre site
- Initially 8 transects
- 4-5 sample points about 75 feet apart on each transect
- Used undisturbed forested area to the west as “reference site”

After 5 transects, no new variations in vegetation, soils, topography or land use were encountered. No need to do additional 3 transects.

Lateral Effect of Ditch

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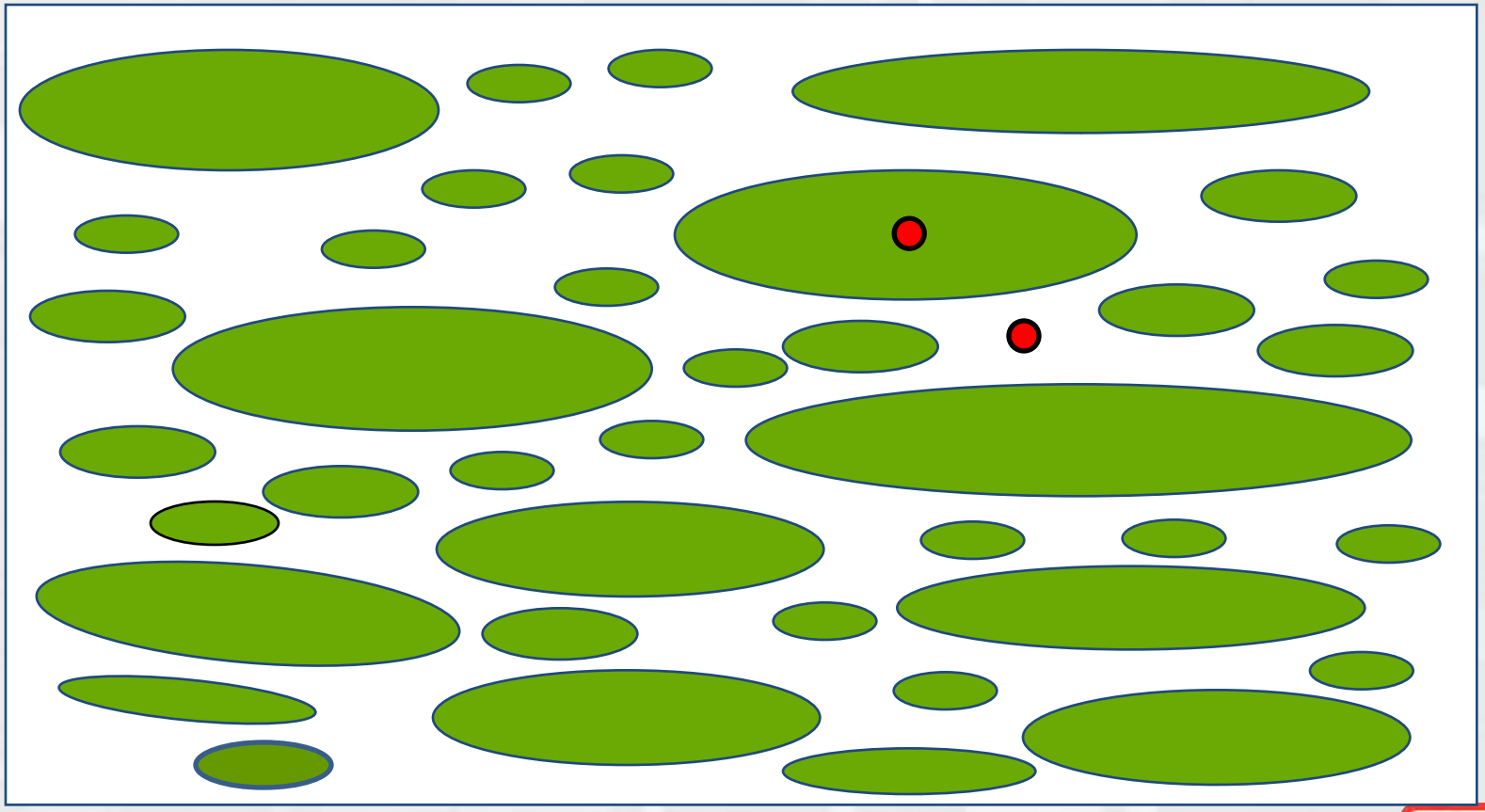
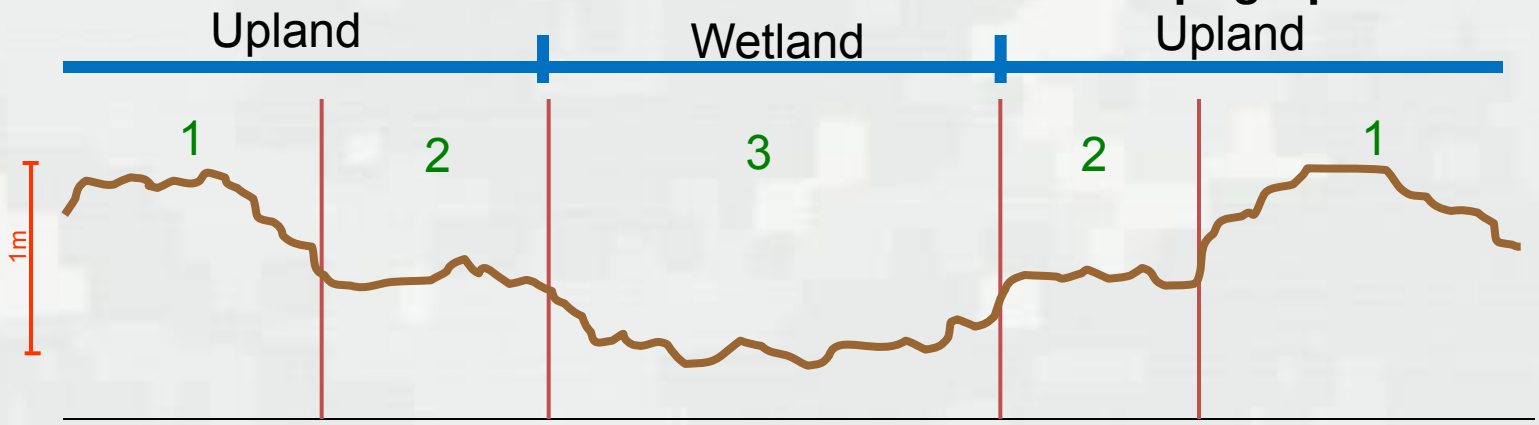
MOSAICS



Complete full data sheet of representative example

Mosaics

Plant Associations That Differentiate Microtopographic Zones



Zone 1

Basswood (FACU)
Red Maple (FAC)
Blue Beech (FAC)
Penn Sedge (UPL)
Wild Geranium (FACU)
Non-Hydric Soils
No Hydrology Indicators

Zone 2

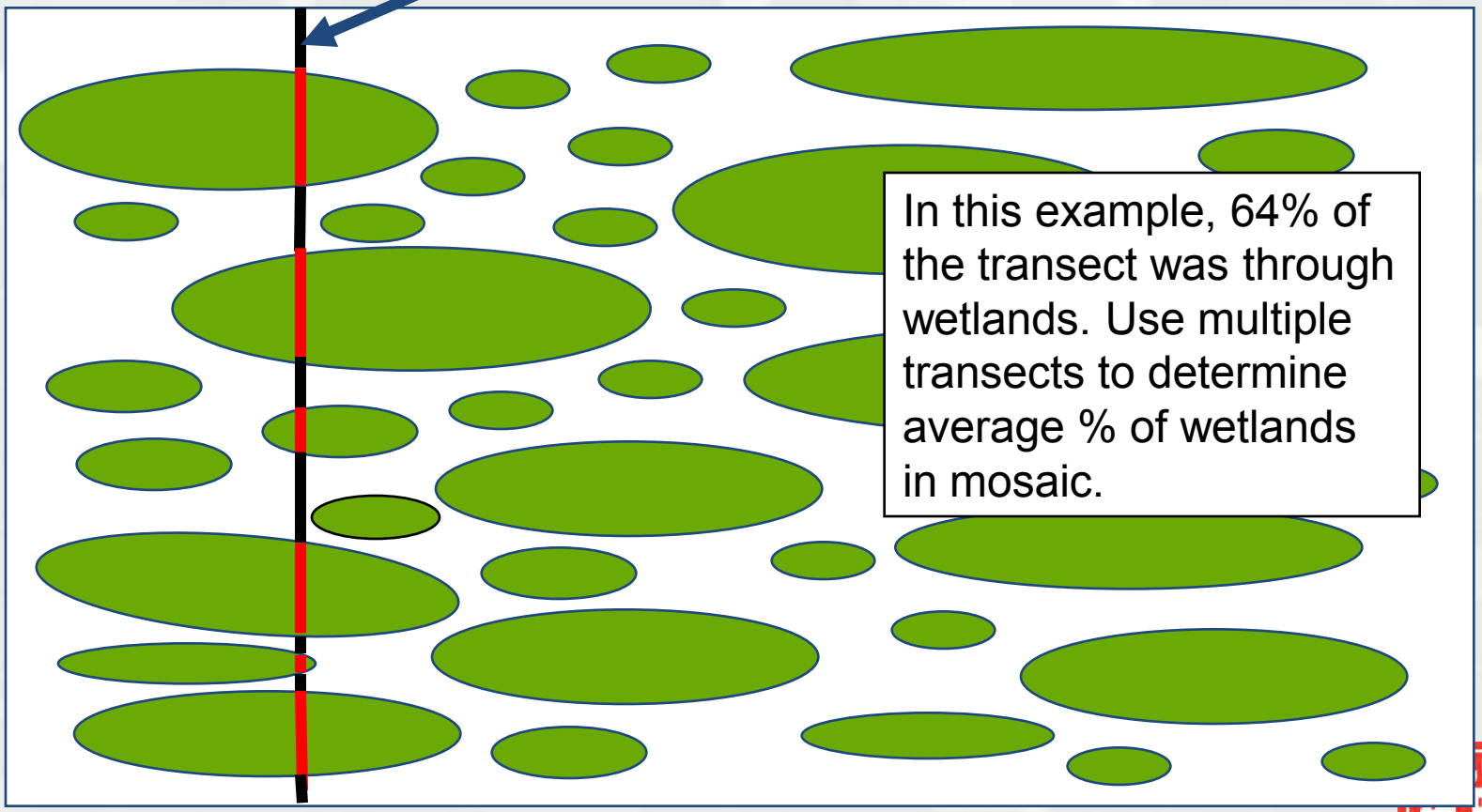
Red Maple (FAC)
Quaking Aspen (FAC)
Yellow Birch (FAC)
Interrupted Fern (FAC)
Wood Sedge (FAC)
Non-Hydric Soils
No Hydrology Indicators

Zone 3

Red Maple (FAC)
Jewelweed (FACW)
Cinnamon Fern (FACW)
Fringed Sedge (FACW)
Bur Sedge (FACW)
Hydric Soils
Hydrology Indicators
(Multiple)

MOSAICS

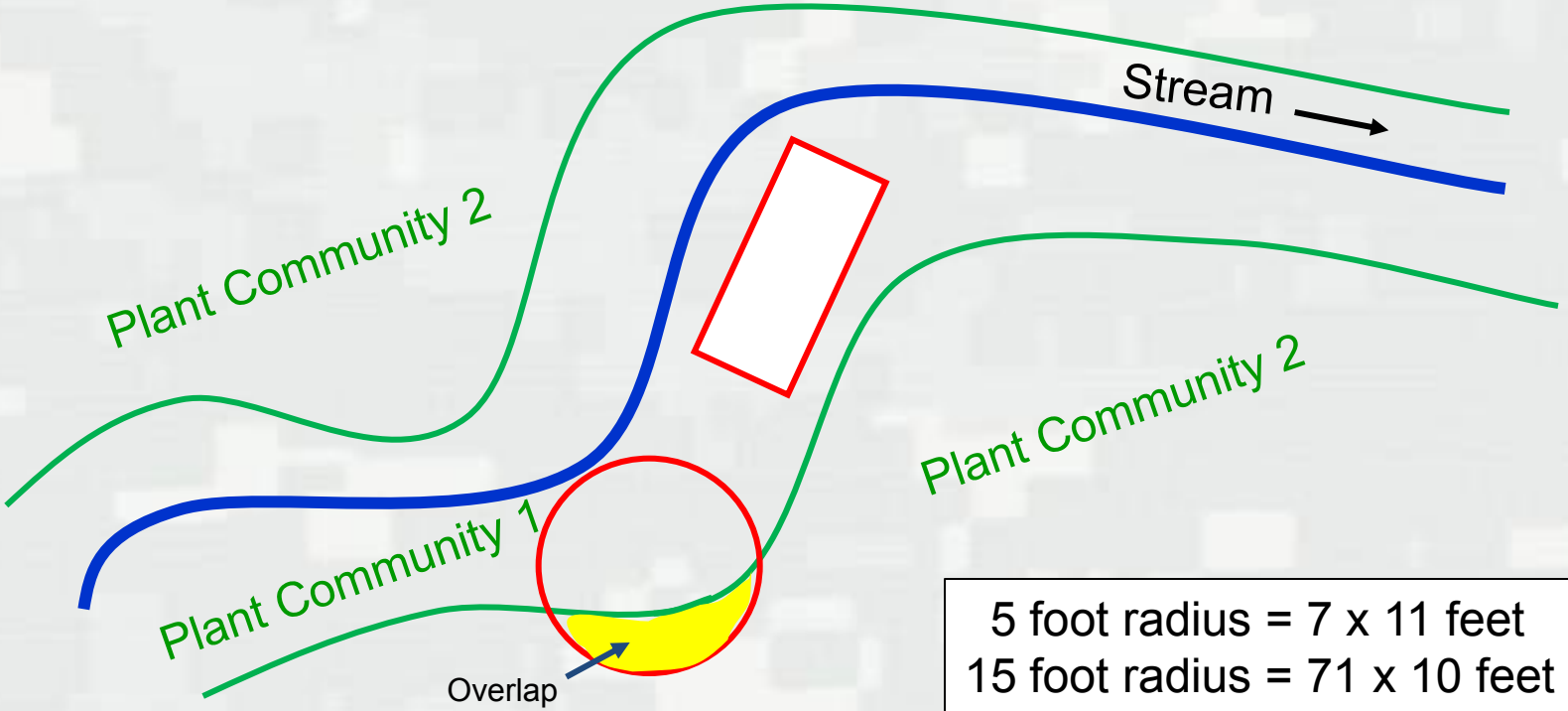
Example: 100 foot transect with 64 feet (red) in wetlands, 36 feet (black) in uplands



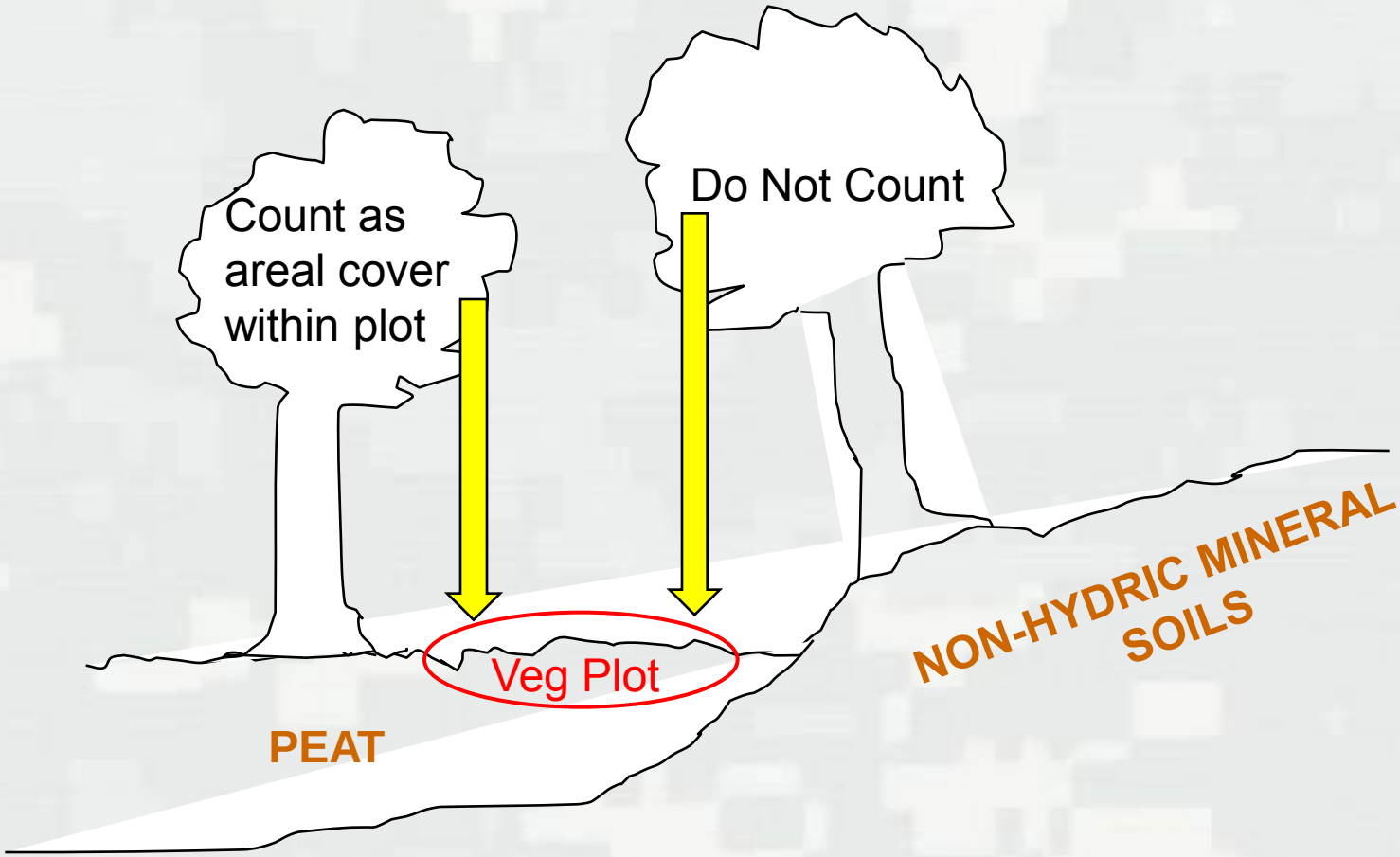
WETLANDS

Adjust Vegetation Plot Shape as Needed

If circular plot would overlap two different plant communities then use rectangular plot of same square footage



5 foot radius = 7 x 11 feet
15 foot radius = 71 x 10 feet
30 foot radius = 100 x 28 feet

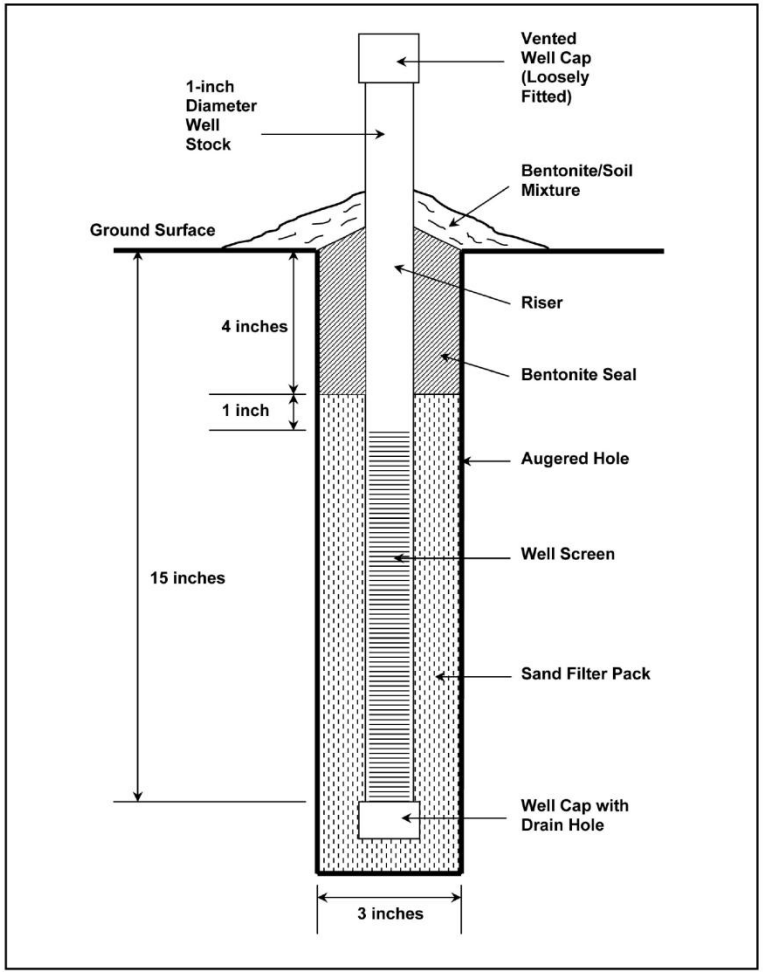


To contribute to areal cover, a plant does not have to be rooted in the plot, but does have to be within the same plant community

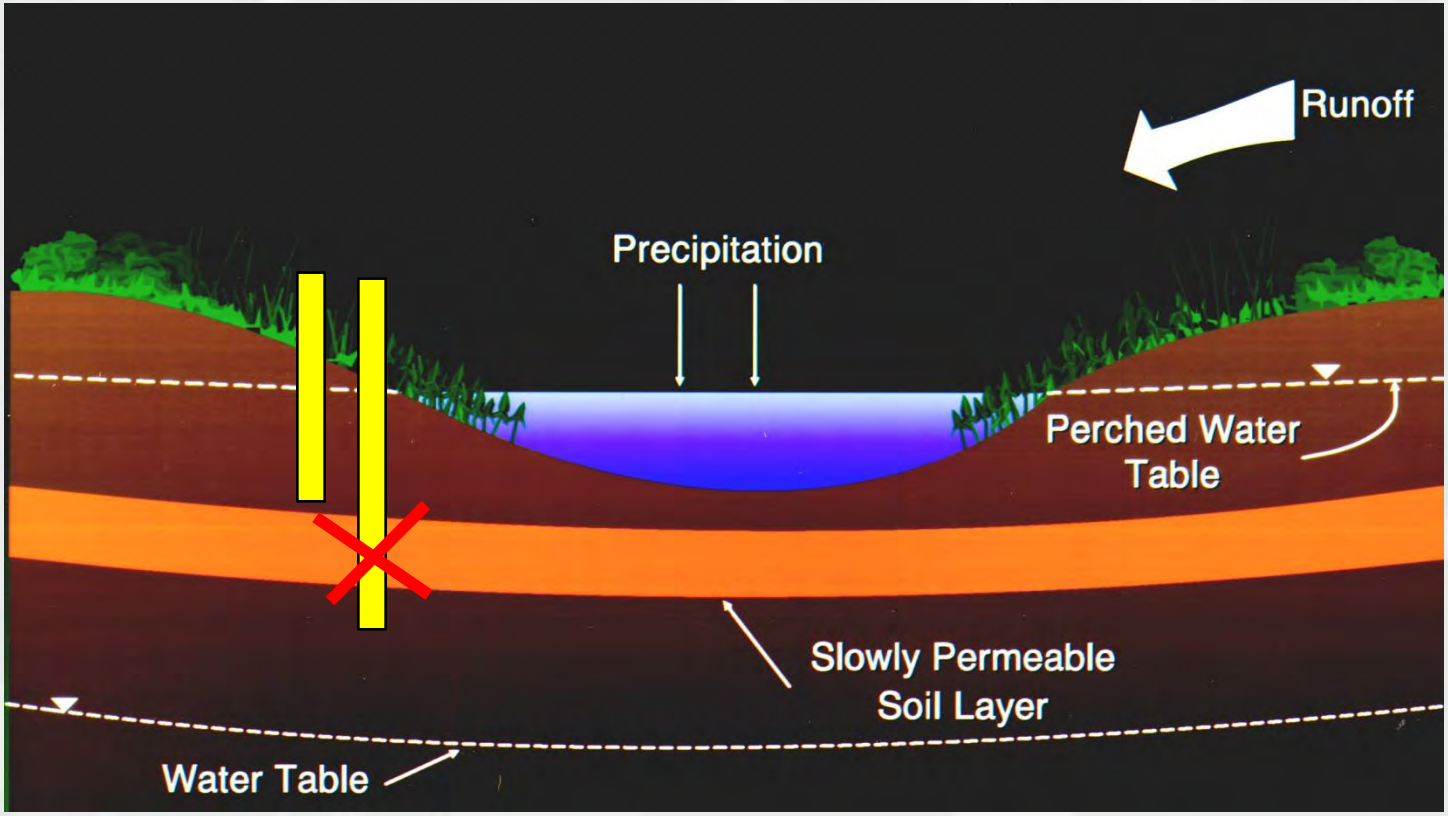
D9 – Gauge or Well Data
(Primary)

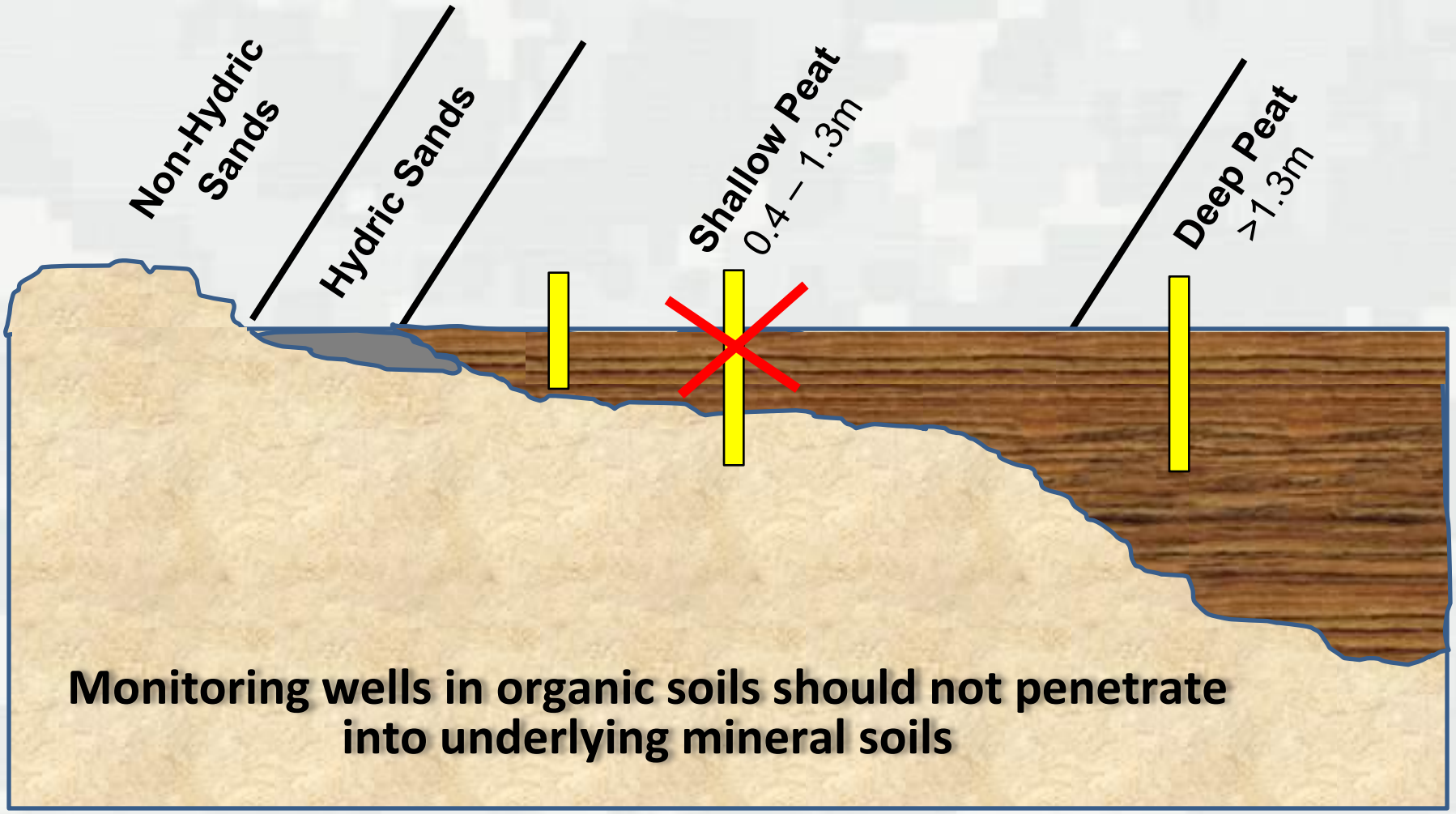
On sites that have complex hydrological manipulations, such as a network of drainage ditches or drain tile, a monitoring well study may be needed.

Monitoring well data must be placed in context of precipitation antecedent to, and during, the monitoring period.



Monitoring well should not penetrate a confining layer




Non-Hydric Sands
Hydric Sands
Shallow Peat
0.4 – 1.3m
Deep Peat
>1.3m
Monitoring wells in organic soils should not penetrate into underlying mineral soils