Update on the National Wetland Plant List

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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

<table>
<thead>
<tr>
<th>Species</th>
<th>1988 List Region 3</th>
<th>2012 NWPL</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Abies balsamea</em> (Balsam Fir)</td>
<td>FACW</td>
<td>FAC</td>
<td>FACW</td>
<td>FAC</td>
</tr>
<tr>
<td><em>Alnus incana</em> (Speckled Alder)</td>
<td>OBL</td>
<td>FACW</td>
<td>FACW</td>
<td>FACW</td>
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<tr>
<td><em>Andropogon gerardii</em> (Big Bluestem)</td>
<td>FAC-</td>
<td>FACU</td>
<td>FAC</td>
<td>FACU</td>
</tr>
<tr>
<td><em>Eurybia macrophylla</em> (Large-leaved Aster)</td>
<td>UPL</td>
<td>UPL</td>
<td>FACU</td>
<td>FACU</td>
</tr>
<tr>
<td><em>Frangula alnus</em> (Glossy Buckthorn)</td>
<td>FAC+</td>
<td>FAC</td>
<td>FACW</td>
<td>FAC</td>
</tr>
<tr>
<td><em>Poa pratensis</em> (Kentucky Bluegrass)</td>
<td>FAC-</td>
<td>FACU</td>
<td>FAC</td>
<td>FACU</td>
</tr>
<tr>
<td><em>Rhamnus cathartica</em> (Common Buckthorn)</td>
<td>FACU</td>
<td>FAC</td>
<td>FAC</td>
<td>FACU</td>
</tr>
<tr>
<td><em>Rubus idaeus</em> (American Red Raspberry)</td>
<td>FACW-</td>
<td>FAC</td>
<td>FACU</td>
<td>FACU</td>
</tr>
</tbody>
</table>
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, and 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)
## EXAMPLE

### 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

<table>
<thead>
<tr>
<th>YEAR</th>
<th>CLIMATE*</th>
<th>AREA/FIELD: 3</th>
<th>AREA/FIELD: 4</th>
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<tbody>
<tr>
<td>1979</td>
<td>Normal</td>
<td>CNW</td>
<td>CNW</td>
</tr>
<tr>
<td>1980</td>
<td>Normal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>Normal</td>
<td>AC (plowed with no visible crop); VV</td>
<td>AC, VV</td>
</tr>
<tr>
<td>1982</td>
<td>Normal</td>
<td>VV in ditches</td>
<td>VV in ditches</td>
</tr>
<tr>
<td>1983</td>
<td>Normal</td>
<td>Cropped: 25% DO, VV</td>
<td>Cropped: 70% DO, CS, VV</td>
</tr>
<tr>
<td>1984</td>
<td>Normal</td>
<td>CNW except DO in ditches</td>
<td>50% CS</td>
</tr>
<tr>
<td>1985</td>
<td>Normal</td>
<td>WS, VV</td>
<td>AC</td>
</tr>
<tr>
<td>1986</td>
<td>Normal</td>
<td>AC (30% exposed soils); WS, VV</td>
<td>AC; WS 10%</td>
</tr>
<tr>
<td>1987</td>
<td>Wet</td>
<td>NC, VV</td>
<td>NC, VV</td>
</tr>
<tr>
<td>1988</td>
<td>Dry</td>
<td>Plowed, no visible crop; drought</td>
<td>Cropped; drought</td>
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<tr>
<td>1989</td>
<td>Normal</td>
<td>Cropped; 30% CS</td>
<td>Cropped; minor CS</td>
</tr>
<tr>
<td>1990</td>
<td>Normal</td>
<td>Cropped; 40% CS, VV</td>
<td>NC</td>
</tr>
<tr>
<td>1991</td>
<td>Normal</td>
<td>CS</td>
<td>NC</td>
</tr>
<tr>
<td>1992</td>
<td>Dry</td>
<td>CNW</td>
<td>CNW except ditches</td>
</tr>
<tr>
<td>1993</td>
<td>Wet</td>
<td>NC, VV</td>
<td>NC, VV</td>
</tr>
<tr>
<td>1994</td>
<td>Normal</td>
<td>Poor Slide</td>
<td>Poor Slide</td>
</tr>
<tr>
<td>1995</td>
<td>Dry</td>
<td>CNW</td>
<td>CNW</td>
</tr>
<tr>
<td>1996</td>
<td>Normal</td>
<td>CS</td>
<td>Cropped in E. 10% rest is NC</td>
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<tr>
<td>1997</td>
<td>Normal</td>
<td>NC</td>
<td>CNW except ditch</td>
</tr>
<tr>
<td>1998</td>
<td>Normal</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>1999</td>
<td>Wet</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
<td>2000</td>
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<tr>
<td>2005</td>
<td>Normal</td>
<td>NC, VV</td>
<td>NC, VV</td>
</tr>
<tr>
<td>2007</td>
<td>Normal</td>
<td>NC; hayed</td>
<td>NC</td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td>WS</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td>DO, CS, VV</td>
<td></td>
</tr>
</tbody>
</table>

- % Normal Years with Wet Signature: 13/15 = 87%  
- % Normal and Equal No. of Wet, Dry Years with Wet Signature: 15/19 = 79%  
- % Normal Years with Wet Signature: 13/16 = 81%  
- % Normal and Equal No. of Wet, Dry Years with Wet Signature: 15/20 = 75% 

*Precipitation three months antecedent to date of aerial photograph

**KEY:** DO = drowned 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
Antecedent Precip for July 2013 at La Crosse, WI

<table>
<thead>
<tr>
<th>Month</th>
<th>3 yrs. in 10 less than</th>
<th>Normal</th>
<th>3 yrs. in 10 more than</th>
<th>Rainfall</th>
<th>Condition dry, wet, normal</th>
<th>Condition value</th>
<th>Month weight value</th>
<th>Product of previous two columns</th>
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<tbody>
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<td>1st prior month*</td>
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<td></td>
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<td></td>
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<tr>
<td>Jun</td>
<td>2.46</td>
<td></td>
<td>4.50</td>
<td>5.82</td>
<td>W</td>
<td>3</td>
<td>3</td>
<td>9</td>
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<tr>
<td>2nd prior month*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>May</td>
<td>2.30</td>
<td></td>
<td>4.04</td>
<td>8.49</td>
<td>W</td>
<td>3</td>
<td>2</td>
<td>6</td>
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<tr>
<td>3rd prior month*</td>
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<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Apr</td>
<td>2.26</td>
<td></td>
<td>3.83</td>
<td>5.92</td>
<td>W</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

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

In this example, 64% of the transect was through wetlands. Use multiple transects to determine average % of wetlands in mosaic.
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
Monitoring wells in organic soils should not penetrate into underlying mineral soils.