Policy Required by USDA, CORPS and BWSR

- Developed by several agencies
- Official version August 1994
- BWSR modified for WCA use
- Is now incorporated into the 87 Manual supplements
Use of MN Mapping Conventions

- This method can be used for:
  - Determining if wetland hydrology is normally present (i.e. a wetland hydrology *indicator*).
  - Determining if a hydrophytic plant community would be supported by the site under normal circumstances.
  - Placing all observations (hydrology, soils, veg.) in the context of normal circumstances by analyzing historical conditions.

- The results of the slide analysis are not necessarily the determination of whether the site is wetland or not. It is just one piece of information to be considered with others (see 87 Manual and Manual Supplements).
Minnesota mapping conventions use a percentage of the slides with normal precipitation to indicate the likelihood of wetland hydrology being present.

UM Climatology website tools are used for precipitation data in most cases.
Basics

- Must have a minimum of 5 normal precipitation years for the procedure; may add equal number of wet and dry years

- In years where precipitation is extreme, (wet or dry) disregard slide for counting hydrology “hits”
Items Needed to Do Analyses

- Blank photo
- Slides of tract
- Form for recording slide review
- Precipitation data
Procedure

1. Copy dates off slides
2. Record precipitation information from climatology website
3. Examine wettest year slide
4. Note potential sites on blank photo – wet signature from wettest year slide, mapped hydric soil, NWI-mapped
5. Quickly examine slides to determine how often a signature may occur for a site
Example of potential wetland sites identified for mapping conventions review
Procedure, continued

6. Number the sites that appear enough times to be considered potential wetlands

7. Go through the slides carefully, looking at each of the numbered sites for potential wet signatures

8. Count the number of “hits” in years with normal precipitation; enter as ratio

9. Go through the slides again to sketch the approximate size and location using normal years to use during the field visit
10. During field visit, look over all the sites, but spend the most time looking at the “in-between” sites

11. Look for hydrology indicators independent from the other two criteria

12. Know current climate conditions at time of field visit
How to use MN Wetland Mapping
Conventions for Delineation Determinations

Terminology:

WCS- crop stress: obvious difference in crop condition for crop at site due to wetness versus crop in surrounding field(s); may include color (photo tone), size of crop, different planting dates.

WDO- drowned out: site appears to have been tilled through and possibly planted; however, pattern of crop appears as though all or part has been drowned out.

WNC- not cropped: site appears to have natural vegetative cover rather than annual crops; no obvious tillage pattern lines through the site; adjacent cropped area squared-up or otherwise planted to avoid the area.

WSW- standing water
How to use MN Wetland Mapping Conventions for Delineation Determinations

WCS?

WDO

WNC
How to use MN Wetland Mapping
Conventions for Delineation Determinations

Terminology:

DC- cropped site is tilled and planted: crop appears to have same health and vigor as surrounding fields.

DNC- not cropped: site appears to have natural vegetative cover rather than annual crops; no obvious tillage pattern lines through the site; adjacent cropped area squared-up or otherwise planted to avoid the area.
How to find “normal” years.

- The old method is described in detail in MN Mapping Conventions.

- The new way is to use the Minnesota State Climatology website (http://climate.umn.edu/wetland/). Print out NRCS WETS table for each slide.
Example print-out of WETS table for a July 2006 FSA slide. This print-out indicates that the slide was taken following a normal precipitation period.

<table>
<thead>
<tr>
<th>(values are in inches)</th>
<th>first prior month: June 2006</th>
<th>second prior month: May 2006</th>
<th>third prior month: April 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>estimated precipitation total for this location:</td>
<td>3.72</td>
<td>1.90</td>
<td>3.42</td>
</tr>
<tr>
<td>there is a 30% chance this location will have less than:</td>
<td>2.79</td>
<td>2.51</td>
<td>1.30</td>
</tr>
<tr>
<td>there is a 30% chance this location will have more than:</td>
<td>5.12</td>
<td>3.95</td>
<td>2.75</td>
</tr>
<tr>
<td>type of month: dry normal wet</td>
<td>normal</td>
<td>dry</td>
<td>wet</td>
</tr>
<tr>
<td>monthly score</td>
<td>$3 \times 2 = 6$</td>
<td>$2 \times 1 = 2$</td>
<td>$1 \times 3 = 3$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>multi-month score:</th>
<th>6 to 9 (dry)</th>
<th>10 to 14 (normal)</th>
<th>15 to 18 (wet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>11 (Normal)</td>
</tr>
</tbody>
</table>
Fill out a Slide Review Data Form

Can be any form that you want as long as it has the following information:

- Slide year
- Climatic condition (wet, dry, normal)
- Wetland signature interpretation
- Reviewer name and date

Other data can be incorporated into the form such as NWI classification, soil unit, etc., but the above items are the documentation requirements for the slide review. They should be in the delineation report!
Example data form for recording mapping conventions review. Can record data for up to 5 different areas on this form.
Determining if a wetland hydrology indicator is present

At this point, there is a clear break with the Mapping Conventions procedure.

- **<50% wet signatures - no hydrology indicator**
- **>50% wet signatures – hydrology indicator**

NWI is information to consider, but not in such a direct way as in the NRCS procedure.

The wetland determination must be made based on 87 Manual, not results of slide review.

<table>
<thead>
<tr>
<th>Hydric Soils Map Unit and Inclusions</th>
<th>NWI?</th>
<th>Farm Service Agency Imagery?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes or No</td>
<td>No</td>
<td>≤30%</td>
<td>Non-wetland or ED?</td>
</tr>
<tr>
<td>Yes or No</td>
<td>No</td>
<td>30%-50%</td>
<td>Field Verify</td>
</tr>
<tr>
<td>Yes or No</td>
<td>No</td>
<td>≥50%</td>
<td>Wetland</td>
</tr>
<tr>
<td>Yes or No</td>
<td>Yes</td>
<td>≤30%</td>
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<tr>
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<td>≥50%</td>
<td>Wetland</td>
</tr>
</tbody>
</table>
Determining if a wetland hydrology indicator is present

- For areas that are borderline, slides should be scrutinized further.
  - Look at all years and calculate % wet
  - Look at signatures year by year compared to known upland and wetland sites in similar situations (reference wetlands)
  - Closely examine previous precipitation just prior to slide date if known (30-day rolling average, major rainfall events, etc.)
Making a Decision

1. Utilize relevant procedure from MN Mapping Conventions.

2. Further scrutinize slides in borderline situations.

3. Determine if slide review shows a wetland hydrology indicator.
4. Look at other information (see 87 Manual and Supplement) including field observations.

5. Determine if hydrology is present during some portion of the growing season.

6. Follow problem area procedures to determine if area is a wetland (has indicators of all 3 parameters).
Important Final Points

- Slide review is one piece of information to be considered with others in determining if wetland hydrology is present.

- Consider other sources of information as described in the 87 Manual and Supplements. Consider what is appropriate and available for the site in question.

- Weigh all evidence in making a determination. If there is not enough evidence to make a reasonable decision, then ask for more information.
Document and explain the basis for the determination in the file (LGU) and report (applicant/consultant).