



**STORMWATER MANAGEMENT COMMISSION**

We hope to see [hear] you at the next TAC meeting on **Thursday, March 17, 2022** at 9:00 AM.

**Meeting Topics:**

- Nominations for new TAC Vice Chairman
- Revised SMC guidance memo for agricultural land wetland determinations (“farmed wetlands”)

SMC Zoom B is inviting you to a scheduled Zoom meeting.

Topic: March TAC Meeting

Time: Mar 17, 2022 09:00 AM Central Time (US and Canada)

Join Zoom Meeting

<https://us02web.zoom.us/j/87080997763>

Meeting ID: 870 8099 7763

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Pursuant to Section 7(e) of the Illinois Open Meetings Act, the Governorial Disaster Proclamation, and the Written Determination of the Lake County Stormwater Management Commission Chair, this meeting will be held by audio and video conference.

**PUBLIC ATTENDANCE:** There are two options for the public to attend the meeting: (1) in-person attendance on the 2nd floor Central Permit Facility building 500 W. Winchester Road, Libertyville, Illinois, or (2) remote / virtual attendance through registration at the link at the beginning of this agenda.

**RECORDING:** Meetings, including Public Comment, will be recorded.

**PUBLIC COMMENT:** The public will be afforded time to comment on matters related to the business of the Lake County Stormwater Management Commission. A total of 30 minutes will be permitted for Public Comment and no more than three minutes per Comment. In general, Public Comment on items not on the agenda will be presented near the beginning of the meeting. Public Comment on agenda items may be presented during consideration of that item.

Individuals attending in-person or remotely may present their Public Comment during the meeting. Individuals not in attendance may provide written Public Comment that must be received by noon on the date of the meeting (emailed to [stormwater@lakecountyil.gov](mailto:stormwater@lakecountyil.gov) or delivered to the Lake County Stormwater Management office at 500 W. Winchester Road, Libertyville Suite 201). Public Comment will proceed in the following order: (1) Public Comment by individuals in attendance on the 2nd floor, (2) Public Comment by individuals who registered via the link at the beginning of the agenda and are attending remotely, and then (3) written comments.

Public with no access to email may leave a message with Stormwater Management at 847-377-7700.



**STORMWATER MANAGEMENT COMMISSION**  
**TECHNICAL ADVISORY COMMITTEE**  
**AGENDA**  
**March 17, 2022**  
**9:00 AM – 12:00 PM**

<https://us02web.zoom.us/j/87080997763>



- 1.0 CALL TO ORDER
- 2.0 ADDITIONS TO THE AGENDA
- 3.0 PUBLIC COMMENT
- 4.0 STAFF REPORT
  - 4.1 Officer nominations and elections
- 5.0 APPROVAL OF THE MINUTES
  - 5.1 January 20, 2022 Minutes  
Action Requested: Approval
- 6.0 OLD BUSINESS
- 7.0 NEW BUSINESS
  - 7.1 Revisions to SMC Guidance Memo for Agricultural Land Wetland Determinations (“Farmed Wetlands”)  
Action Requested: Approval
- 8.0 ADJOURNMENT

## Technical Advisory Committee

|   |   |  |  |
|---|---|--|--|
| <p><b>James Anderson</b><br/>(Term Expires May 2024)<br/>Director of Natural Resources<br/>LC Forest Preserve District<br/>1899 W. Winchester Rd.<br/>Libertyville, IL 60048<br/>Phone: 847-968-3282<br/>Fax: 847-367-6649<br/>Email: janderson@lcfpd.org</p> | <p><u>Alternates</u><br/><b>John Nelson</b><br/>Director of Operations &amp; Infrastructure<br/>LC Forest Preserve Dist.<br/>19808 W. Grand Avenue.<br/>Lindenhurst, IL 60046<br/>Phone: 847-968-3407<br/>Fax: 847-367-6649<br/>Email: jnelson@lcfpd.org</p> <p><b>Ken Klick</b><br/>Restoration Ecologist<br/>LC Forest Preserve Dist.<br/>1899 W. Winchester Rd.<br/>Libertyville, IL 60048<br/>Phone: 847-968-3284<br/>Fax: 847-367-6649<br/>Email: kklick@lcfpd.org</p> | <p><b>Tom Polzin (Vice Chairman)</b><br/>(Term Expires May 2024)<br/>Hey &amp; Assoc., Inc.<br/>26575 W. Commerce Dr., Ste. 601<br/>Volo, IL 60073<br/>Phone: 847-740-0888<br/>Fax: 847-740-2888<br/>Email: tpolzin@heyassoc.com</p> | <p><u>Alternate</u><br/><b>Vince Mosca</b><br/>Hey &amp; Assoc., Inc.<br/>26575 W. Commerce Dr., Ste. 601<br/>Volo, IL 60073<br/>Phone: 847-740-0888<br/>Fax: 847-740-2888<br/>Email: vmosca@heyassoc.com</p>                |
| <p><b>Mike Zemaitis</b><br/>(Term Expires May 2024)<br/>Engineer of Design<br/>LC Division. of Transportation<br/>600 Winchester Rd.<br/>Libertyville, IL 60048<br/>Phone: 847-377-7400<br/>Fax: 847-362-5290<br/>Email: mzemaitis@lakecountyil.gov</p>       | <p><u>Alternate</u><br/><b>AI Giertych</b><br/>Assist. County Engineer<br/>LC Division of Transportation<br/>600 Winchester Rd.<br/>Libertyville, IL 60048<br/>Phone: 847-377-7400<br/>Fax: 847-362-5290<br/>Email: agiertych@lakecountyil.gov</p>  | <p><b>Pat Bleck</b><br/>(Term Expires May 2024)<br/>Bleck Engineering Co., Inc.<br/>1375 Western Ave.<br/>Lake Forest, IL 60045<br/>Phone: 847-295-5200<br/>Fax: 847-295-7081<br/>Email: pbleck@bleckeng.com</p>                     | <p><u>Alternate</u><br/><b>Joy Corona</b><br/>Bleck Engineering Co., Inc.<br/>1375 Western Ave.<br/>Lake Forest, IL 60045<br/>Phone: 847-295-5200<br/>Fax: 847-295-7081<br/>Email: jcorona@bleckeng.com</p>                  |
| <p><b>Patrick Glenn</b><br/>(Term Expires May 2024)<br/>Senior Engineer<br/>Gewalt Hamilton Assoc. Inc.<br/>625 Forest Edge Dr.<br/>Vernon Hills, IL 60061<br/>Phone: 847-478-9700<br/>Fax: 847-478-9701<br/>Email: pglenn@gha-engineers.com</p>              | <p><u>Alternate</u><br/><b>Mei Zhu</b><br/>Senior Engineer<br/>Gewalt Hamilton Assoc. Inc.<br/>625 Forest Edge Dr.<br/>Vernon Hills, IL 60061<br/>Phone: 847-478-9700<br/>Fax: 847-478-9701<br/>Email: mzhu@gha-engineers.com</p>   | <p><b>Bill Heinz</b><br/>(Term Expires May 2024)<br/>Village of Grayslake<br/>585 Berry Ave.<br/>Grayslake, IL 60030<br/>Phone: 847-223-2323<br/>Fax: 847-223-4821<br/>Email: wheinz@villageofgrayslake.com</p>                      | <p><u>Alternate</u><br/><b>Kurt Baumann</b><br/>Baxter &amp; Woodman<br/>442 N. Cedar Lake Rd.<br/>Round Lake, IL 60073<br/>Phone: 815-444-3313<br/>Email: baumann@baxterwoodman.com</p>                                     |
| <p><b>Kathy Chernich</b><br/>(Term Expires May 2024)<br/>U.S. Army Corp. of Engineers<br/>231 LaSalle St., Ste. 1500<br/>Chicago, IL 60604<br/>Phone: 312-846-5531<br/>Fax: 312-353-4110<br/>Email: Kathy.G.Chernich@usace.army.mil</p>                       | <p><u>Alternate</u><br/><b>Kaitlyn Pascus</b><br/>U.S. Army Corp. of Engineers<br/>231 LaSalle St., Ste. 1500<br/>Chicago, IL 60604<br/>Phone: 312-846-5533<br/>Fax: 312-353-4110<br/>Email: kaitlyn.a.pascus@usace.army.mil</p>  | <p><b>Peter Manhard</b><br/>(Term Expires May 2024)<br/>Manhard Consulting<br/>One Overlook Point, Suite 290,<br/>Lincolnshire, IL 60069<br/>Phone: 847-634-5550<br/>Fax: 847-634-0095<br/>Email: pmanhard@manhard.com</p>           | <p><u>Alternate</u><br/><b>Bill Hupperich</b><br/>Manhard Consulting, Ltd.<br/>One Overlook Point, Suite 290,<br/>Lincolnshire, IL 60069<br/>Phone: 847-634-5550<br/>Fax: 847-634-0095<br/>Email: whupperich@manhard.com</p> |

# Technical Advisory Committee

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|---|--|---|---|
| <p><b>Don Dressel (Chairman)</b><br/> <i>(Term Expires May 2024)</i><br/>                 Christopher Burke Engineering<br/>                 9575 W. Higgins Rd., Ste. 600<br/>                 Rosemont, IL 60018-4920<br/>                 Phone: 847-823-0500<br/>                 Fax: 847-823-0520<br/>                 Email: Ddressel@cbbel.com</p>  | <p><u>Alternates</u><br/> <b>Kay Whitlock</b><br/>                 Christopher Burke Engineering<br/>                 9575 W. Higgins Rd., Ste. 600<br/>                 Rosemont, IL 60018-4920<br/>                 Phone: 847-823-0500<br/>                 Fax: 847-823-0520<br/>                 Email: kwhitlock@cbbel.com</p> <p><b>Scott Griffith</b><br/>                 Christopher Burke Engineering<br/>                 9575 W. Higgins Rd., Ste. 600<br/>                 Rosemont, IL 60018-4920<br/>                 Phone: 847-823-0500<br/>                 Fax: 847-823-0520<br/>                 Email: sgriffith@cbbel.com</p> | <p><b>Ramesh Kanapareddy</b><br/> <i>(Term Expires May 2024)</i><br/>                 City of Highland Park<br/>                 1150 Half Day Rd.<br/>                 Highland Park, IL 60035<br/>                 Phone: 847-432-9907<br/>                 Fax: 847-432-0807<br/>                 Email: rkanapareddy@cityhpil.com</p>                           | <p><u>Alternate</u><br/> <b>Manny Gomez</b><br/>                 City of Highland Park<br/>                 1150 Half Day Rd.<br/>                 Highland Park, IL 60035<br/>                 Phone: 847-432-1186<br/>                 Fax: 847-432-0807<br/>                 Email: egomez@cityhpil.com</p>  |
| <p><b>Eric Steffen</b><br/> <i>(Term Expires May 2024)</i><br/>                 Operations Manager<br/>                 Lake County Planning<br/>                 Building &amp; Development<br/>                 500 W. Winchester Rd.<br/>                 Libertyville, IL 60048<br/>                 Phone: 847-377-2109<br/>                 Fax: 847-984-5853<br/>                 Email: esteffen@lakecountyil.gov</p> | <p><u>Alternates</u><br/> <b>Joel Krause</b><br/>                 Senior Engineer<br/>                 Lake County Planning, Building &amp; Development<br/>                 500 W. Winchester Rd.<br/>                 Libertyville, IL 60048<br/>                 Phone: 847-377-2087<br/>                 Fax: 847-984-5853<br/>                 Email: jkrause@lakecountyil.gov</p>  | <p><b>Heather Galan</b><br/> <i>(Term Expires May 2024)</i><br/>                 Village Engineer<br/>                 Village of Gurnee<br/>                 325 N. O'Plaine Rd.<br/>                 Gurnee, IL 60031<br/>                 Phone: 847-599-7582<br/>                 Fax: 847-623-9475<br/>                 Email: hgalan@village.gurnee.il.us</p> | <p><u>Alternates</u><br/> <b>Nicholas Leach</b><br/>                 Village of Gurnee<br/>                 325 N. O'Plaine Rd.<br/>                 Gurnee, IL 60031<br/>                 Phone: 847-599-7586<br/>                 Fax: 847-623-9475<br/>                 Email: nleach@village.gurnee.il.us</p> <p><b>Dave Ziegler</b><br/>                 Director of Community Development<br/>                 Village of Gurnee<br/>                 325 N. O'Plaine Rd.<br/>                 Gurnee, IL 60031<br/>                 Phone: 847-599-7550<br/>                 Fax: 847-623-9475<br/>                 Email: davidz@village.gurnee.il.us</p> |
| <p><b>Steve Zimmerman</b><br/> <i>(Term Expires 2024)</i><br/>                 Principal Ecologist<br/>                 Resource Environmental Solutions, LLC<br/>                 120 West Main St.<br/>                 West Dundee, IL 60118<br/>                 Phone: 847-844-9385<br/>                 Email: szimmerman@res.us</p>  | <p><u>Alternates</u><br/> <b>Caitlin Burke</b><br/>                 Ecologist II<br/>                 Resource Environmental Solutions, LLC<br/>                 120 West Main St.<br/>                 West Dundee, IL 60118<br/>                 Phone: 847-772-0161<br/>                 Email: cburke@res.us</p>   |   |   |

**TECHNICAL ADVISORY COMMITTEE**  
**MEETING MINUTES**  
January 20, 2022  
**Lake County Stormwater Management Commission**  
**MEETING HELD VIRTUALLY [ZOOM]**

**1.0 CALL TO ORDER 9:05 AM**

| <b>TAC Members &amp; Alternates</b> | <b>Staff Present</b> | <b>General Public</b> |
|-------------------------------------|----------------------|-----------------------|
| Kurt Baumann                        | Glenn Westman        | Jodi McCarthy         |
| Mei Zhu                             | Kelcey Traynoff      | Marie Hansen          |
| Nick Leach                          | Juli Crane           | Brian Joyce           |
| Joel Krause                         | Brian Frank          | Jacob Wellbank        |
| Scott Griffith                      | Tim Cook             | Pati Vitt             |
| Steve Zimmerman                     | Mea Blauer           | Heather Lis           |
| Ramesh Kanapareddy                  | Phil Ruiz            | Ron Milanesio         |
|                                     | Mia Gerace           |                       |

**2.0 ADDITIONS TO THE AGENDA – None**

**3.0 PUBLIC COMMENT – None**

**4.0 STAFF REPORT –** Kelcey Traynoff mentioned that TAC member, Jim Anderson, would be retiring on 01/21. Mr. Anderson was not in attendance, but he was wished well for his upcoming retirement. Ms. Traynoff also mentioned that Amendment #2 – Appendix A: Regulatory Floodway Definition would be brought to the Commission, along with additional WDO amendments and FEMA map updates, for approval and included in the next round of WDO updates and revisions (anticipated to be late 2022 or early 2023).

**5.0 APPROVAL OF THE MINUTES**

5.1 Mr. Kurt Baumann moved to approve the May 20, 2021 TAC minutes. Motion was seconded by Ms. Mei Zhu. Vote: Approved 7-0-0 (unanimous voice vote)

**6.0 OLD BUSINESS –** Mr. Scott Griffith asked if there was any movement forward on Countywide Permit #1. Ms. Traynoff explained that all Countywide Permits (#1, #2, and #3) were approved by SMC in September 2021.

**7.0 NEW BUSINESS**

7.1 Kelcey Traynoff began the discussion on revisions made to the Certified Wetland Specialist (CWS), Enforcement Officer (EO), and Designated Erosion Control Inspector (DECI) exams. Ms. Traynoff explained that the revisions made to the EO and DECI exams were done to match the updated WDO sections, provide consistency between the WDO and the exams, and to clarify questions. She also explained that there were no changes made to the CWS exam questions, only the answer key was revised to match the new WDO sections and references. Approval was requested for these proposed revisions. Mr. Kurt Baumann moved to approve this item, seconded by Mr. Joel Krause. Vote: Approved 6-0-0 (unanimous roll call vote)

**8.0 ADJOURNMENT**

Motion to end discussion and adjourn by Mr. Kurt Baumann, seconded by Mr. Nick Leach. Meeting adjourned at 9:28 AM. Vote: Approved 6-0-0 (unanimous voice).



DRAFT

STORMWATER MANAGEMENT COMMISSION

REGULATORY GUIDANCE MEMORANDUM

\_\_\_\_\_, 2022

To: Lake County Certified Wetland Specialists (CWS) and Other Interested Parties  
From: Brian Frank, Chief Engineer, Lake County Stormwater Management Commission (SMC)  
Subject: REVISED SMC Guidance for Agricultural Land Wetland Determinations  
("Farmed Wetlands") in Lake County, Illinois

**This guidance memorandum supersedes all previous guidance memoranda issued by the SMC for agricultural land wetland determinations in Lake County, Illinois.**

For wetland permitting on development sites in Lake County, Illinois, (and in collar communities in adjacent counties under SMC's permitting authority) that contain agricultural land<sup>1</sup>, an agricultural land wetland determination shall be performed by or under the supervision of a Lake County Certified Wetland Specialist (CWS) to determine the presence and extent of *farmed wetlands*<sup>2</sup>. The determination shall be performed within three (3) years of the initial Watershed Development Permit (WDP) application date, in accordance with the wetland delineation provisions of the Lake County Watershed Development Ordinance (WDO, as amended). The agricultural land wetland determination shall be performed following standard USDA-Natural Resources Conservation Service (NRCS) procedures and the guidance provided below.

**A. STEP 1 – OFFICE REVIEW OF AERIAL IMAGERY AND REFERENCE MAPS**

The NRCS procedures require a review of various inventories to identify wetland signatures<sup>3</sup> on a development site, including but not limited to the U.S. Fish & Wildlife Service's National Wetland Inventory (NWI) maps and a *minimum* of five (5) years of aerial imagery for designated years with approximate "normal precipitation" during the early growing season period (April-June), based on long-term precipitation averages.

**If wetland signatures are identified in 3 or more of the 5 normal precipitation years of aerial imagery reviewed (>50%), the area is a potential farmed wetland, subject to field confirmation (see Step 2).** Designation of an area as a wetland/farmed wetland on the NWI map or the Lake County Wetland Inventory (LCWI) map also constitutes one (1) year of wetland signature. The online NWI maps can be viewed at <https://www.fws.gov/wetlands/data/Mapper.html>, and the online LCWI maps can be viewed at <https://maps.lakecountyiil.gov/maponline/>. Note that the size of an area is not a part of the wetland criteria—the field investigation (Step 2) may revise the determination to add small farmed wetland areas missed in the office review step.

Use the Lake County on-line maps (<https://maps.lakecountyiil.gov/maponline/>) to determine which climate station location listed on **Table 1** is closest to your development site, then follow the guidance for the designated years of FSA aerial slide imagery (or SMC-designated alternate aerial imagery) to be reviewed. Digital copies of FSA aerial slide imagery can be obtained from the McHenry-Lake Soil & Water Conservation District at <https://www.mchenryswcd.org/> (click on: Forms & Publications>Farm Service Agency (FSA) Farmed Wetland Compliance Request Form).

- <sup>1</sup> For the purposes of this guidance, *Agricultural Land* includes cropland, pasture land, orchards, vineyards, and nurseries, confined feeding operations and equestrian facilities (Lake County Planning, Building & Development, Land Use Designations, online mapping most recent version).
- <sup>2</sup> Per WDO Appendix A: *Farmed Wetlands* are wetlands that are farmed currently, or have been farmed within five (5) years previous to the permit application date, as defined in 7 CFR Part 12 (61 FR 47025).
- <sup>3</sup> *Wetland Signatures* are indications left in the field, recorded by photograph, of ponding, flooding or impacts of saturation for sufficient duration that meets wetland hydrology and possibly wetland vegetation criteria (Wetland Mapping Conventions NRCS Illinois 1998).

**Table 1. Climate Station Locations and Associated Aerial Imagery for Farmed Wetland Determinations.**

|  |                     | CLIMATE STATION LOCATION           |                                    |                                    |
|--|---------------------|------------------------------------|------------------------------------|------------------------------------|
|  |                     | ANTIOCH                            | BARRINGTON                         | HIGHLAND PARK                      |
| <b>Climate Station:</b>  |                     | IL0203                             | IL0442                             | IL1497                             |
| <b>Location:</b>   |                     | Lat: 42.480496<br>Long. -88.100366 | Lat: 42.113885<br>Long. -88.163229 | Lat: 42.151981<br>Long. -87.787139 |
| <b>Aerials:*</b>   |                     |                                    |                                    |                                    |
| <b>Normal, Primary</b>   | <b>Google Earth</b> | 2016 (flight date 6-26-16)         | 2016 (flight date 6-26-16)         | 2016 (flight date 6-26-16)         |
|  | <b>FSA</b>          | 2012, 2007, 2006 & 2003            | 2008, 2006, 2004 & 2003            | 2012, 2004, 2003 & 2002            |
| <b>Normal, Secondary</b>   | <b>FSA</b>          | 2002, then 2001                    | 2002, then 2001                    | 2001, then 1997                    |
| <b>Wet, Primary</b>  | <b>FSA</b>          | 2014                               | 2014                               | 2014                               |
| <b>Wet, Secondary</b>  | <b>FSA</b>          | 2011                               | 2011                               | 2011                               |
| * Recommended Process: Review the “Wet” indicator imagery to help identify wetland signatures. Then review aerial imagery for the indicated five years of approximate normal precipitation (minimum). If any primary year FSA imagery is not available or has poor resolution, defer to the secondary years, in order. |                     |                                    |                                    |                                    |

**B. STEP 2 – FIELD INVESTIGATION**

Locate a minimum of one (1) field data point in each potential farmed wetland area within the development site limits to determine if hydric soil is present (use the current version of *Field Indicators of Hydric Soils in the United States*, NRCS for this determination). The field data point(s) are to be "representative" of the potential farmed wetland area, meaning the points should be located clearly within the boundary of the mapped wetland signature, not along the upper edge of the signature. Record data on the standard *Wetland Determination Data Form* included in the current version of the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (or *Northcentral-Northeast Region* manual, as applicable). **If any hydric soil indicator(s) occur in the representative data point, the area is confirmed as a farmed wetland.** As previously noted, the field investigation may result in mapping additional small farmed wetlands missed by the office review (Step 1).

**C. STEP 3 – REPORTING**

A *Farmed Wetland Determination Report* shall be prepared that includes the following information, at a minimum:

- i. A location map with the development site boundaries outlined, scaled to show nearby major crossroads;
- ii. A summary table of wetland signature(s) identified, based on review of the aerial imagery, NWI map, and LCWI map (see example Summary Table on page 3);
- iii. A color copy of each year of aerial imagery reviewed with the approximate boundaries of that year’s wetland signature(s) delineated;
- iv. A recent aerial photograph exhibit (scale: 1”=400’ or larger) showing the approximate boundary and estimated acreage of each confirmed farmed wetland, along with locations of field data points. Note: the approximate boundary of each farmed wetland should be the average of all its wetland signature polygons. If farmed wetland boundaries extend off-site, show the approximate boundaries within 100’ of the development site limits;
- v. Copies of field data point forms;
- vi. Copies of reference maps reviewed: NWI, LCWI, NRCS Soil Survey, and Topographic Wetness Index (GIS layer available on Lake County online maps under Drainage menu at <https://maps.lakecountyil.gov/maponline/>) with development site boundaries outlined; and
- vii. An Antecedent Precipitation Tool (APT) graphic printout (or table) showing 30-year-average conditions of site for field investigation date(s) – APT can be downloaded at <https://github.com/jDeters-USACE/Antecedent-Precipitation-Tool/releases/tag/v1.0.19>.

If you have any questions concerning this guidance, please contact SMC’s wetland specialists:

Glenn Westman: (847) 377-7718 [gwestman@lakecountyil.gov](mailto:gwestman@lakecountyil.gov)

Juli Crane: (847) 377-7708 [jcrane@lakecountyil.gov](mailto:jcrane@lakecountyil.gov).







## STORMWATER MANAGEMENT COMMISSION

### MEMORANDUM

March 20, 2012

To: Lake County Certified Wetland Specialists (CWS) and Other Interested Parties  
From: Kurt Woolford, Chief Engineer, Lake County Stormwater Management Commission (SMC)  
Subject: SMC Guidance for Agricultural Land Wetland Determinations ("Farmed Wetlands") in Lake County, Illinois

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This guidance memorandum supersedes all previous guidance memoranda issued by SMC for agricultural land wetland determinations in Lake County, Illinois.

For wetland permitting on development sites that contain agricultural land<sup>1</sup> and are under SMC's jurisdiction, we require an agricultural land wetland determination be performed by or under the supervision of a Lake County Certified Wetland Specialist (CWS) to determine the presence and extent of "farmed wetlands" within 3 years of the initial Watershed Development Permit application date, in accordance with the wetland delineation provisions of the Lake County Watershed Development Ordinance (WDO). The agricultural land wetland determination shall be performed following the current NRCS procedures (see enclosed "Wetland Mapping Conventions NRCS Illinois 1998") and the guidance below.

#### A. **STEP 1 - OFFICE REVIEW WETLAND INVENTORY**

The NRCS 1998 wetland mapping conventions require a review of various reference maps and aerial imagery to identify "wetland signatures" on a development site, including the U. S. Fish & Wildlife Service' National Wetland Inventory (NWI) map(s) and 5 years of USDA-Farm Services Agency (FSA) aerial slides for designated years of approximate normal precipitation, based on local WETS tables developed by the NRCS. **If wetland signatures are identified in 3 or more of the 5 normal precipitation years reviewed (>50%), the area is considered to be a potential farmed wetland, subject to field confirmation (see Step 2 below).** Note that designation of an area as wetland on the NWI map also constitutes 1 year of wetland signature. Digital copies of FSA aerial slides can be obtained from the McHenry-Lake Soil & Water Conservation District: [click here for order form](#). Use the Lake County on-line GIS maps to determine which of the following National Weather Service (NWS) precipitation recording stations is closest to your development site: Antioch, Barrington, or Waukegan ([click here for on-line maps](#)). Then proceed to i), ii), or iii) below.

- i) **ANTIOCH STATION (Antioch Wastewater Treatment Plant, 796 Holbeck Dr., Antioch, 60002):** Review the following 5 "Primary Years" of slides: 2007, 2006, 2004, 2003, & 2002. If Primary Years slides are not available or have poor resolution, defer to the following 2 "Secondary Years" of slides, in order: 2001, then 1998. Recommended "Wet" indicator slide years to help identify potential wetland signatures are, in order: 2000, then 1999.

<sup>1</sup> For the purposes of this guidance, "agricultural land" refers to cultivated cropland that has been farmed at least 1 year in the last 5 years.

- ii) BARRINGTON STATION (Crabtree Nature Center, Rt. 3 Stover Rd., Barrington, 60010): Review the following 5 "Primary Years" of slides: 2006, 2004, 2003, 2002 & 2001. If Primary Years slides are not available or have poor resolution, defer to the following 2 "Secondary Years" of slides, in order: 1997, then 1995. Recommended "Wet" indicator slide years to help identify potential wetland signatures are, in order: 2011, then 2010.
- iii) WAUKEGAN STATION (Radio Station WKRS, 3250 Belvidere Rd. Waukegan, 60085): Review the following 5 "Primary Years" of slides: 2001, 1997, 1993, 1991 & 1990. If Primary Years slides are not available or have poor resolution, defer to the following 2 Secondary Years of slides, in order: 1987, then 1983. Recommended "Wet" indicator slide years to identify potential wetland signatures, in order: 2000, then 1996.

**B. STEP 2 – FIELD INVESTIGATION**

A minimum of one (1) field data point shall be located in each potential farmed wetland area within the development site limits, as identified in A. above, in order to determine if hydric soil is present (use the current version of *Field Indicators of Hydric Soils in the United States*, NRCS for this determination: [click here](#)). The field data point(s) are to be "representative" of the potential farmed wetland area, meaning the points should be located clearly within the boundary of the mapped wetland signature, not along the upper edge of the signature. Data should be recorded on the standard *Wetland Determination Data Form* included in the current version of the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* - [click here](#). **If any hydric soil indicator(s) are identified, the area is confirmed to be a farmed wetland.**

**C. STEP 3 – REPORTING**

A *Farmed Wetland Determination Report* shall be prepared, which should include at a minimum:

- i) site location map;
- j) list of reference maps and years of FSA aerial slides reviewed;
- k) summary table of wetland signature(s) identified in each normal and precipitation year reviewed, based on the NWI map and FSA aerial slides reviewed (see A. above);
- l) color copy of each FSA aerial slide year reviewed with approximate boundary of wetland signature(s) delineated on each slide year;
- m) aerial photograph exhibit (scale: 1"=400' or larger) showing the approximate boundary and acreage of each confirmed farmed wetland, along with locations of field data points - the approximate boundary of each farmed wetland should generally be the average of all its' wetland signature polygons (if farmed wetland boundaries extend off-site, show the approximate boundaries within 100' of the site limits);
- n) copies of field data point forms; and,
- o) JPEG copies of all FSA slide years reviewed (can be provided on a CD included with report or via e-mail to SMC wetland specialist (see below).

If you have any questions concerning this guidance, please contact SMC's wetland specialists:

Glenn Westman: (847)377-7718, [gwestman@lakecountyil.gov](mailto:gwestman@lakecountyil.gov), or  
Juli Crane: (847)377-7708, [jcrane@lakecountyil.gov](mailto:jcrane@lakecountyil.gov).

Enclosure: *NRCS Wetland Mapping Conventions 1998*

## WETLAND MAPPING CONVENTIONS NRCS ILLINOIS 1998

### INTRODUCTION

Mapping conventions are a set of accepted practices or procedures used to guide the wetland delineator in making off site wetland inventories, and on site determinations. The conventions developed for Illinois were done so with guidance from the NRCS Technical Service Center and revised according to the Midwest Regional Wetland Team recommendations. They were discussed and formulated with input from local, state and federal agency personnel.

The off site techniques rely on the interpretation of aerial photography and other inventories such as the County Soil Survey and the National Wetland Inventory (NWI). This requires training in properly identifying wetland signatures for the different types of aerial photography available. Off site techniques shall only be used by personnel trained in both wetland delineation and in identifying wetland signatures in the area.

Before a certified determination is made potential sites identified in the off-site phase will be field verified by making a field investigation of the site. The field investigation shall include:

1. For identified potential sites in intensively used and managed wetland areas (potential FW and FWP), as per definitions in the National Food Security Act Manual (NFSAM), verify that the site is wetland by documenting the presence of hydric soils, and any hydrophytic plants or hydrology indicators observed. Adjust site locations and wetland boundaries based upon observations during the field visit.
2. For identified potential sites in naturally vegetated wetland areas, document as per Corps of Engineer's 87 Manual requirements and set boundaries accordingly.
3. Any delineations omitted during the off-site phase may be added; any sites incorrectly delineated should be omitted.

### GENERAL INFORMATION - ALL CONVENTIONS

Size of an area is not part of the wetland criteria. However, only areas large enough to detect and delineate on a map when interpreting aerial photography will be mapped as wetlands using this procedure. The on-site investigation may revise the determination to add small wetlands missed in the off-site inventory.

**Mapping Tools** - The following materials will be used in this procedure:

**1) County Soil Survey with approved County Hydric Soil Legend**

**2) Base Map** - Usually a NHAPP black and white aerial photo, 8 inch to mile scale, 24 X 24 inch sheet.

**3) National Wetland Inventory (NWI)** - The NWI provides an excellent overview of the extent and type of wetlands in the area. This inventory was done in the early 1980's (see photo date on each map) using infrared photography. In most cases, it has been very consistent with the Farm Bill wetland inventories. However, it does not delineate prior converted cropland, it did not use soils information, and in some cases it did not inventory wetlands in cropland due to the policy they were working under.

4) **Climatic Data** - Precipitation records from the area being mapped.

5) **Long Duration Flooding Data** - Elevations of 15 day flooding along major rivers were developed by the Illinois State Water Survey from stream gauge data.

6) **FSA Slides** - Aerial compliance (crop history) color slides (low altitude) used by FSA. At least five years of FSA slides must be used in this procedure. When making an individual determination, it is recommended that all available slides be viewed for general reference, but slides used for making the determination should be from years that are determined to have normal periods of precipitation before the slides were taken (see below). When inventorying a large area (an entire county or large part of a county), select five years, from those with slides available, with the closest to normal precipitation in the three months before the slides were taken. Use slides from these 5 years to complete the inventory.

#### Selection of slides with "normal precipitation"

Using records from weather reporting stations nearest the area to be mapped, assemble the long term precipitation averages and precipitation averages for each slide year for April, May, June, and for July alone. The slides are usually taken in July. Ponding in May and June can be observed on the slides taken in July, as areas where the crop was not planted because it was too wet, or was killed by the ponded water. Select the five years that are closest to the long term precipitation averages. Further information and procedures for determining "normal years" can be found in Section I of the Field Office Technical Guide under Climate Data. Balance, as well as possible, the number of wet and dry years. Select as many years as possible in the 1980 - 1985 range. This will help to establish conditions present on December 23, 1985 which is important to know when making the determination. If slides for years 1983, 1984 and 1985 are not selected because they do not represent years of "normal" precipitation, then review them before making the final determination to establish the conditions present on December 23, 1985.

#### Identification of wetland signatures

A wetland signature is the indication left in a field, recorded by a photograph, of ponding, flooding or impacts of saturation for sufficient duration that meets wetland hydrology and possibly wetland vegetation criteria. Being identified as a wetland on the NWI is also considered a wetland signature. Wetland signatures in Illinois are:

- NWI - Area is labeled as a wetland on the National Wetland Inventory
- Hydrophytic vegetation (observed as different color than crop or forage)
- Surface water
- Drowned-out crops or crop damage due to wetness.
- Differences in vegetation (within a field) due to different planting dates.
- Isolated areas that are not farmed with rest of the field (includes areas not planted due to wetness at time of planting).
- Inclusion of wet areas as set-aside if other signs of wetness are evident.
- Patches of greener vegetation (crop) during years of below normal precipitation
- Crop stress can be used only if the District Conservationist believes that it is a valid indicator in that area. Crop stress is seen on the FSA slides as areas of yellow crop, or sparse canopy coverage of crop, that has been in stress due to wetness.

The wetland delineator must be trained to interpret the above signatures in each region being mapped. This training should include field verification of the signatures observed.

## WETLAND MAPPING CONVENTIONS

Three mapping conventions will be used in Illinois. The first convention will be used in the prairie pothole region of the state (see attached map). The second one will be used in the remainder of the state. The third convention will be used anywhere ponding or flooding is encountered. Ponding can occur anywhere while flooding is restricted primarily along the lower reaches of larger rivers.

The three mapping conventions are:

1. Prairie potholes and saturated soils in the Wisconsin Glaciation Region. It does not include alluvial soils. In cropland and non-native pastureland/hayland, farmed wetland and farmed wetland pasture areas must have 7 day ponding or 14 day saturation, during the growing season for greater than a 50 percent chance of occurrence each year (5 out of 10 years). In naturally vegetated wetlands soil saturation must be present at least 5% of the growing season to meet wetland hydrology criteria.
2. Saturated soils outside the Wisconsin Glaciation Region. Includes saturated alluvial soils state wide. In cropland, farmed wetland areas must have 15 days of ponding during the growing season for greater than a 50 percent chance of occurrence each year (5 out of 10 years). In non-native pastureland/hayland farmed wetland pasture areas must be have 7 day ponding or 14 day saturation during the growing season. In naturally vegetated wetlands soil saturation must be present at least 5% of the growing season to meet wetland hydrology criteria.
3. Flooded or ponded soils. These soils must be inundated for the required periods (below), during the growing season for greater than a 50 percent chance of occurrence each year (5 out of 10 years):
  - a) Cropland manipulated and farmed before December 23, 1985 that floods or ponds for 15 consecutive days during the growing season.
  - b) Pasture/hayland manipulated and farmed before December 23, 1985 that floods or ponds for 7 days during the growing season.
  - c) In naturally vegetated wetlands inundation and/or soil saturation must be present at least 5% of the growing season to meet wetland hydrology criteria.

## PRAIRIE POTHoles AND SATURATED SOILS IN THE WISCONSIN GLACIATION REGION

Wetlands will be mapped using the following procedure as the basis for making inventories of wetlands in prairie pothole soils. These soils include all saturated soils in the Wisconsin Glaciation Region except for alluvial soils along streams and rivers.

**Step 1.** --Review base map. Note location of areas that appear to be wet (usually areas with dark soil tones).

**Step 2.** - Review NWI. Note location of any wetlands.

**Step 3.** - Review Soil Survey. Note location of hydric soil map units, and location of map units with hydric inclusions.

**Step 4.** - Review FSA slides for all years, and at least 5 years of slides that are determined to represent normal periods of precipitation (see General Information, #6 FSA Slides above). Note any areas converted from other land uses to cropland. Note location and year of wetland signatures from the slides.

**Step 5.** - Document the various wetlands, etc., on the inventory base map according to the following rules according to apparent land use:

**Cropland:**

- In every cropland field, place a "PC"\* if the soils in the field are all hydric.
- Place a "NW" in each cropland field, if all the soils in the field are non-hydric.
- Place a NW/PC\* in each cropland field, if there are both non-hydric and hydric soils, or if there are soils with hydric inclusions.
- For areas of the field that have hydric soils or soil with possible hydric inclusions, review the FSA slides and NWI. Delineate and label areas "FW" that have wetland signatures greater than 50% of the time (3 or more years out of 5; or 2 out of 5 years if the area also is shown on the NWI as a wetland) for years that have been determined to represent normal periods of precipitation. For the extent of the area to be delineated, use the wetland signature boundary during a year of normal precipitation and conditions.
- If the area meets FW criteria, record the years wetland signatures were observed beside the FW (e.g.: FW '86'88'91).

\* NOTE: For this inventory procedure, the assumption is made that all hydric prairie soils in Illinois have had some manipulation if they are being cropped. If it is discovered that a cropland field with prairie soils has not had any subsurface or surface drainage, then the "PC" or "FW" will be changed to "W" for the hydric soils and cropping can continue as weather permits.

**Areas of Woodland or Herbaceous Vegetation (not pastured or hayed):**

- Areas too small to delineate within cropland, including single trees and single tree wide fence rows that are not also drainage ways, are considered part of the cropland field and are considered whatever the surrounding field is (e.g. PC, NW, FW).
- If on NWI and a hydric soil, outline the area and label with "W"
- If not a hydric soil or soil with hydric inclusions, and not on the NWI, outline the area and label with "NW".
- All other cases are to be outlined and labeled "NI" for "Not Inventoried". Areas of NW within areas of NI are only delineated out of the NI area only if apparent landmarks allow for accurate separation of the two areas.

Note: On any wetland determination or copy of a wetland inventory given out to a client, an explanation of "NI" must be included. This note should state that NI areas may or may not contain wetlands. If any manipulation is planned for this area, a determination should first be requested for Farm Bill or section 404 of the Clean Water Act purposes.

**Pasture:** (<25% canopy coverage of woody species, and not cropped from 1980 - 1985)

- Areas with all hydric soil, outline and label "FWP"
- Areas with soils with hydric inclusions, and on the NWI, outline and label "FWP"
- Areas with only non-hydric soils, not on the NWI, outline and label "NW"
- All other cases, outline and label the area "NI".

**Ponds:**

- Outline all ponds. Large lakes do not have to be outlined if it is clear where the boundaries are.
- If the pond is surrounded by predominantly hydric soils or soils with hydric inclusions, label "W".
- If the pond is surrounded by predominantly non-hydric soils, label "AW".

**Streams:**

- All ditches, creeks, streams, and rivers, should be delineated as NI on a wetland inventory. The upstream extent to which they are delineated generally should be no farther than that which is labeled as a riparian area on the NWI. For a determination, the delineation of these areas should be the same unless there is a proposed manipulation that would affect an area labeled NI, in which case the determination must be coordinated with the Corps of Engineers for a determination of "Waters of the U.S."

**Converted Wetland \*:**

The 1985 FSA slide, or other 1985 aerial photography, should always be compared with the latest aerial photography available. Note all wetlands, farmed wetlands, and farmed wetland pastures in 1985 that have been manipulated and converted to cropland. Natural wetlands cropped under natural conditions (e.g., during a drought) is not a converted wetland for Farm Bill purposes if woody vegetation was not cleared. Otherwise, use the following procedure.

- Determine the part or parts of the area made croppable that was a wetland, farmed wetland or farmed wetland pasture in 1985 using the above convention.
- From the FSA slides, or other aerial photography, determine the year in which the area was manipulated (cleared, drained, levied, etc.) and made croppable.
- Outline and label the area "CW" if the conversion occurred in 1990 or before (converted on the 1990 FSA slide). Label the area "CW+year" (e.g. CW+91) for the year in which the conversion occurred after 1990.
- If an area has been converted (cleared, drained, filled, etc.) since 1985 but not made croppable (this will probably require a field investigation to determine) outline the area and label it WX.

\* NOTE: Converted wetland in this sections refers to its use as a wetland label for Farm Bill purposes, not necessary for Section 404 of the Clean Water Act.

### Orchards, Nurseries, and Vineyards:

Orchards, nurseries, and vineyards are assumed to be in long term rotations with crops in Illinois. Inventory the same way as cropland. However, if a determination is being done as the result of planned manipulation of the area, a site investigation should be done if the area has hydric soils.

**Step 6.** - Additional Documentation - For all areas except "NI" that are labeled add the following check marks to wetland inventories:

- X - if the area is on the NWI.
- ✓ - check if the area has hydric soils.
- X - check with a slash if the area has soils with hydric inclusions.

For inventories completed before 1994, the following documentation can be found:

**Red check** if the area is on the NWI.

**Green check** if the area has hydric soils.

**Green check with a slash** if the area has soils with hydric inclusions.

### SATURATED SOILS OUTSIDE THE WISCONSIN GLACIATION REGION

Areas outside the Wisconsin Glaciation area of Illinois are mapped under this convention. In non-cropped areas the wetland criteria are the same as for the Potholes and Saturated Prairie Soils convention. In cropland the National Food Security Act Manual (NFSAM) requires surface water to be present for 15 consecutive days (except for potholes) during the growing season to be a wetland. In Illinois, the evaluation of the FSA aerial slides for this convention is the same as for the Potholes and Saturated Prairie Soils convention. Training on interpretation of the wetland signatures must be adjusted at the regional level to correspond to wetlands in each region.

Therefore, under this convention follow the same steps and procedures in the Potholes and Saturated Prairie Soils convention above.

### FLOODED OR PONDED SOILS

The hydrology criteria on cropland and non-native pasture/hayland is: 7 days ponding or flooding in non-native pasture/hayland and all potholes; OR 15 days in cropland that is not a pothole.

In naturally vegetated wetlands inundation and/or soil saturation must be present at least 5% of the growing season to meet wetland hydrology criteria.

This convention is to be used in conjunction with the first two conventions.

#### Ponded

The evidence of ponding in cropland is observed as wetland signatures on the FSA aerial slides (see "FSA Slides" on page 2). Therefore, the other conventions cover this condition. In non-cropped areas, the soils and NWI will identify it as a wetland in the other conventions, or require that a site investigation be made.



**Flooded**

Long duration (15 days or more) on cropland during the growing season can result from flooding by a major river. The Illinois State Water Survey developed elevation data from stream gage data, for the 15 day duration flood (50% chance of occurrence) during the growing season along major rivers where the data was available. This has been given to each county for which there was data. The following procedure should be used for where there is data. Otherwise, it is assumed that this type of flooding will be captured under the first two conventions (observed as ponding) or does not exist. Where flooding data exist:

**Step 1)** Delineated on the base map that areas unprotected by levee below the 15 day duration flooding elevation for the nearest river mile to that location.

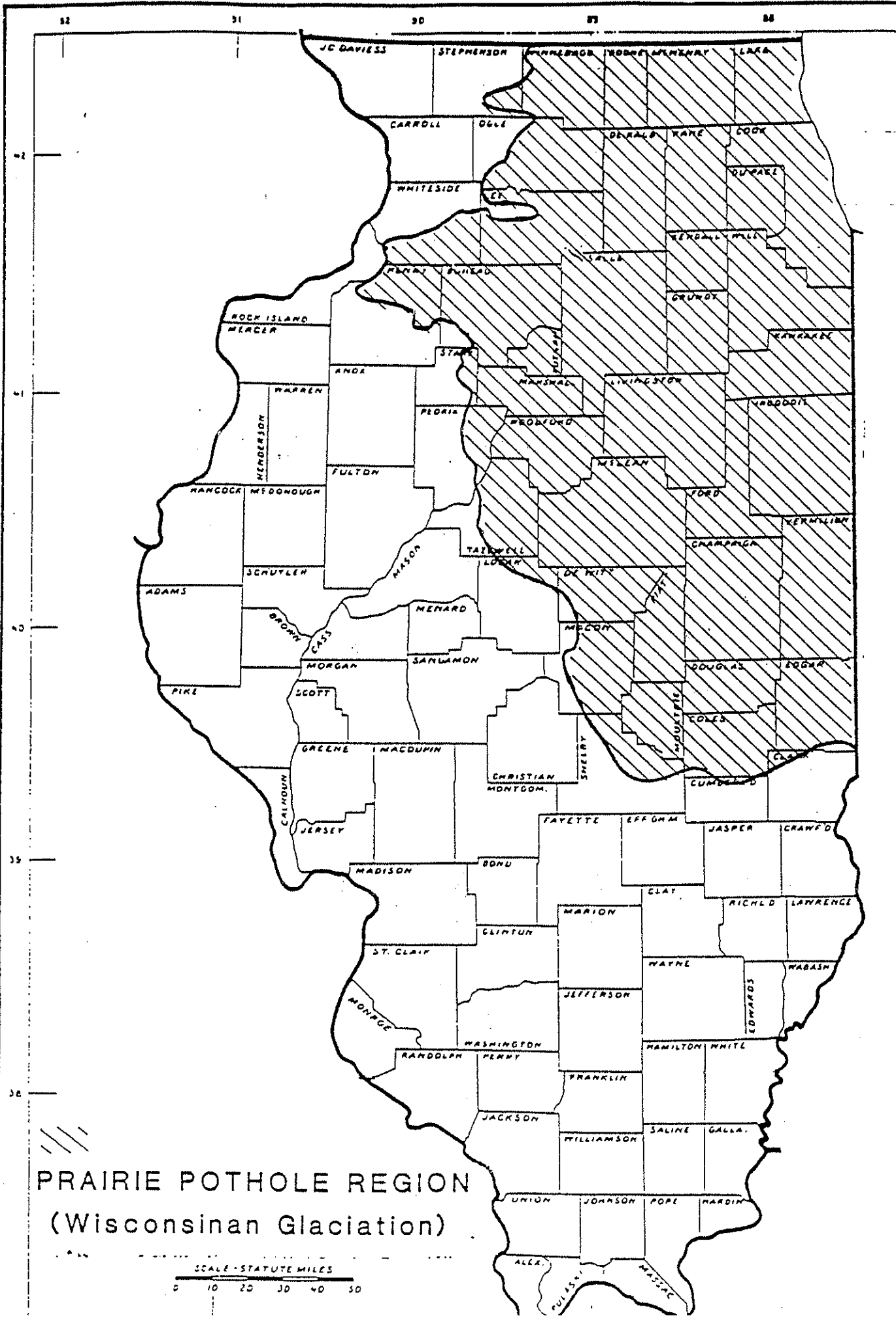
**Step 2)** Label the delineated area above, as "FW" if cropland.

**Step 3)** Label all non-cropped areas delineated above as "W".

**SUMMARY OF DOCUMENTATION**

| <u>Code</u>      | <u>Definition</u>  |
|------------------|--|
| AW               | Artificial Wetland   |
| CW               | Converted Wetland between 1985 - 1990                                      |
| CW+year          | Converted Wetland after 1990   |
| FW               | Farmed Wetland   |
| FWP              | Farmed Wetland Pasture   |
| NI               | Not Inventoried, no determination/delineation has been made for this area. |
| NW               | Non Wetland  |
| PC               | Prior Converted Cropland   |
| W                | Wetland  |
| WX               | Manipulated but cropping is not possible                                   |
| Year by FW       | Year in which a wetland signature was observed on aerial photography       |
| ✓                | Area has a hydric soil map unit  |
| ✗                | Area has a soil map unit with possible hydric inclusion                    |
| X or a Red Check | Area is on the NWI   |

# ILLINOIS



PRAIRIE POTHOLE REGION  
(Wisconsinan Glaciation)

