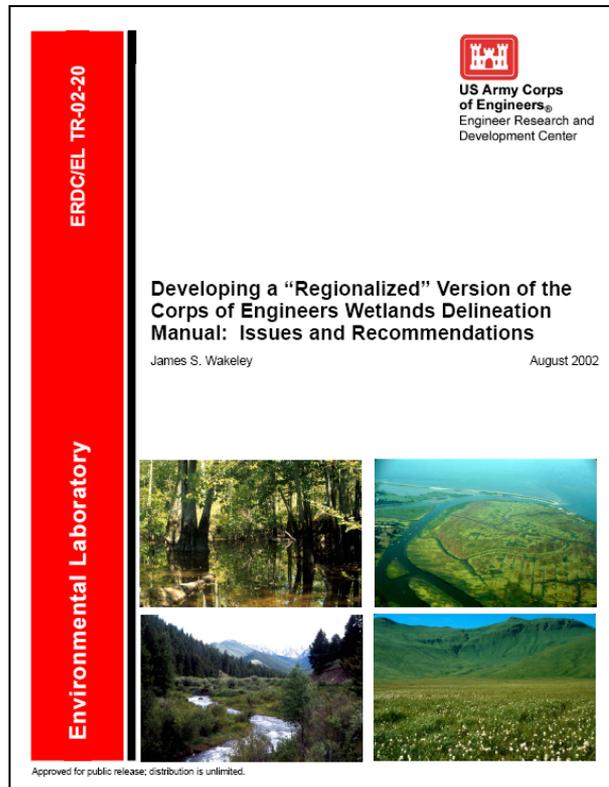




**US Army Corps
of Engineers®**
Mississippi Valley Division
Mississippi River Commission



Bringing Wetland Delineation up to the State-of-the-Science:



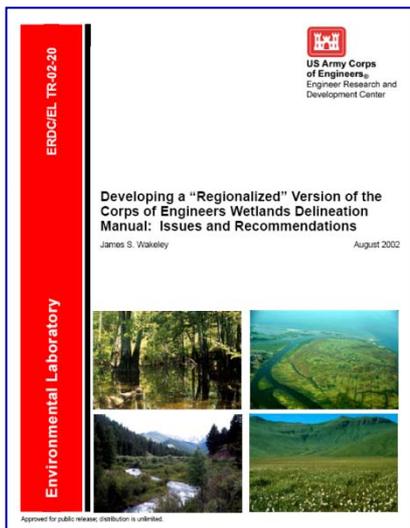
Regional Supplements to the Corps of Engineers 1987 Wetlands Delineation Manual

By Steve Eggers, Senior Ecologist

One Corps Serving the Armed Forces and the Nation

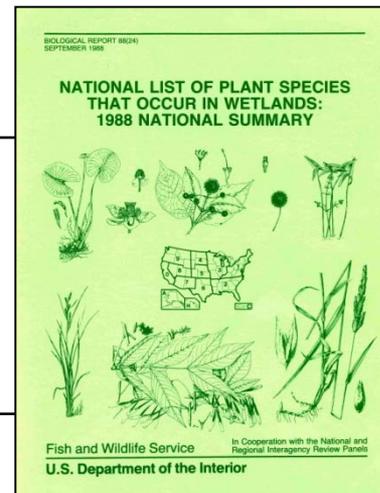


Bringing Wetland Delineation up to the State-of-the-Science....



Regionalize the 1987 Manual

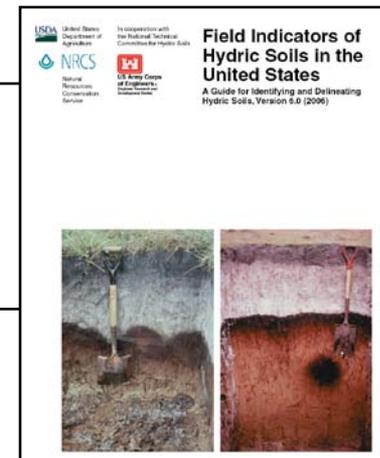
Update the National List of Plant Species that Occur in Wetlands



Adopt 14-Day Hydrology Criterion



Adopt Field Indicators of Hydric Soils Version 6.0



One Corps Serving the Armed Forces and the Nation



Historical Background

✓ Wetland Delineation Manuals

1982-1986 Corps' Waterways Experiment Station drafts

1987 Corps Manual

1988 EPA Manual

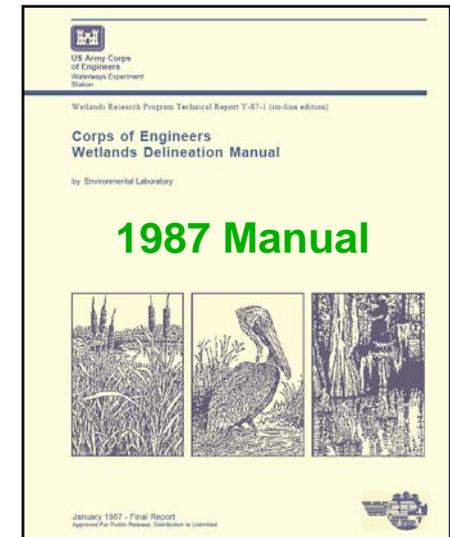
1989 Interagency Manual

1991 Proposed Revisions (Federal Register)

✓ Congress told Corps → use 1987 Manual

1991 and 1992 HQUSACE guidance

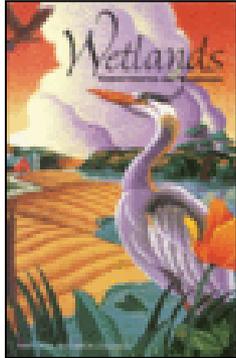
✓ Congress → asks National Academy of Sciences to address delineation issues



Also: National Food Security Act Manual for Farm Bill Purposes



National Academy of Sciences Recommendations



“Wetlands: Characteristics and Boundaries” (1995)

- Confirmed validity of 3-parameter approach
- Recommended regionalization of the 1987 Manual
- Recommended adopting 14-day hydrology criterion



Corps Army Engineer Research and Development Center (ERDC, formerly WES) report proposes rationale/process for “regionalization” (2002)



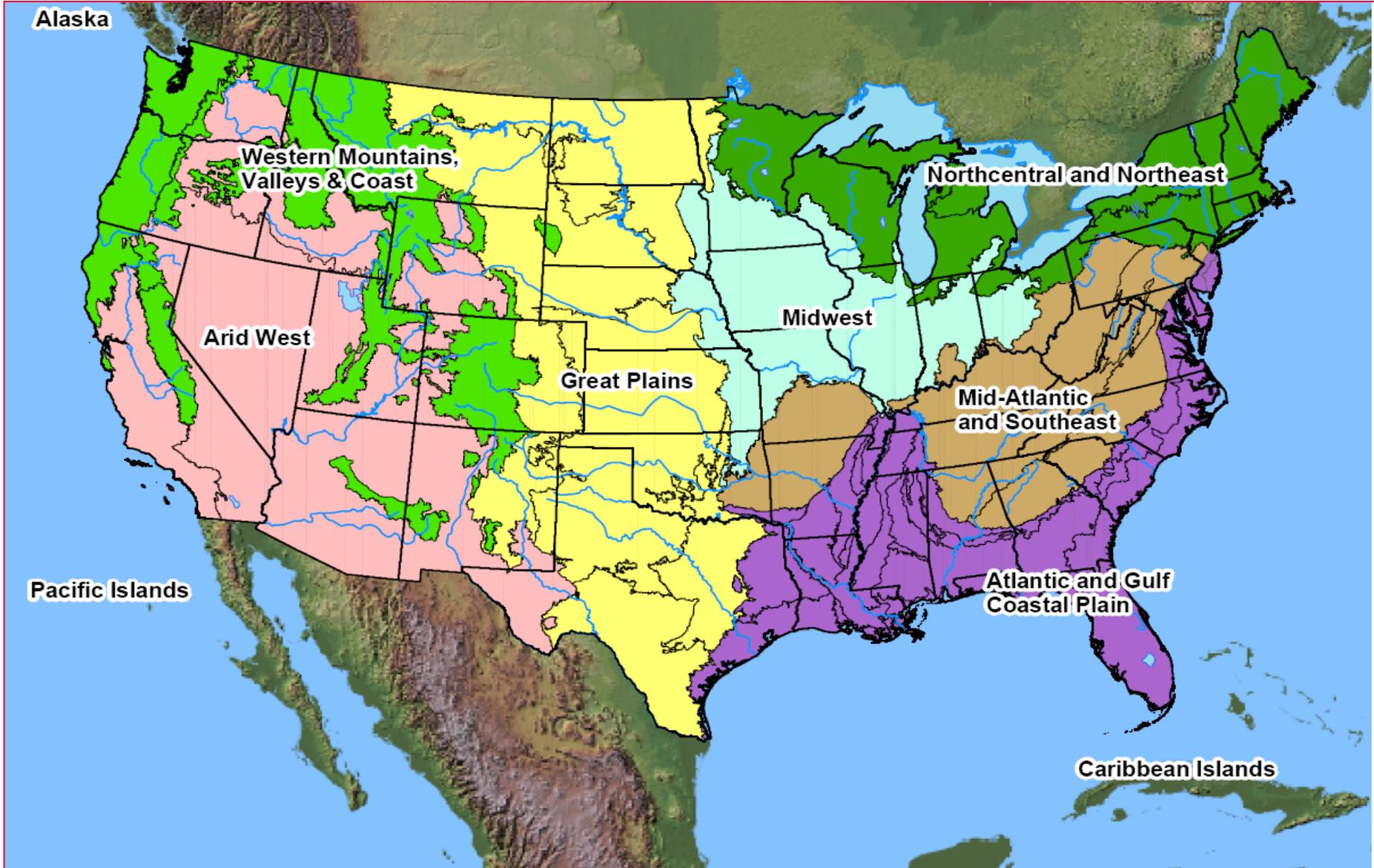
Purpose and Need for Supplements

- ✓ **Bring 1987 Manual up to the state-of-the-science in determining if an area meets technical criteria for wetlands**
- ✓ **Supplement use is mandatory for Corps regulatory program**
- ✓ **States: optional, each state makes decision on what manual is used for state wetland rules and programs**



US Army Corps
of Engineers®
Mississippi Valley Division
Mississippi River Commission

Regional Supplements (10)





US Army Corps
of Engineers®
Mississippi Valley Division
Mississippi River Commission



Land Resource Regions

LAND RESOURCE REGIONS AND MAJOR LAND RESOURCE AREAS FOR THE CONTERMINOUS U.S. - SIDE A



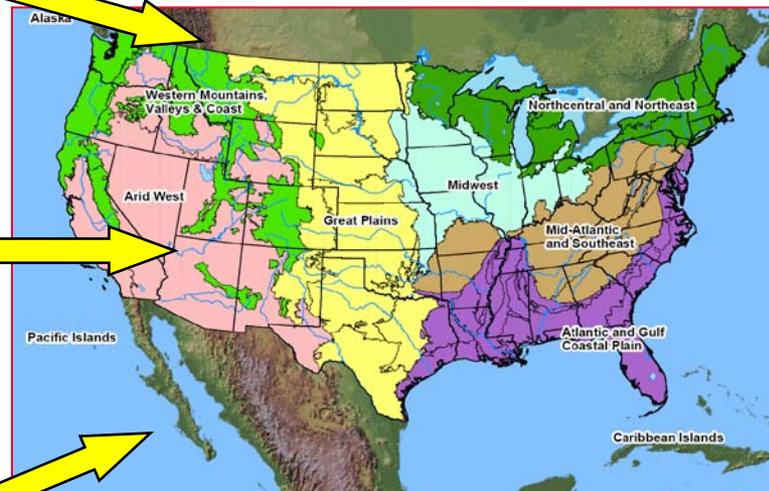


Land Resource Regions

NRCS “Field Indicators for Hydric Soils”

National List of Wetland Plant Species

Regional Supplements to 1987 Manual



Consistent regional approach for soils, vegetation and hydrology
field indicators



Schedule of Regional Supplements

- Alaska – Version 2.0 published
- Arid West – Version 2.0 published
- Western Mtns, Valleys & Coast – Ver. 2.0 being finalized
- Great Plains – Ver. 2.0 ready to publish
- Atlantic and Gulf Coastal Plain – Ver. 2.0 being finalized
- Midwest – Version 2.0 being finalized
- Northcentral and Northeast – Ver. 1.0 Interim use in March 2010
- Caribbean Islands – Ver. 1.0 Interim use in 2010
- Mid-Atlantic and Southeast – Ver. 1.0 being drafted
- Hawaii/Pacific Islands – Ver. 1.0 being drafted

2009: Started update of 1987 Manual itself to serve as the umbrella document for supplements:
Corps of Engineers Wetlands Delineation Manual, Version 2.0



Process for Each Supplement

- ✓ **Four levels of preparation and review:**
 - (1) Interagency/interdisciplinary workgroup**
 - (2) Independent peer-review group**
 - (3) National Advisory Team reviews all supplements to ensure consistency, resolve universal issues**
 - (4) Public notice comment periods**

Then REPEAT

Participants:
400 wetland delineators



Core of 1987 Manual Remains

- ✓ Supplements are additional guidance for 1987 Manual
- ✓ Methods, sampling techniques, data sources, etc., remain
- ✓ For Section 404, whether or not a wetland is **jurisdictional** is outside the scope of the 1987 Manual and supplements (no change, see ¶ 4. of the Manual)

(SWANCC-isolated, Rapanos JD, prior-converted, incidental wetland, etc., are policy applications, not delineation issues)



Sections of 1987 Manual Replaced by Supplements

Table 1. Sections of the Corps Manual replaced by this Regional Supplement for applications in the Midwest Region.

Item	Replaced Portions of the Corps Manual (Environmental Laboratory 1987)	Replacement Guidance (this Supplement)
Hydrophytic Vegetation Indicators	Paragraph 35, all subparts, and all references to specific indicators in Part IV.	Chapter 2
Hydric Soil Indicators	Paragraphs 44 and 45, all subparts, and all references to specific indicators in Part IV.	Chapter 3
Wetland Hydrology Indicators	Paragraph 49(b), all subparts, and all references to specific indicators in Part IV.	Chapter 4
Growing Season Definition	Glossary	Chapter 4, Growing Season; Glossary
Hydrology Standard for Highly Disturbed or Problematic Wetland Situations	Paragraph 48, including Table 5 and the accompanying User Note in the online version of the Manual	Chapter 5, Wetlands that Periodically Lack Indicators of Wetland Hydrology, Procedure item 3(g)



All Supplements Use Same Format

- ✓ Chapter 1: Introduction
- ✓ Chapter 2: **Hydrophytic Vegetation Indicators**
- ✓ Chapter 3: **Hydric Soil Indicators**
- ✓ Chapter 4: **Wetland Hydrology Indicators**
- ✓ Chapter 5: **Difficult Wetland Situations**



Difficult Wetland Situations

- ✓ Each supplement addresses difficult to delineate wetlands specific to that region (the “problem areas” and “atypical situations” of the 1987 Manual)
- ✓ Much expanded guidance compared to previous 1987 Manual
- ✓ Examples:
 - a. Hydric soils that have no NRCS field indicator
 - b. Artificial drainage
 - c. FACU dominated
 - d. Seasonal wetlands
 - e. Wetland/non-wetland mosaics



Same 3 Basic Questions

✓ Atypical Situations

(Significantly Disturbed)

✓ Problem Areas

**Combined in
Chapter 5
“Difficult to
Delineate
Wetlands”**

✓ Normal Circumstances:

- Soils and hydrology normally present without regard to vegetation
- The legally established, long-term conditions of a site
- Normal circumstances may be pristine conditions to highly disturbed conditions
- Physical alterations to the soils and/or hydrology due to unauthorized activities are NOT the normal circumstances



1977 Wetland Definition

Wetlands are areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions



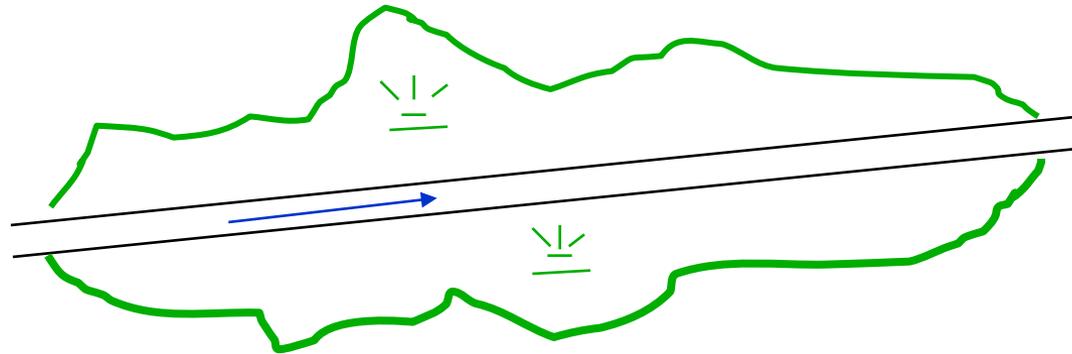
Normal Circumstances



Recent, unauthorized fill that buried native soils and altered hydrology is not the normal circumstance



Normal Circumstances



Ditch legally constructed in 1950s and maintained = ditch is established as the normal circumstance; partially drained is the normal circumstance for hydrology





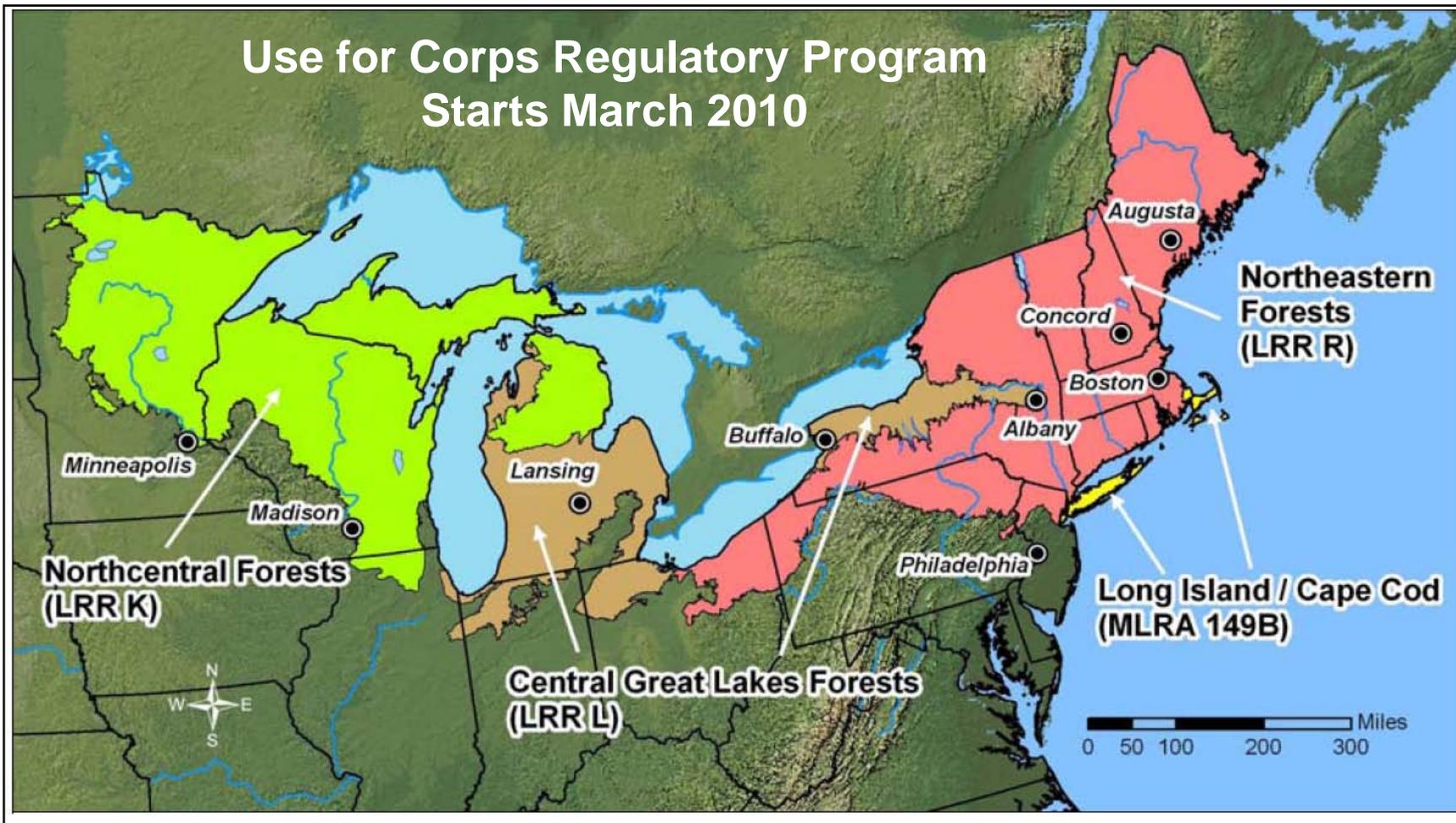
Overview

- ✓ **Soils:** Hydric soil field indicators already regionalized, supplements adopt most current NRCS field indicators.
- ✓ **Plant Lists:** Already regionalized (but boundaries will change). Nomenclature and indicator status will be updated. Drop (+) and (-).
- ✓ **Hydrology:** Multiple new indicators added. One current indicator deleted (LSSD). New 14-day criterion proposed.
- ✓ **Difficult Wetland Situations:** Formerly “problem areas” and “atypical situations” in 1987 Manual. Expanded discussion tailored to each supplement region.
- ✓ **Growing Season:** One new indicator added, another modified.
- ✓ **Glossary:** Update definitions, eliminate contradictions.



Northcentral/Northeast Supplement

Use for Corps Regulatory Program
Starts March 2010



One Corps Serving the Armed Forces and the Nation



Midwest Supplement



Use for Corps regulatory program began in November 2008

One Corps Serving the Armed Forces and the Nation



Differences Between NC/NE Supplement and Midwest Supplement

Hydrology Field Indicators:

- 29 in NC/NE Supplement
 - a) Marl deposits
 - b) Moss trim lines
 - c) Shallow aquitard
 - d) Microtopographic relief

- 27 in Midwest Supplement
 - a) Gauge or monitoring well data
 - b) True aquatic plants



US Army Corps
of Engineers®
Mississippi Valley Division
Mississippi River Commission



Regional Supplements

✓ **Web site:**

http://www.usace.army.mil/cecw/pages/reg_supp.aspx

- **WETLAND DELINEATION FIELD EVALUATION QUESTIONNAIRE**

One Corps Serving the Armed Forces and the Nation



Supplements: The 21st Century is Now!

- ✓ Update a 20-year-old manual
- ✓ Install new mechanism for periodic updates
- ✓ The 3-parameter approach has stood the test of time