



MN WETLAND PROFESSIONAL CERTIFICATION PROGRAM

CORE CURRICULUM OUTLINE

1) WETLAND CONSERVATION ACT (WCA) OF 1991

Topic covers a brief history of the passage of the WCA, the statutes on which the Rule is authorized and based, and how guidance is incorporated within application of the Rule. Topic also includes administrative boundaries of the state such as pre-settlement areas and bank service areas.

- a) MN Statute 103G and parts of 103A,B,E,F
- b) MN Rule 8420
 - i) Pre-settlement areas
 - ii) Bank service areas
- c) Agency Guidance

2) Purpose

Topic covers the purpose of WCA and generally how that purpose is accomplished. Topics include the concept of no net loss and increasing the quantity, quality and biological diversity of wetlands through avoiding wetland impacts and replacing unavoidable impacts.

- a) No net loss
- b) Increase the quantity, quality & biological diversity
- c) Avoid impacts
- d) Replace impacts

3) Scope

Topic covers the regulatory scope of WCA including identifying the types of activities that are regulated and the types of wetlands and activities within wetlands that are not regulated by the Act.

- a) Regulates: Draining, filling and excavation of certain types
- b) What WCA does NOT regulate: PWW, Permit to Mine, Normal Farming, Incidental

4) Other Regulatory Programs

Topic identifies other state and federal wetland and water resource regulatory programs and the agency responsible for administering those programs. Specifically the U.S. Army Corps of Engineers' administration of Section 404 of the Clean Water Act and the MN DNR's administration of the Public Waters Permitting Program will be covered.

- a) Section 404 of the Clean Water Act
 - i) Army Corps
- b) MN Public Waters Permitting Program
 - i) MN DNR

5) Local Government Unit

Topic explains that WCA is administered by local units of government. Included is the process for identifying the Local Government Unit responsible for administering WCA and the specific duties the LGU must perform in order to implement the program.



- a) Determining LGU
- b) LGU duties

6) Technical Evaluation Panel (TEP)

Topic covers the purpose of a TEP and how and when it is utilized. This topic will identify the members of a TEP including when specific members are and are not officially members. TEP meeting procedures and documentation will be explained and how the products of a TEP are utilized in the decision making process.

- a) Makeup of the TEP (members and when DNR is and is not member)
- b) TEP meetings & Findings of Fact and recommendations

7) Definitions

WCA utilizes terms and phrases that if not specifically defined could result in inconsistent application of the Act. This section covers commonly utilized terms, their definitions, and the context in which those terms are used. Examples include definitions of: wetland, impact, fill, project, <50% area, 50%-80% area, and >80% area.

- a) WCA: wetland, Impact, fill, project, etc.
- b) Presettlement wetland areas <50%, 50%-80%, >80%

8) Wetland Classification Systems

This section covers the different classification systems of wetlands. It will include descriptions and definitions as well as how the different classification systems are, or may be, used within the regulatory framework of the Act.

- i) Circular 39
- ii) Cowardin
- iii) Eggers & Reed
- iv) Hydrogeomorphic Method

9) Wetland Functional Assessment

This section covers the array of functions that wetlands perform on the landscape and the associated values those functions provide to the State of Minnesota. Also covered are the methods used to measure wetlands functions and values.

- a) Functions & Values
- b) Functional Assessment Methods

10) Wetland Delineation

This section covers the comprehensive method of identifying wetlands and delineating wetland boundaries as defined in the 1987 Army Corps of Engineers Wetland Delineation Manual and Regional Supplements. Topics included are identifying and quantifying wetland vegetation, sampling and describing hydric soils, and finding wetland hydrology.

- a) 87 Manual and Regional Supplement
 - i) Definition of wetland: Those areas that are inundated or saturated by surface or ground water 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.
 - ii) Wetland Delineation Types- ref 2015 Joint Guidance for submitting wetland delineations in MN



- (1) Routine
 - (a) Level 1 - Onsite Inspection Unnecessary
 - (b) Level 2 - Onsite Inspection Necessary
 - (c) Level 3 - Combination of Levels 1 and 2
- (2) Comprehensive
- iii) Normal circumstance, atypical, problem areas
- iv) Difficult Wetland Situations- Chapter 5
 - (1) Agricultural & Silvicultural land uses
 - (2) Problematic hydrophytic vegetation
 - (3) Problematic hydric soils
 - (4) Wetlands that periodically lack hydrology
 - (5) Mosaic wetlands
- b) Vegetation
 - i) Plant ID
 - (1) Plant Types
 - (a) Grasses, sedges, rushes, forbs, ferns, trees, shrubs, vines
 - (2) Plant Characteristics
 - ii) Plant Communities
 - (1) Native
 - (2) Disturbed
 - iii) Strata
 - (1) Herbaceous
 - (2) Shrubs
 - (3) Trees
 - (4) Woody vines
 - iv) Sampling plots
 - (1) Herbaceous- 5ft
 - (2) Shrubs- 15ft
 - (3) Trees- 30ft
 - (4) Woody vines- 30ft
 - v) Definition of a Hydrophyte
 - (1) Any macrophyte that grows in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content
 - (a) Adaptations
 - (i) Morphological
 - (ii) Reproductive
 - (iii) Physiological
 - vi) National Wetland Plant List- Regions
 - vii) Plant indicator Status
 - (1) Obligate wetland
 - (2) Facultative Wetland
 - (3) Facultative
 - (4) Facultative Upland



- (5) Obligate upland
- viii) Dominant Species
 - (1) Percent areal cover- recommended
 - (2) Stem density
 - (3) Basal area
- ix) Determining hydrophytic vegetation
 - (1) Rapid test
 - (2) Dominance test (50/20)
 - (3) Prevalence Index
 - (4) Morphological adaptations
- x) Problematic Hydrophytic Vegetation
 - (1) Temporal shifts, riparian areas, vernal pools, disturbed areas, managed plant, stress responses, non-vascular
- c) Soil
 - i) Definition of a Hydric Soil
 - (1) soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.
 - ii) Categories of Soil Material
 - (1) Organic horizons
 - (2) Mineral horizons
 - iii) Key Soil Properties
 - (1) Color
 - (a) Hue
 - (b) Value
 - (c) Chroma
 - (2) Matrix (predominant) color
 - (3) redoximorphic features (mottles)
 - (a) Contrast
 - (4) Soil Texture - Relative Sizes of Soil Particles
 - (a) Three Major Textural Divisions
 - (i) All soils (A)
 - (ii) Sandy soils (S)
 - (iii) Loamy & Clayey (F)
 - iv) Web Soil Survey
 - v) Field Indicators of Hydric Soils
 - (1) Used for on-site verification of hydric soils
 - (2) FI Version 8.2
 - vi) Diagnostic Zones
 - (1) Color
 - (2) Depth from Surface
 - (3) Thickness
- d) Hydrology
 - i) Hydrology technical standard



(1) "...free water within 12 inches of surface for 14 consecutive days..."

ii) Hydrology Indicators

(1) Primary – provide stand-alone evidence of a current or recent hydrologic event

(2) Secondary – provide evidence of recent hydrology when supported by one or more other hydrology indicators.

iii) Groups of Hydrology Indicator

(1) Group A – direct observation of *water*

(2) Group B – evidence of *flooding/ponding*

(3) Group C – evidence of *current or recent saturation*.

(4) Group D – *Landscape and veg. characteristics* that indicate contemporary wetland conditions.

iv) Antecedent Precipitation

(1) Three-Prior Month Method

(2) Thirty Day Rolling Total

(3) Hybrid Method

v) Offsite Aerial imagery review- ref 2016 Joint Guidance

11) General WCA Application requirements

This section covers the type of information that should be included in every application in order to make it complete and ready to be submitted and/or reviewed and processed for decision.

a) Determining a complete application

i) Joint Application

ii) Applicable attachment(s)

iii) Supporting documentation

iv) Fee (if applicable)

12) Notice Requirements

This section covers the noticing requirements after a WCA application has been submitted and after a decision is made. You will learn what types of applications need and which types of applications do not need a notice. Also covered will be the decision timeline of Minnesota Statute 15.99.

a) WCA Notice of Application (NOA)

i) Provides a summary of app

ii) Comments and deadlines

iii) When is it needed – which application types

iv) Comment period

v) Appeals

b) WCA Notice of Decision (NOD)

i) Purpose of the NOD

(1) Acts as "permit"

(2) Clearly records the process used in and the facts associated with decision

(3) TEP findings

(4) LGU findings/conclusions

(5) Clearly records the decision that was made and any conditions



- c) Timelines
 - i) 15.99
 - ii) Conditions
 - iii) Appeals

13) Boundary and Type Applications

This section will cover the components of a Boundary and Type (delineation) application. It will cover the type of information that should be included in the supporting materials (delineation report) in order for it to be considered for review and to be reviewed.

- a) Boundaries must be delineated using USACE 1987 Manual and Supplements
- b) Types must be identified using FWS Circular 39 and Eggers and Reed
- c) Requires NOA and NOD.
- d) Should include site visit for confirmation
 - i) Boundaries marked in the field for review/verification
- e) Report components
 - i) Narrative description
 - ii) Data sheets
 - iii) Antecedent precipitation
 - iv) Offsite aerial review (required on ag)
 - v) Maps
 - (1) Site Location
 - (2) National Wetland Inventory (NWI)
 - (3) Soils
 - (4) Public Waters Inventory (PWI)
 - (5) Wetland Boundary Map

14) General No-loss and Exemption Conditions

This section describes the standard conditions applied to all No Loss and Exemption decision.

- a) Erosion control
- b) Does not block fish activity
- c) Compliance with all other local, state, federal requirements

15) No-Loss Criteria

The no loss section covers types of activities in wetlands that do not result in the loss of wetlands. Topics include certain types of excavation, water level management, and short term or temporary impacts.

- a) Will not impact a wetland
- b) Excavation limited to removal of sediment or debris
- c) Water level management done for maintenance, or vegetation, or habitat management
- d) Part of an approved replacement or banking plan or an authorized public agency project for fish/wildlife.
- e) Excavation limited to removal of sediment in wetlands utilized as storm water basins.
- f) Operation, Maintenance or Emergency Repair.
- g) Temporary access for silvicultural activities
- h) Temporary impact if:



- i) Returned to previous conditions.
- ii) Activity completed within 6 months; extension can be granted
- iii) Landowner provides sufficient financial assurance.
- iv) Can claim once every 10 years

16) Exemption Standards- Impacts to wetlands that DO NOT require replacement

This section covers the types of activities that result in impacts to wetlands that are not subject to the replacement requirements of WCA. Specifically covered are different types of impacts (draining and filling) and the maximum amount of impacted wetland for each type of activity.

- a) General conditions:
 - i) Do not apply to calcareous fens
 - ii) Do not apply to wetland bank sites
 - iii) Do not apply to project specific replacement sites
 - iv) May not be combined on a project.
- b) Exemptions:
 - i) Impacts from Agricultural Activities
 - ii) Drainage Exemption
 - iii) Federal Approvals
 - iv) Restored or Created Wetlands
 - v) Utilities
 - vi) Forestry Exemption
 - vii) De minimis
 - viii) Wildlife Habitat

17) Replacement plans

The replacement plan section covers all of the standards and conditions that must be met in order to lawfully impact a wetland. This topic covers the application requirements, sequencing, and replacement standards. Also included are special conditions that must be considered and standard conditions if approval is obtained.

- a) Purpose & Requirement
- b) Application requirements
 - i) Preapplication meeting
 - ii) Contents
- c) Approval conditions
- d) Special Considerations
 - i) T&E Species
 - ii) Rare natural communities
 - iii) Special fish and wildlife resources
 - iv) Cultural Resources
 - v) Groundwater sensitivity
- e) Sequencing
 - i) In descending order, applicants must:
 - (1) Avoid direct or indirect impacts
 - (2) Minimize impacts



- (3) Rectify impacts
- (4) Reduce or eliminate impacts that can occur over time
- (5) Replace unavoidable impacts
- ii) Alternatives Analysis
 - (1) Review for *every* replacement plan application.
 - (2) Two avoidance alternatives are required (unless infrastructure repair/rehabilitate).
- iii) Sequencing flexibility
- f) Replacement standards
 - i) Methods of replacement (project specific and bank credits)
 - ii) Replacement ratios
 - iii) Replacement siting
 - iv) Timing of replacement

18) Wetland Banking

The section covers the process for establishing a wetland bank. The different types of banks, how credits from each type of bank are to be used, and the actions taken to obtain wetland credit are explained. Also covered is the public road replacement process, bank site monitoring criteria, and wetland bank transactions.

- a) Purpose
- b) Bank types
 - i) Private
 - ii) Ag
 - iii) ILF
- c) Actions Eligible for Credit
 - i) Upland buffer
 - ii) Restoration of completely drained
 - iii) restoration of partially drained
 - iv) vegetative restoration of farmed wetlands
 - v) protection
 - vi) creation
 - vii) ENRV
 - viii) preservation
- d) Restoration Construction Standards
 - i) Design requirements & considerations
- e) Replacement for Public Road Projects
 - i) Determining eligibility for program
 - ii) LGU & TEP procedures
- f) Establishing a Wetland Bank
 - i) Draft Prospectus
 - ii) Prospectus
 - iii) Mitigation Plan = Full Application
- g) Certification and deposit of credits
- h) Monitoring and Corrective Actions
- i) Withdrawals and transfers



19) Contractor Notification Responsibility

This brief section covers the contractor liability and landowner statement form. It will explain the purpose of the form, when it needs to be submitted, and the implications for not submitting the form.

20) Enforcement

This section covers the enforcement procedures for when a violation of WCA is discovered. It will spell out the roles of each agency and the steps and procedures each should follow. Specifically covered will be the notifications used by law enforcement to notify a landowner of a violation, the writing and distribution of restoration and replacement orders, and the certificate of completion.

- a) Enforcement Procedures Overview
- b) Agency Roles in violations
 - i) DNR
 - ii) LGU
 - iii) SWCD
 - iv) BWSR
- c) Enforcement Procedures
 - i) Resource Protection Notices
 - ii) Cease and Desist Orders
 - iii) voluntary Restoration
 - iv) Restoration and Replacement orders
 - v) Certificate of Satisfactory Restoration

21) Appeals

The appeals section will describe the appeal process for all WCA decisions and orders. It will cover to whom appeals are sent, the different outcomes of appeals, and the timelines that must be met to make an appeal. Also discussed will be what happens to WCA timelines and deadlines during an appeal.