

## Wetland Conservation Act (WCA) Topic of the Week

### Wetland Classification and Type

June 27, 2022

*WCA topics of the week are a series of informal fact sheets that provide practical information on WCA program implementation in a question-and-answer format. They are intended to better clarify and summarize certain aspects of WCA implementation and should be considered as supplemental to WCA statutes, rules and any associated BWSR guidance and policy. Information in these fact sheets is subject to change over time.*

**Question:** What wetland classification systems are used for implementation of WCA?

**Answer:** There are four main classification systems used in WCA implementation, each separating wetlands into categories or types based on soil, vegetation, hydrology and/or landscape characteristics.

- Circular 39 – older system developed for inventory and classification of waterfowl habitat. Has 20 different wetland types, eight of which occur in Minnesota. Based on frequency and depth of water and vegetation community type.
- Cowardin - system used by the National Wetland Inventory to describe wetlands and ecologically related deepwater habitats. It is a hierarchical classification organized into ecological systems, classes, and subclasses. The class and subclass levels are primarily based on plant community or substrate. The system also provides information on water regime and a variety of other special cases.
- Wetland Plants and Plant Communities of Minnesota and Wisconsin - classification based on vegetation and includes 15 different plant community types which are consolidated into 12 types for WCA implementation.
- Hydrogeomorphic (HGM) - classifies wetlands based on their geomorphic setting (i.e. landscape position), water source, and hydrodynamics. Includes six broad HGM wetland classes in Minnesota, but there can be many subclasses. BWSR has drafted an HGM classification system for the state that may be incorporated into future WCA policies and procedures. Minnesota's updated National Wetland Inventory Map includes a classification system that is an adaptation of HGM. The system (landscape position, landform/waterbody type, and water flow path referred to as LLWW) is used to perform watershed-based preliminary assessments of wetland function. The HGM system is generally accepted as the best system to identify wetlands with similar functions.

**Question:** How is each classification system used in WCA?

**Answer:**

Classification System	Use in WCA
Circular 39	Used for exemptions (drainage, agricultural, deminimis, wildlife) and regulation of excavation activities in wetlands.
Cowardin	Used for regulation of excavation activities in wetlands and NWI classification.
Plant Communities of Minnesota and Wisconsin	Used for determining replacement ratios (in-kind vs out-of-kind replacement).
HGM	Used for determining replacement ratios (in-kind vs out-of-kind replacement).

**Question:** Can more than one type be found in the same wetland?

**Answer:** Yes. However, both the Circular 39 and HGM systems were intended to classify a wetland as a single type, while there are often multiple Cowardin and Plant Communities of MN and WI types within a single wetland. Out of necessity, multiple Circular 39 types are regularly identified for many wetlands so that WCA regulations can be reasonably applied.

**Question:** What type of information is used to classify wetlands?

**Answer:** All wetland classification systems rely on a combination of on and offsite data to arrive at a classification. Aerial imagery, soil mapping, topographic information, and field observations of vegetation and hydrology indicators are used.

**Question:** Can wetland classifications be used to determine the value of one wetland compared to another?

**Answer:** No. Each classification system groups wetlands by similar characteristics such as vegetation, hydrology, landscape position, etc. Rules, policies, and regulations as well as technical assessment tools are used to determine the importance and condition of the wetland, not the classification type. The Circular 39 classification of a wetland (different types numbered one through eight) is often misinterpreted as meaning that a Type 1 wetland is better than a Type 2, etc., which is not the case.

**Question:** How is classification different in highly altered settings or during naturally problematic conditions (drought/flooding)?

**Answer:** Classification systems that rely heavily on observations of vegetation and hydrology can be difficult to use in instances where wetlands have been altered or disturbed due to natural (floods, drought) or manmade causes (mowing, cropping, managed vegetation). Pre-disturbance conditions assessed through historic aerial imagery, remnant vegetation and hydrology indicators, and/or soil classification may need to be relied upon to determine the “normal” condition of the wetland and hence the normal classification type. It can be useful to classify a wetland based on its disturbed condition as well as its presumed natural condition particularly when predicting wetland restoration outcomes. The HGM classification system is the least affected by disturbance/alteration as it relies on topographic position and hydrology source, two characteristics that tend to remain relatively stable over time.

Exhibit A– Example Classification of a Wetland complex in Sherburne County.

