

Wetland Conservation Act (WCA) Topic of the Week

Streams and WCA

June 10, 2020

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 are subject to change over time.

Question: Does WCA regulate streams?

Answer: No. WCA regulates wetlands as defined by the 1987 Corps of Engineers Wetland Delineation Manual and applicable supplements. Streams differ from wetlands in that they have a bed, a bank and flowing water that results in features such as a meandering channel, point bars, pools, and riffles.

Question: Are ditches considered streams or wetlands?

Answer: Some ditches function like wetlands, others like streams. The distinction between the two is not always clear. Some ditches are straightened stream reaches and are not considered wetland. Other ditches are channels constructed in wetland or former wetland areas. While these wetland channels may convey flowing water, they often have low velocity and/or infrequent flow, lack most stream channel features (riffles, pools, meanders, point bars) and function as wetland most of the time (albeit in a degraded condition). Ditches constructed in upland are not regulated by WCA. For regulatory purposes it is important to evaluate the historic context of the ditch as well as its current characteristics. Pertinent questions include: Was the ditch constructed in an area that was naturally wetland? Is the ditch an alteration of a natural channel or was it constructed in an area that did not naturally have a channel?

Question: Is it important to differentiate and delineate streams from wetlands for regulatory purposes?

Answer: Yes. Many stream reaches in Minnesota are bordered by and contiguous with riparian wetlands (with a few notable exceptions such as areas of Karst topography in the southeast). The boundary of a stream is defined by its Ordinary High Water Level (OHWL) or Ordinary High Water Mark (OHWM) depending on the regulatory program. Definitions of and methods used to make determinations are slightly different for OHWL vs OHWM, but the resulting boundaries are often similar. In general, areas below the OHWL and OHWM are within the active channel where surface water flows and sediment transport/deposition occurs. Even though features such as point bars may be seasonally/intermittently exposed and exhibit wetland characteristics (hydrophytic vegetation, surface water, saturation, etc.) at certain times of the year, they are considered part of the active stream channel when they are below the OHWL or OHWM.

Question: Why is it important to identify streams if WCA only regulates wetlands?

Answer: Because streams are regulated by both the Department of Natural Resources Public Waters Work Permit Program (PWWPP) and the Army Corps of Engineers Section 404 permit program (404 program). The PWWPP regulates certain stream reaches identified as Public Watercourses on the DNR's Public Waters Inventory with their boundaries being the OHWL. The 404 program regulates aquatic resources including streams with their boundaries being the OHWM. When a 404 program permit or federal license is required, the Minnesota Pollution Control Agency (MPCA) will review and consider stream impacts in their assessment of water quality standards under Section 401 of the Clean Water Act.

Question: Does WCA have anything to do with streams?

Answer: Yes. There is a statutory provision to allow stream restoration as a means of wetland replacement in northeast Minnesota. This provision will be effective when rules are developed to facilitate implementation within the WCA regulatory program.

Question: How are stream impacts and mitigation assessed for regulatory purposes?

Answer: Until recently there was no standardized stream functional assessment tool or method specific to Minnesota. That changed in 2019 with the development of the Minnesota Stream Quantification Tool (MNSQT). The MNSQT is a regionalized, science-based tool to assess changes in natural stream functions resulting from proposed activities. The tool can be used to assess both negative impacts (e.g. realignments, crossings, etc.) and positive impacts (e.g. restoration activities) on functions. The MNSQT has already been used for some assessments, and it will likely be required for some regulatory uses in the future.

Question: Who developed the MNSQT?

Answer: The MNSQT was developed by a multi-agency team (Environmental Pollution Agency, US Army Corps of Engineers, MN Department of Natural Resources, MN Pollution Control Agency and the MN Board of Water and Soil Resources) with a consultant (Stream Mechanics). The project was funded and led by the EPA. The effort was similar to that of other states who have developed an SQT including Tennessee, North Carolina, Colorado, Wyoming and Georgia.

Question: How does it work?

Answer: The MNSQT uses 12 function-based parameters and 24 metrics to assess five functional categories: Hydrology, Hydraulics, Geomorphology, Physicochemical, and Biology. The MNSQT integrates multiple indicators from these functional categories into a reach-based condition score that is used to calculate the change in condition before and after impact or restoration activities are implemented. The results can be used to calculate regulatory credits and debits associated with stream impacts and restorations.

Question: Can it be used and reviewed by wetland professionals (consultants, TEP members, etc.)?

Answer: Not unless the wetland professional is trained and familiar with standard stream assessment methods and concepts. Although the [MNSQT User Manual](#) includes detailed instructions on data collection methods, some measurements require specialized expertise in stream ecology and restoration. Users and reviewers of the MNSQT will likely have to work with a stream ecologist. BWSR anticipates offering training and guidance on the use of the tool when it is integrated into WCA rule/policy.