BOARD OF WATER AND SOIL RESOURCES

Wetland Conservation Act (WCA) Topic of the Week

Growing Season and Wetland Delineations

May 5, 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: When does the growing season start in Minnesota for purposes of wetland delineations?

Answer: It is highly variable and depends on specific climate conditions at a particular site in a particular year. The start of the growing season can vary among wetlands on the same site or even among different areas within the same wetland. Like wetland parameters, the start of the growing season can be approximated by indicators. Growing season indicators include soil temperature (41 °F at 12 inches below the soil surface) and aboveground growth development of vascular plants (referred to as the "green up" indicator). The green up indicator is the most frequently used and includes emergence of herbaceous plants from the ground, bud burst on woody plants, and emergence or opening of flowers (see example photos below). The end of the growing season is identified by loss of leaves on woody plants, plants cease flowering and their leaves become dry and brown (senescence). When on-site data collection is not practical, growing season dates may be approximated by the median dates (i.e., 5 years in 10, or 50 percent probability) of 28 °F air emperatures in spring and fall, based on long-term records gathered at National Weather Service Meteorological stations.

Question: What is the connection between growing season and wetland delineations?

Answer: A wetland must have three parameters; wetland hydrology, hydric soils and hydrophytic vegetation. Each wetland parameter has a set of indicators. Certain wetland hydrology indicators in regional supplements to the Corps of Engineers wetland delineation manual such as surface water (A1), high water table (A2) and saturation (A3) are applicable only during the growing season. Additionally, the growing season is relevant for long-term monitoring to assess water levels in relation to the wetland hydrology technical standard.

Question: Does this mean wetland delineations can only be conducted during the growing season?

Answer: No. Wetland delineation methods are robust and flexible. Although there are some wetland hydrology indicators that are only applicable during the growing season as mentioned above, there are many other hydrology indicators that can be assessed outside the growing season. Additionally, offsite delineation assessment methods such as Minnesota's July 2016 *Guidance for Offsite Hydrology/Wetland Determinations* are not dependent on growing season observations.

Question: So, can wetlands be delineated any time of year?

Answer: Yes, but the delineator may not be able to accurately describe and document information on all three wetland paramaters to justify wetland boundaries. It depends on the characteristics of the wetland and conditions at the time of the delineation. For example, wetland delineations in agricultural cropland can often be assessed using remote imagery with very little or no onsite observations. Delineations of wetlands with subtle wetland-upland transitions conducted during a period of frozen soils and snow cover will likely prohibit adequate observations of the three wetland parameters. The more subtle the wetland-upland transition is and the harsher the climatic conditions at the time (deep snow, frozen ground, senesced vegetation, etc.), the more likely that a wetland delineation will need to be conducted within or close to the growing season.

Question: Who decides if a wetland delineation completed outside the growing season is acceptable?

Answer: The WCA Local Government Unit (LGU) in consultation with the Technical Evaluation Panel (TEP). Field conditions when a delineation is reviewed by the LGU/TEP and when the delineation was conducted are equally important. Field conditions may obscure observations critical for verifying the accuracy of the delineation. A specific cuttoff date for delineation submittals is not necessary, but there is increased risk of denial or delayed review for submittals that do not allow time for growing season review by the LGU/TEP. See FAQs for delineation on the BWSR website for more information.

Question: What's the bottom line on growing season and wetland delineations?

Answer: The start and end of the growing season is important for wetland delineations, but the exact date is generally not. Wetland delineators should document growing season indicators when conducting field work in early spring and late fall and use these indicators when evaluating the applicability of certain wetland hydrology indicators. Site-specific weather conditions and wetland characteristics related to the observability of key indicators of wetland hydrology, hydric soils and hydrophytic vegetation are the primary considerations in determining the accuracy of wetland delineations conducted and reviewed outside the growing season.