

# Minnesota State Water Quality Standards: wetland physical alteration

The Minnesota Pollution Control Agency (MPCA) is responsible for controlling water pollution, and protecting and maintaining the quality and integrity of Minnesota's waters, including wetlands. Water pollution can occur through human alteration activities which affects the chemical, physical, biological, or radiological integrity of state waters, including wetlands.

## Definitions:

**Beneficial uses** are the goods or services provided by a water. Wetland beneficial uses include: supporting a healthy biological community of aquatic and terrestrial species; providing wildlife habitat; reducing flows preventing shoreland erosion, recharging groundwater; augmenting river, stream or lake low-flow ; retaining and releasing stormwater slowly; flood reduction; general water quality improvement; and reducing stream sedimentation.

**Mitigation** means actions to replace or compensate beneficial uses lost due to wetland physical alteration. Mitigation includes wetland restoration, creation, or purchase of wetland bank credits. Any activity that would result in physical alterations must comply with mitigation sequencing requirements in Minn. R. 7050.0186.

**Sequencing** is the review and project planning process to avoid wetland impacts. Unavoidable impacts must be further minimized, and fully compensated (i.e. mitigated).

**Physical alteration** is defined in state water quality standards ([Minn. R. 7050](#)) as dredging, filling, draining or permanent inundation of a wetland. Physical alteration results in significant wetland impacts, including loss of designated uses. Restoring a degraded wetland by re-establishing its original hydrology is not considered a physical alteration and does not require mitigation

**State water quality standards** are regulations to protect water quality in Minnesota (Minn. R. ch.7050). Minnesota water quality standards maintain and protect existing beneficial uses of state waters, including wetlands. Note: state wetland water quality standards are broader than "physical alteration" as discussed here.

**Wetland bank** is a mitigation credit/debit system. The Minnesota Board of Water and Soil Resources (BWSR) maintains credit and debit accounting for [wetland banking in Minnesota](#). The process of mitigation sequencing under Minn. R. 7050 typically involves negotiations between an applicant and representatives of the MPCA through the course of permit or water quality certification issuance, to assure that instances of wetland physical alteration are fully mitigated.

## Determining wetland physical alteration

**Dredging** means the removal of wetland sediment or soil and associated vegetation by any means. Dredging a wetland will cause a loss of one or more beneficial uses. For example, dredging may occur by digging a pond in a vegetated seasonally saturated, Type 1 or 2 wetland; or by excavating within wetlands that typically have semi-permanent standing water. Dredging or excavating wetlands can also be part of a stormwater management system. However, dredging any natural wetland will require mitigation. The MPCA recognizes the importance of ponding stormwater to treat pollutants and store flood flows to protect downstream water quality and adjacent

wetlands. Dredging an existing stormwater pond to restore designed specifications including original bottom elevations is not a physical alteration and does not require mitigation. If treatment ponds or other stormwater practice are proposed to be constructed in a natural wetland, such an action will result in loss of one or more beneficial uses and constitutes a physical alteration which does require mitigation.

**Filling** refers to an action of altering the cross-section hydrological characteristics, elevation or flow patterns within a wetland by introducing soil or other solid material, to convert the wetland to upland and resulting in the loss of one or more beneficial uses. Wetland fill which impacts one or more wetland beneficial uses is a physical alteration and requires mitigation.

**Draining** is an action that results in permanently lowering a surface or subsurface water table, by an artificial method such as ditching, tiling, diverting water flow away from a wetland, or lowering a wetland's outlet elevation. Draining a wetland will adversely impact one or more beneficial uses and result in a physical alteration. Temporary wetland drainage to improve wildlife habitat is not a physical alteration. Normal agricultural practices including ditching and tiling are exempted from wetland water quality standards.

**Inundation** refers to an action that artificially raises a wetland's normal water level sufficiently to cause the loss of one or more beneficial uses. Inundation examples include adding new water sources or flow volumes to a wetland, constructing a dam, weir, dike, berm or other structure which changes the aquatic community structure. Temporary inundation actions (lasting less than 12 months) are not considered to be a physical alteration and does not require mitigation. Restoring a degraded wetland by reestablishing its historical hydrology does not require mitigation as it is not a physical alteration.

Wetland plant community types vary in their susceptibility to inundation. In some wetland communities a small increase in the normal water depth for short periods of time may not result in a loss of beneficial uses. For more information on wetland susceptibility to inundation, the reader is referred to the MPCA publication [Guidance for Evaluating Storm-Water and Snow-Melt Runoff Impacts to Wetlands](#).

## Antidegradation and physical alteration of wetlands

Antidegradation rules (Minn. R. 7050.0250 through 7050.0335) address "existing" beneficial uses. The purpose of antidegradation is to achieve and maintain the highest possible quality in surface waters of the state (Minn. R. 7050.0250). Sponsors of projects that would result in a physical alteration to wetlands and require approval from the MPCA, must provide a written request in a manner specified by the applicable MPCA permitting or Section 401 Certification program describing the proposed activity. The applicant must document that all alternative options to avoid impacting wetlands have been considered. MPCA will not approve wetland impacts if prudent and feasible alternatives exist. Applicants must also demonstrate they have designed the project to minimize unavoidable wetland impacts. Unavoidable wetland impacts must be compensated by mitigation in sufficient quality and quantity to ensure replacement of beneficial uses. To the extent available and practicable options exist, the mitigation must occur within the same watershed as the impact, and must be completed prior to or concurrent with the proposed physical alteration activity.

Impacting wetlands requires the applicant make a reasonable effort to assess the "existing" beneficial use. Mitigation must replace the highest quality which the wetland achieved on or after November 28, 1975. The MPCA can provide example approaches to assess existing uses.

## For more information

For more information, call 651-296-6300 or 800-657-3864 to speak with wetland water quality standards staff.