

# Minnesota Wetland Water Quality Standards

Wetlands are a vital part of Minnesota's landscape, and they provide many beneficial water quality uses. These beneficial uses generally apply to all wetlands, though some uses are more applicable to certain wetland types. Most, if not all wetlands provide aquatic habitat and flow reduction. To better ensure these water quality uses are fully recognized and adequately maintained, the Minnesota Pollution Control Agency (MPCA) adopted narrative wetland standards into state water quality standards [Minn. R. ch 7050](#) and use-classification rules, (Minn. R. 7050.0186; 7050.0220; and 7050.0222). These narrative standards identify the importance of maintaining wetland water quality in several ways as explained below.

## Wetland definitions

Minnesota water quality standards clearly identify wetlands as waters of the state and define "wetlands" as:

*"Wetlands are 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. Wetlands generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not waters of the state. Wetlands must have the following attributes:*

- a) A predominance of hydric soils;*
- b) Inundated or saturated by surface water or ground water at a frequency and duration sufficient to support a prevalence of hydrophilic vegetation typically adapted for life in a saturated soil condition; and*
- c) Under normal circumstances support prevalence of such vegetation."*

## Beneficial uses

State Water quality standards recognize and designate beneficial uses provided by water resources, including wetlands. Wetland beneficial uses include: **biological diversity, supporting a healthy community of aquatic and terrestrial species indigenous to wetlands; wildlife habitat; flow reduction and erosion control, groundwater recharge, low flow augmentation, stormwater retention and stream sedimentation**. With few exceptions, individual waters meeting the definition of wetlands are classified in Minn. R. ch. 7050 as Class 2D, 3, 4A and 4B, 5, and 6 waters:

- Class 2D waters are those which support aquatic life/biological diversity and recreational opportunities.
- Class 3 waters support general industrial needs.
- Class 4A and 4B waters provide for agricultural and wildlife needs,
- Class 5 waters provide for aesthetic enjoyment and navigation.
- Class 6 waters support other unspecified uses which may be recognized by other jurisdictions.

Note, a few wetlands individually listed in Minn. R. 7050.0470 have specific use class designations

## Discharge into wetlands

Minnesota state water quality standards prohibit discharging into wetlands, such that the discharge will result in the loss of one or more wetland beneficial uses.

An example discharge is the placement of fill or disposal of snow and ice in a wetland in quantities that will disrupt the ecological integrity of the wetland and result in loss of one or more wetland beneficial uses. Wetland conditions shall be protected from chemical, physical, biological or radiological changes to prevent significant adverse impacts to beneficial uses.

## Mitigation sequence

State water quality standards Minn. R. 7050, establish a mitigation sequence of first avoiding, next minimizing, and lastly compensating the loss of any beneficial uses due to a wetland physical alteration. A wetland physical alteration includes human activities resulting in dredging, filling, draining, or permanently inundating a wetland. Restoring a degraded wetland by re-establishing its hydrology does not constitute a physical alteration.

Mitigation sequencing review and adequacy are applied through Clean Water Act Section 401 Water Quality Certification review; review under a National Pollutant Discharge Elimination System (NPDES) or State Disposal System permit. In cases where an action determined under one of these water quality compliance programs would cause a physical alteration to a wetland, the permit applicant must adequately demonstrate compliance with the mitigation sequencing requirements of Minn. R. 7050.0186 and also state antidegradation standards established in Minn. R. 7050.0260 and Minn. R. 7050.0270. Activities which are wetland-dependent are required to comply with all mitigation sequence steps, except the avoidance step.

## Numeric standards

State water quality standards specify numeric standards for many chemical constituents and physical parameters. These standards include chemical concentrations which must not be exceeded in ambient surface waters. Maintaining these numeric standards help assure that waters of the state will maintain their beneficial uses. These standards are used as a baseline to calculate and set effluent limits in NPDES/SDS permits and determine 401 Certification condition to ensure that uses for the receiving waters are not adversely affected.

Most of the numeric standards that are applicable to rivers, streams and lakes also apply to wetlands. However a few wetland water chemistry variables often differ from the expected chemical range or regime for rivers, streams and lakes. In accord with Minn. R. 7050.0222, subp. 6 the following variables are different for wetlands: dissolved oxygen, pH, temperature, chloride, and settleable solids. Except for chloride and settleable solids, these variables in wetland waters should be maintained at background levels. For example, if the background level of dissolved oxygen in a wetland is less than 5.0 milligrams per liter (mg/l) as a daily minimum, then the background level should be maintained. Settleable solids in wetlands shall not be allowed in concentrations that will adversely affect one or more wetland beneficial uses. For chloride, if background is greater than the class 2B chloride standard (230 mg/L), then maintain background.

“Maintain background” means to keep the concentration of these variables at levels which are similar to expected natural concentrations, such that no beneficial use will be adversely affected. Background levels represent the wetland at its best expected condition. Often, monitoring of specific target wetlands or similar minimally disturbed wetlands, will be used to determine background levels. In the absence of these data, best professional judgment may be used to determine background conditions. The need for monitoring background levels is made on a case-by-case basis considering the scale and potential for impact from a proposed activity.

## For more information

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