



Open Water Wetlands

Types 3, 4 & 5



Spring



Summer



Fall



Winter

Function and Values

Open water wetlands are included as some of the most desirable of all wetlands for water birds and furbearers, and they can also provide spawning and nursery habitat for some fish species thereby replenishing fish populations in adjacent lakes. Birds that use open water wetlands for breeding and feeding include ducks, geese, rails, and songbirds. Submergent plants and aquatic invertebrates provide food for waterfowl, which is especially important during migration. Raptors, such as the bald eagle, also frequent these wetlands. Furbearers inhabiting marshes include muskrat and mink. Excellent winter habitat can be provided for upland wildlife, including deer.

In addition to providing fish and wildlife habitat, marshes have other functions, including floodwater retention, protection of shorelines from erosion, aesthetics, and water quality functions involving the trapping of sediments and assimilation of nutrients.



Water Quality

Flood Control

Erosion Control

Habitat

Vegetation

Open water wetland are dominated by nonforested vegetation that can tolerate their roots and lower stem submergend in water over a period of time. Familiarity with common vegetation found in these wetlands is a useful wetland determination tool. Brief descriptions of vegetation types and other wetland plant indicators are listed below:

Submergent and floating – vegetation requiring complete immersion, and are rooted in the bottom or free floating with majority of the leaves floating on the surface;

Emergent – rooted vegetation where most of the plant material is above the water surface; water levels must fluctuate for proper growth and seed germination (usually during drawdown in late summer);

Herbs and forbs – broad-leaved plants that typically grow either in the shallow water edges of wetlands, or ponds, and streams;

Shrub – woody vegetation that is less than 20 feet tall with single or multiple stems; species can be broad-leaved deciduous, or broad-leaved evergreen;

Tree – woody vegetation that dominate forested wetlands and is greater than 20 feet tall.

Open water wetlands are generally dominated by aquatic and submergent vegetation, and are not populated by shrubs or trees.



Plants

Wild Calla

Water Lily

Wild Rice

Lake Sedge



Plants

Hemlock

Cattail

Bulrush

Burreed

What is a Wetland?

Wetlands are among the most productive ecosystems in the world and a source of support for all of the major groups of biological organisms.

By most standards, a wetland has mostly wet soil, is saturated with water either above or just below the surface, and is covered with plants that have adapted to wet conditions. A wetland is a term to describe a wide variety of wet environments from a slight depression, which holds water after spring runoff, to a forested swamp with peat soils.

The identification of wetlands can be difficult and it may be necessary for the landowner to hire a consultant to identify wetland boundaries. A consultant can also help with wetland replacement and permitting requirements.

Differences

The primary difference between the three open water wetlands described in this guide is in the depth of standing water and duration of the soil saturation. Shallow marshes are in 6 inches of water during the growing season while deep marshes are in 6 inches to 3 or more feet of water during the growing season. Shallow open water wetlands have up to 6.6 feet of water and are rarely, if ever, drawn down preventing emergent aquatic vegetation to become established.

Sequencing

Prior to any draining, filling or excavating in a wetland, proposed impacts to nonexempt wetlands must undergo a process known as sequencing. Sequencing is a step-by-step process that must be followed for clearly defined projects that intend to impact wetlands and reviewed to assess the efforts made by the applicant to follow these principles: avoidance, minimization, reduction or elimination of impacts over time, and replacement. Therefore, a Local Government Unit (LGU) may not consider or approve a wetland replacement plan unless the LGU finds that the applicant has demonstrated the activity impacting the wetlands has complied with all of the following principals in ascending order:

1. Avoiding Impacts

The first priority is to avoid impact to a wetland. If a project can be redesigned or relocated to eliminate any wetland impact, you must select this option.

2. Minimization

If St. Louis County determines that wetland impacts are unavoidable, you must then demonstrate that the project minimizes wetland impacts to the greatest extent possible. The county will determine if sufficient effort was made to minimize impacts by considering:

- The purpose of the project
- Size requirements of the project
- Location
- Sensitivity of the site design to the natural features of the site, including topography, hydrology, and existing vegetation
- The function and value of the wetlands on the site

- Applicants efforts to show alternatives to modify the size and scope of the project

3. Rectification

There may be times that a wetland impact is not possible to avoid but the impact either is temporary or results in no net loss of wetlands. Temporary impacts may be approved by the county if the activity is completed and the physical characteristics of the wetland are restored within six months from the start of the activity. An example would be the construction of a temporary road through a wetland that is needed for a short term project. Once the project is completed, the road is removed. A performance bond would need to be provided to the county for an amount sufficient to cover the cost of restoring the wetland to pre-project conditions.

4. Reduction or Elimination of Impacts Over Time

Further impacts from draining or filling must be reduced or eliminated by managing the project in a manner that preserves remaining wetland functions and values. The county must require the applicants to implement Best Management Practices (i.e. silt fences) to protect wetland functions and values.

5. Replacement

Replacement wetlands must replace the functions and values that are lost from a wetland that is drained or filled. Replacement of wetland functions and values may occur at more than one location.

Conservation Level

In nonshoreland areas, shallow and deep marshes, and shallow open water and lakes wetland with a predominance of cedar or tamarack and shoreland wetlands, nonisolated, or with surficial connection to a open water have impacts limited to 400 square feet. To the extent that a local shoreland management ordinance is more restrictive than 400 square feet, the local shoreland ordinance applies.

Wetland Areas in Minnesota

This map illustrates the concentrated amount of wetlands present in northern Minnesota when compared to the amount of wetlands throughout the remainder of the state emphasizing the need for wetland conservation.



Typical Impacts

- Filling:** adding any material to change the bottom level of a wetland;
- Draining:** removing the water from a wetland by ditching, tilling, pumping, or other such techniques;
- Excavating:** dredging and removing soil and vegetation from a wetland;
- Diverting water:** preventing the flow of water into a wetland by removing water upstream, lowering lake levels, or lowering groundwater tables;
- Clearing:** removing vegetation by digging or scraping;
- Flooding:** raising water levels, either behind dams or by pumping or otherwise channeling water into a wetland so that water levels are too high for wetland vegetation and animals to survive (i.e., converting a wetland to a lake or pond);
- Diverting or withholding sediment:** trapping sediment through the construction of dams, channelization or other such projects that inhibit the regeneration of wetlands in natural areas of deposition, such as deltas;
- Shading:** placing pile supported platforms or bridges over wetlands, causing vegetation to die;
- Conducting activities in adjacent areas:** disrupting the interactions between wetlands and adjacent land areas, or indirectly impacting wetlands through activities at adjoining sites.

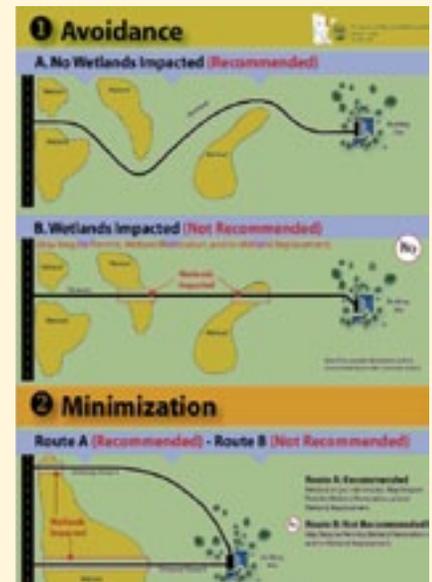
Do's

Rather than draining or filling wetlands, seek compatible uses involving minimal wetland alteration, such as waterfowl production, fur harvest, hay and forage, wild rice production, hunting and trapping leases, and selective timber harvest.

Maintain wetlands and adjacent buffer strips as open space.

Encourage neighbors, developers, and state and local governments to protect the function and value of wetlands in your watershed.

Select upland rather than wetlands sites for development projects and avoid wetland alteration or degradation during project construction.



Impacts

Boardwalk	Harvesting	Temporary Road	Recreation

Don'ts

Impacts

Dredging	Filling	Construction	Flooding

St. Louis County Contact Information

Wetland Administration, Technical Assistance & Enforcement

Primary Contact for all Wetlands Issues

Contact these agencies **FIRST** if you suspect wetlands exist, to request a review, or obtain necessary permits for projects that may affect wetlands.

After working with primary contacts, try these agencies for additional technical assistance.

St. Louis County Planning and Community Development



Local administrators of the Minnesota Wetland Conservation Act. Provides plan and site reviews for wetland determinations, delineations, banking and replacement. Coordinates enforcement with DNR.

Soil & Water Conservation District

North St. Louis
or
South St. Louis

Provides technical, educational, and financial resources to land occupiers in order to implement practices and projects that preserve, protect, and enhance water quality and other natural resources.

Fond Du Lac Reservation Office of Water Protection

Administers wetland regulations on all lands on the Fond du Lac Reservation and provides technical and educational resources to help protect and enhance water quality.

U.S. Army Corps of Engineers



Regulates deposition of fill or dredge material in waters of the U.S. or adjacent wetlands through section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act of 1899.

State of Minnesota Board of Water & Soil Resources (BWSR)



State Administration of the Minnesota Wetland Conservation Act

State of Minnesota Department of Natural Resources (DNR) Waters Division



Regulates Public Waters Permits for all work within public water wetlands of types 3, 4 and 5 that are 10 or more acres in size or 2.5 acres in incorporated areas.

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www.nslswcd.org

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1554 Hwy. 2, Ste 2
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218-834-6630

www.mvp.usace.army.mil

BWSR
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Duluth, MN 55802
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www.bwsr.state.mn.us

DNR Waters
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www.dnr.state.mn.us

About the Guide

This guide is designed to give general information about wetland regulations, identifying wetland areas, common species, and impacts to wetland areas for residents, contractors, and professionals associated with wetland property.

St. Louis County has over 1,000 lakes, countless rivers and streams, and hundreds of thousands of acres of wetlands that provide recreational opportunities to both residents and tourists.

Obtaining the Guide

Copies of this guide are available free to all residents. Requests for a large number of guides should be directed to St. Louis County Planning and Community Development and may be charged a minimal fee to cover printing and production costs. All requests should be directed to:

218-725-5000
Toll Free Minnesota 800-450-9777
www.stlouiscountymn.gov

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The Wetland Guide was developed and published by St. Louis County Planning and Community Development Department.

Information Updates

St. Louis County strives to maintain the latest information available. If any information in this guide is incorrect or any additional information is needed, please contact St. Louis County Planning and Community Development, 218-725-5000.