



# Preserving Wetlands

SHORELAND BEST MANAGEMENT PRACTICES

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## What Are Shoreland BMPs?

Best Management Practices (BMPs) are actions you can take to reduce your impact on the environment. BMPs have been described for agriculture, forest management, and construction. This fact sheet describes BMPs you can adopt on your shoreland property to help protect and preserve water quality. In many cases, the best management for shorelands may be retaining the natural characteristics of your property.

## Wetland Values

Why are we even concerned about wetlands? Wetlands have many values, some very evident, others less discernable. Many creatures, such as amphibians and migratory birds, depend on wetland fringes which border lakes and streams for nesting and food.

A not so obvious benefit of wetlands is flood control. Flood damage in Minnesota is estimated to be at \$130,000,000 per year! Wetlands hold storm water and release it gradually, reducing flood damage and improving water quality by filtering nutrients and some pollutants. Other values of wetlands include recharging groundwater and aesthetic benefits.

## What Is A Wetland?

The term wetland is used to describe a wide variety of wet environments found in Minnesota. A wetland can range from a slight depression which holds water only after spring runoff to a forested swamp with saturated peat soils.

Most people probably would describe a wetland as a small body of open water with cattails on the fringe. Lakes and streams are generally not wetlands, but may be bordered by wetlands. How then do we know what is and what is not a wetland?

Since there are many laws today protecting wetlands, it is important to identify wetlands and define their boundaries. There are some clues that are helpful in determining wetland or non-wetland areas.

Water usually determines soil and influences the vegetation found on a site. Therefore, vegetation, soils, and hydrologic (water) factors must all be present in legal identification of a wetland. In undisturbed sites, vegetation is the most easily identifiable criterion and can be useful in wetland observations. Soils and hydrologic factors are more complex and are only briefly described in this fact sheet.

## Wetland Vegetation

Wetland areas are usually dominated by vegetation that competes well or survives in wet conditions. In fact, some plants are almost always found in wetlands! These "obligate" wetland plants are good indicators of the existence of a wetland.

If you see the following obligate wetland plants, you are looking at a wetland.

- bog rosemary
- bog birch
- cotton-grass
- black willow
- labrador tea
- bulrush
- cattail
- swamp milkweed
- sundew
- sand bar willow
- skunk-cabbage
- sphagnum moss
- wild rice

The following plants are usually found in wet areas and are fairly good indicators of the presence of a wetland. If any of these are found in the area of interest, further investigation should be done to determine the presence of a wetland.

- red-osier dogwood
- larch (tamarack)
- northern white cedar
- black spruce
- speckled alder
- black ash

## Wetland Replacement

If avoidance is not possible, replacement of an impacted wetland area or paying into a "wetland bank" are two alternatives. Both replacement and banking programs are coordinated with your local governmental unit.

Replacing an impacted wetland area with a wetland elsewhere on the landscape is usually accomplished by restoring a wetland that was previously drained. Plugging an existing tile or building a dike is usually required to restore a wetland. Created wetlands are also generally acceptable for wetland replacement.

Proposed rules for wetland banking require that a landowner pay into a wetland bank for the amount of wetland drained or filled for a project. Payment for mitigation will vary depending on the cost of land in your vicinity and the cost of creating a wetland. The local government unit would then restore or create a wetland using money available through the "bank."

## BMPs For Wetlands

**Avoid, minimize, and replace** are the watchwords for wetland protection. Avoid wetlands whenever possible. If you must disturb a wetland area, minimize disruption of the soil, vegetation, and hydrology. A final alternative when a wetland is lost is mitigation by replacing it elsewhere.

Even very small wetland areas can help protect water quality. Following simple practices such as these on your property can help maintain the integrity and effectiveness of wetlands.

- use docks or boardwalks to cross a wetland rather than filling
- lay out access paths along high ground, even if it means a longer walk to the shore
- preserve existing drainageways and never divert water to or from wetland areas

## Costs

If you cannot avoid altering a wetland on your property, there will be some financial cost. Costs will be incurred for acquiring permits to work in the wetland. There will also be mitigation costs for restoring wetlands.

- **DNR permits for working on protected wetlands or streams depend on the size and scope of the project. Fees are charged.**
- U.S. Army Corps of Engineers has permit fees for individuals and for commercial applications. These fees relate to nationwide permits. Larger projects may require individual permits with increased costs.

- Local governmental units may have fees in addition to building permits. Fees may be charged for inspecting erosion control near streams or for wetland replacement.
- The landowner may be responsible for delineating the wetland boundary by paying the local governmental unit or by using a consultant.
- Costs for replacing a wetland will vary greatly across Minnesota. Costs may range from \$4,000 to \$50,000 per acre to buy credits in the wetland bank depending on land acquisition, earthwork, and seeding costs. Better estimates will become available as the program develops.

## Garage Example

This is an example of building a garage and driveway in a wetland. After acquiring a building permit for the garage from your local government unit, complete a project notification form describing the proposed project. The U.S. Army Corps of Engineers may determine that the fill area is small enough to be exempt from their program.

However, WCA regulations will apply. If your driveway is 50 feet long by 15 feet wide, you will impact 750 square feet. The garage fill will require 20 feet by 18 feet or 360 square feet. Total wetland impact is 1,110 square feet. Your local governmental unit will review and approve or reject your proposed wetland replacement plan.