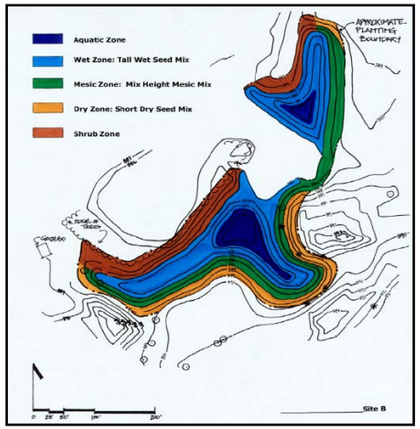
- An undulating bottom is very desirable to allow interspersion of vegetation and open water.

- Creating irregular shorelines with points and bays. In general, the more shoreline the better.



A well-designed excavation.

- Adding islands is not recommended unless they are at least 300 feet from shore because predators can swim and destroy nests. Also, they tend to concentrate Canada geese which can become a nuisance. Nest structures are a good alternative to islands.

- Encourage the growth of emergent vegetation. Emergent vegetation are those plants like cattails and bulrush that grow up out of the water. Not only will they provide food and shelter for wildlife, but emergent plants consume the nutrients that would otherwise be used by floating blue-green algae, known for it unsightliness and foul smell.

- Maintain a buffer of deep-rooted native grasses, sedges and wildflowers around the perimeter for wildlife habitat and to improve water quality.

- Be sure to leave islands of tall vegetation throughout mown areas that you don't want geese to frequent. Geese avoid tall vegetation for fear of predators.

- "Wildlife Habitat Improvement in Wetlands" is guidance for agencies to determine when excavations in wetlands should be permitted. It is also available online at www.bwsr.state.mn.us

- Native grasses and forbs should be seeded in exposed soil areas after final grading. Please contact the Stearns County Soil and Water Conservation District (SWCD) for more information. Be prepared to fight reed canary grass or it will take over and undermine your efforts.

PEAT MINING

Peat mining, defined under MN Statues, section 93.461, is subject to mine permit and reclamation requirements under MN Statues, section 93.44 to 93.51 and the rules of the commissioner of the DNR adopted under those sections.

Contact the Mining Hydrologist, Department of Natural Resources, Division of Land and Minerals, 1525 3rd Ave E, Hibbing, MN 55746 for more information.

This peat bog is not a good candidate for mining because of its high plant diversity.

This guide was developed by the Anoka Conservation District through the 2002 Agricultural Preservation Program and adapted for the residents of Stearns County by Stearns County Environmental Services.

Please note that the information presented here is only a summary of the WCA law. Contact Stearns County Environmental Services for more complete information.

Brochures in the Series

1. Purchasing & Developing Land

2. What's Regulated & Who Regulates

3. Exemptions

4. Wetland Impact Avoidance & Minimization

5. Wetland Replacement and Appeals

6. Wetland Banking

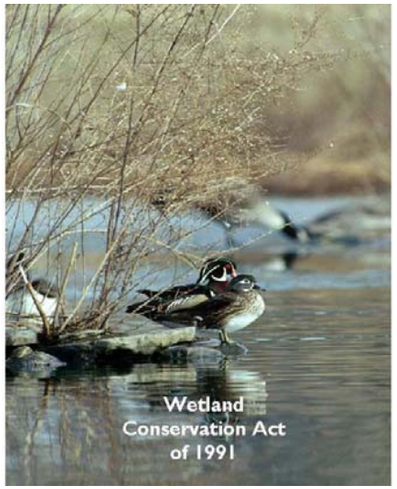
7. Ditch Maintenance, Pond Excavation & Mining

8. Violations and Enforcement

www. co. stearns.mn.us

Environmental Services Department
COUNTY OF STEARNS

DITCH MAINTENANCE, POND EXCAVATION & MINING



.

Brochure #7

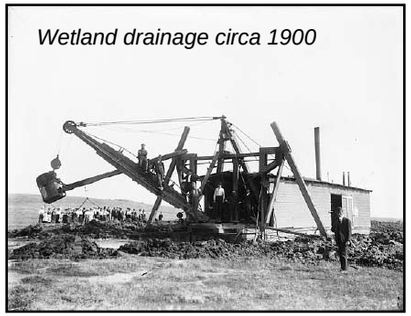
Stearns County Environmental Services
Administration Center Room 343
705 Courthouse Square
St. Cloud, MN 56303

(320) 656-3613
FAX (320) 656-6484
1-800-450-0852

Information is current as of April, 2011

DITCH MAINTENANCE

The Wetland Conservation Act (WCA) generally requires that a wetland which is drained must be replaced by created or restored wetland. There are some exemptions from this wetland replacement requirement that apply to ditch maintenance. The applicability of exemptions can be confusing so it is advisable to contact the Stearns County Environmental Services (SCESD) for more information prior to conducting any work within a private or public ditch.



Wetland drainage circa 1900

Exemptions

Following are brief summaries of the exemptions that apply to ditch maintenance. A replacement plan is not required for draining or filling of wetlands:

- resulting from the maintenance or repair of existing public drainage systems, except for draining types 3, 4 or 5 wetlands that have been in existence for more than 25 years.

- resulting from the maintenance or repair or existing private drainage systems, except for draining wetlands that have been in existence for more than 25 years.

- on agricultural land that (1) was planted with annually seeded crops prior to July 5, except for crops that are normally planted after this date, in 8 out of 10 most recent years prior to the impact; (2) was in a crop rotation seeding of pasture grass, cover crop, or legumes or was fallow for a crop production purpose in 8 out of 10 most recent years prior to impact; or (3) was enrolled in a state or federal land conservation program and met the requirements of (1) or (2) prior to enrollment.

- or draining type 1 wetlands, or up to five acres of type 2 or 6 wetlands, in an unincorporated area on land that has been assessed drainage benefits for public drainage system" provided that during the twenty years ending January 1, 1992 there was an expenditure made from the drainage system account for the public drainage system and the system was repaired or maintained as approved by the drainage authority or no repair or maintenance was required under Minnesota Statues, Section 103E.705, sub. 1 as determined by the public drainage authority.

Present and future owners of wetlands drained under a drainage exemption must make no use of the wetland areas after it is impacted, other than as agricultural land, for at least ten years, unless it is first replaced.

A private drainage ditch on a vegetable farm.

POND EXCAVATION

Stearns County residents frequently inquire how to improve their land for waterfowl or other wildlife. Often the goal is to provide open water habitat in a cattail-choked wetland or greater water retention in a seasonally saturated area.

The WCA regulates excavations in the permanently and semi-permanently flooded areas of type 3, 4 or 5 wetlands and also regulates the placement of spoil and the depth of the excavation in all types of wetlands.

This is a poorly designed excavation because of the steep slope, the island, and the uniform shape.

Other jurisdictions including the US Army Corps of Engineers and the Minnesota Department of Natural Resources may also have regulatory authority on wetland excavation projects.

Draining: There is potential for pond excavations to drain adjacent wetland areas. Typically, in Stearns County, if the hydrology is predominantly groundwater driven, a pond excavation can be designed that will not drain adjacent wetlands. However, there is an increased likelihood that a pond excavation will drain adjacent wetlands when wetlands hydrology is primarily surface water, or when the excavation is connected to a drainage ditch. This is an issue that is best addressed by the SCESD during review of a specific project.

Filling: Filling of wetlands must be avoided during pond excavations. The spoil from the excavation must be placed in an upland area. A qualified wetland professional may be needed to ensure that the destination of the spoil is upland.

Proper erosion control practices must be incorporated. You may contact the SCESD or Stearns County Soil and Water Conservation District for assistance with an erosion control plan

Recommendations for Waterfowl Ponds

Pond excavations are often perceived as being of an overall benefit to wildlife. It is more accurate to regard them as a way of exchanging types of wildlife. Whereas open water ponds are beneficial to ducks, geese and herons, sedge meadows are better for a large variety of amphibians, reptiles, mammals, and birds of prey.

Mulch is a great defense against sheet erosion

Forested wetlands harbor a different variety of song birds, amphibians, large and small mammals, and birds of prey. Wetlands that are saturated often but seldom have standing water support a wide variety of flowering plants, grasses and shrubs including orchids, ferns, and wild bleeding hearts. Flowering plants also attract a variety of interesting butterflies and moths.

Be sure to identify the wildlife you want to attract before changing the landscape, or your actions may accidentally displace the animals you hope to see more of.

- Excavations should only be carried out in wetlands that are degraded by invasive species, such as reed canary grass.

- Ponds should only be constructed if other open-water wetlands are greater than 1/2 mile away.

- Proper open water depth is 1.5' to 3.0' deep. The pond cannot exceed 6.6' in depth.

- Gradual flat slopes of 10:1 are preferred at the boundaries.

Monotypic stand of reed canary grass

- Wildlife ponds can be safety hazards so be sure to leave a shallow water shelf around the perimeter of the pond and to have gradual slopes throughout.