Wetland Types

Type 1

Circular 39
Type 1 wetlands are either **seasonally flooded basins or floodplains**. Vegetation varies according to the season and the amount of flooding. Benefits of Type 1 wetlands include seasonal waterfowl and wildlife habitat, water quality protection and groundwater recharge and discharge.

Cowardin
Upper right: PEMA
Lower right: PFOA (summer)
Lower left: PFOA (spring)

Type 2

Circular 39
Type 2 wetlands are **wet meadows**. The soil is without standing water during most of the growing season, but is saturated below the surface. Vegetation includes grasses, sedges, rushes and various broad-leaved plants. Type 2 wetlands provide waterfowl and wildlife habitat, water quality benefits and groundwater recharge or discharge.

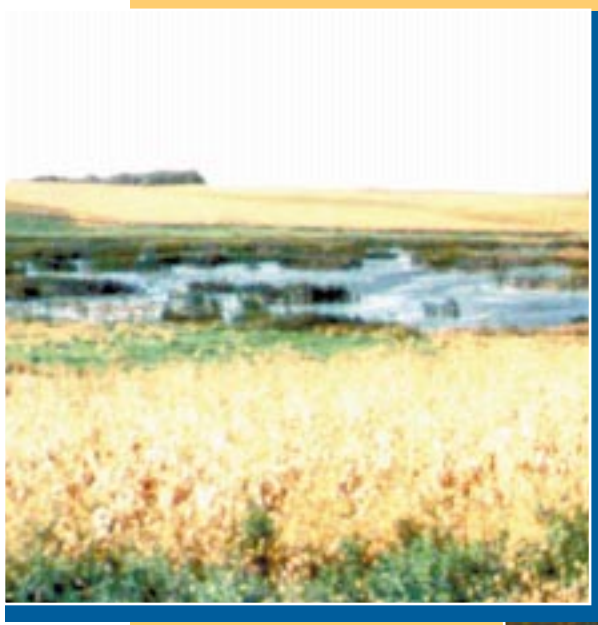
Cowardin
PEMB

Type 3

Circular 39
Type 3 wetlands are **shallow marshes**. The soil is usually waterlogged early in the spring and often covered with six or more inches of water. Vegetation includes grasses, bulrushes, spikerushes, cattails, arrowheads, pickerelweed and smartweeds. Type 3 wetlands protect water quality and shoreland, retain floodwater, provide habitat for waterfowl, amphibians and fish, and offer recreation, including hunting, fishing and canoeing.

Cowardin
PEMC and F; PSSH; PUBA and C

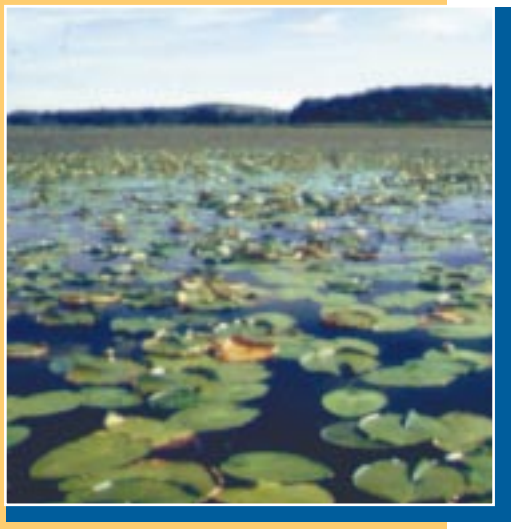
Type 4



Circular 39
Type 4 wetlands are **deep marshes**. The soil is usually covered with water during spring and summer—anywhere from six inches to three feet. Vegetation includes cattails, reeds, bulrushes, spikerushes and wild rice. In open areas, pondweed, naiads, coontail, watermilfoils, waterweeds, duckweeds, waterlilies or spatterdocks may grow. These deep marshes may completely fill shallow lake basins, potholes, limestone sinks and depressions, or they may border open water. Type 4 wetlands provide water quality protection, floodwater detention, wildlife and fisheries habitat, and recreation, including hunting, fishing and canoeing.

Cowardin
PEMF; PEMG and H; PUBB and F; PABF and G; L2US; L2EMF and G; L2ABF

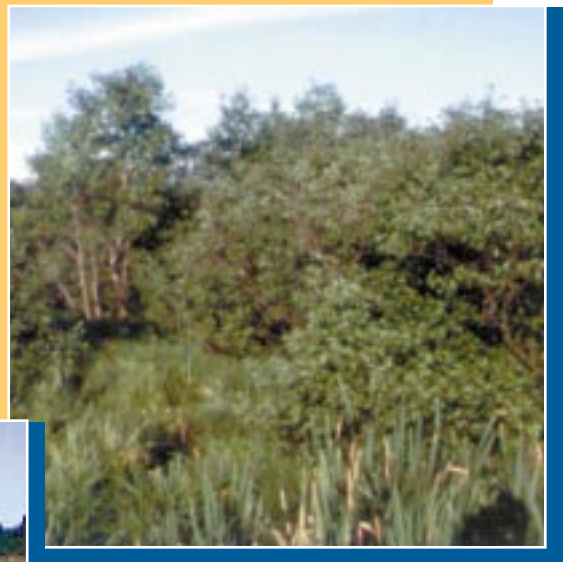
Type 5



Circular 39
Type 5 wetlands are **open water wetlands**, including shallow ponds and reservoirs. The water is less than six feet deep and fringed by a border of emergent vegetation. Type 5 wetlands provide floodwater detention, wildlife and fish habitat, and recreation, including hunting, fishing and canoeing.

Cowardin
L2ABG and H; L2EMA, B and H; L2RS; L2UB; PABH; PUBG and H

Type 6



Circular 39
Type 6 wetlands are **shrub swamps**. Soil is usually waterlogged during much of the growing season, and is often covered with as much as six inches of water. Vegetation includes alders, willows, buttonbush, dogwoods, leatherleaf and swamp-privet. Typical benefits of Type 6 wetlands include water quality, floodwater detention, low flow augmentation and wildlife habitat.

Cowardin
PSSA, C, F and G; PSS1, 5 and 6B

Type 7

Circular 39
Type 7 wetlands are **wooded swamps**. Soil is waterlogged to within a few inches of the surface during the growing season, and can be covered with as much as a foot of water. Typical trees include tamarack, white cedar, arborvitae, black spruce, balsam, red maple and black ash. Type 7 wetland benefits include water quality, low flow augmentation, floodwater detention and timber harvesting.

Cowardin
PFO1, 5, and 6B; PFOC and F

Type 8

Circular 39
Type 8 wetlands are **bogs**. Soil is usually waterlogged and has a spongy covering of mosses. Typical plants include heath shrubs, sphagnum moss, sedge, leatherleaf, labrador-tea, cranberries and cottongrass, and scattered, often stunted, black spruce and tamarack. Typical benefits include peat harvesting, water quality, low flow augmentation and shoreland protection.

Cowardin
PFO2, 4 and 7B; PSS2, 3, 4 and 7B

Minnesota Board of Water & Soil Resources