



# Natural Resources

## Wetlands

Rice County contains approximately 3,000 wetlands covering 28,000 acres - this is only a small fraction of those that covered the landscape in the 1800s. Filling of wetlands and excessive tiling as a result of agriculture and population increase, has resulted in the disappearance of many wetlands.

Wetlands differ in size, shape, and types of wet environments that derive their unique characteristics from the climate, vegetation, soils, and hydrologic conditions present.

Rice County's wetlands play an invaluable role in supporting the water cycle and promoting a healthy ecosystem.

Several wetland restoration programs have been very active in Rice County over the past few years. U.S. Fish and Wildlife Service (FWS) staff members typically work with 30 Rice County landowners each year on restoration and management options. Efforts can be seen below:

Restore	Acres
414 Wetland Basins	2,700 acres
29 Prairie sites	600 acres

Management	Acres
24 Wetland Protection Areas and Easements	3,300 acres

- Beneficial functions of wetlands include:**
- ❖ Maintain and improve water quality in lakes, rivers, streams, and groundwater via interception of surface water runoff and filtration.
    - Slowing the velocity of runoff and trapping pollutants, silts, and sediments.
  - ❖ Flood protection- during heavy rainstorms or snowmelt, wetlands store and slow the rate of runoff preventing flood damage downstream.
  - ❖ Topographically providing a complex environmental landscaping in both vegetation and wildlife.
  - ❖ Provide open spaces and natural areas for enjoyment to include fishing, canoeing, hiking, and sightseeing.
  - ❖ Habitat for amphibians, migratory birds, mammals, and plant life.

Program	Description	Acres
Re-Invest in Minnesota (RIM) Reserve Program	Permanent easements	789.5 acres
Re-Invest in Minnesota (RIM) Reserve/Federal Wetland Reserve Program Partnership	Permanent easements (including upland buffer)	430.4 acres
Conservation Reserve Enhancement Program	Permanent easement	168.2 acres
State Permanent Wetland Preserve Program	Long-term/permanent easements	489 acres



Identification and proper classification of wetlands is necessary to appropriately protect resources. There are two main types of classification systems developed by the United States Fish and Wildlife

Service that are used: Circular 39 and Cowardin. The Circular 39 system was developed in 1956 and divides wetlands into eight types. The Cowardin classification utilizes a tier system and describes tiers narrowly. One of the main differences between wetland classifications are the wetlands' habitats which are classified using the Cowardin method, whereas Circular 39 maps use wetland basins for classification. The Rice County Soil & Water Conservation District (SWCD) is the wetland authority in Rice County with regard to administration of state-mandated regulations under the Minnesota Wetland Conservation Act adopted in the mid-1990s. The planning & zoning offices at both county and city levels work closely with SWCD when development occurs in close proximity to wetland areas in order to protect these important environmental resources countywide.

### Circular 39, wetland types defined:

***Type 1- Seasonally flooded basin or floodplains***

**Soil:** Usually well-drained during much of the growing season

**Hydrology:** Covered with water or waterlogged during variable seasonal periods

**Vegetation:** Varies greatly according to season and duration of flooding from bottomland hardwoods to herbaceous plants

**Common sites:** Upland depressions, bottomland hardwoods (floodplain forests)

***Type 2- Wet Meadow***

**Soil:** Saturated or nearly saturated during most of the growing season

**Hydrology:** Usually without standing water during most of the growing season but waterlogged within at least a few inches of the surface

**Vegetation:** Grasses, sedges, rushes, various broad-leaved plants

**Common sites:** May fill shallow basins, sloughs, or farmland sags; may border shallow marshes on the landward side and include low prairies, sedge meadows, and calcareous fens

***Type 3- Shallow marsh***

**Soil:** Usually waterlogged early during growing season

**Hydrology:** Often covered with 6 inches or more of water

**Vegetation:** Grasses; bulrush; spikerush; and various other marsh plants, such as cattail, arrowhead, pickerelweed, and smartweed

**Common sites:** May nearly fill shallow lake basins or sloughs; may border deep marshes on landward side, commonly as seep areas near irrigated lands

***Type 4- Deep marsh***

**Soil:** Inundated

**Hydrology:** Usually covered with 6 inches to 3 feet or more of water during growing season

**Vegetation:** Cattail, reed, bulrush, spikerush, and wild rice; open areas may have pondweed, naiad, coontail, watermilfoil, waterweed, duckweed, waterlily, and spatterdock

**Common sites:** May completely fill shallow lake basins, potholes, limestone sinks, and sloughs; may border open water in such depressions

***Type 5- Shallow open water***

**Soil:** Inundated

**Hydrology:** Usually covered with less than 10-foot-deep water; includes shallow ponds and reservoirs

**Vegetation:** Fringe of emergent vegetation similar to open areas of Type 4

**Common sites:** Shallow lake basins and may border large open water basins

***Type 6- Shrub swamp***

**Soil:** Usually waterlogged during growing season

**Hydrology:** Often covered with as much as 6 inches of water; water table is at or near the surface

**Vegetation:** Includes alder, willow, buttonbrush, dogwood, and swamp privet

**Common sites:** Along sluggish streams, drainage depressions, and occasionally on floodplains

***Type 7- Wooded swamp***

**Soil:** Waterlogged within a few inches of the surface during the growing season

**Hydrology:** Often covered with as much as 1 foot of water; water table is at or near the surface

**Vegetation:** Hardwood and coniferous swamps with tamarack, northern white cedar, black spruce, balsam fir, balsam poplar, red maple, and black ash; deciduous sites frequently support beds of duckweed and smartweed

**Common sites:** Mostly in shallow ancient lake basins, old riverine oxbows, flat terrains, and along sluggish streams

***Type 8- Bogs***

**Soil:** Usually waterlogged

**Hydrology:** Water table at or near the surface

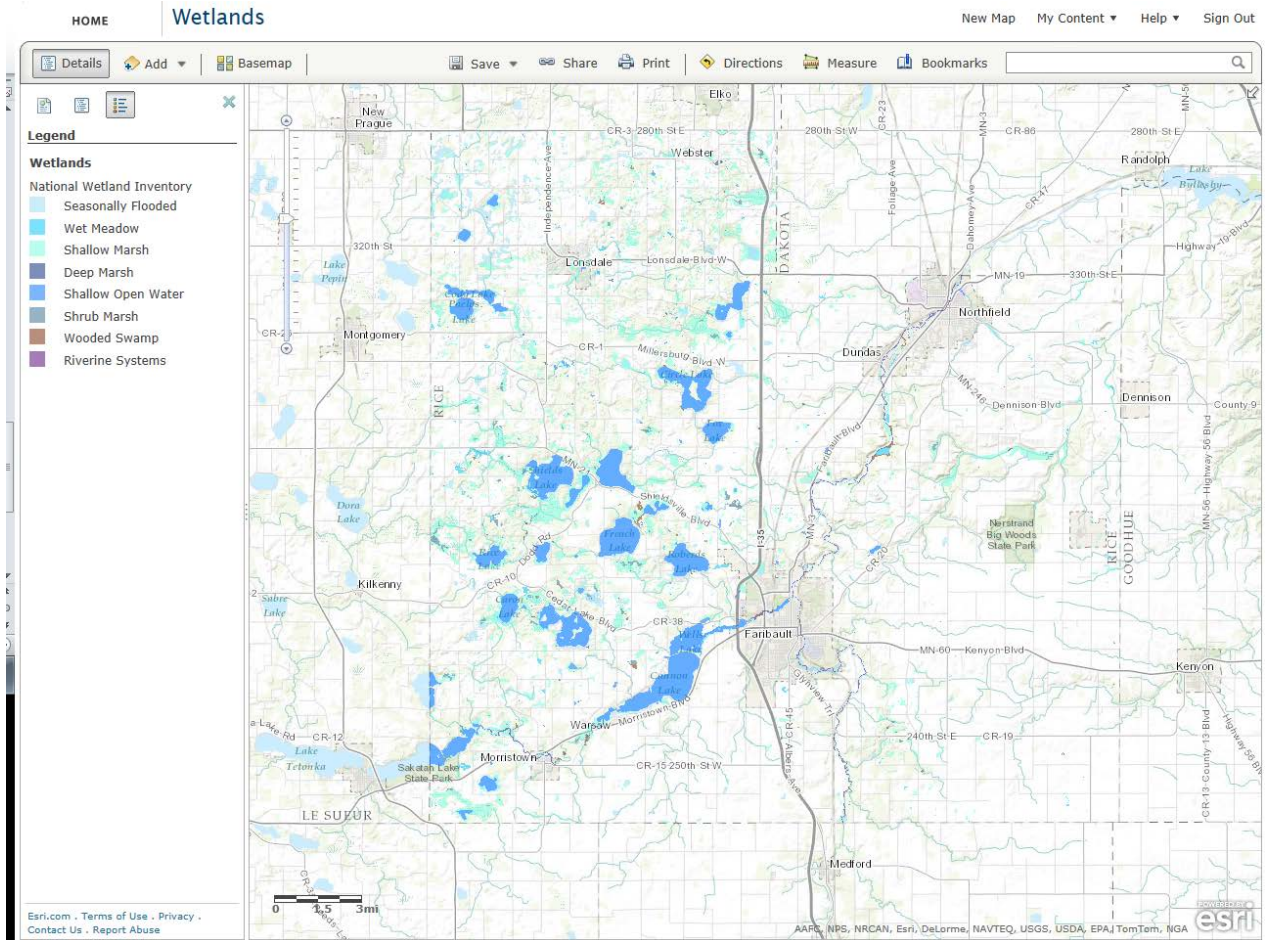
**Vegetation:** Woody, herbaceous, or both supporting a spongy covering of mosses; typical plants are heath shrubs, sphagnum mosses, sedges, leatherleaf, Labrador tea, cranberry, and cottongrass; may include stunted black spruce and tamarack

**Common sites:** Mostly on shallow glacial lake basins and depressions, flat terrains, and along sluggish streams

\*For additional information on wetland types, please visit:

<http://www.dnr.state.mn.us/wetlands/index.html>

# Rice County Wetland Inventory



Click on the following map to access:

<http://www.arcgis.com/home/webmap/viewer.html?webmap=c81e4916be87454b8814f902ecba49ec>

