



## VT WETLANDS PROGRAM

# WETLANDS 101

## Vermont Wetlands

The term **wetland** refers to those areas of the state that are inundated by surface or ground water with a frequency sufficient to support plants and animals that depend on saturated or seasonally saturated soil conditions for growth and reproduction.

These areas are commonly known as ponds, bogs, fens, marshes, wet meadows, shrub swamps, and forested wetlands (Fig. 1).

In Vermont, over 230,000 acres, or 4% of the land area in the state, have been identified as wetlands on the [Vermont Significant Wetlands Inventory \(VSWI\) Map](#). Studies have shown that up to 39% of Vermont wetlands may not be mapped.

In addition, more than 35% of the original wetlands in Vermont have been lost. In recent years, residential, commercial and industrial development have been the primary causes of wetland loss.

## Wetland Functions

Wetlands in Vermont are identified and protected because they provide many valuable and irreplaceable functions that benefit the public. Some functions and values that wetlands provide include surface and ground water protection, storm and flood water storage, fish and wildlife habitat, erosion control, threatened and endangered species habitat,

### Jurisdictional Wetlands

The following wetlands are subject to the Vermont Wetland Rules because they are presumed to provide significant functions and values:

- ◇ Any wetland on the VSWI map
- ◇ Any wetland contiguous or connected to the VSWI mapped wetland
- ◇ Any wetland that is the same type and size as what is on the VSWI maps (1/2 acre or larger)
- ◇ Wetlands over or under a half acre that:
  - ◇ Are adjacent to a stream, lake, pond, or river
  - ◇ Are vernal pools
  - ◇ Are special and unique wetlands - i.e. bogs or fens
  - ◇ Are headwaters above 2500 feet elevation
  - ◇ Are adjacent to impaired waters

open space and aesthetics, recreation, education, and economic value.

The functions that wetlands provide can be valued based on the income they generate and save the public on a local, state and national level. For example: (1) income produced from the sale of fish that depend on wetlands, (2) tourist and outdoor recreation dollars associated with wetlands (photographing, bird watching, boating, fishing, and hunting), (3) costly damage prevented by flood and



**Figure 1. Wetland types from left to right: bog, cattail marsh, wet meadow, shrub swamp, and forested wetland.**

stormwater runoff and erosion control, and (4) money saved through surface and groundwater filtration of nutrients and toxins.

Even small wetlands offer vital services: headwater seep wetlands provide cold water discharge that trout require during warm summer months and vernal pools provide habitat for amphibians that lower pesky bug populations.

In August 2011 during Tropical Storm Irene there were historically high flows and damaging flooding happening along the Otter Creek in Rutland. While just 30 miles downstream the flooding and flow in Middlebury was much less. The Otter Creek swamp complex is located between Rutland and Middlebury. The wetlands and floodplains in this area are extensive and allowed the spread and uptake of flood waters. This resulted in a decrease in property damage and flooding down stream in Middlebury.

The VT Wetland Rules establish regulation for development of wetland areas like the Otter Creek swamp complex and many other smaller wetlands. As a result, these regulations protect wetland function and values for future generations.

## Responsibilities of the Wetlands Program

The goal of the Vermont Wetlands Program is to identify wetlands and to protect the functions and values that wetlands provide. Activities to achieve this goal include education, project review, and enforcement. Many of the activities are mandated under state and federal regulations. On average the Wetlands office reviews over 500 wetland-related projects per year.

In 2010, the Water Resources Panel passed new [Vermont Wetland Rules](#) pursuant to 10 V.S.A. § 6025 (d)(5). This statute limits the applicability of these rules to those wetlands which are so significant that they merit protection. Wetlands that are not significant should be assumed to have public value, and therefore may merit protection under other statutory or regulatory authority.



**A VSWI map showing the approximate location of a Class II stream-associated wetland (light blue shaded area).**

The Vermont Wetland Rules identify and protect [10 functions and values](#) of significant wetlands and establishes a 3-tier wetland classification system to identify such wetlands. The first two classes of wetlands (Class I and Class II) are considered significant and protected under the wetland rules along with their buffer zones (generally 100-foot for Class I and 50-foot for Class II).

According to §9.5 and §9.7 of the Vermont Wetland Rules, a Wetland Permit can only be issued for activities in the wetland or its buffer zone if it is determined that the uses will have no undue adverse impacts on protected functions, unless such impacts are mitigated. Mitigation measures include avoidance and minimization of wetland impacts.

If you are thinking about planning an activity near a wetland, contact the Wetlands Staff to review a project and determine if a wetland is jurisdictional,

## Links:

Contact us [dec.vermont.gov/watershed/wetlands](http://dec.vermont.gov/watershed/wetlands)  
VT Wetland Map (VSWI) <https://anrmaps.vermont.gov/websites/WetlandProjects/default.html>

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