
Ecology and Stewardship of NH Wetlands
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With thanks to
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A “Wetland” is a “Wetland”?

Wetlands in New Hampshire

Env-Wt 101.99 NH Code Administrative Rules

Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions

Wetlands in New Hampshire

•Dominance of wetland vegetation

•Hydric (wetland) soils

•Wetlands hydrology

Size does not matter!

Wildlife use of a wetland:

- Portion of year wetland holds standing water
- Water depth
- Types of vegetation in and around wetland
- Wetland size
- Proximity to other habitats

You can use these factors to predict what wildlife will use any wetland

How long does the wetland hold water?

Hydroperiod is how long a wetland holds water

Short hydroperiod	Intermediate hydroperiod	Long hydroperiod
		
<4 months	4 months to all year	doesn't dry

how long wetland holds water

Hydroperiod can vary from year to year

How deep is the water?

Water depth influences water temperature and what plants will grow.

water depth

>10-12 feet	~3.5 to 7 feet	3 feet or less
		
•too deep for plants •required by trout	•floating-leaved aquatics •too deep for emergents	•emergent plants •dabbling ducks

What type of vegetation/structure is present?

Emergent vegetation

Dense shrubs

What type of vegetation/structure is present?

Open water

Snags and fallen logs

Does wetland size matter?

Yes, for some:

Most birds have minimum wetland size requirements for breeding:

American bittern – 10-25ac. min.

Pied-billed grebe – 12ac. minimum

Common loon – prefer >60ac. lakes

No, for others:

Success of amphibian breeding is determined by hydroperiod, not wetland size.

To maintain the greatest diversity of wetlands wildlife:




Must maintain a diversity of wetland types!

Wetland Types

- Marsh and Shrub
- Peatlands
- Forested Wetlands (temperate and northern swamps)
- Vernal Pool

This is the way wetlands are named in the Wildlife Action Plan

Marsh and Shrub Wetlands

A variety of wetlands fall into this category

emergent marshes

scrub-shrub wetlands

wet meadows

Emergent marshes

Emergent marshes are wetlands that contain a variety of aquatic plants that grow out of the water

Emergent marshes

Are permanently flooded or dry only in very dry years

Areas with vegetation up to three feet deep

Deeper parts often lack emergent vegetation and appear as open water

Wildlife of Emergent Marshes

beaver

Blanding's turtle
NH State Endangered

green heron

pied-billed grebe
NH State Endangered

Wildlife of Emergent Marshes

red spotted newt

bullfrog tadpole

green frog

dragonfly larva

Shrub Wetlands

Shrub Wetlands

Scrub-shrub wetlands usually contain standing water that can be shallow or many feet deep

Wildlife of Shrub Wetlands

Rusty blackbird
Special Concern

Spotted turtle
NH State Threatened

New England cottontail
NH State Endangered

Wet Meadows

Wet Meadows

Wildlife of Wet Meadows

Northern harrier
NH State Endangered

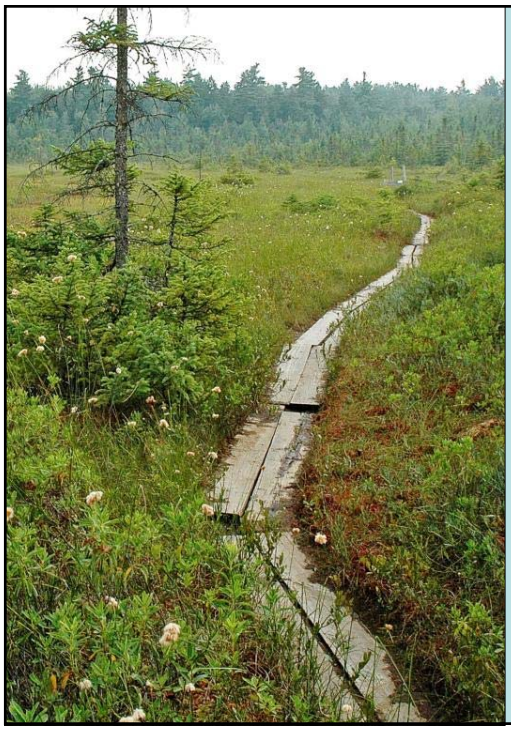
Northern leopard frog
Special Concern

Ribbon snake

Sedge wren
NH State Endangered

Peatlands

A moat around the edge of a wetland can indicate a peatland



Quaking Bog

Carnivorous Plants

pitcher plant

round-leaved sundew

horned bladderwort

Wildlife of Peatlands

Ringed boghaunter dragonfly
NH State endangered

Spruce Grouse
Special Concern

Moose

Northern bog lemming Special Concern

Forested Wetlands

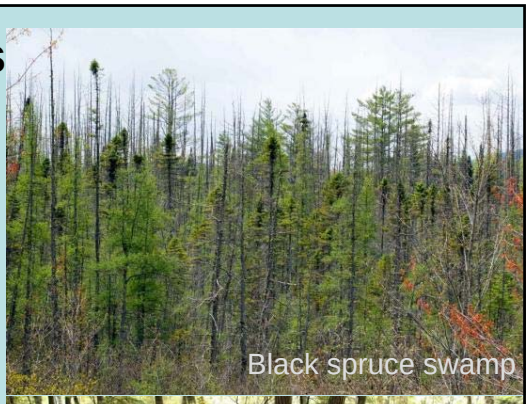
Atlantic white cedar swamp

Many of these are not identified in the National Wetlands Inventory (NWI) data.

Silver maple floodplain forest

Forested Wetlands


Red maple - Sphagnum basin swamp


Black spruce swamp


Black gum red maple basin swamp

Wildlife of Forested Wetlands


wood turtle
Special Concern

great blue heron nesting colony


Silver-haired bat


Wood duck


Red-bellied woodpecker

Vernal pools

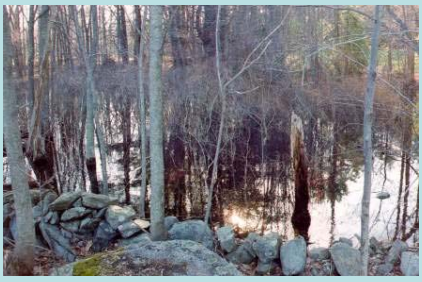
Vernal pools are wetlands that fill with water in the spring or fall…

vernal pool in spring with water

dry vernal pool in summer

and *usually* dry during the summer.

Vernal pools



or can be part of larger wetland complexes

Can be small, isolated pools….

Must have no *permanently* flowing outlet to qualify under regulations as a vernal pool in New Hampshire

Vernal pools

Fish can't maintain *viable* populations in wetlands that dry

A wetland must lack a viable fish pop. to qualify as a VP in NH

There are fewer aquatic insect predators in wetlands that dry

Wildlife of Vernal Pools

wood frog

spotted salamander

fairy shrimp

Jefferson's/blue-spotted salamander

Wetland habitats: what you can do

Learn where the wetlands are on your property and keep track of what wildlife species use them.

Maintain tree, shrub and ground cover around wetlands for wildlife.

Minimize fertilizer and pesticide applications to lawns.

Resources

- Taking Action for Wildlife web pages
- NH Wildlife Action Plan
- Habitat Stewardship guidelines
- Good Forestry in the Granite State
- UNH Cooperative Extension foresters and NHFG biologists
- Consulting foresters and biologists

Confused?

Any Questions?