

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



<4 months

Intermediate hydroperiod



4 months to all year

Long hydroperiod



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



- too deep for plants
- required by trout

~3.5 to 7 feet



- floating-leaved aquatics
- too deep for emergents

3 feet or less



- 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



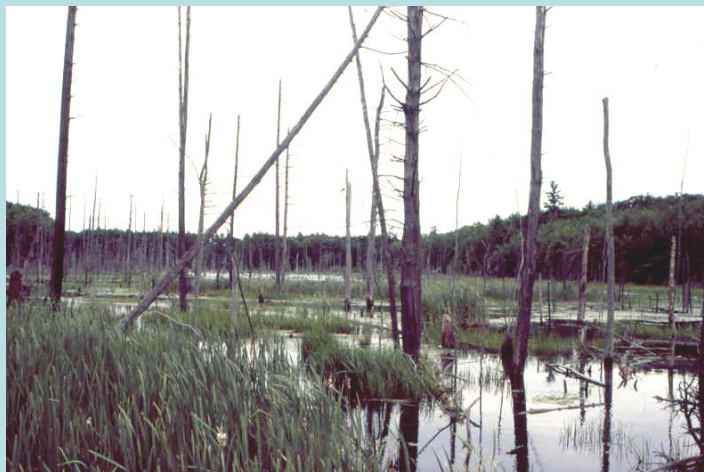
scrub-shrub wetlands



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

Bogs



Peat swamps



Fens



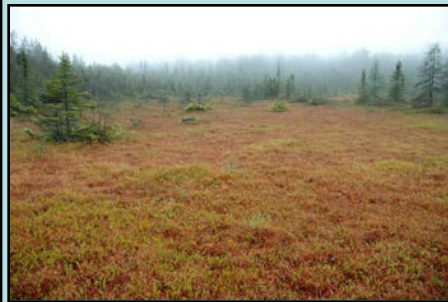




A moat around the edge of a wetland can indicate a peatland



Quaking Bog



Carnivorous Plants



pitcher plant



round-leaved sundew

horned bladderwort



Wildlife of Peatlands



Ringed boghaunter dragonfly
NH State threatened



Moose



Spruce Grouse
Special Concern



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

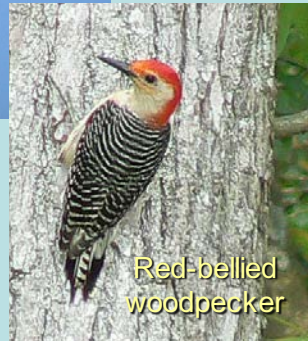
great blue heron nesting colony



Silver-haired bat
Special Concern



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
Special Concern

New Hampshire Fish & Game Department

New Hampshire Wildlife Sightings



Home Species of Interest Related Links Contact Us Login



Blanding's turtle (Emydoidea blandingii)

1 2 3 4 5 6 7 Previous Next Pause

Tell us what you've seen!

WELCOME to NH Wildlife Sightings, a web tool for reporting wildlife observations in New Hampshire.

It's for everyone — landowners, foresters, outdoor sportspersons, wildlife enthusiasts... And it's easy!

- Begin by creating your own **user account**...
- **Learn** how to use the reporting tools
- Review our wildlife **species of interest**
- **Visit links** of related information.

NH Fish & Game's Nongame and Endangered Wildlife Program
Protecting over 400 species of mammals, birds, reptiles, and amphibians, as well as thousands of insects and other invertebrates.
Read more...

Tips for Wildlife Watching in New Hampshire
Get ideas on tools for wildlife viewing, viewing ethics and responsibilities, photo tips, and how to increase your chances of seeing wildlife.
Read more...

NH Wildlife Management Conservation Areas
Find locations of undeveloped land owned by N.H. Fish and Game Dept. and designated as areas for wildlife conservation, hunting and fishing.

Wetland habitats: what you can do



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

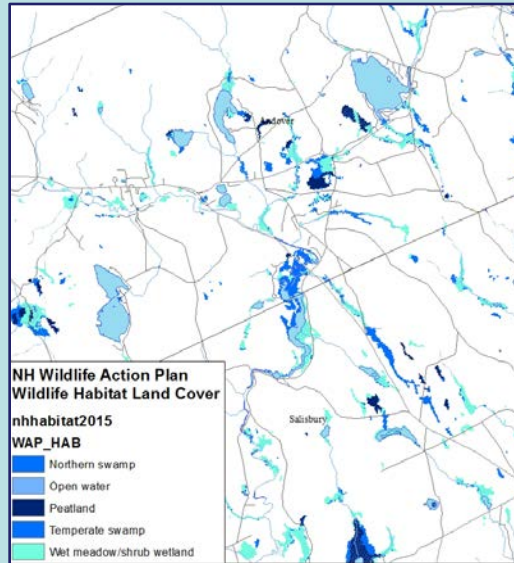
Maintain tree, shrub and ground cover around wetlands for wildlife.



Minimize fertilizer and pesticide applications to lawns.

Wetlands Mapping

- NH Wildlife Action Plan Habitat Land Cover
- National Wetlands Inventory (NWI)



Resources



- Taking Action for Wildlife
 - NH Wildlife Action Plan
 - Habitat Stewardship guidelines
 - Vernal Pool Manual (NHFG)
 - Good Forestry in the Granite State
- UNH Cooperative Extension foresters and NHFG biologists
 - Consulting foresters and biologists

Confused?



Any Questions?