
Requesting change to Wetlands Ordinance

From Kelly Short <kshort@canterburynh.gov>

Date Sun 6/7/2026 10:06 PM

To Brendan O'Donnell <bodonnell@canterburynh.gov>

Cc Land Use Administrator <landuseadministrator@canterburynh.gov>; Audra Klumb <aklumb@canterburynh.gov>

Hi Brendan,

Following up on the discussion at the All Land Boards meeting, the Conservation Commission voted at its May 2026 meeting to request a clarification in the language of the Wetlands Ordinance.

Vernal pools are high value wetlands that support aquatic organisms that are not able to live in other types of wetlands and waterbodies. The State recognizes that vernal pools are different and special wetlands by including them separately in their Rules. Vernal pools are often very small, isolated, wetland areas that provide the habitat that is needed by the vernal pool dependent species. The following is from UNH extension:

- "Small pools can have just as many (or more) breeding amphibians as larger wetlands—size isn't a good measure of habitat value." (<https://extension.unh.edu/resource/vernal-pools>)

The Wetland Subcommittee, which was tasked with organizing the Wetland Setback Ordinance, intended that vernal pools should be protected completely. The 2,000-sq-foot threshold for applying the setback was intended only for wetlands, not vernal pools or surface waters.

The Conservation Commission requests that Planning Board amend the language in the ordinance by deleting the text in red below:

Setback: No new structures may be erected within 25 feet of, and no land disturbing activity may be conducted within 15 feet of: (i) wetlands that are larger than 2,000 square feet; (ii) vernal pools **that are larger than 2,000 square feet**; or (iii) surface waters. The setback distance is measured from the edge of the wetland, vernal pool, or surface water to the edge of soil disturbance or foundation of structure.

Please let me know if the Planning Board has any questions.

Thank you,
Kelly Short
Chair, Conservation Commission

Vernal Pools

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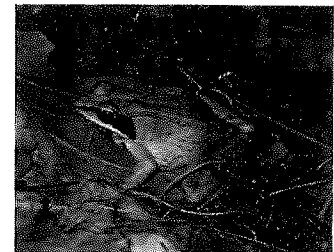
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Vernal pools are wetlands with a seasonal cycle of flooding and drying. Some vernal pools flood in the spring with water from melting snow, rain or high groundwater and then typically dry by summer's end. Other pools follow a similar pattern, but fill with rain in autumn, hold water all winter and spring, and then dry out by late summer. The annual drying cycle of vernal pools makes them different from other wetlands and plays a key role in determining which wildlife species uses which pools as habitat.

Some sunnier vernal pools may contain sphagnum moss, sedges, ferns and shrubs such as high-bush blueberry or buttonbush. Red maple and eastern hemlock commonly grow on the edges of vernal pools, although pools may be found in many different forest types. Dry vernal pools can sometimes be identified by the presence of dark, matted leaves within a depression in the ground.

Why are Vernal Pools Important?

Fish are top predators in wetlands, but they can't survive in pools that dry out.. As a result, vernal pools provide key breeding habitat for amphibians whose tadpoles and larvae are especially vulnerable to fish predation: wood frogs, spotted, blue-spotted, and Jefferson's salamanders. In the spring, these amphibians migrate from nearby woodlands to vernal pools– where they breed and deposit their eggs. Once hatched, tadpoles and larvae develop quickly into young frogs and salamanders that must leave the wetland before it dries up – by early or mid-summer for wood frogs, or by late summer or early autumn for salamanders. Other species besides amphibians use vernal pools as habitat. Fairy shrimp (at right) are small crustaceans that require vernal pools for breeding. Spotted and Blanding's turtles, great blue herons, raccoons and predatory insects travel to vernal pools to feed on amphibian eggs, tadpoles, insects and crustaceans in the pools.



Where do Vernal Pools Occur in New Hampshire?

Vernal pools can exist almost anywhere—in forests, fields, shrub swamps, marshes, or in gravel pits. They can be smaller than one-tenth acre or larger than two acres. Vernal pools occur as isolated wetlands (not connected to other wetlands), as part of larger wetlands (for example, a vernal pool within a scrub-shrub swamp), or in floodplains along rivers. Vernal pools in woodlands are often small enough that the forested canopy remains unbroken above them, staying shady and cool throughout the growing season. These may be overlooked, appearing as simple pools of water in the forest, with little vegetation growing in them.



Vernal pools exist in all parts of the state, but are most common in the flatter regions of central and southeastern New Hampshire. Vernal pools are scattered across the landscape and are easily overlooked in wetland inventories. As a result, most vernal pools haven't been adequately mapped, and scientists don't know how many pools have already been lost to development.

Interested in mapping vernal pools in your community? [Click here](#) to learn more!

Understanding the Threats to Vernal Pools

Threats from Development

The impact of human development on vernal pools is the most significant threat to these habitats and their associated wildlife. Development, road-building and re-grading of land can fill and destroy vernal pools, causing immediate loss of habitat and (for some species) permanent loss of populations. Many amphibians breed in the pools where they hatched, returning to the same pool every year. If one pool is lost, the pool's returning amphibians may be lost as well. Although many vernal pools meet the state regulatory definition of a wetland, some pools either don't meet the definition (for example, no vegetation) or are overlooked during wetlands' mapping due to their small size and isolation. If construction of a new development will affect wetlands, it is often the small pools which are chosen to be filled.

Threats to Surrounding Woodlands

The time most amphibians spend in a vernal pool is short but critical. They breed in the pool, but they spend about 11 months of the year in the surrounding woodlands, usually within 600 yards of the wetland. So, even when development plans avoid direct impacts to vernal pools, some amphibians may be lost if the woods surrounding the pool are significantly altered. Indirect impacts of development such as changes in water flow, changes to the water table, increased pollution, and the removal of forested canopy near pools can combine to degrade or destroy the habitat value of nearby vernal pools.

Climate Vulnerabilities for Vernal Pools

- Higher temperatures could cause vernal pools to draw down earlier in season or have greater annual variation in hydroperiod, which could affect breeding amphibians and other species.

[Click here for the Seasonally Flooded Wetlands Climate Assessment](#), a section of the Ecosystems and Wildlife Climate Change Adaptation Plan (2013), an Amendment to the NH Wildlife Action Plan

Wildlife Found in Vernal Pools

The species listed here are closely associated with vernal pools, but many other wildlife species will use vernal pools at some time of the year for breeding or foraging. Species of conservation concern--those wildlife species identified in the [NH Wildlife Action Plan](#) as having the greatest need of conservation--appear in bold typeface with links to their species profile from the Plan.

NH Fish & Game publishes a [website about reptiles & amphibians](#) in NH with identification photos for all species. Many of the links below connect to these Fish & Game webpages.

- American toad
- Fowler's toad
- Pickerel frog
- Blanding's turtle**
- Giant water bug
- Red-spotted newt
- Blue-spotted salamander
- Gray tree frog
- Ribbon snake
- Bull frog
- Green frog
- Snapping turtle
- Damselflies & Dragonflies
- Jefferson salamander
- Spring Peeper

- Northern leopard frog
- Wood frog
- Wood turtle

* state-threatened species ** state-endangered species

Stewardship Guidelines for Vernal Pools

- Work with the New Hampshire Fish and Game Department to **identify and map the vernal pools on your land or in your town** (contact the Wildlife Division at 603-271-2461 or [read more here](#)).
- New Hampshire Fish and Game tracks all sightings of rare reptiles and amphibians. Report any sightings you make to the New Hampshire Reptile and Amphibian Reporting Program (links to New Hampshire Fish & Game webpage).
- To conserve the greatest diversity of amphibians, **focus conservation efforts on areas containing a variety of wetlands such as vernal pools and others that hold water all year long**. Keep in mind:
 - Isolated pools (without inlet or outlet) are less likely to have fish.
 - Small pools can have just as many (or more) breeding amphibians as larger wetlands—size isn't a good measure of habitat value.
 - Most amphibians require wetlands that hold water at least four months.
 - Pools that hold water for four to 11 months (including permanent wetlands) help protect against complete reproductive failures in more seasonal pools during dry years.
 - Pools that hold water less than four months can still serve as foraging sites, as wood frog breeding sites, as habitat for insects and crustaceans, and as stepping stones for amphibians migrating to new habitats.
 - Clusters of vernal pools may be more productive for wildlife than single, isolated pools.
- When conducting any work near vernal pools, **avoid creating ruts and skid roads that collect or change the flow of water**. Through runoff, these disturbances can influence the timing of wet/dry periods in a vernal pool, altering the species that can breed there.
- To avoid changing the pool's ability to hold water, **don't run heavy machinery through vernal pool basins** (wet or dry).
- **Avoid clearcuts in or around vernal pools**. Removing the shade of the tree canopy can heat up the air, soil and water in the pool, change the period of time that water remains in the pool, and influence which species can survive there.
- In upland areas within 300 feet of a pool, and in corridors between vernal pools, **retain ground cover** (logs, surface stones, deep leaf-litter) as cover for amphibians, and maintain a moist environment on the forest floor by retaining patches of canopy shade.
- **Consult a licensed New Hampshire forester before conducting a timber harvest** on your property. Understand and follow all laws pertaining to tree harvesting near wetlands and waterbodies. Many vernal pools qualify as wetlands by New Hampshire state regulations.
- **Follow established Best Management Practices**, and harvest timber near vernal pools only when the soils are either frozen (winter) or very dry (summer).
- The quality of the uplands that surround vernal pools has a strong impact on the diversity of the vernal pool. When possible, **keep development, roads, and driveways at least 300 yards away from vernal pools** (and other wetlands).
- When planning new roads or upgrades that bisect known amphibian and reptile migration corridors (especially for such species as Blanding's turtles, marbled or Jefferson salamanders), **consider incorporating tunnel crossings under roads** with accompanying drift fencing to minimize deaths among these animals during migration.
- **Zoning ordinances that promote cluster development** can help preserve natural lands and and/or wetlands.

Additional Resources for Vernal Pools

- [NH Wildlife Action Plan habitat profile for Vernal Pools](#), including information about the condition and location of this habitat, the threats facing this habitat, and conservation actions recommended by biologists to protect vernal pools in New Hampshire.
- [Wetlands Assessment](#) - Click on the following link to download (or order) the UNH Cooperative Extension publication, "[The Importance of Hydroperiod in Wetlands Assessment](#)," a technical publication for wetland scientists and public decision-makers interested in assessing the habitat value of various wetlands (at left).

Photo Credits on this page: Malin Ely Clyde; Mike Marchand, NH Fish & Game; Timothy Beaulieu.

Research for this webpage and accompanying [Habitat Stewardship brochures](#) was conducted by UNH Cooperative Extension staff with support from the [Sustainable Forestry Initiative](#) and [NH Fish & Game](#).

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