

Is this a Vernal Pool ?

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We thank the Of Pools and People team for contributing the science, photography, and figures for this presentation

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We hope that the following images will be helpful in distinguishing between vernal pool habitat and habitat that does not meet Maine's regulatory definition of a vernal pool

Maine State Vernal Pool Definition

*Naturally occurring, temporary to semi-permanent pools occurring in shallow depressions in forested landscapes. Vernal pools provide the primary breeding habitat for wood frogs, blue-spotted and spotted salamanders, and fairy shrimp and provide habitat for other wildlife including several endangered and threatened species. **



* Please note in other states and in other situations requiring conservation decisions unrelated to jurisdictional issues, artificial wetlands that are old or "naturalized" like gravel pits, old borrow pits or abandoned farm ponds, may have temporary hydrology and be embedded in forested landscapes. Although not natural, these areas may provide superb breeding areas.

Like most animals, frogs, salamanders, and fairy shrimp do not read and do not always abide by our definitions. In addition to breeding in vernal pools, they may also be found using habitat that does not meet our definition of a vernal pool. The presence of vernal pool species in a roadside ditches, skidder ruts, or borrow pits does not make the ditch a vernal pool.



Vernal pool – semi-permanent pool within large forested wetland complex



Not a vernal pool – skidder ruts



Not a vernal pool - slow-moving stream. Blue-spotted and spotted salamanders, especially in southern NE and parts of Maine, may lay some eggs along slow moving streams but this does not make the streams vernal pools. In some cases, the eggs are hidden enough in vegetation or little isolated pools that they successfully hatch.



Vernal pool – shrub swamp dominated by winterberry and blueberry bushes which are often used as attachment sites for wood frog egg masses



Not a vernal pool - road-side ditch. These collect toxins and may produce young but they may also be biological sinks (meaning significantly less young are recruited into the general populations than are deposited as eggs as compared to a real ephemeral wetland in the forest)



Vernal pool - isolated depression surrounded by forested upland



Not a vernal pool - retention basin, often permanent and low water quality



Not a vernal pool - recently abandoned beaver flowage. In general, large flowages complete with dead standing trees, are not vernal pools. However, spotted salamanders may do well in these settings, and in some contexts, wood frogs do well too. It depends on the availability of natural pools, the complexity of the flowage (there may be fish free refugia) etc. See papers by Cunningham and Karraker on these issues.



Early fall potential vernal pool - check in spring. If it contains egg masses then it is a vernal pool within a forested wetland.



Definitely NOT a vernal pool - farm pond once stocked with game fish and teeming with predatory bull and green frogs



Vernal pool – discrete depression in a upland forest setting



Vernal pool - floodplain depression along the bank of a large river. The pool may be flooded by the river in spring and sometimes there are temporarily fish in a pool from this overflow. It is still a vernal pool.



Vernal Pool - Floodplain depression along the bank of a small stream



Potential vernal pool - check for egg masses

This is most likely a vernal pool in a forested wetland (common in central and southern Maine)



Not a vernal pool – permanent natural pond that hosts a breeding population of spring peepers. If you see pond lilies or plants like pickerel weed, chances are, it is a permanent water body.



This is a difficult call. It is hard to tell whether the road went through the pool OR the road work created a rut that serves as a pool. You will have to use your judgment. If it is an active road, it should NOT be called a pool.

If this were a shallow pool in the woods (not part of a road) read below.

This is technically a vernal pool. It may hold water for too short a time to be productive, but in good rain years, it may produce wood frogs and salamanders and it may hold water long enough to support fairy shrimp. There are pools that only produce vernal pool amphibians once in five years but they are very productive on that fifth year.



Vernal pool – Depression in upland forest...you can see rafts of wood frog egg masses attached to woody material at the pools surface.