

Vernal Pools

Vernal pools and their surrounding 650' life zone. Vernal Pools are small (generally less than one acre), ephemeral pools that occur in natural basins within upland forests. They typically have no permanent inlet or outlet streams and have very small watersheds. Vernal pools are defined by the physical and hydrologic characteristics of the basin and by the animal species associated with the pool, including mole salamanders, wood frogs, and invertebrates.

Why is it Important?

Vernal pools are best known as breeding habitat for mole salamanders (spotted salamander, blue-spotted salamander, and Jefferson salamander), eastern four-toed salamander, and wood frog. These species are considered vernal pool indicator species, meaning they cannot reproduce without access to a vernal pool. All these species migrate to vernal pools for spring breeding from adjacent upland forests where they spend the majority of their life cycles. Eggs are laid in the pools and amphibian larvae develop and mature there and then move to the adjacent forest. Studies indicate that the majority of the amphibians using a pool for breeding are found within 650 feet of the pool during the non-breeding season, underscoring the importance of the habitat surrounding the pool in addition to the pool itself. Vernal pools are also important for other species, including fairy shrimp, fingernail clams, spring peepers, American toad, and several plant and wildlife species. Vernal pools and the species that rely on them are particularly vulnerable to hydrologic changes to their small watersheds. For example, development and climate driven changes in runoff volume and pool duration may render them less suitable amphibian breeding habitat.

How was it made?

This dataset was first created in 2015 for use in BioFinder and Vermont Conservation Design and was updated to include vernal pools that had been field-verified since the last version.

Highest Priority Vernal Pools are those that were confirmed as actual vernal pools as part of the VT Vernal Pool mapping project, while *Priority* Vernal Pools are those that were not confirmed.

To get more technical information about the Vernal Pools Component, see the see the [2023 Technical Abstract](#)