Vernal Pool Stewardship Award Manual

Prepared by the Vernal Pool Stewardship Working Group for the Northeast

https://www.vernalpools.me/vernal-pool-working-groups-for-the-northeast/

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Stewardship Award Overview

The Vernal Pool Stewardship Award program is a *Pools and People* initiative that officially recognizes landowners that adopt vernal pool-friendly conservation strategies on their properties and can be applied to either managed forests or suburban lots. The goal of the Vernal Pool (VP) Stewardship Program is to create a community of landowners who together help protect vulnerable animals that depend on Vernal Pools for breeding, such as the spotted salamander, Jefferson salamander, blue-spotted salamander, marbled salamander, wood frog, and fairy shrimp.

Landowners who agree to follow specific land management practices and landscaping on their property that is advantageous to these vernal pool breeders qualify for a VP Stewardship Award. These landowners will receive an attractive VP Stewardship sign to display on their property that demonstrates their commitment, and which can serve as a "model" property for others.

Host organizations, such as a local land trust or wildlife management or conservation organization, may nominate landowners, review award applications, and provide awardees with the signs. Landowners may also apply for an award by contacting the nearest host organization.

If you or your organization would like to become a host organization and sponsor awards, please contact Aram Calhoun at: calhoun@maine.edu.

Introduction to Award Criteria

Below you will find two sets of stewardship guidelines for landowners - one designed for those pools that are surrounded by at least 10 acres of relatively intact forest (may be a small family woodlot) and the other designed for vernal pools found on suburban lots where some or all of the vernal pool depression and surrounding Critical Terrestrial Habitat occurs on that lot.

The guidelines are based on extensive field research about habitat conditions vernal pool amphibians need to thrive both during the breeding season and non-breeding seasons. The guidelines were designed using data on how far adult amphibians travel to and from breeding pools from winter habitat in the adjacent forests as well as information on summer and fall migrations among wetlands and upland forest sites.

We recognize that any one landowner cannot always control what happens in the entire vernal pool depression and/or surrounding forest, so the guidelines have been tailored to actions any one landowner can take and still make a difference. However, for best results when vernal pools cross property boundaries, we encourage neighbors to work together to provide high quality habitat conditions for vernal pool amphibians and the many other wildlife species that use vernal pools.

For further information and references, please visit the *Pools and People* website at www.vernalpools.me.

Recommended guidelines for vernal pools and surrounding habitat for homeowners

MANAGEMENT AREA (Distance from Pool Edge)	PRIMARY WILDLIFE HABITAT VALUES	DESIRED MANAGEMENT OUTCOMES	RECOMMENDED GUIDELINES (Further details can be found *in Calhoun and Klemens 2002)*
***VERNAL POOL DEPRESSION* (0 FT)**	Breeding pool for frogs, salamanders, and fairy shrimp. Adults lay eggs attached to aquatic vegetation, shrubs, or downed wood in the pools. Young hatch and grow into juveniles before leaving the pool for the surrounding uplands. Eggs, young, and other aquatic life serve as food for other wildlife, including snakes, turtles, birds, and mammals.	Maintain high water quality and water-holding capacity. Keep natural, native shrubs around the edge of the pool and in the pool where present. These provide surfaces for attaching eggs and dead leaves and wood that supports the food web.	• No disturbance in any season, even when dry. • Allow leaves and branches to fall into the wetland. • Don't dump yard debris into the pool. • Keep pets out of the pool.
***VERNAL POOL ENVELOPE* (0-100 FT)**	Trees around pools provide shade. Dead leaves and wood fall into the pool and provide organic food for insects and juvenile amphibians. Recently emerged wood frogs and salamanders may overwinter in this zone and some adults (especially male wood frogs) move into this zone to over-winter.	Maintain a healthy forest canopy around the pool. Retain sources of clean water that feed the pool. Maintain or provide large logs from pool to upland to help amphibians move from pool to forest.	• No development and no disturbance. • Allow shrubs and trees to encircle the pool. • Use no lawn fertilizers, herbicides, or pesticides. • Do not mow, rake, or remove logs in this area. • Replace invasive plant species with native plants. • Limit use of driveway and walkway de-icing salts. • Keep cats inside at night (or always if possible). • Do not clear down wood from the forest floor.
***CRITICAL TERRESTRIAL HABITAT* (100-750 FT)**	Surrounding upland and wetland forests provide food, cover, and hibernation sites for adult pool-breeding amphibians. Also provides safe passage for juveniles to disperse to other nearby vernal pools.	Maintain at least 75% tree cover to provide shade, a deep layer of leaves, and dead logs and branches. These conditions help keep amphibians from drying out and provide homes for invertebrates that frogs and salamanders feed on. Small mammal burrows provide cover and hibernation sites for salamanders.	• Use no lawn fertilizers, herbicides, or pesticides. • Reduce mowing around the house to once every two weeks or less until after amphibian migration. • Use screen fencing to keep animals out of the swimming pool area and/or use escape ramps to allow amphibians to climb out of in-ground swimming pools. • Keep cats inside at night (or always if possible). • Cover window wells or install escape ramps so amphibians don't get trapped. • Keep trash cans inaccessible to raccoons, skunks, and other wild animals.

Recommended guidelines for vernal pools and surrounding management areas in forested landscapes

MANAGEMENT AREA (Distance from Pool Edge)	PRIMARY WILDLIFE HABITAT VALUES	DESIRED MANAGEMENT OUTCOMES	RECOMMENDED GUIDELINES (Further details can be found *in Calhoun and deMaynadier 2004)*
VERNAL POOL DEPRESSION **(0 FT)**	Breeding pool for frogs, salamanders, and fairy shrimp. Adults lay eggs attached to aquatic vegetation, shrubs, or down wood in the pools. Young hatch and grow into juveniles before leaving the pool for the surrounding forests. Eggs, young, and other aquatic life serve as food for other wildlife, including snakes, turtles, birds, and mammals.	Maintain high water quality and water-holding capacity. Keep natural, native shrubs around the edge of the pool and in the pool where present. These provide surfaces for attaching eggs and provide dead leaves and wood that support the food web.	• No disturbance in any season, even when dry. • Keep all equipment out of pool depression.
VERNAL POOL ENVELOPE **(0-100 FT)**	Trees around pools provide shade. Dead leaves and woody material fall into the pool and provide organic food for insects and juvenile amphibians. Recently emerged wood frogs and salamanders may overwinter in this zone and some adults (especially male wood frogs) move into this zone to over-winter.	Maintain a healthy forest canopy with shade around the pool. Retain sources of clean water that feed the pool. Maintain deep, moist, uncompacted leaf litter and abundant down wood on forest floor.	• Harvest only when ground is frozen, or soil is dry. • Retain at least 75% canopy cover throughout area. • Limit impacts from harvesting machinery by reaching in from outside the area and using low impact machinery. • Retain abundant large down wood on forest floor.
CRITICAL TERRESTRIAL HABITAT **(100-750 FT)**	Surrounding upland and wetland forests provide food, cover, and hibernation sites for adult pool-breeding amphibians. Also provides safe passage for juveniles to disperse to other nearby vernal pools.	Maintain at least 50% tree cover to provide shade, a deep layer of uncompacted leaves, and dead logs and branches on the forest floor. These conditions help keep amphibians from drying out and provide habitat for invertebrates that frogs and salamanders feed on. Small mammal burrows provide cover and hibernation sites for salamanders.	• Harvest only when ground is frozen or soil is dry and use low- impact harvest machinery. • Retain at least 50% canopy cover throughout area. • Ensure any openings are < 1 acre in size. • Retain abundant large down wood on forest floor.