



# Division of Fisheries & Wildlife

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## *Natural Heritage & Endangered Species Program*

### *Explanation for the 2009 Revisions to the 'Guidelines for the Certification of Vernal Pool Habitat'*

*March 2009*

The Natural Heritage & Endangered Species Program ("NHESP") has administered the state's official vernal pool certification program for over twenty years. Since its inception over 5,000 vernal pools have been certified. This March, the NHESP released revisions to the *Guidelines for the Certification of Vernal Pool Habitat* (the "Guidelines"). Prior to the release of these revisions, the NHESP held a publicly-noticed comment period relative to the recommended revisions. Below (Section II.) is a summary of the major comments received during this comment period and the NHESP's responses to those comments.

#### **Section I. Vernal Pool Certification Program – Background and Intent**

The vernal pool certification program was established in 1987 when the Wetlands Protection Act regulations (WPA) (310 CMR 10.00) were amended to include 'Wildlife Habitat' as a statutory interest. Vernal pools are not a jurisdictional wetland 'Resource Area' under the WPA, but are areas located within wetland 'Resource Areas' that provide important wildlife habitat functions. Under the WPA, vernal pools aren't presumed present in jurisdictional wetland 'Resource Areas' unless they have been certified by the NHESP. Thus, the vernal pool certification program was created to register the locations of vernal pools, regardless of WPA jurisdiction, that meet the characteristics of 'Vernal Pool Habitat' in the WPA: those that provide essential breeding habitat for certain amphibians that make extensive use of vernal pools [see 310 CMR 10.04, 10.57(1)(a)(3), 10.57(1)(b)(4), and 10.58(1)].

#### **Section II. Public Comments Received Primarily Raised the Following Nine Questions:**

##### **1. Why the Guidelines were for the Certification of Vernal Pool Habitat recently revised?**

Revisions to the *Guidelines* were designed to ensure consistency between the NHESP's vernal pool certification criteria and the biological and physical characteristics of 'Vernal Pool Habitat' in the WPA [see 310 CMR 10.04, 10.57(1)(a)(3), 10.57(1)(b)(4), and 10.58(1)]. Overall, the revisions are intended to contribute to the defensible certification of Vernal Pool Habitat in the broad variety of wetland habitats where vernal pools occur. [www.nhesp.org](http://www.nhesp.org)



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To accomplish this, the revised *Guidelines* reduces the number of facultative species acceptable for certification to four amphibians (i.e., Spring Peeper, Gray Treefrog, American Toad, and Fowler's Toad) and eliminates the 'Dry Pool' certification method. In addition, requirements for documenting the physical and biological characteristics of a vernal pool have been enhanced. For example, more comprehensive photographs of the pool are required and egg masses of obligate amphibian species (Wood Frog or Ambystomid salamanders) have been increased from two for each species to five for *all species combined*.

## 2. Why was the Facultative Species Method revised and the Dry Pool Method eliminated?

One of the original intents of the certification program was to certify *isolated* vernal pools that were not protected for their wildlife habitat functions by the WPA. With this in mind, facultative species were chosen as a certification criterion to indicate appropriate vernal pool hydrology (two months) in isolated pools; they indicate vernal pool habitat *only* when combined with the appropriate physical evidence.

Today it is commonly acknowledged that vernal pool habitat occurs within a variety of wetland settings *beyond* isolated wetlands, including forested and shrub swamps, emergent marshes, floodplains, and other wetland environments. Vernal pool certification has evolved with this knowledge, and all vernal pools are certified provided they meet the requisite biological and physical criteria of 'Vernal Pool Habitat' in the WPA. For this reason, the continued use of facultative vernal pool species, particularly invertebrates, has become problematic.

Although many facultative species are commonly found in vernal pools, they also use a wide variety of temporary and permanent wetlands. Their presence *may* indicate a minimum two-month hydroperiod, but in portions of swamps, marshes, or floodplains it is difficult to confirm that these areas also meet the physical criteria of 'Vernal Pool Habitat', or that they provide essential breeding habitat for amphibians that need vernal pools. More importantly, certain facultative invertebrates can be found in wetlands with very short hydroperiods and shallow water levels that aren't likely to support successful amphibian larval development.

To increase the confidence that certified vernal pools meet the biological and physical description of Vernal Pool Habitat in the WPA, the Dry Pool Method has been eliminated and the Facultative Species Method has been modified to certify pools that have direct evidence of:

- 1) breeding facultative amphibians that preferentially use vernal pools and require a minimum of two months inundation for metamorphosis, and
- 2) the physical features that demonstrate an area functions as vernal pool habitat.

## 3. Isn't removal of some of the facultative species inconsistent with the WPA Regulations?

In accordance with the WPA, the NHESP certifies essential breeding habitat for certain amphibians that require vernal pools [see 310 CMR 10.04, 10.57(1)(a)(3), 10.57(1)(b)(4), and 10.58(1)]. As described in the 'Preface To The Wetlands Protection Act Regulations,

Vernal pools within jurisdictional wetland 'Resource Areas' that are automatically *presumed* significant to wildlife can receive protection whether certified or not; vernal pools in jurisdictional 'Isolated Land Subject to Flooding', however, can't be protected until certified.

2005 Revisions', section 'Preface To Wetlands Regulations Relative To Protection Of Wildlife Habitat, 1987 Regulations', section V., Issues Of Major Concern, part C. Vernal Pools (pg. 447):

*"...the final regulations create a presumption that vernal pools are present only when mapped, where such maps have been certified by the Division of Fisheries and Wildlife. That Division has agreed to establish such a certification program, which will require evidence of the breeding of amphibian species that need vernal pools."*

**4. Since facultative species use a variety of permanent and temporary wetlands, why were certain facultative species retained for certification while others were eliminated?**

The NHESP conducted a species-by-species evaluation of the facultative species list, eliminating the less reliable indicators of vernal pool habitat while retaining the species considered reliable.

Facultative Species Retained:

The facultative amphibians retained for certification include those that preferentially breed in the fish-free habitats vernal pools provide and/or generally require a minimum of two months of inundation to complete metamorphosis (Spring Peeper, Gray Treefrog, American Toad, and Fowler's Toad). Thus, breeding evidence of at least two of these species is accepted as documentation that a wetland meets the minimum two-month hydroperiod and, if coupled with appropriate physical evidence, indicates that an area provides vernal pool habitat. In some areas it may be especially important to protect vernal pools used by these facultative amphibians because it is thought they may constitute essential breeding habitat for some local populations of facultative species; the loss of these pools in certain regions could result in reductions to local populations. As part of the revisions process, the NHESP convened a Vernal Pool Technical Group comprised of vernal pool ecologists from Massachusetts. Members of the Vernal Pool Technical Group recommended retaining for certification the facultative amphibians that are more reliable indicators of vernal pool habitat.

Facultative Species Eliminated:

All facultative invertebrates were eliminated because, in various types of wetlands, their presence may not be a reliable indicator of vernal pool habitat (see #2 above). Facultative amphibians eliminated generally included those that are not typical vernal pool breeders, prefer water bodies with long- to permanent-hydroperiods, have overwintering tadpoles, and/or are known to inhabit water bodies with fish. Although vernal pools are important spring feeding habitats for turtles (facultative reptiles), where they feast on amphibian eggs, larval amphibians, crustaceans, and other organisms and plants, turtles are not reliable indicators of vernal pool habitat and have been removed as a certification criterion.

**5. Doesn't the elimination of the Dry Pool Method limit the ability to document vernal pools to the spring/summer breeding season?**

Yes, the 2009 *Guidelines* limits certification to the time of year when direct evidence of amphibian breeding, and/or fairy shrimp, can be documented. The NHESP will provide information on our website at [www.nhesp.org](http://www.nhesp.org) by July 2009 that can be used to identify likely vernal pool habitat when dry. This document describes certain facultative invertebrates and

physical features, that when combined, indicate that a wetland likely possesses a hydroperiod and physical features consistent with vernal pool habitat. A site visit during the amphibian breeding season is then warranted to determine if the area actually provides vernal pool habitat as described in the WPA.

**6. The intent of certification is to identify vernal pool habitat, not to assess vernal pool quality; are the increases in the number of egg masses and mated pairs intended to assess pool quality?**

No, increases in the numbers of egg masses and mated pairs are intended to ensure that certified vernal pools meet the minimum two-month hydroperiod of Vernal Pool Habitat in the WPA. Although obligate vernal pool amphibians generally require a minimum of two months of inundation for successful metamorphosis, they occasionally attempt to breed in wetlands with sub-optimal hydrologic conditions (e.g., hydroperiod too short, permanent water bodies supporting fish). As part of the revisions process, the NHESP convened a Vernal Pool Technical Group comprised of vernal pool ecologists from Massachusetts. There was general consensus among these experts that higher numbers of egg masses and mated pairs are typically associated with vernal pools that have hydroperiods suitable for amphibian metamorphosis. In consultation with the Technical Group, the NHESP concluded that five egg masses of either the Wood Frog or Spotted Salamander (originally suggested 10 for Wood Frog) would reliably indicate vernal pool habitat meeting the minimum two-month hydroperiod in the WPA.

The NHESP received a number of public comments expressing concern that increasing the required number of egg masses from two to five for the Spotted Salamander and the Wood Frog was overly stringent from a biological perspective, and would make certification significantly more difficult for individuals who document biological evidence from the shoreline (rather than entering the pool). In response to these concerns, the NHESP increased the number of egg masses to a **total of five for all obligate amphibians combined**, regardless of species.

**7. Why is there no minimum number of egg masses required for facultative and MESA-listed amphibians, as there are for obligate amphibians?**

There is no minimum number of egg masses required for facultative species because these species do not produce distinct egg masses that can be readily counted:

- **Spring Peeper** eggs are very small and deposited singly or in small clusters making detection very difficult;
- **Gray Treefrog** eggs are in very small filmy masses that are widely distributed and difficult to find ([http://www.uri.edu/cels/nrs/paton/LH\\_treefrog.html](http://www.uri.edu/cels/nrs/paton/LH_treefrog.html)); and
- **American Toad** and **Fowler's Toad** eggs are in gelatinous strands.

Only one egg mass is required for MESA-listed salamanders because only one of the three listed species produces classic egg masses (Jefferson's Salamander) and because breeding habitat for MESA-listed species is vital for the persistence of these imperiled species.

**8. a) Does the NHESP require proof of landowner permission before certifying a vernal pool and b) is the certification documentation provided to the landowner upon submission of data to NHESP?**

- a) No, the NHESP does not require proof of landowner permission for certification, but strongly recommends that landowner permission be obtained prior to collecting certification documentation. It is the sole responsibility of an individual providing vernal pool certification information to the NHESP to ensure that all of their activities associated with gathering said information comply with law.
- b) Once a pool is certified, a copy of the official notice of Vernal Pool Certification is provided to the landowner if the NHESP was provided landowner contact information. This form is also forwarded to the appropriate regional office of the MA Department of Environmental Protection (DEP), local conservation commissions, and the observer.

**9. Will details about the proposed Certification Appeals Process be publicly-noticed with a comment period?**

The written clarification describing the process for appealing vernal pool certifications is currently being drafted by the DEP in consultation with the NHESP. It is our understanding, based on consultations with DEP to-date, that release of the clarification document will likely not involve a publicly-noticed comment period. This is because the document will not describe *new* appeal options, but rather detail the existing appeal options available through the DEP and conservation commissions under existing regulations. Once complete, the clarification document will be made available on the NHESP website. Currently, requests for vernal pool decertification should be made to the NHESP.