

MASS EAST: V39



# Natural Heritage & Endangered Species Program



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## Vernal Pool Fact Sheet

Route 135  
Westborough, MA 01581  
Phone: 508/792-7270 ext. 200  
Fax: 508/792-7275  
<http://www.state.ma.us/dfwele>

### WHAT ARE VERNAL POOLS?

Vernal pools are temporary bodies of fresh water that provide critical habitat for many vertebrate and invertebrate wildlife species. "Vernal" means spring, and indeed, many vernal pools are filled by spring rains and snowmelt, only to dry up during the hot, dry months of summer. However, many vernal pools are filled by the rains of autumn and may persist throughout the winter. Vernal pools are quite often very small and shallow; vernal pools that support rich communities of vertebrate and invertebrate animals may measure only a few yards across. However, vernal pools of several acres occur throughout Massachusetts.

### WHERE ARE VERNAL POOLS FOUND?

Vernal pools are common in Massachusetts, probably occurring in every town in the state. Vernal pools are found across the landscape where small woodland depressions, swales or kettle holes collect spring runoff or intercept seasonally high groundwater tables. Although many people associate vernal pools only with upland wooded areas, valuable vernal pools also occur in meadows, river floodplains, interdunal swales, and large vegetated wetland complexes. Vernal pool habitat occurs wherever water is contained for more than 2 months in the spring and summer of most years, where no fish are present.

### WHY ARE VERNAL POOLS VALUABLE?

Vernal pools constitute a unique and increasingly vulnerable type of wetland. Vernal pools are inhabited by many species of wildlife, some of which are totally dependent on vernal pools for their survival. Vernal pools do not support fish because they dry out annually or at least periodically. Some may contain water year round, but are free of fish as a result of significant draw-downs that result in extremely low dissolved oxygen levels. The wood frog (*Rana sylvatica*), the eastern spadefoot toad (*Scaphiopus h. holbrooki*), and the four local species of mole salamander (*Ambystoma* spp.) have evolved breeding strategies intolerant of fish predation on their eggs and larvae; the lack of fish populations is essential to the breeding success of these species. Other amphibian species, including the American toad (*Bufo americanus*), green frog (*Rana clamitans*), and the red-spotted newt (*Notophthalmus viridescens*), often exploit the fish-free waters of vernal pools but do not depend on them. Vernal pools also support rich and diverse invertebrate fauna. Some invertebrate species, such as fairy shrimp (*Eubranchipus* spp.), are also entirely dependent upon vernal pool habitat. Invertebrates are both important predators and prey in vernal pool ecosystems. Vernal pools are an important habitat resource for many birds, mammals, reptiles and amphibians, including many state-listed rare species.

#### State-listed species found in vernal pools

| Species   | Status |
|---|--------|
| Blue-spotted salamander ( <i>Ambystoma laterale</i> ) <sup>1</sup>    | SC     |
| Jefferson salamander ( <i>Ambystoma jeffersonianum</i> ) <sup>1</sup> | SC     |
| Marbled salamander ( <i>Ambystoma opacum</i> ) <sup>1</sup>           | T      |
| Four-toed salamander ( <i>Hemidactylium scutatum</i> ) <sup>2</sup>   | SC     |
| Eastern spadefoot toad ( <i>Scaphiopus holbrooki</i> ) <sup>1</sup>   | T      |
| Spotted turtle ( <i>Clemmys guttata</i> ) <sup>2</sup>                | SC     |
| Wood turtle ( <i>Clemmys insculpta</i> ) <sup>2</sup>                 | SC     |
| Blanding's turtle ( <i>Emydoidea blandingi</i> ) <sup>2</sup>         | T      |

<sup>1</sup> Obligate species require vernal pool habitat to successfully breed

<sup>2</sup> Facultative species may use vernal pools but do not require them

<sup>3</sup> Status pursuant to the MA Endangered Species Act; T: Threatened, SC: Special Concern

## VERNAL POOL PROTECTION

The Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00), the Massachusetts Surface Water Quality Standards (314 CMR 4.00) used to administer section 401 of the federal Clean Water Act, the Massachusetts Environmental Code: Title 5, and the Forest Cutting Practices Act regulations all provide protection to vernal pools that have been officially certified. The regulations for both the Wetlands Protection Act and Forest Cutting Practices Act also provide protection to vernal pools that have not been certified if their occurrence is adequately documented during permit review. Protection under any of these laws requires the following:

- 1) the vernal pool occurs in an area subject to the jurisdiction of the regulations; and
- 2) the activities proposed are regulated.

**The Massachusetts Wetlands Protection Act regulations (310 CMR 10.00)** protect certified vernal pools and up to 100 feet beyond the boundary of the pool (referred to as the “vernal pool habitat”), by preventing alterations which would result in the reduction of the wildlife habitat value of the certified vernal pool. A certified vernal pool is not automatically protected by these regulations, though. Certified vernal pools must occur within a resource area that comes under the jurisdiction of the Act before they receive protection. Similarly, the 100 feet around the vernal pool must also fall within a resource area, and not in non-jurisdictional upland or the buffer zone of a resource area in order to be protected under the Act. The March, 1996 Massachusetts Department of Environmental Protection Wetlands Report Alert established a desire within the DEP to protect vernal pools that occur within any jurisdictional wetlands. Although performance standards exist only for vernal pools that occur within *Land Subject to Flooding*, vernal pools occurring within any wetlands resource area should be protected through the incorporation of appropriate conditions in an Order of Conditions issued by a conservation commission or the DEP.

Vernal pools that are not certified may also be protected by a local conservation commission or the DEP if credible scientific evidence is presented up until the end of the appeals period for a Superseding Order of Conditions issued by the DEP. A conservation commission, or the DEP on appeal, can incorporate protective conditions into an Order of Conditions that would prevent the alteration of the wildlife habitat value of the pool and its 100 foot “vernal pool habitat” if they occur within a regulated wetland even though it is not certified.

Each DEP Regional Office has at least one Vernal Pool Liaison who should be contacted for all questions related to the protection of both certified and uncertified vernal pools. Since regulatory authority rests with the Department, they are best able to answer questions about what may or may not happen in or around vernal pools. Your regional liaison may be reached at the following addresses:

Northeast Regional Office  
203-A Lowell Street  
Wilmington, MA 01887

Southeast Regional Office  
20 Riverside Drive  
Lakeville, MA 02347

Central Regional Office  
627 Main Street  
Worcester, MA 01608

Western Regional Office  
State House West, 4th Floor  
Springfield, MA 01103

**The Massachusetts Surface Water Quality Standards (314 CMR 4.00)** administer Section 401 of the federal Clean Water Act and protect certified vernal pools. Under these regulations, any certified vernal pool is classified as an Outstanding Resource Water (ORW). The regulations, administered by the DEP, strictly prohibit discharges of solid or liquid fill within certified vernal pools. Storm drainage from roads and rooftops as well as solid fill are prohibited within the boundaries of the pool. As is the case with the Wetlands Protection Act however, the certified vernal pool as well as the proposed activity must be within the jurisdiction of these regulations - the state’s Clean Water Act - before it receives this protection.

## **VERNAL POOL PROTECTION CONTINUED**

**The Massachusetts Environmental Title 5 (310 CMR 15.000)** regulates the siting and construction of subsurface sewage disposal (septic) systems in the state. A system's septic tank and distribution box must be located a minimum of 50 feet, and the leaching field a minimum of 100 feet, from the boundary of a certified vernal pool.

**The Massachusetts Forest Cutting Practices Act Regulations (3.04 CMR 11.00)** protect certified vernal pools from certain forestry impacts. Harvesting requirements limit cutting to no more than 50% of the trees within 50 feet of a certified vernal pool. They also require that trees or tree tops not be felled in certified vernal pools, and restrict the use of pools as staging areas or skidder trails. Guidelines, similar to the regulations, are established for activities planned near uncertified vernal pools identified by consulting foresters.

### **THE VERNAL POOL BOUNDARY**

When a vernal pool has been certified and the local conservation commission or the state Department of Environmental Protection has determined that it is protectable, the boundary of the vernal pool may require delineation.

The extreme edges of vernal pool habitat represent one of the most ecologically valuable portions of these habitats. Shallow water at the edges of a pool is generally the first to thaw in the spring. This provides early access to the pool for the earliest breeding species. The shallow water zones also tend to be significantly warmer than the deeper portions of a vernal pool throughout the spring. Egg masses of early breeding amphibians benefit from the warmer water temperatures at the pool edges that promote rapid egg development.

The ecological boundary of vernal pool habitat is therefore defined as

the lower of:

- a) the maximum elevation of a topographic depression that holds water for a minimum of 2 continuous months; or
- b) the maximum observed or recorded water level in a topographic depression

**\*PLEASE NOTE\*** The boundary of vernal pool habitat may be defined differently for the purpose of state or federal protection.

The boundary of a certified vernal pool is not established when a certification number is issued. Field observations of maximum flood levels or of indicators of the maximum water level obtained must be made to determine the boundary. Therefore, in recording observations of vernal pools for the purpose of certification, notes pertaining to observed water level and recognizable landmarks that show maximum flooding are extremely helpful in boundary delineation.

The Wetlands Protection Act regulations allows a project proponent to submit an opinion as to the extent of a certified vernal pool that is based upon a theoretical one year storm of a total of 2.7 inches of water in 24 hours. If an opinion based on this theoretical storm event is to be submitted, it should take into account ground water that the basin is holding at the beginning of the spring amphibian breeding season. The DEP has stated in its program policies that ground water inputs should not be ignored in these calculations because it will result in a total volume that may be considerably smaller than the basin holds in any given spring.

## HOW CAN VERNAL POOLS BE CERTIFIED?

The Massachusetts Natural Heritage & Endangered Species Program administers the official vernal pool certification program. The Certification Program depends entirely on volunteer effort and the initiative of interested individuals and organizations. Interested parties should locate potential vernal pools and then:

1. Contact the Massachusetts Natural Heritage & Endangered Species Program [(508) 792-7270, ext.200] to obtain the official "Guidelines for the Certification of Vernal Pool Habitat," along with Vernal Pool Field Observation Forms;

Certification is based on proof that a confined basin depression provides important wildlife habitat consistent with the vernal pool certification criteria in the "Guidelines". Animals that use vernal pools at some point in their life cycle are generally divided into two groups:

**Obligate Species:** those vertebrate and invertebrate species that rely on vernal pools for all or a portion of their life cycle and are unable to successfully complete their life cycle without vernal pools

**Facultative Species:** those vertebrate and invertebrate species that can use vernal pool habitat for all or a portion of their life cycle, but are able to successfully complete their life cycle in other water bodies

Obligate species serve as *direct* indicators of vernal pool habitat because they require at least two months of flooded conditions and the absence of established fish populations. When breeding evidence of obligate species is documented, it is not necessary to prove that an established, reproducing fish population does not exist. Facultative species serve as *indirect* indicators of vernal pool habitat. Therefore, if only facultative species are observed, evidence that there is no reproducing fish population must also be submitted for certification.

2. Fill out and submit a Field Observation Form along with photographic documentation of the physical and biological criteria required by the "Guidelines" and required maps to the NHESP for review. Photographs (slides or prints) are the preferred type of documentation of the biological certification criteria observed in a vernal pool. The most easily photographed evidence of vernal pool indicator species is egg masses of wood frogs and mole salamanders. These are conspicuous in the early spring and easily distinguished from other amphibian eggs. See the "Guidelines" for details.

Following receipt of certification materials, the Natural Heritage & Endangered Species Program assesses the completeness and accuracy of the information and documentation submitted. The NHESP does not field visit pools prior to certification but relies on the presentation of accurate and clear documentation.

After it is determined that a vernal pool meets the physical and biological criteria established in the "Guidelines," it will be officially certified by the NHESP. The observer, local conservation commission, regional office of the Department of Environmental Protection and the landowner are notified of the certification. The locations of Certified Vernal Pools are plotted on the NHESP's "Estimated Habitats of Rare Wetlands Wildlife and Certified Vernal Pools" on a biennial basis. These maps are sent to the town clerk and to the Conservation Commission, and are available for viewing by the public. The NHESP also produces a statewide Atlas of these maps, reproduced at a reduced scale, which is available at cost.



# Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

Spring 2000

## CERTIFICATION CRITERIA

Please read and understand the DOCUMENTATION REQUIREMENTS in the next section before submitting vernal pool certification applications.

Documentation of the biological and physical criteria described in this section is necessary to obtain official certification of any vernal pool.

**DOCUMENTATION OF ANY ONE OF THE FOLLOWING (1-3) WILL CONFIRM THE EXISTENCE OF VERNAL POOL HABITAT AND IS SUFFICIENT FOR OFFICIAL CERTIFICATION**

- 1) The Obligate Species Method**
- 2) The Facultative Species Method**
- 3) The Dry Pool Method**

### 1) The Obligate Species Method

Evidence of a confined basin depression with no permanently flowing outlet **AND** one or more of the following:

- 1A Breeding\* Obligate Amphibian
- Wood frog (*Rana sylvatica*)
  - Spotted salamander (*Ambystoma maculatum*)
  - Blue-spotted salamander (*Ambystoma laterale*)\*\*
  - Jefferson salamander (*Ambystoma jeffersonianum*)\*\*
  - Marbled salamander (*Ambystoma opacum*)\*\*
  - Eastern spadefoot toad (*Scaphiopus holbrookii*)\*\*

**OR**

- 1B Adult Obligate Invertebrate
- Fairy shrimp (ANOSTRACA: *Eubranchipus*)

### \* Acceptable Breeding Evidence

Documentation of **any one** of the following proves that an area functions as vernal pool habitat. For the purposes of official certification, if amphibian evidence is submitted it must show evidence of breeding.

1. Breeding Adults
  - Frogs and toads: breeding chorus and/or mated pairs
  - Salamanders: courting individuals (congressing) and/or spermatophores
2. Egg Masses (**two or more are required**)
3. Larvae (tadpoles or salamander larvae)
4. Transforming Juveniles
  - Frogs and toads: tail remnants evident
  - Salamanders: gill remnants evident

### \*\* State-listed Species

State-listed Endangered (E), Threatened (T) and Special Concern (SC) species are protected under the Massachusetts Endangered Species Act (321 CMR 10.60); fill out a Rare Animal Observation Form and submit along with Certification Form.

## CERTIFICATION CRITERIA

### 2) The Facultative Species Method

Evidence of a confined basin depression with no permanently flowing outlet **AND** evidence that there is no established, reproducing fish population

**AND** photographs of two or more of the following:

#### **AMPHIBIANS**

Breeding\* Spring peeper (*Pseudacris crucifer*)  
Breeding\* Gray treefrog (*Hyla versicolor*)  
Breeding\* American toad (*Bufo americanus*)  
Breeding\* Fowler's toad (*Bufo woodhousii*)  
Breeding\* Green frog (*Rana clamitans melanota*)  
Breeding\* Pickerel frog (*Rana palustris*)  
Breeding\* Leopard frog (*Rana pipiens*)  
Breeding\* Four-toed salamander  
(*Hemidactylium scutatum*)\*\*  
Adult or Breeding\* Red-spotted Newt  
(*Notophthalmus v. viridescens*)

#### **REPTILES**

Spotted turtle (*Clemmys guttata*)\*\*  
Blanding's turtle (*Emydoidea blandingii*)\*\*  
Wood turtle (*Clemmys insculpta*)\*\*  
Painted turtle (*Chrysemys p. pictata*)  
Snapping turtle (*Chelydra serpentina*)

#### **INVERTEBRATES**

Predaceous diving beetle larvae (*Dytiscidae*)  
Water scorpion (*Nepidae*)  
Dragonfly larvae (*Odonata: Anisoptera*)  
Damselfly larvae (*Odonata: Zygoptera*)  
Dobsonfly larvae (*Corydalidae*)  
Whirligig beetle larvae (*Gyrinidae*)  
Caddisfly larvae (*Trichoptera*)  
Leeches (*Hirundinea*)  
Freshwater (fingernail) clams (*Pisidiidae*)  
Amphibious, air-breathing snails (*Basommatophora*)

### 3) The Dry Pool Method

Evidence of a confined basin depression containing no standing water (dry pool)

**AND** one or more of the following:

Cases of caddisfly larvae (*Trichoptera*)  
Adults, juveniles or shells of either of the following:  
Freshwater clams (*Pisidiidae*)  
Amphibious, air-breathing snails (*Basommatophora*)  
Shed skins (exuvia) of dragonfly or damselfly larvae on vegetation along the edge of pool

## DOCUMENTATION REQUIREMENTS

Documentation of the biological and physical characteristics listed in the CERTIFICATION CRITERIA must be submitted for official certification of a vernal pool. Photographic prints or slides are the preferred method of documentation, but video tapes of evidence or audio recordings of calling frogs are acceptable. Field notes are encouraged, but are not accepted as evidence; they must be submitted along with photographic or taped documentation.

Label all photographs as follows:

**Location of pool  
(or tracking number)  
Date of photograph  
Observer's name**

The following field observations must be adequately documented

1. Biological criteria:

1A Clear photographs or video of obligate amphibian breeding evidence

**OR**

1B Clear photographs or video of facultative invertebrate or vertebrate species (**AND** 2B or 2C)

**OR**

1C Audio tape of frog breeding chorus

2. Fishlessness:

2A Evidence of obligate species per CERTIFICATION CRITERIA (1A above)

**OR**

2B Photograph of dry vernal pool

**OR**

2C Scientific evidence (e.g. seining) that documents the absence of fish

3. Physical criteria:

Clear photographs or video of the vernal pool demonstrating the lack of permanently flowing connections to larger wetlands

## MAPPING REQUIREMENTS

It is critical to provide maps that are accurate and clear when submitting information for state vernal pool certification. A 1:24,000 or 1:25,000 scale U.S. **Geological Survey topographic map is required**, and additional maps that clarify the position of the vernal pool must be submitted. Many maps are acceptable for this purpose. Large scale street maps generally are not acceptable as supporting maps.

At least one from each of the following groups must be submitted:

### GROUP 1

**USGS topographic:**

The location of the vernal pool must be clearly and accurately marked with an 'X' or dot

### GROUP 2

**Aerial photograph**

Large scale (1:12,000 or better) with pool clearly visible

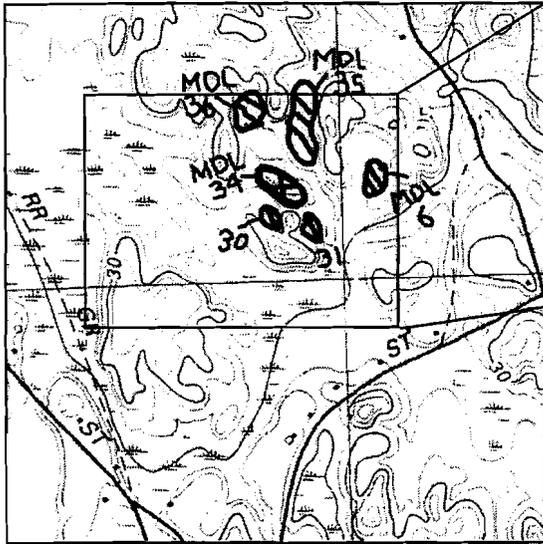
**Compass directions and distances**

Magnetic compass direction and distances from two permanent landmarks within 1000 feet of the pool. Landmarks should be readily identifiable in the field and clearly described on the submitted map

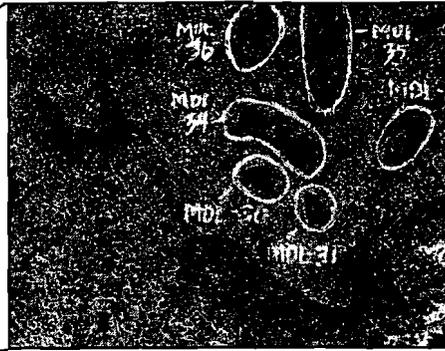
**Professional survey**

Large scale topographic maps or project plans where the depression is evident

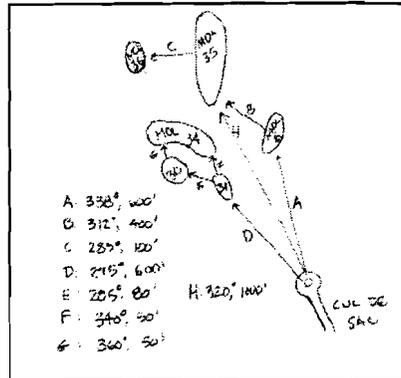
## Some examples of required maps



USGS Topographic map section with pools clearly marked



B&W copy of color infra-red aerial photograph (1:12,000 scale) with pools also marked



Sketch map with compass directions and distance in feet

## Field Observation Form

Application for certification of vernal pool habitat should be made using the standard field observation form (revised in 1999). All requested information should be filled out to the fullest extent possible. Additional directions are provided on the field form.

Please give particular attention to the following items:

**Section 1:** Written directions to the pool must be provided, noting field markers to help navigation.

**Section 2:** Please indicate the dates on which evidence was collected, including the year.

**Section 3:** Indicate the evidence of obligate and facultative species collected at each pool. If egg masses were found, indicate the number of masses discovered.

**Section 4 and 5:** Check the boxes corresponding to evidence submitted for each pool (in photographs or tape)

**Optional Information:** Information provided in this section gives the Natural Heritage & Endangered Species Program a better sense of the type of vernal pools that are being identified through the certification program, and aids in-field identification of the pools should anyone need to visit it. This section is optional, but provides very helpful information.

**Section 6:** Field forms must be signed at the bottom of page 2.

Incomplete submissions will be returned in full with a letter indicating any missing information. When the requested information has been collected, the application may be resubmitted.

Submit completed applications to:

Vernal Pool Certification  
Natural Heritage & Endangered Species Program  
Route 135  
Westborough, MA 01581



# Natural Heritage & Endangered Species Program Massachusetts Division of Fisheries and Wildlife Vernal Pool Field Observation Form

(7/99)

(For use with *Guidelines for Certification of Vernal Pool Habitat*)

For office use only.

## 1. Pool location

Town \_\_\_\_\_ County \_\_\_\_\_

USGS Quadrangle name \_\_\_\_\_  SERIES 7.5' X 7.5'

SERIES 7.5' X 15'

WRITTEN DIRECTIONS TO POOL: \_\_\_\_\_

THIS INFORMATION  
MUST BE SUBMITTED

(USE ADDITIONAL PAGES, IF NECESSARY.)

## Instructions

FOR COMPLETE INFORMATION ABOUT CERTIFICATION, REFER TO *GUIDELINES FOR CERTIFICATION OF VERNAL POOL HABITAT*.

PROVIDE ALL OF THE INFORMATION REQUESTED IN BOXES 1-6. IF MORE SPACE IS REQUIRED, ATTACH ADDITIONAL PAGES. INCLUDE ALL REQUIRED PHOTOGRAPHS AND DOCUMENTATION. SIGN THE FORM IN THE AREA PROVIDED ON THE REVERSE SIDE. **INCOMPLETE OR UNSIGNED SUBMISSIONS WILL BE RETURNED.**

THE FOLLOWING INSTRUCTIONS REFER TO EACH OF THE NUMBERED BOXES.

1. THE 7.5 X 7.5 SERIES HAS THE LEGEND "7.5 MINUTE SERIES" IN THE UPPER RIGHT HAND CORNER ALONG WITH THE QUADRANGLE NAME. THE 7.5 X 15 MINUTE SERIES IS SO LABELED IN THE UPPER RIGHT HAND CORNER AND HAS THE QUADRANGLE NAME IN THE LOWER RIGHT CORNER.

WRITTEN DIRECTIONS MUST BE INCLUDED.

2 INDICATE THE FIRST AND LAST DATES THAT THE POOL OR ITS BIOLOGICAL COMPONENTS WERE OBSERVED.

3. PART A AND B ARE FOR CERTIFICATION BY OBLIGATE SPECIES. PART C IS EITHER FOR ADDITIONAL INFORMATION (APPRECIATED) OR FOR CERTIFICATION BY THE FACULTATIVE SPECIES. IF CERTIFYING BY OBLIGATE SPECIES, PROVIDE A PHOTOGRAPH OF THE POOL HOLDING WATER AND AT LEAST ONE PHOTOGRAPH (OR AUDIO TAPE FOR CHORUSING) OF BREEDING ACTIVITY.

FOR CERTIFICATION BY FACULTATIVE SPECIES, PROVIDE PHOTOGRAPHS OF THE POOL HOLDING WATER AND PHOTOGRAPHS (OR TAPES) OF THE FACULTATIVE SPECIES AS REQUIRED. ADDITIONALLY, PROVIDE A PHOTOGRAPH OF THE POOL WHEN DRY OR OTHERWISE PROVE THAT IT HAS NO FISH.

## 2. Observation dates

First date pool/species observed \_\_\_\_\_

Last date pool observed \_\_\_\_\_ Last date species observed \_\_\_\_\_

## 3 A. Evidence: obligate amphibians Indicate date of observation.

| * = RARE SPECIES             | COURTING ADULTS | SPERMATOPHORES | EGG MASSES (2+) | SALAMANDER LARVAE | TRANSFORMING JUVENILES |
|------------------------------|-----------------|----------------|-----------------|-------------------|------------------------|
| SPOTTED SALAMANDER           |                 |                |                 |                   |                        |
| * BLUE-SPOTTED SALAMANDER    |                 |                |                 |                   |                        |
| * JEFFERSON SALAMANDER       |                 |                |                 |                   |                        |
| * MARBLED SALAMANDER         |                 |                |                 |                   |                        |
| UNIDENTIFIED MOLE SALAMANDER |                 |                |                 |                   |                        |
|                              | BREEDING CHORUS | MATED PAIRS    | EGG MASSES (2+) | FROG TADPOLES     | TRANSFORMING JUVENILES |
| WOOD FROG                    |                 |                |                 |                   |                        |
| * SPADEFOOT TOAD             |                 |                |                 |                   |                        |

## 3 B. Evidence: fairy shrimp

DATE OBSERVED \_\_\_\_\_

## 3 C. Evidence: facultative organisms Two or more must be documented. Indicate date of observation.

| * = RARE SPECIES                 | DATE OBSERVED | ACTIVITY OBSERVED | DATE OBSERVED                   | ACTIVITY OBSERVED |
|----------------------------------|---------------|-------------------|---------------------------------|-------------------|
| BREEDING SPRING PEEPERS          |               |                   | PAINTED TURTLES                 |                   |
| BREEDING GRAY TREEFROGS          |               |                   | SNAPPING TURTLES                |                   |
| BREEDING GREEN FROGS             |               |                   | PREDACEOUS DIVING BEETLE LARVAE |                   |
| BREEDING LEOPARD FROGS           |               |                   | WATER SCORPIONS                 |                   |
| BREEDING PICKEREL FROGS          |               |                   | DRAGONFLY NYMPHS                |                   |
| BREEDING AMERICAN TOADS          |               |                   | DAMSELFLY NYMPHS                |                   |
| BREEDING FOWLER'S TOADS          |               |                   | DOBSONFLY LARVAE                |                   |
| * BREEDING FOUR-TOED SALAMANDERS |               |                   | WHIRLIGIG BEETLE LARVAE         |                   |
| RED-SPOTTED NEWT (ADULTS)        |               |                   | CADDISFLY LARVAE                |                   |
| * SPOTTED TURTLES                |               |                   | LEECHES                         |                   |
| * WOOD TURTLES                   |               |                   | FINGERNAIL (FRESHWATER) CLAMS   |                   |
| * BLANDINGS TURTLES              |               |                   | AMPHIBIOUS AIR-BREATHING SNAILS |                   |

### Instructions (continued)

4. INDICATE THE PHOTOGRAPHS BEING SUBMITTED. LABEL, DATE, AND SIGN ALL PHOTOS.

5. MARK THE POOL CLEARLY ON ALL MAPS. THE POOL MUST BE CLEARLY DISTINGUISHED FROM OTHER WETLANDS AND BE RELOCATEABLE BY OTHERS. PROVIDE ANY MAPS THAT WOULD HELP SOMEONE UNFAMILIAR WITH THE AREA LOCATE THE VERNAL POOL IN THE FIELD.

6. THE FORM MUST BE SIGNED. UNSIGNED SUBMISSIONS WILL BE RETURNED WITHOUT FURTHER ACTION.

**OPTIONAL INFORMATION:**

**PROPERTY OWNER.** PROVIDE INFORMATION ABOUT PROPERTY OWNER(S), IF KNOWN. IT IS RECOMMENDED THAT YOU SEEK PROPERTY OWNER PERMISSION PRIOR TO CERTIFICATION ACTIVITIES.

**RARE SPECIES.** A PHOTOGRAPH IS NECESSARY FOR DOCUMENTATION OF RARE SPECIES HABITAT.

**DESCRIPTION.** PROVIDE ANY INFORMATION THAT WILL DISTINGUISH THE POOL FROM OTHER WETLANDS (BOULDERS, DEBRIS, TREE SPECIES, ETC.).

### Optional information

Although the following information is not required for certification, it is useful to NHESP to possibly better protect the vernal pool, its habitat and species.

#### Property owner

IT IS STRONGLY RECOMMENDED THAT LANDOWNER PERMISSION BE OBTAINED PRIOR TO COLLECTING CERTIFICATION DOCUMENTATION.

Name \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

#### Rare wetland species

Y  N WERE ANY RARE STATE-LISTED SPECIES OBSERVED USING THIS POOL?

Y  N IS A PHOTOGRAPH OF THE RARE SPECIES INCLUDED WITH THIS FILING?

#### Description of pool and surroundings

DIMENSIONS: APPROXIMATE LENGTH APPROXIMATE WIDTH

APPROXIMATE DEPTH

DESCRIBE DISTINCTIVE FEATURES (ROADS, STRUCTURES, BOULDERS, ETC.) WHICH ARE VISIBLE FROM OR NEAR THE POOL.

ARE THERE OTHER DISTINCTIVE FEATURES ABOUT THIS POOL (VEGETATION TYPES, ABANDONED VEHICLES, FOOT TRAILS, ETC.) THAT WOULD HELP SOMEONE RECOGNIZE IT?

### 4. Photographs

MUST BE LABELED, DATED, AND SIGNED.

- POOL HOLDING WATER
- OBLIGATE +/-OR FACULTATIVE SPECIES
- DRY POOL (REQUIRED FOR EVIDENCE 3C)

### 5. Maps submitted

- USGS TOPOGRAPHIC MAP (REQUIRED)

AND ONE OR MORE OF THE FOLLOWING:

- AERIAL PHOTOGRAPH
- DISTANCES/COMPASS DIRECTIONS
- PROFESSIONAL SURVEY
- LARGE SCALE TOPO
- OTHER \_\_\_\_\_

OPTIONAL EXTRA INFORMATION

- SKETCH MAP OF AREA
- ASSESSOR'S MAP
- GPS LONGITUDE/LATITUDE COORDINATES

### 6. Observer information & signature

Name \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Telephone \_\_\_\_\_

e-mail \_\_\_\_\_

I hereby certify under the pains and penalties of perjury that the information contained in this report is true and complete to the best of my knowledge.

Signature \_\_\_\_\_ Date \_\_\_\_\_

SEND COMPLETED FORM AND SUPPORTING DOCUMENTATION TO:

NH&ESP  
 VERNAL POOL CERTIFICATION  
 MA DIVISION OF FISHERIES & WILDLIFE  
 ROUTE 135  
 WESTBOROUGH, MA 01581

All submissions and supporting documents will be retained by the Natural Heritage & Endangered Species Program. Information submitted on this form and other documents is part of the public record and is available to interested parties under the State Documents Request Law.