

**On 3/01/09, the Guidelines for Vernal Pool
Certification in Massachusetts changed.
These pages reflect those changes.**

http://www.vernalpool.org/macert_1.htm

Certification is the procedure by which citizens can document the existence of a vernal pool in Massachusetts. The documentation material is submitted to the Natural Heritage & Endangered Species Program which then certifies the vernal pool. When a vernal pool has been certified, it receives automatically any protection afforded to vernal pools under the Wetlands Protection Act. Go to FAQ's for discussion about vernal pool protection.

In Massachusetts, vernal pools are certified as "existing" by the Natural Heritage & Endangered Species Program based on documentation by citizens. Documentation for vernal pool certification has three components: evidence, maps, and an observation form. Click on the links below for details and some suggestions you might find useful.

- 1) **Obligate Species Method:** You provide evidence of the vernal pool itself as well as evidence that the pool is used for breeding by obligate vernal pool species such as the wood frog, mole salamanders, or fairy shrimp or **Facultative Species Method:** You provide evidence that the pool holds and water, that the pool becomes dry or is otherwise free of fish, and that certain facultative amphibians use the pool for breeding.
- 2) **Maps:** You provide required maps that precisely locate the vernal pool.
- 3) **Observation Form:** You complete and sign an observation form which documents your findings, pool characteristics, pool biodiversity, and the land owner of the pool. Completed materials are submitted to the Massachusetts Natural Heritage & Endangered Species Program.

(See following pages)

Massachusetts Vernal Pool Certification by Obligate Vernal Pool Species

Obligate vernal pool species are those organisms which breed or live only in waters free from permanent populations of fish. Because they require vernal pools to complete their life cycle, we refer to them as obligate vernal pool breeders, obligate vernal pool species, or the improper shorthand, "obligate species".

In Massachusetts, the obligate species are the spotted salamander, blue-spotted salamander, Jefferson salamander, marbled salamander, wood frog and fairy shrimp. Breeding activity by any of these amphibians or the presence of fairy shrimp indicates a vernal pool.

Documentation of a vernal pool by obligate species requires 1) a photograph of the vernal pool holding water and 2) photographs or audio recording of breeding activity (wood frog chorus, mating adults, eggs, larvae, or emergents) of the amphibians or photographs of fairy shrimp from the pool.

Provide the following evidence:

A photograph of the pool holding water. The pool photograph (or photographs) should show that the vernal pool has no **permanent** outlet. This is not always easy to document in photographs. However, your pictures should establish that the pool is isolated from other bodies of water and not just a small area of a large wetland. Provide photos of inlets and outlets such as streams and culverts. Label the photos on the back with location, date, direction being viewed, a caption, and sign them. If you use a digital camera, print out the images, annotate them and sign the printout.

Evidence of obligate amphibian breeding or presence fairy shrimp.

Evidence that a pool is used by obligate species would include the presence of fairy shrimp in the water, a wood frog chorus, a salamander breeding congress, salamander spermatophores, amphibian egg masses in the water, swimming larvae, and fully developed larvae emerging from the pool. You need to provide photographs of one of these activities. In some cases, minimum numbers to be documented have been established to assure that the pool is used by a population of the species and not merely a couple of individuals.

The photographs below are examples of the evidence that could be used to certify a vernal pool by the obligate species method. Clear, recognizable photographs with good captions and annotations are important. On the back of each photograph (or beside it for printouts of digital images), indicate the pool at which the picture was taken, the subject in the picture, the date, and then sign it. If you find more than one obligate species using the pool, record as many as you can.

[Go to the details page](#) for information about **required** evidence, examples, and some photographic tips.



Marbled salamander in nest



Blue-spotted larva



Wood frogs in amplexus



wood frog eggs



Spotted salamander eggs



Spotted sal. spermatophores



Hatched spotted sal. eggs



Fairy shrimp



Blue-spotted eggs

Maps required for Massachusetts vernal pool certification

Certification procedures require that you locate the vernal pool on a U.S.G.S. topographic quadrangle map, an aerial photograph, and one additional map or GPS coordinates. The additional map could be one you make yourself with compass bearings and distances, a professional survey of the site, a town wide topographic map, state highway plans, park map, et cetera. These map types are explained below.

It is important to keep in mind the purpose of the maps. They are not intended as an impediment to certification but as a means for others to find the vernal pool at a later time. Provide as much information as you can to help others to identify your pool. You might consider providing characteristics of the pool and surroundings which distinguish it from other wetlands nearby. Mention the presence of large rocks, cliffs, tree types, pool vegetation, views in the distance, debris in the pool, and so forth. Pinpointing a pool when other pools might be nearby is very important.

You need to provide:

USGS topographic map. All certification packets must contain a copy of a section of the appropriate USGS topographic map with the location of the pool marked. Locate your pool on the map while in the field so that you can reference your actual location with the various features shown on the map. Take the time to check the immediate area to see if there are other potential vernal pools which might be confused with the one you are mapping. Label your copy of the map with the map name as shown on the cover page. If you are using a GPS unit, make note of the longitude/latitude readings. There is a space for this optional information on the certification form.

Aerial photography. Aerial photographs are an easy way to get information for finding a vernal pool and for locating it so that others can find it. Your second map can be an aerial photograph, color or black/white, with the pool clearly marked. Label the photograph with all information about its source, the series. You might also mark landmarks such as roads on the photograph. Aerial photographs might be available from your town conservation or engineering department.

CIRs, such as this one, use false colors to highlight certain features. Red represents actively photosynthesizing vegetation, black is open water, dark green is wetland area. Isolated areas of dark green and/or black are often vernal pools.

Plus one or more of the following:

GPS coordinates. Take your GPS unit into the field and note the N and W coordinates of the pool. Done! For large pools, you might want to record and provide more points around the pool or indicate at which end of the pool you recorded coordinates.

The coordinates on the screen to the left would be for a location Northerly at 42 degrees, 35 minutes, 56.1 seconds and Westerly at 70 degrees, 59 minutes, and 18.1 seconds.

Compass bearings and distances map. You can make your own map! A map which has compass directions and distances from at least two permanent markers is often called a "metes and bounds" map. If you are new to using a compass for mapping, you might ask help of friends, local scout or orienteering groups, get a book from the library or search the web for information. The USGS has some information about elementary map and compass use.

Professional survey map. Sometimes the vernal pool to be certified is already located on professionally made maps. These maps might be subdivision plans, state highway plans (which often shown quite a bit

of detail on either side of the roadway), town topographic maps (engineering department or planning board), soil maps, trail maps, orienteering maps, water department maps, park maps and so on. Do some checking. Everyone seems to have maps!

With any map, clearly label the pool you are documenting and label the map as to source and so on.

When you have all your maps together, ask yourself "Could someone really find this pool with these maps? If "yes", you have your mapping completed.

FREQUENTLY ASKED QUESTIONS about MASSACHUSETTS VERNAL POOL CERTIFICATION

1. Can vernal pools be protected if they aren't certified?

YES. Certification simply establishes a presumption of significance to wildlife habitat for a wetland. The state Wetlands Protection Act Regulations give the Conservation Commission discretionary authority to protect wetland resources (310 CMR 10.53). In the absence of a certification, if information is presented to the Commission which clearly shows that a resource area is functioning as a vernal pool (i.e. meets the NHESP "Guidelines for Certification of Vernal Pool Habitat"), the Commission may condition a project to protect the wildlife habitat value of the vernal pool.

2. May the Commission apply WPA performance standards to pools certified after a Notice of Intent has been filed?

YES. The Conservation Commission has the discretionary authority to accept any information during the public hearing process for a Notice of Intent that will help them protect the interests of the Wetlands Protection Act. The discretionary authority granted to Conservation Commissions and to the Department of Environmental Protection allows the incorporation of protective conditions into the Order of Conditions that prevent adverse effects to the wildlife habitat value of vernal pools. The opportunity to protect a vernal pool expires only after final permit appeal periods have lapsed.

3. How much of the area surrounding a Certified Vernal Pool is protected under the Wetlands Protection Act Regulations?

This is tricky. Certified Vernal Pools (or even uncertified) and an additional associated "vernal pool habitat" zone is protected under the Wetlands Protection Act Regulations. Vernal pool habitat includes the pool of water itself, plus that area extending up to 100 feet from the boundary of the pool. Protected vernal pool habitat does not include any adjacent non-jurisdictional upland (pools in Riverfront Area are different). The vernal pool and associated vernal pool habitat must occur within a jurisdictional wetland resource area. Under the Wetlands Protection Act Regulations, there is no protection afforded to any portion of vernal pool habitat that extends beyond the delineated boundary of a jurisdictional resource area. In the Riverfront Area, surrounding upland habitat, which provide essential non-breeding habitat for vernal pool amphibians, can be protected. Measures can and should be taken to protect upland surrounding vernal pools beyond 100 feet from the boundary of the vernal pool.

4. Are Certified Vernal Pools protected by laws other than the Wetlands Protection Act Regulations?

Certified vernal pools are protected under the Massachusetts Surface Water Quality Standards (314 CMR 4.00), the subsurface sewage disposal law, Title 5 (310 CMR 15.00), and the Forest Cutting Practices Act regulations (304 CMR 11.00). The Forest Cutting Practices Act regulations also protect vernal pools that are not certified by providing Best Management Practices that are designed to minimize impacts on vernal pools that are identified during the review of forest cutting plans.

5. Who should we call if a project is going to result in alteration of or discharge into a Certified Vernal Pool?

The Natural Heritage Program has no statutory authority to protect vernal pools. The first call should be to the local Conservation Commission, then the appropriate regional office of the Department of Environmental Protection. The wetlands sections of the Environmental Protection Agency in Boston and the US Army Corps of Engineers in Concord can also be contacted.

6. Doesn't the presence of an inlet or outlet disqualify vernal pools from certification?

NO. Vernal pool habitat is defined in both the Regulations and the "Guidelines for the Certification of Vernal Pool Habitat," and neither definition contains restrictions based on the presence or absence of inlets or outlets. Inlets and outlets are important in determining whether or not a wetland may be classified as an Isolated Land Subject to Flooding, a jurisdictional wetland resource area that cannot have an inlet or outlet.

7. How is the boundary of a Certified Vernal Pool determined?

The Wetlands Protection Act Regulations state that "the boundary of vernal pool habitat is that which is certified by the Division of Fisheries & Wildlife (DFW)..." The NHESP does not establish an on-the-ground boundary for vernal pools through the certification process. Boundary delineation requires field observation. The boundary of vernal pool habitat must incorporate the shallowest reaches of the pool. Where there is no distinct and clear topographic break at the edge of a pool, the maximum observed or recorded water level represents the ecological boundary of the vernal pool. If a determination must be made outside of the spring (maximum flooding) season, leaf staining and other indicators of hydrology should be used.

The regulations allow an opinion from a registered professional engineer regarding the boundary of a vernal pool. WATCH OUT -- it is important that ground water inputs be included in any such calculation, and DEP has issued a policy requiring this (ILSF definition Policy, DWW Policy 85-2). Otherwise, the boundary can be very wrong.

8. Does the Natural Heritage & Endangered Species Program (NHESP) require proof of landowner permission before certifying a vernal pool occurring on private property?

NO. The NHESP strongly recommends obtaining permission to enter on private property when collecting information for vernal pool certification. Although, it is often difficult to tell whose property one is on. The NHESP cannot determine whether or not a pool that has been submitted for certification occurs on lands posted against trespass.

9. Does the NHESP visit every vernal pool prior to issuing certifications?

NO. Certification is based on the physical and biological documentation (i.e. photographs) submitted by volunteers for each vernal pool.

10. How can a vernal pool be decertified?

Once a vernal pool has been documented to provide breeding habitat for obligate vernal pool species it is very difficult to reverse the presumption that it functions as vernal pool habitat. However, evidence presented by a competent source that clearly proves that the area does not meet the physical and biological criteria established for vernal pool certification may be presented in an appeal.