

## VERNAL POOL SURVEYING – PROCEDURE

### **Step 1: Register with the Wildlife Conservation Corps (WCC) of NJ DEP Fish and Wildlife Dept.**

For the state's Vernal Pool project to accept your data, they must know who you are. This is easily accomplished by registering as a volunteer with them. **The application form is attached here.** You can also obtain it by going to the website <http://www.state.nj.us/dep//fgw/wcchome.htm> and clicking on "application form." Print out the form, fill it in, and mail it in.

Don't be concerned about the commitment hours in question 2 of the form. Any amount of time you can give is welcome.

### **2) Identify a vernal pool for observation/survey**

a) Use the maps at [www.dbcrssa.rutgers.edu/ims/vernal](http://www.dbcrssa.rutgers.edu/ims/vernal) to choose one or more vernal pools that you want to investigate.  
(Aerial photos that may be helpful: <http://earth.google.com/>)

Note the unique ID name, such as 1234rvh or 567ocp of the pool(s) and use it (both numbers and letters) on your data form.

All mapped pools are color coded to define their current survey status:

Yellow pools = have never been observed

Blue pools = have been deemed "vernal" but not certified using herpetological (reptile and amphibian) data.

Green pools = certified

or

b) You may already know of a vernal pool you'd like to survey that isn't mapped. If it is a new pool to the database, just use your last name followed by a number to identify the pool(s) on your report forms (ex. Smith 1, Smith 2, Smith 3).

Please check carefully - it is important that we do not duplicate surveys or misidentify pools.

### **Step 3: Plan your vernal pool investigation**

- a) If you need help in the field or want to work in a team, call Christine Nolan at the Gloucester Co. Watershed/SJ Land Trust office at 856-881-2269 to arrange this.
- b) Locate the pool in the field, if possible. You may be able to survey by ear and see the pool without entering the property. If not, find out who owns the property by asking the nearest residents or by going to the tax assessor's office of the municipality.
- c) Contact the landowner and obtain permission. Give the landowner the explanatory letter if he/she wants something in writing. Keep a record of the owner's name and contact info (if you have any) for your data sheet.

### Suggestions for Explaining the Project to a Landowner

"Hello. I'm a volunteer [or student] from the Federation of Gloucester County Watersheds [or name your college, if you are a student]. [Show badge or ID] We are studying frogs and salamanders and their habitats to document what species still exist in our area. May I have permission to access your property to take a look at the frog pond on your property. I will be looking for the animals and their egg masses and will take pictures but I will not disturb anything at the site or on your land. I may need to return at night to do this and to hear the frog choruses.

I would be happy to let you know what types of frogs and salamanders I find, if any. If you would like that information, please give me a mail or email address so I can send it to you."

[Give the landowner the letter with information on how to contact you, as a followup to your conversation. Note that landowners are exempt by NJ statute from any liability for volunteers on their land.]

#### Step 4: Collect data on the vernal pool

Use the **data sheet (attached)**. The forms are also available online under the "Volunteers" link on the CRSSA website: [www.dbcrssa.rutgers.edu/ims/vernal/vol.htm](http://www.dbcrssa.rutgers.edu/ims/vernal/vol.htm). You can copy to your computer (hit the Microsoft Word button on the screen, get form and save it) or print out directly.

Please fill out forms to the best of your ability. Include your name, address and phone number or email address under the "Observer" field in case it's necessary to contact you to verify information. The Endangered Nongame Species Program (ENSP) cannot accept data from an unidentified observer.

- a) If you are only surveying to document the existence of a pool (and not the species), please be sure to note the dates when you visited and any information about whether the pool has an outlet that may be permanent. If possible, plan to return the next month to document that the pool still has standing water and again in the late summer or fall to document that the pool has dried up.
- b) If you are surveying for species, use the data sheet and pay careful attention to the species checklist. It is this data that will ultimately decide whether or not a vernal pool is certifiable, affording it regulatory protection.  
In addition to simply checking the appropriate box, try to record an estimate of numbers of individuals observed.
- c) If you are surveying a **new pool** for either a) or b) above, make every attempt to identify the exact location of your pool. Written directions are often not enough for ENSP to accurately map a pool into its Geographic Information System (GIS) software.

The best way to identify a new pool location is by using a Global Positioning System (GPS) unit and noting the coordinates. We are investigating how to obtain access to some GPS units.

Also acceptable is a well-defined mark on a printed out map from the CRSSA site ([www.dbcrrsa.rutgers.edu/ims/vernal/vol.htm](http://www.dbcrrsa.rutgers.edu/ims/vernal/vol.htm)).

Another alternative is to download an aerial photo from Google Earth and pinpoint the location on that (<http://earth.google.com/>).

A single vernal pool may be visited several times over the course of its annual cycle to definitively document its herpetological activity for that year and/or its ephemeral nature. You can use one data sheet per visit per pool or neatly combine all information and visit dates on a single data sheet per pool. It must be clear as to what dates certain pool characteristics or species were observed. Your dates should reflect when you were at the pool and not when you filled out the sheet.

**It is just as important to note dates when vernal pools are filled with water as it is when they are dry.** The absence of water in a pool addresses part of the definition of a vernal pool for regulatory purposes.

Although direct examination of a vernal pool will yield the most information, you can survey frog species by listening to calls. If possible, tape the calls or videotape the pool and the calls. Be sure to note location, date and your name to submit with the tape/videotape. Speaking that information onto your tape/videotape at the start of recording is a good idea.

### **Step 5: Photograph the vernal pool(s)**

For a), b), and c) above, provide photos (digital or otherwise) of both the pool and any species observed to support your findings. **Photographic documentation is mandatory for observers that have not attended a prior vernal pool training seminar.**

On the back of a photo, record the unique ID number for the pool, along with your name, and the date the photo was taken. For digital photos, make this information the title of the image: "1234rv-Smith-3-3-06," for example.

### **Step 6: Submit data**

Send your data sheet(s), photos, and any marked maps by mail or email to:

The South Jersey Vernal Pool Project  
P.O. Box 233  
Glassboro, NJ 08208  
[sjwatersheds@verizon.net](mailto:sjwatersheds@verizon.net)

If you can email the data forms, that would be helpful, even if you must mail the photos and maps.

**If you have questions, call Christine Nolan at 856-881-2269 or email to [sjwatersheds@verizon.net](mailto:sjwatersheds@verizon.net).**

Our website, [www.sjwatersheds.org](http://www.sjwatersheds.org), also has data and forms online.

3-5-06



**VERNAL POOL DATA SHEET**  
*New Jersey Division of Fish and Wildlife*  
*Endangered and Nongame Species Program*

**GENERAL INFO**

**SITE NAME/NUMBER:** \_\_\_\_\_ **OBSERVER:** \_\_\_\_\_

**ORGANIZATION:** \_\_\_\_\_ **DATE:** \_\_\_\_\_ **COUNTY:** \_\_\_\_\_

**MUNICIPALITY:** \_\_\_\_\_ **TOPO QUAD/BLOCK:** \_\_\_\_\_

**LANDOWNER:** \_\_\_\_\_

**DIRECTIONS TO SITE:** \_\_\_\_\_

**POOL CHARACTERISTICS**

**POOL TYPE (check):**  natural swale/depression  excavated pit/ditch  impoundment

**WATER LEVEL (check):**  full  >50%full  <50%full  dry

**POOL DIMENSIONS (at max capacity):** \_\_\_\_\_ m x \_\_\_\_\_ m

**WATER QUALITY (check):**  clear  tea-colored  algae-green

**STRUCTURE OF VEGETATION WITHIN/OVERHANGING POOL (ESTIMATE % COVER):**

trees  scrub/shrub  floating vegetation  emergent vegetation

**DOMINANT PLANT SPECIES WITHIN/OVERHANGING POOL (optional):** \_\_\_\_\_

**SURROUNDING HABITAT (check all that apply):**  upland forest  forested wetlands

emergent/scrub-shrub wetland  agricultural field/grassland  suburban

**GENERAL NOTES/COMMENTS:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

	Please check appropriate box				
	STATUS	ADULT	JUVENILE/LARVA	VOCALIZATION	EGG MASS
<b>OBLIGATE VERNAL POOL HERPETOFAUNA</b>					
1) spotted salamander ( <i>Ambystoma maculatum</i> )	stable				
2) eastern tiger salamander ( <i>Ambystoma t. tigrinum</i> )	<b>endangered</b>				
3) marbled salamander ( <i>Ambystoma opacum</i> )	special concern				
4) Jefferson salamander ( <i>Ambystoma jeffersonianum</i> )	special concern				
5) blue-spotted salamander ( <i>Ambystoma laterale</i> )	<b>endangered</b>				
6) Jefferson x blue-spotted salamander ( <i>Ambystoma jeffersonianum</i> x <i>laterale</i> )	<i>no status</i>				
7) wood frog ( <i>Rana sylvatica</i> )	stable				
8) eastern spadefoot toad ( <i>Scaphiopus holbrookii</i> )	unknown				
<b>FACULTATIVE VERNAL POOL HERPETOFAUNA</b>					
1) long-tailed salamander ( <i>Eurycea l. longicauda</i> )	<b>threatened</b>				
2) red-spotted newt ( <i>Notophthalmus v. viridescens</i> )	stable				
3) four-toed salamander ( <i>Hemidactylum scutatum</i> )	unknown				
4) northern spring peeper ( <i>Pseudacris crucifer</i> )	stable				
5) New Jersey chorus frog ( <i>Pseudacris triseriata kalmii</i> )	unknown				
6) upland chorus frog ( <i>Pseudacris triseriata ferarium</i> )	unknown				
7) northern cricket frog ( <i>Acris c. crepitans</i> )	stable				
8) northern gray treefrog ( <i>Hyla versicolor</i> )	stable				
9) southern gray treefrog ( <i>Hyla chrysoscelis</i> )	<b>endangered</b>				
10) pine barrens treefrog ( <i>Hyla andersonii</i> )	<b>threatened</b>				
11) american toad ( <i>Bufo americanus</i> )	stable				
12) fowlers toad ( <i>Bufo woodhousii fowleri</i> )	special concern				
13) green frog ( <i>Rana clamitans melanota</i> )	stable				
14) bullfrog ( <i>Rana catesbeiana</i> )	stable				
15) carpenter frog ( <i>Rana virgatipes</i> )	special concern				
16) pickerel frog ( <i>Rana palustris</i> )	stable				
17) southern leopard frog ( <i>Rana utricularia</i> )	stable				
18) spotted turtle ( <i>Clemmys guttata</i> )	special concern				
19) wood turtle ( <i>Clemmys insculpta</i> )	<b>threatened</b>				
20) eastern painted turtle ( <i>Chrysemys p. picta</i> )	stable				
21) eastern mud turtle ( <i>Kinosternon subrubrum</i> )	stable				
22) common snapping turtle ( <i>Chelydra serpentina</i> )	stable				

**VERNAL POOL INVERTEBRATES (Please check appropriate line)**

mosquito \_\_\_ fairy shrimp \_\_\_ caddisfly \_\_\_ predaceous diving beetle \_\_\_ crawling water beetle \_\_\_ water scavenger beetle \_\_\_  
whirligig beetle \_\_\_ damselfly \_\_\_ dragonfly \_\_\_ backswimmer \_\_\_ water boatman \_\_\_ water scorpion \_\_\_ giant water bug \_\_\_ water strider \_\_\_  
fishfly \_\_\_ mayfly \_\_\_ chironomid midge \_\_\_ phantom midge \_\_\_ springtail \_\_\_ water mites \_\_\_ amphipod \_\_\_ isopod \_\_\_  
clam shrimp \_\_\_ ostracod \_\_\_ daphnia \_\_\_ copepod \_\_\_ snail \_\_\_ fingernail clam \_\_\_ horsehair worm \_\_\_ planaria \_\_\_ leech \_\_\_  
aquatic oligochaete worms \_\_\_

**Last Revised: 03/21/02**

Mail or email completed forms to:

The South Jersey Vernal Pool Project  
P.O. Box 233  
Glassboro, NJ 08208  
[contact@sjwatersheds.org](mailto:contact@sjwatersheds.org)

