

# Vernal



# Ponds

If you have ever walked in the Staten Island Greenbelt and noticed a body of water that was not there in the summer, you may have come across what is known as a vernal pond. Vernal, meaning Spring in Latin, is an appropriate name. It seems to spring up from Winter to Spring and although temporary, these pools provide many benefits to not only wildlife, but the environment as well!

Here, we will learn exactly how vernal ponds impact nature and why you should take a closer look at these pools on your next visit to the Greenbelt. Let's get started!



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## What do vernal ponds do for the environment?

**Flood Control-** You most likely have a sewage system in your own neighborhood. But what about nature? Thank vernal ponds because after all the melting snow and rain, all that water gathers in the depressions of wetlands. This reduces flooding and erosion while the water slowly evaporates back into the water cycle. In fact, the wetlands on the northern shore of Staten Island gathered much water from Hurricane Sandy, saving the lives of countless people.

**Water Purification-** Vernal ponds filter out pollutants that will eventually enter different waterways and potential drinking water. They capture harmful sediment that can be harmful. It's a dirty job but someone has to do it!

**Home to Unique Plants-** There are a few plants that thrive in wetlands, providing more food for wildlife. Plants such as high bush blueberry, skunk cabbage grasses, ferns, sedges and other flora, grow in and around these ponds.



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## What about the wild life?

Yes, many game animals you see such as deer, ducks, birds will use the ponds to find sources of food and water. **But what if you look closer?**

Salamanders, frogs, crustaceans, insects, turtles and others creatures gather to mate and lay their eggs. It's a perfect place since fish can't live in a temporary pool. The pond last just long enough for the eggs to hatch, and the creatures that hatch from them develop into a stage of life that no longer requires an aquatic environment. In the spring time, you can hear the calls of the wood frogs attracting a female counterpart, which is a good way of finding a vernal pond yourself.



Courtesy of Sudbury Valley Trustees



Courtesy of WV Department of Environmental Protection



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## Phases of a Vernal Pond

**Wet Phase**- Vernal Ponds fill with water. Organisms begin to hatch and reproduce.

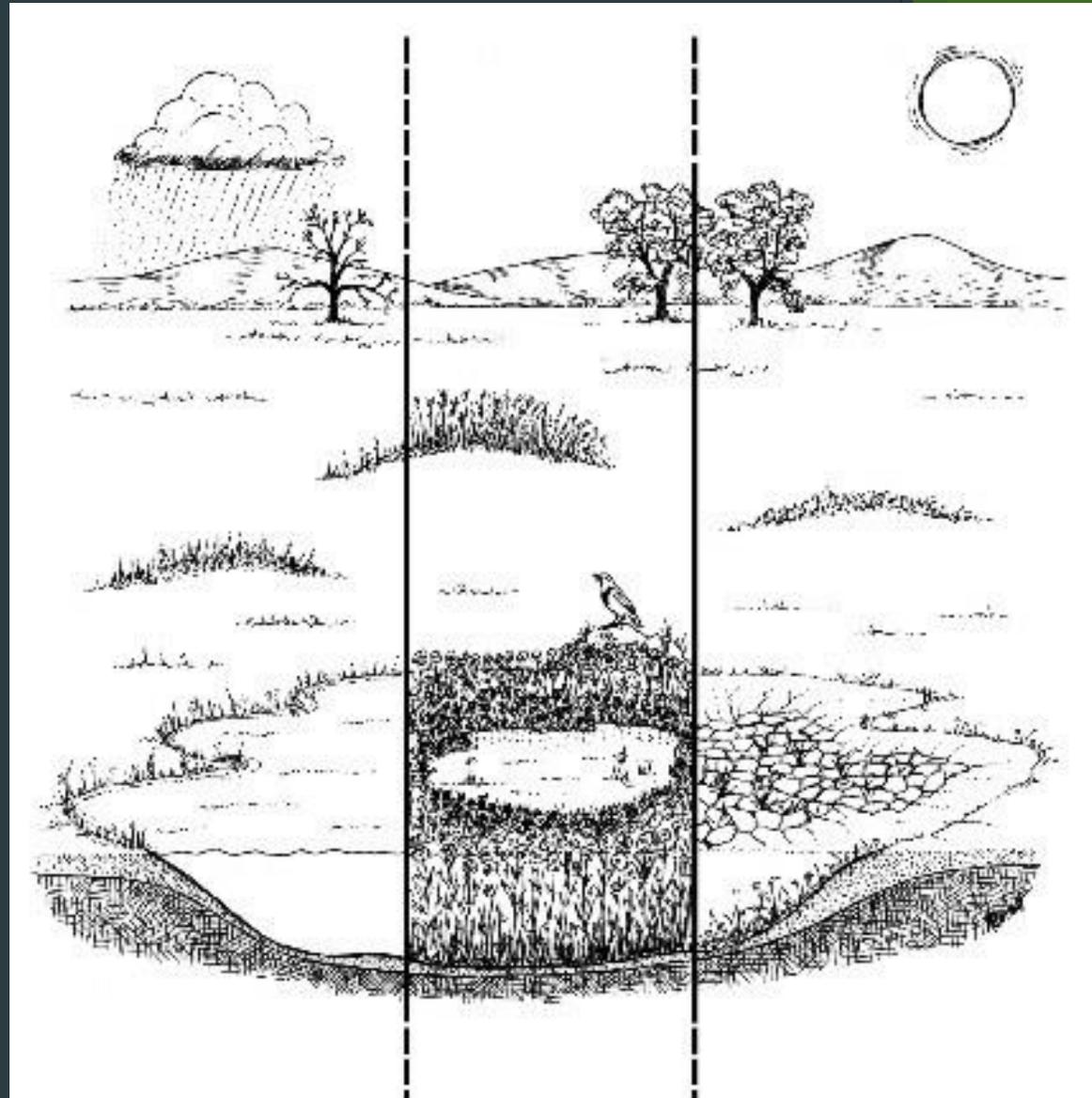
**Flowering Phase**- Flowers bloom and seed quickly while ponds start to evaporate. Cysts are laid in the ponds.

**Dry Phase**- The ponds have evaporated and are dry. Cysts and seeds lay dormant waiting for the ponds to fill. It is hot and dry.

Wet Phase

Flowering Phase

Dry Phase



Winter/Early Spring

Spring

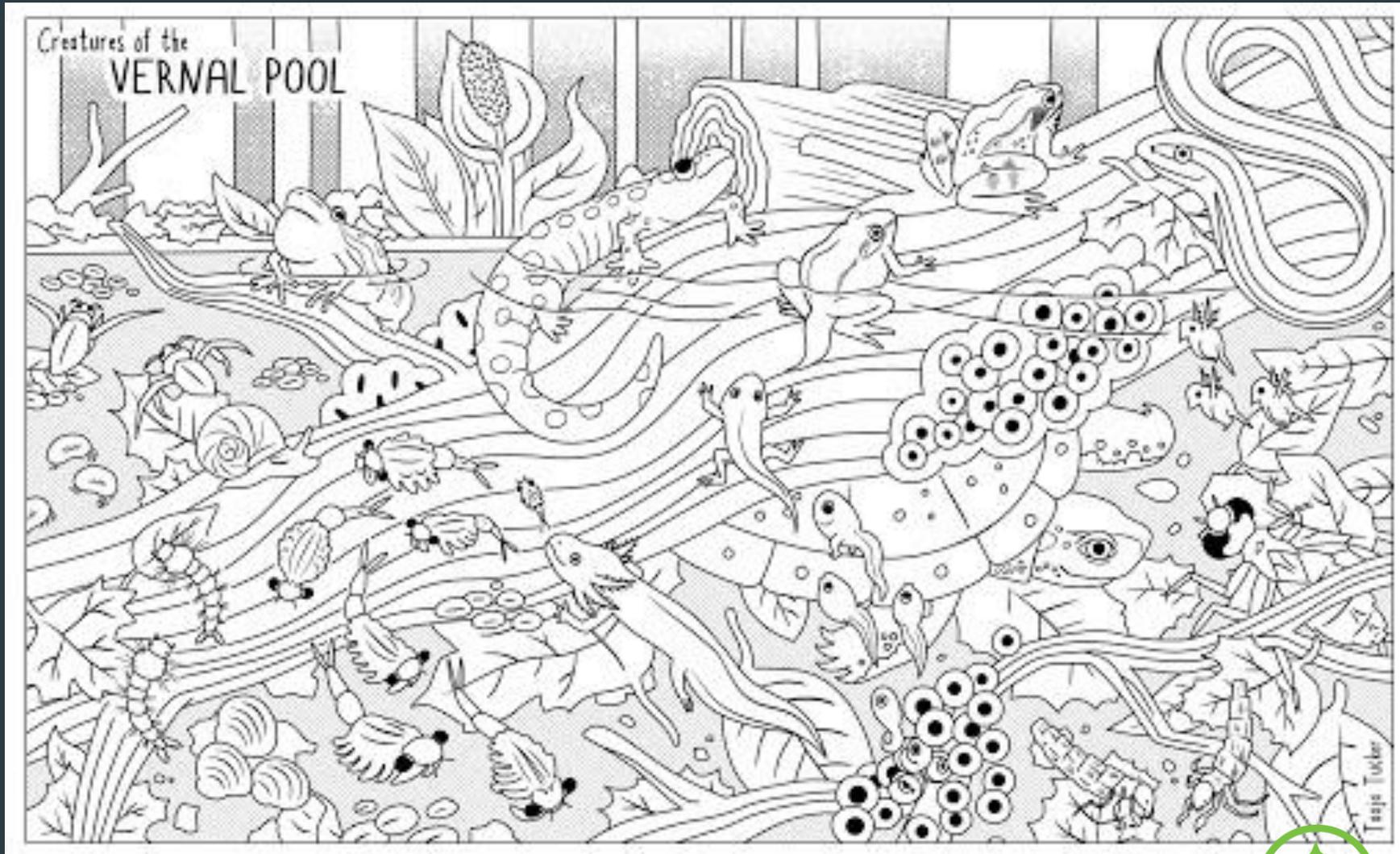
Summer/Fall



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Here is a fun coloring activity. On this page are many different species that use vernal pools as their home. How many different animals and invertebrates can you find? To print this page, follow this link <http://taajatucker.com/ColoringSheets/vernalpool.jpg>



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## Pop Quiz!

Test your knowledge on vernal pools and see how well you know about wetlands

1. Vernal ponds are a temporary wetland. (True or False)
2. Vernal ponds will contain different types of fish. (True or False)
3. Vernal ponds help filter water. (True or False)

Fill in the blanks using words from the box below.

4. Vernal ponds dry up because the water \_\_\_\_\_.
5. Vernal is a Latin word meaning \_\_\_\_\_.
6. During most of the year vernal ponds are \_\_\_\_\_.
7. The depressions in the grasslands that fill with water are called \_\_\_\_\_.
8. Vernal ponds are a type of \_\_\_\_\_.
9. The wet phase for vernal ponds is in \_\_\_\_\_.

Wetland

Evaporates

Spring

Winter

Dry

Vernal Ponds



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Answer key:

1. True 2. False 3. True 4. Evaporates 5. Spring 6. Dry 7. Vernal Ponds 8. Wetland 9. Winter

## Vernal Ponds Scavenger Hunt!

When you visit nature, your senses will be used to notice things you may not be used to. Although we don't expect you to taste things in the Greenbelt, your sense of touch, sight, hearing and smell will definitely be tested. Here are some things that will stimulate your senses when you come across a vernal pond. Can you think of any more?

### Things to See



Frog

### Things to Feel



Salamander

### Things to Hear



Rainfall

### Things to Smell



Wildflowers



Dragonflies



Wet Leaves



Spring Peeper

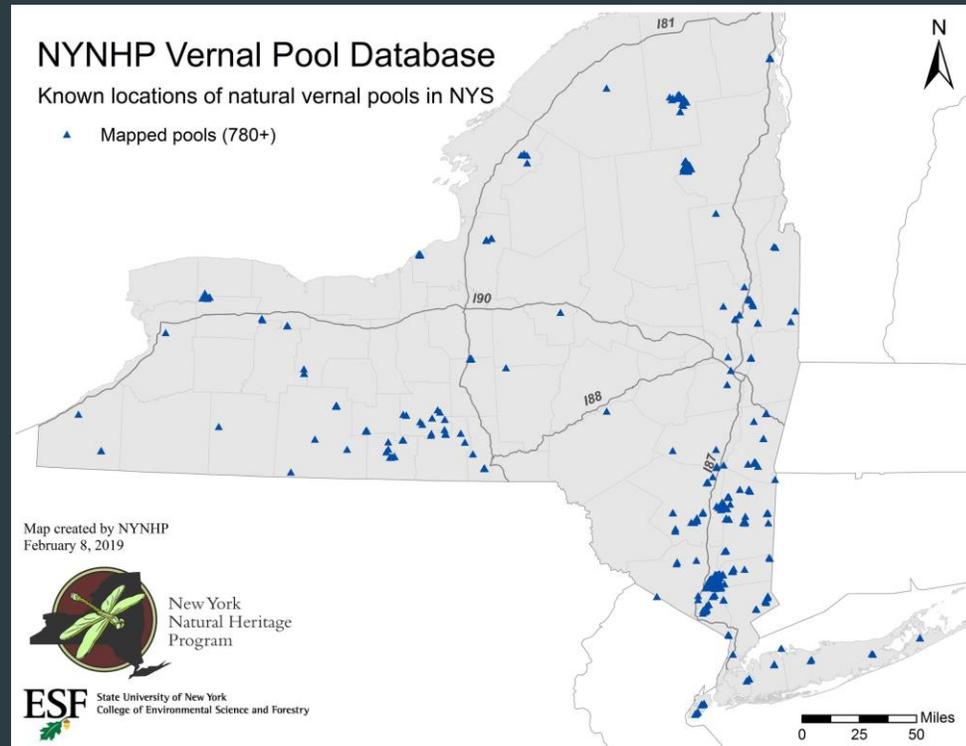


Mud

The **New York Natural Heritage Program** keeps a vernal pond database that logs every pool in the entire state. Take a look if you ever travel to see if you can come across more vernal ponds and see if you can spot different aquatic life. They also have resources that can teach you more on aquatic wildlife such as spotted salamanders, fairy shrimp, wood frogs, spring peepers and more!

Click on the link to find more of this data.

<https://nynhp.org/epa-vernal-pools>



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# Thank You The Readers!

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