

A FROG HOUSE

Homebuilt Vernal Pond Preparation Guide



Tools for vernal pond building at Robert C. Corby Arboretum

Photo Credit Dan Hucko

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Before You Begin

Vernal Pond Construction Methods:

The type of vernal pond construction we are using in our instructional booklet is called the **surface-water method**. We will be using rainwater or hose water to fill the pond, rather than groundwater from a high-water table, which would be the **groundwater method**.

The surface-water method can be used with any type of soil, as we are placing a waterproof liner in the ground. If your soil is high in **clay**, it will hold water naturally, and you do not need a liner.

Disclaimer: Our kit is specifically designed for those who do not have groundwater recharge or high clay content in the soil of their planned pond location. Tom Biebighauser recommends digging a test hole to determine which method would be best for you. (Please see the following page). Tom says that it may be necessary to add water from time to time if you live in an arid region.

Before constructing your vernal pond, please take some time to view two videos published by Tom Biebighauser, of Wetland Restoration and Training LLC.

In episodes 27 and 28 Tom details vernal pond construction start to finish. You can find them on his website at:
<https://wetlandrestorationandtraining.com/wetlands/>



Digging a Test Hole

Choose a spot:

- On your own private property.
- Further than 100 ft from a freshwater wetland.
- Unconnected to a stream, ditch, or waterway.
- Free from debris, trash, rocks, broken glass, and contamination.
- With any type of soil, (exceptions below) as you will be placing a waterproof liner.
- Without buried utilities (see page 7).
- That is safe if you have children or pets.

Please follow Tom Biebighauser's recommendations to determine which construction method is best for your property:

- Mark the perimeter of the wetland to be built. Locate an area where the slope is no steeper than 6% (no more than a 2-ft change in elevation from upper to lower edge).
- Dig a test hole with a shovel or post hole digger.
- You do not need the waterproof liner:
 - If groundwater enters the test hole. In this case, one may build a wetland using the **groundwater method**.
 - If you have high clay content. You can test the clay content in the soil removed from the test hole using the ribbon test (see page 5). You can also fill the hole with water and if it doesn't drain at all, it holds the water naturally without a liner.
- If you determine that you do **not** have ground water or high clay content, the **surface-water method** should be used with an aquatic-safe waterproof liner.

Determining Soil Type

Use the ribbon test below to determine if your soil is high in clay.

Ribbon Test Instructions:

Step 1: Obtain a handful (a few tablespoons) of soil removed from the test hole

Step 2: Add small amounts of water to the soil until a ball can be formed



Step 3: Flatten and press the ball into a thin ribbon shape



Step 4: Measure the length of the longest ribbon that can be formed without breaking

Does the ribbon stay intact longer than two inches? If so, your soil may be high in clay.

If you have very high clay content, you do not need to use a waterproof liner, as the soil will hold water naturally.

Is a Permit Required?

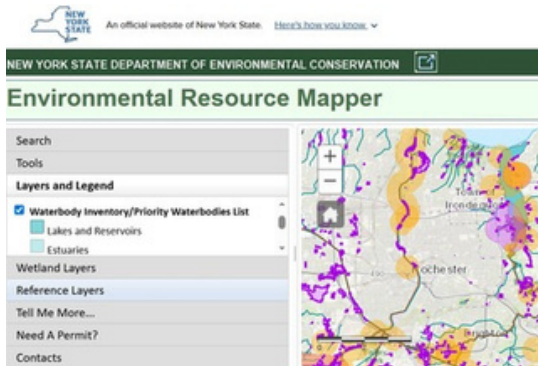
Disclaimer: A permit may be necessary.

- In New York State, permits are not typically required for private property to build ponds with a depth of less than 18" or a surface area of less than 100sq ft, however, regulations may vary by jurisdiction.
- A permit may be required if your property is near protected land or water.

How to check?

For New York State residents:

- First, visit the NYSDEC Environmental Resource Mapper Website to check your proximity to protected areas:
 - <https://dec.ny.gov/nature/animals-fish-plants/biodiversity-species-conservation/biodiversity-mapping/environmental-resource-mapper>
 - Navigate to the "Need A Permit"? section for guidance.



- Next, contact the NYSDEC Permitting Office (Rochester area residents can contact Region 8 Permitting at (585)226-2830).

For residents of other states:

- Contact your state or regional environmental protection agency to inquire about protected land and water, as well as permitting for wetland projects.

SAFETY FIRST

We recommend the following safety checks:

Did you check with your state's 811 system for buried utilities such as water, electric, gas lines or other hazards?

For example, NY811 will provide you with information and guidelines for safely digging on your property. Most can submit a request online with each state's 811 website. It is recommended to request a check at least 48 hours but no more than 10 days before you break ground.

For New York State residents:

<https://newyork-811.com/>

Did you contact your local water authority?

It is also recommended to call your local water authority as some do not participate in the 811 system.

Did you gather all necessary safety equipment?

Don't forget your safety gear while digging!

Consider protecting yourself with the following equipment: gloves, close-toed/ sturdy shoes, protective eyewear, helmet.

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