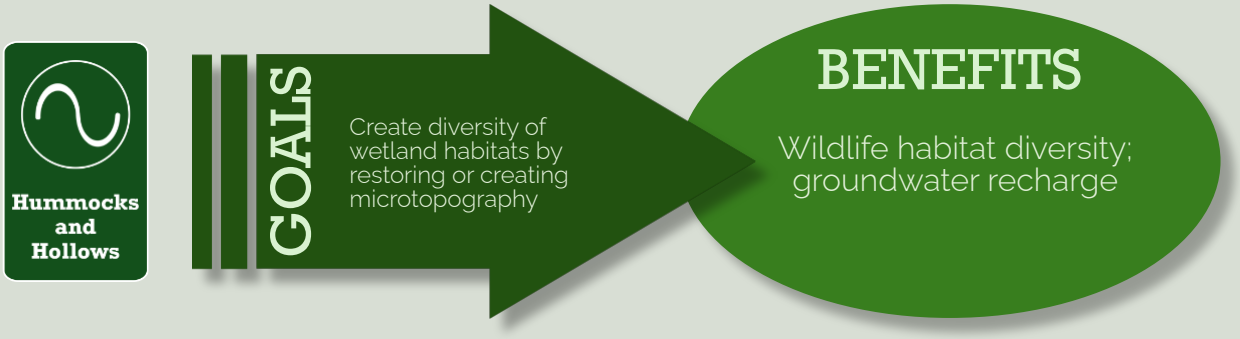
3.9 Hummock/Hollow Creation

Hummocks, also called mounds, are typically initiated as the root masses and trunks of fallen trees rising above the wetland floor. The low-lying areas between hummocks are called hollows or pits. Hummocks provide necessary growing conditions for certain plants, while hollows provide breeding areas for amphibians and insects, feeding and drinking holes for birds and mammals, and contribute to ground water recharge.



1. Design Hummock/Hollow Schematic
2. Identify Staging and Access
3. Excavate Hollows and Shape Hummocks
4. Stabilize Site
5. Monitor for Success

DEFINITIONS

Compaction: Pushing soils together so tightly that there is little air between particles.

Backhoe: A machine mounted on rubber tires with a wide bucket on the front for carrying soil and a smaller bucket attached to an arm in the back for digging holes.

Charlie Hohn, VTDEC

Naturally created hummock & hollow

Hummock/Hollow Specification

Hollow Depth	Less than 6" of water (water stands for short durations)
Hummock Height	6" to 2' (variable)
Width	Not less than 3'
Side Slopes	5 : 1 Slope (where subject to wave action)
Surface Finish	Rough bottom and sides and a ragged boundary
Hummock Material	Excavated material from hollow/pit - do not compact

Hummocks & hollows constructed in a small sloped forested wetland restoration

Hummocks & hollow creation in a low-gradient wetland restoration. Adam Huggins, Galiano Conservancy Association

Pre-Construction Planning

Schematic Plan

Develop a general detail for hummock/hollow sequence and specify an average density and spacing per acre of restoration. Random variations in shape, depth, and spacing are preferred.

Locate Underground Utilities

Mark locations of underground utilities in or adjacent to the excavation area.

Identify Staging Location

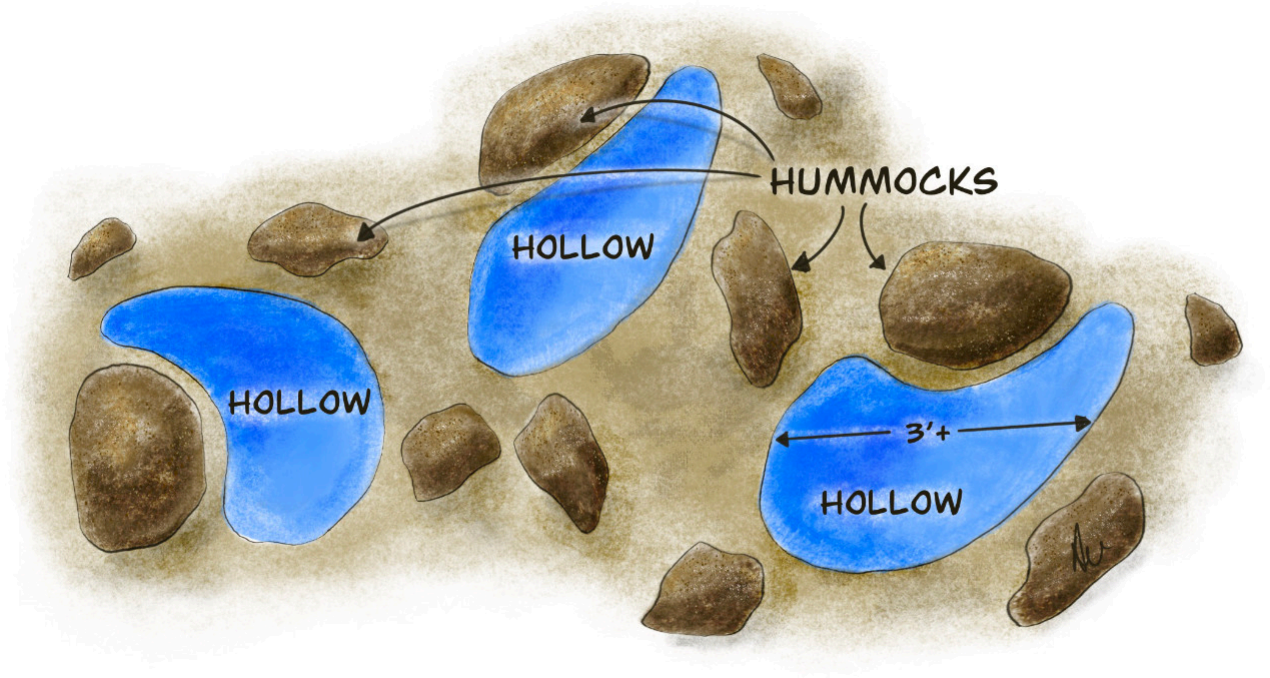
Find an upland location for temporary equipment parking. For this practice, soil for the hummocks comes from excavating the adjacent hollows, and you shouldn't need to store any soil.

Identify Access Routes

Use of existing roads and trails without improvement is allowed. Temporary use of swamp mats is also allowed if removed within one growing season, provided their use meets the US Army Corps of Engineers General Permit conditions (see chapter 5).

Select a Contractor & Equipment

Choose a contractor with previous experience working in wetlands and use low ground pressure equipment such as a backhoe with wide tracks. Meet with the contractor to review project details including site access and staging location, the specifications for hummock/hollow construction, and NNIS control/management procedures (see Invasive Species Control and Management). Plan work for dry field conditions.



Construction Sequencing

1. Stake out location of each hummock/hollow treatment area.
2. Excavate hollows and shape hummocks, working from the interior of the restoration site to the exterior to avoid compaction by equipment.
3. Securely stabilize the restoration area through appropriate erosion control measures. Seed and mulch all disturbed soils (see Erosion Control).

Additional permitting may be required for the construction of new access roads or trails, for the stockpiling of soil in a wetland or wetland buffer.

This practice may not be appropriate in floodplains, so seek qualified advice. Additional permitting may be required.

Challenges and Solutions

- Introduction of invasive species: If work crews are used, ask them to clean tools and boots, and to power-wash equipment before entering the restoration site. Work with your contractor to minimize soil disturbance.

Complementary Practices: