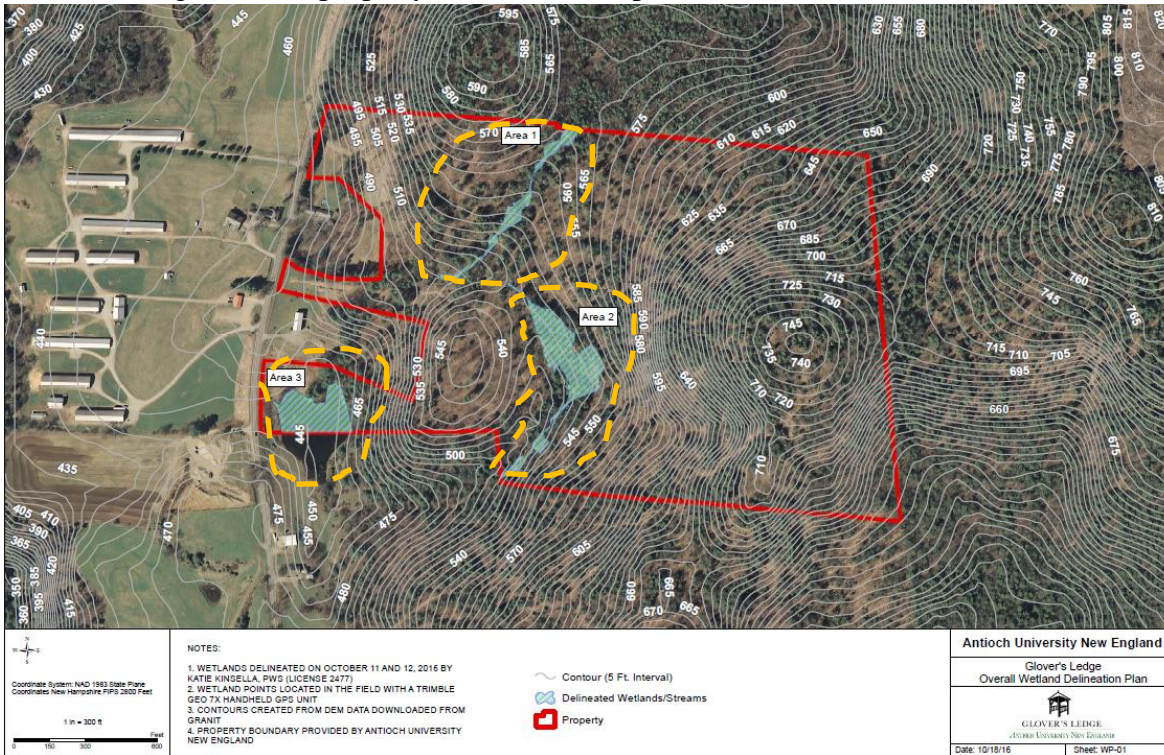


The Wetlands of Glover's Ledge

Environmental Studies Department
Glover's Ledge
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Glover's Ledge contains 8 different types of wetland habitats in 3 distinct areas of the property. AUNE alumna **Katie Kinsella** identified these wetlands in 2016 for her master's project. Prior to her survey, NH State and the National Wetlands Inventory had only mapped the existence of a stream on the northern edge of the property and a stream/pond

system at the southwestern corner. Any wetland features in the interior of the parcel were undocumented and unknown. Katie used records of soil types and surveys of plant communities to identify and categorize the wetland sites of Glover's Ledge using the Cowardin Classification system.



Area 1 – Pockets of water

Wetlands of Area 1 consist of *Palustrine Forested Needle-leaved Deciduous Mineral* (PFO2N) and *Palustrine Emergent Persistent Mineral* (PEM1n) systems. The landscape itself contains multiple depressions and a stony stream channel following the slope of a gentle hill.

Vegetation communities define the divide between these two wetland types. PFO2N contains a mix of deciduous and evergreen trees; mainly eastern hemlock, red maple, and yellow birch. Under the canopy of these trees, honeysuckle, evergreen wood

fern, cinnamon fern, wool grass and moss compete for space. By contrast, the PEM1n wetland patches have no canopy. These areas are dominated by sensitive fern, as well as edge communities of wool grass, goldenrod, raspberry, other ferns, and seedlings of hemlock and maple.



Sensitive fern
by Luciana
Ranelli via
iNaturalist

Things to look for: Fields of sensitive fern define the transition between these two wetland types.

Area 2 – Ephemeral systems

Located from roughly the center of the property to the southern edge, this area encompasses the widest diversity of wetland types due to its unique topography and is defined by diverse plant communities. Wetland types include *Palustrine Forested Needle-leaved Deciduous Mineral* (PFO2n), *Palustrine Forested Needle-leaved Deciduous Permanently Flooded Organic* (PFO2Hg), *Palustrine Emergent Persistent Organic/Mineral* (PEM1g/n), *Palustrine Forested Needle-leaved Deciduous Organic* (PFO2g), *Riverine Unconsolidated Bottom Cobble-Gravel Permanently Flooded Fresh*, (RUB1H0) and an *Ephemeral Stream* (EPH).



Photo 7. Duckweed dominated wetland in Area 2

Photo of Duckweed on surface water from Katie's report

The area is defined by a stony streambed connecting the wetland patches and a large depression in the middle of the property containing a cinnamon-fern swamp and two vernal pools. In the spring time, spotted salamander and wood frog egg masses can be seen within these flooded basins.

As with Area 1, the canopy is dominated by hemlock, red maple, and yellow birch but also includes white pine and black birch along the edges of all the wetlands. While sensitive fern, hypnum moss and marsh-pennywort are common across all wetland types here, the herbaceous understory defines the divide between wetland types. PEM1g/n wetlands host large communities of wool grass, sensitive fern, sphagnum mosses, fernmoss and cattails with meadowsweet and honeysuckle growing along their edges. Duckweed grows on the

surface water of PFO2Hg patches and raspberry and multiflora rose line the edges of the RUB1H0 patch.

Things to look for: Patches of duckweed on open water, a stony riverbed, and changes in wetland type due to the landscape.

Area 3 – Open Water

This is the single largest stretch of open water on the property, taking up the southwest corner and overflowing into neighboring land. It is a different wetland system than Areas 1 and 2, meaning they don't connect. The entirety of Area 3 is a *Palustrine Unconsolidated Bottom Semi-permanently Flooded Diked/Impounded Mineral* (PUBFhn) system. The ponded area flows into Great Brook on the other side of the Cheshire Turnpike.

There is no canopy in this area; the wetland is instead filled with herbaceous species. Wool grass, tussock sedge, cattails, soft rush, and buttonbush mark the marshy edges of this system.



Things to look for: Tall cattails and other rushes, chorus of wood frogs and spring peepers calling in March – May.