



Wetland Resource Delineation and Evaluation

55 Pearson Drive

Byfield, MA

February 17, 2016

Revised June 26, 2017

Introduction and Methods

The project site is an approximately 16.3 acre parcel located at 55 Pearson Drive in the Byfield section of Newbury, MA and is located in Figure 1 below. The site contains one single family residence and the remainder is forested.

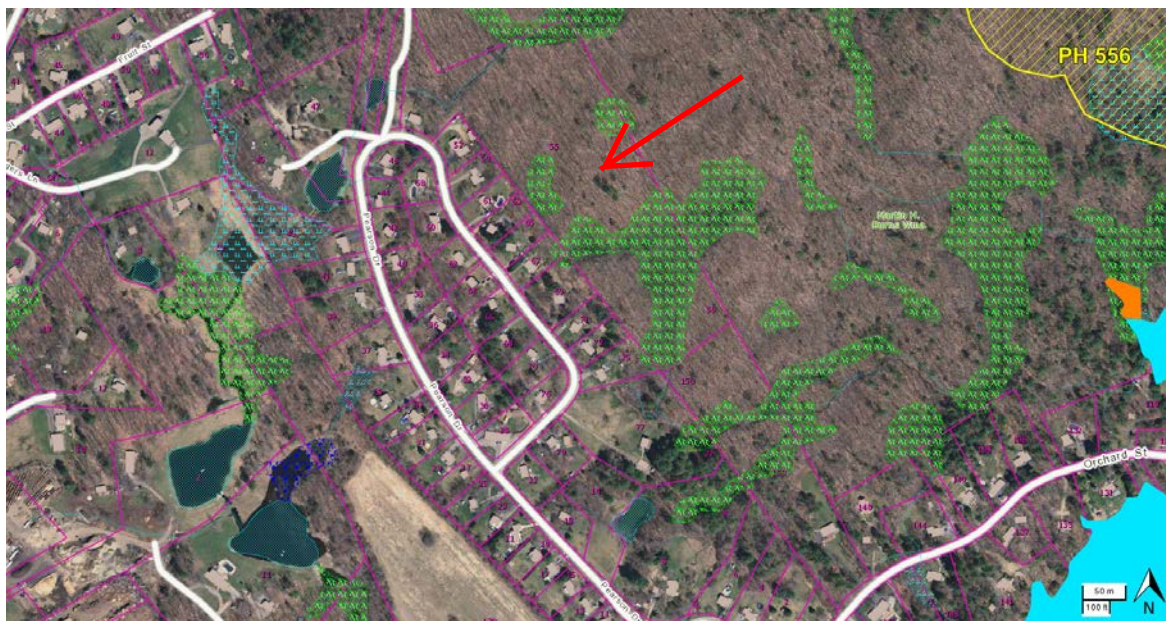


Fig. 1 MassGIS Wetlands Mapping

Field inspection of the project site was conducted by Rimmer Environmental Consulting, LLC (REC) on December 7, 2015, January 22, 2016 and June 8, 2017 for the purposes of evaluating the location and extent of wetland resources subject to jurisdiction under the Massachusetts Wetlands Protection Act (MGL Ch. 131 s. 40). The 2017 inspection also included an evaluation of potential vernal pools on the property.

Wetlands were delineated in accordance with the procedures established in the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00). Numbered sequences of were placed in the field to identify the limit of wetland resource areas. Wetlands were delineated primarily based upon the presence of 50% or more wetland vegetation, though other indicators of hydrology, including hydric soil were also evaluated. DEP Delineating Bordering Vegetated

Wetlands Field Data Forms are included as an attachment to provide additional documentation of the wetland boundary. The delineation conducted in 2016 was reviewed again in June 2017 during which time missing flags were replaced and a few adjustments to the boundary were made based upon current conditions.

Findings

The following wetland resource areas were determined to be present on and adjacent to the project area:

1. Bordering Vegetated Wetland (BVW)

Flags C1-C23 delineate a forested wetland which covers most of the southeastern portion of the project site. It consists of a red maple (*Acer rubrum*) and ironwood (*Carpinus caroliniana*) over story with oak (*Quercus spp.*) and white pine (*Pinus strobus*) in the adjacent upland. There may be additional upland areas south of the C-series wetland within the project site, but this southernmost portion of the site was not inspected for purposes of this project.

Flags D1-D22 and E1-E23 delineate a forested wetland associated with an unnamed intermittent stream in the northwesterly portion of the project site. Vegetation is similar to the above wetlands, with the addition of green ash (*Fraxinus pensylvanica*) in the overstory and sensitive fern (*Onoclea sensibilis*) as ground cover.

2. Isolated Vegetated Wetland

Flags A1-23 delineate a scrub-shrub/forested wetland in the southwestern portion of the site. This wetland is dominated by red maple and ironwood in the canopy and adjacent upland areas consist of mixed oak and pine forest. The A-series wetland does not border on another waterbody or waterway and therefore does not qualify as BVW. It may be large enough to qualify as an Isolated Land Subject to Flooding (ILSF) if survey shows that it holds the minimum ¼ acre feet of flood storage volume. ILSF does not contain an associated 100-foot Buffer Zone. This wetland was observed to contain seasonal ponding and may function as vernal pool habitat, though this could not be confirmed at the time of the inspection. If it is ILSF there is no associated 100-foot buffer zone associated with this resource.

Flags B1-B5 delineate a second, smaller isolated wetland between the A and C-series wetlands described above. It also lacks a waterbody or waterway connection and therefore does not qualify as BVW. It is also too small to hold the minimum ¼ acre feet of flood storage for designation as ILSF. It was therefore determined to be non-jurisdictional under state regulation.

Both the A and B series wetlands as well as the C, D and E series qualify as federally jurisdictional wetland due to their proximity to other wetlands.

3. Other Resources

The site is not located within Estimated Habitat of Rare Wetlands Wildlife and Priority Habitat and does not contain certified vernal pools, as determined by reference to Massachusetts Division of Fisheries and Wildlife – Natural Heritage and Endangered Species Program (NHESP) data available on MassGIS. However, inspection of the A series wetland indicates that it does support vernal pool habitat. During the June 2017 inspection REC observed that much of the A series was ponded to depths between approximately .5-1.5 feet in depth and the southern portion of this wetland contained numerous wood frog (*Rana sylvatica*) tadpoles, an obligate vernal pool species. Wood frog tadpoles and remnants of at least two egg masses were also noted in a small ponded area that is mostly isolated from the stream channel within the D series. An approximately 500 square foot area contained ponding to depths of approximately .5-1.5 feet in the area downgradient of flags D8 and D9. Mean high water of the vernal pool was estimated to be 8 feet downgradient of flag D8 and 2 feet downgradient of D9.



View northwest of D series near D9



Egg mass remnant



Wood frog tadpole