55 Walkers Brook Drive, Suite 100, Reading, MA 01867
Tel: 978.532.1900

# MEMORANDUM

| | |
|---|---|
| TO: | Town of Wellesley |
| FROM: | Jordan Foulds, Weston & Sampson Engineers Inc. |
| DATE: | June 26, 2025 |
| SUBJECT: | Wellesley Morses Pond Wetland Delineation Report Comparison (August 2021 to June 2025) |

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On August 27th, 2021, and June 12th, 2025, Devin Herrick, Jordan Foulds, and Greg Russo of Weston & Sampson Inc. investigated the wetland resource areas surrounding Morses Pond in Wellesley, MA, (please see enclosed wetland delineation report). In the state of Massachusetts, wetland delineations are valid for 3 years.

Wetland resources on the site (Inland Bank; Isolated Vegetated Wetland; and Bordering Land Subject to Flooding) have remained the same. Wetland delineations can have slight variations due to seasonal changes in hydrology and wetland vegetation. There were some slight changes between the 2021 and 2025 reports, as noted below:

- The isolated vegetated wetland was determined to be larger in 2025 than in 2021 by approximately 1,240 square feet, which is consistent with annual variations.
- There was a variation in wetland plant species and wetland hydrology indicators. This may have been due to the time of year each wetland delineation occurred.
- During the most recent wetland delineation, more wetland flags and bank flags were hung in the field.
- The Bordering Land Subject to Flooding elevation is anticipated to change on July 8, 2025, from 124.0' to 124.2' feet NAVD88 based on updated available FEMA mapping.
- The updated wetland delineation report from June 2025 includes information on the Town of Wellesley Wetland Protection Bylaws/Regulations. This is due to a change in the general format of our wetland delineation reports since 2021. The 2025 report includes information on local bylaw requirements, including the 25-foot No Disturbance Zone and the 200-foot buffer zone on Bordering Land Subject to Flooding. The 2025 report also includes information on Article 97 land, which is another update to our delineation report format that has occurred since 2021.

Weston & Sampson SM

westonandsampson.com

55 Walkers Brook Drive, Suite 100
Reading, MA 01867
tel: 978.532.1900

# Wetland Delineation Report

June 2025

Wellesley, Massachusetts
Project # ENG25-0709

Morses Pond
Wellesley, MA

Wetland Delineation Conducted By:
Greg Russo, CWS and Jordan Foulds, PWS on 6/12/2025

Delineation Report Reviewed By:
Rhianna Sommers, PWS

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## FIGURES



## APPENDICES

# 1.0 SITE DESCRIPTION

On June 12th, 2025, the presence of wetland resources was investigated near Morses Pond along the Morses Pond Access Road in Wellesley, MA. The investigation area is located adjacent to undeveloped woodlands and recreational walking paths. Please see Figure 1 (Wetlands Field Map) and Figure 2 (USGS Topographic Map) of this report for the investigation area.

Wetland resource areas including an isolated vegetated wetland and a lake bank, were identified and flagged in the field using pink flagging by a Weston & Sampson employee who is trained in the wetland delineation process using the Massachusetts Department of Environmental Protection (MassDEP) and the US Army Corps of Engineers methodology. Further descriptions of the wetland resource areas identified on site are presented in the following sections.

# 2.0 DELINEATION OF WETLAND RESOURCES

## 2.1 Site Observations

The Weston & Sampson wetland scientist, trained in the ACOE Wetland Delineation Manual and Massachusetts Department of Environmental Protection (MassDEP) Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetland Protection Act guidance document, observed the following protected wetland resources at the site:

- Isolated Vegetated Wetland (IW)
- Bank – Lake

Field data were recorded on US Army Corps of Engineers (ACOE) Wetland Determination Data Forms. See Appendix A for completed data forms and Appendix B for site photographs.

## 2.2 Wetland Delineation Methodology

A wetland delineation assessment was conducted in accordance with the Massachusetts Wetland Protection Act Regulations (310 CMR 10.55(2)(c)), Massachusetts Department of Environmental Protection (MassDEP) Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands (Second Edition, September 2022), ACOE Wetland Manual (Technical Report Y-87-1) and the Town of Wellesley Wetland Protection Bylaws/Regulations.

The bordering vegetated wetlands (BVW) delineation methodology included the characterization of vegetation, hydrologic conditions, and soil in both wetland and upland areas to identify the transitional area, which was used as the wetland limit. Pink flags with distinct flag numbers were left in the field to show wetland resource area limits.

Vegetation, hydrology and soils were assessed in both wetland and upland areas to accurately place the wetland limits at each site. The percentage of vegetative species was estimated by creating sample plots. Sample plot radius for trees, saplings, shrubs, groundcover and woody vine strata was 30', 15', 15', 5' and 30', respectively. After creating the sample plot areas, the percent basal area coverage of each species within the monitoring plot was recorded. Using these field observations, the percent dominance of each species within its stratum was calculated. The 50/20 Rule was then used to

determine dominance. Dominant species were considered the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceeds 50% of the total dominance measure (basal area) for the stratum, plus any additional species comprising 20% or more of the total dominance measure for the stratum. Once the dominant species were determined, they were treated equally to determine the presence of hydrophytic vegetation. If the number of dominant species with a Wetland Indicator Status of FAC (excluding FAC-), FACW or OBL is greater than, or equal to, the number of remaining dominant species, the area was considered a jurisdictional wetland resource area based on vegetation.

A soil sample from each wetland sample plot was also taken. Each soil sample goes to a depth of at least 12-24 inches. The soil was characterized to determine if the soil sample was considered a hydric (wetland) soil. Soil samples, including mottles, were characterized based on color using Munsell Soil-Color charts as a color reference.

The general area was then assessed for hydrologic conditions, including, but not limited to, site inundation, depth to free water, depth of soil saturation, water marks, drift lines, sediment deposits, ed leaves.

## 2.3 Isolated Vegetated Wetland (IW)

One Isolated Vegetated Wetland (IW) series was delineated at the site. The limit of the IW resource area was determined by locating the transitional area between wetland and upland vegetation, soils and hydrologic conditions. Vegetation, hydrology and soils were assessed in the same manner as described above for identifying BVW.

Wetland flags left in the field included:

- WET-A1 through WET-A13 (WET “A” Series)

Dominant vegetation in the wetland included red maple (*Acer rubrum)*, coastal sweet pepperbush (*Clethra alnifolia)*, glossy buckthorn (*Frangula alnus)*, and jewelweed (*Impatiens capensis)*. The soils were composed of sandy loam with 5% redoximorphic features appearing 2 inches below the soil

surface. Other indicators of wetland hydrology included saturation, water stained leaves, and geomorphic position.

Dominant vegetation in the uplands included red oak (*Quercus rubra),* hop hornbeam (*Ostrya virginiana)*, coastal sweet pepperbush (*Clethra alnifolia)*, and wild sarsparilla (*Aralia nudicaulis)*. Soils were composed of silt loam. No indicators of wetland hydrology were observed in the adjacent upland area.

The Massachusetts Wetland Protection Act does not typically protect isolated vegetated wetlands, unless they are vernal pools or meet the criteria for Isolated Land Subject to Flooding (ILSF). Pursuant to 310 CMR 10.57(2)(b), ILSF is an isolated depression or closed basin without an inlet or an outlet which at least once a year confines standing water to a volume of at least ¼ acre-feet and to an average depth of at least six inches. Additionally, the Town of Wellesley Wetland Protection Bylaws/Regulations also places protection on ILSF. Per Article 44; Section 2.8 (2)(a), ILSF is defined as an isolated depression or closed basin without an inlet or an outlet. It is an area which at least once a year confines standing water to an average depth of at least six (6) inches and has a surface area of 2,500 square feet or greater. Isolated Land Subject to Flooding may be underlain by pervious material, which in turn may be covered by a mat of organic peat or muck. IW A does not appear to be large enough to hold the volume of water required to be jurisdictional as ILSF under the WPA or the Wellesley Wetland Protection Bylaws/Regulations. However, it is recommended that project engineers perform the necessary calculations to confirm that the IW would not hold the requisite volume of water to be considered ILSF.

The Town of Wellesley Wetland Protection Bylaws/Regulations have a 100-foot buffer zone on isolated vegetated wetlands, as well as a 25-foot No Disturbance Zone, on isolated vegetated wetlands greater than 2,500 square feet. The isolated vegetated wetland is approximately 6,600 square feet and would be jurisdictional under the Town of Wellesley Wetland Protection Bylaws/Regulations.

## 2.4 Bank

Water bodies, including perennial streams, intermittent streams, ponds and lakes, have banks which are protected by the Massachusetts Wetland Protection Act. Bank is a wetland resource area defined by 310 CMR 10.54(2)(a) as “the portion of land surface which normally abuts and confines a water body. It occurs between a waterbody and a vegetated bordering wetland and adjacent floodplain, or, in absence of these, it occurs between a waterbody and an upland.” Vegetated banks provide valuable

functions such as flood control, stormwater prevention, fisheries protection, and water quality protection. The limit of this resource area is identified by Top of Bank (TOB) which is located at the first observable break in slope or the Mean Annual Flood Level (MAFL), whichever is lower. TOB is easily identified in the field so that indicator was utilized for this wetland delineation.

### Lake Bank

Morses Pond and the un-named extension adjacent to the pond are located off Morse Pond Access Road. The un-named extension is connected under a bridge to form a joined waterbody. The waterbody is approximately 100 acres in size, based on data from the Town of Wellesley[1]. Due to its size, Morses Pond and the adjacent extension are classified as a lake. According to the Massachusetts Wetland Protection Act a lake is defined as "any open body of fresh water with a surface area of ten acres or more, and shall include great ponds." (310 CMR 10.04). Great Ponds are defined in 310 CMR 9.02 as "any pond which contained more than ten acres in its natural state … prior to any alteration by damming or other human activity". Although Morses Pond is greater than ten acres in size, it is not listed on the Massachusetts List of Great Ponds. Top of bank flags left in the field included:

- TOB-A1 through TOB-A97 (Lake Bank "A" Series)

Top of bank flags were not left within the beach area to due to public usage, however the locations were GPS-located.

Banks are subject to a 100-foot buffer under the Massachusetts Wetland Protection Act per 310 CMR 10.02(2)(b). The Town of Wellesley Wetland Protection Bylaws/Regulations have a 100-foot buffer zone on lakes, as well as a 25-foot No Disturbance Zone.

## 2.5 Bordering Land Subject to Flooding

Bordering Land Subject to Flooding is a wetland resource area define by 310 CMR 10.57 (2)(a) as "an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland".

[1] https://wellesleyma.gov/353/Morses-Pond

FEMA Flood Insurance Rate Maps (FIRM) were created online from the FEMA website to determine if there is a 100-year flood zone at the site. Based on current FEMA flood maps the investigation area is located within a Zone AE 100-year flood zone with a base flood elevation of 124 feet NAVD88. However, there is a preliminary FIRM map available that will be active as of July 8, 2025. The area is still shown as a zone AE but with the base flood elevation to be updated to elevation 124.2 feet NAVD 88. See Figure 3 for FIRM map where the preliminary FIRM was utilized. FEMA defines Zone AE as "areas subject to inundation by the 1-percent-annual-chance flood event".

The Massachusetts Wetland Protection Act does not place a buffer zone on the 100-year flood zone (Bordering Land Subject to Flooding). However, the Town of Wellesley Wetland Protection Bylaws/Regulations have a 200-foot buffer zone on bordering land subject to flooding.

## 2.6 Other Protected Areas

Weston & Sampson created environmental resources maps (see Figure 4) of the site to determine the presence of other protected areas. The data source of these map layers was the Massachusetts Geographic Information System (MassGIS). These areas included:

- NHESP Priority Habitats of Rare Species
- NHESP Estimated Habitats of Rare Wildlife
- NHESP Certified and Potential Vernal Pools
- Areas of Critical Environmental Concern (ACEC)
- Outstanding Resource Waters (ORW)
- Coldwater Fisheries
- Article 97 Land

Wetland resources identified in the field were also added to these maps. Based on the MassGIS information, the western portion of the investigation area along Morses Pond Beach is located within Article 97 Land (open space) owned and managed by the Town of Wellesley. The site is not located within NHESP Priority Habitats of Rare Species, NHESP Estimated Habits of Rare Wildlife, Areas of Critical Environmental Concern, Outstanding Resource Waters, or Coldwater Fisheries. The site does not contain any mapped NHESP Certified or Potential Vernal Pools.

# 3.0 SUMMARY

On June 12th, 2025, the presence of wetland resources was investigated near Morses Pond along the Morses Pond Access Road in Wellesley, MA. A single isolated vegetated wetland and a lake were identified and flagged at the site.

Additional environmental mapping was conducted using MassGIS data layers and FEMA FIRM mapping. This additional mapping indicates that portions of the investigation area is located within Article 97 Land (open space) and the 100-year flood zone.

This Wetlands Delineation Report has been reviewed and approved by a Professional Wetland Scientist (PWS).

# 4.0 REFERENCES

Massachusetts Department of Environmental Protection. September 2022. "Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands – Second Edition".

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New England Hydric Soils Technical Committee, 2019, Version 4, *Field Indicator of Identifying Hydric Soils in New England*. New England Interstate Water Pollution Control Commission, Lowell, MA.
.

Default Folder: \\wse03.local\WSE\Projects\MA\Wellesley MA\25-1067-Morses Pond Beach Area & Bathhouse Supplemental Feasibility Study\09-Permitting\Wetland Delineation 2025\GIS\Shapefiles\Morses Pond 2025 User: Foulds.Jordan Date: 6/16/2025 9:54 AM


N
W E
S

200 100 0 200
Feet

**Data Source:** Office of Geographic and Environmental Information (MassGIS),Maxar, Microsoft

**Legend**

- Investigation Area
- TOB-Lake
- Isolated Vegetated Wetland
- MA Towns
- Hydrologic Connection
- MassDOT Roads

**USGS Streams**

- USGS Perennial Stream
- USGS Intermittent Stream

DEP Wetland Areas

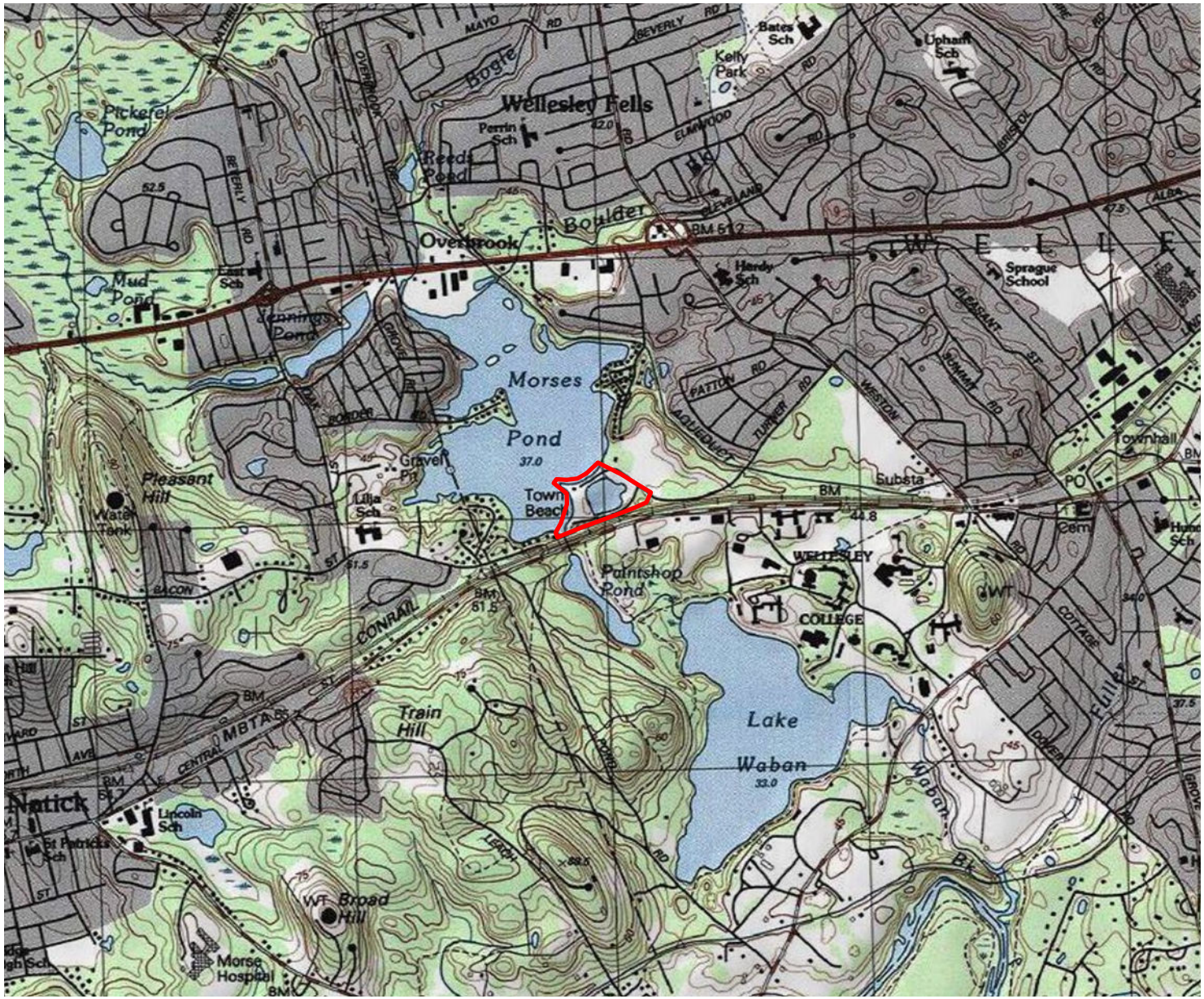
- Marsh/Bog
- Wooded marsh
- Cranberry Bog
- Salt Marsh
- Open Water
- Reservoir (with PWSID)
- Tidal Flats
- Beach/Dune

**FIGURE 1**

Morses Pond
Morses Pond Access Road
Wellesley, MA

Wetlands Field Map

Weston & Sampson




**Legend**

Investigation Area

N
W E
S

1,000 500 0 1,000
Feet

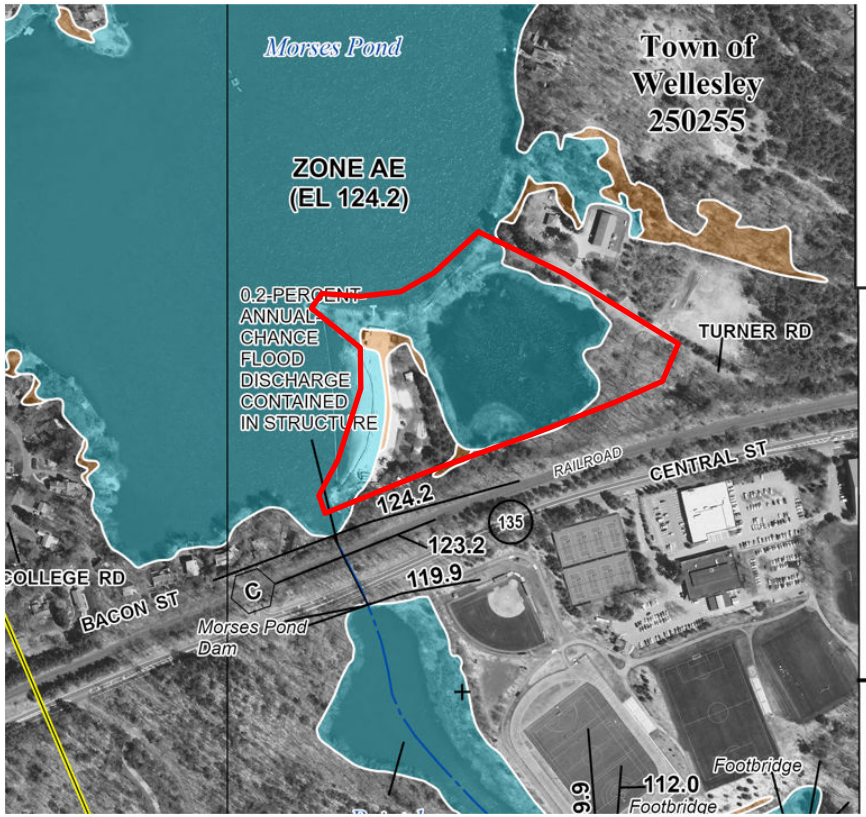
**Data Source:** Office of Geographic and Environmental Information (MassGIS), Copyright:© 2013 National Geographic Society, i-cubed

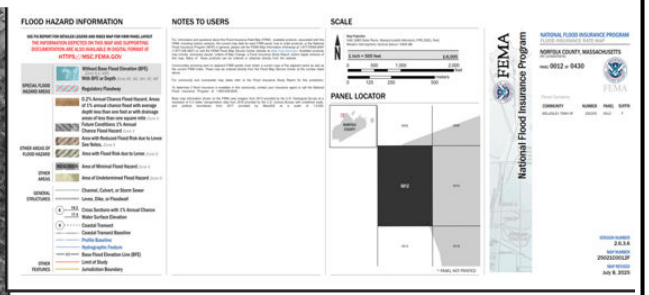
**FIGURE 2**

Morses Pond
Morses Pond Access Road
Wellesley, MA

USGS Topographic Map

Weston & Sampson




## Legend

Investigation Area

**FIGURE 3**

Morses Pond
Morses Pond Access Road
Wellesley, MA

FEMA Map

N
W E
S

**Data Source:** FEMA, USGS National Map 2023

Weston & Sampson

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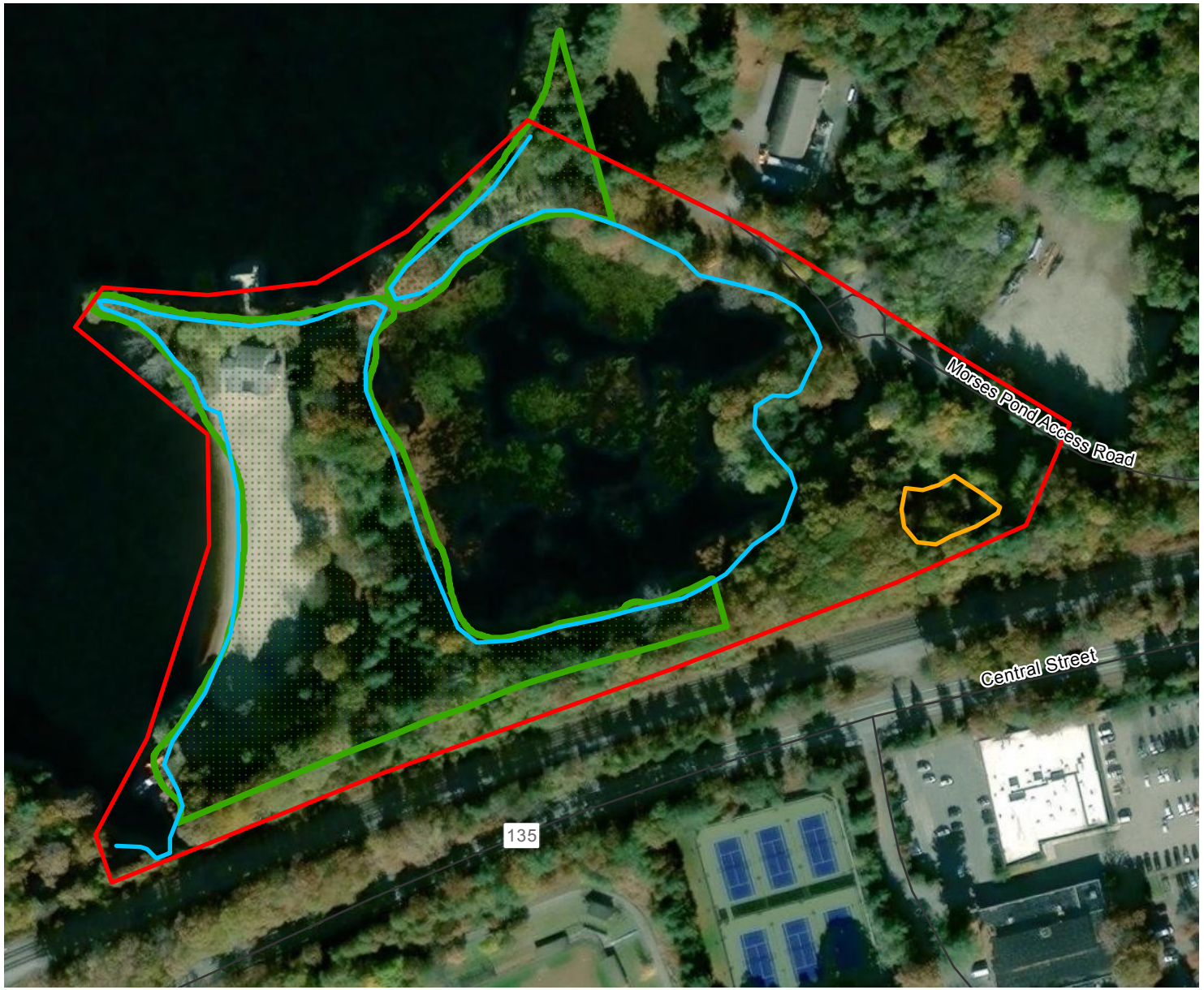


**Legend**

- Investigation Area
- TOB-Lake
- Isolated Vegetated Wetland
- Article 97 Land
- ACECs
- NHESP Estimated Habitats of Rare Wildlife
- NHESP Priority Habitats of Rare Species
- NHESP Certified Vernal Pools
- NHESP Potential Vernal Pools
- Cold Water Fisheries

**Outstanding Resource Waters**

- Public Water Supply Contributor
- ORW for ACEC
- ORW for both Water Supply and Other

N
W E
S

150 75 0 150
Feet

**Data Source:** Office of Geographic and Environmental Information (MassGIS), Maxar, Microsoft, NHESP, MassGIS

**FIGURE 4**

Morses Pond
Morses Pond Access Road
Wellesley, MA

Environmental Receptors Map

Weston & Sampson

# APPENDIX A

ACOE Wetland Determination Data Forms

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Morses Pond City/County: Wellesley Sampling Date: 6/12/2025

Applicant/Owner: Town of Wellesley State: MA Sampling Point: WET A WET

Investigator(s): Greg Russo, CWS and Jordan Foulds, PWS Section, Township, Range:

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 0-3

Subregion (LRR or MLRA): LRR R Lat: 42.2962969 Long: 71.3146760 Datum: WGS84

Soil Map Unit Name: Hinckley NWI classification: PFO1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | | |
|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes X | No ____ | **Is the Sampled Area** | |
| Hydric Soil Present? | Yes X | No ____ | **within a Wetland?** | **Yes** X **No** ____ |
| Wetland Hydrology Present? | Yes X | No ____ | If yes, optional Wetland Site ID: | |

Remarks: (Explain alternative procedures here or in a separate report.)

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ____ | No X | Depth (inches): ____ |
| Water Table Present? | Yes ____ | No X | Depth (inches): ____ |
| Saturation Present? (includes capillary fringe) | Yes X | No ____ | Depth (inches): 0 |

**Wetland Hydrology Present?** **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: WET A WET

| Tree Stratum (Plot size: 30 ft radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Acer rubrum* | 30 | Yes | FAC |
| 2. *Ulmus americana* | 5 | No | FACW |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 35 | =Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 15 ft radius) | | | |
| 1. *Clethra alnifolia* | 5 | Yes | FAC |
| 2. *Frangula alnus* | 15 | Yes | FAC |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 20 | =Total Cover | |
| **Herb Stratum** (Plot size: 5 ft radius) | | | |
| 1. *Impatiens capensis* | 40 | Yes | FACW |
| 2. *Parthenocissus quinquefolia* | 5 | No | FACU |
| 3. *Arisaema triphyllum* | 5 | No | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| | 50 | =Total Cover | |
| **Woody Vine Stratum** (Plot size: ) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | | =Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 45 | x 2 = | 90 |
| FAC species | 55 | x 3 = | 165 |
| FACU species | 5 | x 4 = | 20 |
| UPL species | 0 | x 5 = | 0 |
| Column Totals: | 105 (A) | | 275 (B) |

Prevalence Index = B/A = 2.62

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

## SOIL

Sampling Point: WET A WET

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-2 | 10YR 2/1 | 90 | | | | | Loamy/Clayey | sandy loam |
| 2-10 | 2.5Y 4/2 | 95 | 10YR 5/8 | 5 | C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: rock

Depth (inches): 10

**Hydric Soil Present?** **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Morses Pond City/County: Wellesley Sampling Date: 6/12/2025

Applicant/Owner: Town of Wellesley State: MA Sampling Point: WET A UP

Investigator(s): Greg Russo, CWS and Jordan Foulds, PWS Section, Township, Range:

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 0-3

Subregion (LRR or MLRA): LRR R Lat: 42.2962969 Long: 71.3146760 Datum: WGS84

Soil Map Unit Name: Hinckley NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes | No X | **Is the Sampled Area** | | |
| Hydric Soil Present? | Yes | No X | **within a Wetland?** | **Yes** | **No** X |
| Wetland Hydrology Present? | Yes | No X | If yes, optional Wetland Site ID: | | |

Remarks: (Explain alternative procedures here or in a separate report.)

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes | No X | Depth (inches): |
| Water Table Present? | Yes | No X | Depth (inches): |
| Saturation Present? (includes capillary fringe) | Yes | No X | Depth (inches): |

**Wetland Hydrology Present?** **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: WET A UP

| Tree Stratum (Plot size: 30 ft radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *Quercus rubra* | 65 | Yes | FACU |
| 2. *Ostrya virginiana* | 45 | Yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 110 | =Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 15 ft radius) | | | |
| 1. *Clethra alnifolia* | 5 | Yes | FAC |
| 2. *Ostrya virginiana* | 10 | Yes | FACU |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 15 | =Total Cover | |
| **Herb Stratum** (Plot size: 5 ft radius) | | | |
| 1. *Aralia nudicaulis* | 10 | Yes | FACU |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| | 10 | =Total Cover | |
| **Woody Vine Stratum** (Plot size: ) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| | | =Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 5 | x 3 = | 15 |
| FACU species | 130 | x 4 = | 520 |
| UPL species | 0 | x 5 = | 0 |
| Column Totals: | 135 (A) | | 535 (B) |
| Prevalence Index = B/A = | | | 3.96 |

**Hydrophytic Vegetation Indicators:**

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

## SOIL

Sampling Point: WET A UP

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-4 | 10YR 2/2 | 100 | | | | | Loamy/Clayey | silt loam |
| 4-20 | 10YR 3/6 | 100 | | | | | Loamy/Clayey | silt loam |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

**Indicators for Problematic Hydric Soils[3]:**

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ___ **No** X

Remarks:

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# APPENDIX B

Site Photographs

**Photo 1:** Morses Pond looking North.

**Photo 2:** WET-A Series.

Photo 3: Extension adjacent to Morses Pond.