Client: TEC, Dylan Skinner, PE
Wetland Delineation Report
Hancock Project #: 28616
Address: Clark's Road, Amesbury MA
Date: September 25, 2025

In execution of TEC Contract, a Wetland Professional in Training (WPIT) field delineated all jurisdictional wetlands within 100-feet of Clark's Road in Amesbury, MA. Based on this delineation, Inland Bank associated with perennial Merrimack River was identified and delineated.

Prior to performing field wetland observations, an environmental constraints desktop assessment of the subject property was performed through review of MassGIS data layers, USGS 7.5-minute quadrangle maps, NRCS soil maps, and Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs). Based on this review, the focus of the delineation was the bank of the Merrimack River.

The following report summarizes the findings of this delineation, which was conducted on September 23, 2025, in accordance with MassDEP wetland delineation standards.

Inland Bank

As defined in 310 CMR 10.54 (2)(a) &(c), a Bank is "... *the portion of the land surface that normally abuts and confines a waterbody*." This land surface "... *may be partially or totally vegetated, or it may be comprised of exposed soil, gravel, or stone*." "*The upper boundary of a Bank is delineated as the first observable break in the slope or the mean annual flood level, whichever is lower.*" Bank is present between a perennial river, lake, or pond and the adjacent BVW or upland and within intermittent streams.

Bank was delineated with one (1) flag series labeled as BA100 as follows:

BA100

The BA100 series represents Mean Annual High Water (MAHW) and runs along the bank of the river. The bank was delineated to the extent that it broadcasts onto the area of proposed work on Site. The limit of the bank was demarcated with one (1) series of flags, labeled BA (100 through 117).

Bank full Width

The edge of the bankfull channel typically corresponds to the start of the floodplain. A floodplain receives floodwaters in most years but is vegetated by perennial plants and trees. This vegetation often reflects repeated flow-related disturbance and may not support mature trees. Field determination of the bankfull channel edge of streams rely on where the substrate is dominated by boulders or bedrock or where the channel is tightly confined, a distinct floodplain may not exist. In these situations, you will have to rely on secondary indicators, such as vegetation or other evidence of flood flows to determine the bankfull width. These indicators may include:

- A change in vegetation from bare surfaces or annual water-tolerant species to perennial upland or water-tolerant shrubs and trees;
- Bare areas associated with scour around woody debris or other obstructions.
- The top of point bars; or
- The lowest elevation at which fine organic debris is caught on brush or trees

Due to field conditions, field measurements were not performed. If necessary bankfull width should be confirmed with stream stats and during field topographic land surveying services.

Bordering Land Subject to Flooding (BLSF)

According to 310 CMR 10.57, "*Bordering Land Subject to Flooding is 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."*

According to the FEMA map 25009C0106G (effective 07/08/2025) there are portions of the Site associated with the Merrimack River within special flood zone AE with elevation 10.5 feet. This area is associated with the jurisdictional wetland resource area, BLSF.

Buffer Zone and Setback Zones

Buffer Zone is defined in 310 CRM 10.04 as *"that area of land extending 100 feet horizontally outward from the boundary of any area specified in 310 CMR 10.02(1)(a)."*

Work within the Buffer Zones to Inland Bank falls under the jurisdiction of both the MA WPA and the town of Amesbury Wetlands Protection Ordinance. Inland Bank has a 100-foot Buffer Zone horizontally off the limits of resource area as well as a 200-foot Riverfront Area (RFA). Proposed projects within these areas must adhere to certain regulatory performance standards.

Additional Areas Investigated

The roadside adjacent to the cemetery was investigated on October 2, 2026. During this investigation, soils were examined with a hand auger to determine if hydric soil characteristics were present. Auger holes were excavated to a depth that confirmed the presence of hydric soils in wetland areas, or that eliminated the possibility of hydric soils in uplands. Soils were observed to be 10YR 2/2 approximately 4 inches below the surface then transitioning to 10YR 5/6 below which is indicative of an upland matrix. The area was primarily vegetated with grass (*Poa pratensis,* FACU), English plantain (*Plantago lanceolata,* FACU), common yarrow (*Achillea spp.,* FACU*),* and red oak (*Quercus rubra,* FACU). Some roadside drainage patterns were observed but otherwise all field evidence supports this area to be upland.

If you have any questions regarding the delineation, please contact me at cwhite@hancockassociates.com or 978-777-3050 ext. 406.

Caitlin White, WPIT
Project Wetland Scientist
Hancock Associates

Attachments:

A – Figures

National Flood Hazard Layer FIRMette

FEMA

70°55'6"W 42°50'51"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

70°54'29"W 42°50'25"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

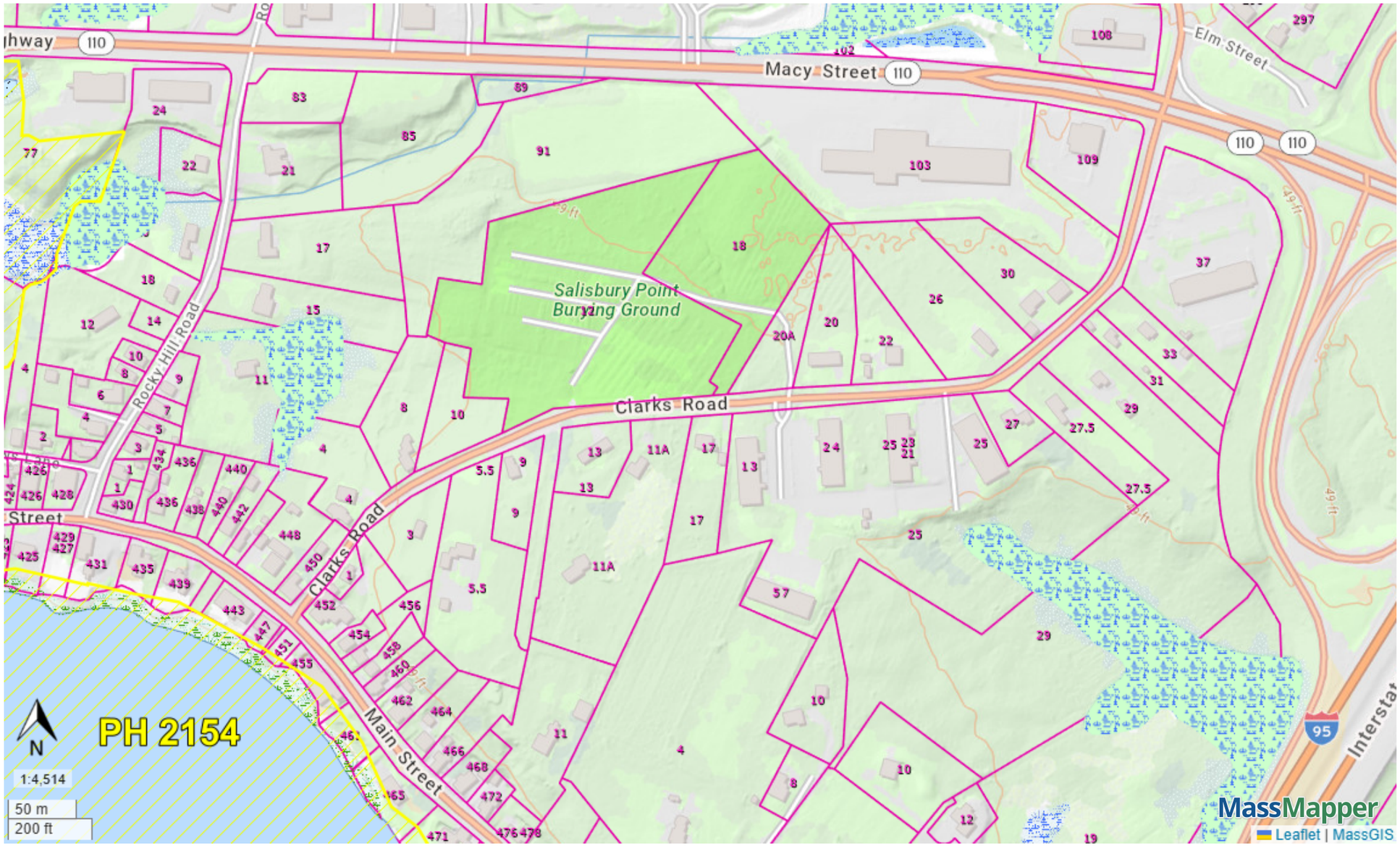
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The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/30/2026 at 9:07 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



Mouth of the River (MOR) Lines

Public Water Supplies

- Communtiy Groundwater Well
- Non-Communtiy Groundwater Well
- Surface Water Intake
- Emergency Surface Water Intake
- Community Labels
- Non-Community Labels

Areas of Critical Environmental Concern ACECs

NHESP Priority Habitats of Rare Species

NHESP Estimated Habitats of Rare Wildlife

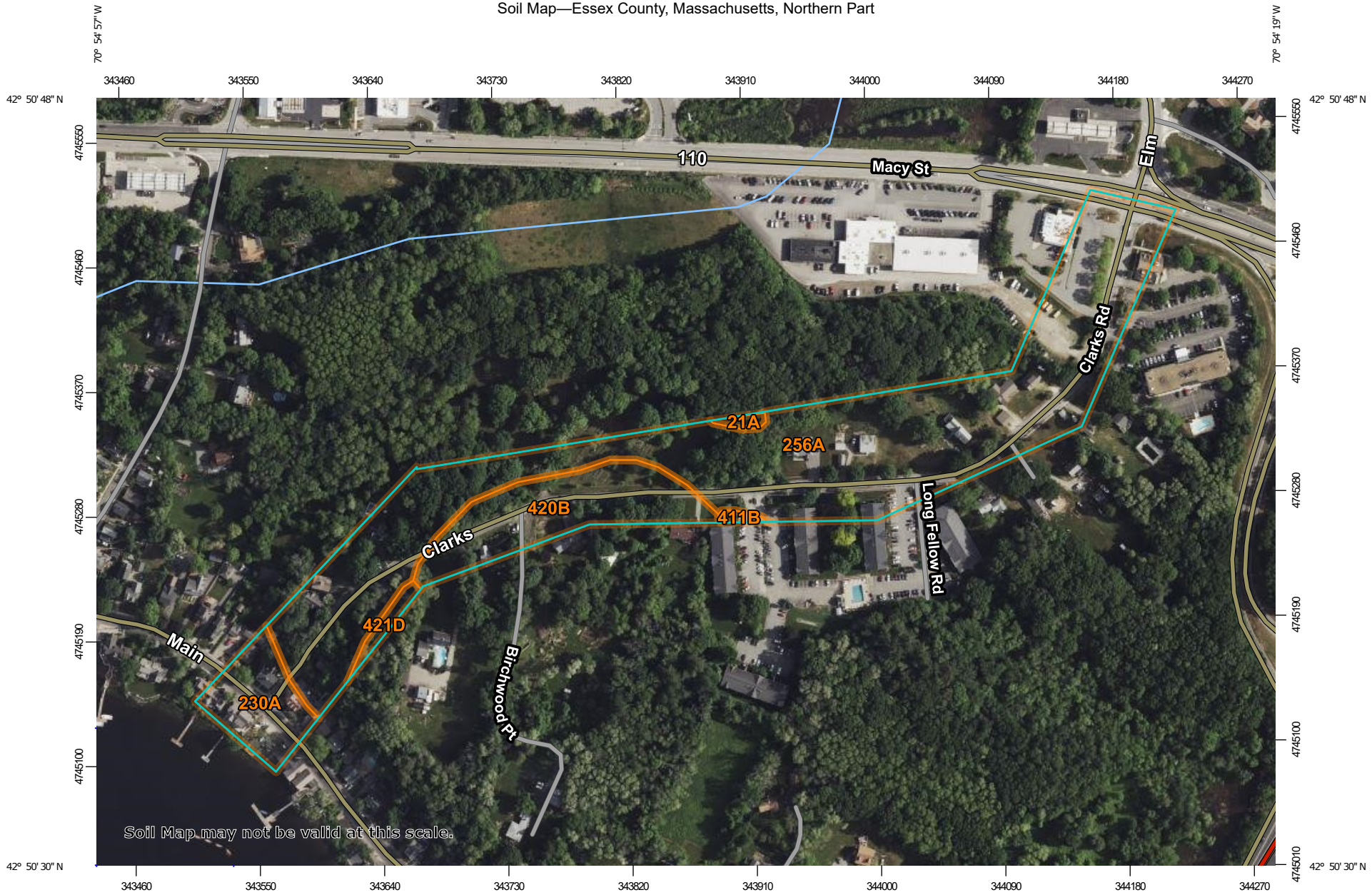
NHESP Certified Vernal Pools

DEP Wetlands General Categories

- MARSH/BOG
- WOODED MARSH
- CRANBERRY BOG
- SALT MARSH
- OPEN WATER
- RESERVOIR (WITH PWSID)
- TIDAL FLATS
- BEACH/DUNE

Property Tax Parcels

Printed Sep 30, 2026



Map Scale: 1:3,900 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Essex County, Massachusetts, Northern Part
Survey Area Data: Version 21, Sep 5, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
21A	Walpole variant fine sandy loam, 0 to 3 percent slopes	0.1	0.5%
230A	Unadilla very fine sandy loam, 0 to 3 percent slopes	1.1	7.7%
256A	Deerfield loamy fine sand, 0 to 3 percent slopes	10.8	75.2%
411B	Sutton fine sandy loam, 0 to 8 percent slopes, very stony	0.1	0.4%
420B	Canton fine sandy loam, 3 to 8 percent slopes	2.2	15.0%
421D	Canton fine sandy loam, 15 to 25 percent slopes, very stony	0.2	1.1%
Totals for Area of Interest		**14.3**	**100.0%**