

October 2, 2025

Medway Conservation Commission
155 Village Street
Medway, MA 02053

**Re: Request for More Information – NOI
Landfill Cap Investigation
46 Broad Street
Medway, Massachusetts**

Dear Bridget,

On behalf of the Town of Medway Department of Public Works, Weston & Sampson Engineers, Inc. (Weston & Sampson / W&S) is hereby enclosing the requested responses to the following comments (shown in bold) issued via email on September 15, 2025:

- 1. Provide Figure 4 in 24' x 36' with topo lines, test pits, and access routes, include wetland flagging on all sheets, this layer should be turned on for every map.**

1. W&S Response: Figure 1 has been revised to include these items and is attached. Figure 1 also includes revised wetland lines based on the flag revisions and additions provided by the Agent on September 2, 2025. Revised delineation maps are also included with the attached revised wetland Delineation Report.

- 2. Use the Agent's review of the Riverfront designation, StreamStats for the width of the stream, GIS for the center line, 7.25' to each side, and create a MAHW line, using 200' from this line.**

2. W&S Response: Figure 1 has been revised to use the Agent's review of the Riverfront designation to create a new MAHW line and 200' Riverfront Area Line. A revised Figure 1 is attached as well as a revised Wetland Delineation Report.

Based on the new MAHW line, 100' Riverfront Area, and 200' Riverfront Area, temporary and permanent impacts to Riverfront Area have decreased from the numbers previously reported in the NOI Narrative. The new Riverfront Area impact numbers are provided on the following page:

Wetland Resource Area	Number of Test Pits	Temporary ^(1,3)		Permanent ^(2,3)	
		Minimum Impact	Maximum Impact	Minimum Impact	Maximum Impact
RFA 0'-100'	8	1,424 SF	1,924 SF	1,232 SF	1,540 SF
RFA 100'-200'	12	3,096 SF	4,086 SF	2,808 SF	3,510 SF
RFA 0'-200'	20	4,520 SF	6,010 SF	4,040 SF	5,050 SF

Notes:

1. Temporary impacts are impacts that include test pits and access roads within wetland resource areas that will be returned to pre-existing conditions.
2. Permanent impacts are impacts that include tree/woody vegetation clearing.
3. Proposed impacts are concurrent and may occur in multiple wetland resource areas.

3. Stumps will not be removed, this should be noted.

3. W&S Response: Woody vegetation will be cut to ground level and stumps will be left in place. No stump removal is proposed as part of this project.

4. Provide calculations showing the 30% of the site is “degraded” – these need to be reviewed by the Commission for meeting this standard. Please show these areas on the map. This only to qualify under the 310 CMR 10.58(5), these areas shall be marked on the map, described and reviewed for consideration under the provision. Page 4-4.

4. W&S Response: Total Riverfront Area within the site is approximately 165,850 sq ft. Degraded area within the total Riverfront Area is approximately 41,500 sq ft. Based on the new MAHW line and 200' Riverfront Area line, approximately 25% of the Riverfront Area within the site is degraded. These areas have been identified and quantified in the revised version of Figure 1 attached.

5. Quantify the exact percentage of riverfront to be altered, does this exceed the 10%?

5. W&S Response: Based on the total area of potential access roads, there will be approximately 2,808 – 3,510 sq ft of alteration to Riverfront Area from tree clearing. This results in approximately 1.7% – 2.1% of alteration to the existing Riverfront Area, which does not exceed 10%.

6. Provide the percentage of riverfront to be disturbed under 310 CMR 10.58(4).

6. W&S Response: Including access roads and test pits, approximately 1.7 – 2.1% of the existing Riverfront Area will be altered.

7. Add Condition - W&S presence at the site for flagging access routes.

7. W&S Response: Noted. Weston & Sampson will be onsite during test pitting activities with a handheld global positioning system (GPS unit to flag access routes.

8. Add Condition - GIS all disturbed areas and calculate at the end for comparison to the proposed alterations.

8. W&S Response: Noted. Weston & Sampson will GPS disturbed areas during test pitting activities.

9. Revise Figure 4 to show E&S not in BVW.

9. W&S Response: Figure 1 has been revised to show adjusted E&S control outside BVW.

10. Add Condition - any drums or other materials which may be contaminated to be removed from the site, if encountered during testing.

10. W&S Response: Based on the Site history, the landfill accepted municipal solid waste (MSW), which is primarily comprised of household wastes. Therefore, drums or other materials such as tanks are unlikely to be encountered. If drums or other materials are encountered, these items will be placed on polyethylene sheeting and properly disposed of off-site.

11. NOTE: Commission agreed to accept the comment letter as the request for waiver.

11. W&S Response: W&S is requesting a waiver from Article 21 Section 23 of The Town of Medway Wetlands Protection Bylaw (Bylaw). Per Article 21, the purpose of this Bylaw is to establish a public review process by which activities having an impact or cumulative effect upon the wetland, surface, and groundwater resources of the Town of Medway (the Town) are regulated, and to identify additional public interests not recognized by the Massachusetts Wetlands Protection Act (WPA). Section 23 of the Bylaw places regulations around the removal and replacement of vegetation from resource areas protected by the Bylaw due to its importance for wildlife, wildlife habitat, water quality, and climate change impact mitigation.

Section 23 of the Bylaw states that no vegetation within a resource area protected by the Bylaw shall be damaged, extensively pruned, or removed without written approval by the Commission and in-kind replacement. Section 23 also outlines several potentially acceptable reasons for removal including health of vegetation, bank or slope stabilization, invasive species, ecological restoration, vegetation replacement, or imminent risk to public health and safety, and outlines the requirements of an Application for Removal which must be submitted as part of a Notice of Intent.

Per Section 29 of the Bylaw, Waivers, "The Conservation Commission may grant a waiver from these rules and regulations upon a preponderance of evidence presented by the applicant that any proposed work will have an overriding public benefit."

This proposed work is being conducted to support a request by MassDEP to determine the extent of the existing landfill and its cap so that in the future the landfill can be properly closed and left in a condition that is improved over the current situation where historic evidence suggests the landfill was not properly capped. A waiver is in the public interest because it will expedite the completion of these required investigations to proceed with the proper closure of this inactive landfill which is located within a MassDEP approved Zone II Wellhead Protection Area due to proximity of the Town water supply well. Proper closure of inactive landfills protects public health and the environment by creating a barrier between the landfill contents and the surrounding environment, minimizing infiltration and erosion. It is critical that the integrity of the landfill cap be maintained in order to protect public health.

This proposed test pit investigation seeks to cut any trees or woody vegetation identified on or within the landfill cap (if present) extents while the herbaceous material will remain. Trees and woody

vegetation must be removed from the landfill cap in order to be in compliance with the vegetative cover standards of the Massachusetts Solid Waste Regulations. Per 310 CMR 19.112 (10)(a)(5), vegetative cover shall “have root systems that shall not compromise the drainage layer or low permeability layer.” Any woody vegetation growing on the landfill cap (if present) can have root systems that extend below the cover thickness impacting the integrity of the cap. As a result, all cover vegetation must be herbaceous. The project does not seek to remove the herbaceous layer, vegetation growth will still be encouraged on the landfill cap. Only woody vegetation is to be removed.

Because the proposed work seeks to protect public health by properly closing this inactive landfill, minimizing stormwater infiltration, thereby mitigating leachate generation from the waste body, which could potentially migrate and impact downgradient drinking water, and because a critical required component of this proposed work is to remove woody vegetation to protect the integrity of the cap, the Town of Medway would like to formally seek a waiver from Section 23: Vegetation Removal and Replacement.

12. Submit Land Disturbance Permit with waivers.

12. W&S Response: W&S is requesting a waiver from Article 26: The Town of Medway Stormwater Management and Land Disturbance Bylaw. Per Article 26, the purpose and intent of this Bylaw is to fulfill the Town’s obligations under the Clean Water Act (CWA) and under the Town’s National Pollution Discharge Elimination System (NPDES) permit by:

1. Protecting the waters of the US as defined in the Act and implementing regulations from uncontrolled Discharges of Storm Water or discharges of contaminated water which have a negative impact on the receiving waters by changing the physical, biological and chemical composition of those waters resulting in an unhealthy environment for aquatic organisms, wildlife and people;
2. Establishing a comprehensive and fair system of regulation of discharges to the Town’s Municipal Separate Storm Sewer System (MS4);
3. To identify, and authorize or eliminate direct or indirect connections to the MS4;
4. To require the removal of all illicit discharges to MS4;
5. To comply with Town, state and federal regulations related to storm water discharges, including but not limited to point sources, construction or industrial activities, and post-construction runoff by establishing provisions for the long-term responsibility for and maintenance of stormwater control facilities; and
6. To establish legal authority to ensure compliance with the provisions of this Bylaw through inspection, monitoring and enforcement.

Section 26.5 of this Bylaw states that any activities which the limit of work results in disturbance of 20,000 square feet or more will require a Land Disturbance Permit except as authorized by the applicable board or commission. Section 26.5.5 of this Bylaw states that “The Permitting Authority may waive strict compliance with any requirement of this Bylaw or the Rules and Regulations promulgated hereunder, where:

- a. *Such action is allowed by federal, state and local statutes and/or regulations,*
- b. *a waiver is in the public interest, or*
- c. *a waiver is not inconsistent with the purpose and intent of this Bylaw, or*
- d. *the requirement does not apply to the particular site or situation under review, or*
- e. *a waiver would permit a superior design.*

This proposed work is being conducted to support a request by MassDEP to determine the extent of the existing landfill and its cap so that in the future the landfill can be properly closed and left in a condition that is improved over the current situation where historic evidence suggests the landfill was not properly capped. A waiver is in the public interest because it will expedite the completion of these required investigations to proceed with the proper closure of this inactive landfill which is located within a MassDEP approved Zone II Wellhead Protection Area due to proximity of the Town water supply well. Proper closure of inactive landfills protects public health and the environment by creating a barrier between the landfill contents and the surrounding environment, minimizing infiltration and erosion. It is critical that the integrity of the landfill cap be maintained in order to protect public health.

Because the proposed work seeks to protect public health by properly closing this inactive landfill, minimizing stormwater infiltration, thereby mitigating leachate generation from the waste body, which could potentially migrate and impact downgradient drinking water, a waiver would not be inconsistent with the purpose and intent of this Bylaw and as a result the applicant is seeking a waiver from the requirement of a Land Disturbance Permit.

13. Revise Plans - Applicant to amend the erosion controls to be compost socks.

13. W&S Response: Figure 1 has been revised to show compost socks instead of straw wattles, and Appendix E of the NOI has been revised to show specs for compost socks instead of straw wattles.

14. Provide location of Wetland Delineation forms – ACOE notes, W&S will get the location of the upland and lowland plots (could not find the locations).

14. W&S Response: ACOE data plots were not GPS located in the field. Based on conversations with the wetland scientist conducting the delineation the data plots for BVW-A were taken in the vicinity of flags 3 and 4. The data plots for BVW-B were taken in the vicinity of flags 44 – 46. The data plots for IVW-A were taken in the vicinity of flag 2.

15. Discussed – if areas where vegetation is removed, and there is no landfill be identified and restored as part of the Landfill closure?

15. W&S Response: W&S is requesting a waiver from Article 21 Section 23 of The Town of Medway Wetlands Protection Bylaw (Bylaw). Please see response #11 above.

16. Review the Agent interpretation of 310 CMR 10/53(3)(p)(2)(f). This is part of the requirements needed for landfill closure. Review and determine if this portion of the work is covered under a limited project.

16. W&S Response: W&S is requesting that the proposed work be considered under a Limited Project. The Massachusetts Wetlands Protection Act (WPA) grants relief from the performance standards under its limited project provisions, for various types of infrastructure and agricultural projects as described at 310 CMR 10.53(3) that cannot comply to all of the performance standards. Simply stated, these provisions allow the Conservation Commission to permit certain unique projects that cannot meet the applicable performance standards.

The proposed project consists of digging test pits to support a request by MassDEP to determine the extent of the existing landfill and its cap so that in the future the landfill can be properly closed and left in a condition that is improved over the current situation where historic evidence suggests the landfill was not properly capped. Although the current proposed project is not yet to cap and close the landfill, this proposed investigation is required under 310 CMR 19.140 Landfill Closure Requirements. Item 3 of these requirements states that the owner or operator of a landfill shall initiate an assessment in accordance with 310 CMR 19.150 prior to landfill closure. Per 310 CMR 19.150, an assessment shall consist of all activities, as determined by MassDEP, required to identify the existence, source, nature and extent of pollution or threat of pollution, the extent of the adverse impact from any pollution and the feasible cost-effective alternatives available to correct or reduce the impacts of pollution. As stated above, MassDEP has determined that a test pit program is required for closure purposes and so can be considered a limited project under 310 CMR 10.53 (3)(p).

310 CMR 10.53 (3)(p) lists the following standards that must be met to qualify as a limited project under this provision (shown in bold italics). Compliance with these standards is discussed below.

a. Hydrological changes to resource areas shall be minimized.

Hydrological changes to resource areas are not proposed.

b. Best management practices shall be used to minimize adverse impacts during construction, including prevention of erosion and siltation of adjacent water bodies and wetlands in accordance with standard U.S.D.A. Soil Conservation Service methods;

Compost filter tubes will be placed on the down-slope side of each test pit to separate each test pit area from the nearest waterbody or wetland.

c. Mitigating measures shall be implemented that contribute to the protection of the interests identified in M.G.L. c. 131, § 40;

Prior to excavating test pits near the wetland areas, erosion controls will be placed down slope. Herbaceous vegetation, if present, will be removed carefully, placed to the side of the hole then back over the test pit once finished, to conserve herbaceous vegetation to the maximum extent practicable and return the site to pre-existing conditions. Materials removed from each test pit will be separated by material type on polyethylene sheeting next to the hole. Once the test pit investigation is completed, the material will be placed back into the hole in the same order it was removed. The backfilled hole will be compacted using the back of the excavator bucket.

- d. Compensatory storage shall be provided in accordance with the standards of 310 CMR 10.57(4)(a)1. for all flood storage volume that will be lost;*

Flood storage volume will not be lost as a result of this project.

- e. No access road, assessment or monitoring device, or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity;*

No component of the proposed project will restrict flows so as to cause an increase in flood stage or velocity.

- f. Temporary structures and work areas in resource areas, such as access roads and assessment and monitoring devices, shall be removed within 30 days of the Department's written determination that the closure of the facility has been completed in accordance with the closure permit. Temporary alterations to resource areas shall be substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion in accordance with standard U.S.D.A. Soil Conservation Service methods. Temporary structures, work areas, and alterations to resource areas are those that no longer are necessary to fulfill the requirements of 310 CMR 19.000: Solid Waste Management;*

This project will not be closing the landfill. Closing the landfill will be a component of a future project. However, this proposed investigation is required under 310 CMR 19.140 Landfill Closure Requirements. Item 3 of these requirements states that the owner or operator of a landfill shall initiate an assessment in accordance with 310 CMR 19.150 prior to landfill closure and MassDEP has determined that a test pit program is required for future closure purposes. The proposed test pit program will not alter existing topography or hydrology. Clearing access roads to the test pits will remove woody vegetation only and allow herbaceous vegetation to remain. Roads will not be constructed, only cleared paths through existing vegetation. Any disturbance to herbaceous vegetation is expected to regenerate naturally. Any exposed soil will be stabilized as needed. All test pits will be backfilled immediately upon completion and any reserved herbaceous vegetation will be removed with it.

- g. Except for direct impacts to resource areas caused by the final cap and cover on the landfill, no changes in the existing topography or the existing soil and surface water levels shall be permitted, except for those resulting from temporary access roads;*

No changes to existing topography, soil, or surface water levels are proposed.

- h. Work in resource areas shall occur only when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment used; and*

Noted.

- i. Such projects shall not include the construction of new landfills or the expansion or modification of existing landfills.*

The proposed project does not include the construction of new landfills or the expansion/modification of the existing landfill.

If you have any questions regarding this submittal, please contact me at 774-298-3095 or russo.gregory@wseinc.com.

Sincerely,

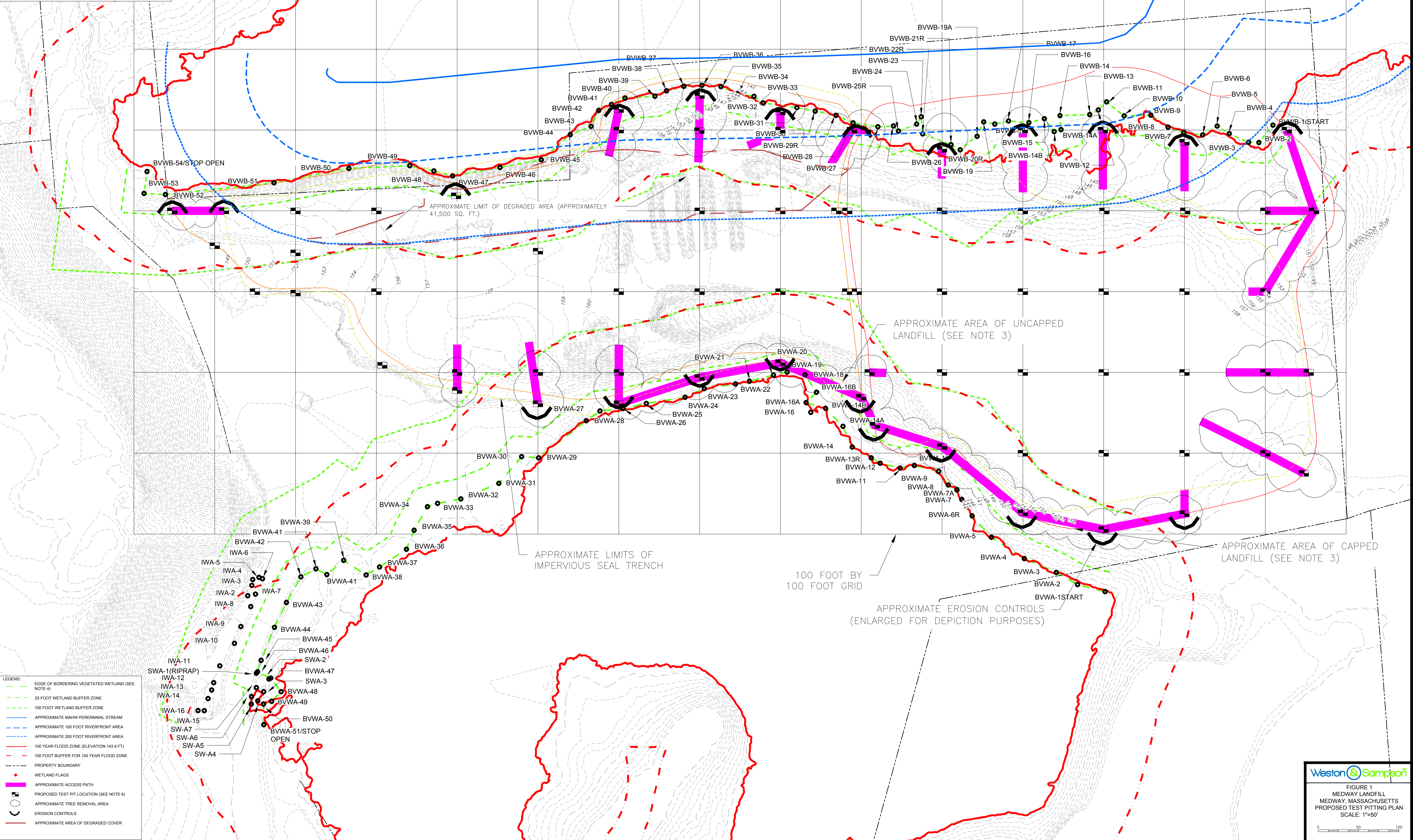
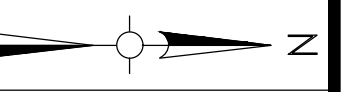
WESTON & SAMPSON

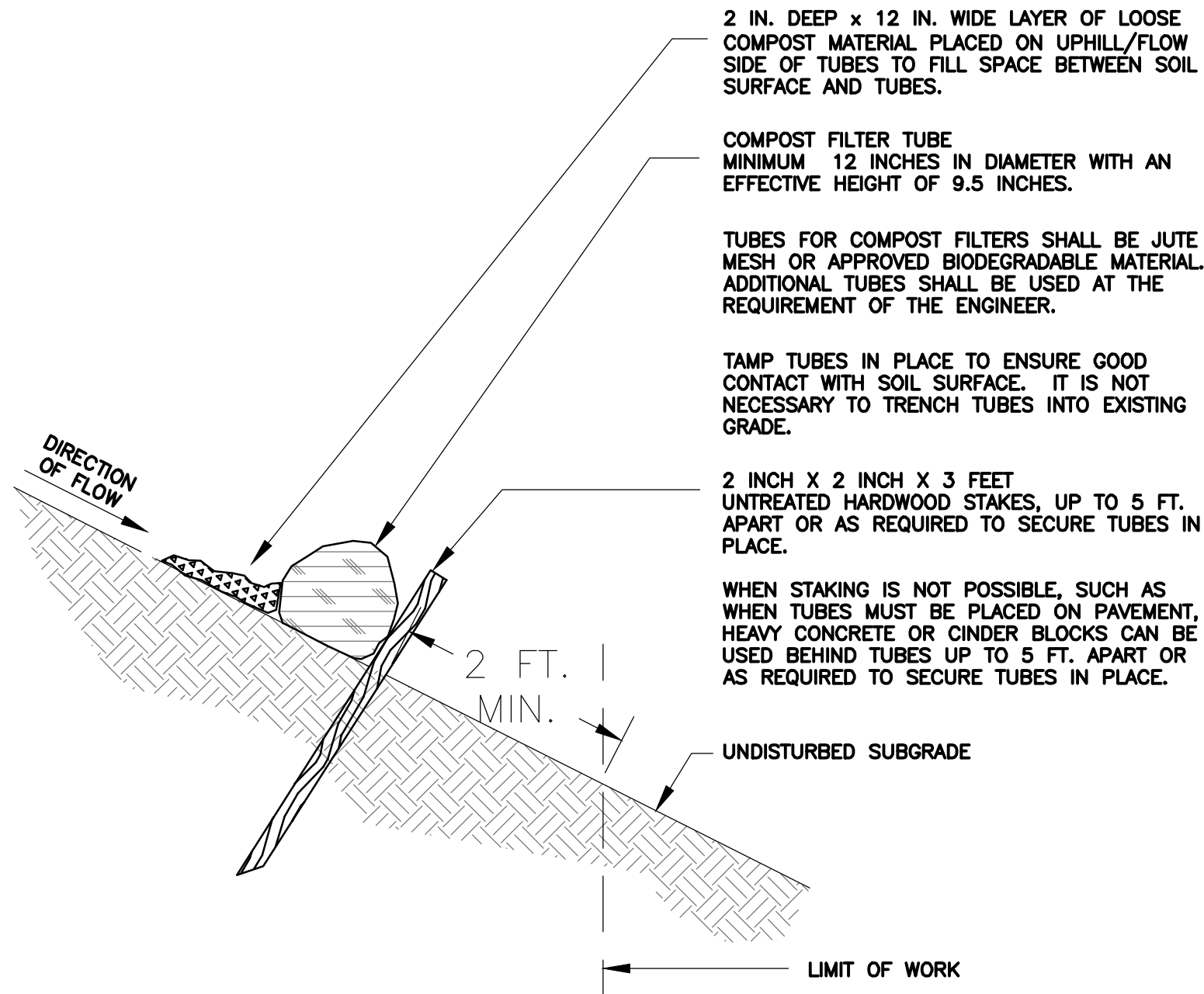
A handwritten signature in black ink, appearing to read "Gregory Russo", is written over a light blue rectangular background.

Gregory Russo, CE, CISEC, CWS
Technical Specialist

FIGURES

- NOTES:
1. PROPERTY BOUNDARIES ARE REFERENCED FROM MASSMAPPER.
 2. CONTOURS ARE REFERENCED FROM MASSGIS DATA LAYER: 1-FOOT ELEVATION CONTOURS FOR CENTRAL AND EASTERN MA DATED MAY 2023.
 3. APPROXIMATE AREAS OF THE CAPPED AND UNCAPPED LANDFILL AND THE APPROXIMATE LIMITS OF THE IMPERVIOUS SEAL TRENCH ARE BASED UPON A 1981 FIGURE DRAFTED BY GREEN INTERNATIONAL AFFILIATES, INC.
 4. EDGE OF WETLAND IS BASED ON A DELINEATION COMPLETED BY WESTON & SAMPSON ON 5/29/2025.
 5. STREAM BANKS WERE ESTIMATED USING THE CENTERLINE OF THE STREAM AND USGS STREAMSTATS.
 6. TEST PIT LOCATIONS MAY BE SUBJECT TO CHANGE OR ELIMINATED BASED ON CONDITIONS OBSERVED IN THE FIELD.
 7. EROSION CONTROLS ARE TO BE INSTALLED BETWEEN THE WETLAND AND TEST PIT LOCATIONS PRIOR TO EXCAVATION.

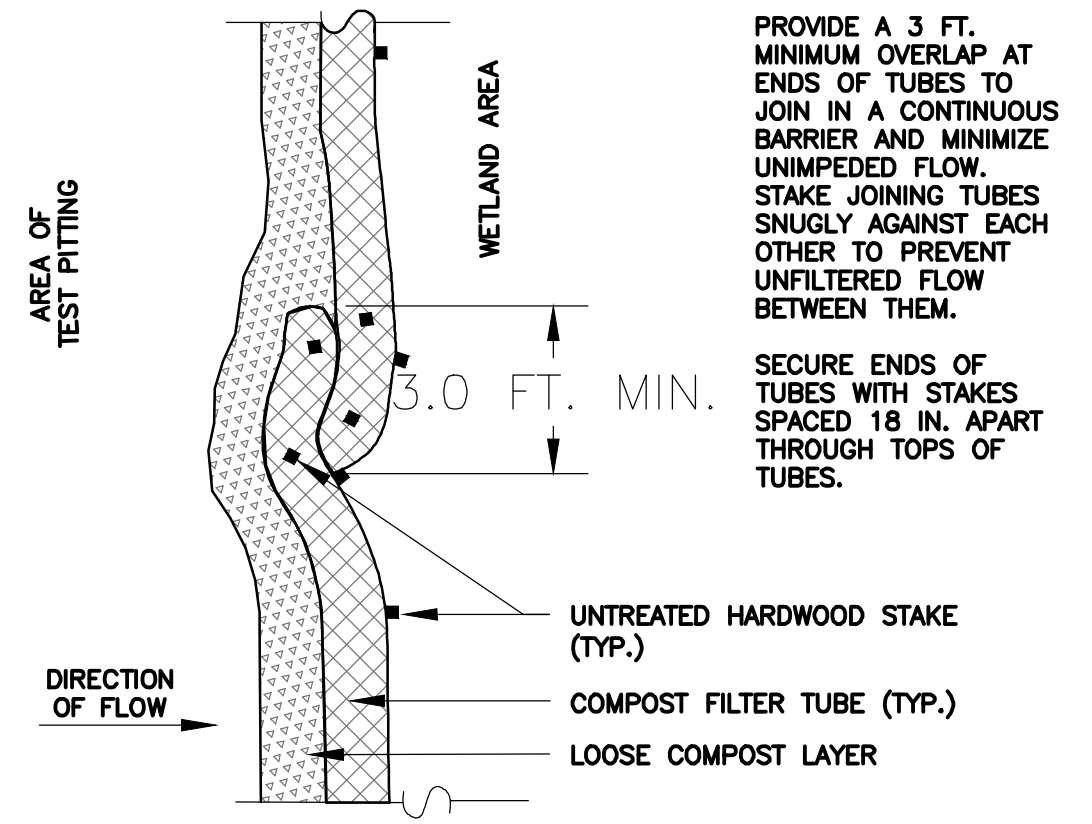




PLAN VIEW

GENERAL NOTES:

1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSEING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.



PLAN VIEW - JOIN DETAIL

FIGURE 5
MEDWAY LANDFILL
MEDWAY, MASSACHUSETTS
COMPOST FILTER TUBE DETAILS
NOT TO SCALE

REVISED DELINEATION REPORT



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Wetland Delineation Report



May 2025 (Updated Sep 2025)

Medway, Massachusetts

Project # ENG25-0496

Landfill Cap Investigation

Medway, MA

Wetland Delineation Conducted By:
Jordan Foulds, PWS and Hailey Page on
5/29/2025

Delineation Report Reviewed By:
Rhianna Sommers, PWS



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FIGURES

Figure 1	Wetlands Field Map
Figure 2	USGS Topographic Map
Figure 3	FEMA FIRM Map
Figure 4	Environmental Resources Map

APPENDICES

Appendix A	ACOE Wetland Determination Data Forms
Appendix B	Site Photographs

1.0 SITE DESCRIPTION

On May 29th, 2025, the presence of wetland resources was investigated near the Medway Recycling Center (46 Broad Street) in Medway, MA. The investigation area is located adjacent to an existing Department of Public Works facility and undeveloped woodlands. Please see Figure 1 (Wetlands Field Map) and Figure 2 (USGS Topographic Map) of this report for the investigation area. Adjacent wetland resource areas and associated buffer zones, which may project into the investigation area, were approximated utilizing aerial imagery and USGS Stream data from MassGIS as the perennial stream was inaccessible due to high water levels.

Wetland resource areas including two bordering vegetated wetlands and one isolated vegetated wetland were identified and flagged within the investigation area 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. Outside the investigation area, one unnamed perennial stream, was approximated utilizing wetland data layers from MassGIS and aerial imagery as the perennial stream was inaccessible due to high water levels. One non-jurisdictional stormwater basin was observed within the investigation area. 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:

- Bordering Vegetated Wetlands (BVW)
- Isolated Vegetated Wetlands (IW)
- Approximate Bank – Perennial Stream
- Riverfront Area
- Stormwater Basin

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), Town of Medway General Bylaw Article 21, and the Town of Medway Rules and 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

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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, water-stained leaves.

2.3 Bordering Vegetated Wetlands (BVW)

Two Bordering Vegetated Wetland (BVW) series were delineated at the site. The BVW are located adjacent to an unnamed perennial stream and a wetland system located outside of the investigation area. The limit of the BVW resource areas were determined by locating the transitional area between wetland and upland vegetation, soils and hydrologic conditions. Wetland flags left in the field included:

- BVW-A1 through BVW-A51 (BVW "A" Series)
- BVW-B1 through BVW-B54 (BVW "B" Series)

Dominant vegetation within the wetlands included red maple (*Acer rubrum*), high bush blueberry (*Vaccinium corymbosum*), multiflora rose (*Rosa multiflora*), glossy buckthorn (*Frangula alnus*), coastal sweet-pepperbush (*Clethra alnifolia*), smooth arrowwood (*Viburnum dentatum*), broad-leaved cattail

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(*Typha latifolia*), sensitive fern (*Onoclea sensibilis*), tussock sedge (*Carex stricta*), and asiatic bittersweet (*Celastrus orbiculatus*). Soils within the BWV's were composed of muck. Other indicators of wetland hydrology included surface water, highwater table, water-stained leaves, and saturation.

Dominant vegetation in the uplands included red maple (*Acer rubrum*), red mulberry (*Morus rubra*), high bush blueberry (*Vaccinium corymbosum*), black locust (*Robinia pseudoacacia*), box elder (*Acer negundo*), poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), and garlic mustard (*Alliaria petiolata*). Soils within the uplands were composed of fine sandy loam, with no evidence of mottling or hydrology within the top 10 inches.

BWVs are subject to a 100-foot buffer under the Massachusetts Wetland Protection Act per 310 CMR 10.02(2)(b). The Town of Medway Wetland Bylaw, Rules, and Regulations implement a 100-foot buffer zone on freshwater wetlands, as well as a local 25-foot No Disturb Zone.

2.4 Isolated Vegetated Wetland (IW)

A single 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 BWV.

Wetland flags left in the field included:

- IW-A1 through IW-A16 (IW "A" Series)

Dominant vegetation in the wetland included quaking aspen (*Populus tremuloides*), red maple (*Acer rubrum*), and common reed (*Phragmites australis*). Soils within the IW showed evidence of prior disturbance, which is consistent with the location adjacent to the roadway. The soils were composed of fine sand and loam. Other indicators of wetland hydrology included a highwater table, saturation, and water-stained leaves.

The upland vegetation adjacent to the IW was dominated by red maple (*Acer rubrum*), Norway maple (*Acer platanoides*), multiflora rose (*Rosa multiflora*), Glossy buckthorn (*Frangula alnus*), poison ivy

(*Toxicodendron radicans*), and Virginia creeper (*Parthenocissus quinquefolia*). Soils were composed of fine sandy loam. No indicators of wetland hydrology were observed.

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. IW A does not appear to be large enough to hold the volume of water required to be jurisdictional as ILSF. 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.

Certain individual communities have chosen to extend protections to these isolated wetlands within their local bylaws including the Town of Medway Wetland Bylaw, Rules, and Regulations implement a 100-foot buffer zone on freshwater wetlands, as well as a local 25-foot No Disturb Zone.

2.5 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.

Approximate Perennial Stream Banks

The limits of an unnamed perennial stream located outside of the investigation area were approximated for the purpose of estimating the extent of Riverfront Area that extends into the investigation area. The stream boundaries were approximated utilizing wetland data layers from MassGIS and aerial imagery as the stream was inaccessible at the time of the delineation due to the surrounding wetlands and outside the investigation area/property

boundary.

Perennial streams are subject to a 200-foot Riverfront Area under the Massachusetts Wetland Protection Act per 301 CMR 10.58(2)(a)(2)(c). The Town of Medway Wetland Bylaw, Rules, and Regulations also implements a 100-foot buffer zone off all streams, as well as a 25-foot No Disturb Zone.

2.6 Riverfront Area

Riverfront Area is a wetland resource area defined by 310 CMR 10.58 (2)(a)(3) as “The Riverfront Area is the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away”. The Riverfront Area (RA) on site is associated with an unnamed perennial stream. The boundary of the RA was approximated due to the unnamed perennial stream being inaccessible and outside the investigation area/property boundary.

A USGS StreamStats report was run which includes the calculated bankfull width. The calculated bankfull width of the perennial stream is shown as 14.5 feet. In order to determine the approximate RA, an offset of 7.25 feet was added to the perennial stream line shown in the MassGIS data layer in order to approximate the mean annual high-water line. The approximate 200-ft RA was applied to this calculated mean annual high-water line.

The Massachusetts Wetland Protection Act does not place a buffer zone on the Riverfront Area and neither does the Town of Medway.

2.7 Stormwater Basin

One stormwater basin was identified within the investigation area. Based on field observation, the stormwater basin appears to be a currently maintained structure used for drainage purposes. If it can be shown that the basin is in fact a stormwater management system that is maintained, then the basin may be considered non-jurisdictional per 310 CMR 10.02 (2)(C) which states:

Notwithstanding the provisions of 310 CMR 10.02(1) and (2)(a) and (b), stormwater management systems designed, constructed, installed, operated, maintained, and/or improved as defined in 310 CMR 10.04 in accordance with the Stormwater Management Standards as provided in the

Stormwater Management Policy (1996) or 310 CMR 10.05(6)(k) through (q) do not by themselves constitute Areas Subject to Protection under M.G.L. c. 131, § 40 or Buffer Zone provided that:

- 1. the system was designed, constructed, installed, and/or improved as defined in 310 CMR 10.04 on or after November 18, 1996; and*
- 2. if the system was constructed in an Area Subject to Protection under M.G.L. c. 131, § 40 or Buffer Zone, the system was designed, constructed, and installed in accordance with all applicable provisions in 310 CMR 10.00.*

GPS points taken in the field included:

- SW A1 through SW A7 (Stormwater "A" Series)

Based on a review of available aerial imagery, SW A is located on the investigation area property and appears to have been constructed between 2019 and 2020 (please see aerial imagery below).



The left image displays the absence of a stormwater basin in 2019 and the presence of the stormwater basin in 2020 on the right image.

In order to comply with 310 CMR 10.02 (2)(C), the stormwater management system needs to have been designed, constructed, installed, and/or improved as defined in 310 CMR 10.04 on or after November 18, 1996. SW A appears to have been constructed between 2019 and 2020. The Massachusetts Wetland Protection Act does not protect stormwater management systems and neither does the Town of Medway. SW A does not meet the definition of any jurisdictional wetland resource area under the WPA.

2.8 Bordering Land Subject to Flooding

Bordering Land Subject to Flooding is a wetland resource area defined 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”.

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. See Figure 3 for FIRM map. Based on FEMA flood maps the investigation area is located within a Zone A 100-year flood zone. FEMA defines a Zone A as “areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones”.

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 Medway Wetlands Protection By-Law, Rules, and Regulations have extended protections to land within 100 feet of land subject to flooding.

2.9 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 Delineation Report

Wetland resources identified in the field were also added to these maps. Based on the MassGIS information there are no protected areas other than the wetland resource areas previously identified above.

3.0 SUMMARY

On May 29th, 2025, the presence of wetland resources was investigated near the Medway Recycling Center (46 Broad Street) in Medway, MA. Two bordering vegetated wetlands and one isolated vegetated wetland were identified and flagged within the investigation area. Outside the investigation area, one unnamed perennial stream was approximated utilizing wetland data layers from MassGIS and aerial imagery as the stream was inaccessible due to high water levels.

One stormwater basin was identified at the site. SW A is located in the southeast corner of the investigation area.

Additional environmental mapping was conducted using MassGIS data layers and FEMA FIRM mapping. This additional mapping indicates that the investigation area is located within 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".

Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program. Massachusetts Natural Heritage Atlas, 13th Edition with 2017 web updates. Accessed on 5/30/2025.

Massachusetts Geographic Information System. January 2009. Outstanding Resource Waters. Massachusetts Department of Environmental Protection. Accessed on 5/30/2025.

Massachusetts Geographic Information System. December 2003. Areas of Critical Environmental Concern. Massachusetts Department of Environmental Protection. Accessed on 5/30/2025.

Newcomb, Lawrence. 1977. Newcomb's Wildflower Guide. Little, Brown and Company.

Web Soil Survey of Norfolk County, Massachusetts. United States Department of Agriculture, Soil Conservation Service, in cooperation with Massachusetts Agricultural Experiment Station

United States Department of Agriculture, Natural Resources Conservation Service. 2018. *Field Indicators of Hydric Soils in the United States, Version 8.2*. L. M. Vasilas, G. W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

USACOE, January 1987, Corps of Engineers Wetlands Delineation Manual, Wetlands Research Program Technical Report Y-87-1.

FEMA Flood Map Service Center, online at msc.fema.gov/portal Assessed on 5/30/2025.

Tiner, Jr., Ralph W., 2005, Field Guide to Nontidal Wetland Identification

Tiner, Jr., Ralph W, 2009, Field Guide to Tidal Wetland Plants of the Northeastern United States and Neighboring Canada.

Wojtec, Michael, Bard – A field Guide to Trees of the Northeast.

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.

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Legend

- Investigation Area
- Boring Vegetated Wetland
- Isolated Vegetated Wetland
- Stormwater Basin
- Approximate Mean Annual High Water Line
- Approximate Riverfront Area
- MA Towns
- USGS Streams**
 - USGS Perennial Stream
 - USGS Intermittent Stream
 - Hydrologic Connection
 - MassDOT Roads
- DEP Wetland Areas**
 - Marsh/Bog
 - Wooded marsh
 - Cranberry Bog
 - Salt Marsh
 - Open Water
 - Reservoir (with PWSID)
 - Tidal Flats
 - Beach/Dune

FIGURE 1
Medway Landfill
Town of Medway
Medway, MA

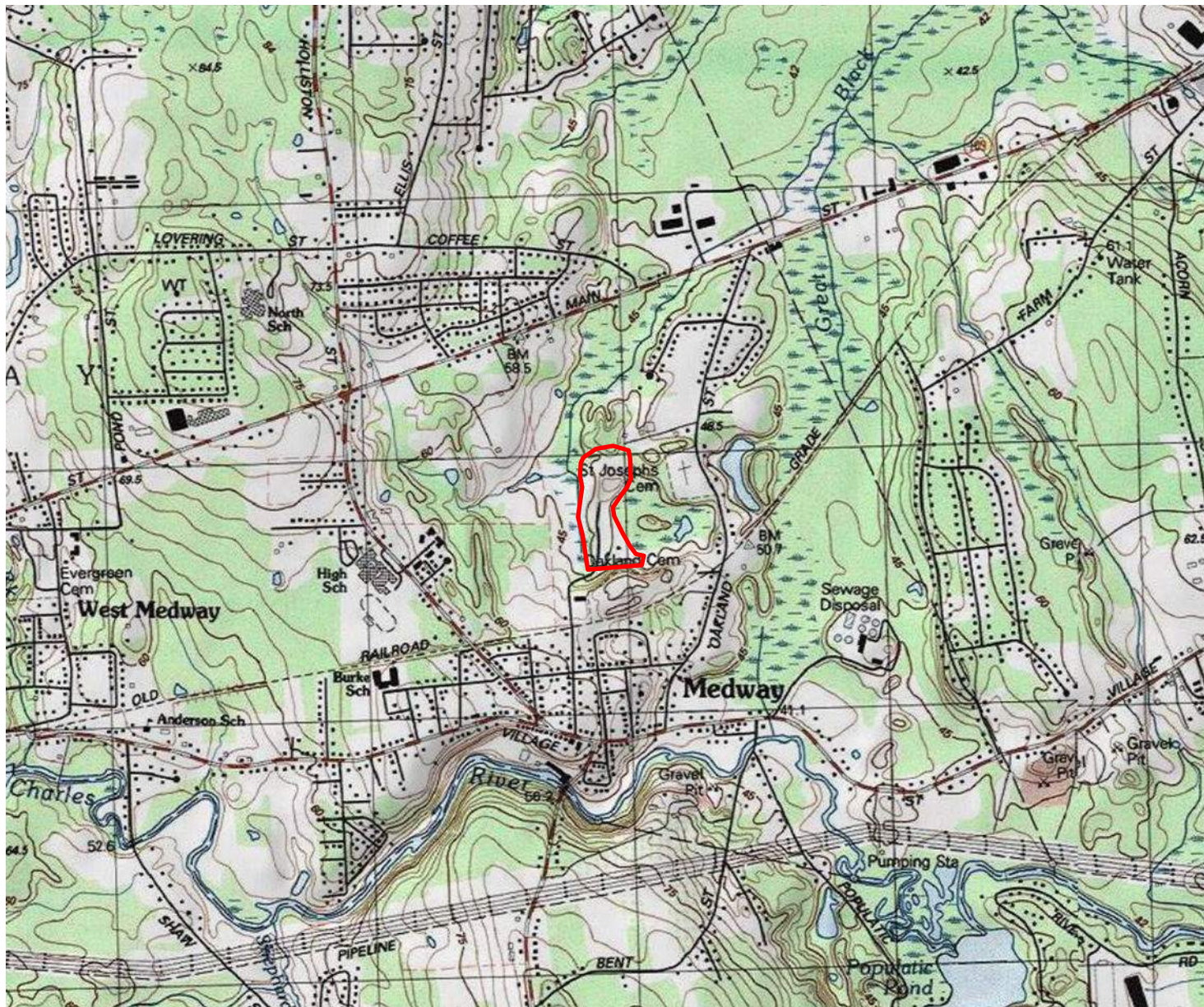
Wetlands Field Map



200 100 0 200
Feet

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

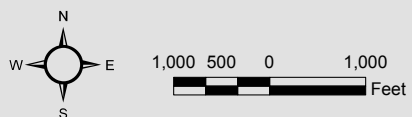
Weston & Sampson



Legend
 Investigation Area

FIGURE 2
 Medway Landfill
 Town of Medway
 Medway, MA

USGS Topographic Map



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

Weston & Sampson

National Flood Hazard Layer FIRMette



71°24'5"W 42°9'2"N



71°23'27"W 42°8'35"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, AE9
	With BFE or Depth Zone AE, AD, 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
GENERAL STRUCTURES	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer
OTHER FEATURES	Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation
MAP PANELS	Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	Digital Data Available
	No Digital Data Available
	Unmapped
	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 8/14/2025 at 6:38 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.

Data Source: FEMA, USGS National Map 2023

Legend

Investigation Area

FIGURE 3
Medway Landfill
Town of Medway
Medway, MA

FEMA Map

Weston & Sampson



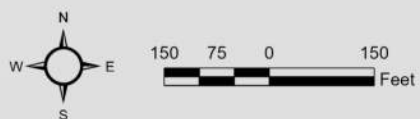


Legend

- Investigation Area
 - Bordering Vegetated Wetland
 - Isolated Vegetated Wetland
 - Stormwater Basin
 - - - Approximate Mean Annual High Water Line
 - Approximate Riverfront Area
 - MassDOT Roads
 - 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

FIGURE 4
Medway Landfill
Town of Medway
Medway, MA

Environmental Receptors Map



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

Weston & Sampson

APPENDIX A

ACOE Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 46 Broad Street City/County: Medway Sampling Date: 5/29/2025
Applicant/Owner: Town of Medway State: MA Sampling Point: BVWA WET
Investigator(s): Jordan Foulds, PWS and Hailey Page Section, Township, Range: _____
Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 0-3
Subregion (LRR or MLRA): LRR R Lat: 42.1478101 Long: 71.3947637 Datum: WGS84
Soil Map Unit Name: Freetown muck 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 <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>BVWA-WET</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:		Wetland Hydrology Present? Yes <u>X</u> No _____	
Surface Water Present? Yes <u>X</u> No _____	Depth (inches): <u>0</u>		
Water Table Present? Yes <u>X</u> No _____	Depth (inches): <u>0</u>		
Saturation Present? Yes <u>X</u> No _____	Depth (inches): <u>0</u>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: BVWA WET

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer rubrum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>5</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>40</u></td> <td>x 1 = <u>40</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>17</u></td> <td>x 3 = <u>51</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>112</u> (A)</td> <td><u>271</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.42</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>40</u>	x 1 = <u>40</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>17</u>	x 3 = <u>51</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>112</u> (A)	<u>271</u> (B)	Prevalence Index = B/A = <u>2.42</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>40</u>	x 1 = <u>40</u>																			
FACW species <u>30</u>	x 2 = <u>60</u>																			
FAC species <u>17</u>	x 3 = <u>51</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>20</u>	x 5 = <u>100</u>																			
Column Totals: <u>112</u> (A)	<u>271</u> (B)																			
Prevalence Index = B/A = <u>2.42</u>																				
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																				
1. <u>Acer rubrum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Vaccinium corymbosum</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Rosa multiflora</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Frangula alnus</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>25</u>	=Total Cover																	
Herb Stratum (Plot size: <u>5 ft radius</u>)																				
1. <u>Onoclea sensibilis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Osmunda regalis</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
3. <u>Carex stricta</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>																	
4. <u>Toxicodendron radicans</u>	<u>2</u>	<u>No</u>	<u>FAC</u>																	
5. <u>Thelypteris palustris</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
6. <u>Typha latifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
7. <u>Phragmites australis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>62</u>	=Total Cover																	
Woody Vine Stratum (Plot size: <u>5</u>)																				
1. <u>Celastrus orbiculatus</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	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.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		<u>20</u>	=Total Cover																	

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

SOIL

Sampling Point: BVWA WET

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 46 Broad Street City/County: Medway Sampling Date: 5/29/2025
Applicant/Owner: Town of Medway State: MA Sampling Point: BVWA UP
Investigator(s): Jordan Foulds, PWS and Hailey Page Section, Township, Range: _____
Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 0-3
Subregion (LRR or MLRA): LRR R Lat: 42.1478101 Long: 71.3947637 Datum: WGS84
Soil Map Unit Name: Udorthents 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 <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:		Wetland Hydrology Present? Yes _____ No <u>X</u>	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: BVWA UP

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer rubrum</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. <u>Robinia pseudoacacia</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Morus rubra</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>22</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>57</u></td> <td>x 4 = <u>228</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>102</u> (A)</td> <td><u>358</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.51</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>57</u>	x 4 = <u>228</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>102</u> (A)	<u>358</u> (B)	Prevalence Index = B/A = <u>3.51</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>5</u>	x 2 = <u>10</u>																			
FAC species <u>40</u>	x 3 = <u>120</u>																			
FACU species <u>57</u>	x 4 = <u>228</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>102</u> (A)	<u>358</u> (B)																			
Prevalence Index = B/A = <u>3.51</u>																				
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																				
1. <u>Robinia pseudoacacia</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Lonicera morrowii</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Vaccinium corymbosum</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>Acer negundo</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>30</u>	=Total Cover	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5 ft radius</u>)																				
1. <u>Toxicodendron radicans</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Alliaria petiolata</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>40</u>	=Total Cover	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.																
Woody Vine Stratum (Plot size: <u>5</u>)																				
1. <u>Toxicodendron radicans</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Parthenocissus quinquefolia</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		<u>10</u>	=Total Cover																	
Remarks: (Include photo numbers here or on a separate sheet.)																				

SOIL

Sampling Point: BVWA UP

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 46 Broad Street City/County: Medway Sampling Date: 5/29/2025
Applicant/Owner: Town of Medway State: MA Sampling Point: BVWB WET
Investigator(s): Jordan Foulds, PWS and Hailey Page Section, Township, Range: _____
Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 0-3
Subregion (LRR or MLRA): LRR R Lat: 42.1485053 Long: 71.3976427 Datum: WGS84
Soil Map Unit Name: Saco silt loam 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 <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>BVWB-WET</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:		Wetland Hydrology Present? Yes <u>X</u> No _____	
Surface Water Present? Yes <u>X</u> No _____	Depth (inches): <u>1</u>		
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): <u>0</u>		
Saturation Present? Yes <u>X</u> No _____	Depth (inches): <u>0</u>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: BVWB WET

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer rubrum</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)																
2. <u>Alnus incana</u>	<u>2</u>	<u>No</u>	<u>FACW</u>																	
3. <u>Robinia pseudoacacia</u>	<u>1</u>	<u>No</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>13</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>1</u></td> <td>x 1 = <u>1</u></td> </tr> <tr> <td>FACW species <u>27</u></td> <td>x 2 = <u>54</u></td> </tr> <tr> <td>FAC species <u>26</u></td> <td>x 3 = <u>78</u></td> </tr> <tr> <td>FACU species <u>11</u></td> <td>x 4 = <u>44</u></td> </tr> <tr> <td>UPL species <u>1</u></td> <td>x 5 = <u>5</u></td> </tr> <tr> <td>Column Totals: <u>66</u> (A)</td> <td><u>182</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.76</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>1</u>	x 1 = <u>1</u>	FACW species <u>27</u>	x 2 = <u>54</u>	FAC species <u>26</u>	x 3 = <u>78</u>	FACU species <u>11</u>	x 4 = <u>44</u>	UPL species <u>1</u>	x 5 = <u>5</u>	Column Totals: <u>66</u> (A)	<u>182</u> (B)	Prevalence Index = B/A = <u>2.76</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>1</u>	x 1 = <u>1</u>																			
FACW species <u>27</u>	x 2 = <u>54</u>																			
FAC species <u>26</u>	x 3 = <u>78</u>																			
FACU species <u>11</u>	x 4 = <u>44</u>																			
UPL species <u>1</u>	x 5 = <u>5</u>																			
Column Totals: <u>66</u> (A)	<u>182</u> (B)																			
Prevalence Index = B/A = <u>2.76</u>																				
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																				
1. <u>Rosa multiflora</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Clethra alnifolia</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Viburnum dentatum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>20</u>	=Total Cover	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5 ft radius</u>)																				
1. <u>Onoclea sensibilis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Impatiens capensis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
3. <u>Toxicodendron radicans</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
4. <u>Symplocarpus foetidus</u>	<u>1</u>	<u>No</u>	<u>OBL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>31</u>	=Total Cover	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.																
Woody Vine Stratum (Plot size: <u>5</u>)																				
1. <u>Celastrus orbiculatus</u>	<u>1</u>	<u>No</u>	<u>UPL</u>																	
2. <u>Toxicodendron radicans</u>	<u>1</u>	<u>No</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		<u>2</u>	=Total Cover																	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																				

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

SOIL

Sampling Point: BVWB WET

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 46 Broad Street City/County: Medway Sampling Date: 5/29/2025
Applicant/Owner: Town of Medway State: MA Sampling Point: BVWB UP
Investigator(s): Jordan Foulds, PWS and Hailey Page Section, Township, Range: _____
Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 0-3
Subregion (LRR or MLRA): LRR R Lat: 42.1485053 Long: 71.3976427 Datum: WGS84
Soil Map Unit Name: Udorthents 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 <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes _____ No <u>X</u>
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: 		

VEGETATION – Use scientific names of plants.

 Sampling Point: BVWB UP

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer platanoides</u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>5</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>50</u></td> <td>(A) <u>190</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.80</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>50</u>	(A) <u>190</u> (B)	Prevalence Index = B/A = <u>3.80</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>15</u>	x 3 = <u>45</u>																			
FACU species <u>30</u>	x 4 = <u>120</u>																			
UPL species <u>5</u>	x 5 = <u>25</u>																			
Column Totals: <u>50</u>	(A) <u>190</u> (B)																			
Prevalence Index = B/A = <u>3.80</u>																				
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																				
1. <u>Rosa multiflora</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>10</u>	=Total Cover																	
Herb Stratum (Plot size: <u>5 ft radius</u>)																				
1. <u>Toxicodendron radicans</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Alliaria petiolata</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Rumex obtusifolius</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>30</u>	=Total Cover																	
Woody Vine Stratum (Plot size: <u>5</u>)																				
1. <u>Parthenocissus quinquefolia</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	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.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		<u>5</u>	=Total Cover	Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

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

SOIL

Sampling Point: BVWB UP

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 46 Broad Street City/County: Medway Sampling Date: 5/29/2025
Applicant/Owner: Town of Medway State: MA Sampling Point: IWA WET
Investigator(s): Jordan Foulds, PWS and Hailey Page Section, Township, Range: _____
Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 0-3
Subregion (LRR or MLRA): LRR R Lat: 42.1462998 Long: 71.3952205 Datum: WGS84
Soil Map Unit Name: Saco silt loam NWI classification: PSS1

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 <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>IWA-WET</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes <u>X</u> No _____
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u>	
Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u>	(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

Sampling Point: IW A WET

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>85</u></td> <td>x 2 = <u>170</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>225</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.25</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>85</u>	x 2 = <u>170</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>225</u> (B)	Prevalence Index = B/A = <u>2.25</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>85</u>	x 2 = <u>170</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>10</u>	x 4 = <u>40</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>100</u> (A)	<u>225</u> (B)																			
Prevalence Index = B/A = <u>2.25</u>																				
_____ =Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																				
1. <u>Populus tremuloides</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Acer rubrum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
_____ =Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
_____ =Total Cover																				
Herb Stratum (Plot size: <u>5 ft radius</u>)																				
1. <u>Phragmites australis</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Impatiens capensis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
_____ =Total Cover				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.																
Woody Vine Stratum (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				
_____ =Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																

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

SOIL

Sampling Point: IW A WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 2/2	100					Loamy/Clayey	
5-10	10YR 2/2	100					Sandy	fine sand
10-15	10YR 5/2	100					Sandy	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:					
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/>	Polyvalue Below Surface (S8) (LRR R,	<input type="checkbox"/>	2 cm Muck (A10) (LRR K, L, MLRA 149B)				
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/>	MLRA 149B)	<input type="checkbox"/>	Coast Prairie Redox (A16) (LRR K, L, R)				
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/>	Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/>	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)				
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/>	High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/>	Polyvalue Below Surface (S8) (LRR K, L)				
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/>	Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/>	Thin Dark Surface (S9) (LRR K, L)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/>	Iron-Manganese Masses (F12) (LRR K, L, R)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/>	Piedmont Floodplain Soils (F19) (MLRA 149B)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/>	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Depleted Dark Surface (F7)	<input type="checkbox"/>	Red Parent Material (F21)				
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/>	Redox Depressions (F8)	<input type="checkbox"/>	Very Shallow Dark Surface (TF12)				
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/>	Marl (F10) (LRR K, L)	<input type="checkbox"/>	Other (Explain in Remarks)				
<input type="checkbox"/> Dark Surface (S7)								

³Indicators 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:				
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) Compacted sand significantly disturbed by roadway				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 46 Broad Street City/County: Medway Sampling Date: 5/29/2025
Applicant/Owner: Town of Medway State: MA Sampling Point: IW A UP
Investigator(s): Jordan Foulds, PWS and Hailey Page Section, Township, Range: _____
Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 0-3
Subregion (LRR or MLRA): LRR R Lat: 42.1462998 Long: 71.3952205 Datum: WGS84
Soil Map Unit Name: Udorthents 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 <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes _____ No <u>X</u>
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: IW A UP

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Acer rubrum</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. <u>Pinus strobus</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Acer platanoides</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>																	
4. <u>Quercus rubra</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>32</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>23</u></td> <td>x 4 = <u>92</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>68</u> (A)</td> <td><u>257</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.78</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>23</u>	x 4 = <u>92</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>68</u> (A)	<u>257</u> (B)	Prevalence Index = B/A = <u>3.78</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>30</u>	x 3 = <u>90</u>																			
FACU species <u>23</u>	x 4 = <u>92</u>																			
UPL species <u>15</u>	x 5 = <u>75</u>																			
Column Totals: <u>68</u> (A)	<u>257</u> (B)																			
Prevalence Index = B/A = <u>3.78</u>																				
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)																				
1. <u>Rosa multiflora</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Frangula alnus</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Acer rubrum</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
4. <u>Populus tremuloides</u>	<u>1</u>	<u>No</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>26</u>	=Total Cover	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5 ft radius</u>)																				
1. <u>Toxicodendron radicans</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Parthenocissus quinquefolia</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>10</u>	=Total Cover	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.																
Woody Vine Stratum (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		_____	=Total Cover	Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																

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

SOIL

Sampling Point: IW A UP

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	100					Loamy/Clayey	fine sandy loam
6-14	10YR 3/2	100					Loamy/Clayey	fine sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R,	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)			
<input type="checkbox"/> Histic Epipedon (A2)	MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)			
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Dark Surface (S7)					

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

Restrictive Layer (if observed):		Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: <input type="text"/>		
Depth (inches): <input type="text"/>		
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)		

APPENDIX B

Site Photographs



Photo 1: BVW-A Series.



Photo 2: SW-A Series.



Photo 3: BVW-B Series



Photo 4: IW-A Series.

REVISED SPECS

SECTION 01570

ENVIRONMENTAL PROTECTION

PART 1 – GENERAL

1.01 DESCRIPTION:

- A. The work covered by this section of the specifications consists of furnishing all labor, materials, tools and equipment and performing all work required for the prevention of environmental pollution during and as a result of construction operations under this contract.
- B. The requirements set forth in this section of the specifications apply to cross-country areas, river and stream crossings, and construction in and adjacent to wetlands, unless otherwise specifically stated.
- C. All work under this Contract shall be in accordance with the Conservation Commissions' Orders of Conditions as well as any conditional requirements applied, all of which are attached to Section 00890, PERMITS.
- D. Prior to commencement of work, the Contractor shall meet with representatives of the Engineer to develop mutual understandings relative to compliance of the environmental protection program.

1.02 SUBMITTALS:

- A. The Contractor shall submit details and literature fully describing environmental protection methods to be employed in carrying out construction activities within 100 feet of wetlands or across areas designated as wetlands.

PART 2 - PRODUCTS

2.01 COMPOST FILTER TUBES:

- A. Compost material inside the filter tube shall meet M1.06.0, except for the following: no peat, manure or bio-solids shall be used; no kiln-dried wood or construction debris shall be allowed; material shall pass through a 2-inch sieve; and the C:N ratio shall be disregarded.
- B. Outer tube fabric shall be made of 100% biodegradable materials (i.e., cotton, hemp or jute) and shall have a knitted mesh with openings that allow for sufficient water flow and effective sediment capture.
- C. Tubes shall be tamped, but not trenched, to ensure good contact with soil.

PART 3- EXECUTION

3.01 NOTIFICATION AND STOPPAGE OF WORK:

- A. The Engineer will notify the Contractor in writing of any non-compliance with the provisions of the Order of Conditions. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or its authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails to act promptly, the Owner may order stoppage of all or part of the work through the Engineer until

satisfactory corrective action has been taken. No claim for an extension of time or for excess costs or damage incurred by the Contractor as a result of time lost due to any stop work orders shall be made unless it was later determined that the Contractor was in compliance.

3.02 AREA OF CONSTRUCTION ACTIVITY:

- A. Insofar as possible, the Contractor shall confine its construction activities to those areas defined by the plans and specifications. All land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition after completion of construction at least equal to that which existed prior to work under this contract.

3.03 PROTECTION OF WATER RESOURCES:

- A. The Contractor shall not pollute streams, lakes or reservoirs with fuels, oils, bitumens, calcium chloride, acids or other harmful materials. It is the Contractor's responsibility to comply with all applicable Federal, State, County and Municipal laws regarding pollution of rivers and streams.
- B. Special measures should be taken to insure against spillage of any pollutants into public waters.

3.04 CONSTRUCTION IN AREAS DESIGNATED AS WETLANDS ON THE DRAWINGS:

- A. Insofar as possible, the Contractor shall make every effort to minimize disturbance within areas designated as wetlands or within 100-feet of wetland resource areas.
- B. The Contractor shall perform its work in such a way that these areas are left in the condition existing prior to construction.
- A. The elevations of areas designated as wetlands shall not be unduly disturbed by the Contractor's operations outside of the trench limits. If such disturbance does occur, the Contractor shall take all measures necessary to return these areas to the elevations which existed prior to construction.
- B. Excavated materials shall not be permanently placed or temporarily stored in areas designated as wetlands. Temporary storage areas for excavated material shall be as required by the Engineer.

3.05 PROTECTING AND MINIMIZING EXPOSED AREAS:

- A. The Contractor shall limit the area of land which is exposed and free from vegetation during construction. In areas where the period of exposure will be greater than two (2) months, temporary vegetation, mulching or other protective measures shall be provided as specified.
- B. The Contractor shall take account of the conditions of the soil where temporary cover crop will be used to insure that materials used for temporary vegetation are adaptive to the sediment control. Materials to be used for temporary vegetation shall be approved by the Engineer.

3.06 LOCATION OF STORAGE AREAS:

- A. The location of the Contractor's storage areas for equipment and/or materials shall be upon cleared portions of the job site or areas to be cleared as a part of this project, and shall require

written approval of the Engineer. Plans showing storage facilities for equipment and materials shall be submitted for approval of the Engineer.

- B. No excavated materials or materials used in backfill operations shall be deposited within a minimum distance of one hundred (100) feet of any watercourse or any drainage facility. Adequate measures for erosion and sediment control such as the placement of baled straw around the downstream perimeter of stockpiles shall be employed to protect any downstream areas from siltation.
- C. There shall be no storage of equipment or materials in areas designated as wetlands.
- D. The Engineer may designate a particular area or areas where the Contractor may store materials used in its operations.

3.07 PROTECTION OF LANDSCAPE:

- A. The Contractor shall not deface, injure, or destroy trees or shrubs nor remove or cut them without written authority from the Owner. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorages unless specifically authorized by the Engineer. Excavating machinery and cranes shall be of suitable type and be operated with care to prevent injury to trees which are not to be removed, particularly overhanging branches and limbs. The Contractor shall, in any event, be responsible for any damage resulting from such use.
- B. Branches, limbs, and roots shall not be cut except by permission of the Engineer. All cutting shall be smoothly and neatly done without splitting or crushing. When there is unavoidable injury to branches, limbs and trunks of trees, the injured portions shall be neatly trimmed and covered with an application of grafting wax or tree healing paint as directed.
- C. Where, in the opinion of the Engineer, trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment or by its blasting or other operations, the Engineer may require the Contractor to adequately protect such trees by placing boards, planks, poles or fencing around them. Any trees or landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the expense of the Contractor. The Engineer will decide what method of restoration shall be used, and whether damaged trees shall be treated and healed or removed and disposed of under the provisions of Section 02230, CLEARING AND GRUBBING.
- D. Cultivated hedges, shrubs, and plants which could be injured by the Contractor's operations shall be protected by suitable means or shall be dug up, balled and temporarily replanted and maintained. After construction operations have been substantially completed, they shall be replanted in their original positions and cared for until growth is re-established. If cultivated hedges, shrubs, and plants are injured to such a degree as to affect their growth or diminish

their beauty or usefulness, they shall be replaced by items of a kind and quality at least equal to that existing at the start of the work.

3.08 CLEARING AND GRUBBING:

- A. The Contractor shall clear and grub only on the Owner's land or the Owner's easements, and only the area required for construction operations, as approved by the Engineer.
- B. The Contractor shall not remove trees in the Owner's temporary easements without permission of the Engineer.

3.09 COMPOST FILTER TUBES:

- A. Tubes shall be tamped, but not trenched, to ensure good contact with soil.
- B. The compost filter tubes shall be regularly inspected and before and after every forecasted major weather event. All deposited sediment shall be removed and not allowed to accumulate to the top of the tubes. Compost filter tubes damaged during construction shall be repaired or replaced as required by the Engineer at no additional cost to the Owner.
- C. Barriers shall be dismantled and/or removed, as required, when construction work is complete and upslope areas have been permanently stabilized and after receiving permission to do so from the Engineer.
- D. Regardless of site context, nonbiodegradable material and components of the sediment barriers, including photo-biodegradable fabric, plastic netting, nylon twine, and sedimentation fence, shall be removed and disposed off-site by the Contractor.
- E. For naturalized areas, biodegradable, natural fabric and material may be left in place to decompose on-site. In urban, residential, or other locations where aesthetics is a concern, the following shall apply:
 - 1. Compost filter tube fabric shall be cut and removed, and compost shall be raked to blend evenly (as would be done with a soil amendment or mulch). No more than a 2-inch depth shall be left on soil substrate.

END OF SECTION