



TERRA ENVIRONMENTAL, LLC
PLANNING | CONSULTING | MANAGEMENT | REMEDIATION

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June 28, 2018

Mr. John Moak, Town Administrator
Town of Pepperell
1 Main Street,
Pepperell, MA 01463

Subject: Nashua Road Quarry Reclamation Project
161 Nashua Road Pepperell, MA

Dear Mr. Moak,

On behalf of Mass Composting Group, Inc. (MCGI), TERRA Environmental, LLC is pleased to provide the Town of Pepperell with this letter summarizing the reclamation of the Nashua Road Quarry located at 161 Nashua Road in Pepperell, MA (the "Site"). This letter and attachments summarize our approach for the reclamation of the 50-acre quarry property owned by MCGI.

As discussed with Town officials on December 5, 2017 and as contained in a letter hand delivered on February 11, 2018, the purpose of this reclamation project is to improve current topographic conditions by restoring elevations to pre-mining conditions, install a sustainable vegetative cover and prepare the property for future development. The reclamation project will accept, receive and place similar soils in a manner that is protective of human health, safety and the environment. No waste material of any type or description, including solid waste, will be accepted. As requested by the Town of Pepperell's former Town Administrator and former Town Planner, a Soil Management Plan was prepared describing procedures to evaluate potential soil source sites; monitor and place soils as they are received; conduct inspections of the ongoing operations; and stabilize the Site after soils are received and before the long-term development plans are implemented. A copy of the Soil Management Plan has been included in Attachment C.

It is anticipated that approximately 4-million cubic yards of soil will be received over the course of the Reclamation Project, which should take place over the course of 7 to 9 years. Anticipated sources of soil material include large volumes of excess soil from excavation and construction projects in Massachusetts, as well as qualified soils from Vermont, New Hampshire and Maine. The intended soil material will include native deposits of soil including sand, gravel, organic soils, estuarine deposits, marine sands, glacial till, clay, top soils, and soil/slurry mixtures from foundation installations. Soil intended for reuse in the reclamation operation must meet the Acceptance Criteria established for this location. The derivation of the Acceptance Criteria is based on MassDEP's Similar Soils Policy WSC#-13-500 and Policy #COMM-15-01 (Interim Policy on the Re-Use of Soil for Large Reclamation Projects),

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Massachusetts Contingency Plan (MCP) and any other applicable state and federal regulations. All reclamation soil will be sampled and analyzed under the supervision of a Licensed Site Professional (LSP) prior to acceptance for reuse by the Project.

The Reclamation Project would be undertaken pursuant to MassDEP policies including:

- MassDEP, Policy #COMM-15-01, Final Interim Policy on the Re-use of Soil for Large Reclamation Projects (i.e. quarries, sand and gravel pits), a copy of which is provided in Attachment A.
- MassDEP Similar Soils Policy WSC#-13-500, a copy of which is provided in Attachment B.

MassDEP has developed and utilizes Policy #COMM-15-01 to issue an Administrative Consent Orders (i.e. permit) to Reclamation Project owners and operators as a method to allow reclamation and development of sand pits, gravel pits quarries and other similar underutilized properties. The Administrative Consent Order (ACO) permit will incorporate the methods and procedures to be followed during the management and execution of the reclamation project.

- *MassDEP Policy #COMM-15-01 is implemented pursuant to Section 277 of Chapter 165 of the Acts of 2014, M.G.L. c. 21E, § 6(2) and 310 CMR 40.0000, and M.G.L. c. 111, § 150A3 and 310 CMR 16.00 and 19.000. Section 277 of Chapter 165 of the Acts of 2014 directs the Department to “establish regulations, guidelines, standards or procedures for determining the suitability of soil used as fill material for the reclamation of quarries, sand pits and gravel pits. The regulations, standards or procedures shall ensure the reuse of soil poses no significant risk of harm to health, safety, public welfare or the environment considering the transport, filling operations and the foreseeable future use of the filled land.”*

The Reclamation Project will be completed in accordance with a MassDEP issued Administrative Consent Order (ACO) permit that will incorporate the methods and procedures to be followed by MCGI during the management and execution of the Reclamation Project.

MCGI is seeking the Town’s support and meaningful input with respect to the Reclamation Project. If the Town provides its support, MCGI is willing to provide the Town a Town-Host Fee of \$0.25 per cubic yard for soils received and accepted at the Site, which should generate approximately \$1,000,000 in revenue for the Town based upon the anticipated approximately 4 million cubic yards of soil. However, this proposed Host Fee will be offered only if the Town provides support of MCGI’s proposal within a reasonable period (e.g., 30-45 days).

As discussed above and through other correspondence, on December 5, 2017 representatives from MCGI met with certain Town representatives; and on February 11, 2018, Mr. David Burton, the President of MCGI, met with and distributed a letter describing the Reclamation Project to various Town officials. As of the date of this letter, representatives from the Town of Pepperell have not contacted representatives from MCGI, and/or Mr. David Burton to discuss the project.

Therefore on behalf of MCGI, TERRA Environmental requests a meeting with the Town of Pepperell's Town Administrator and Town Planner as well as the Selectmen at the earliest mutually-convenient date to discuss the Reclamation Project and to answer any questions or respond to any concerns regarding the Reclamation Project.

If you should have any questions or require additional information, please do not hesitate to contact David Burton or myself directly at your convenience.

Respectfully submitted,
TERRA ENVIRONMENTAL, LLC



Philip M. Peterson, LSP
Principal Consultant / Manager

- ATTACHMENT A: MASSDEP, POLICY #COMM-15-01**
- ATTACHMENT B: MASSDEP SIMILAR SOILS POLICY WSC#-13-500.**
- ATTACHMENT C: SOIL MANAGEMENT PLAN**

CC: PEPPERELL BOARD OF SELECTMEN (6-COPIES)
MASSDEP – CENTRAL REGIONAL OFFICE (MARK BALDI)
DAVID BURTON, PRESIDENT (MCGI)

**ATTACHMENT A
MASSDEP, POLICY #COMM-15-01**



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

Interim Policy on the Re-Use of Soil for Large Reclamation Projects Policy # COMM-15-01

August 28, 2015

Policy Statement

This Interim Policy provides notice of MassDEP's intent to issue site-specific approvals, in the form of an Administrative Consent Order, to ensure the reuse of large volumes of soil for the reclamation of sand pits, gravel pits and quarries poses no significant risk of harm to health, safety, public welfare or the environment and would not create new releases or threats of releases of oil or hazardous materials.

During the effective period of this policy, MassDEP approval for the filling of sand pits, gravel pits and quarries to which this policy applies will be provided only through Administrative Consent Orders completed by the terms of this policy. Filling operations conducted without MassDEP approval operate at risk of Department enforcement for violations of rules governing solid waste management and oil and/or hazardous material releases.

The use of soil for the reclamation of a quarry, sand pit or gravel pit under the conditions of this policy is considered approved re-use for the purposes of the notification exemption described at 310 CMR 40.0317(13).

Effective Date

This Interim Policy is effective on August 28, 2015. This Interim Policy will remain in effect until it is specifically rescinded or superseded by MassDEP regulations governing soil fill projects promulgated pursuant to Section 277 of Chapter 165 of the Acts of 2014, M.G.L. c. 21E, Section 6, and M.G.L. c. 111, Section 150A. While such future regulations will likely differ in scope and detail from this Interim Policy, the Department anticipates that regulations and policies developed to implement the final approach will specifically accommodate projects commenced under an Administrative Consent Order issued pursuant to this Interim Policy through the incorporation of transition provisions.

Authority

This Interim Policy is implemented pursuant to Section 277 of Chapter 165 of the Acts of 2014¹, M.G.L. c. 21E, § 6² and 310 CMR 40.0000, and M.G.L. c. 111, § 150A³ and 310 CMR 16.00 and 19.000.

Section 277 of Chapter 165 of the Acts of 2014 directs the Department to “*establish regulations, guidelines, standards or procedures for determining the suitability of soil used as fill material for the reclamation of quarries, sand pits and gravel pits. The regulations, standards or procedures shall ensure the reuse of soil poses no significant risk of harm to health, safety, public welfare or the environment considering the transport, filling operations and the foreseeable future use of the filled land.*”

M.G.L. c. 21E, § 6 establishes the Department’s authority to “*specify reasonable requirements, applicable to sites and vessels where releases of hazardous material or oil might occur and to activities which might cause, contribute to, or exacerbate a release of hazardous material or oil, to prevent and control, and to counter the effects of, such releases. Such requirements may be prescribed... by order under section nine⁴ for specific sites and vessels which the department has determined to... be conducting an activity which poses a threat of release of hazardous material or oil.*”

The placement, dumping, disposing or reuse of soil containing oil and/or hazardous material (OHM) into the environment is a “release” as that term is defined in M.G.L. c. 21E § 2⁵. Such dumping, disposing or unapproved re-use of soil is potentially a notifiable release (310 CMR 40.0300) requiring assessment and, where indicated, remediation. Depending upon site-specific conditions and the nature of the OHM present in the soil, such releases may have significant adverse human health and environmental effects. Examples of such effects include:

¹ <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter165>

² <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter21E/Section6>

³ <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section150A>

⁴ <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter21E/Section9>

⁵ <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter21E/Section2>

- contamination of the underlying aquifer through leaching of the OHM;
- human exposure through direct contact with the soil or inhalation of vapors or particulates emanating from the soil;
- degradation of wildlife habitats;
- degradation of neighboring properties, wetlands, and waterways through stormwater runoff; and
- exacerbation of localized flooding.

Applicability

This Interim Policy is applicable to any quarry, gravel pit, or sand pit reclamation project that receives, or plans to receive greater than 100,000 cubic yards of soil for the reclamation/filling of said quarry, gravel pit, or sand pit after August 28, 2015 including:

- Reclamation projects that will begin to receive on site more than 100,000 cubic yards of soil after August 28, 2015;
- Reclamation projects that have commenced physically receiving soil on site on an “at risk” basis prior to August 28, 2015 subject to the regulations, policies and procedures in place prior to August 28, 2015 and which will receive more than 100,000 cubic yards after October 31, 2015;

To be eligible for MassDEP approval pursuant to this Interim Policy, the soil accepted by the quarry, gravel pit or sand pit can contain no more than de minimis quantities of Solid Waste (e.g. Municipal Solid Waste and/or Construction and Demolition Waste) as defined in 310 CMR 16.00 and 310 CMR 19.000.

Soil fill projects to which this policy applies and that are not managed in compliance with this policy may be found to have caused, contributed to, or exacerbated a release of OHM and may be subject to enforcement pursuant to Section 277 of Chapter 165 of the Acts of 2014⁶, M.G.L. c. 21E, § 6⁷ and 310 CMR 40.0000, and/or M.G.L. c. 111, § 150A⁸ and 310 CMR 16.00 and 19.000.

Fill projects that accept any amount of soil (whether pursuant to this Interim Policy or otherwise) must ensure that the filling does not create new, reportable releases of oil or hazardous materials to the environment pursuant to M.G.L. c. 21E and 310 CMR 40.0000, or will not violate M.G.L. c. 111, section 150A, 310 CMR 16.00, or 310 CMR 19.000.

Nothing in this Interim Policy eliminates, supersedes or otherwise modifies any local, state or federal requirements that apply to the management of soil, including any local, state or federal permits or approvals necessary before placing the soil at the receiving location, including, but not limited to, those related to placement of fill, noise, traffic, dust control, stormwater management, wetlands, groundwater or drinking water source protection.

⁶ <https://malegislature.gov/Budget/CurrentBudget>

⁷ <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter21E/Section6>

⁸ <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section150A>

Implementation

A reclamation project proponent should contact the Regional Director in the MassDEP Regional Office for the region in which the reclamation project is located to initiate the approval process.

In determining whether to issue an Administrative Consent Order to a project proponent for a specific quarry, gravel pit or sand pit reclamation project, MassDEP will review data describing the types and concentrations of OHM contained in the excavated soil proposed to be used for reclamation, data describing the relevant characteristics of the location proposed to receive this soil and the surrounding area, proposed soil management plans, and any other information necessary to ensure the proper handling of the fill material.

As a case-specific approval, the development of an ACO for a reclamation project will necessitate discussions between the Department and the project proponent to identify all the information necessary as a basis for approval. These discussions will likely occur concurrent with the project proponent's discussions with local officials and the development of final soil management plans.

MassDEP will review documentation submitted by project proponents to demonstrate that the appropriate local officials are aware of the project and have been afforded the opportunity for meaningful input. Examples of such documentation may include:

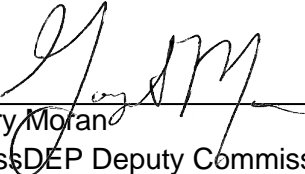
- a copy of any local permit or other approval specific to the use of large volumes of fill material that may be required (municipal approval of an up-to-date reclamation plan for the receiving location, and/or or a municipal permit under an "earth filling" ordinance, and/or any other approval required by a municipality for activities that involve the transportation of soil onto the receiving site); or
- where such local approvals are not required:
 - a copy of any notification to the public in the area surrounding the fill project and the Chief Municipal Official (CMO) and the Chair of the Board of Health (BOH) of the city or town in which the fill project is located of the proposal to use the excavated soil (including a description of the oil and/or hazardous materials that it contains) and
 - a summary of the steps taken to solicit meaningful input from those local officials, copies of comments received, and a description of the ways in which these comments have been (or will be) addressed.

MassDEP will not finalize an Administrative Consent Order on the proposed quarry, gravel pit or sand pit reclamation project unless and until all comments from such local officials on project impacts related to noise, dust, odor and/or trucks have been appropriately addressed by the project proponent.

Administrative Consent Orders will include, as appropriate, requirements for:

- Implementation of a detailed Soil and Fill Management Plan that specifies how material will be sampled⁹, documented, tracked, transported and managed as well as what materials are permitted and not permitted;
- Detailed plans that specify how material will be managed at the reclamation project to prevent nuisance conditions, such as noise, odor, litter and dust;
- Detailed Stormwater Management Plan to prevent impacts to sensitive receptors;
- Detailed Wetlands Impact provisions, including, as applicable, a requirement to obtain an Order of Conditions, Determination of Applicability or other approval or permit to proceed with the project as designed;
- A plan for communicating with the public and involving interested parties at key points in the implementation of the reclamation project;
- Oversight by an LSP or other qualified environmental professional and/or Third Party Inspection program;
- Knowledge of and intention to comply with all applicable laws and regulations; and
- Stipulated penalties for noncompliance with the Administrative Consent Order.

August 28, 2015
Date


Gary Moran
MassDEP Deputy Commissioner

⁹ Soil that has been pre-characterized *in situ* prior to August 28, 2015 using standard practices, procedures and methodologies in place at the time of sampling (for example, characterized for RCRA-8 metals) may be evaluated for use as reclamation soil on the basis of that pre-characterization through August 28, 2016.

ATTACHMENT B:

MASSDEP SIMILAR SOILS POLICY WSC#-13-500



Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

MAEVE VALLELY BARTLETT
Secretary

DAVID W. CASH
Commissioner

Similar Soils Provision Guidance

Guidance for Identifying When Soil Concentrations at a Receiving Location Are “Not Significantly Lower Than” Managed Soil Concentrations Pursuant to 310 CMR 40.0032(3)

September 4, 2014¹

(Originally published October 2, 2013 and revised April 25, 2014²)

WSC#-13-500

The information contained in this document is intended solely as guidance. This guidance does not create any substantive or procedural rights, and is not enforceable by any party in any administrative proceeding with the Commonwealth. Parties using this guidance should be aware that there may be other acceptable alternatives for achieving and documenting compliance with the applicable regulatory requirements and performance standards of the Massachusetts Contingency Plan.

I. Purpose and Scope

The Massachusetts Contingency Plan (“MCP”, 310 CMR 40.0000) establishes conditions and requirements for the management of soil excavated at a disposal site. This guidance addresses the specific requirements of 310 CMR 40.0032(3) and the criteria by which a Licensed Site Professional (“LSP”) may determine that soil may be moved without prior notice to or approval from the Department. Soil managed pursuant to 310 CMR 40.0032(3) may be transported using a Bill of Lading (“BOL”), but a BOL is not required. Attachment 1 provides a flowchart depiction of the Similar Soil regulations and guidance.

This guidance is not applicable to the excavation and movement of soil from locations other than M.G.L. Chapter 21E disposal sites, nor to the management of soils considered Remediation Waste under the MCP.

¹ Updated to revise an inaccurate RCS-1 concentration for lead in Table 2 and an inaccurate RCS-2 concentration for selenium in Table 3.

² Updated to reflect the 2014 revisions to the Massachusetts Contingency Plan, 310 CMR 40.0000

II. Relationship to Other Local, State or Federal Requirements

This guidance is intended to clarify and more fully describe regulatory requirements contained within the MCP. Nothing in this guidance eliminates, supersedes or otherwise modifies any local, state or federal requirements that apply to the management of soil, including any local, state or federal permits or approvals necessary before placing the soil at the receiving location, including, *but not limited to*, those related to placement of fill, noise, traffic, dust control, wetlands, groundwater or drinking water source protection.

III. Requirements of 310 CMR 40.0032(3)

The requirements specified in 310 CMR 40.0032(3) are:

- (3) Soils containing oil or waste oil at concentrations less than an otherwise applicable Reportable Concentration and that are not otherwise a hazardous waste, and soils that contain one or more hazardous materials at concentrations less than an otherwise applicable Reportable Concentration and that are not a hazardous waste, may be transported from a disposal site without notice to or approval from the Department under the provisions of this Contingency Plan, provided that such soils:
- (a) are not disposed or reused at locations where the concentrations of oil or hazardous materials in the soil would be in excess of a release notification threshold applicable at the receiving site, as delineated in 310 CMR 40.0300 and 40.1600; and
 - (b) are not disposed or reused at locations where existing concentrations of oil and/or hazardous material at the receiving site are significantly lower than the levels of those oil and/or hazardous materials present in the soil being disposed or reused.

There are therefore four requirements that must be met before the managed soil can be moved to and re-used (or disposed) at a new location without notice to or approval from MassDEP. Each requirement (A. through D.) is addressed below.

A. The Managed Soil Must Not Be a Hazardous Waste

310 CMR 40.0032(3) applies to soils containing oil or waste oil that are not otherwise a hazardous waste, and to soils containing hazardous materials that are not a hazardous waste. The MCP definition of hazardous waste (310 CMR 40.0006) refers to the definitions promulgated in the Massachusetts Hazardous Waste Regulations, 310 CMR 30.000.

Under the federal Resource Conservation and Recovery Act of 1976 (“RCRA”, 42 U.S.C. §§6901 *et. seq.*), the Massachusetts Hazardous Waste Management Act (M.G.L. c.21C), and the Massachusetts Hazardous Waste Regulations (310 CMR 30.000), soil is considered to contain a hazardous waste (hazardous waste soil) if, when generated, it meets either or both of the following two conditions:

- the soil exhibits one or more of the characteristics of a hazardous waste pursuant to 310 CMR 30.120 [such as exhibiting a characteristic of toxicity under 310 CMR 30.125 and 30.155 (Toxicity Characteristic Leaching Procedure, or TCLP)]; or
- the soil contains hazardous constituents from a listed hazardous waste identified in 310 CMR 30.130 or Title 40, Chapter I, Part 261 (Identification and Listing of Hazardous Waste) of the Code of Federal Regulations.

MassDEP has published a Technical Update entitled: *Considerations for Managing Contaminated Soil: RCRA Land Disposal Restrictions and Contained-In Determinations* (August 2010, <http://www.mass.gov/eea/docs/dep/cleanup/laws/contain.pdf>) that focuses on the determination of whether contaminated soil must be managed as a hazardous waste subject to RCRA requirements, and the presumptive approval process an LSP/PRP can use to document such a determination.

B. The Managed Soil Must Be Less Than Reportable Concentrations (RCs).

This requirement is intended to ensure that the soil being excavated and relocated from a disposal site is not “Contaminated Soil” and therefore neither “Contaminated Media” nor “Remediation Waste” as those terms are defined in 310 CMR 40.0006³.

310 CMR 40.0361 sets forth two reporting categories for soil (RCS-1 and RCS-2). Reporting Category RCS-1 applies to locations with the highest potential for exposure, such as residences, playgrounds and schools, and to locations within the boundaries of a groundwater resource area. Reporting Category RCS-2 applies to all other locations.

Note that the “applicable Reportable Concentrations” referred to in 310 CMR 40.0032(3) may be the RCS-1 or RCS-2 criteria, depending upon which category would apply to the soils being excavated at the original disposal site location, not the RCs applicable to the soils at the receiving location (see Section III.C. below).

EXAMPLE: If soil is being excavated from a disposal site at an RCS-2 location and the soil contaminant concentrations are found to be less than the RCS-2 criteria, then the soil is not “Contaminated Soil” since the soil is less than the release notification threshold established for RCS-2 soil by 310 CMR 40.0300 and 40.1600. The RCS-2 soil in this example is not “Contaminated Soil” even if one or more constituent concentration is greater than an RCS-1 value.

Also, the language at 310 CMR 40.0032(3) specifies the *applicable* RCs. If a notification exemption (listed at 310 CMR 40.0317) applies to the OHM in soil at its original location, then the corresponding Reportable Concentration is not *applicable*. Thus 310 CMR 40.0032(3) should be read to apply to soils containing concentrations of oil or hazardous material (“OHM”) less than the applicable RCs or covered by a notification exemption. This interpretation of the requirement is consistent with the definition of Contaminated Soil, which uses the term “notification threshold” rather than “Reportable Concentration.”

³ Contaminated Soil - means soil containing oil and/or hazardous material at concentrations equal to or greater than a release notification threshold established by 310 CMR 40.0300 and 40.1600.

Contaminated Media - means Contaminated Groundwater, Contaminated Sediment, Contaminated Soil, and/or Contaminated Surface Water.

Remediation Waste - means any Uncontainerized Waste, Contaminated Media, and/or Contaminated Debris that is managed pursuant to 310 CMR 40.0030. The term "Remediation Waste" does not include Containerized Waste.

C. The Managed Soil Must Not Create a Notifiable Condition at the Receiving Location.

This requirement is intended to prevent the creation of new reportable releases that must be subsequently assessed and remediated.

If the contaminant concentrations in the soil being relocated are less than the RCS-1 criteria, then placement of the soil in any RCS-1 location would not create a new notifiable condition. There are, however, conditions that could result in a notifiable condition.

First, if the soil is excavated from an RCS-2 location (as described in the example in Section III.B. above) with contaminant concentrations *between* the RCS-1 and RCS-2 criteria, then the placement of that soil at an RCS-1 receiving location would create a notifiable condition since one or more concentrations of OHM would then exceed the RCS-1 criteria in the RCS-1 receiving location.

Second, a notification exemption that applies to the original location of the soil may not apply to the receiving location. (For example, the lead paint exemption at 310 CMR 40.0317(8) is specific to “the point of application.”) In cases where a notification exemption applies only to the original location, the managed soil must be evaluated solely based on whether its OHM concentrations exceed the applicable RCs at the receiving location.

D. The Managed Soil Must Not Be Significantly More Contaminated Than the Soil at the Receiving Location.

This requirement has been referred to as the “anti-degradation provision” although it is more accurately described as the “Similar Soils Provision.” 310 CMR 40.0032(3)(b) requires that the concentrations of OHM at the receiving location not be “significantly lower” than the relocated soil OHM concentrations. One could also say that the provision requires that “there is no significant difference between the relocated soil and the soil at the receiving location,” or that “the soils being brought to the receiving location are similar to what is already there.” This requirement embodies several considerations.

First, as a general principle, M.G.L. c.21E is intended to clean up contaminated properties and leave them better than they started -- even to clean sites to background conditions, if feasible. It would be inconsistent with this principle to then raise the ambient levels of contamination in the environment as a consequence of a response action conducted under the MCP.

Second, despite the three other requirements (A. through C. above) of 310 CMR 40.0032(3), decisions about the movement of the managed soil will be based upon sampling of soil that is likely to have significant heterogeneity. The Similar Soils Provision is an additional measure to minimize the adverse effects of soil characterization that may not be representative of such heterogeneity.

Third, none of the criteria of 310 CMR 40.0032(3) address the question of whether the soil poses a *risk* in its original or receiving location, although the hazardous waste- and notification-related requirements seem to *imply* risk-based decision making. Put simply, soil that is not a hazardous waste and does not require notification may still pose incremental risk at the receiving location. The Similar Soils Provision is intended to ensure that the managed soil does not increase risk of harm to health, safety, public welfare or the environment at the receiving location, since it will be similar to what is already there.

The “not... significantly lower” language of 310 CMR 40.0032(3)(b) can be interpreted to mean either a quantitative “not statistically different” analysis, or a semi-quantitative, albeit somewhat subjective, approach. MassDEP does not believe that a statistics-driven quantitative approach is necessary when comparing managed soil to known or assumed background conditions, given (a) the relatively low concentrations at issue and (b) the cost of such an analysis, driven by the quantity of sampling needed to show a statistical difference.

The regulations imply that the LSP must have knowledge about the concentrations of OHM in the soil at the receiving location in order to apply the Similar Soils Provision. The regulations also imply that the new soil may contain concentrations of OHM that are somewhat higher than those levels at the receiving location – just not “significantly” higher.

MassDEP recognizes that there may be several approaches to address this “knowledge” issue when implementing the Similar Soils Provision of the MCP.

- **Assume the soils at the receiving location are natural background.**
Sampling of the soil at the receiving location is not necessary if it is assumed that the concentrations of OHM there are consistent with natural background conditions. MassDEP acknowledges that there is a range of background levels, and that the concentrations at any given location may be lower than the statewide levels published by the Department⁴, but the costs associated with determining site-specific background are not justified by likely differences. Further, the published “natural background” levels are similarly used in several areas of the MCP as an acceptable endpoint, including site delineation and the development of the MCP cleanup standards.

Of course, routine due diligence about the receiving location may still reveal factors that would make the location inappropriate to receive the proposed fill material. Nothing in this guidance relieves any party of the obligation to conduct such due diligence and appropriately consider and act on information thereby obtained.

⁴ See Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil (May, 2002)
<http://www.mass.gov/eea/docs/dep/cleanup/laws/backtu.pdf>

- **Sample the soils at the receiving location.**

The sampling plan should include a sufficient number of samples taken at locations selected to provide an understanding of the concentrations of OHM present and the distribution of OHM throughout the receiving location. In order to provide data appropriate for the Similar Soils comparison, the soil at the receiving location should be analyzed for constituents that are likely to be present there (e.g., naturally occurring metals) as well as any OHM known or likely to be present in the soil brought from the disposal site. If a receiving location has been adequately and comprehensively characterized, that data may then be used for comparison to the OHM concentrations in any subsequent soil deliveries - additional sampling is not required.

- **Provide Technical Justification for an Alternative Approach**

There may be situations for which a different combination of analytical and non-analytical information available for both the source and receiving locations is sufficient to conclude that the nature and concentrations of OHM in the soils are not significantly different. Guidance on recognizing such conditions and the level of documentation that would be necessary to support such a technical justification is beyond the scope of this guidance.

Once the concentrations of OHM in the soils are known (or assumed consistent with this guidance), the LSP must compare the concentrations of the source and receiving locations and determine whether the concentrations at the receiving location are “significantly lower” than those in the soil proposed to be relocated from the disposal site. This comparison may be conducted in several ways, including analyses with appropriate statistical power and confidence. MassDEP has also developed a *rule-of-thumb* comparison to simplify this determination, as described in Section IV.

IV. Determining whether soils at the receiving location are “significantly lower” using a simplified approach

The simplified comparison shall be made using the *maximum* values of the OHM concentrations in both the soil at the receiving location and the soil proposed to be disposed of or reused.

Use of the maximum values is appropriate for several reasons. First, the provisions of 310 CMR 40.0032(3) include comparisons to Reportable Concentrations, and notification is triggered by any single value (i.e., maximum value) exceeding the RC. Second, soil is by its nature heterogeneous, and the use of maximum values is a means of minimizing sampling costs while addressing the expected variability of results. Third, if natural background levels are assumed at the receiving location, the MassDEP published background concentrations are upper percentile levels that are only appropriately compared to similar (e.g., maximum) values of the soil data set.

Note also that when using the maximum reported concentrations for comparison purposes, the typical or average concentration will be lower. This is important to recognize if/when the question of the risk posed by the soil is raised. For example, the RCS-1 and the Method 1 S-1 standard for arsenic are both 20 mg/kg. The Reportable Concentration is applied as a not-to-be-exceeded value, triggering the need to report the release and investigate further. However the S-1 standard is applied as an average value, considering exposure over time. At a location where the highest arsenic value found is less than 20 mg/kg, the average concentration would be well below the Method 1 S-1 standard.

The maximum concentration in the soil at the receiving location may be less than that in the proposed disposed/reused soil by some amount and not be considered “significantly lower.” The question is how much lower is “significantly lower”? In this guidance, MassDEP establishes a multiplying factor to be applied to the concentration in the soil at the receiving location. The multiplying factor varies depending upon the concentration in the soil at the receiving location, as shown in Table 1.

Table 1. Receiving Soil Concentration Multiplying Factors

If the concentration in soil at the receiving location for a given OHM is:	Then use a multiplying factor of:
< 10 mg/kg	10
10 mg/kg ≤ x < 100 mg/kg	7.5
100 mg/kg ≤ x < 1,000 mg/kg	5
≥ 1,000 mg/kg	2.5

EXAMPLE: The soil at a receiving location that is considered RCS-1 is appropriately sampled and the maximum concentration of silver is found to be 6 mg/kg. Using Table 1, the concentration of silver at the receiving location would not be considered “significantly lower” than $10 \times 6 \text{ mg/kg} = 60 \text{ mg/kg}$. Since 60 mg/kg is less than the silver RCS-1 value of 100 mg/kg, soil containing a maximum concentration that is less than 60 mg/kg silver could be reused at this location.

EXAMPLE: The soil at a receiving location that is considered RCS-1 is assumed to be consistent with natural background. The MassDEP published natural background level for arsenic is 20 mg/kg. Using Table 1, the concentration of arsenic at the receiving location would not be considered “significantly lower” than $7.5 \times 20 \text{ mg/kg} = 150 \text{ mg/kg}$. However, since 150 mg/kg is greater than the arsenic RCS-1 value of 20 mg/kg, only soil containing a maximum concentration that is less than 20 mg/kg arsenic could be reused at this location. [The managed soil must not create a notifiable condition at the receiving location, see Section III.C. above.]

EXAMPLE: The soil at a receiving location that is considered RCS-2 is assumed to be consistent with natural background. The MassDEP published natural background level for benzo[a]anthracene is 2 mg/kg. Using Table 1, the concentration of benzo[a]anthracene at the receiving location would not be considered “significantly lower” than $10 \times 2 \text{ mg/kg} = 20 \text{ mg/kg}$. Since 20 mg/kg is less than the benzo[a]anthracene RCS-2 value of 40 mg/kg, soil containing a maximum concentration that is less than 20 mg/kg benzo[a]anthracene could be reused at this location. [Note that due to the lower reportable concentration, RCS-1 receiving locations could only accept soil containing less than 7 mg/kg benzo[a]anthracene.]

The multiplying factors in Table 1 and the MassDEP published natural background levels can be used to establish concentrations of OHM in soil that would be acceptable for reuse at an RCS-1 receiving location, consistent with the requirements of 310 CMR 40.0032(3). Table 2 lists such concentrations. Note that soil that meets the criteria in Table 2 could be re-used at any location (RCS-1 or RCS-2). Similarly, Table 3 lists concentrations of OHM in soil that would be acceptable for reuse at an RCS-2 receiving location (but not RCS-1 locations).

If a chemical is not listed on these tables, then MassDEP has not established a natural background concentration⁵. This guidance is limited to the use of only MassDEP-published statewide background concentrations. Therefore an alternative approach, such as sampling the receiving location and comparing maximum reported concentrations, would be appropriate to meet the requirements of 310 CMR 40.0032(3).

⁵ For example, MassDEP has not established natural background levels for PCBs, volatile organic compounds (VOCs) or petroleum-related constituents.

Table 2.
Limits to the Concentration of OHM In Soil for Re-Use
Assuming Natural Background Conditions at an RCS-1 Receiving Location

OIL OR HAZARDOUS MATERIAL	Concentration	Rule-of- Thumb Multiplier	Multiplied Value mg/kg	RCS-1 mg/kg	Limiting ¹ Soil Concentration mg/kg	
	In "Natural" Soil mg/kg				<	
ACENAPHTHENE	0.5	10	5	4	<	4
ACENAPHTHYLENE	0.5	10	5	1	<	1
ALUMINIUM	10,000	2.5	25000		<	25000
ANTHRACENE	1	10	10	1000	<	10
ANTIMONY	1	10	10	20	<	10
ARSENIC	20	7.5	150	20	<	20
BARIUM	50	7.5	375	1000	<	375
BENZO(a)ANTHRACENE	2	10	20	7	<	7
BENZO(a)PYRENE	2	10	20	2	<	2
BENZO(b)FLUORANTHENE	2	10	20	7	<	7
BENZO(g,h,i)PERYLENE	1	10	10	1000	<	10
BENZO(k)FLUORANTHENE	1	10	10	70	<	10
BERYLLIUM	0.4	10	4	90	<	4
CADMIUM	2	10	20	70	<	20
CHROMIUM (TOTAL)	30	7.5	225	100	<	100
CHROMIUM(III)	30	7.5	225	1000	<	225
CHROMIUM(VI)	30	7.5	225	100	<	100
CHRYSENE	2	10	20	70	<	20
COBALT	4	10	40		<	40
COPPER	40	7.5	300		<	300
DIBENZO(a,h)ANTHRACENE	0.5	10	5	0.7	<	0.7
FLUORANTHENE	4	10	40	1000	<	40
FLUORENE	1	10	10	1000	<	10
INDENO(1,2,3-cd)PYRENE	1	10	10	7	<	7
IRON	20,000	2.5	50000		<	50000
LEAD	100	5	500	200	<	200
MAGNESIUM	5,000	2.5	12500		<	12500
MANGANESE	300	5	1500		<	1500
MERCURY	0.3	10	3	20	<	3
METHYLNAPHTHALENE, 2-	0.5	10	5	0.7	<	0.7
NAPHTHALENE	0.5	10	5	4	<	4
NICKEL	20	7.5	150	600	<	150
PHENANTHRENE	3	10	30	10	<	10
PYRENE	4	10	40	1000	<	40
SELENIUM	0.5	10	5	400	<	5
SILVER	0.6	10	6	100	<	6
THALLIUM	0.6	10	6	8	<	6
VANADIUM	30	7.5	225	400	<	225
ZINC	100	5	500	1000	<	500

¹ Concentration of OHM in soil must be LESS THAN (not equal or greater than) this value.

Table 3.
Limits to the Concentration of OHM In Soil for Re-Use
Assuming Natural Background Conditions at an RCS-2 Receiving Location

OIL OR HAZARDOUS MATERIAL	Concentration			RCS-2 mg/kg	Limiting ¹ Soil Concentration mg/kg	
	In "Natural" Soil mg/kg	Rule-of- Thumb Multiplier	Multiplied Value mg/kg			
ACENAPHTHENE	0.5	10	5	3000	<	5
ACENAPHTHYLENE	0.5	10	5	10	<	5
ALUMINIUM	10,000	2.5	25000		<	25000
ANTHRACENE	1	10	10	3000	<	10
ANTIMONY	1	10	10	30	<	10
ARSENIC	20	7.5	150	20	<	20
BARIIUM	50	7.5	375	3000	<	375
BENZO(a)ANTHRACENE	2	10	20	40	<	20
BENZO(a)PYRENE	2	10	20	7	<	7
BENZO(b)FLUORANTHENE	2	10	20	40	<	20
BENZO(g,h,i)PERYLENE	1	10	10	3000	<	10
BENZO(k)FLUORANTHENE	1	10	10	400	<	10
BERYLLIUM	0.4	10	4	200	<	4
CADMIUM	2	10	20	100	<	20
CHROMIUM (TOTAL)	30	7.5	225	200	<	200
CHROMIUM(III)	30	7.5	225	3000	<	225
CHROMIUM(VI)	30	7.5	225	200	<	200
CHRYSENE	2	10	20	400	<	20
COBALT	4	10	40		<	40
COPPER	40	7.5	300		<	300
DIBENZO(a,h)ANTHRACENE	0.5	10	5	4	<	4
FLUORANTHENE	4	10	40	3000	<	40
FLUORENE	1	10	10	3000	<	10
INDENO(1,2,3-cd)PYRENE	1	10	10	40	<	10
IRON	20,000	2.5	50000		<	50000
LEAD	100	5	500	600	<	500
MAGNESIUM	5,000	2.5	12500		<	12500
MANGANESE	300	5	1500		<	1500
MERCURY	0.3	10	3	30	<	3
METHYLNAPHTHALENE, 2-	0.5	10	5	80	<	5
NAPHTHALENE	0.5	10	5	20	<	5
NICKEL	20	7.5	150	1000	<	150
PHENANTHRENE	3	10	30	1000	<	30
PYRENE	4	10	40	3000	<	40
SELENIUM	0.5	10	5	700	<	5
SILVER	0.6	10	6	200	<	6
THALLIUM	0.6	10	6	60	<	6
VANADIUM	30	7.5	225	700	<	225
ZINC	100	5	500	3000	<	500

¹ Concentration of OHM in soil must be LESS THAN (not equal or greater than) this value.

V. Sampling Considerations

The soil proposed for disposal/re-use should be sampled at sufficient and adequately distributed locations so that the concentrations of the contaminants of concern in the soil are adequately characterized. This includes sampling for the purpose of MCP site assessment and sampling to characterize the soil in any given stockpile/shipment leaving the site. The factors listed below should be considered when developing and implementing such a sampling plan. Evaluation of release, source, and site specific conditions assist in developing the basis for the selection of field screening techniques, sampling methodologies, sampling frequencies, and the contaminants of concern (e.g., analytical parameters) used to characterize the soil. These include, but are not necessarily limited to the following:

- the type(s) and likely constituents known or suspected to be in the soil;
- current and former site uses, past incidents involving the spill or release of OHM, and past and present management practices of OHM at the site;
- the potential for the soil to contain listed hazardous waste or to be a characteristic hazardous waste;
- the presence or likelihood of any other OHM (e.g., chlorinated solvents, metals, polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), halogenated volatile organic compounds (VOCs));
- visual/olfactory observations, field screening, analytical data, and/or in-situ pre-characterization data;
- soil matrix type - naturally occurring soil or fill/soil mixtures (e.g., homogeneous or heterogeneous soil conditions);
- the identification and segregation of discrete "hot spots";
- the concentration variability in the soil;
- the volume of soil;
- the current and likely future exposure potential at the receiving location, including the potential for sensitive receptors, such as young children, to contact the soil (for example, more extensive sampling of the stockpiles would be warranted for soil slated to be moved to a residential setting than for soil being moved to a secure, low-exposure potential regulated receiving facility); and
- any sampling requirements stipulated by the receiving location.

The assessment of the soil, including the nature and concentrations of OHM therein, is a component of the MCP site assessment and therefore must meet all applicable performance standards, including those for environmental sample collection, analysis and data usability⁶. The assessment should address the precision, accuracy, completeness, representativeness, and comparability of the sampling and analytical results used to determine whether the soil

⁶ Additional guidance on data usability is available in Policy #WSC-07-350, [MCP Representativeness Evaluations and Data Usability Assessments](http://www.mass.gov/eea/docs/dep/cleanup/laws/07-350.pdf). <http://www.mass.gov/eea/docs/dep/cleanup/laws/07-350.pdf>

stockpiles meet the Similar Soils Provision requirements. The representativeness of any site assessment sampling data if used to characterize contaminant concentrations in soil to be moved and reused offsite should be carefully evaluated. Additional guidance on soil sampling considerations is available from U.S. EPA and other state environmental agencies.⁷

VI. Segregation and Management of Soils of Different Known Quality

Soil containing concentrations of OHM equal to or greater than the values listed in Table 3 cannot be managed using the streamlined approach described in this guidance. Such soil must be managed in a manner consistent with its regulatory classification, which may include management as a hazardous waste, as a remediation waste, or under a case-specific Similar Soils determination.

Segregation of soil of different quality should occur based upon *in-situ* pre-characterization sampling results. Stockpiles of soil are mixtures that would require more extensive sampling to document the effectiveness of any attempted post-excavation segregation.

The known presence of soil that exceeds the Table 3 concentrations and the subsequent segregation of soil is one factor that would indicate the need for more frequent sampling (at least in that area of soil excavation) as described in Section V.

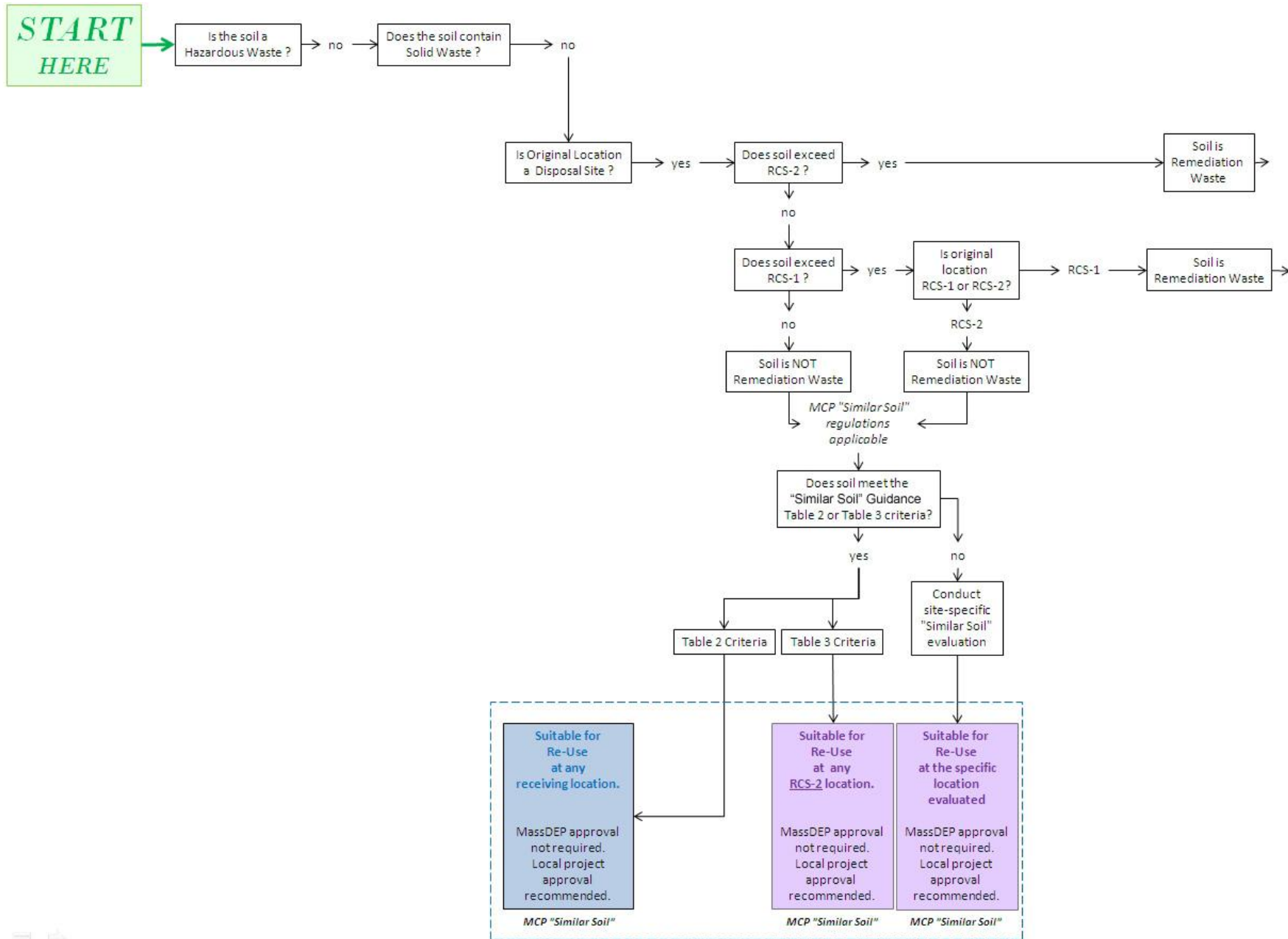
⁷ Note that the guidance below are not specific to MGL Chapter 21E disposal sites and may not reflect MCP-specific considerations to determine the suitability of soils for offsite transport and use, such as for residential and other S-1 locations.

NJDEP. 2011. Alternative and Clean Fill Guidance for SRP Sites.
New Jersey Department of Environmental Protection Site Remediation Program
http://www.state.nj.us/dep/srp/guidance/srra/fill_protocol.pdf

USEPA. 1992. Supplemental Guidance to RAGS: Calculating the Concentration Term.
Office of Solid Waste and Emergency Response (OSWER), Washington, DC
http://www.epa.gov/oswer/riskassessment/pdf/1992_0622_concentrationterm.pdf

USEPA. 1995. Superfund Program Representative Sampling Guidance Volume 1: Soil.
OSWER. Washington, DC.
(Note that guidance for determining the number of samples for statistical analysis is addressed in Section 5.4.1).
http://www.epa.gov/tio/download/char/sf_rep_samp_guid_soil.pdf

Attachment 1 – Similar Soil Flowchart



ATTACHMENT C:

SOIL MANAGEMENT PLAN



TERRA ENVIRONMENTAL, LLC
PLANNING | CONSULTING | MANAGEMENT | REMEDIATION

SOIL MANAGEMENT PLAN

NASHUA ROAD QUARRY RECLAMATION PROJECT

161 NASHUA ROAD

PEPPERELL, MA 01463

Prepared for:

Mass Composting Group, Inc.

161 Nashua Road

Pepperell, MA 01463

Prepared by:

TERRA Environmental, LLC

159 haven St., 2nd Floor

Reading, MA 01867

Prepared: June 28, 2018

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1.0 INTRODUCTION

The **Nashua Road Quarry Reclamation Project** location is 161 Nashua Road in Pepperell, Massachusetts, (See Site Assessment map, **Figure 1** and Topographic map, **Figure 2**) and is identified as parcel 6-20-0 in the Town of Pepperell's Assessor's Property Map 6 (**Figure 3**). The subject site is located off 161 Nashua Road (i.e. **Route 111**) and is zoned Industrial by the Town of Pepperell.

The following soil management plan and attachments discuss our approach to reclaiming the gravel to pre-mining conditions in accordance with previously issued removal permits and MassDEP policies including, "Similar Soils Policy WSC#-13-500 and MassDEP, Policy #COMM-15-01, Interim Policy on the Re-use of Soil for Large Reclamation Projects (i.e. quarries, sand and gravel pits).

Historically, the site was used as a quarry for the production of gravel by Shattuck prior to 1972. The site access is located off Nashua Road/Route 111 and the site is being prepared for future development under its existing Industrial Zoning (**Figure 4**).

There will be no new impervious area(s) added as part of the proposed project. The project will include semi-permanent placement of silt fence along the site boundaries and will serve as a visible and physical barrier between the work area and surrounding properties.

It is anticipated that the reclamation project will take approximately 7 to 9 years to complete based upon the size of the area to be filled; projections of volumes of fill material likely available and anticipated daily operations at the site. It is estimated that 4-million cubic yards of soil will be received over the course of the project. Anticipated sources of fill material include large volumes of excess soil from excavation and construction projects in Massachusetts, as well as qualified soils from Maine and New Hampshire. The intended fill material will include native deposits of soil including sand, gravel, organic soils, estuarine deposits, marine sands, glacial till, clay, fill soils, and soil/slurry mixtures from foundation installations.

Soil intended for reuse in the filling operation must meet the Acceptance Criteria established for this location. The derivation of the Acceptance Criteria is based on MassDEP's Similar Soils Policy WSC#-13-500, MassDEP Policy #COMM-15-01 (Policy for re-use of soil for Large Reclamation Projects), Massachusetts Contingency Plan (MCP) and any other applicable state and federal regulations. All Reclamation soil will be sampled and analyzed under the supervision of a Licensed Site Professional (LSP) prior to accepting them for reuse by the Project.

The Property owner including "involved parties" identified in section 2.0 of this Plan have met the Town regarding this project, see Appendix B.

1.1 SITE BACKGROUND AND HISTORY

The Shattuck Gravel Pit, hereinafter referred to as "**Shattuck Pit**" is located off Nashua Road, also known as and identified as State Route Number 111 and is located within the Industrial Zone as shown on the Town of Pepperell Zoning Map. Under current Town Zoning Regulations, Earth and soil removal operations are allowed by Board of Selectmen Special Permit in the Industrial Zone. Such use has been an allowed use in the Industrial Zone since on or about 1973 by Special Permit and prior thereto as a matter of right (1968+). Gravel removal operations have occurred at the **Shattuck Pit** under previously issued permits. No gravel removal operations will occur as part of the reclamation project.

Gravel removal operations for the **Shattuck Pit** date back to prior to 1972. It is reported that gravel removal operations were originally initiated in 1965. Shattuck's removal operation mandates restoration standards to be completed and include a provision to restore excavated areas. In addition, the provision states that no slope shall be left with a slope steeper than three to one (3:1) and the final grades will be covered with topsoil and seeded. Such restoration standards have been in effect since adoption of the Town Zoning regulations for soil removal and have been a recited "condition" in each permit granted for soil removal operations for the **Shattuck Pit** and which restoration conditions remain outstanding. The reclamation project would be undertaken pursuant to "reclamation" provisions provided in previously issued permits and including "MassDEP, Policy #COMM-15-01, Interim Policy on the Re-use of Soil for Large Reclamation Projects (i.e. quarries, sand and gravel pits) "and MassDEP "Similar Soils Policy WSC#-13-500."

1.1.1 Topography, Geology and Soils

The topography of the site consists of a relatively flat-bottomed quarry with a steep blasted edge running north and south through the center of the pit. The highest elevation on the site exists in the center of the property and is approximately 250 feet (NAD 83) and the lowest elevation on the site exists at the edge of the northeast corner along Sewall Road and is approximately 55 feet (NAD 83).

1.1.2 Wetlands Delineation

The proposed project includes the clearing of minor scrub bushes. No clearing, filling or disturbance will take place within 100' of any wetlands, or 100 around a potential vernal pool as indicated on the site plans. The Site, specifically the reclamation area, is not a Priority Habitat for Rare Species, and does not require special permitting under National Heritage, MESA and does not require specific wetlands permitting for the Project. This has been addressed by Oxbow Associates, Inc. as detailed in Appendix A.

A Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented in accordance with USEPA National Pollutant Discharge Elimination System (NPDES) requirements for a Construction General Permit disturbing over 1 acre of land. A draft copy of the Storm Water Pollution Prevention Plan along with the draft eNOI will be prepared and submitted within 30-days of starting land disturbance activities. The final version will be provided under a separate cover to the Town and will be included in Appendix C.

1.1.3 Site Setting and Potential Receptors

Pursuant to the MCP, the soil and groundwater Reportable Concentrations (RCs) applicable to the site - are RCS-2 for soil and RCGW-2 for groundwater. The determination is supported by the following criteria:

Soil:

- There are no residential properties within 500 feet from the Site
- According to interviews with town officials, and review of available documents, all properties within 1,000 feet are reportedly connected to the municipal water distribution system.
- There are no private/residential drinking water wells within ¼ mile of the Site.
- There will be no athletic fields or areas of high intensity activity in the area to be filled under this proposal and the intended future use of the Site is industrial as allowed by the Town of Pepperell.
- There are also no planned vegetable or communal vegetable gardens.

Groundwater: Based on a review of the MassDEP Phase I Priority Resource Map (Figure 1), Pepperell Zoning Maps, local file reviews and conditions observed at the Site, groundwater at the Site meets the criteria of groundwater category RCGW-2.

- **RCGW-1:** This criterion does not apply since the reclamation area is not located within the geographic boundaries of a MassDEP Approved Wellhead Protection Area (Zone II), Interim Wellhead Protection Area, Zone A of Class A surface water body used as a public water supply, Potentially Productive Aquifer or an aquifer protection district. According to Zoning Maps, the Site is not located within an aquifer or groundwater protection district
- **RCGW-2:** This criterion applies since the Site is not located within a current or potential drinking water resource area.

1.2 GROUNDWATER MONITORING

A groundwater monitoring program will be implemented to monitor groundwater quality and assess potential changes to environmental conditions at the Site during reclamation activities. A total of four (4) groundwater-monitoring wells will be installed as shown on Figure 6 to establish background - concentrations of dissolved components in groundwater at the project site and to complete annual monitoring of the groundwater. The Groundwater Monitoring Plan will be submitted to MassDEP within 90 days of the effective date of the Administrative Consent Order. The plan will include the following:

A groundwater monitoring network showing the location of monitoring wells sufficient to demonstrate groundwater flow direction and capable of being used to monitor any contaminant releases that may occur within the entire fill area at the Site.

The wells will be sampled using low-flow sampling procedures, and samples will be analyzed for the presence of polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), total MCP-14 metals, volatile organic compounds (VOCs), herbicides, pesticides, and extractable petroleum hydrocarbons (EPH). Samples collected for MCP-14 metals shall include both filtered and unfiltered containers; the unfiltered sample containers shall be analyzed initially by the laboratory, with an option to analyze the filtered sample should the unfiltered samples contain elevated levels of the MCP-14 metals.

Monitoring shall be conducted semi-annually throughout the duration of reclamation activities and annually thereafter for four (4) years after its completion. The results of the sampling data will be added to this plan as Appendix D as obtained. A final sampling event will be performed two (2) years after completion of the project.

When required by the Department and/or determined from monitoring results or other Soil Management Plan (SMP) activity at the project location, the Project shall conduct an appropriate risk assessment and associated mitigation, if necessary, when any potential or adverse impact(s) have been identified as a result of project activities.

2.0 PARTIES INVOLVED

Several parties will be involved with the placement of fill material associated with the Nashua Road Quarry Reclamation Project at 161 Nashua Street.

Property Owner:

Mass Composting Group, Inc.
161 Nashua Road
Pepperell, MA

Environmental and Reclamation Project Manager

Philip Peterson, LSP #5753
TERRA Environmental, LLC
159 haven Street, 2nd Floor
Reading, MA 01867

Project LSP, Review and Approval of Submittal Packages:

William J. Mallio, Ph.D., LSP #4966
TERRA Environmental, LLC
159 haven Street, 2nd floor
Reading, MA 01867

3.0 RECLAMATION SOIL ACCEPTANCE CRITERIA

Soil acceptance criteria has been established for various constituents in soil intended for use as fill material at the Nashua Road Site. The criteria were based on review of available and applicable soil standards, guidelines, values, criteria, and background levels established by MassDEP in various regulations, guidelines, and MassDEP technical guidance documents including the Interim Policy on the Re-Use of Soil for Large Reclamation Projects, Policy #COMM-15-01 dated August 28, 2015, the Similar Soils Provision Guidance WSC#-13-500 dated September 4, 2014 (Similar Soils Guidance), and concentration ranges of typical contaminants detected in historic urban fill, naturally-deposited soil, Boston Blue Clay, and other soil. The acceptance criteria were established to be protective of surrounding natural resource areas including groundwater and nearby wetland areas.

3.1 DEVELOPMENT OF SOIL ACCEPTANCE CRITERIA

3.1.1 *Groundwater Classification*

The reclamation area is not located within a Current Drinking Water Source Area:

- (a) MassDEP Phase I Site Assessment Map (see Figure 1) and MassGIS mapping (see Figure 5) shows a portion of the property is located within the Zone II for a public water supply;
 - i. Reclamation (i.e. placement of soil) will not occur in Zone II
- (b) MassDEP Phase I Site Assessment Map shows the site is not within the Interim Wellhead Protection Area for a public water supply;
- (c) A review of MassGIS mapping and the MassDEP Phase I Site Assessment Map shows the site is not within the Zone A of a Class A surface water body used as a public water supply; and
- (d) A review of the Town of Pepperell, Board of Health drilling permits shows the fill portion of the project is not within 500 feet of a private water supply well.

The site is not located within a Potential Drinking Water Source Area:

- (a) A review of the Town of Pepperell utilities shows the property is within 500 feet of a public water supply distribution pipeline located on Nashua Road;
- (b) The property is not within an area designated by the municipality specifically for the protection of groundwater quality to ensure its availability for use as a source of potable water supply.
- (c) There is no local ordinance or bylaw adopted by the municipality for protection of groundwater at the site, there is no inter-municipal agreement approved by the Town of Pepperell and no executed inter-governmental contract for the purchase or sale of drinking water derived from the site; and
- (c) MassGIS mapping shows the property is not within a Potentially Productive Aquifer that has not been excluded as a Non-Potential Drinking Water Source Area. This is a non-potential Drinking Water Source as this groundwater underlies land which has been developed for heavy industry as of January 1, 1996. This Industrial Zoning Area has been in industrial use (granite quarrying and material processing) for over 120 years encompassing an area greater than 100 acres.

Accordingly, the site is subject to RCGW-2 reporting criteria.

3.1.2 Soil Testing Requirements and Standards

Chemical constituents within candidate soil must be less than established Acceptance Criteria. The Criteria were established for the following: MCP-14 Metals (pursuant to DEP Policy #COMM-15-01, Semi-volatile Organic Compounds (SVOCs), Total Petroleum Hydrocarbons (TPH), Volatile Organic Compounds (VOCs), Polychlorinated Biphenyls (PCBs), pH/corrosivity, Specific Conductance, Moisture Content/Free Liquids, Reactivity (cyanide and sulfide), Ignitibility/Flash Point, Herbicides, Pesticides, and other potential constituents based on location-specific history.

Reporting limits for laboratory tests must be appropriate and adequate for evaluation and comparison to Acceptance Criteria. MassDEP Compendium of Analytical Methods (CAM) and levels must be utilized for all CAM analytes.

Averaging of concentrations will not be allowed to meet Soil Acceptance Criteria. Soil containing a constituent at a concentration equal to or exceeding Soil Acceptance Criteria will not be accepted. All batches of soil, represented by a single composite analysis, must meet Soil Acceptance Criteria as established herein.

3.1.3 Visual, Olfactory, and Field Screening Criteria

All soil intended for reuse in the Nashua Road as filling and grading material will meet visual, olfactory, and field screening criteria prior to being accepted and/or placed. Visual inspection of soil is to be performed at time of soil borings, test pits, stockpile sampling, at time of excavation, and/or upon arrival at the project site prior to acceptance and placement. Mass Composting Group will have an authorized representative on-site on a full-time basis to observe off-loading of trucks and perform visual inspections of soil.

Soil will exhibit no indication of staining or other discoloration indicative of a release or impact of oil or hazardous material or other nuisance conditions. Soil and fill materials approved for use at the property shall contain no more than a total of 5% by volume of asphalt, brick and concrete ("ABC") material. Any such ABC material must measure less than 6 inches in any dimension and acceptance of such soil will be considered on a case-by-case basis. Soil and fill materials approved for use at the property may contain only incidental, randomly dispersed, de minimus quantities of ash and/or Solid Wastes, as defined in 310 CMR 16.00 and 310 CMR 19.00, collectively present at less than 1% by volume.

Loads arriving with material not meeting acceptance criteria or determined to contain contaminants at levels at or exceeding acceptance criteria based on quality assurance/quality control sampling will be rejected and removed from the Nashua Road site at the expense of the Generator of that material. Loads not meeting acceptance criteria at the time of delivery to the project site due to debris, odors, or other nonconformance with Acceptance Criteria will be rejected prior to off-loading or reloaded immediately by the facility operator. Such loads will be removed from the project site immediately in the truck they were delivered in.

Should testing or observations indicate soil, as delivered, is not below acceptance criteria, the Generator of that soil and the party contracting with Nashua Road for placement of soil will promptly remove such soil from the project site at a maximum not to exceed seven (7) days. Additional soil will not be accepted from a source where soil failed a QA/QC test or soil was rejected by the facility upon arrival, until appropriate resolution is reached. If the Generator of the soils fails to act, the rejected soil will be removed from the site within this fourteen-day period by Mass Composting Group

Soil will not contain nuisance odors; such as, petroleum, chemicals, solvent, and/or organic material/hydrogen sulfide as described on soil boring or test pit logs, stockpile sampling plans, and/or upon arrival at the project location. Soil with natural organic/hydrogen sulfide odor that is mixed with an odor reducing agent at the location of origin will be evaluated on a case-by-case basis. The Safety Data Sheet (SDS) for all odor-reducing products is required with soil submittal packages.

Soil must be field screened for Total Organic Vapors (TOV) following the MassDEP Jar Headspace Screening Procedure MassDEP Policy #WSC-94-400, modified to be based upon an isobutylene response factor rather than a Benzene standard at the time of sample collection from borings, test pits, stockpiles, or other locations or at the time of excavation and load out. Soil must also be field screened at the time of excavation and load out to the Nashua Road site at a frequency of one (1) field-screening test per approximately 50 cubic yards of soil. These samples shall be preferentially obtained from soils displaying signs of contamination, such as discoloration or odors, if present. Soil must contain less than five (5) parts per million volume (ppmv) TOV above ambient background by the jar headspace screening procedure to meet Acceptance Criteria. Natural organic soils, which exhibit TOV screening levels above five (5) ppmv, may be considered for acceptance on a case-by-case basis provided the following:

- Results of analytical testing, particularly VOC analysis, for the soil that exceeded the 5 ppmv TOV value identifies no exceedances of acceptance criteria; or
- Source of elevated TOV screening levels can be attributed to a source other than oil or hazardous material (such as hydrogen sulfide interference on PID).

Soil mixed with bentonite clay or other slurry material will be accepted on a case-by-case basis. A description of the process and materials generating the soil with slurry must be provided. The safety data sheet (SDS) for all slurry and additive products must be submitted for review. If needed, pH must be adjusted to meet Acceptance Criteria prior to arrival at the fill site. Soil with slurry mixture is subject to field screening for pH upon arrival at the fill site and subject to rejection if Acceptance Criteria are not met.

Soil will contain no free liquid at the time of loading or upon arrival at the project site. Soil containing free liquid will be rejected upon arrival and inspection.

3.1.4 Additional Considerations

A review of the Massachusetts Natural Heritage & Endangered Species Program (NHESP) online database was conducted. The property is not located within a mapped Priority Habitat for Rare Species or an Estimated Habitat for Rare Species. Further, there are no potential vernal pool mapped at this property, within the project site, see Appendix A.

3.2 SOURCE REVIEW, ACCEPTANCE CRITERIA AND PROCEDURES

3.2.1 Source Site History and Use Criteria

Relevant site history and uses of each soil origin/source with regard to the presence, use, disposal, and/or release of oil or hazardous material must be provided in submittal packages prior to acceptance at Nashua Road. Reports including MCP phase reports, URAMs, RAMS, LRAs, ASTM Environmental Site Assessment Reports, or similar documentation must be submitted and will be reviewed with regard to suitability of soil as fill material for this project. In addition, MassDEP's Similar Soils Policy will be applied for the

acceptance and reuse of Reclamation Soils.

Soil that meets the definition of Remediation Waste as defined in Section 40.0032 of the MCP will **not** be considered for reuse at the Nashua Road Project site.

3.2.2 SOURCE SOIL SAMPLING APPROACH

A composite approach is preferred in obtaining samples for chemical analysis. Each composite sample subjected to chemical testing should be comprised of at least eight (8) sub-samples obtained throughout the area/volume being evaluated. However, in no case shall soil displaying apparent signs of contamination (i.e., staining, discoloration, odors, or elevated PID readings) be composited/mixed with soils that do not display these signs. If present, these suspicious soils shall be sampled or composited for separate analyses.

An LSP, or other qualified environmental professional, must justify the representativeness and usability of any testing data obtained from discrete soil samples or composite samples with fewer than five (5) sub-samples.

3.2.3 SOURCE SOIL CHEMICAL TESTING REQUIREMENTS

Testing is required on soil proposed for acceptance as fill material from sources such as developed areas with historic urban fill soil, locations identified as an MCP Disposal Site or other oil or hazardous material release or spill locations, locations with history of manufacturing or industrial use, locations with current or past chemical or petroleum storage, or soil known to contain naturally-occurring elevated levels of metals including Boston Blue Clay and soil from Worcester County with arsenic.

Upon review of initial submittal package information from a soil source, source-specific supplemental testing of specific areas for specific contaminants where the proposed soil is adjacent to other soils with exceedance(s) of acceptance criteria to define/confirm limits of acceptable soil may be required at the discretion of the reviewing LSP prior to acceptance of proposed soil.

Required Test Parameters

Test parameters required on soil to be considered for acceptance include:

- Volatile Organic Compounds (EPA 8260 with methanol preservation)
- Semi-volatile Organic Compounds (EPA 8270 full list)
- Metals: MCP 14 metals
- PCBs
- Total Petroleum Hydrocarbons (summation of EPH Fractions may be substituted)
- Hexavalent Chromium if Total Chromium > 100 mg/kg
- pH/Corrosivity
- Specific Conductance (conductivity; may be limited based on site history)
- Field Screening for Total Organic Vapors (PID following MADEP Jar Headspace Screening Procedure based upon an isobutylene response factor)
- Herbicides (may be excluded or limited based on site history)
- Pesticides (may be excluded or limited based on site history)
- Ignitibility/Flash point (may be excluded or limited based on site history)
- Reactive Cyanide (may be excluded or limited based on site history)
- Reactive Sulfide (may be excluded or limited based on site history)
- TCLP for any analyte exceeding EPA TCLP Trigger Values (20 times rule)

- Net Acid Generation
- Others as deemed prudent based on soil source site history.

Current and appropriate versions of applicable methods are to be used in accordance with MassDEP Compendium of Analytical Methods. Reporting limits for analyses must be appropriate for comparison to Acceptance Criteria. Generator and Qualified Environmental Professional/LSP must assert that data is appropriate for use as intended.

3.2.4 Required Chemical Testing and Frequency

Initial testing by the Generator is required at the minimum frequencies below. Additional testing may be required for the following situations when an Acceptance Criterion is exceeded within or in proximity to soil requested for reuse at 161 Nashua Road:

Source/Origin Description		Minimum Sampling Frequency
1	Naturally Deposited Soils Not from an area of known or suspected high background levels of metals, No / not proximate to urban fill soil, No / not proximate to MCP Disposal Site No industrial/commercial history No agricultural history with likely pesticide / herbicide use	No testing required with Generator and Qualified Environmental Professional / LSP Statement including documentation of site background / area conditions.
2	Other naturally-deposited soils from known or suspected areas of elevated metals (i.e. Boston Blue Clay, Marine Soils). Not / not proximate to urban fill soil, Not / not proximate to MCP Disposal Site No industrial or manufacturing history No agricultural history with likely pesticide / herbicide use	1 test profile per 1,000 cubic yards (1,500 – 1,700 ton). If any acceptance criteria are exceeded, supplemental in-situ or ex-situ (stockpile) samples must be obtained at a minimum frequency of 1 sample/100 cubic yards to confirm limits of acceptable soils for the contaminant(s) that exceeded acceptance criteria.
3	Historic Fill Soil Historic Fill and other soil in areas where impacts would be expected from lead paint, oils, pesticides/herbicides use, and other anthropogenic activities. No industrial or manufacturing history	1 test profile per 500-cy (750-850 ton). If any acceptance criteria are exceeded, supplemental in-situ or ex-situ (stockpile) samples must be obtained at a minimum frequency of 1 sample / 100 cubic yards to confirm limits of acceptable soils for the contaminant(s) that exceeded acceptance criteria.

	Source/Origin Description	Minimum Sampling Frequency
4	<p>Commercial/Industrial Soils Soil from current or former Industrial, Commercial, or Manufacturing site with history of Tannery, Textiles, Chemical/Paint Production, Circuit Board manufacturing, Plating/Metal finishing, Foundry operations, Coal Gasification, Dry Cleaning, Salvage Yards, or Herbicide / Pesticide use, storage or distribution facilities.</p> <p>No soil or fill shall be obtained from, or immediately contiguous, to such locations unless an LSP, LSRP, or LEP provides a report detailing why such soils conform to acceptance criteria.</p>	<p>Minimum 1 test profile per 500-cy (750-850 ton).</p> <p>If any acceptance criteria are exceeded, supplemental in-situ or ex-situ (stockpile) samples must be obtained at a minimum frequency of 1 sample/100 cubic yards to confirm limits of acceptable soils for the contaminant(s) that exceeded acceptance criteria. Additional test parameters such as cyanide must be included as appropriate.</p>
5	<p>Other Soil from source not otherwise described above where historic test data indicate exceedance of Acceptance Criteria, or where past use or site history indicated use or storage of oil or hazardous materials at more than household quantities, or use of pesticide/herbicides</p>	<p>Minimum 1 test profile per 500-cy (750-850 ton).</p> <p>If any acceptance criteria are exceeded, supplemental in-situ or ex-situ (stockpile) samples must be obtained at a minimum frequency of 1 sample/100 cubic yards to confirm limits of acceptable soils for the contaminant(s) that exceeded acceptance criteria.</p>
6	<p>Rock: Blasted or excavated ledge or bedrock.</p>	<p>One test for perchlorate per 500 cy, unless Generator demonstrates that no perchlorate blasting agents were used. One geochemical characterization profile per 500 cy including Acid Base Accounting and Net Acid Generation Potential unless Generator demonstrates that the rock is not known or suspected to contain sulfide minerals.</p>
<p>The more conservative sampling protocol shall apply to soils that meet more than one of the above</p>		

Analytical results for VOCs, SVOCs, metals, PCBs, EPH/TPH, and Herbicides/Pesticides must be expressed on dry-weight basis. If a proposed shipment of soil falls into more than one category, the more conservative sampling protocol shall apply.

3.2.5 Test Data Quality and Usability

Test data provided for review and acceptance must be considered current. If aged data (greater than one (1) year old) is to be utilized for acceptance, then a statement from the qualified environmental professional making the submittal must be provided indicating site conditions have not changed since collection of data and that no documented releases that may impact site conditions have occurred since data was collected.

Prior to submittal, the environmental professional making the submittal must perform a quality assurance/quality control (QA/QC) evaluation of the data to document that data is representative and usable for its intended purpose. This evaluation must include a justification of the representativeness of analytical data obtained for discrete soil samples or composite samples with less than five (5) sub-samples.

Table 1 – Acceptance Criteria

Parameter Analyzed	Acceptance Criteria / Limit (mg/kg)
MCP 14 Metals	
<i>Antimony</i>	30
<i>Arsenic</i>	20
<i>Barium</i>	3,000
<i>Beryllium</i>	200
<i>Cadmium</i>	100
<i>Chromium (Total)</i>	200
<i>Chromium (III)</i>	3,000
<i>Chromium (VI)</i>	200
<i>Lead</i>	600
<i>Mercury</i>	30
<i>Nickel</i>	1,000
<i>Selenium</i>	700
<i>Silver</i>	200
<i>Thallium</i>	60
<i>Vanadium</i>	700
<i>Zinc</i>	3,000
Total VOCs	<10% RCS-2 or 0.1 mg/kg ¹
SVOCs - Targets	
<i>Acenaphthene</i>	3,000
<i>Acenaphthylene</i>	10
<i>Anthracene</i>	3,000
<i>Benzo(a)anthracene</i>	40
<i>Benzo(a)pyrene</i>	7
<i>Benzo(b)fluoranthene</i>	40
<i>Benzo(g,h,i)perylene</i>	3,000
<i>Benzo(k)fluoranthene</i>	400

<i>Chrysene</i>	400
<i>Indeno(1,2,3-cd)pyrene</i>	40
<i>Dibenzo(a,h)anthracene</i>	4
<i>Fluoranthene</i>	3,000
<i>Fluorene</i>	3,000
<i>2-Methylnaphthalene</i>	80
<i>Naphthalene</i>	20
<i>Phenanthrene</i>	1,000
<i>Pyrene</i>	3,000
Parameter Analyzed	Acceptance Criteria / Limit
PCBs (mg/kg)	< 0.1
TPH (mg/kg)	<3,000
Waste Characteristics	
<i>pH (Corrosivity)</i>	4-11.5
<i>Reactive sulfide (mg/kg)</i>	<500
<i>Reactive cyanide (mg/kg)</i>	<250
<i>Pesticides and Herbicides (mg/kg)</i>	<10% RCS-2 or 0.05³
<i>Free Liquid/Paint Filter Test</i>	No Free Liquid
<i>Flashpoint (Degrees F)</i>	>140
<i>Conductivity (umhos/cm)</i>	<4,000

Notes:

1. VOCs shall be less than 10% of their RCS-2 value or 0.1 mg/kg, whichever is greater.
2. Pesticides and Herbicides shall be less than 10% of their RCS-2 value, or 0.05 mg/kg, whichever is greater

4.0 SOIL SUBMITTAL PROCESS

A soil submittal package must be provided by representatives of each soil source/origin for review and approval by representatives of Nashua Road. A complete submittal package will be forwarded to:

Email: pepperellapprovals@terra-env.com

TERRA's Project Management Team will perform an initial review to establish whether the submittal is complete, and soil is appropriate for reuse as fill material at Nashua Road. If the is submittal complete, it will then be assigned an Acceptance Code and forwarded to the site LSP to complete a final review and approval.

The Reclamation Soil Sources/Origin is required to provide an LSP Opinion and is required for all proposed soil shipments that originate from RCS-1 or RCS-2 locations, acknowledging that Pepperrell Reclamation Project's Acceptance Criteria are not exceeded, and the LSP Opinion shall demonstrate, pursuant to the provisions of the MCP, that the proposed soil is exempt from the notification requirements of the MCP and is not otherwise considered Remediation Waste.

Upon completion of the submittal review process and determination that soil meets acceptance criteria, an acceptance letter will be issued. The acceptance letter will reference the assigned acceptance code, will state a review of information as provided was performed and found adequate and appropriate for acceptance, the quantity of soil that is approved, any samples/soils that are not acceptable, and any other conditions applicable to the acceptance of applicable the soil. The property owner will retain soil submittal packages and approval letters.

A complete submittal package must contain the following:

- Soil/Site information, see Appendix E;
- LSP/QEP Opinion Letter stating relevant site history and use, and a statement that the soil requested for acceptance at Nashua Road meets Acceptance Criteria established in this plan;
- Appropriate shipping papers signed by an LSP/Qualified Environmental Professional and the Generator;
- Laboratory test data reports with chain-of-custody and QA/QC for the soil samples intended for reuse at Nashua Road;
- A data summary table comparing soil test data to the Nashua Road acceptance criteria; and
- Supplemental site investigation reports or information supporting acceptance of subject soil at Nashua Road.

Copies of soil submittal form is included in Appendix E. Soil acceptance criteria for use in a data comparison table are listed in Table 1.

The assigned acceptance code must be placed at the top of each page of the intended shipping papers. Trucks will not be allowed access to the Nashua Road site without an acceptance code on shipping papers.

5.0 ENVIRONMENTAL CONTROLS AND HEALTH AND SAFETY

5.1 DUST AND SEDIMENT CONTROL

The Project will utilize several best management practices (BMPs) to control fugitive dust and sediment associated with transporting, spreading, and compacting soil to fill the Site including any BMPs that are proposed in the SWPPP and required in the Town of Pepperell Order of Conditions to manage stormwater runoff at the Site. These measures are as follows:

- Re-use operations shall be suspended when winds speeds exceed 40-mile per hour or when wind carries dust beyond the property line despite implementation of dust control measures.
- An operational water truck will be on Site at all times. Water will be applied to control dust as needed to prevent visible dust emissions and offsite dust impacts.
- Truck and trailer dumping of soil will be conducted in a manner to minimize fugitive dust generation.
- Wheel washers may be installed to prevent track-out where project vehicles or equipment exit the site.
- A gravel tracking pad will be constructed as appropriate at equipment/vehicle site exit points to remove soil buildup from wheels and tracks and to assist in minimizing track- out onto public ways.
- Roads from the Site will be swept as needed to control fugitive dust and tracking of soil/sediment onto the public way.
- Erosion controls will be installed at the 100-foot wetland buffer. Erosion controls can include hay bales, sand bags, crushed stone filter berms and geotextile fabric/silt sacks. The SWPPP will provide final documentation on wetland buffer zones and runoff protection.

5.2 HEALTH AND SAFETY

Site Specific Health and Safety Plan (SS-HASP) will be required by the Operator to specify the types of personal protection, engineering controls, to manage physical hazards associated with soil work. No environmental monitoring will be necessary as soils are <RCS-2 and will not constitute unacceptable exposures to contaminated soil through ingestion, dermal contact, and inhalation. See Appendix B.

6.0 SITE ACCESS, QUANTITY DETERMINATION AND SITE REJECTION OF MATERIAL

Directions to the site From the South via Massachusetts State Roads:

- ◇ US-3 North toward the New Hampshire border.
- ◇ Use the right 2 lanes to take exit 5 for NH-111 toward Nashua/Pepperell (MA/NH 111A).
- ◇ Keep left to continue toward NH-111 West/West Hollis Street.
- ◇ Keep Right to continue to Exit 5W, follow signs for NH-111/NH-111A/Pepperell, MA and merge onto NH-111 West/West Hollis Street.
- ◇ Follow NH-111 West to MA-111 South.
- ◇ Enter the site on the left.

Directions to the site From the South via New Hampshire and Massachusetts State Roads:

- ◇ US-3 North toward the New Hampshire border.
- ◇ Use right lane to take exit 35 for MA-113 toward Tyngsborough, MA.
- ◇ Continue toward MA-111.
- ◇ Keep Right to continue to Exit 5W, follow signs for NH-111/NH-111A/Pepperell, MA and merge onto NH-111 West/West Hollis Street.
- ◇ Follow MA-113 West, turn right onto MA-111 North.
- ◇ Follow MA 111 North to 161 Nashua Road in Pepperell
- ◇ Enter the site on the left.

Trucks will be weighed at the on-site certified scale to determine the quantity of soil delivered. Access will be through the access road into the Site, and roadways will be maintained for truck access.

The owner will maintain the appropriate equipment year-round to spread, dry, process, and compact the soils.

Loads deemed unacceptable by the Facility Operations Personnel will be rejected from the site. No additional loads will be accepted from the source in question until the Generator, Generator's LSP, and the contracting party provide an appropriate explanation and assurance that no additional, similar loads will be delivered to the project site.

7.0 QUALITY CONTROL/QUALITY ASSURANCE

For quality control/quality assurance purposes, Mass Composting Group Inc. (MCGI) proposes to contract with an independent third-party consultant to once monthly randomly collect and test a grab sample to confirm soil as received meets established Acceptance Criteria. Soil will be randomly obtained during off-loading of trucks at the Site and testing parameters will be as required by MassDEP and identified in the 161 Nashua Road Project's ACO.

During each inspection, at a minimum, the Inspector shall:

- Observe the practices involved in the receipt and/or placement of soil and fill materials at the Property, to the extent that such activities are occurring;
- Inspect the soil and fill materials that are being unloaded and/or placed/recently placed during the inspection, if any, and inspect all areas of the Property where soil and fill materials have been placed since the previous inspection;
- Collect a grab sample of any area or load of soil that appears to be contaminated, based upon staining, discoloration, odors, or PID readings. If no area or load appears to be contaminated, collect a composite soil sample from a minimum of one load of soil being delivered or that had been delivered to the Property since the previous inspection, and submit the collected sample to a laboratory for the soil profile analyses specified in the Soil Management Plan. The composite sample shall consist of a minimum of 5 to 10 subsamples from the load(s) under evaluation.
- Inspect all erosion control measures including but not limited to, silt fence, hay bales, temporary basins and swales.

The Independent Third Party inspector shall prepare an inspection report documenting the findings for each inspection and shall submit such report to the Facility Operators and MassDEP on or before the 21st of the month following the month during which testing was performed.

Loads or areas of soil selected for sampling performed by the Inspector will be segregated pending receipt of test results. Should the test results indicate that contaminants detected in soil are not below all Acceptance Criteria, the Material Source, Generator and/or party contracting for soil placement shall be immediately notified of the need to remove the soil from the site. If the Generator and/or party contracting for soil placement fail to remove unacceptable soil within 7 days of notification then Pepperell Reclamation Project Team will remove the soil from the project site within 14 days of receipt of the laboratory results for proper off-site management or disposal. On behalf of the owner, TERRA will seek recovery from the Source, Generator and/or party contracting for soil placement for all costs associated with removal of any unacceptable soil from the Pepperell Reclamation Project site.

Other sampling and testing may be performed by Reclamation Project should soil as received appear to be inconsistent with the characterization data and information used to obtain acceptance.

Soil deemed not meeting Acceptance Criteria due to debris, odors, or other observations at the time of arrival at the Reclamation Project site will not be accepted and will be reloaded into the truck upon which it arrived and reject the load. No additional loads will be accepted from that source until appropriate explanation and assurance that no additional similar loads will be delivered to the Sewell Street Reclamation Project site is provided by the Generator, Generator's LSP, and the party contracting delivery of soil to the Reclamation Project site.

8.0 MONTHLY REPORT SUBMITTALS TO MASSDEP

Monthly reports shall be submitted electronically to MassDEP by the 21st of each month, using eDEP Transmittal Form BWSC 126, Section B (2), under a Release Tracking Number (RTN) that will be issued by MassDEP for the site.

The monthly reports shall include the following:

1. The total cubic yards/tons of soil received by the site in the previous month; the total cubic yard/tons of soil received by the site since the signing of the ACO; and the estimated total tons of capacity remaining at the site;
2. A tabulation showing the origin/addresses of the sources of soil received during the previous month:
 - a. for each address, the total cubic yards/tons received for the month
 - b. for each address, affirmation that the required PID screening at 1 sample/50 yd³ was conducted at the point of generation, and affirmation that soil with headspace concentrations > 5 ppmV was either rejected or approved after further evaluation by an LSP.
3. A notation on any problems or issues experienced during the previous month; any noteworthy activities expected in the upcoming month, and any significant changes in the project design, schedule, or on-property contact persons
4. A report by the Independent Third Party Inspector, to include:
 - Notations on any practices that are not compliant with the SMP and/or Consent Order;
 - Notations on whether solid or hazardous waste, stained soils, odors, or sheen were observed at the fill site;
 - Notations on airborne dust and dust control measures employed;
 - Specific recommendations, if any, for repair, replacement or changes to erosion control measures at the Property;
 - Status updates of actions taken by Respondent to implement the recommendations made in prior inspection reports, if any; and
 - The results and laboratory analytical report(s) for the soil sample(s) collected during the inspection, including, but not limited to the following, providing that the testing results for a given inspection may be submitted in the next monthly report if not available for submittal with the inspection report:
 - ❖ the analytical results in a tabular format comparing the results to the Acceptance Criteria identified in the Soil Management Plan.
 - ❖ a clear statement regarding whether any of the Acceptance Criteria were exceeded.
 - ❖ the laboratory analytical reports and chain of custody documentation
5. Any other information or data deemed to be significant and/or noteworthy by the Facility Owner or Project LSP.

9.0 ADDITIONAL CONSIDERATIONS, RESTRICTIONS AND/OR LIMITATIONS

The Project Owner proposes the following Reclamation Project considerations, restrictions and/or Limitations.

1. Reclamation soil will not enter the pit before 6:30 A.M., and the operation will cease for the day by 5:00 P.M Monday through Friday. Acceptance of reclamation soils on weekends and after hours will be proposed to the Town for their consideration.
2. Nashua Road will be kept free of debris and soil. Roadways and entrance will be maintained at all times.
3. Maintain onsite dust control at all times.
4. Access road to the operation to be surfaced with bituminous concrete or similar material and will be a minimum of 50 ft. off Nashua Road.
5. All perimeter slopes will be established at a 3:1 ratio, and properly restored with top-soil and seeding during the progress of the reclamation operation.
 - a. Grading, restoration of top-soil, and seeding of areas will be completed as final grades are met and as soon as weather and soil conditions permit.
6. To the greatest extent possible proposed finish grades in the reclamation area through the use of temporary grade stakes to aid in inspections of the operation by the Town.
7. TERRA Environmental will provide the Selectmen and their agents monthly inspections reports as discussed in this Plan.
8. The Selectmen and their agents shall be free to inspect the premises at any time.
9. Monthly MassDEP Reclamation reports will be provided to the Town
10. Owner to provide the Town with a Certificate of Insurance naming the Town as additional insured.

FIGURES

- Figure 1 MassDEP Phase I Site Assessment Map**
- Figure 2 Topographic Map**
- Figure 3 Assessor’s Map**
- Figure 4 Zoning Map**
- Figure 5 MassGIS (Zone II) Map**
- Figure 6 Groundwater Monitoring Wells**
- Figure 7 Wetlands and Buffers**

FIGURE 1 MASSDEP PHASE I SITE ASSESSMENT MAP

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:

161 NASHUA ROAD
161 NASHUA ROAD PEPPERELL, MA

NAD83 UTM Meters:

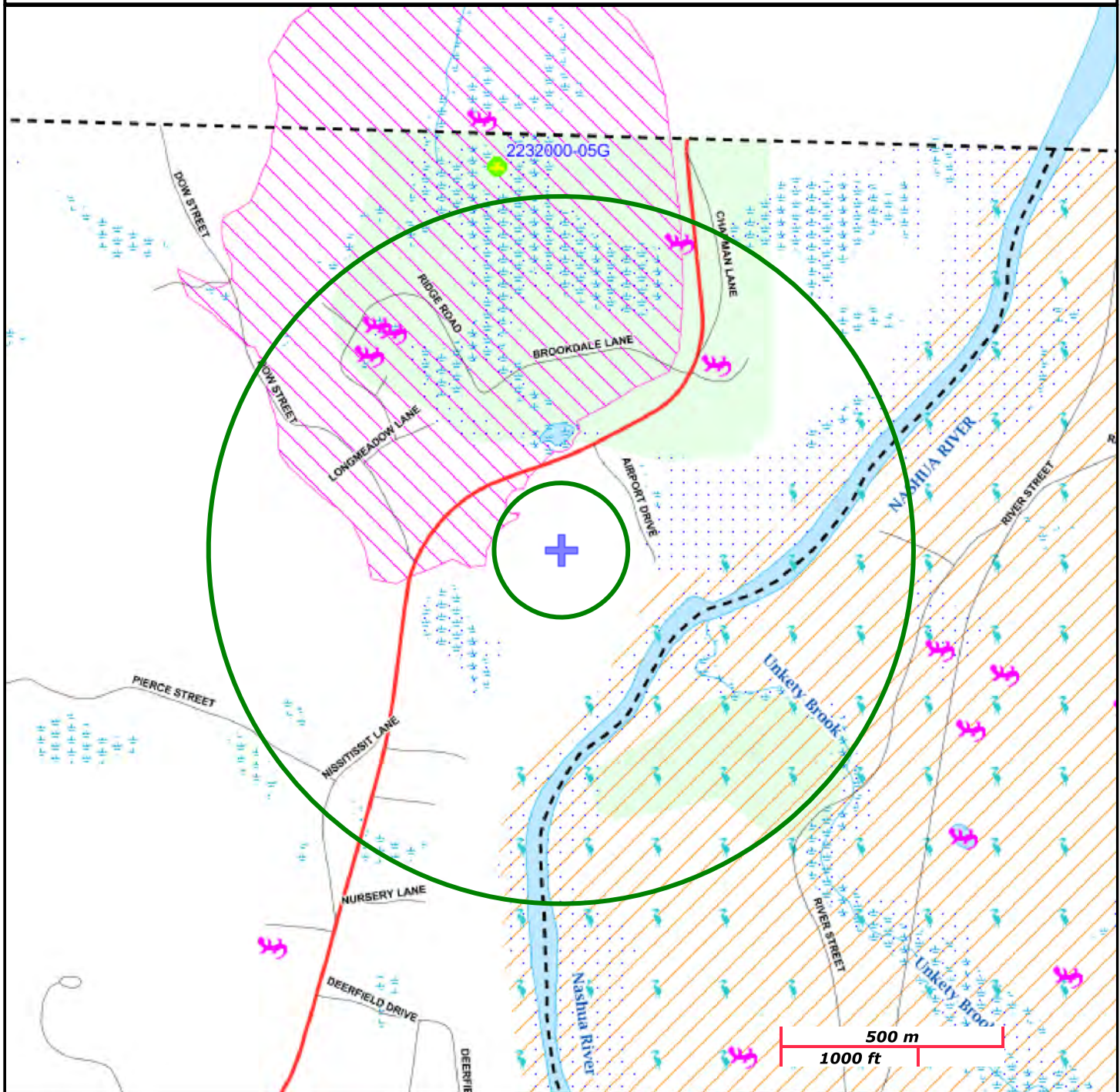
4730068mN , 290617mE (Zone: 19)
March 8, 2018

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<http://www.mass.gov/mgis/>



MassDEP

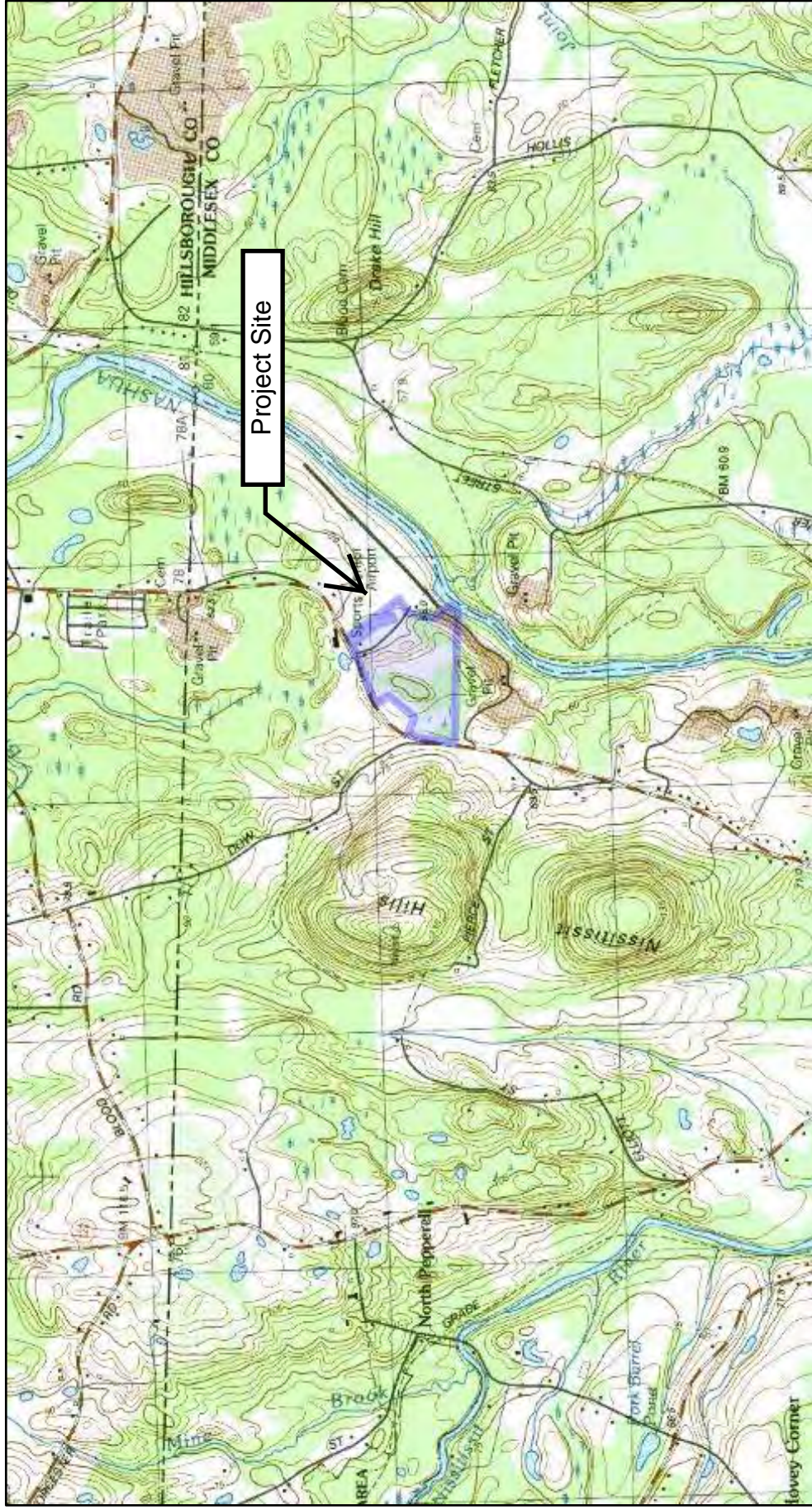
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, IWPA, Zone A		
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat		
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog		
Aquifers: Medium Yield, High Yield, EPA Sole Source	FEMA 100yr Floodplain; Protected Open Space; ACEC		
Non Potential Drinking Water Source Area: Medium, High (Yield)	Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential		
	Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.		

FIGURE 2 TOPOGRAPHIC MAP

Topographic Map



Site Address:	161 Nashua Road, Pepperell, MA
MassDEP RTN:	N/A
Base Map:	MassGIS (USGS Topographic Quadrangles)
Prepared by:	TERRA Environmental, LLC

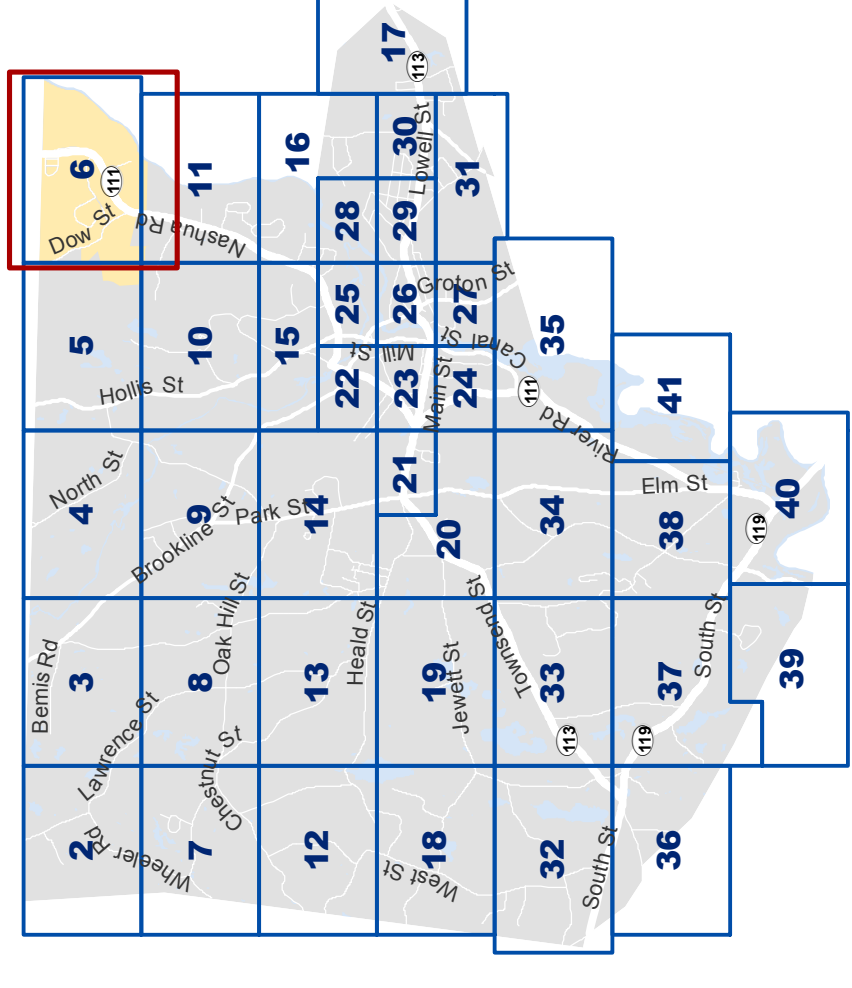
FIGURE 3 ASSESSOR'S MAP

Assessor's Property Map

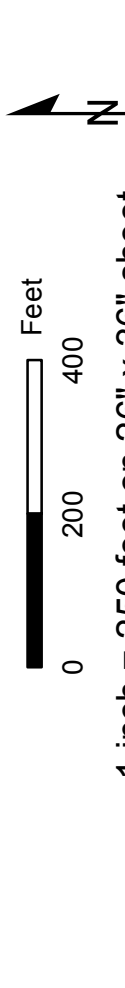
6



Locus Map



- Parcel Boundary
- Common Ownership Parcel Boundary
- Common Ownership Hook
- Parcel Matching Map Number
- Easement or Conservation Restriction
- Right of Way
- Historic Map Line
- Map Index Grid
- Town Boundary
- Water Feature (approximate)



1 inch = 250 feet on 26" x 36" sheet

NOTE: Map acreages are derived from the Assessor's database and may include multiple parcels with common ownership (see common ownership boundaries).

Data Sources:
 Northern Middlesex Assessor's Office (FY2018, 2019, 2017 Parcel extent, Public Maps);
 Northern Middlesex Assessor's Office (MassGIS (Sovory town boundaries, 2013/2014 structures); MassDOT/MassGIS/NIMCOG (2013 roads); MassDEP/MassGIS/NIMCOG (2009 hydrography); NH GRANIT (New Hampshire roads, towns)

This map is for assessment purposes only. The Town of Pepperell assumes no liability for the accuracy of the information provided hereon. The GIS data is illustrative only material and should not be used for legal description or conveyance. Lot dimensions were compiled from existing assessor's maps and survey based plans. For legal determination please refer to parcel specific deeds or the Town of Pepperell Assessor's Office. Water features are based on 2009 MassDEP hydrography data and are for illustration purposes only.
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Produced by:



Northern Middlesex
 Council of Governments
 40 Church Street, Suite 200
 Lowell, Massachusetts 01852
 978-454-8021 www.nmco.org

Map produced: June 30, 2017

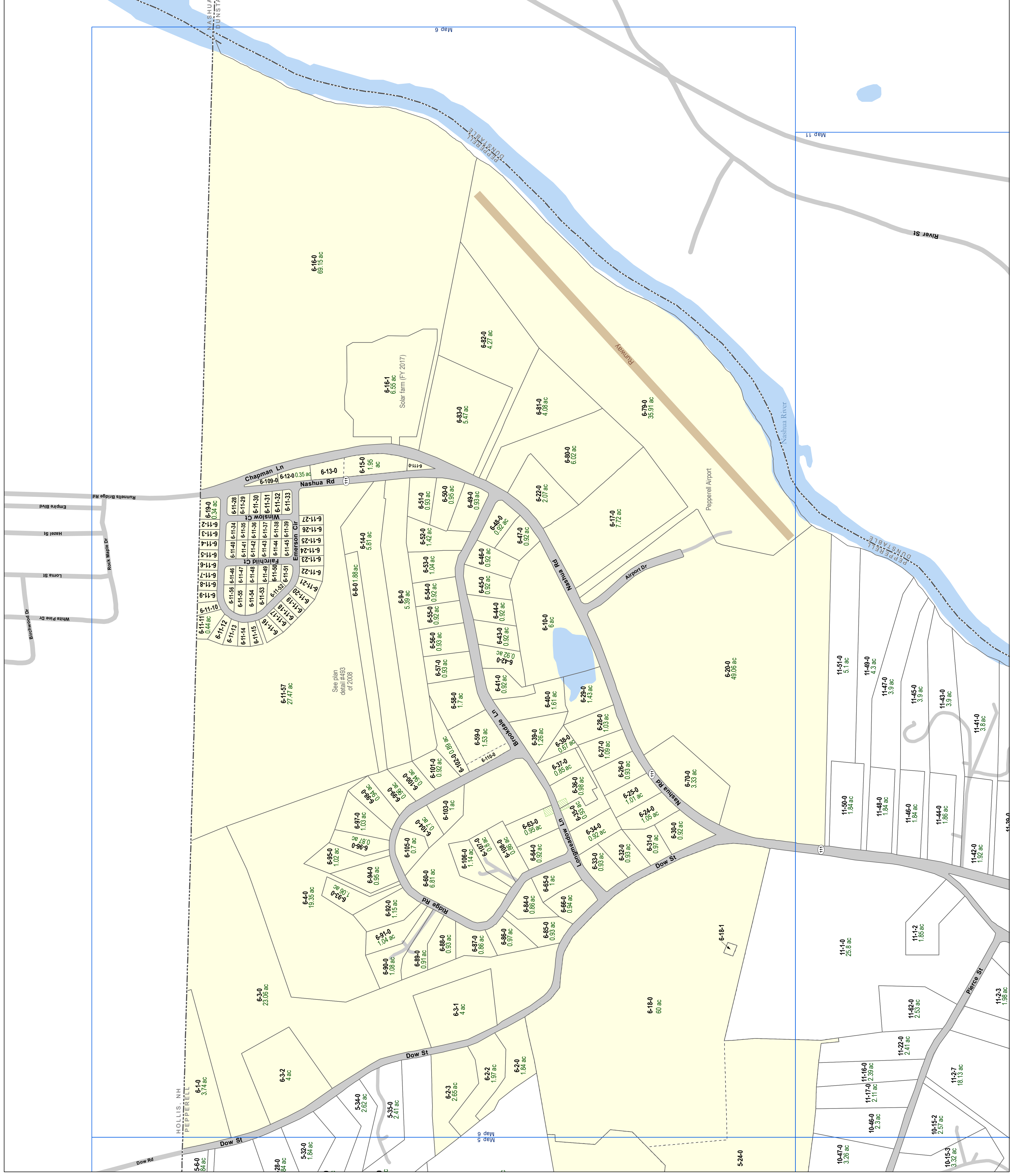
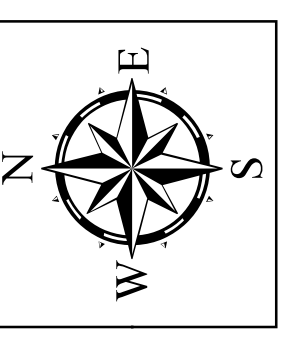


FIGURE 4 ZONING MAP

Pepperell, MA Official Zoning Map:



May 6, 2014

Legend

- Community Boundaries
- Public Ways**
 - Laid Out and Accepted
 - Not Laid Out but Accepted
 - Parcel Boundaries
- Water**
 - Streams & Rivers
 - Lakes, Ponds & Reservoirs
- Zoning Districts**
 - Commercial
 - Industrial
 - Recreation Residence
 - Rural Residence
 - Suburban Residence
 - Town Residence
 - Urban Residence
- Zoning Overlay Districts**
 - Sewer
 - Aquifer-Watershed Protection
 - Zone (AWPZ)
 - Water Source Protection
 - Zone (WSPZ)
 - Well Protection
 - Zone (WPZ)

0 0.125 0.25 0.5 Miles

DATA SOURCES: MassGIS, MassDEP, SEA Consultants, Inc. and the Town of Pepperell.
DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.
PREPARED BY:
 Town of Pepperell GIS
 May 2014
 One Main Street
 Pepperell, MA 01463

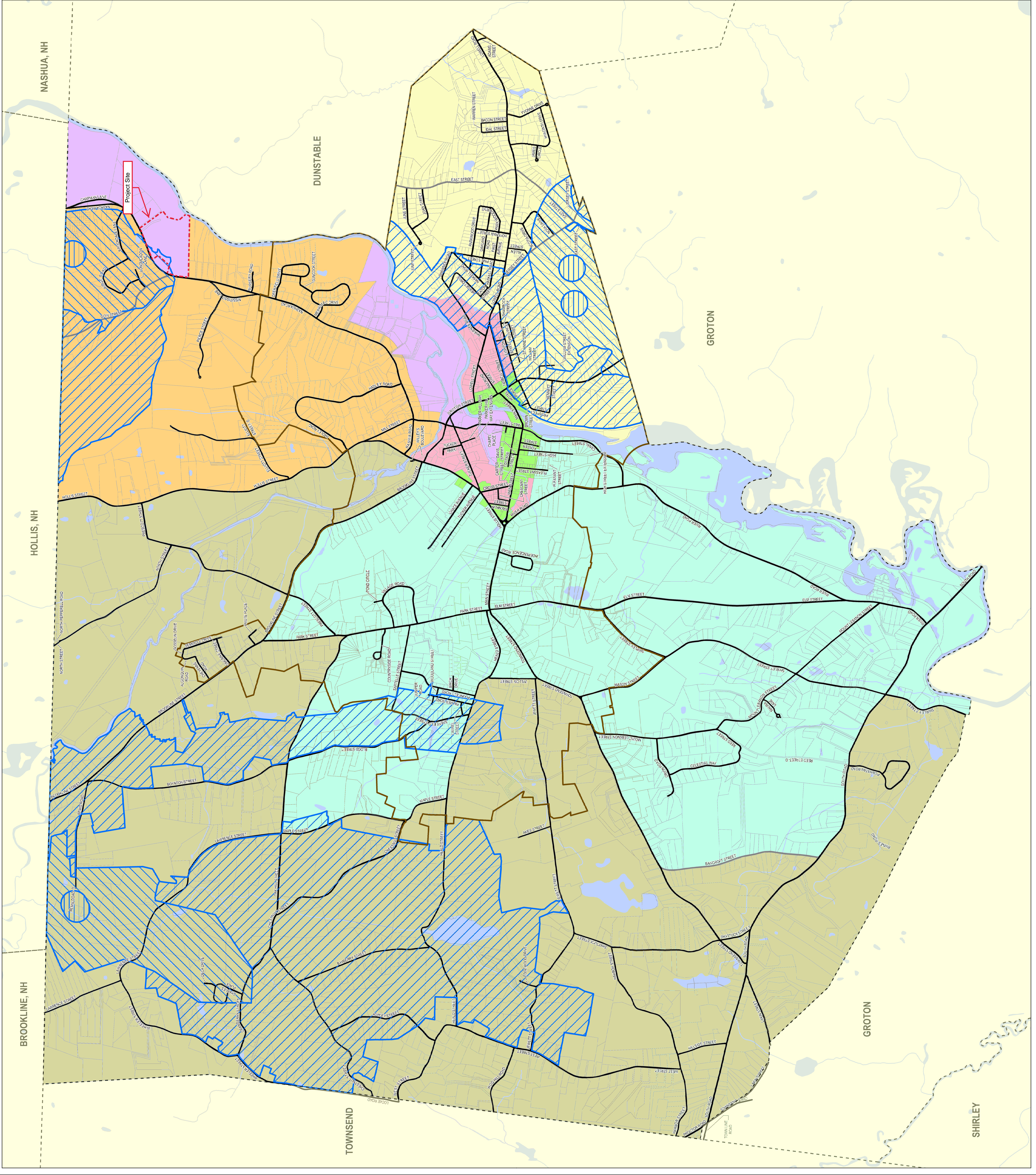
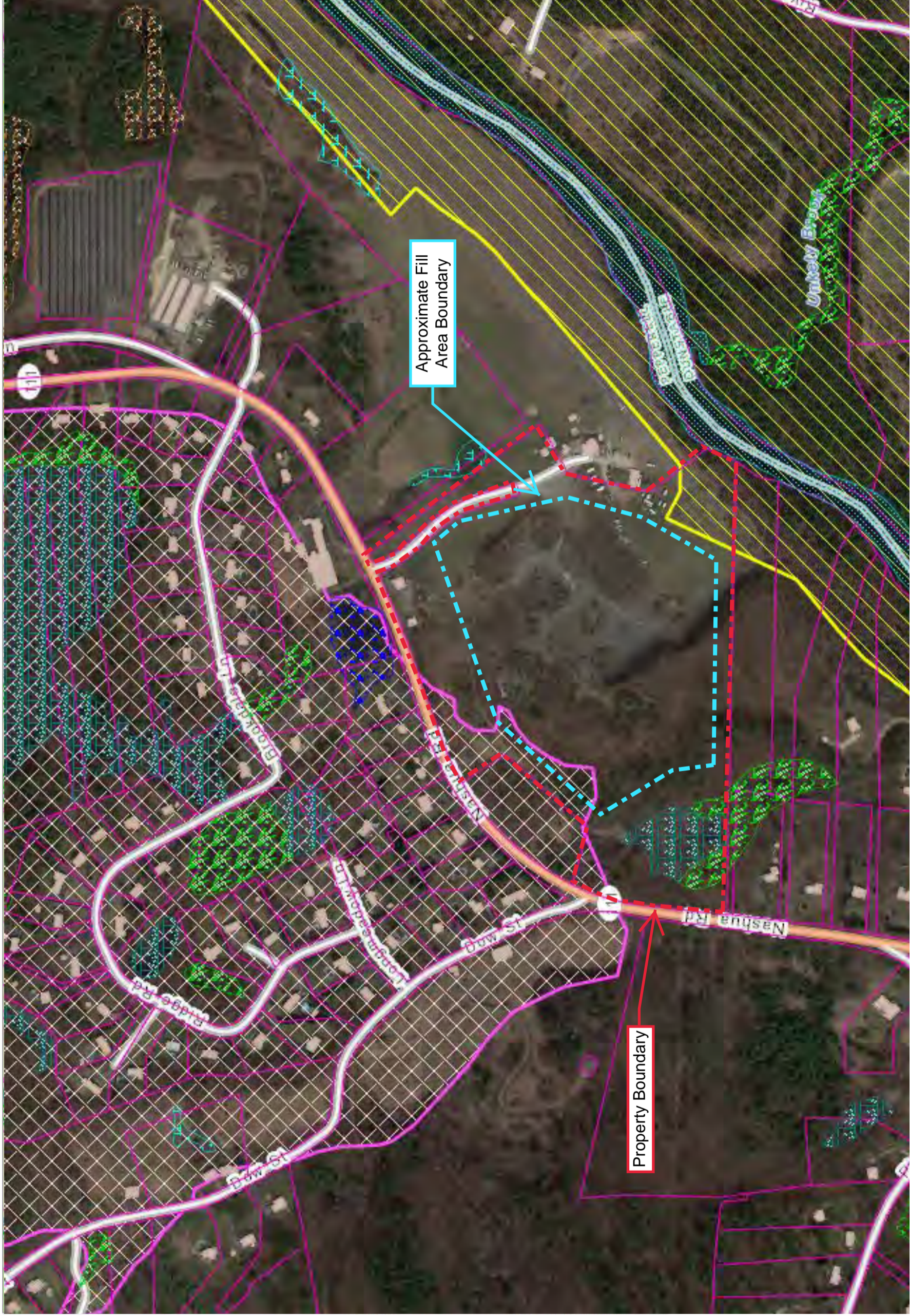
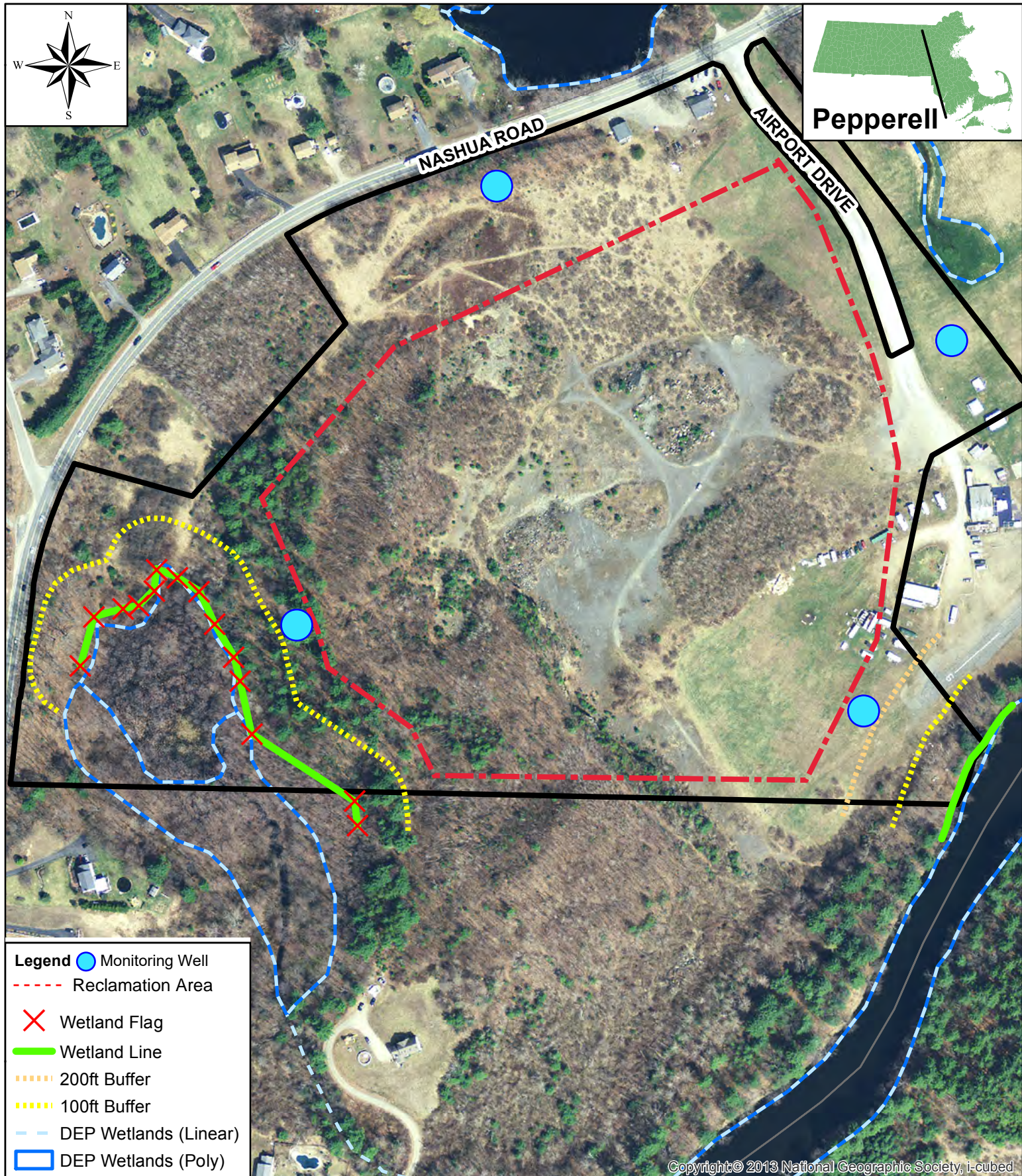
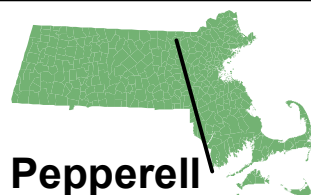
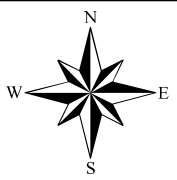


FIGURE 5 MASSGIS (ZONE II) MAP



- DEP Wetlands Detailed With Outlines
- Barrier Beach System
- Barrier Beach-Deep Marsh
- Barrier Beach-Wooded Swamp Mixed Trees
- Barrier Beach-Coastal Beach
- Barrier Beach-Coastal Dune
- Barrier Beach-Marsh
- Barrier Beach-Salt Marsh
- Barrier Beach-Shrub Swamp
- Barrier Beach-Wooded Swamp Coniferous
- Barrier Beach-Wooded Swamp Deciduous
- Bog
- Coastal Bank Bluff or Sea Cliff
- Coastal Beach
- Coastal Dune
- Cranberry Bog
- Deep Marsh
- Barrier Beach-Open Water
- Open Water
- Rocky/Intertidal Shore
- Salt Marsh
- Shallow Marsh Meadow or Fen
- Shrub Swamp
- Tidal Flat
- Wooded Swamp Coniferous
- Wooded Swamp Deciduous
- Wooded Swamp Mixed Trees
- Tax Parcels
- Detailed Features
- Structures
- NHESP Priority Habitats of Rare Species
- IWPAs
- Zone Is
- Zone IIs
- Google 2014-2017 Orthoimagery
- MassGIS Statewide Basemap
- MassGIS Topographic Features Basemap

FIGURE 6 MONITORING WELL LOCATIONS



- Legend**
- Monitoring Well
 - Reclamation Area
 - Wetland Flag
 - Wetland Line
 - 200ft Buffer
 - 100ft Buffer
 - DEP Wetlands (Linear)
 - DEP Wetlands (Poly)

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Wetlands Delineation and Permitting
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ACTON, MASSACHUSETTS 01720
PHONE: (978) 929-9058
FAX: (978) 635-1892
WEB: www.oxbowassociates.com

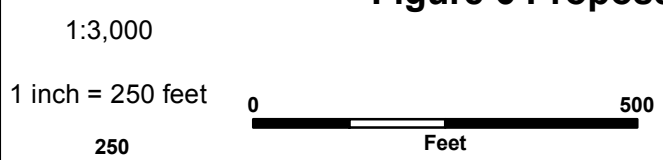
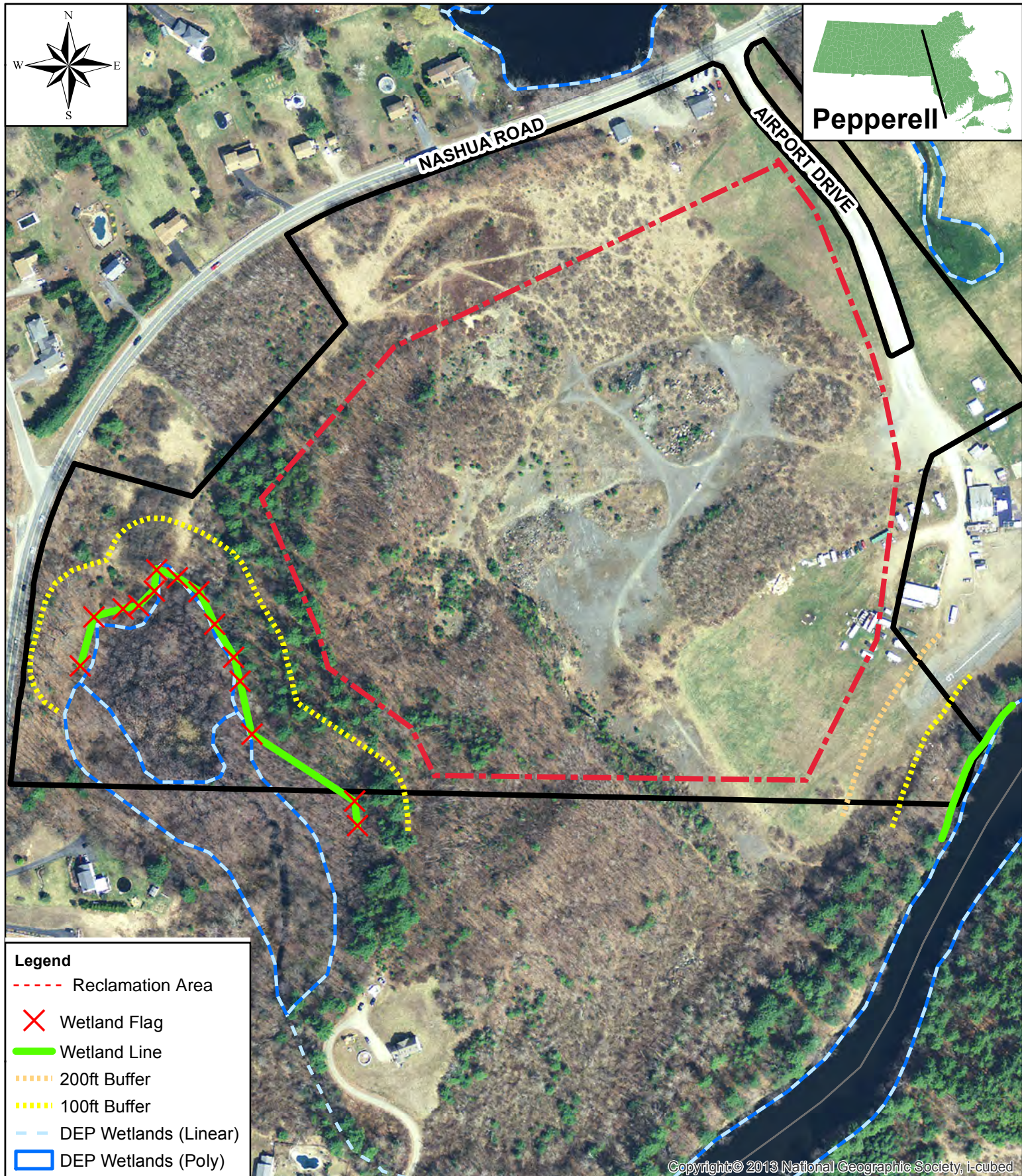
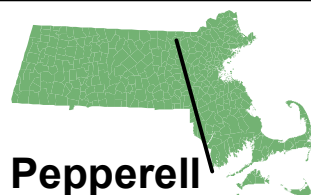
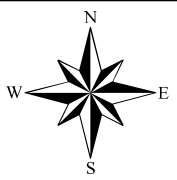


Figure 6 Proposed Monitoring Wells Locations
161 Nashua road
Pepperell, MA

Base Map-Wetlands Buffer/2013 Orthophotograph

FIGURE 7 WETLANDS AND BUFFERS



- Legend**
- - - Reclamation Area
 - X Wetland Flag
 - Wetland Line
 - - - 200ft Buffer
 - - - 100ft Buffer
 - - - DEP Wetlands (Linear)
 - DEP Wetlands (Poly)

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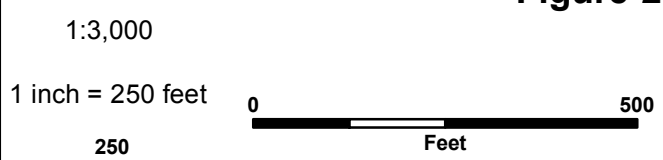


Figure-2 Proposed Reclamation Area
161 Nashua road
Pepperell, MA

Base Map-Wetlands Buffer/2013 Orthophotograph

DRAWINGS – CONSTRUCTION

APPENDIX A OXBOW ASSOCIATES ENDANGERED SPECIES AND WETLANDS LETTER



OXBOW ASSOCIATES, INC.

Wetlands Delineation and Permitting • Wildlife Studies • Herpetology • Vernal Pool Ecology

January 29, 2018

Mr. Bill Scott
Mass Composting Group, Inc
161 Nashua Rd.
Pepperell, MA 01463

**Re: Wetland Resource Area Evaluation
161 Nashua Road, Pepperell, MA**

Dear Mr. Scott:

In response to your request, Oxbow Associates, Inc. (OA: specifically M. Charpentier) reviewed the above referenced site with specific regard to wetland resource areas on January 9th 2017, with approximately 8 inches of snow on the ground, and a subsequent visit on January 24th by which time most snow had melted on the site. This evaluation was conducted in accordance with standard methodology for delineating vegetated wetlands under the Massachusetts Wetlands Protection Act (MGL Ch. 131, §40; the "Act"), and the Town of Pepperell Wetland Protection Bylaw (the "Bylaw").

Existing Conditions and Wetland Resource Areas

This site is located east of Nashua road (Route 111), south of Skydive Pepperell, and west of the Nashua River. The property consists of a single parcel, encompassing approximately 44.5 acres predominantly composed of mixed deciduous forest, early successional forest, maintained fields, and partly overgrown gravel pit. The parcel is largely undeveloped, with the exception of an auto body shop and garage adjacent Nashua Road. The site contains a Bordering Vegetated Wetland (BVW: Series A), a Riverfront area with associated Bank (Series B) whose wetland buffer and Riverfront area buffer extend onto the site, as well as two offsite Bordering Vegetated Wetlands which extend onto the site. The positions of the latter two were traced onto the attached map (Figure 1) using the 2009 Department of Environmental Protection Wetlands Polygons. Additionally, portions of the site exist in as Bordering Land Subject to Flooding (BLSF) within 100-year flood zones associated with the Nashua River and the BVW associated with the site.

OA examined the soil conditions (representative upland soil profile below) and vegetation and delineated one section of a Bordering Vegetated Wetland (BVW: 310 CMR 10.55) with 14 blue plastic flags in a single series (OA A1-A13, with A5B between A5 and A6). The wetland is composed of swamp/shrub swamp, it lacks an inlet and flows off the property from north to south, via an unnamed stream, draining into the Nashua River 0.25 miles away.

One upland soil profile, located 2 feet northeast from flag A5B, was documented in detail. The mapped soil type is Quonset sandy loam (U.S. Dept. of Agriculture, Web Soil Survey).

O: 1-0" organic debris

A: 0-10" 10 YR 3/3

Bw: 10-18" 2.5 Y 5/4

18" refusal/rock, unable to collect samples deeper

This soil profile does not qualify as hydric because the chroma of the Bw horizon is too high to indicate frequent saturation and mineral leaching.

Vegetation within the BVW includes red maple (*Acer rubrum*), winterberry (*Ilex verticillata*), royal fern (*Osmunda regalis*), and various sedges (*Carex* spp.) and grasses (family Poaceae). Upland vegetation includes red oak (*Quercus rubra*), white oak (*Quercus alba*), eastern white pine (*Pinus strobus*), gray birch (*Betula populifolia*), cherry birch (*Betula lenta*), autumn olive (*Elaeagnus umbellata*), sweet-fern (*Comptonia peregrina*), glossy false buckthorn (*Frangula alnus*), and several species of poplar (*Populus* spp).

Additionally, OA delineated a section of Bank (Bank 310 10.54) along the Nashua River with 4 blue plastic flags (OA-B1 to OA-B4). This is also the estimated annual high flow, which constitutes the beginning of the 200-foot Riverfront Area (10.58). In this case, the delineated River is coincident with Bank and its associated 100 foot buffer zone. OA also estimated off-site wetlands, which have associated buffer zones that extend onto the subject property. There are two off site wetlands: a wet meadow east of Airport Drive and a pond, north of Nashua Road.

Regulatory Implications and Recommendations

The pertinent jurisdictional resource areas located on the subject property is BVW, Bank, Bordering Land Subject to Flooding (BLSF: 310 CMR 10.57), and Riverfront Area. These wetlands boundaries are also protected under the wetlands bylaw under Town of Pepperell Wetlands Protection Bylaw (Article 2). The BVW and Bank have a 100 foot buffer zone and the Riverfront is a 200-foot zone extending from the delineated boundary. Furthermore, any work within the A or AE 100-year flood zone is also subject to the performance standards including a prohibition of any fill or structures within the BLSF. The Town of Pepperell Wetlands Protection Bylaw requires a 50 foot wide undisturbed, vegetated strip of naturally occurring plant species maintained between wetland resource areas.

According to the Massachusetts Natural Heritage and Endangered Species Program (NHESP), currently there are no certified vernal pools, or potential vernal pools on the property. A portion of the site, adjacent the Nashua River, is mapped within Priority and Estimated Habitat of rare species (MassGIS, 2017). We recommend filing an Information Request (\$50 fee) with MA NHESP to determine which species are associated with this section of the Nashua River. The result of this request will inform us as to if the NHESP may regulate the entire property under the MA Endangered Species Act, or limit their review to within the mapped habitat shown on MassGIS.

The wetland delineation is OA's interpretation of the wetland boundary and it must be reviewed and approved by the Pepperell Conservation Commission (PCC) before it is the legally affirmed boundary. If work is proposed within the 100-foot buffer zone to off-site wetlands, the PCC may require gaining permission and delineating the wetlands. However, this decision is up to their discretion. The GIS/GPS map we have provided can be used as a planning tool, but OA recommends you work with a Professional Land Surveyor and Professional Engineer to determine the exact extent of the wetlands for site specific permitting. The survey should provide information to determine the exact distance between the wetland resource areas, existing structures, treeline, topography, floodplain, and the proposed limit of work. Floodplain must include both the zone A and AE (with reference elevation).

Any activity proposed within any of the field-delineated wetland boundaries is subject to review by the PCC as well as the Army Corps of Engineers (ACOE) and may require filing a 401 Water Quality Certificate with the Department of Environmental Protection (DEP). Any activity proposed within 100 feet of the BVW boundary is subject to review by the PCC and the DEP.

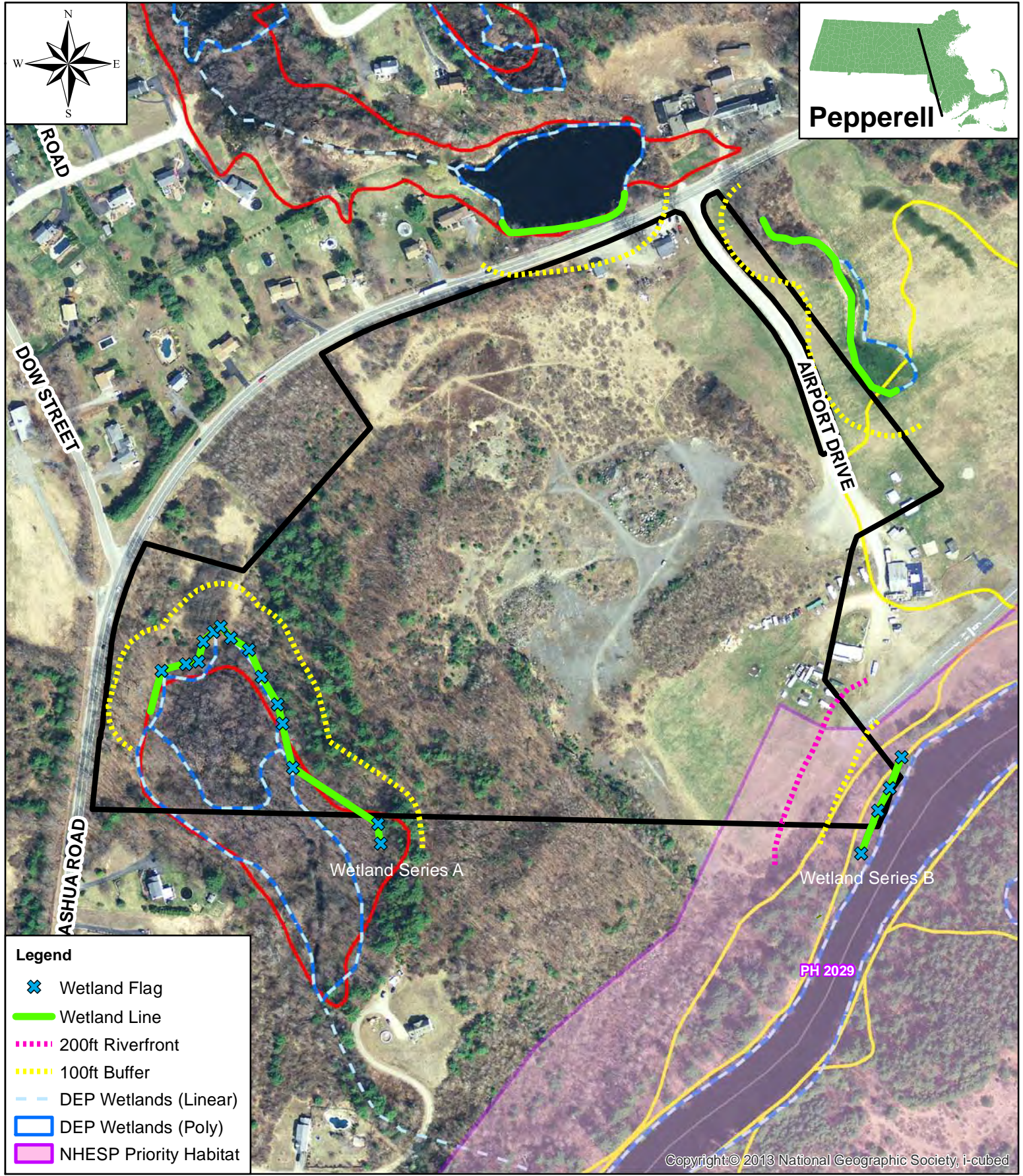
If you have any questions, please do not hesitate to contact Scott Smyers at 978-929-9058 ext. 3 or Matt Charpentier at ext. 2.

Sincerely,

A handwritten signature in cursive script that reads "Matthew Charpentier".

Matthew Charpentier
Botanist/Environmental Scientist I

encs.



Legend

- Wetland Flag
- Wetland Line
- 200ft Riverfront
- 100ft Buffer
- DEP Wetlands (Linear)
- DEP Wetlands (Poly)
- NHESP Priority Habitat

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1:3,600
 1 inch = 300 feet
 0 300 600
 Feet

**Figure 1. Wetland Delineation
 2013/2014 Orthophotograph
 161 Nashua road
 Pepperell, MA**

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APPENDIX B CORRESPONDENCE TIMELINE WITH TOWN OF PEPPERELL**Timeline**

- **December 5, 2017:** Representatives from MCGI met with certain Town representatives;
- **February 11, 2018:** Mr. David Burton, the President of MCGI, met with and distributed a letter describing the Reclamation Project to various Town officials.
- **June 28, 2018:**
 - MCGI submits this Soil Management Plan to Town of Pepperell and requests meeting with the Town of Pepperell's Town Administrator and Town Planner as well as the Selectmen at the earliest mutually-convenient date to discuss the Reclamation Project and to answer any questions or respond to any concerns regarding the Reclamation Project.
 - As of the date of this Soil Management Plan, representatives from the Town of Pepperell have not directly contacted representatives from MCGI, and/or Mr. David Burton to discuss the project.
- ***Additional Correspondence(s) to be added.***

APPENDIX C STORM WATER POLLUTION PREVENTION PLAN / ENOI (TO BE ADDED)

APPENDIX D GROUNDWATER SAMPLING RESULTS (TO BE ADDED)

APPENDIX E SOIL PROFILE PACKAGE INFORMATION

NASHUA ROAD SOIL SUBMITTAL FORM

Generator	
Project	
MCP Tracking Number (if applicable)	
Quantity of Soil	
Description of Soil	
Sampling Frequency	
Shipment Schedule	

On the basis of a due-diligence investigation of site history and use, the generator must provide a “yes” or “no” indication for each of the following, based on a preponderance of the evidence:

- Yes No Tannery operations
- Yes No Textile manufacturing
- Yes No Foundry operations
- Yes No Dry Cleaning operations
- Yes No Coal Gasification operations
- Yes No Machine Shop activities
- Yes No Salvage/Junk Yard operations
- Yes No Petroleum Storage facility (more than household quantities)
- Yes No Plating/metal finishing operations
- Yes No Chemical Production operations
- Yes No Circuit Board Manufacturing

A “yes” or “no” indication must also be provided for the following conditions at the site of generation:

- Yes No Herbicide or Pesticide were used or likely used, stored, or disposed
- Yes No Urban Fill Soils are present
- Yes No Boston Blue Clay is present

- Yes No Soil with elevated natural background of Arsenic are present
- Yes No The site was a dumping ground for dredge spoils, fill soil, ash, or other waste
- Yes No The site is classified as RCS-1
- Yes No Soil samples were obtained at the site and point of generation and screened at a minimum frequency of 1 sample/50 cubic yards using the MassDEP Jar Headspace procedure, with priority given to any soil exhibiting signs of contamination (e.g., staining or odors)

ATTACHMENTS

- ◇ Site sketch showing soil origin, soil stockpiles, and location of all soil samples
- ◇ Laboratory Data
- ◇ Analytical Data table comparing all applicable results to the Nashua Road Acceptance Criteria provided.
- ◇ Signed & Stamped MSR is provided
- ◇ Field screening data used to support chemical composition provided.
- ◇ LSP Opinion Letter including description of site, contaminants, current and former site usage/history.

APPENDIX F ADMINISTRATIVE CONSENT ORDER WITH MASSDEP (TO BE ADDED)