

BENNINGTON PFOA REMEDIATION TRENCH SPOILS DISPOSAL SITE ENVIRONMENTAL ASSESSMENT

Prepared For:

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LIMITED SCOPE ENVIRONMENTAL ASSESSMENT
BENNINGTON NW EXTENSION PFOA REMEDIATION TRENCH SPOILS DISPOSAL SITE
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1.0 INTRODUCTION

1.1 ENVIRONMENTAL ASSESSMENT BACKGROUND AND OVERVIEW

The topic of this Environmental Assessment is related to the disposal of soils that are presumed to contain perfluorooctanoic acid (PFOA) from trench spoils generated by construction related to the installation of water main and service lines in the Town of Bennington and adjacent Village of North Bennington to properties affected by the presence of PFOA in private drinking wells.

The construction of the water mains will run under five (5) separate projects: four (4) to be serviced by the Town of Bennington municipal water system and one (1) to be serviced by the Village of North Bennington water system. Construction for both projects is scheduled to commence in October of 2017 and will continue for approximately one (1) year. Additional information on the municipal water distribution projects can be found at: <http://dec.vermont.gov/commissioners-office/pfoa/communities>

Construction of the water mains will involve trenching and/or directional drilling and will generate excess spoils which require disposal. The presence of PFOA in the spoils is assumed based on the results of the site investigation work that has taken place for the areas where water lines will be expanded. Seven (7) alternatives were initially evaluated, including six (6) potential locations for disposal of trench spoils extracted during construction. Possible environmental impacts have also been assessed as part of this investigation.

One proposed disposal site is located within the VT Rt. 279 right-of-way near Austin Hill Road. Approval from the Vermont Agency of Transportation (VTTrans) will be required for placing spoils at this site.

In accordance with 23 CFR 1.23, the proposed use of the VT 279 highway right-of-way also requires approval by the Federal Highway Administration (FHWA). FHWA's approval is considered an administrative action as defined in 23 CFR 107(c), thus requiring compliance with the National Environmental Policy Act (NEPA). FHWA has chosen an Environmental Assessment as the appropriate level of NEPA evaluation for this action.

1.2 PURPOSE AND NEED

Purpose:

The purpose of the project is to ensure a suitable location for disposal of excess soils (spoils) presumed to contain PFOA from trenches dug during construction of new water mains and service lines in North Bennington and Bennington, VT.

Need:

Although the preferred alternative for soils removed during water line installation is to put these soils back into the water line trench, or the immediate vicinity of the trench, excess soils is anticipated. For this reason, suitable locations are needed for spoils generated during the waterline extension work.

2.0 ALTERNATIVES CONSIDERED

The Vermont Agency of Natural Resources (VT ANR) identified the need to manage the disposal of the construction spoils generated by the five (5) construction projects. VT ANR then hired the engineering firm of Weston & Sampson to complete an analysis of potential areas using the following siting criteria:

1. Areas where water lines are being expanded within Corrective Action Area I as identified in the Consent Order (See Figure 1). A copy of the Consent Order can be found at: <https://anrweb.vt.gov/DEC/DEC/PFOADocs.aspx>;
2. On public land/in public right of way area, if possible;
3. Areas with limited erosion potential;
4. Greater than 100 feet from wetlands, river corridor, and Federal Emergency Management Agency (FEMA) floodplains;
5. Outside of public water supply source protection areas; and
6. Distal from homes with private wells that will not be replaced with municipal water.

Construction of the water main lines will include the excavation of trenches approximately seven (7) feet deep and four (4) to six (6) feet wide. Where possible, soil will be backfilled into the trenches but excess spoils will be generated and will require proper disposal. Eight (8) alternatives were identified, which included no action and six (6) potential disposal areas investigated by Weston and Sampson¹ (see Appendix A):¹ Figure 2 shows the locations of the six (6) potential disposal areas.

Alternatives are described below with any additional information regarding main issues for each site being identified by bullet point. These alternatives were developed prior to a contractor or contractors being hired to construct the waterlines. Since then, contractors

¹ Note the Weston & Sampson report references a volume of excess soil generated by construction of 23,000 cubic yards. Further analysis by MSK estimates the total spoils for the projects to be 44,000 cubic yards.

have identified other possible alternatives on private property and Town right-of-way. A copy of the most updated spoils management plan can be found here. At this time, soil disposal locations are limited to locations where groundwater is contaminated and where properties are being connected to a public water system, disposal facilities permitted to receive PFOA-containing soils, or other locations approved by ANR. Excess soils generated during waterline construction this Fall were taken to locations specified in the spoils management plan (Appendix B). The VT Route 279 location will not receive spoils unless approval is given by VTrans to use this location.

An evaluation of a low permeability soil cap over the soils was not considered necessary because the placement of a cap on these soils would not change the conditions of groundwater under the VT 279 right-of-way. This groundwater is already contaminated with PFOA above Vermont Groundwater Enforcement Standards, will be classified as Class IV groundwater (non-potable), and the immediate area around where spoils will be placed will be serviced by municipal water.

2.1 ALTERNATIVE 1 – NO ACTION

Spoils from trenching during the construction of water main are considered sensitive material, due to the presumed presence of PFOA. A no action would be failing to establish a disposal location within an area that is presumed to be contaminated with PFOA and will be served by municipal water. This area is identified as Corrective Action Area I Operable Unit A (CAA I OU A), as shown on Figure 1. Disposing soils outside of CAA I OU A could result in water supplies not currently adversely affected to become impacted if these soils are not properly managed. Therefore, a no action is considered unacceptable.

2.2 ALTERNATIVE 2 – ORE BED ROAD TO RIVERSIDE DRIVE RIGHT OF WAY

This disposal option is located within the southwest side of CAA I OU A, south of the Walloomsac River, and north of Route 279. The usable width of the right-of-way (ROW) is assumed to be 30 feet total. The majority of the ROW is forested, with an approximate 100-foot wide clearing for an overhead high-power transmission line that crosses through its eastern side. Topography generally slopes down to the east with a slope mapped between 2% and 10%. There is an approximately thirty (30) foot hill on the western end of the ROW with slopes up to 20%. This site can only accommodate a small volume of the projected volume of spoils generated by the construction projects.

Criteria met: 6/6

Spoils accommodated by the site: 2,500 CY (approximately 7% of total)

2.3 ALTERNATIVE 3 – BARD ROAD TO RED PINE ROAD RIGHT OF WAY

This potential disposal area is located within the southern portion of CAA I OU A, south of the Walloomsac River and south of Route 279 (see Figure 1). The majority of the ROW is forested. Topography slopes gentle down to the northwest with a slope mapped as between 2% and 10%. This site can only accommodate a small volume of the projected volume of spoils generated by the construction projects, plus it is located near a small wetland.

Criteria met: 5/6

- A small wetland is mapped approximately 100 feet to the north of the ROW.

Spoils accommodated by the site: 3,000 CY (8% of total)

2.4 ALTERNATIVE 4 – BENNINGTON COLLEGE CAMPUS

This option is located within the eastern portion of CAA I OU A, north of the Walloomsac River and between the College access road and Matteson Road. The area appears to have been a gravel “borrow pit” in the past. The area is currently wooded with slopes on the bottom of the pit area estimated to be 2% and 10%. This site is not on public land or ROW and is located near properties with private wells not being replaced with public water.

Criteria met: 4/6

- The site is not located on a publicly controlled property or ROW of a state agency.
- There are a number of wells nearby on Rice Lane that do not contain PFOA above the Vermont groundwater enforcement water standard of 20 parts per trillion (ppt).

Spoils accommodated by the site: 40,000 CY (+/- 100% of total)

2.5 ALTERNATIVE 5 – BENNINGTON LANDFILL

This potential disposal area is located within a proposed Corrective Action Area II, north of the Walloomsac River and east of Vermont Route 7A. This site is located near wetlands. Multiple water supply wells near this potential disposal area are contaminated with PFOA. These properties with impacted water supply are not being replaced with public water at this time.

Criteria met: 4/6

- A wetland is mapped approximately 90 feet east of the landfill.
- Homes in this area are not expected to be supplied with municipal water as part of this water system extension project, though wells have been shown to contain PFOA at or above 20 ppt.

2.6 ALTERNATIVE 6 – WILLIAM MORSE AIRPORT

This potential disposal area is located in CAA 1 OU B, southwest of the Walloomsac River. This site is located near properties with non-detectable levels of PFOA in private wells and an area that is not receiving public water.

Criteria met: 5/6

Spoils accommodated by site: Unknown, not identified by the Weston & Sampson report.

- A specific disposal site was not identified as part of the Weston & Sampson report.
- The Federal Aviation Administration would likely be involved in regulating disposal.
- The potential site is close to private wells that have non-detectable levels of PFOA or detections of less than 20 ppt and will not be serviced by municipal water.

2.7 ALTERNATIVE 7 – ROUTE 279 AT AUSTIN HILL ROAD

This potential disposal area is located in the southern portion of CAA 1 OU A, south of the Walloomsac River. This proposed location is within VTrans Right-of-Way. Areas to the north and south of Route 279, and west of Austin Hill Road have been identified as potential disposal options. Residences adjacent to and near this location have PFOA in their water supply wells at or above 20 ppt and will be connected as part of the forthcoming water line extension work scheduled to take place in 2017 and 2018.

Criteria met: 6/6

Spoils accommodated by the site: Up to 44,000 CY

2.8 VT ROUTE 279 AT AUSTIN HILL ROAD- A SUITABLE ALTERNATIVE

This Alternative meets all criteria outlined in Section 2.0 above and is considered one of several locations that could receive spoils associated with the five (5) waterline construction projects within the Bennington and North Bennington area. This location, if determined needed, will be limited to receive spoils from the waterline construction in the Bard Road-Austin Hill Area and potentially, if needed, other waterline construction areas south of the Walloomsac River. Two of the major comments received during the public comments period were the concern of bringing potentially higher contaminated soils from near the Chemfab facilities to this location and traffic, particularly if soils needed to be transported through Old Bennington. Limiting the source of the spoils to those areas in the immediate neighbor of VT Route 279 will eliminate the concerns of soil from near the former Chemfab facilities being disposed at this location and will reduce truck traffic.

Should disposal occur at this site, plans to expand Route 279 to a four-lane road in the future will likely result in disturbance to the PFOA-containing soil. However, as presence of PFOA in the soil at the site is likely due to its location within CAA I OU A, no additional impact is anticipated.

3 EXPECTED ENVIRONMENTAL IMPACTS AND MITIGATION FOR SELECTED SITE

Under the National Environmental Policy Act (NEPA), the Federal Highway Administration (FHWA) assesses impacts to several resources in accordance with FHWA Technical Advisory T 6640.8A. Regarding the proposed disposal of spoils (excess soils anticipated to be generated during the construction of water line extensions) that are presumed to contain PFOA at the preferred location off of Vermont Route 279 and Austin Hill Road, the only resource that rises to the level of discussion within this Environmental Assessment is hazardous materials. Impacts to all other resources are considered not substantial and are addressed in Appendix C attached hereto.

3.1 HAZARDOUS MATERIALS

As indicated in the “Interim Measures Corrective Action Plan (CAP) For Public Water System (PWS) Extensions- Corrective Action Area I Operable Unit A North Bennington and Bennington dated August 11, 2017” (Appendix D), all soils and groundwater within CAA I OU A are assumed to contain PFOA at levels that could affect groundwater at levels above the Vermont Groundwater Enforcement Standard. Therefore, all excess soil disposal related to the water line work is limited to locations within areas that will be connected to municipal water, disposal facilities permitted to receive PFOA-containing soils, or other locations approved by VT ANR locations. Before construction of the waterlines can occur, a waste management plan, approved by VT ANR must be in place (Appendix B).

The Route 279 At Austin Hill Road alternative site is located within CAA I OU A (Figure 1). As specified in the CAP for the public water system extension, VT ANR considers the disposal of PFOA containing-soils within CAA I OU A acceptable and no additional mitigation is needed for the following reasons:

- PFOA concentrations in soils are not a direct contact concern. All of the soil samples collected to date, including those closest to the former Water Street facility, were significantly below the Vermont Department of Health Advisory level of 300 ug/kg, or part per billion (ppb), for human direct contact. All soil samples collected to date for this area are below approximately 75 ppb, with most being less than 10 ppb (Appendix E). Therefore, PFOA containing-soils within CAA I OU A are not a direct contact issue.

- Soils throughout the entire CAA I OU A are presumed to contain PFOA at levels that can impact groundwater to levels above Vermont groundwater standards. Therefore, moving soils around in this area will not contaminate groundwater that is currently below Vermont’s standards to levels that could go above Vermont’s standards.
- PFOA is already present in groundwater and the potential human exposure pathway will be eliminated by the corrective action measures for CAA 1 OU A.
- The mass of PFOA in the soils being proposed to be placed at this location is a very small percentage of the total mass of PFOA believed to exist in soils surrounding this disposal location due to air deposition of PFOA. Therefore, the proposed “excess” soil from the water line project would not add any substantial mass of PFOA to this area.

More detail about why soils and groundwater within CAA I OU A are presumed to contain PFOA can be found in the ANR PFOA document library (Consent Order and Core Technical Documents).

<https://anrweb.vt.gov/DEC/DEC/PFOADocs.aspx>

4 AGENCY COORDINATION AND PERMITS

An 1111 permit from VTrans is required for placement of soils within the preferred alternative location (Route 279 at Austin Hill Road). Prior to issuance of this permit, an geotechnical investigation and analysis must be completed, to the satisfaction of VTrans, that the placement of excess soils within the right-of-way will be stable. In addition, an existing VT 3-9020 stormwater construction general permit for the waterline placement will require amendment due to additional soil disturbance. The general permit includes provisions that must be followed to stabilize any disturbed area including locations receiving spoils.

5 PUBLIC INVOLVEMENT

5.1 PUBLIC REVIEW PERIOD

This initial Environmental Assessment was made available for a thirty (30) day public comment period, which ended on October 13, 2017. In addition, the disposal of the spoils has been addressed in the CAP. The public comment period for the CAP ended on September 13, 2017.

5.2 PUBLIC MEETING

A public meeting regarding this Environmental Assessment was held on September 26, 2017. Approximately 30 members of public attended the meeting. A copy of the meeting minutes is in Appendix F. Written comments on the Environmental Assessment are included in Appendix G.

5.3 SUMMARY OF WRITTEN AND VERBAL COMMENTS

Most of the comments focused on two primary concerns pertaining to using the VT 279 right-of-way near Austin Hill Road as a location to receive excess soils associated with the water line project:

- The addition of more soils that likely contains PFOA to their neighborhood, particularly soils originating near the Chemfab facility, which likely contains higher PFOA concentrations than the soil at and surrounding the proposed disposal location. There were many comments and questions about why the soils could not be placed back into the trench, at location closer to the Chemfab facility, the Bennington Landfill, or a permitted facility that can receive these soils.
- The increased truck traffic associated with moving the soils to this location, particularly if this location is used to dispose of soils south of the Walloomsac River.

5.4 RESPONSE TO COMMENTS

In response to the concerns expressed during the public comment period, the VT Route 279 right-of-way along Austin Hill Road site is no longer being considered as a primary location to receive all the excess spoils from the waterline extension project that is taking place in North Bennington and portions of Bennington. It is possible that the VT Route 279 right-of-way will not even be needed to receive spoils. If this location is used for spoils, it will only receive spoils from the immediate neighborhood, that is, spoils from waterline work along Bard Road, Murphy Road, Red Pine Road, and Austin Hill Road. This restriction would also significantly reduce the number of trucks that would travel through Old Bennington and Austin Hill-Bard Road area.

As stated in the original EA, all efforts will be made to place soils back in the trench or adjacent to the trenching activities. If there are still excess soils, then the soils will be placed at locations as close as possible to the reaches where soils are being removed,

Once contractors were authorized to begin work, the contractors were requested to evaluate and, if possible, secure multiple locations to receive spoils. Appendix I contains the most updated spoils management plan and the approval letter from ANR. This plan identifies the locations of approved spoils sites, which are located on either private

property or Town property (or right-of-way) and the criteria (same criteria as identified in Section 2.0 except the qualification that the site be on public land or within a public right of way.

6 APPENDICES AND FIGURES

- 6.1 APPENDIX A: Weston & Sampson Excess Soils Location Evaluation
- 6.2 APPENDIX B: Updated Spoils Management Plan
- 6.3 APPENDIX C: Additional Expected Environmental Impacts and Mitigation for Selected Site
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- 6.8 APPENDIX H: Environmental Screening for two locations where petroleum contamination was suspected
- 6.9 FIGURE 1: Corrective Action 1 with Disposal Sites Identified
- 6.10 FIGURE 2: Proposed Disposal Project Area

APPENDIX A

Weston & Sampson Excess Soils Location Evaluation

June 16, 2017

Richard Spiese & John Schmeltzer
Vermont Department of Environmental Conservation
1 National Life Drive
Montpelier, VT 05620

Re: ChemFab (SMS# 2016-4630) - Bennington and North Bennington Water System Extension Excess Soils Disposal Option Analysis

This letter presents the current state of knowledge regarding the excess soil disposal options for the upcoming Bennington and North Bennington water system extension project. The water lines of both the Bennington and North Bennington water systems are being extended into areas impacted by poly and/or perfluorinated compound (PFC) contamination. Engineers estimates of the volumes of excess soil which will need disposal are 7,000 to 8,000 cubic yards from North Bennington and 14,000 to 15,000 cubic yards from Bennington for a total of 23,000 cubic yards of excess soil. The VTDEC is assuming that all of the soil is contaminated with PFCs below the direct contact screening concentration of 300 ug/Kg. The VTDEC has indicated that they would prefer disposal of excess soil within the general areas identified as having PFC contamination (the Area of Concern-AOC). The VTDEC has asked Weston & Sampson to complete an analysis of potential areas to dispose of the excess soil using the following project specific siting criteria established by the VTDEC:

- On public land/in public right of way area, if possible
- Areas with limited erosion potential
- Greater than 100 feet from wetlands, river corridor, and FEMA floodplains
- Outside of public water supply source protection areas
- Distal from homes with private wells that will not be replaced with municipal water

Areas which do not meet these criteria are shown on **Figure 1**. To date, six potential disposal areas of sufficient size to receive > 1,000 cubic yards of soil have been identified and are discussed below. Each area is evaluated based on the above project specific siting criteria and the potential benefits and/or drawbacks of each location. Remaining issues to be resolved for each location are also listed.

Ore Bed Road to Riverside Drive Right of Way

This potential disposal option is located within the southwest side of the AOC, south of the Walloomsac River, and north of Route 279 shown on **Figure 2**. Based on the VTDEC Natural Resource Atlas based map of the area, approximately 1,100 feet of the proposed water line extension between the edge of Riverside Drive and Ore Bed Road is on a publicly owned right-of way (ROW) that does not currently have a developed roadway. The usable width of the right of way is assumed to be 30 feet total. The majority of the ROW is forested, with an approximately 100-ft wide clearing for an overhead high power transmission line that crosses through its eastern side. Topography generally slopes down to the east with a slope mapped between 2 and 10%. There is an approximately 30-ft tall hill on the western end of the ROW with slopes up to 20%.

This location appears to meet all of the site specific siting criteria. No wetlands, river corridors, or FEMA floodplains are mapped in this area. No public water supply source protection areas are mapped in, or near, this ROW. Homes in this area are expected to be supplied with municipal water and private drinking water wells will be abandoned.

Assuming that an excess soils berm approximately 2-ft high by 30-ft wide could be constructed along the entirety of this section, a maximum of approximately 2,500 cubic yards (cy) could be placed in this area. As the construction will be occurring through this area access will be good for placement and construction of the berm.

Public access to the disposal area is not controlled along the ROW.

Remaining issues to be resolved prior to selection:

- Actual limits of the ROW need to be determined.
- The area will need to be assessed by a wetland scientist to evaluate if unmapped wetlands exist.
- Approval/permitting for the removal of additional trees along the ROW to accommodate the berm width would need to be completed.
- The Town will need to approve any additional soil placement in this area beyond that generated during the water system extension beneath the ROW.

Bard Road to Red Pine Road Right of Way

This potential disposal area is located within the southern portion of the AOC, south of the Walloomsac River and south of Route 279 as shown on **Figure 3**. Approximately 1,500 feet of the proposed water line extension between Bard Road and Red Pine Road is on the publicly owned ROW that does not currently have a developed roadway. The majority of this ROW is forested. Topography slopes gently down to the northwest with a slope mapped as between 2 and 10%.

Regarding meeting siting criteria, a small wetland is mapped approximately 100 feet to the north of the ROW. No river corridors, or FEMA floodplains are mapped in this area. No public water supply source protection areas are mapped in, or near, this ROW. Homes in this area are expected to be supplied with municipal water and private drinking water wells will be abandoned.

Assuming that a berm approximately 2-ft high by 30-ft wide could be constructed along the entirety of this section, up to a maximum of approximately 3,000 cy could be placed in this location. As the construction will be occurring through this area access will be good for placement and construction of the berm.

Public access to the disposal area is not controlled along the ROW.

Remaining issues to be resolved prior to selection:

- Actual limits of the ROW need to be determined.
- The area will need to be assessed by a wetland scientist to evaluate the limit of the mapped wetland and if any unmapped wetlands exist in this area.
- Approval/permitting for the removal of additional trees along the ROW to accommodate the berm width would need to be completed.
- The Town will need to approve any additional soil placement in this area beyond that generated during the water system extension in this ROW.

Route 279 at Austin Hill Road

This potential disposal area is shown on **Figure 4**. The potential disposal area is located in the southern portion of the AOC, south of the Walloomsac River. This area is the right of way/fee simple land? managed by VTTrans for Route 279. Areas to the north and south of Route 279, and west of Austin Hill Road have been identified as a potential disposal options. Access roads will need to be constructed to the disposal locations. However, grades appear favorable to access road construction.

No portion of the water system extension will be located in the immediate area. All private wells located downgradient are contaminated with >100 ppt of PFCs. No public water source protection areas are nearby. The two areas are grassy slopes (mapped as slopes between 10 and 36%), with forest along the southern and northern edges. A wetland is mapped approximately 800 feet from the proposed disposal area.

A preliminary evaluation by the project engineer at MSK indicates that all of the excess soil (>23,000 cy) could potentially be disposed of in this area utilizing berms of 15 to 30 feet in height. Erosion control and permeant runoff control methods will need to be designed.

Public access to this area is controlled through fencing along the ROW. Also few homes are located in the immediate area limiting potential for casual contact by walkers and hikers.

Remaining issues to be resolved prior to selection:

- The area will need to be assessed by a wetland scientist to evaluate the limit of the mapped wetland and identify if unmapped wetlands exist in this area.
- A formal erosion control plan will likely be needed.
- The VTDEC will need to work with the Vermont Agency of Transportation to identify and secure any necessary Federal approvals to utilize the highway ROW for soil disposal.
- The AOT has requested that analytical testing of existing PFC concentrations at the disposal location(s) be completed prior to placing any soil. The VTDEC will need to work with the AOT to identify the number of samples and analytes needed to meet the VTrans request.
- The AOT has requested a release of liability for any soil accepted onto their ROW from this project which will need to be completed.
- Permitting requirements for the creation of a road into the ROW will need to be determined.

Bennington College Campus

This potential disposal option is located within the eastern portion of the AOC, north of the Walloomsac River and between the College access road and Matteson Road. **Figure 5** shows the approximate outline of the proposed fill area. The area appears to have been a gravel "borrow pit" in the past. The proposed water system extension will be located adjacent to this area. The area is currently wooded with slopes on the bottom of the pit area estimated to be 2 and 10%.

This is not public controlled property or a ROW of a state agency. No wetlands, river corridors, or FEMA floodplains are mapped in this area. No public water supply source protection areas are mapped in, or near, this area. Many of the homes in this area are contaminated with >100 ppt PFAS and will be connected to the water line extension. However, there are also a number of wells nearby on Rice Lane which do not contain PFAS contamination.

Based on a reported discussion with the College, the MSK project engineer estimates that up to 40,000 cy of soil could potentially be disposed of in this area. Infilling of the gravel pit from northwest to southeast resulting in similar slopes to those currently observed.

Public access to the disposal area is not controlled in this area. However, the configuration and location of this area naturally limits public access.

Remaining issues to be resolved prior to selection:

- The actual limits of the area in question will need to be identified and surveyed to calculate an accurate potential disposal volume.
- The area will need to be assessed by a wetland scientist to evaluate if unmapped wetlands exist in this area.
- The College administration will need to grant approval to place excess soil on their property.
- A formal, binding agreement between the VTDEC and College should be developed to clearly define liability and long term use of the surrounding area.

Bennington Landfill

This potential disposal area is located within the eastern portion of the AOC, north of the Walloomsac River and east of Route 7A. No portion of the water system extension will be located in this area.

A wetland is mapped approximately 90 feet east of the landfill. No river corridors, or FEMA floodplains are mapped in this area. No public water supply source protection areas are mapped in, or near, this area. Homes in this area are consistently contaminated with PFCs but are not expected to be supplied with municipal water as part of this water system extension project.

Public access to this area is highly controlled through fencing , signage and gated access. The landfill is also some distance from the project area.

Remaining issues to be resolved prior to selection:

- The Town has not identified what would be necessary to adequately address their liability concerns regarding accepting the excess soils.
- The actual area of the landfill to be utilized will need to be identified and surveyed to calculate an accurate potential disposal volume. It is unknown the maximum height of a potential soil pile would be allowed at the landfill. The VTDEC is currently in discussions with the Town to identify potential areas of the landfill.
- The VTDEC will need to coordinate with the EPA to secure approval for placement of soil at the site, which is under EPA jurisdiction.
- Private wells in the area are not being replaced. The VTDEC will need to decide how to address the concerns of residents who do not already have point-of-entry treatment systems (POETs).

Airport

Remaining issues to be resolved prior to selection:

Where would disposal occur?

FAA involvement?

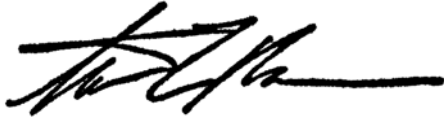
Close to wells that have non-detects or detections less than 20 ppt.

A number of issues associated with all potential disposal areas will need to be addressed prior to selecting a disposal location(s). We believe that at a minimum the following must be properly evaluated:

- 1) Erosion control plans will be needed for each disposal area.
- 2) Truck weights and traffic concerns regarding crossing the Walloomsac. Due to covered bridges being the only crossings in the project area, getting large dump trucks across the Walloomsac to a disposal area on the opposite side will require driving additional distances through Bennington. A disposal location on each side of the River may be appropriate.

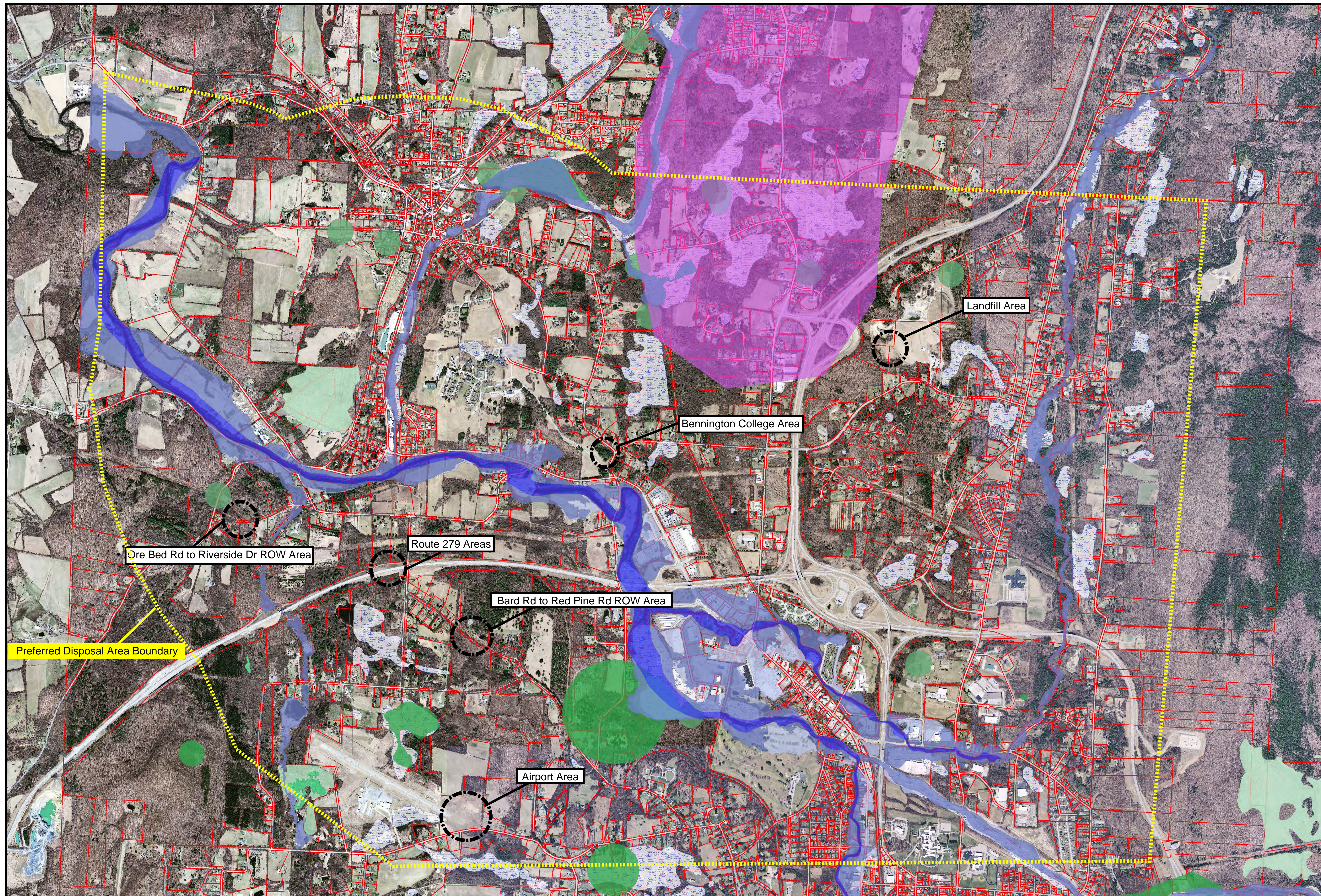
Please contact me directly by phone at (802) 244-5051 x6007 or by e-mail at larosas@wseinc.com if you have any questions or require further information.

Sincerely,
WESTON & SAMPSON



Steven LaRosa
Senior Project Manager
Enclosures

\\wse03.local\wse\projects\vt\vtdec bf 2015-2016\phase h - chemfab - n. bennington\excess soils\061617 excess soils location evaluation.docx



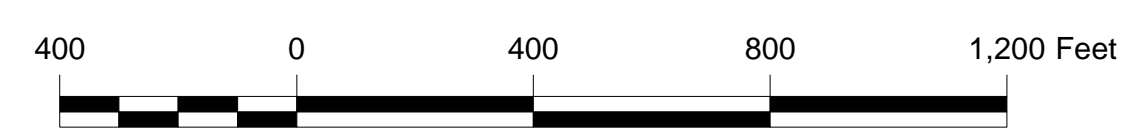
**Vermont Department of
Environmental Conservation**
Bennington and North Bennington
Excess Soil Disposal Option Analysis
June 2017

Data Sources:
Weston & Sampson Engineers
Vermont Center for Geographic Information (1)
FEMA Flood Hazard Maps (2)

Disclaimer:
This information is for planning purposes only and should not be considered exact. Field inspection and verification is required. This data was created from schematic maps.

- Flood Hazard
- Flood Hazard
- Floodway
- Significant Natural Communities
- Biological Hotspots
- Wetland
- Parcel Boundary

FIGURE 1





**Vermont Department of
Environmental Conservation**
Bennington and North Bennington
Excess Soil Disposal Option Analysis
June 2017

Data Sources:
Weston & Sampson Engineers
Vermont Center for Geographic Information (1)
FEMA Flood Hazard Maps (2)

Disclaimer:
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- Flood Hazard
- Flood Hazard
- Floodway
- Significant Natural Communities
- Biological Hotspots
- Wetland
- Parcel Boundary

**Ore Bed Rd to
Riverside Dr Option**

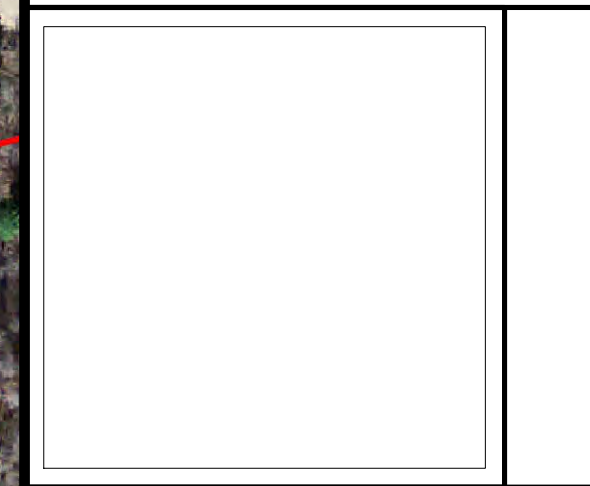


FIGURE 2





Bard Road to Red Pine Road ROW Area

**Vermont Department of
Environmental Conservation**
Bennington and North Bennington
Excess Soil Disposal Option Analysis
June 2017

Data Sources:
Weston & Sampson Engineers
Vermont Center for Geographic Information (1)
FEMA Flood Hazard Maps (2)

Disclaimer:
This information is for planning purposes only and should not be considered exact. Field inspection and verification is required. This data was created from schematic maps.

- Flood Hazard
- Flood Hazard
- Floodway
- Significant Natural Communities
- Biological Hotspots
- Wetland
- Parcel Boundary

Ore Bed Rd to
Riverside Dr Option

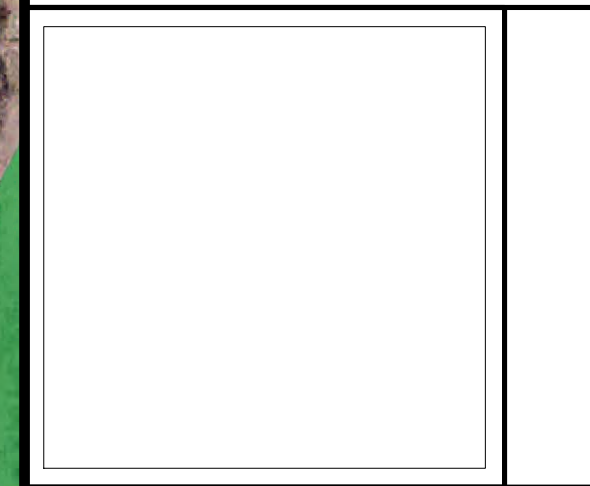


FIGURE 2





**Vermont Department of
Environmental Conservation**
Bennington and North Bennington
Excess Soil Disposal Option Analysis
June 2017

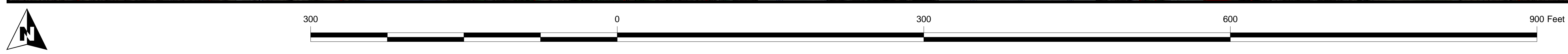
Data Sources:
Weston & Sampson Engineers
Vermont Center for Geographic Information (1)
FEMA Flood Hazard Maps (2)

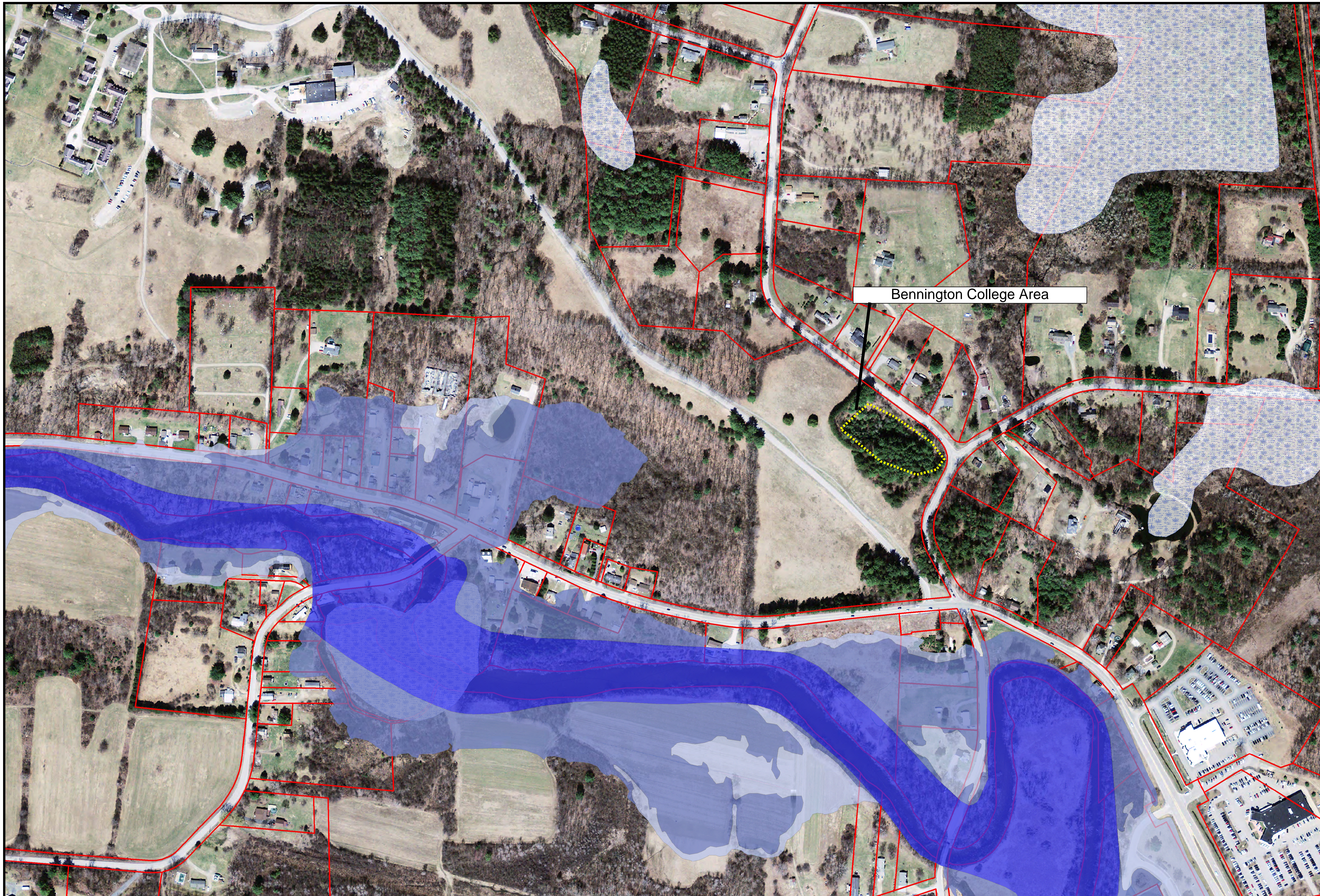
Disclaimer:
This information is for planning purposes only and should not be considered exact. Field inspection and verification is required. This data was created from schematic maps.

- Flood Hazard
- Flood Hazard
- Floodway
- Significant Natural Communities
- Biological Hotspots
- Wetland
- Parcel Boundary

Route 279

FIGURE 4





Vermont Department of Environmental Conservation
Bennington and North Bennington Excess Soil Disposal Option Analysis
 June 2017

Data Sources:
 Weston & Sampson Engineers
 Vermont Center for Geographic Information (1)
 FEMA Flood Hazard Maps (2)

Disclaimer:
 This information is for planning purposes only and should not be considered exact. Field inspection and verification is required. This data was created from schematic maps.

- Legend**
- S_FLD_HAZ_AR_Project2
 - ZONE_SUBTY
 - 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
 - FLOODWAY
 - VT_Biodiversity_Project_Biological_Hotspots
 - BPR
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 10
 - RTE_and_Significant_Natural_Communities
 - CATEGORY
 - Invertebrate Animal
 - Nonvascular Plant
 - Palustrine Natural Community
 - Terrestrial Natural Community
 - Vascular Plant
 - Vertebrate Animal

Bennington College Entrance (College Dr)

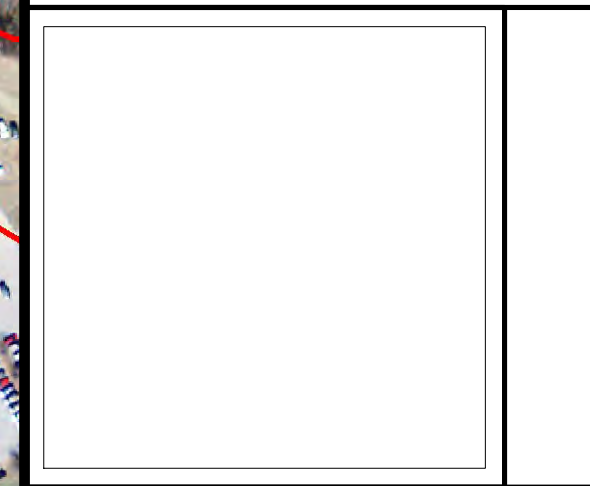


FIGURE 5

APPENDIX B

Updated Spoils Management Plan

SPOILS MANAGEMENT PLAN

BENNINGTON PFOA REMEDIATION TRENCH SPOILS DISPOSAL SITES

Prepared For:

VTANR/DEPT OF ENVIRONMENTAL CONSERVATION
Waste Management and Prevention DIV
1 National Life Drive - Davis 1
Montpelier, VT 05620-3704

Prepared By:

MS&K, Inc.
P.O. Box 139
Bennington, VT 05201

October 17, 2017

Updated: November 8, 2017 (Addendum A)

Updated: December 8, 2017 (Addendum B)

Updated: December 13, 2017 (Addendum C)

SPOILS MANAGEMENT PLAN

BENNINGTON NW EXTENSION PFOA REMEDIATION TRENCH SPOILS DISPOSAL SITES

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- 2.1 Walloomsac (east (a-c)) Road Spoils Site – Page 6
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- 2.3 Silk- Bridge Roads Spoils Site– Page 8
- 2.4 Vail Road Spoils Site – Page 9
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3.0 APPENDICES, FIGURES, ADDENDUM A

- 3.1 Appendix A: Aerial Map of Each Proposed Spoils Site
- 3.2 **Addendum A: Addition of Walloomsac - Pippin Knolls Spoils Site (added November 1, 2017)**
- 3.3 **Addendum B: Addition of Riverside Drive Spoils Site (added December 8, 2017)**
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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND AND OVERVIEW

This Spoils Management Plan provides for the placement of soils that are presumed to contain perflourooctanaic acid (PFOA) from trench spoils generated by construction related to the installation of water main and service lines in the Town of Bennington and adjacent Village of North Bennington to properties affected by the presence of PFOA in private drinking wells.

The construction of the water mains will run under five (5) separate projects: four (4) to be serviced by the Town of Bennington municipal water system and one (1) to be serviced by the Village of North Bennington water system. Construction for both projects is scheduled to commence in October of 2017 and will continue for approximately one (1) year.

Construction of the water mains will involve trenching and/or directional drilling and will generate excess spoils which require disposal. The presence of PFOA in the spoils is assumed based on the results of the site investigation work that has taken place for the areas where water lines will be expanded.

Proposed is the placement of up to 50,000 cubic yards (CY) (approximately 44,000 CY) total spoils along properties adjacent to Walloomsac Road, Murphy Road, Silk Road, Harrington Road, and Vail Road in the Town of Bennington, Bennington County, Vermont.

On November 1, 2017, this Spoils Management Plan was updated to include the Walloomsac - Pippin Knoll Roads Spoils Site (Addendum A).

On December 8, 2017, this Spoils Management Plan was updated to include the Riverside Drive Spoils Site (Addendum B).

On December 13, 2017, this Spoils Management Plan was updated to include the Riverside Drive Spoils Site B (Addendum C).

1.2 PURPOSE AND NEED

Purpose:

The purpose of the project is to ensure a suitable location for the placement of excess soils (spoils) presumed to contain PFOA from trenches dug during construction of new water mains and service lines in North Bennington and Bennington, VT.

Need:

Although the preferred alternative for soils removed during water line installation is to put these soils back into the water line trench, there will be excess soils. For this reason, suitable locations are needed for spoils generated during the waterline extension work.

2.0 VT ANR Criteria to Be Met

The Vermont Agency of Natural Resources (VT ANR) identified the need to manage the disposal of the construction spoils generated by the five (5) construction projects. VT ANR has determined that the following siting criteria is required to be met for each proposed spoils location:

1. Areas where water lines are being expanded within Corrective Action Area I (CAA I OU A) as identified in the Consent Order;
2. On public land/in public right of way area, if possible;
3. Areas with limited erosion potential;
4. Greater than 100 feet from wetlands, river corridor, and Federal Emergency Management Agency (FEMA) floodplains;
5. Outside of public water supply source protection areas; and
6. Distal from homes with private wells that will not be replaced with municipal water.

Construction of the water main lines will include the excavation of trenches approximately seven (7) feet deep and four (4) to six (6) feet wide. Where possible, soil will be backfilled into trenches but excess spoils will be generated and will require proper disposal. Six (6) potential spoils sites have been identified, which meet five of the six requirements. These spoils areas are located on private land except for a right of way (ROW) adjacent to Hill Shadow Farm. Criteria 2.0 states, "if possible", a spoils area is to be on public land/in public right of way. After extensive review, sites have been selected that are in close proximity to the areas where spoils are being generated. This selection process has required the review and assessment team and contractors to work closely with willing private landowners throughout the project area. As a part of the process, contractors request and receive written authorization from the landowners prior to placing spoils on private property.

2.1 WALLOOMSAC-HILL SHADOW FARM ROADS SPOILS SITE

This potential permanent placement area is located within CAA I OU A.

Vegetation:

The proposed area in the ROW adjacent to Hill Shadow Farm Road is primarily vegetated with White Pine and shrub-scrub vegetation.

Wetlands and Aquatic Features:

A qualified environmental scientist assessed the site for potential state and federal wetlands utilizing the methodology set forth in the U.S. Army Corps Federal Manual for Identifying and Delineating Jurisdictional Wetlands, as amended, and in supplemental guidance documents. No hydrophytic vegetation, hydric soils, nor hydrological features were found at the proposed site. No Class I, II, III, or federal wetlands were found at this proposed spoils site. Streams and other aquatic features were also not found at the proposed site. This site drains from the southeast to the northwest.

Topography and Soils:

At this proposed spoils site, topography slopes gently to the northwest with a slope mapped between 2% and 8%. The Natural Resources Conservation Service (NRCS) has mapped this site to include the Stockbridge loam, 2 to 8% percent slopes (100.0% of proposed site). Erosion potential is slight for 100% proposed site. (The NRCS Erosion Hazards are described as “slight”, “moderate”, “severe”, and “very severe”.)

Best Management Practices:

All applicable standards and conditions in the Vermont Construction General Permit 3-9020 will be met and best management practices will be utilized for this project. A construction entrance will be constructed and silt fence will be installed on the western downslope side of the proposed spoils area upslope of the vegetated area prior to any site disturbance.

VT ANR Criteria:

1. This placement option is located within CAA I OU A as identified in the Consent Order (met criteria);
2. This is private property;
3. This area has a gentle slope and with limited erosion potential. The Natural Resources Conservation Service maps 100.0% of this proposed site as slightly erosive (met criteria);
4. This area has no wetlands, streams, rivers and is not with a FEMA Flood Hazard Area (met criteria);
5. This area is outside of public water supply source protection areas (met criteria); and
6. All homes in this area will be supplied by the installation of new water main so no wells will be affected (met criteria).

Criteria met: 5/6

Spoils accommodated by the site: 2,000 to 3,000 CY

2.2 WALLOOMSAC (east (a-c)) ROAD SPOILS SITE

This potential permanent placement area is located within CAA I OU A.

Vegetation:

This proposed spoils area south of Walloomsac Road has been regularly mowed and is primarily vegetated with field and meadow grasses.

Wetlands and Aquatic Features:

A qualified environmental scientist assessed the site for potential state and federal wetlands utilizing the methodology set forth in the U.S. Army Corps Federal Manual for Identifying and Delineating Jurisdictional Wetlands, as amended, and in supplemental guidance documents. Immediately south and to the west of the proposed spoils areas and south of Walloomsac Road exists a forested wetland. This wetland is mapped as a Vermont Class II wetland. The wetland boundary has been flagged at the site and all project activities will occur 100 feet from the wetland boundary (outside of the 100 ft. buffer). This wetland system drains north under Walloomsac Road via culverts and into an intermittent stream channel located to the west of the most northern proposed spoils area at this site. This stream channel drains from the south to the north. All proposed project activities will occur 100 ft. from the top of the streambank of this intermittent stream channel. The proposed site drains from the south to a northwesterly direction.

Topography and Soils:

The proposed spoils areas at this site and south of Walloomsac Road slope to the south and west with a gentle slope mapped between 0% and 3%. The proposed spoils area north of Walloomsac Road slopes towards the northwest with a gentle slope mapped between 0% and 5%. NRCS has mapped this site to include the Georgia loam, 3 to 8 percent slopes, (67.5% of the proposed site), and the Massena silt loam, 0 to 3 percent slopes (32.5% of proposed site). Erosion potential is slight for 100% of the proposed sites, north and south of Walloomsac Road.

Best Management Practices:

All applicable standards and conditions in the Vermont Construction General Permit 3-9020 will be met and best management practices will be utilized for this project. For this site, a construction entrance will be constructed and silt fence will be installed upslope of the 100 ft. buffer on the south and west of the proposed spoils areas prior to any site disturbance.

VT ANR Criteria:

1. This placement option is located within CAA I OU A as identified in the Consent Order (met criteria);
2. This is private property;
3. This area has a gentle slope and with limited erosion potential. NRCS maps 100% of this proposed site as slightly erosive (met criteria);
4. This is not within a FEMA Flood Hazard Area. Project activities will not occur within the 100 ft. buffer located 100 feet from the wetlands and streams adjacent to the proposed project areas. (met criteria);
5. This area is outside of public water supply source protection areas (met criteria); and
6. All homes in this area will be supplied by the installation of new water main so no wells will be affected (met criteria).

Criteria met: 5/6

Spoils accommodated by this site: 7,000 CY

2.3 MURPHY ROAD SPOILS SITE

This potential permanent placement area is located within CAA I OU A, south of the Walloomsac River and north of Route 279.

Vegetation:

The majority of this spoils site has been mowed and is primarily vegetated with field and meadow grasses with a small (1/2 acre) area of forested area to be removed (approximately 15-20 trees).

Wetlands and Aquatic Features:

A qualified environmental scientist assessed the site for potential state and federal wetlands utilizing the methodology set forth in the U.S. Army Corps Federal Manual for Identifying and Delineating Jurisdictional Wetlands, as amended, and in supplemental guidance documents. No hydrophytic vegetation, hydric soils, nor hydrological features were found at the proposed site. No Class I, II, III, or federal wetlands were found at this proposed spoils site. Streams and other aquatic features were not found at the proposed site. Drainage from this site is from the east to the northwest.

Topography and Soils:

Topography slopes gently down to the northwest with a slope mapped between 8% and 15%. NRCS has mapped this site to include the Galway-Nellis-Farmington complex, 8 to 15% percent slopes, rocky (12.5% of the proposed site), and the Stockbridge loam, 8 to 15% percent slopes (87.5% of proposed site) (Appendix B). Erosion potential is slight for 87.5% of the proposed area with an increase to moderate for approximately 12.5% of the site.

Best Management Practices:

All applicable standards and conditions in the Vermont Construction General Permit 3-9020 will be met and best management practices will be utilized for this project. A construction entrance will be constructed and silt fence will be installed on the western downslope side of the proposed spoils area prior to site disturbance.

VT ANR Criteria:

1. This placement option is located within CAA I OU A as identified in the Consent Order (met criteria);
2. This is private property;
3. This area has a gentle slope and with limited erosion potential. NRCS maps 87% of this proposed site as slightly erosive (Appendix B) (met criteria);
4. This area has no wetlands, streams, rivers and is not with a FEMA Flood Hazard Area (met criteria);
5. This area is outside of public water supply source protection areas (met criteria); and
6. All homes in this area will be supplied by the installation of new water main so no wells will be affected (met criteria).

Criteria met: 5/6

Spoils accommodated by this site: 9,000 CY

2.4 SILK - BRIDGE ROADS SPOILS SITE

This potential permanent placement area is located within CAA I OU A, south of the Walloomsac River and north of Route 279.

Vegetation:

The majority of this spoils site is primarily vegetated with field and meadow grasses and herbaceous material indicative of upland areas.

Wetlands and Aquatic Features:

A qualified environmental scientist assessed the site for potential state and federal wetlands utilizing the methodology set forth in the U.S. Army Corps Federal Manual for Identifying and Delineating Jurisdictional Wetlands, as amended, and in supplemental guidance documents. No hydrophytic vegetation, hydric soils, nor hydrological features were found at the proposed site. No Class I, II, III, or federal wetlands were found at this proposed spoils site. Streams and other aquatic features were not found at the proposed site. Drainage from this site is from the west to east. A FEMA Flood Hazard Area exists on the adjacent side of Silk Road, but proposed site activity will be 100 feet from this Hazard Area.

Topography and Soils:

Topography slopes to the east with a slope mapped between 3% and 15%. NRCS has mapped this site to include the Copake gravelly fine sandy loam, 3 to 8 percent slopes (28.6% of the proposed site), the Stockbridge loam, 8 to 15 percent slopes (5.6% of the proposed site), the Georgia loam, 3 to 8 percent slopes (48.4% of the proposed site), and Massena silt loam, 3 to 8 percent slopes (17.5% of the proposed site). Erosion potential is slight for 100% of the proposed site.

Best Management Practices:

Applicable standards and conditions in the Vermont Construction General Permit 3-9020 will be met and best management practices will be utilized for this project. A construction entrance will be constructed and silt fence will be installed on the eastern downslope side of the proposed spoils area prior to site disturbance.

VT ANR Criteria:

1. This placement option is located within CAA IOU A as identified in the Consent Order (met criteria);
2. This is private property;
3. This area has a gentle slope with limited erosion potential. NRCS maps 100% of this proposed site as slightly erosive (met criteria);
4. This area has no wetlands, streams, rivers and is not with a FEMA Flood Hazard Area. All proposed work will be 100 ft. from the Flood Hazard Area on the adjacent side of Silk Road. (met criteria);
5. This area is outside of public water supply source protection areas (met criteria);
6. All homes in this area will be supplied by the installation of new water main so no wells will be affected (met criteria).

Criteria met: 5/6

Spoils accommodated by this site: 8,000 to 9,000 CY

2.5 VAIL ROAD SPOILS SITE

This potential permanent disposal area is located within CAA IOU A, south of the Walloomsac River and south of Route 279.

Vegetation:

The majority of this spoils site is primarily vegetated with field and meadow grasses and herbaceous material indicative of upland areas. A federal jurisdictional emergent wetland exists immediately southeast of the proposed spoils area.

Wetlands and Aquatic Features:

A qualified environmental scientist assessed the site for potential state and federal wetlands utilizing the methodology set forth in the U.S. Army Corps Federal Manual for Identifying and Delineating Jurisdictional Wetlands, as amended, and in supplemental guidance documents. A federal jurisdictional emergent wetland exists to the immediately southeast of the proposed spoils area. All three wetland criteria (hydrology, soils, vegetation) were met during this delineation. The wetland boundary adjacent to the proposed spoils area the proposed spoils area has been demarcated with flagging in the field and no material will be deposited within a 100 ft. buffer of this wetland. No Class I, II, or III state wetlands or streams were found at this proposed spoils site. Drainage from this site is from a northwesterly to southeasterly direction. A FEMA Flood Hazard Area does not exist at the proposed spoils site nor in the near vicinity.

Topography and Soils:

Topography slopes to the southeast with a slope mapped between 3% and 15%. NRCS has mapped this site to include the Stockbridge loam, 8 to 15 percent slopes (35.6% of the proposed site) and a Georgia loam, 3 to 8 percent slopes (64.4% of the proposed site). Erosion potential is slight for 100% of this proposed site.

Best Management Practices:

Applicable standards and conditions in the Vermont Construction General Permit 3-9020 will be met and best management practices will be utilized for this project. A construction entrance will be constructed and silt fence will be installed on the southeastern downslope side of the proposed spoils area just upslope of the 100 ft. wetland buffer prior to site disturbance.

VT ANR Criteria:

1. This placement option is located within CAA IOU A as identified in the Consent Order (met criteria);
2. This is private property;
3. This area has a gentle slope with limited erosion potential. NRCS maps 100% of this proposed site as slightly erosive (met criteria);
4. A federal wetland exists immediately southeast of the proposed spoils area. A 100 ft. buffer will separate the spoils area and wetland. A silt fence will insure that no sediment enters the 100 ft. buffer area. No streams or FEMA Flood Hazard Areas exist on or near the vicinity of the proposed spoils area. (met criteria);
5. This area is outside of public water supply source protection areas (met criteria);
6. All homes in this area will be supplied by the installation of new water main so no wells will be affected (met criteria).

Criteria met: 5/6

Spoils accommodated by this site: 9,000 to 10,000 CY

2.6 HARRINGTON ROAD SPOILS SITE

This potential permanent placement area is located within CAA I OU A, north of the Walloomsac River.

Vegetation:

The majority of this spoils site is primarily vegetated with field and meadow grasses and herbaceous material indicative of upland areas. The 100 year floodplain for the Walloomsac River exists downslope of this spoils site separated by a 100 ft. buffer.

Wetlands and Aquatic Features:

A qualified environmental scientist assessed the site for potential state and federal wetlands utilizing the methodology set forth in the U.S. Army Corps Federal Manual for Identifying and Delineating Jurisdictional Wetlands, as amended, and in supplemental guidance documents. No Class I, II, or III state and federal jurisdictional wetlands or streams were found at this proposed spoils site. Drainage from this site is from a northeasterly to southeasterly direction. A FEMA Flood Hazard Area exists in the near vicinity of the project area, but is separated by a 100 ft. buffer.

Topography and Soils:

Topography slopes to the southeast with a slope mapped between 8% and 15%. NRCS has mapped this site to include the Stockbridge loam, 8 to 15 percent slopes (100.0% of the proposed site). Erosion potential is slight for 100% of this proposed site.

Best Management Practices:

Applicable standards and conditions in the Vermont Construction General Permit 3-9020 will be met and best management practices will be utilized for this project. A construction entrance will be constructed and silt fence will be installed on the southwestern downslope side of the proposed spoils area just upslope of the 100 ft. floodplain buffer prior to site disturbance.

VT ANR Criteria:

1. This placement option is located within CAA I OU A as identified in the Consent Order (met criteria);
2. This is private property;
3. This area has a gentle slope with limited erosion potential. NRCS maps 100% of this proposed site as slightly erosive (met criteria);
4. A 100 year floodplain exists immediately southwest of the proposed spoils area. A 100 ft. buffer will separate the spoils area and the 100 year floodplain. A silt fence will insure that no sediment enters the 100 ft. buffer area. No wetlands or streams exist within 150 ft. of the proposed spoils site. Drainage from this spoils site would not enter these wetlands or streams that are greater than 150 ft. from the spoils site. (met criteria);

5. This area is outside of public water supply source protection areas (met criteria);
6. All homes in this area will be supplied by the installation of new water main so no wells will be affected (met criteria).

Criteria met: 5/6

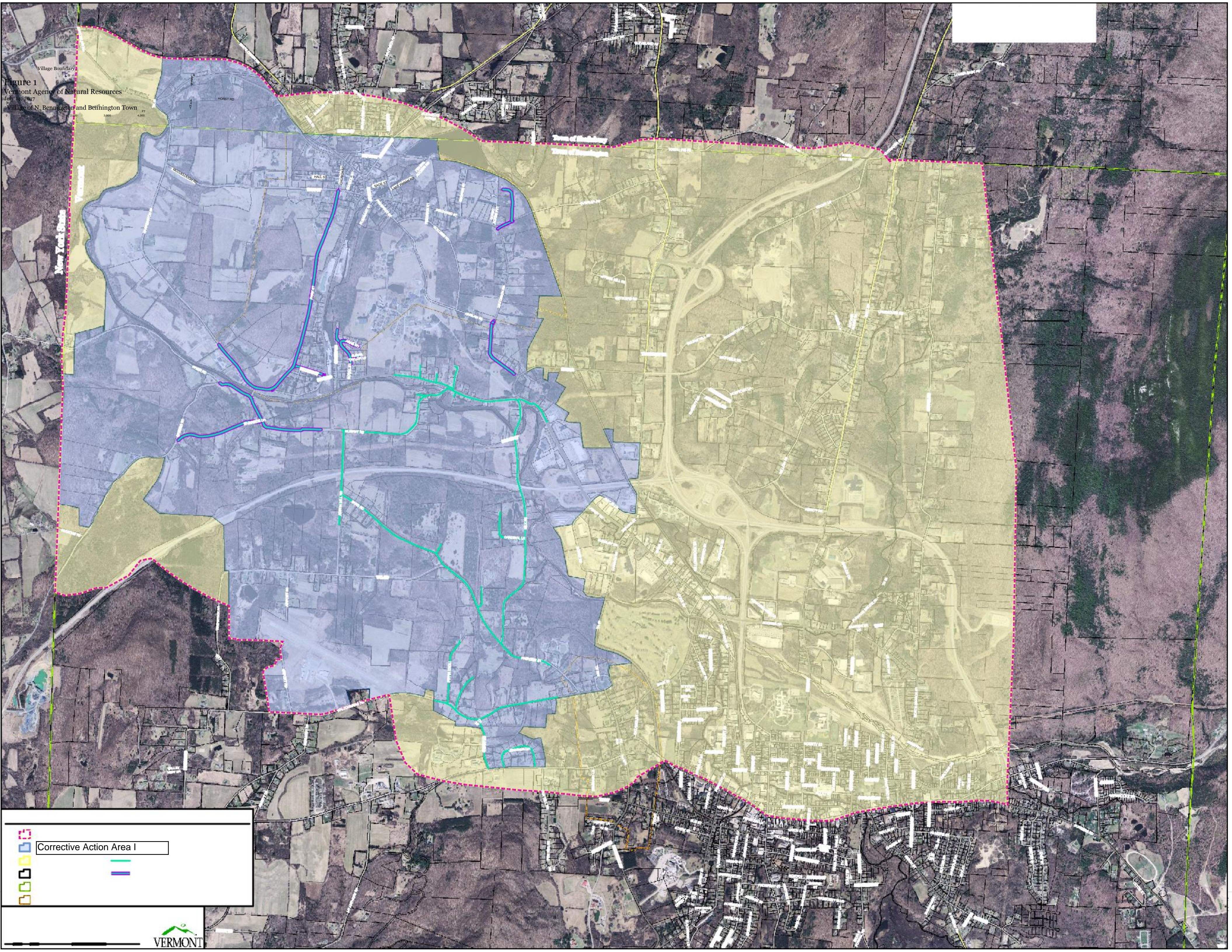
Spoils accommodated by this site: 2,000 CY

2.6 CONCLUSION

The purpose of the project is to ensure a suitable location for placement of excess soils (spoils) presumed to contain PFOA from trenches dug during construction of new water mains and service lines in North Bennington and Bennington, VT. This Spoils Management Report addresses five permanent locations that are suitable for the excess soil for this water main and service line project. All six sites have met 5 of the 6 VT ANR siting criteria. Criteria 2.0 has not been met at each site because each location is privately owned except for the ROW adjacent to Hill Shadow Farm Road. In the VR ANR guidance, Criteria 2.0 includes the wording, "if possible". All publicly owned land and public ROW's have been analyzed for this spoils management project, but have not been found to be suitable locations. An extensive review of the project area has shown that private land is more suited as spoils sites for this project in Correction Area I. These sites were carefully selected due to their proximity to the generation of the spoils material and that the fact that they met 5/6 of the VT ANR siting criteria.

APPENDIX A
CORRECTIVE ACTION AREA I

Figure 1
Vermont Agency of Natural Resources
July 14, 2017
Village of N. Bennington and Bennington Town



Village Boundary
New York State

Corrective Action Area I

APPENDIX B

MAP & PHOTOS OF EACH SPOILS SITE LOCATION



LEGEND

Wetland - VSWI

- Class 1 Wetland
- Class 2 Wetland
- Buffer

Flood Hazard Areas (Only FEMA)

- AE (1-percent annual chance flood)
- A (1-percent annual chance floodpl.)
- AO (1-percent annual chance zone feet)
- 0.2-percent annual chance flood ha

- River Corridors (Jan 2, 2015)
- Small Streams - 50ft Setback
- Parcels (where available)
- Town Boundary

Spoils Site
(2000 to 3000 CY +/-)

1: 3,826

October 12, 2017



NOTES

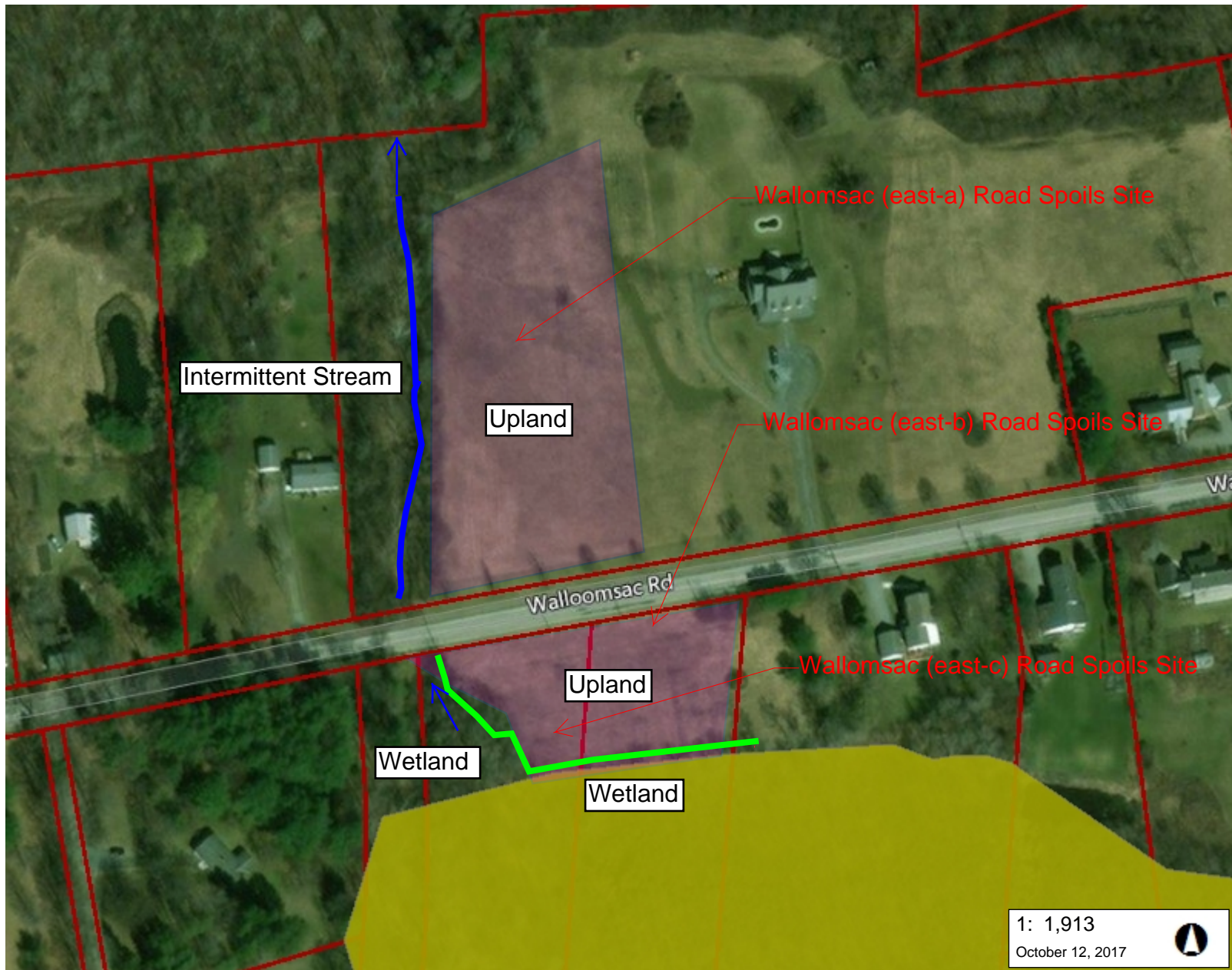
Map created using ANR's Natural Resources Atlas

MS&K, Inc.

194.0 0 97.00 194.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 319 Ft. 1cm = 38 Meters
© Vermont Agency of Natural Resources THIS MAP IS NOT TO BE USED FOR NAVIGATION

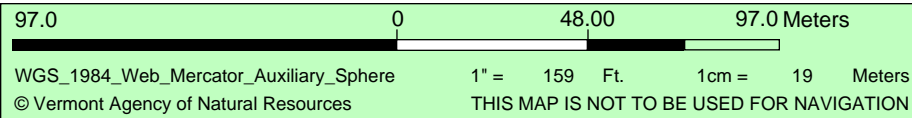
DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.



LEGEND

- Wetland - VSWI
 - Class 1 Wetland
 - Class 2 Wetland
 - Buffer
- Flood Hazard Areas (Only FEMA)
 - AE (1-percent annual chance flood)
 - A (1-percent annual chance floodpl.)
 - AO (1-percent annual chance zone feet)
 - 0.2-percent annual chance flood ha
- River Corridors (Jan 2, 2015)
- Small Streams - 50ft Setback
- Parcels (where available)
- Town Boundary
- Permanent Spoils Sites (7000 CY +/-)
- Wetland Boundary
- Intermittent Stream
- Direction of Flow

1: 1,913
October 12, 2017



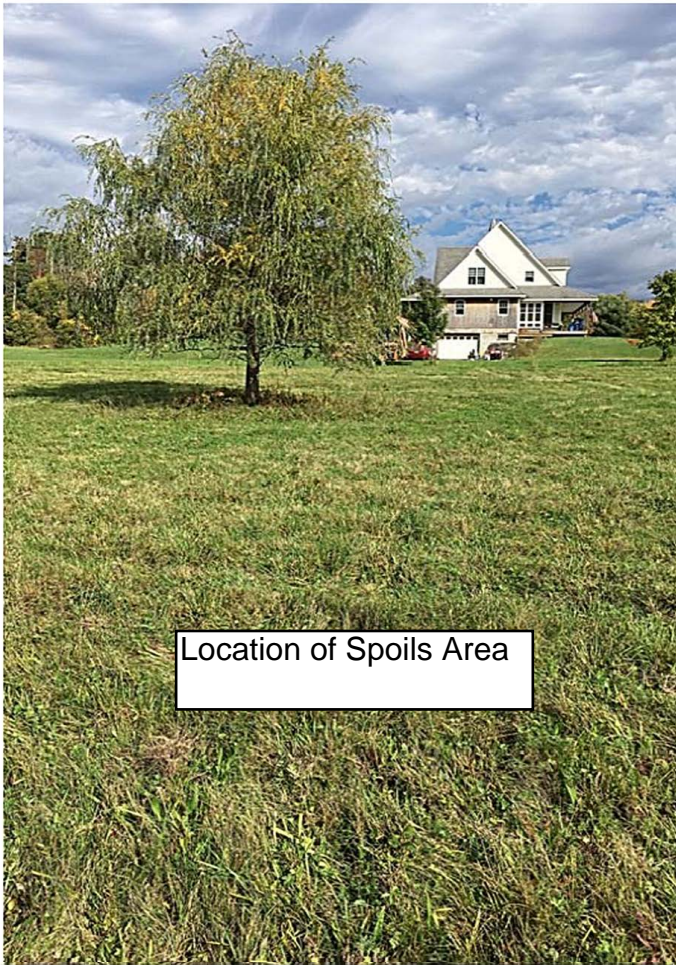
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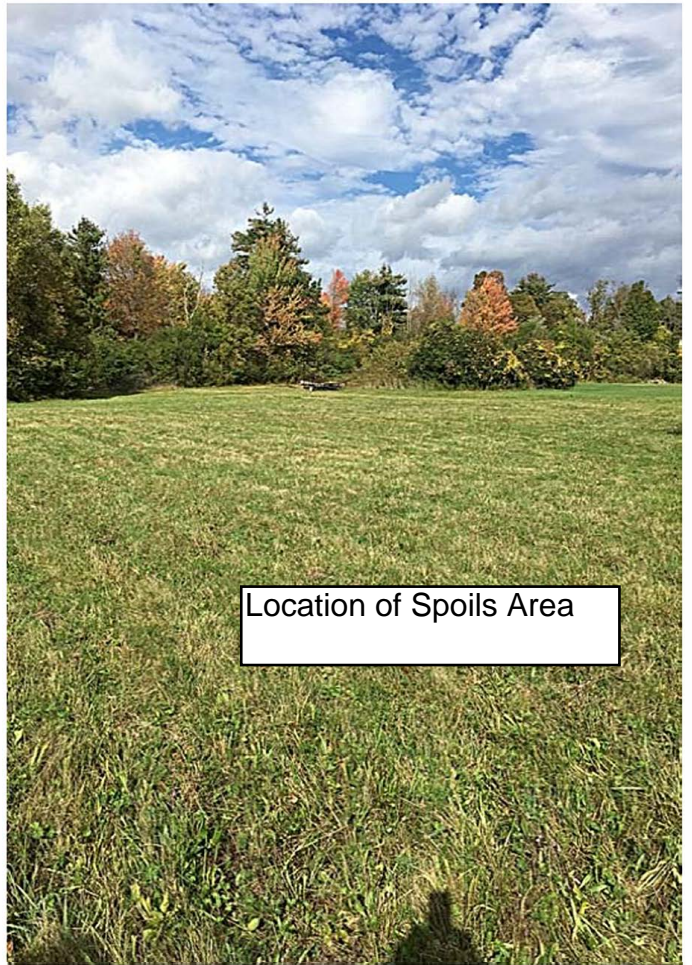
MS&K, Inc

Walloomsac (east) Road Spoil Site (north of Walloomsac Road)



Location of Spoils Area

View to an easterly direction



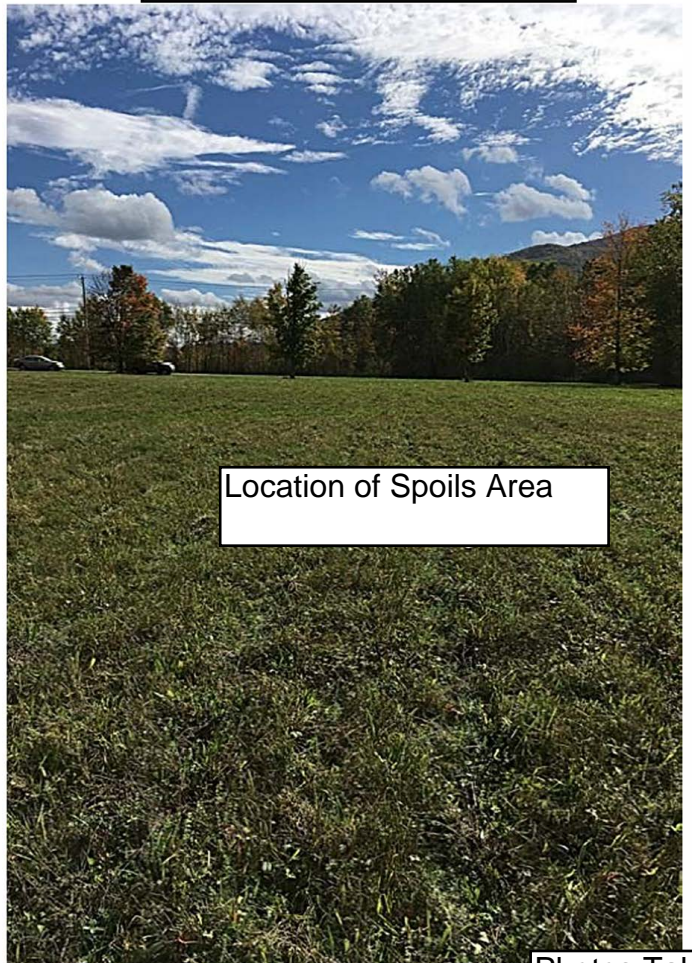
Location of Spoils Area

View to a northerly direction



Location of Spoils Area

View to a northerly direction



Location of Spoils Area

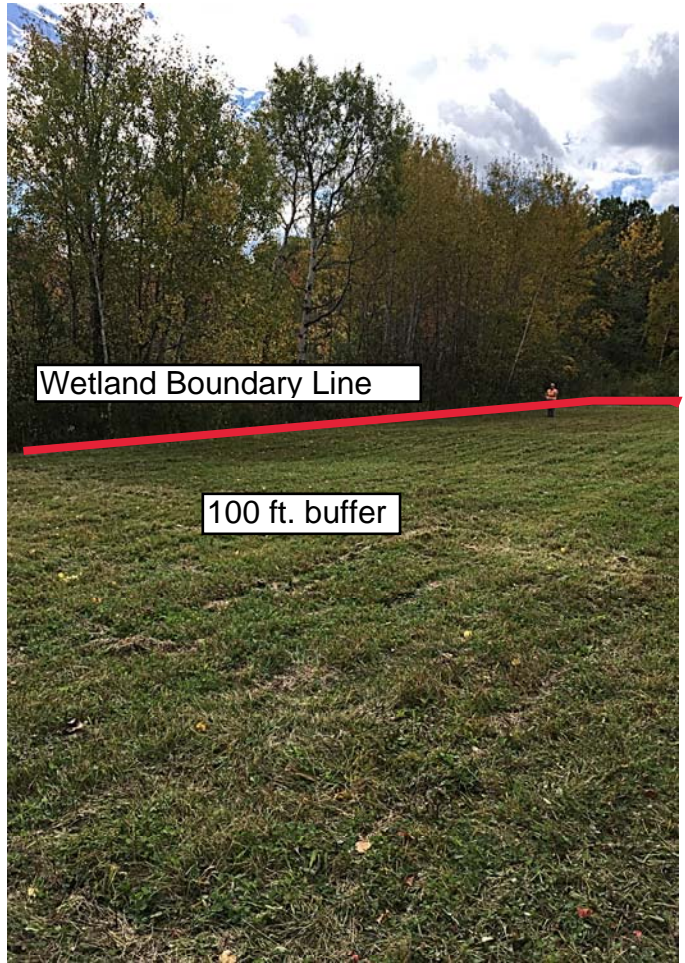
View to a southerly direction

Walloomsac (east-a) Road Spoils Site (south of Walloomsac Road)



Location of Spoil Area →

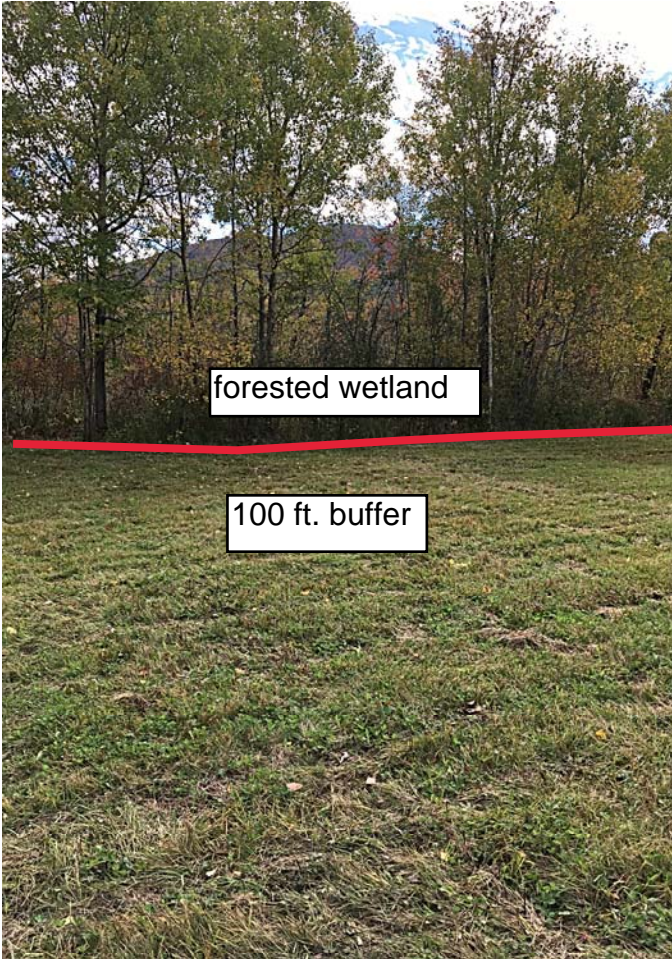
View to a westerly direction



Wetland Boundary Line

100 ft. buffer

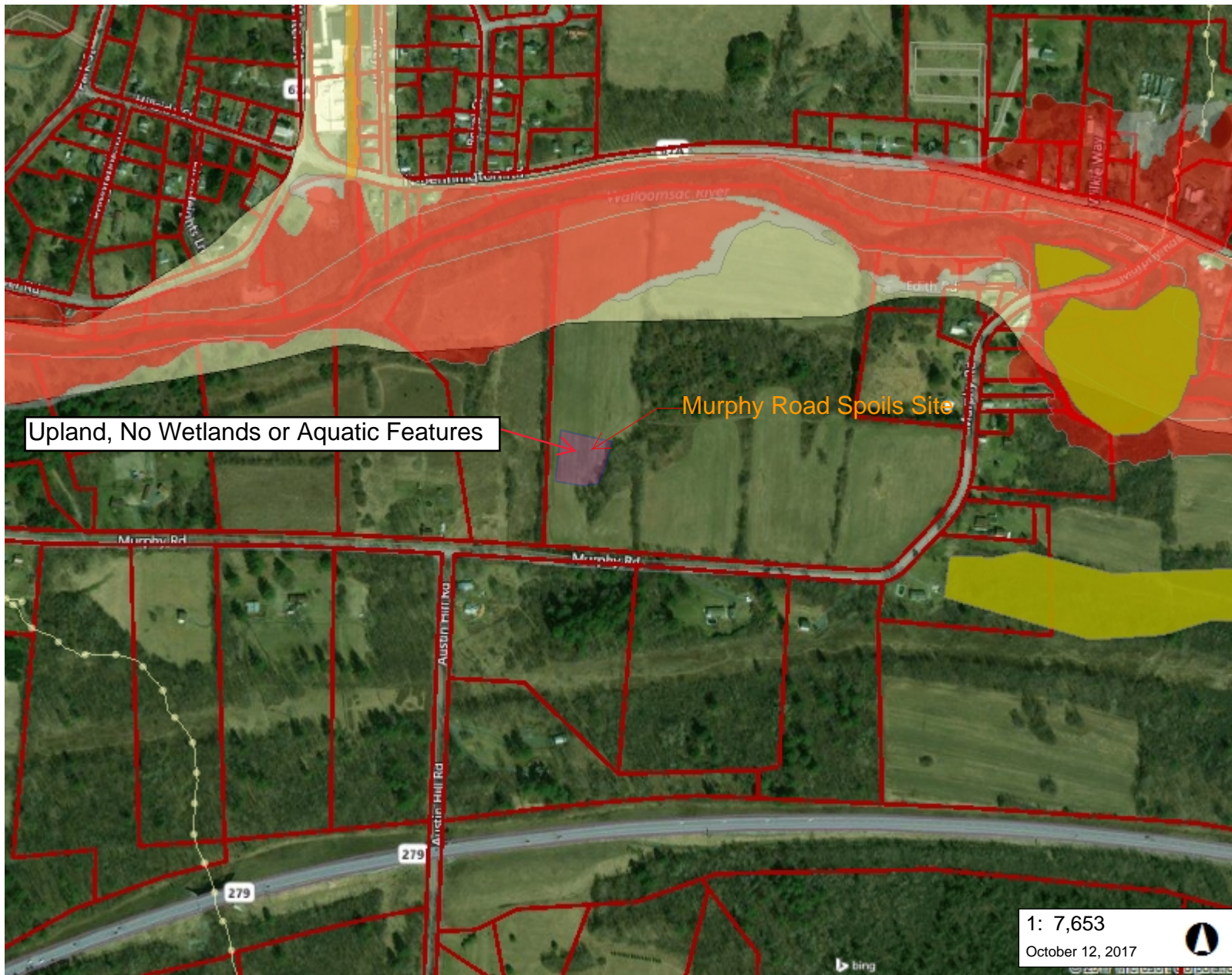
View to a southwesterly direction



forested wetland

100 ft. buffer

View to a southerly direction



Upland, No Wetlands or Aquatic Features

Murphy Road Spoils Site

LEGEND

- Wetland - VSWI
 - Class 1 Wetland
 - Class 2 Wetland
 - Buffer
- M
- AE (1-percent annual chance floodplains)
- A (1-percent annual chance floodplains)
- AO (1-percent annual chance zone of shallow flooding 1-3 feet)
- 0.2-percent annual chance flood hazard zone
- River Corridors (Jan 2, 2015)
- Small Streams - 50ft Setback
- Parcels (where available)
- Town Boundary
- Proposed Spoils Site (9000 CY +/-)

1: 7,653
October 12, 2017



389.0 0 194.00 389.0 Meters
WGS_1984_Web_Mercator_Auxiliary_Sphere
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1" = 638 Ft. 1cm = 77 Meters
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Murphy Road Spoils Site



Location of Spoils Area

View to a northerly direction



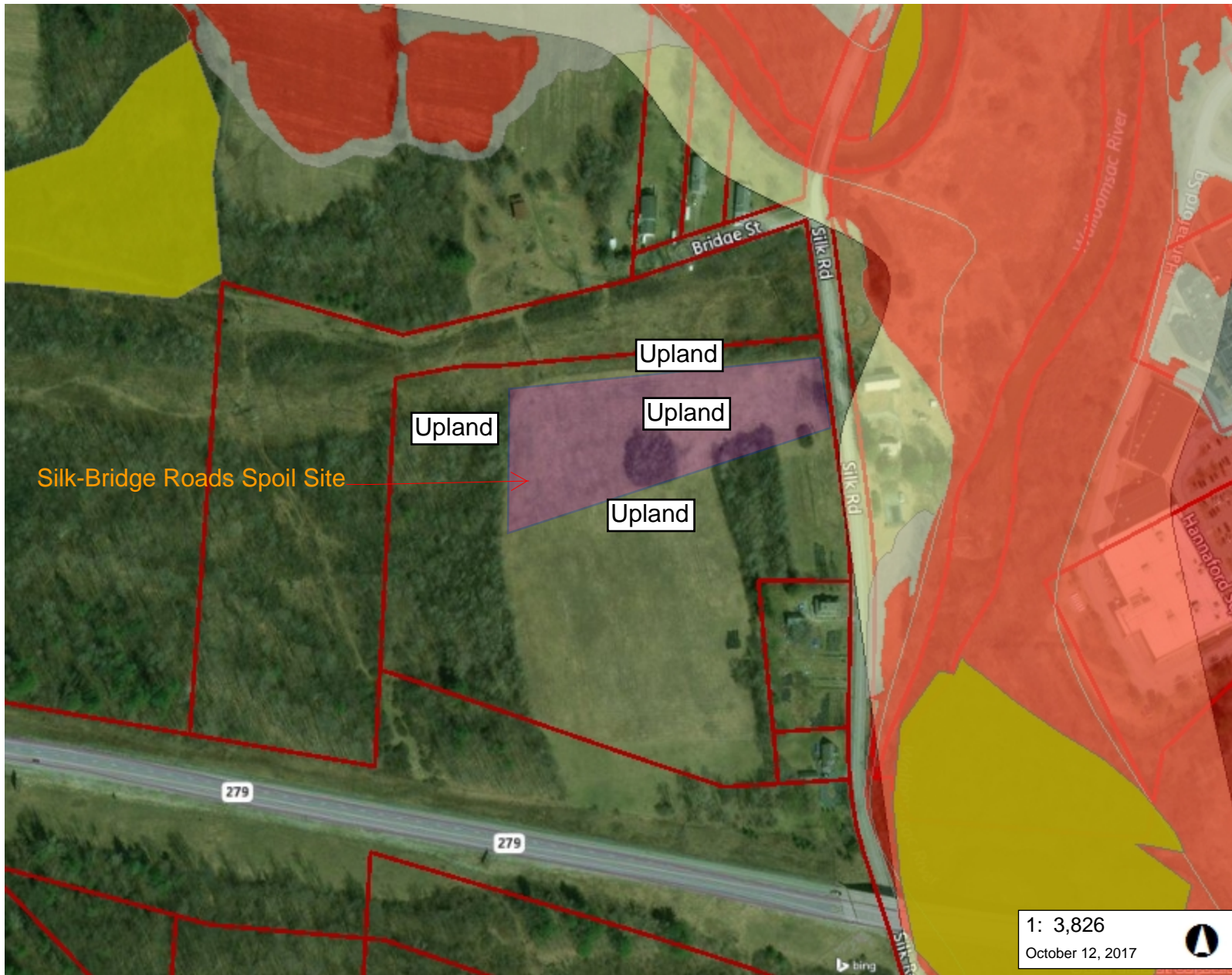
Location of Spoils Area

View to a northerly direction



Trees to be Removed

View to a northerly direction



LEGEND

- Wetland - VSWI
 - Class 1 Wetland
 - Class 2 Wetland
 - Buffer
- Flood Hazard Areas (Only FEMA)
 - AE (1-percent annual chance floodpl)
 - A (1-percent annual chance floodpl)
 - AO (1-percent annual chance zone feet)
 - 0.2-percent annual chance flood ha
- River Corridors (Jan 2, 2015)
- Small Streams - 50ft Setback
- Parcels (where available)
- Town Boundary
- Permanent Spoils Sites (8000 to 9000 CY +/-)

1: 3,826
October 12, 2017

194.0 0 97.00 194.0 Meters
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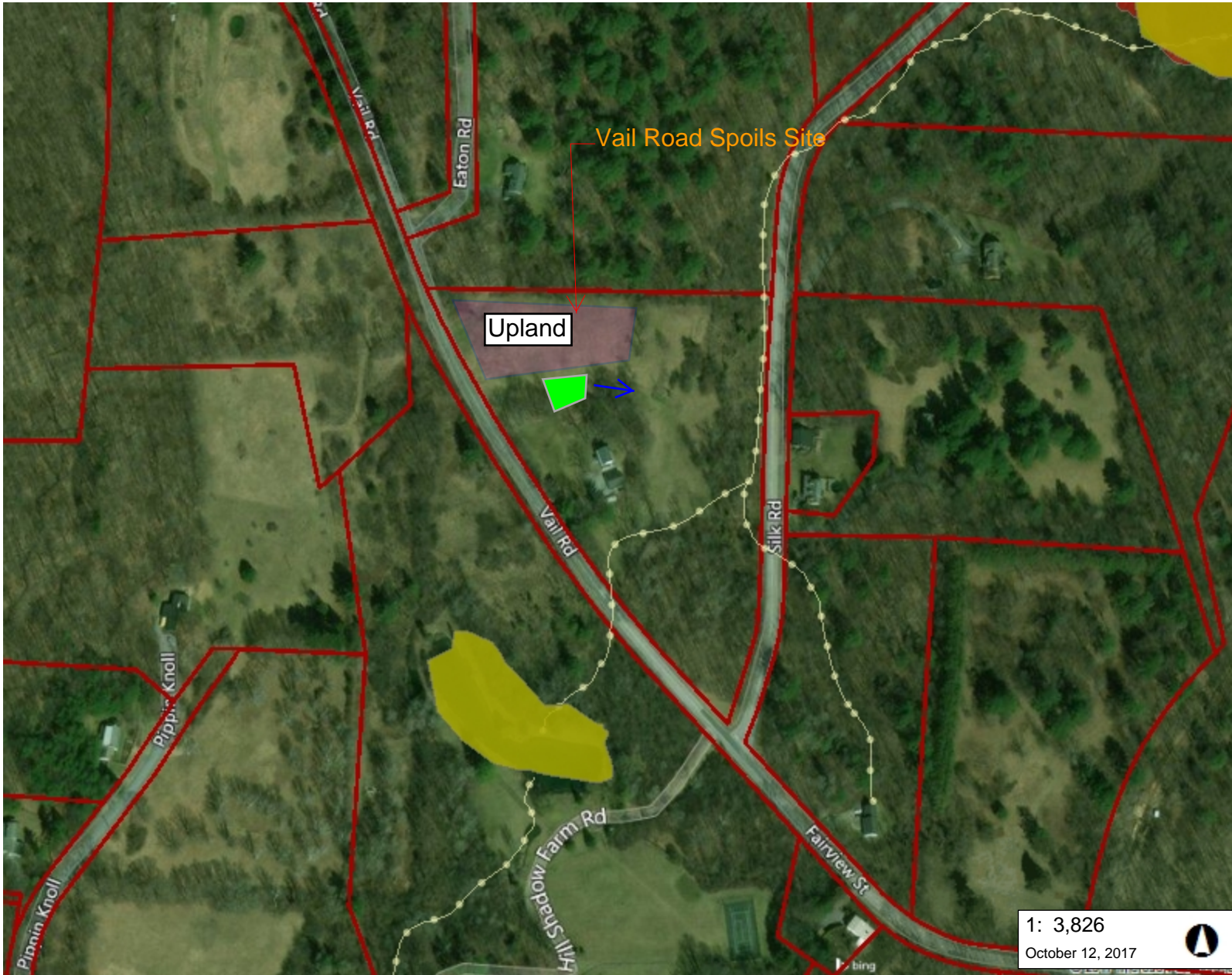
Silk-Bridge Roads Spoils Site



Spoils Site Location

View to a westerly direction

Photos Taken:
10-10-2017



LEGEND

- Wetland - VSWI
 - Class 1 Wetland
 - Class 2 Wetland
 - Buffer
- Flood Hazard Areas (Only FEMA)
 - AE (1-percent annual chance floodpl.)
 - A (1-percent annual chance floodpl.)
 - AO (1-percent annual chance zone feet)
 - 0.2-percent annual chance flood ha
- River Corridors (Jan 2, 2015)
- Small Streams - 50ft Setback
- Parcels (where available)
- Town Boundary
- Permanent Spoils Sites (9000 to 10,000 CY +/-)
- Delineated Wetland
- Direction of Flow

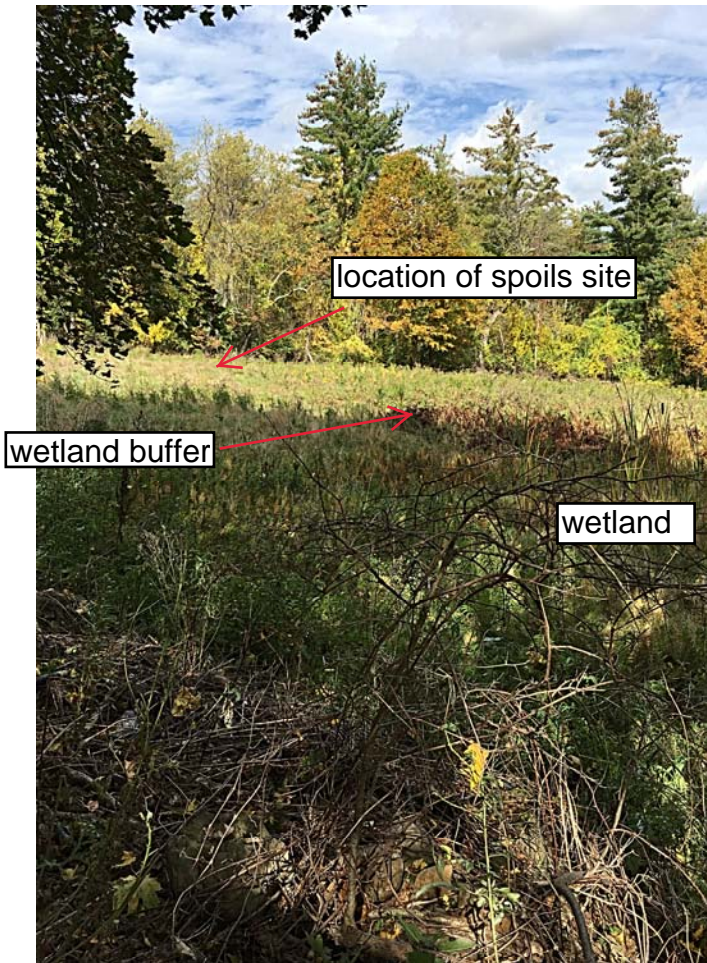
1: 3,826
October 12, 2017

194.0 0 97.00 194.0 Meters
WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 319 Ft. 1cm = 38 Meters
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NOTES
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MS&K, Inc.

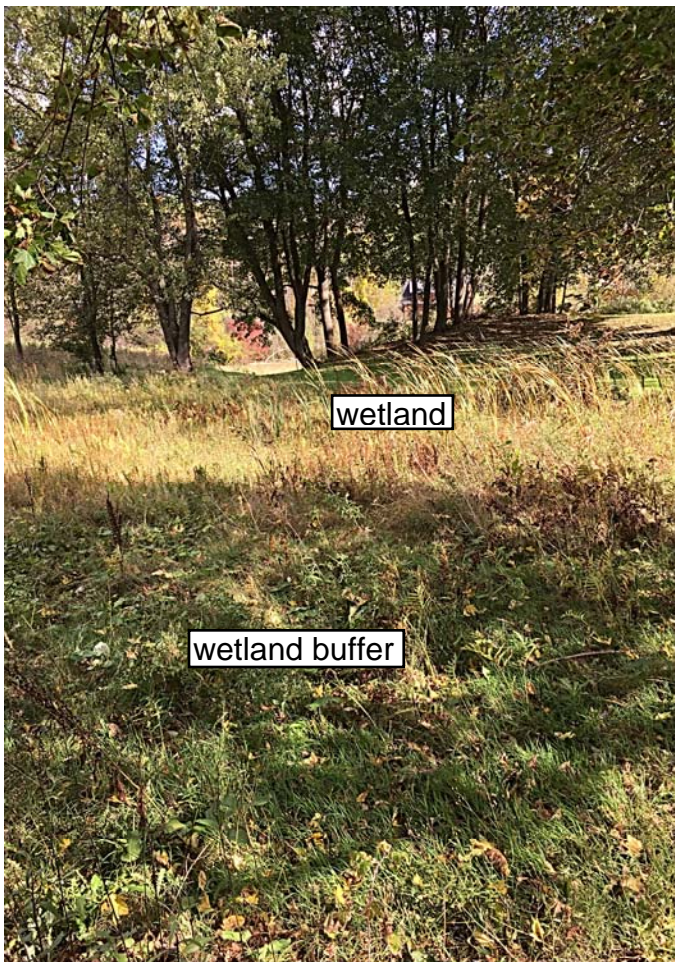
Vail Road Spoils Site



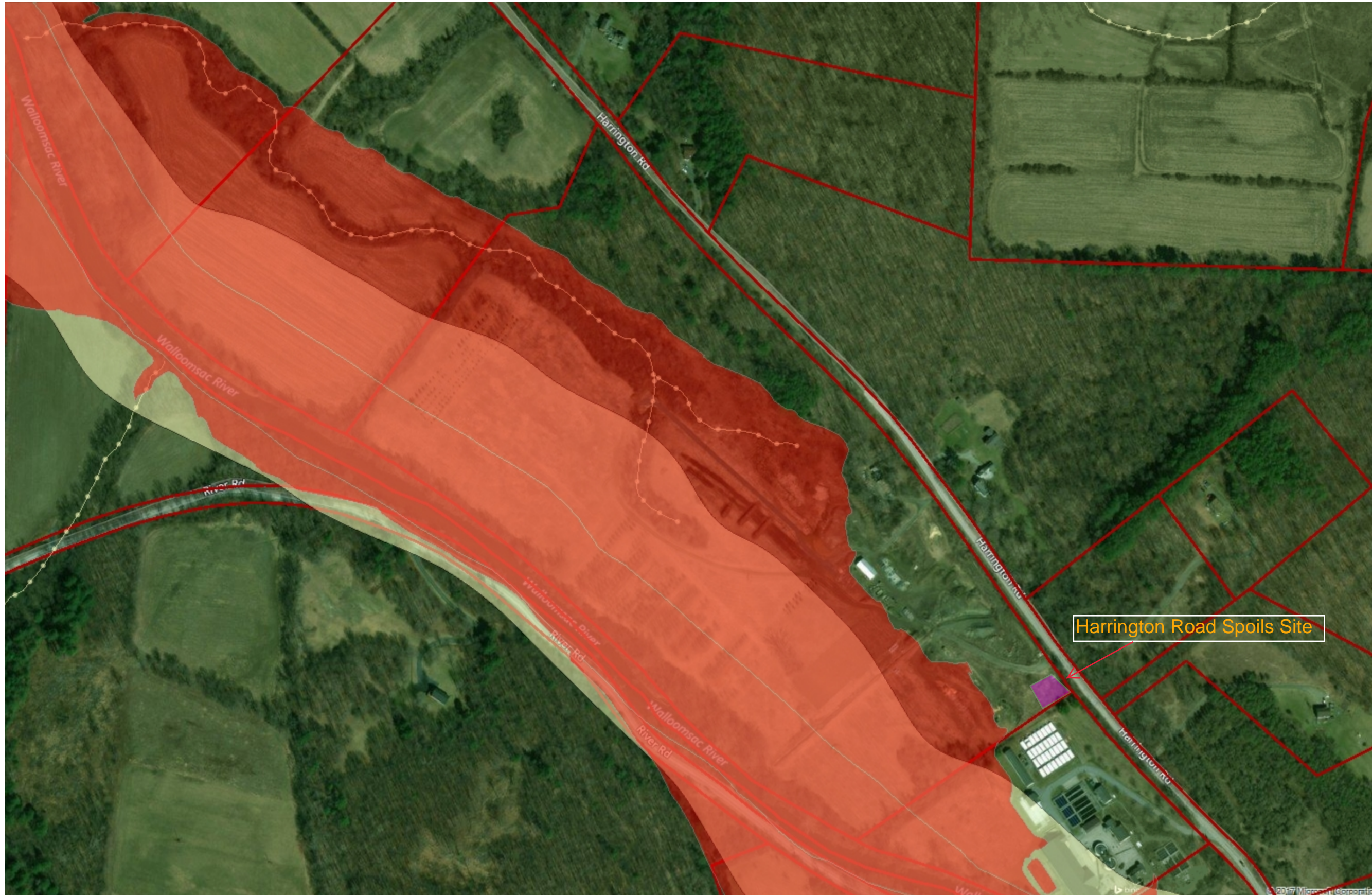
View to a northwesterly direction



View to a northeasterly direction



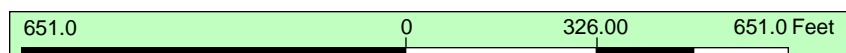
View to an easterly direction



LEGEND

- Flood Hazard Areas (Only FEMA-digitized)
- AE (1-percent annual chance floodplains with elevation data)
 - A (1-percent annual chance floodplains without elevation data)
 - AO (1-percent annual chance zone of shallow flooding)
 - 0.2-percent annual chance flood hazard zone
 - River Corridors (Jan 2, 2015)
 - Small Streams - 50ft Setback
 - Parcels (where available)
 - Town Boundary

■ Spoils Site
2,000 CY +/-



WGS_1984_Web_Mercator_Auxiliary_Sphere
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1: 3,907
1in = 326 ft.
1cm = 39 meters

NOTES
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Harrington Road Spoils Site



location of spoils site, prior fill location

View to a northwesterly direction



location of spoils site, prior fill location

View to a southwesterly direction. Mowed area contains the 100 year floodplain.

ADDENDUM A

WALLOOMSAC - PIPPIN KNOLL ROADS SPOILS SITE

3.2 WALLOOMSAC - PIPPIN KNOLL ROADS SPOILS SITE

This potential permanent disposal area is located on the southwestern area of Corrective Action Area II, but is contiguous with areas demarcated as Corrective Action Area I (CAA I OU A).

Vegetation:

The proposed area located to the north of Walloomsac Road and to the west of Pippin Knoll Road is primarily vegetated with Common Buckthorn (*Rhamnus cathartica*), Silky Dogwood (*Cornus amomum*), and other shrub-scrub vegetation.

Wetlands and Aquatic Features:

A qualified environmental scientist assessed the site for potential state and federal wetlands utilizing the methodology set forth in the U.S. Army Corps Federal Manual for Identifying and Delineating Jurisdictional Wetlands, as amended, and in supplemental guidance documents. No hydrophytic vegetation, hydric soils, nor hydrological features were found at the proposed site. No Class I, II, III, or federal wetlands were found at this proposed spoils site. Streams and other aquatic features were also not found at the proposed site. This site drains from the northeast to the southwest.

Topography and Soils:

At this proposed spoils site, topography slopes gently to the northeast to the southwest with a slope mapped between 2% and 8%. The Natural Resources Conservation Service (NRCS) has mapped this site to include the Stockbridge loam, 2 to 8% percent slopes (100.0% of proposed site). Erosion potential is slight for 100% proposed site.

Best Management Practices:

All applicable standards and conditions in the Vermont Construction General Permit 3-9020 will be met and best management practices will be utilized for this project. A construction entrance will be constructed and silt fence will be installed on the western downslope side of the proposed spoils area upslope of the vegetated area prior to any site disturbance.

VT ANR Criteria:

1. This disposal option is located within the central area of Corrective Action Area II, but contiguous with areas demarcated as Corrective Action Area I (CAA I OU A);
2. This is private property;
3. This area has a gentle slope and with limited erosion potential. The Natural Resources Conservation Service maps 100% of this proposed site as slightly erosive (met criteria);
4. This area has no wetlands, streams, rivers and is not with a FEMA Flood Hazard Area (met criteria);
5. This area is outside of public water supply source protection areas (met criteria); and
6. All homes in this area will be supplied by the installation of new water main so no wells will be affected (met criteria).

Criteria met: 4/6

Spoils accommodated by the site: 7,000 to 9,000 CY



Walloomsac - Pippin Knoll Roads Spoils Site

LEGEND

- Wetland - VSWI
 - Class 1 Wetland
 - Class 2 Wetland
 - Buffer
- Flood Hazard Areas (Only FEMA)
 - AE (1-percent annual chance flood)
 - A (1-percent annual chance floodpl.)
 - AO (1-percent annual chance zone feet)
 - 0.2-percent annual chance flood ha
- River Corridors (Jan 2, 2015)
- Small Streams - 50ft Setback
- Parcels (where available)
- Town Boundary
- Spoils Site (7000 to 9000 CY +/-)

1: 3,826
November 1, 2017



NOTES

Map created using ANR's Natural Resources Atlas

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194.0 0 97.00 194.0 Meters
 WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 319 Ft. 1cm = 38 Meters
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ADDENDUM B

RIVERSIDE DRIVE SPOILS SITE

3.3 RIVERSIDE DRIVE SPOILS SITE

This potential permanent disposal area is located on the southwestern area of Corrective Action Area I (CAA I OU A).

Vegetation:

The proposed area is located to the east and west of Riverside Drive in the Town of Bennington, VT. The spoils site is primarily vegetated with field grasses with a small patch of shrub-scrub vegetation.

Wetlands and Aquatic Features:

A qualified environmental scientist assessed the site for potential state and federal wetlands utilizing the methodology set forth in the U.S. Army Corps Federal Manual for Identifying and Delineating Jurisdictional Wetlands, as amended, and in supplemental guidance documents. No hydrophytic vegetation, hydric soils, nor hydrological features were found at the proposed site. No Vermont State Class I, II, III streams, aquatic features, or federal wetlands were found at the proposed spoils site. A tributary to the Walloomsac River is greater than 100 feet from the proposed spoils site. This site drains from the northwest to the southeast and towards a tributary of the Walloomsac River.

Topography and Soils:

At the proposed spoils site, topography slopes from the northwest to the southeast with a slope mapped between 8% to 15%. The Natural Resources Conservation Service (NRCS) has mapped this site to include the Macomber-Taconic complex, 8 to 15% percent slopes (100.0% of proposed site). Erosion potential is slight for 100% proposed site.

Best Management Practices:

All applicable standards and conditions in the Vermont Construction General Permit 3-9020 will be met and best management practices will be utilized for this project. A construction entrance will be constructed and all bare soil will be stabilized as soon as practicable.

VT ANR Criteria:

1. This disposal option is located within Corrective Action Area I (CAA I OU A);
2. This is private property;
3. This area has a gentle slope and with limited erosion potential. The Natural Resources Conservation Service maps 100% of this proposed site as slightly erosive (met criteria);
4. This area has no wetlands, streams, rivers and is not with a FEMA Flood Hazard Area (met criteria);
5. This area is outside of public water supply source protection areas (met criteria); and
6. All homes in this area will be supplied by the installation of new water main so no wells will be affected (met criteria).

Criteria met: 5/6

Spoils accommodated by the site: 7,000 to 9,000 CY

Spoils Site, Riverside Drive, Photo 1

View looking southeast to northwest where spoils would be placed.



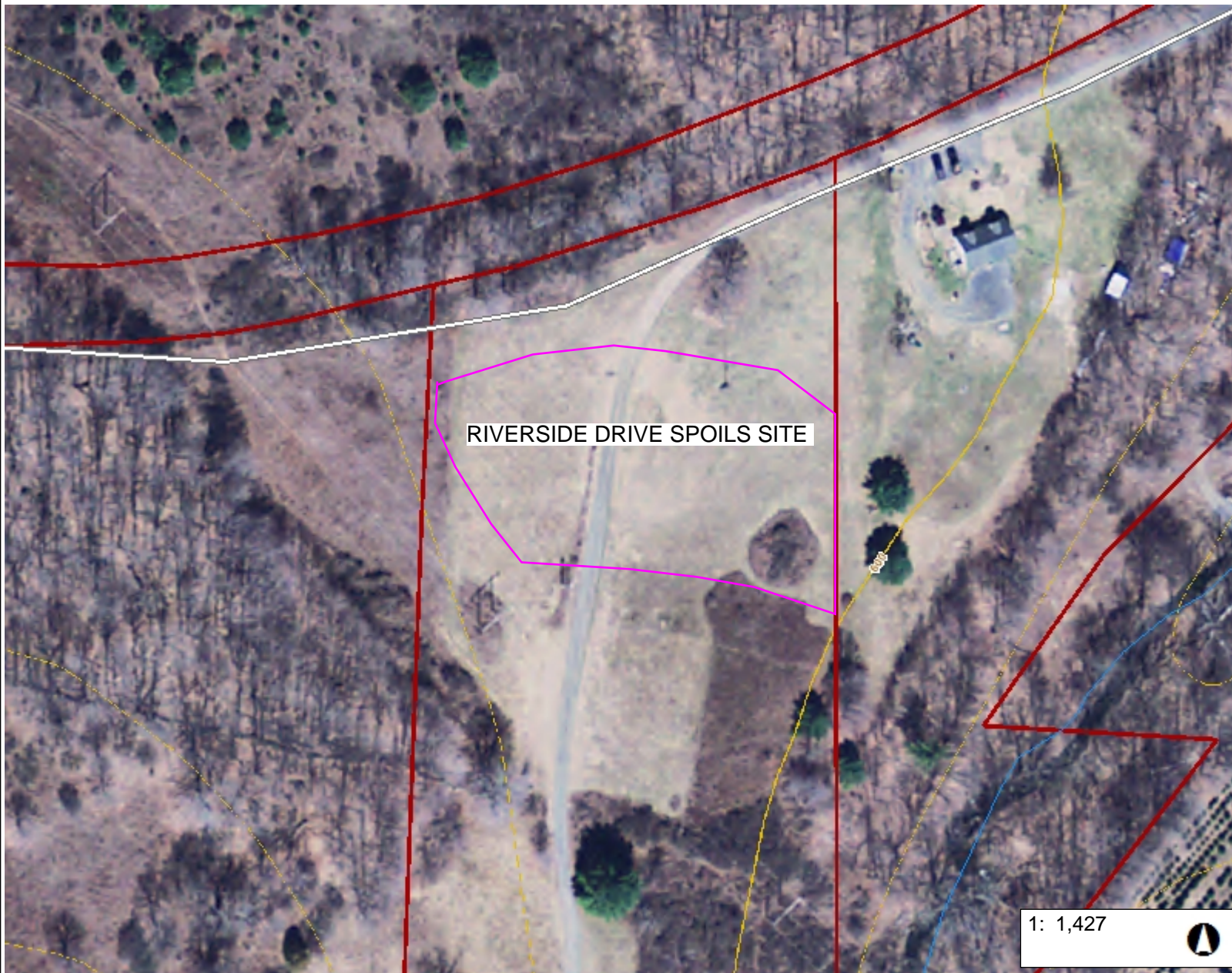
Photo Taken: December 8, 2017



Spoils Site, Riverside Drive, Photo 2


View looking southeast to northwest where spoils would be placed.

Photo Taken: December 8, 2017



LEGEND

- Act250 Permits **INCOMPLET
- Roads**
- Interstate
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local
- Not part of function Classification S
- Waterbody
- Stream
- Parcels (where available)
- Town Boundary
- PROPOSED SPOILS AREA

1: 1,427 

73.0 0 36.00 73.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 119 Ft. 1cm = 14 Meters

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NOTES

Map created using ANR's Natural Resources Atlas

December 8, 2017
MS & K

ADDENDUM C

RIVERSIDE DRIVE SPOILS SITE B

3.3 RIVERSIDE DRIVE SPOILS SITE B

This potential permanent disposal area is located on the southwestern area of Corrective Action Area I (CAA I OU A). Property owners have approved placement of spoils on their site.

Vegetation:

The proposed area is located to the south of Riverside Drive in the Town of Bennington, VT. The spoils site is primarily vegetated with field grasses and shrub-scrub vegetation.

Wetlands and Aquatic Features:

A qualified environmental scientist assessed the site for potential state and federal wetlands utilizing the methodology set forth in the U.S. Army Corps Federal Manual for Identifying and Delineating Jurisdictional Wetlands, as amended, and in supplemental guidance documents. No hydrophytic vegetation, hydric soils, nor hydrological features were found at the proposed site. No Vermont State Class I, II, III streams, aquatic features, or federal wetlands were found at the proposed spoils site. A tributary to the Walloomsac River and its floodplain are greater than 100 feet from the proposed spoils site. This site drains from the northwest to the southeast and towards a tributary of the Walloomsac River.

Topography and Soils:

At the proposed spoils site, topography slopes from the northwest to the southeast with a slope mapped between 8% to 15%. The Natural Resources Conservation Service (NRCS) has mapped this site to include the Macomber-Taconic complex, 8 to 15% percent slopes (100.0% of proposed site). Erosion potential is slight for 100% proposed site.

Best Management Practices:

All applicable standards and conditions in the Vermont Construction General Permit 3-9020 will be met and best management practices will be utilized for this project. Silt fence will be installed on the downslope side of spoils area and bare soil will be stabilized as soon as practicable.

VT ANR Criteria:

1. This disposal option is located within Corrective Action Area I (CAA I OU A);
2. This is private property;
3. This area has a gentle slope and with limited erosion potential. The Natural Resources Conservation Service maps 100% of this proposed site as slightly erosive (met criteria);
4. This area has no wetlands, streams, rivers and is not with a FEMA Flood Hazard Area (met criteria);
5. This area is outside of public water supply source protection areas (met criteria); and
6. All homes in this area will be supplied by the installation of new water main so no wells will be affected (met criteria).

Criteria met: 5/6

Spoils accommodated by the site: 3,000 to 5,000 CY

Riverside Drive Spoils Site B, Town of Bennington, VT



Proposed Spoils Area

View from Riverside Drive looking southeast.



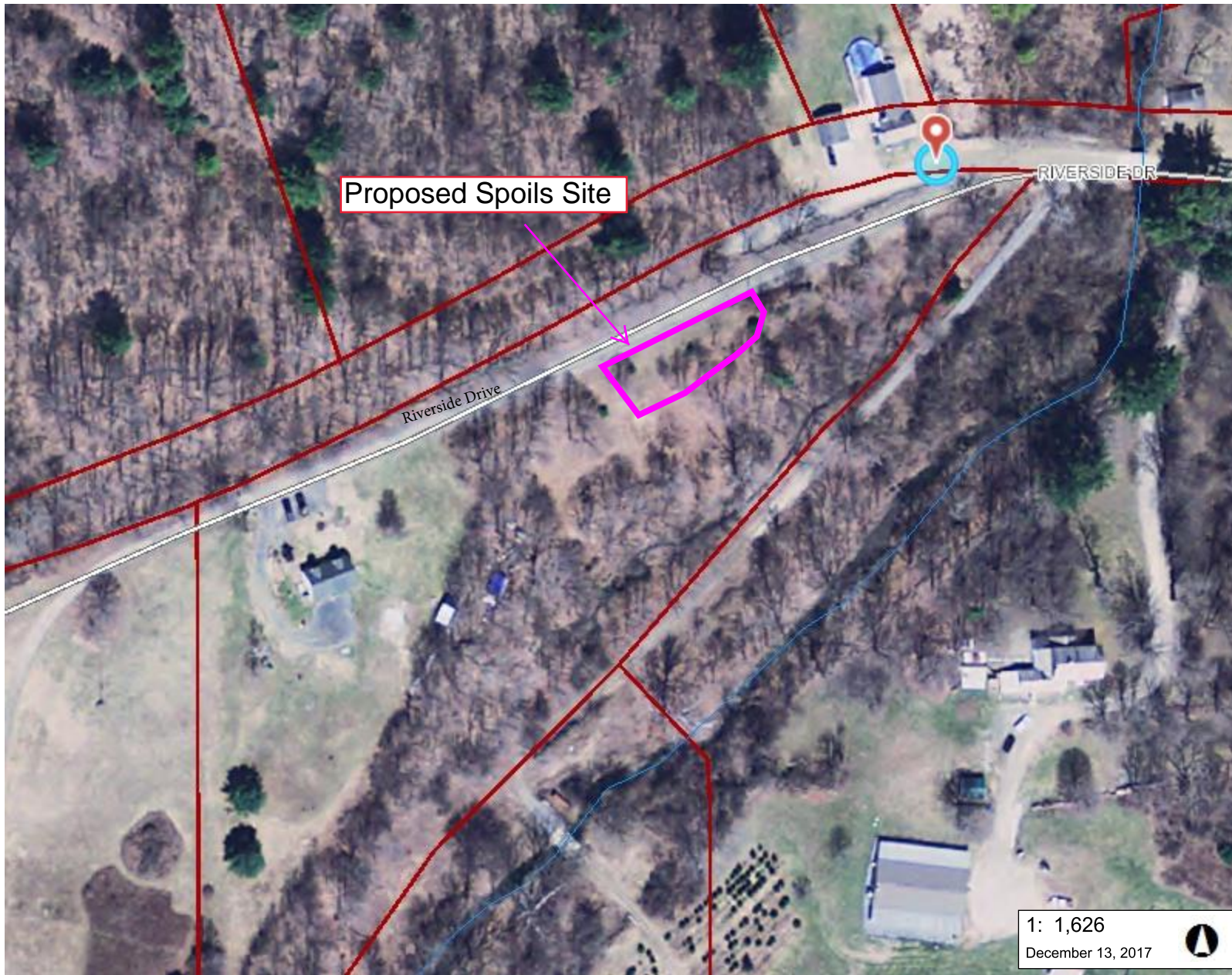
Proposed Spoils Area

View to the east.

Riverside Drive Spoils Site B, Town of Bennington, VT



View to the southwest.



Proposed Spoils Site

Riverside Drive

RIVERSIDE DR

1: 1,626

December 13, 2017



LEGEND

- Roads**
- Interstate
 - Principal Arterial
 - Minor Arterial
 - Major Collector
 - Minor Collector
 - Local
 - Not part of function Classification S
- Waterbody
- Stream
- Parcels (where available)
- Town Boundary

— Spoils Site B

NOTES

Map created using ANR's Natural Resources Atlas

MS & K

December 13, 2017

83.0 0 42.00 83.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 136 Ft. 1cm = 16 Meters

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APPENDIX C

Additional Expected Environmental Impacts and Mitigation for Selected Site

APPENDIX C – ADDITIONAL EXPECTED ENVIRONMENTAL IMPACTS AND MITIGATION FOR SELECTED SITE

1.0 TERRESTRIAL AND BIOLOGICAL RESOURCES

1.1 VEGETATION

The project area consists of grass-covered banks along the side of VT Rt. 279. Adjacent to the proposed disposal area, mixed deciduous and coniferous forest begins.

1.2 WILDLIFE HABITAT

No significant wildlife habitats were discovered within the project area

1.3 THREATENED AND ENDANGERED SPECIES

Northeastern long-eared bat:

- A determination has been made that the project area does not include habitat suitable for the endangered northern long-eared bat (see Appendix E).

No other rare, threatened or endangered species were discovered in the project area.

1.4 SOIL COMPOSITION

Soils in the project are include Georgia Loam, 3-8% slopes and 8-15% slopes; and Massena Silt Loam 3-8% slopes.

2.0 AQUATIC RESOURCES

2.1 FLOODPLAINS

All options considered, including the proposed, were >100 feet from any FEMA mapped flood hazard areas.

2.2 WETLANDS

The project is in close proximity to one unnamed Class II stream-associated wetland and one small (<1/8 Ac) Class III wetland. See Appendix C for wetlands analysis. See Figure 1 for project areas indicating a >50 ft. buffer between any deposit of spoils and these two wetlands.

3.0 CULTURAL RESOURCES

The use of the proposed Route 279 site will be cleared by VTrans under Section 106 of the National Historic Preservation Act.

3.1 ARCHAEOLOGICAL RESOURCES

There are no anticipated impacts to archaeological resources associated with the project.

3.2 HISTORICAL RESOURCES

There are no anticipated impacts to historical resources (above-ground) associated with the project.

4.0 LAND USE AND ZONING

4.1 AFFECTED ENVIRONMENT

The affected area includes a portion of Vermont State Right-of-Way on both sides of VT Route 279. The project area begins at the intersection of Rt. 279 and Austin Hill Road and extends 800 ft. west along the highway.

4.2 ENVIRONMENTAL CONSEQUENCES

Trench spoils from the proposed water main extension are expected to contain PFOA. Results from 46 soil samples around North Bennington indicate maximum soil PFOA contamination of 45 ppb and an average of 9.58 ppb – well below the VT soil screening value of 300 ppb (see Appendix A). Recent soil samples collected near had slightly higher soil concentration (approximately 75 ppb), but still below the VT soil screening value.

5.0 INFRASTRUCTURE

5.1 UTILITIES

No utilities will be affected or required as a part of this project.

5.2 TRAFFIC AND PARKING

The proposed disposal area will be accessed from Austin Hill Road, so traffic along VT Rt. 279 will not be affected. Construction is expected to last twelve months, with an average of 17 trips per day to the disposal site.

6.0 POTENTIAL HAZARDS

6.1 AIR QUALITY

There are no anticipated air quality impacts associated with the project.

6.2 NOISE

There are no anticipated noise impacts associated with the project.

APPENDIX D

**Interim Measures Corrective Action Plan (CAP) For Public Water System (PWS) Extensions-
Corrective Action Area I Operable Unit A North Bennington and Bennington
dated August 11, 2017**

**Interim Measures
Corrective Action Plan
For
Public Water System (PWS)
Extensions
Corrective Action Area I
Operable Unit A
North Bennington and Bennington**

August 11, 2017

**Interim Measures Corrective Action Plan For
Public Water System (PWS) Extensions- Corrective Action Area I
Operable Unit A
North Bennington and Bennington**

August 11, 2017

1.0 Introduction/ Executive Summary

1.1 Purpose

This Corrective Action Plan (CAP) authorizes an interim measure corrective action for the selected drinking water remedy in Corrective Action Area I-Operable Unit A (CAA 1-OU A). The selected remedy is the extension of public water systems (PWS) to residences and businesses as shown on the map in Figure 1. Approximately 200 homes or businesses will be connected to municipal water. The use of an interim measures CAP is authorized by the Investigation and Remediation of Contaminated Properties Rule (IROCPR) § 35-506(b)(1)(B).

This CAP is necessary to meet requirements related to corrective action plans in the following documents:

- The State of Vermont Consent Order (Consent Order) with Saint-Gobain Performance Plastics (Saint-Gobain), which was entered into State Superior Court on July 26, 2017, and
- The Vermont Agency of Natural Resources (ANR) Rule, “Investigation and Remediation of Contaminated Properties Rule (IROCPR), effective July 27, 2017”. Approval of this CAP allows for water line extensions to begin this construction season.

Other CAPs as required in Appendix A of the Consent Order will be prepared separately. More details about the corrective action work items and schedule are provided in [Appendix A of the Consent Order](#).

1.2 Summary of Site Investigation Work

Site investigative work was conducted by multiple parties, including consultants on behalf of Saint Gobain, the ANR, the U.S. Environmental Protections Agency (EPA), and a group of Colleges and Universities. Investigative work included surficial and bedrock mapping; borehole geophysics, measurements of groundwater elevation; and the collection of drinking water samples, groundwater samples from monitoring wells and springs, surface water and samples, sludge samples, and soil samples. This investigative work included the development of a Conceptual Site Model (CSM) provided by Saint Gobain, which, among other things, identified potential sources and pathways for PFOA found in groundwater. The CSM incorporated the data collected from the site investigative work to evaluate the complete PFOA transport

pathway from source to sensitive receptor, that is, primarily people drinking the water, which required multiple numerical models to assess fate and transport through air, the unsaturated zone, and groundwater. A more detailed summary of the site investigation work can be found in [Appendix D of the Consent Order](#), and [the CSM](#). As noted in Appendix D of the Consent Order, the ANR has determined that additional investigation of the Site is required and additional refinement of the CSM is necessary prior to the ANR's concurrence with the conclusions contained within the CSM.

1.3 *Remedial Objectives*

The major remedial objective of this CAP is to provide a long-term remedy that protects human health by eliminating the pathway for people to drink water contains PFOA in concentrations at or above 20 parts per trillion (ppt), or wells that are believed to be at risk and PFOA levels are below 20 ppt where PWS extension work ("Water Line Extension Work"), has been planned, designed, and permitted within CAA 1-OU 1 (the Project Area).

1.4 *Remedial Alternatives Considered to Protect Human Health (Eliminate Drinking Water Pathway)*

Barr Engineering, on behalf of Saint-Gobain, prepared a comparative analysis of corrective action for eliminating drinking water pathways and addressing groundwater. This document is [Appendix C of the Consent Order](#).

For remedies to protect human health, that is, eliminate the drinking water pathway, they evaluated three options:

- Long-term Operations of Point-of-Entry Treatment Systems (POETs)
- Extension of existing community PWS distribution mains
- Drinking water replacement wells

Their comparative analysis of these options was performed using the criteria specified in 40 C.F.R. § 300.430(e)(9)(iii), which is also consistent with the requirements within Subsection 35-503 (Evaluation of Corrective Action Alternatives) in the IROCPR:

- Overall protectiveness to human health and the environment;
- Compliance with applicable, relevant, and appropriate requirements;
- Short-term effectiveness;
- Long-term effectiveness and permanence;
- Reduction of contaminant mass, mobility, and toxicity through treatment;
- Implementability;
- Cost; and
- Community acceptance.

1.5 *Description of Selected Corrective Action*

As specified in the ANR decision document (Appendix D of the Consent Order), the preferred corrective action is to connect impacted water supply wells with PFOA concentrations at or above 20 ppt and other potentially at-risk wells to the municipal water supply, where technically feasible and cost effective.

The Town of Bennington and the Village of North Bennington hired consulting firms, MSK Engineering and Otter Creek Engineering, respectively, to perform this evaluation, working in close consultation with the applicable state programs to ensure any proposed Water Line Extension Work was designed to comply with all applicable health-based and environmental requirements. CAA 1 OU A are those areas where it is technically feasible and cost effective to extend water lines. Figure 1 shows the proposed water-line extensions within CAA 1.

The scope of work associated with the extension of the PWS includes installation of water service lines to the existing internal plumbing within the home or business and restoration of property disturbance. The remedy does not include water usage costs to the PWS or refurbishment or replacement of existing internal plumbing and other items as further set forth in the Consent Order.

This CAP only includes areas where waterlines have been permitted to be extended within the CAA 1 OU A. A separate CAP will address the remedies to protect human health in CAA 1 OU B.

2.0 Performance Standards

The performance standard for this CAP is completion of the Water Line Extension Work, which requires the extension of municipal water service to all homes and businesses as required by the Consent Order within CAA 1 OU A.

Compliance with this performance standard shall be documented by submittal to ANR the required information specified in the two respective PWS Construction Permits (listed below), including record drawing, signed and stamped by a professional engineer, and a letter certifying conformance with all permit conditions from the professional engineering firm responsible for observation of construction.

Public Water System Construction Permit Project C-3478-17.0
Water System: North Bennington Water Department WSID # VT0005017
Permitee: Village of North Bennington
Project Name: Distribution main extensions to provide water service to properties
with on-site wells contaminated with PFOA and PFOS.
Permit Issued: June 5, 2017

Public Water System Construction Permit Project C-3495-17.0
Water System: Bennington Water Department WSID # VT0005016
Permitee: Bennington Town
Project Name: Distribution main extensions to provide water service to properties
with on-site wells contaminated with PFOA and PFOS.
Permit Issued: July 12, 2017

A copy of the public water system construction permit Project C-3478-17.0 (Expansion of North Bennington water system) can be found in Attachment A. A copy of the public water system Construction permit Project C-3495-17.0 (Expansion of Bennington water system) can be found in Appendix B.

3.0 Remedial Construction Plan

Detailed engineering designs, including preliminary engineering reports, design drawings, and technical specifications for the Water Line Extension Work have been developed for North Bennington and Bennington. These designs are referenced in Section A.5 of Permits C-3478-17.0 and C-3495-17.0, and include a Vermont licensed professional engineer signature of review for the PWS extensions as required in IROCP § 35-505 (4)(b). The respective water supply construction permits provide a summary description of the proposed modifications, and extension of two PWS systems. The [bid packages for North Bennington and Bennington, which include the respective designs, are available online](#) and at the offices of the Town of Bennington. The proposed Water Line Extension Work for Bennington is divided into four bid packages.

4.0 Waste Management Plan

All excess excavation materials generated during this project must be managed in accordance with a plan approved by ANR. For purposes of waste management planning, all soils and groundwater within CAA 1 OU A will be assumed to contain PFOA at levels that could affect groundwater at levels above Vermont's Standard for PFOA.

An approved waste management plan must be in place before construction of the waterlines can take place. Evaluation of final options is ongoing. Currently, up to approximately 35,000 cubic yards of excess soils may be generated from these two water line projects. Soil disposal locations are limited to locations within CAA 1 OU A, disposal facilities permitted to receive PFOA-containing soils, or other locations approved by ANR. Disposal of PFOA containing-soils within CAA 1 OU A is considered acceptable for the following reasons:

- PFOA concentrations in soils are not a direct contact concern. All of the soil samples collected to date, including those closest to the former Water Street facility, were significantly below the Vermont Department of Health Advisory level of 300 ug/kg, or part per billion (ppb), for human direct contact. All soil samples collected to date are below 70 ppb, with most being less than 10 ppb. Therefore, PFOA containing-soils within CAA 1 OU are not a direct contact issue.
- Soils within CAA 1 OU A are presumed to contain PFOA at levels that can impact groundwater to levels above Vermont groundwater standards. Therefore, moving soils around in this area will not contaminate groundwater that is currently below Vermont's standards to levels that could go above Vermont's standards.
- PFOA is already present in groundwater and the potential human exposure pathway will be eliminated by the corrective action measures for CAA 1 OU A.

The preferred alternative for soils removed during water line installation is to put these soils back into the water line trench. This will occur when soil geotechnical conditions are

appropriate for this to happen. When this is not possible, additional soils must remain within CAA 1 OU A. Attachment C contains a document that evaluated possible disposal locations of excess soils within CAA 1 OU A. At this time, the three disposal locations being considered are the following:

- Right-of-Way between the end of Riverside Drive and Ore Bed Road (Approximately 1,000 feet).
- Right-of-Way between end of Bard Road to the end of Red Pine Road (Approximately 1,500 feet)
- Area to the north and south of Route 279 and west of Austin Hill Road. This location is on Vermont Agency of Transportation right-of-way.

Because federal funds were used in the construction and acquiring the right-of-way for Route 279, an environmental assessment must be performed for the proposed disposal location within the Route 279 right-of-way west of Austin Hill Road before Federal Highway Administration (FHA) can approve of these soils going to this location. Once FHA issues their approval document, the Vermont Agency of Transportation can authorize use of this right-of-way for disposal of excess soils generated during construction of PWS extensions.

In addition, it is possible that the permittees and their contractors could identify in their waste management plan(s) other potential permanent and temporary soil disposal locations. However, such locations must be approved by ANR prior to moving soils to these locations.

Groundwater may be encountered during the installation of the water lines and it is possible that the excavated trenches for the water line will need to be de-watered. If de-watering is needed, the waste management plan must address how the water will be managed and will not make site conditions worse. Possible management options including re-charging the water in area where the water was removed or storing the water in tanks for treatment (that is, remove the PFOA using carbon canisters) prior to discharge. Any management or discharge of groundwater must comply with the applicable requirements.

At this time, no additional contamination besides PFOA are anticipated to be encountered. However, a preliminary site investigation was performed at two locations where petroleum underground storage tanks are, or were, present. The results of this preliminary site investigation are pending. If contamination besides PFOA is found as result of the preliminary site investigation in an excavation area associated with the Water Line Extension Work or during the actual construction of this work, then the procedures outlined in the VT DEC document "Guidance for Construction of Public Works Projects," effective date March 2002, must be followed for that given reach of waterline work where this contamination is present.

5.0 Implementation Schedule

Construction of the Water Line Extension Work for both North Bennington and Bennington are scheduled to begin in the Fall of 2017. The current goal is to have all the waterlines completed by the Fall of 2018.

6.0 Corrective Action Maintenance Plan

The two water systems are responsible to maintain their water systems per their respective operating permits, and all other applicable requirements, to ensure that they are providing water to their users that meet the requirements of the Federal Safe Drinking Water Act and the Vermont Water Supply Rule. Once the construction of the water line extensions is completed, the water systems are required to obtain an amended PWS permit to operate and provide an updated operation and maintenance manual to account for the expansion of their systems.

7.0 Institutional Controls

As specified in the Consent Order, the groundwater within CAA 1 OU A, following the completion of the municipal water line extension work, will be reclassified as Class IV non-potable groundwater in areas served by the municipal water line in accordance with the IROCPR and state groundwater protection rules.

8.0 Quality Assurance and Quality Control (QA/QC Plan)

The QA/QC requirements are included in the design plans and technical specifications for each water system.

9.0 Proposed contractors and subcontractors

At this time, the contractors to construct the water line have not yet been selected. Request for Proposals were sent out for both water line projects in early August 2017. Selection of these contractors is scheduled to occur in late August of 2017 with contractors being signed in early September of 2017.

10.0 Corrective Action Completion Report

As indicated in Section 2 (Performance Standards), there is a condition in the respective PWS construction permits requiring stamped and signed record drawings and a letter certification by the licensed professional engineering firm responsible for observation of construction to be submitted to the Secretary for review and verification.

11.0 Public Notice

Attachment D contains the public notice that will be sent to individuals located within CAA 1 OU A using the mailing lists that the MSK Engineering and Otter Creek Engineering used to notify individuals and properties about their interest to be connected to a municipal water system. Notice shall be provided to all property owners impacted by this CAP on a form provided by the Secretary. A copy of this CAP will be electronically posted for 30 days for public comment.

- [Figure 1](#) Map showing Proposed Waterline Extension within Corrective Action Area 1
- [Attachment A](#) Public Water System Construction Permit Project C-3478-17.0
North Bennington
- [Attachment B](#) Public Water System Construction Permit Project C-3495-17.0
Bennington
- [Attachment C](#) Weston and Sampson Letter dated June 16, 2017 (Bennington and North
Bennington Water System Extension Excess Soils Disposal Option Analysis
- [Attachment D](#) Public Notice

APPENDIX E: 2016 PFOA Results Surface Soil

APPENDIX E

Summary of Laboratory Results Surface Soil Sampling - PFOA Detections North Bennington, VT March 2016

Sample Location	Sample Date	0 - 6" bgs (ng/g)	6" - 12" bgs (ng/g)	12" - 18" bgs (ng/g)	18" - 24" bgs (ng/g)	VT PFOA Soil Screening Value* (ng/g)
22 Asa Way	3/17/2016	0.82	0.39J	NS	NS	300
25 Asa Way	3/16/2016	0.97	1.2	8.2	7.7	300
Vacant Lot Asa Way	3/21/2016	2.9	4.1	2	1.2	300
1 College Drive: Bennington College						
Bennington College Garden	3/18/2016	1.1	0.65J	0.38J	0.67J	300
Bennington College Adjacent to Garden	3/18/2016	2.9	4.9	2.8	1.8	300
Bennington College Adjacent to Soccer Field	3/18/2016	3.6	3.6	3	1.7	300
Bennington College Jennings Meadow Trail	3/18/2016	2.1	2.8	2.6	2.3	300
132 Harrington Road: Pembroke Nursery						
Stockpile 1 - Topsoil Composite	3/22/2016	5.6	NS	NS	NS	300
Stockpile 2 - Topsoil Composite	3/22/2016	1.5	NS	NS	NS	300
Garden	3/22/2016	0.75	1.8	1.9	2	300
246/248 Harrington Road WWTP Sewer Sludge	3/22/2016	350 ng/L	NS	NS	NS	
1682 Harrington Road	Sampling Pending					300
29 Lever Street	3/22/2016	1.4	1.1	1.1	2.5	300
765 Murphy Road	3/17/2016	6.4	6.3	2.6	1.6	300
? Murphy Road (No Street Address)	Sampling Pending					300
2009 N. Bennington Road	3/22/2016	4.2	4.9	45	NS	300
Paran Lake - Fishing Access Area	3/23/2016	2	1.9	4.1	4.6	300
980 Park Street	3/21/2016	2.7	1.5	1.5	NS	300
8 Polygraphic Lane	3/21/2016	4.2	1.9	2.1	2.4	300
15 Polygraphic Lane	3/21/2016	0.84	1.1	NS	NS	300
59 River Road Playground Roadside	3/16/2016	0.74J	0.86	0.66J	ND	300
59 River Road Playground Slide	3/16/2016	ND	ND	NS	NS	300
180 River Street	3/23/2016	2	0.66J	ND	ND	300
6 Royal Street	3/17/2016	0.82	ND	ND	0.55J	300
5 Scarey Lane	3/17/2016	6.2	5.9	7.1	8.2	300
10 Scarey Lane	3/21/2016	4.1	1.4	2.3	3.6	300
15 Scarey Lane	3/17/2016	1.5	1.2	NS	NS	300
26 Scarey Lane	3/21/2016	1.1	0.33J	NS	NS	300
32 Scarey Lane	3/17/2016	1.3	0.9	0.35J	0.85	300
9 School Street: Village School						
Small Playground	3/18/2016	ND	ND	ND	ND	300
Large Playground	3/18/2016	ND	ND	ND	ND	300
Maple Tree	3/22/2016	1.3	3.1	2.9	NS	300
Northeast Parking Lot	3/22/2016	0.88	ND	0.75	NS	300
26 Susan Taylor Lane	3/21/2016	0.63J	0.86	1.5	1.6	300
37 Susan Taylor Lane	3/16/2016	5.8	3.5	2.5	NS	300
37 Susan Taylor Lane Garden	3/16/2016	8.2	7.3	5.2	2.9	300
492 Water Street - Paran Creek Access	3/24/2016	ND	1.3	ND	0.65J	300
1030 Water Street - Former Chemfab						
Riverside	3/23/2016	9.1	2.7	4.2	4.9	300
West Side	3/23/2016	11	3.6	3.1	4.1	300
BD East	3/23/2016	20	6.1	4.8	13	300
Vent W	3/24/2016	20	11	10	12	300
16 Wilkey Way	3/23/2016	2.9	3.3	4.6	5.7	300

PFOA - Perfluorooctanoic acid

units - ng/g - nanograms per gram or parts per billion

ng/L - nanograms per Liter or parts per trillion

ND - denotes Not Detected

NS - denotes Not Sampled due to auger refusal at 3 locations (2nd and 3rd attempts made adjacent to initial auger hole)

J - denotes Estimated Value

bgs - denotes below ground surface

* VT PFOA Soil Screening Value = 0.3 mg/kg = 300 ng/g

APPENDIX F: Responsive Summary of Public Comments on Environmental Assessment

RESPONSIVENESS SUMMARY ON PUBLIC COMMENTS TO LIMITED SCOPE ENVIRONMENTAL ASSESSMENT DATED SEPTEMBER 2017 FOR DISPOSING OF EXCESS SOIL FROM WATERLINE PROJECT WITHIN VERMONT ROUTE 279 RIGHT-OF-WAY NEAR AUSTIN HILL ROAD

Appendix F of Environmental Assessment

VT Agency of Natural Resources and The Town of Bennington

January 4, 2018

PREFACE:

This Responsiveness Summary documents responses that were prepared jointly by the Town of Bennington and Vermont Agency of Natural Resources (VT ANR). Verbal comments were received during a public meeting at the Bennington Firehouse on September 26, 2017. Approximately 30 people attended the public meeting. VT ANR received written letters and emails during the public comment period, which ended on October 13, 2017, of the proposed use of the Vermont Route 279 Right-of-Way near Austin Hill Road as a location to dispose of excess spoils as part of the waterline extension project. A copy of the September 26th meeting minutes and the written comments on the EA are included in Appendix G.

Summary of Public Comments

Most of the verbal and written comments were opposed to using the Vermont Route 279 Right-of-Way near Austin Hill Road as a location to dispose of excess soils. Most of the comments focused on two primary concerns:

- The importation of soils to the Vermont Route 279 Right-of-Way near Austin Hill Road being in close proximity to their neighborhood (as much as 40,000 cubic yards) that likely contain PFOA, particularly soils originating near the Chemfab facility because soils from these locations likely contain higher levels PFOA than soils at the proposed disposal location within the VT 279 right-of-way. There were many comments and questions about why the excess soils could not be placed back into the trench, at a location closer to the former Chemfab facility on Waters Street, at the Bennington Landfill, or a facility that is permitted to receive soils with PFOA in them. Several comments inquired why the soils, once placed at this location, could not be capped to minimize the potential for PFOA from these soils leaching into groundwater.
- The increased truck traffic associated with moving the soils to this location, particularly if this location is used to dispose of soils originating from areas north of the Walloomsac River.

General Response to Primary Concerns expressed in Public Comments

VT Route 279 right-of-way as a location to receive spoils

The VT Route 279 right-of-way along Austin Hill Road site is no longer being considered as a primary location to receive all the excess spoils from the waterline extension project that is taking place in North Bennington and portions of Bennington. It is possible that the VT Route 279 right-of-way will not even be needed. If this location is used for spoils, it will only receive spoils from the immediate neighborhood, that is, spoils from waterline work along Bard Road, Red Pine Road, Murphy Road, and Austin Hill Road. The Environmental Assessment has been modified to reflect this change.

On typical waterline projects, it is the contractor's responsibility to find locations for excess soils (spoils) locations. Both the Town and VT ANR believed that the contractor could find multiple suitable spoils locations, including private properties, to place excess soils as close as possible to where the soils are removed, but it was not a given. It was important to have at least one location secured prior to the construction contracts being awarded since the terms of the contracts required waterline work to begin immediately, and this location met all of the conditions required by the VT ANR (in the area where PFOA is already in the soils, not in a floodplain or wetland, etc.). This was the reason for proposing the VT Route 279 Right-of-Way location. Once the contractors were authorized to begin work, they were able to quickly secure multiple acceptable locations to receive spoils. Appendix I contains the most updated spoils management plan and the approval letter from ANR. This plan identifies the locations of approved spoils sites, which are located on either private property or Town property (or right-of-way) and the criteria that was followed to select these locations. The goal is to place spoils at locations that are as close as possible to where the spoils are generated.

Currently, between 30% and 40% of the main waterline have been installed and spoils have been placed as close as possible where the spoils have been generated at approved locations, per the approved spoils management plan.

The use of multiple locations will reduce the volume of truck traffic on Vail Road and Austin Hill Road. All efforts will be made to minimize traffic through Old Bennington by:

- using an alternative truck route as the primary route to bring spoils from the northern side of the Walloomsac River to locations receiving spoils on the east side, and
- if possible, finding acceptable locations to receive spoils on the northern side of the Walloomsac River.

Responsive Summary to Public Comments

Below is more detailed responsive summary to public comments. However, this responsiveness survey is not a direct response to each and every comment or question, but provides responses to the major issues, concerns, and questions raised in the public comments.

1. **Question -There were comments and questions about why can't soils be placed back into the trench?**

Response from Town and VTANR- To the extent practical, soils will be placed back in the trench, but the generation of excess soils (spoils) is part of the normal process in water line projects. Spoils are generated by the displacement of the pipe and its subgrade, and some soils are not appropriate to either be placed back beneath and over the piping or for road subbase. When soil types are appropriate, they are placed back in the excavation.

2. **Question-Could the disposal of this soils at the proposed VT 279 Right-of-Way location affect shallow wells, particularly those that are still being used to feed animals.**

Response from Town and VT ANR- All residents that are located in the immediate vicinity or in the downgradient direction of groundwater flow from the proposed disposal location are eligible to be connected to municipal water. For any remaining wells (or all groundwater for this case), VT ANR does not expect any measurable increase in PFOA levels in groundwater due to the placement of these soils. The maximum amount of soils being added to the soils between the VT 279 right-of-way and the river is a small percentage compared to the total soils in this area, and this does not even include soils south of VT Route 279 which are also adding to the PFOA contamination of groundwater in this area.

3. **Question-There were several inquiries about why this material can't be taken to a permitted facility, such as a solid waste or hazardous disposal facility, or a thermal treatment facility.**

Response from Town and VT ANR- From VT ANR's perspective, the requirement for these excess soils to be sent to a disposal facility is not warranted for the following reasons:

- There is no measurable difference in PFOA levels between those soils that will be brought to this location and the existing soils immediately surrounding this location (the right-of-way site). Based on current site investigation data, air modeling, and the area-wide drinking water results, VT ANR has concluded that all soils, including wetlands, surface waters, and floodplains, in this area contain small concentrations of PFOA due to the deposition of air emissions from the former Chemfab facility (approximately ½ mile away from the proposed right-of-way area).

- Soil levels do not pose a human health concern from direct contact. Soil sampling has shown that soils, even those samples on and immediately adjacent to the facility, are at concentrations well below the Department of Human Health Advisory for direct contact of 300 ug/kg (parts per billion).
- Excess soils for this project are being placed in locations where groundwater is already contaminated and within an area serviced by municipal water.
- In addition to the reasons stated above, requiring this construction project to handle spoils as a waste would set an undesirable precedent for all construction projects in the Bennington Area. This specific construction project cannot be held to a more stringent requirement than any other construction project in Bennington. If spoils for this project are required to be disposed at a permitted facility, then all construction projects in the Bennington, private and public, would need to follow the same requirements. At this time, VT ANR believes that such a requirement is not warranted or practical. Given the potential volume of soils being generated, VT ANR required that the waterline extension projects address spoils to ensure soils were confined to areas already contaminated and will be serviced by municipal water.

4. Comment-Alternative routes for disposal which do not require thousands of truckloads to traverse the Village of Old Bennington should be reconsidered. The Village has narrow roads, traffic there is already heavy, and a Village-wide speed limit of 25 mph.

Response from Town and VT ANR- In response to the public concerns, an alternate route was established, which completely avoided the Village boundary as the trustees specifically prohibited trucks traveling on Village Roads. Trucks will travel along Route 9 through the Village on the class I Town Highway. All efforts will be made, to the extent possible, to keep spoils on the same side of the Walloomsac River that they are generated. As stated in the general response above, the goal is to place excess soils at locations that are as close as possible to where they are generated.

Also, the impact on traffic will be temporary. Based on the current schedule, waterline extension work for this area will be completed by October 2018.

5. Comment-The Village of Old Bennington Trustees have not been given adequate opportunity to consider the impacts of this proposed action on the Village and on traffic within the Village. The Village should be given the opportunity to participate in planning efforts to minimize traffic impacts and impacts on road conditions.

Response from Town and VT ANR-Since this comment was submitted, a representative from MSK Engineering, hired by the town to design and oversee the construction work,

has met with the Village Trustees to address their concerns. See response to Comment 4 on measures taken to reduce truck traffic not only in the Village but the entire area.

- 6. Comment- A detailed fate and transport assessment was recommended to predict levels of groundwater contamination that might result at the new location prior to moving soils.**

Response from Town and VT ANR- Fate and transport models have value in understanding how contamination moves in the environment and potentially predicting contaminant movement and magnitude. However, there are limitations and uncertainties that are inherent with models” attempting to mimic complicated environmental systems, such as contaminant movement through the subsurface. ANR believes that a fate and transport model lacks the sensitivity to provide meaningful results for predicting levels of PFOA groundwater contamination as a result of adding soils with PFOA to a location with existing soils that have comparable levels of PFOA. Based on the site investigation data and the current conceptual site model for the area, VT ANR believes that all shallow groundwater in this immediate area is contaminated with PFOA above the Vermont Groundwater Enforcement Standards of 20 ppt. Therefore, moving soils from one part of the area receiving waterline extension (CAA I OU A) to another part of CAA I OU A will not have a significant impact on groundwater. In addition, groundwater in this area will be re-classified to a Class IV (non-potable) and this area will be served by municipal water.

- 7. Comment- There was a recommendation that any placement of excess soils in an open environment should be accompanied by long-term groundwater monitoring in a downgradient direction to ensure that leaching is not taking place.**

Response from Town and VT ANR- The current settlement agreement between the state and Saint-Gobain requires Saint-Gobain to perform site-wide long-term monitoring to track groundwater contaminant levels to validate site modelling and track groundwater conditions over time. VT ANR does not plan on requiring location specific groundwater sampling around the area where these soils are being placed for the following reasons:

- Based on the site investigation data and the current conceptual site model, soils and groundwater in this area are assumed to be contaminated above the Vermont Groundwater Enforcement Standards;
- Waterlines are being extended to this area to provide municipal water;
- Groundwater in this area is being reclassified to a Class IV, which restricts non-potable use of this groundwater, and
- It will be difficult to measure the effect adding soils at this location could have on groundwater concentrations given the variability that have been seen in drinking water and monitoring wells over time... There are multiple variables, such as water levels, soil moisture, etc, that can affect PFOA concentrations at these low levels.

- 8. Comment-It was recommended that the Bennington Landfill should be considered to receive spoils from the current waterline project because the location has restricted access and currently has a monitoring well network in place which could be used to monitor the effects of soil placement at this location on groundwater quality.**

Response from Town and VT ANR-The landfill does have restricted access and a monitoring well network, but it also has private drinking water wells located in the presumed direction of groundwater flow from the landfill. Until there is a plan to connect these water supplies to municipal water, VT ANR does not consider the landfill an acceptable location to receive spoils from water line work.

- 9. Comments-There were several comments recommending the evaluation of installing a low permeability soil or cap (to reduce infiltration through the soils) as part of remedy selection, regardless of location.**

Response from Town and VT ANR-The evaluation of a low permeability soil cap was briefly looked at, but VT ANR ultimately decided that this was not necessary because these soils do not pose a direct contract risk and the placement of a cap on these soils would not change the conditions that groundwater under the VT 279 right-of-way. This groundwater is believed to be already contaminated with PFOA above Vermont Groundwater Enforcement Standards, will be classified as Class IV groundwater (non-potable), and this area will be serviced by municipal water.

- 10. QUESTION- In discussion it was revealed that the soil near the plant has ADDITIONAL contaminants in it that were NOT found in the Austin Hill soil, why would anyone knowingly introduce new contaminants?**

Response from Town and VT ANR Either VT ANR nor the Town are clear what additional contaminants the questioner was referencing. At this time, there is no information that would suggest that soils near the plant have additional contaminants.

- 11. QUESTION- Why would contaminated soil dumping start BEFORE the testing results are compiled or released? Many have asked to see the results but during the meeting, the release date was said to be sometime in December.**

Response from Town and VT ANR-Saint-Gobain's consultant are performing site investigation work, which includes collecting area-wide soil data. Per the requirements in the Consent Order, Saint-Gobain submitted a draft site investigation report on December 15, 2017. The draft report can be found at the following website:

<http://dec.vermont.gov/commissioners-office/pfoa>

From VT ANR's perspective, this data was not necessary before moving forward with the waterline work. Based on reasons presented in the draft EA, the VT ANR is confident that moving soils within areas where PFOA is already present in groundwater at concentrations above 20 ppt and in areas where properties will be connected to water lines will not add any additional risk to local residents.

- 12. QUESTION- During the meeting it was stated that the polluter was subcontracting the testing company and would be releasing the results? I have spoken with the testing crews (contracted by Saint-Gobain) at multiple sites but have not seen the other crew contracted by the state. Can we see the map of testing locations from BOTH teams showing who has tested where?**

Response from Town and VT ANR- The draft site investigation shows locations where samples were collected. VT ANR hired a consultant to collect split sample and observe Saint-Gobain's site investigation activities at targeted locations. The collection and testing of the split samples will help VT ANR assess the quality of the Saint-Gobain data. To clarify, the state did not drill borings or monitoring wells. VT ANR is expecting to be receiving a draft document from our consultant shortly that evaluates the quality of the Saint-Gobain site investigation data based on ANR's split samples. It is anticipated that this document will be finalized and placed on the ANR website sometime in January.

- 13. QUESTION- It was stated the EPA would not be concerned about the chemicals going into the river. This does not sound correct to me. During the meeting the geological data was mapped to show all runoff headed to the river. Given that they were still drilling and taking samples just before the public meeting, how would this have been determined to be an acceptable amount of contaminants complying with EPA standards if the results of the testing have not yet been compiled? Has the EPA been informed of this project's plan to dump contaminated soil on land that is near wetlands and will runoff into the river?**

Response from Town and VT ANR - EPA does not have standards for drinking water, surface water, or soils. EPA does have risk-based screening levels for drinking water and one for soils, both of which are higher (not as protective) than Vermont's levels for drinking water and soils. EPA is not involved in the area-wide PFOA response in Bennington. They have offered and provided technical support to the State of Vermont in its PFOA response. At ANR's request, they have performed monitoring at three local landfills, including the Bennington Landfill, and have performed site investigation activities in 2017 at the Bennington landfill.

At the public meeting in September, the response to this question about the possible effect on the Walloomsac River could have been articulated better. From ANR's perspective, we do not believe that moving small amount of soils (thousands of cubic

yards) relative to the total amount of soil within the area of contamination (millions of cubic yards) will adversely affect the river, especially when this location for placement of soils is over ¼ mile away from the river.

14. **QUESTION-**Why has there not been a more detailed report and investigation of the nearby wetlands? Based on what you discussed there was only one firm that made the ultimate decision that nearby wetlands would not be affected. This report was performed by Gilman & Briggs Environmental, Inc. on July 11, 2017. Once approximately 45,000 cubic yards of soil is put in place how will this impact nearby wetlands. Please direct us to where this potential impact was investigated. If not, we feel this should be addressed properly. Note that there is an extremely large wetlands complex along the Western boundary that was not addressed.

Response from Town and VT ANR – No further investigation of nearby wetlands is considered warranted because soils would not be placed near them. The wetlands survey by Gilman & Briggs Environmental, Inc. identified the wetland that is closest to where the excess soils are proposed to be placed. Any activities associated with the placement of the soils will take place outside the wetland and the required buffer distance from the wetland. The wetland boundary will be confirmed with ANR's wetlands program before any soil is placed at this location. In addition, only excess soils from nearby locations (See General Response to comments at beginning of this responsiveness survey) are proposed to be placed at this location. Therefore, the volume of soil that could be placed at this location will be much less than the original volume of 45,000 cubic yards.

15. **QUESTION-** Specifically what is the soil being tested for? As anyone knows, soils at the edge of a road will be more prone to have Transmission oils, Engine oils, Antifreeze, Gasoline additives from spills or leaks, Blacktop byproducts, etc. In the meeting it was stated this soil would only be an additional 2% by volume BUT this 2% is from the road side, NOT from the woods and may contain a higher concentration of chemicals.

Response from Town and VT ANR - As we indicated in the general response, the goal is to keep soils as local as possible and the VT 279 location will be limited to excess soil in the immediate neighborhood. Additionally, the VT 279 location is along a roadway. Other than the PFOA issue, this waterline project is no different than any other waterline project throughout the state. Soil testing is not typically required unless that there is prior knowledge or sensory (visual or olfactory) evidence that suggests a release or potential release of a contaminant may be present along the proposed waterline alignment. For waterline projects, the most common contaminant found is petroleum. There were two locations identified along North Bennington Road (an existing gas station and the former Vermont Tissue Site) where there was concern that there could be petroleum contaminated soils (other than PFOA) along the proposed waterline alignment. Soil boring were advanced, and environmental samples were screened for volatile organic compounds (VOCs) using photoionization detector (PID). No VOCs were detected by the PID in any of the soil samples. Also, there was no visual or olfactory evidence of

petroleum contamination in any of the samples. Appendix H contains a copy of this report.

- 16. Question -Big Boys Toys store offered to take this contaminated soil and he was refused, WHY? There were several questions about the status of Big Boys Toys to potentially receive excess soils.**

Response from Town and VT ANR -As stated at the public meeting, neither VT DEC nor the Town are aware that Big Boys Toys has offered to take any soils. However, upon further review, this location does not meet the siting criteria because it located within the FEMA 100-year floodplain.

- 17. Question-Will Construction and Demolition (C&D) such as asphalt, concrete, stone and debris generated from saw cutting the roadways also be dumped at the 279 location? If so, what is the estimated volume of C&D vs soil you plan on dumping at this site? Does C&D require additional permitting?**

Response from Town and VT ANR – There could be incidental volumes of C&D mixed in with spoils. VT ANR approval for disposal of incidental volumes of asphalt (or brick, concrete) generated during excavation projects is generally not required, particularly where the mass of asphalt generated is small compared to the total volume of spoils generated, such as with this waterline extension project.

- 18. Will continuous air monitoring be set up at the dump site for the protections of the not only the workers by the nearby neighborhoods? We feel this is necessary unless you can guarantee that all soil levels will be below detection limits and there is no change of hitting a pocket of heavier contamination throughout the duration of the project.**

Response from Town and VT ANR -No air monitoring is planned. As stated previously, soil levels do not pose a human health concern from direct contact. Soil sampling has shown that soils, even those samples on and immediately adjacent to the facility, are at concentrations well below the Department of Human Health Advisory for direct contact of 300 ug/kg (parts per billion). The soils sample results from the draft site investigation report prepared by Barr Engineer confirm that area-wide soil concentrations are well below the direct contact value of 300 ug/kg.

APPENDIX G: Minutes of September 26, 2017 Public Meeting at Bennington Fire Station
on Environmental Assessment and Written Comments submitted on Environmental
Assessment

From: Shively, Andy
Sent: Monday, October 09, 2017 8:52 AM
To: Schmeltzer, John
Subject: Fwd: PFOA EA comments
Attachments: Smith comments 10-03-17.pdf; ATT00001.htm

Categories: PFOA

Attached find my notes I drafted over the weekend. I reviewed the youtube video several times and believe the notes capture the verbal comments provided by the Sept meeting participants.

The general position of those that spoke was in opposition to the proposal.

The prevailing themes of comments include concerns regarding groundwater and water supply contamination, impacts to natural resources, local traffic, local road conditions, and property value. Opponents generally expressed concern about the placement of trench spoils adjacent to or near their property.

I have not read your email from yesterday yet but will respond as warranted.

Andy Shively

Hazardous Materials Coordinator

VTrans Highway Div

Maintenance and Operations Bureau

(802) 229-8740 c

(802) 250-4666 p

Begin forwarded message:

From: "Shively, Andy" <Andy.Shively@vermont.gov>
To: "Shively, Andy" <Andy.Shively@vermont.gov>
Subject: FW: PFOA EA comments

Draft Comments from PFOA ROW Public Meeting Sept 26, 2017

Panel:

John Schmeltzer (Schmeltzer)

Rob Sikora (Sikora)

Rob Faley (Faley)

Jason D. (MSK)

Bard Rd.

Taylor expressed concern about the proposal.

Taylor indicated he understood the reality of contamination "out of ignorance" but felt that the proposal was "not the case

and that contamination would be spread "knowingly".

Taylor expressed that he understands the reasoning of keeping the contaminated soil in the area of contamination but felt that the "whole load" would be put in the proposed site. (Taylor eluded that he understood and neighborhood soils would be OK but soils from near the plant would not be OK).

Ed Donniss (Donniss)

Bard Hill Rd.

Donniss wondered if the proposed site was for the first phase of the CAP and where the remainder of the spoils would be going.

Donniss indicated that they should "Give it to St Gobain" (to applause).

Stewart Hurd (Hurd)

Bennington Town Manager

Sole Street (not in the neighborhood)

Hurd questioned if this is truly the only site.

Hurd indicated he understood why resident feel the landfill should take it.

Hurd indicated that he understood neighbors felling that if came from outside the neighborhood it wasn't appropriate.

Hurd asked if they/we would start looking for other sites and that importing soil doesn't make sense. (Video)

Smith indicated the the landfill doesn't want it.

Hurd indicated that the Landfill was under further investigation (by St Gobain) as a possible source and that all the Town residents would be "drawn into" the issue (presumably by taxes if the landfill is found to be a separate source (by St Gobain)

Hurd indicated the landfill cannot be considered as a site due to that ongoing investigation.

Steve Bennet (Bennet)

Murphy Rd.

Bennet asked if the site would be lined?

Schmeltzer indicated not currently proposed.

Bennet asked if the site will be monitored and if it will be used for future disposal.

Bennet indicated his property was 100 ft below the site and "everything goes downhill"

Lorri Cohen (Cohen)

Cohen asked that this "can't be the first" PFOA contamination issue and are there other examples (of CAP).

Schmeltzer indicated that there are no other example of this type of proposal and of the other PFOA Cap examples that do exist (NH), the CAP did not attempt to manage soils.

Schmeltzer indicated this is a new issue and that soil management was a challenge.

Cohen indicated she was confused by the idea that this constituted "management" considering there is not containment (lining).

Cohen indicated she was skeptical that it will not expand.

At this point the order begins to break down and the audience members begin posing question aloud to the panel and each other. The general themes of this portion of the meeting revolved around construction activity and timing, traffic, road damage and repair.

Shively indicated that the proposal would be taken up the chain of command and that the administration would make the decision to pursue a FONSI or not.

Balzer indicated he wouldn't connect to the water line anyway because they plan on putting fluoride in the water.

At this point audience member began talking among themselves and the meeting broke up without a formal closing.

Andy Shively
Hazardous Materials and Waste Coordinator II
Environmental Program, HazMat Unit
Vermont Agency of Transportation (VTrans)
Highway Division - Maintenance & Operations Bureau
2178 Airport Road, Barre, VT 05641
Mobile (802) 229-8740
Pager (802) 250-4666

Please Note New Email: andy.shively@vermont.gov

-----Original Message-----

From: Schmeltzer, John
Sent: Thursday, October 05, 2017 3:33 PM
To: Schwer, Chuck <Chuck.Schwer@vermont.gov>; Spiese, Richard <Richard.Spiese@vermont.gov>
Cc: Shively, Andy <Andy.Shively@vermont.gov>; Faley, Robert <Robert.Faley@vermont.gov>
Subject: FW: PFOA EA comments

FYI

-----Original Message-----

From: Ramsey, Jeff
Sent: Thursday, October 05, 2017 3:30 PM
To: Sikora, Kenneth (FHWA) <Kenneth.Sikora@dot.gov>
Cc: Schmeltzer, John <John.Schmeltzer@vermont.gov>
Subject: PFOA EA comments

Additional comments from Smith attached. Rob - you may have received the same

Jeff Ramsey
Environmental Specialist Supervisor
Vermont Agency of Transportation
Environmental Section
1 National Life Drive
Montpelier, VT 05633
(802) 828-1278
jeff.ramsey@vermont.gov
VTrans Environmental Section Website

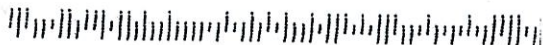


Penny Rich Smith
58 Bard Rd
Bennington, VT 05201

WHITE RIVER JUNCTION
VT 050 1 L
25 SEP 2017 PM



Kenneth R. Sikora
Environmental Program Manager
Federal Highway Admin.
Federal Bldg., Suite 216
87 State St.
Montpelier, VT 05602-9505



From: Penny Rich Smith & Sandra Smith (9/14/17)

Remarks Regarding the Use of Austin Hill Rd. and Rte. 279 Right-of-Way for Disposal of Trench Soils From Waterline Expansion Project:

Talk about adding stress to our already stressed neighborhood!

Dumping contaminated soil, some 66,000 tons of it, in our neighborhood is a matter of great concern for all of us. The answer is easy and clear – this idea is absurd, unfair, irresponsible and ridiculous! We feel insulted by this suggestion.

You would be ensuring that some contamination stays in this area in the soil and running off into ground water for a good long time. PFOA loves to find its way to water and make people sick.

We have all been severely stressed with this nightmare intrusion and have been doing everything we can to get rid of this poison, and now you dare to propose that all the “spoils” generated by the expansion of the waterlines to 200 homes be dumped in our neighborhood – this has to be a joke that isn’t funny at all! And you even admit that the spoils will contain PFOA.

Who thinks this proposal makes any environmental sense? I’d like to know. Why is it that the spoils can’t be dumped at a landfill somewhere or on St. Gobain property – most likely because it is so contaminated. There must be some remote location not near homes that would be a “reasonable” solution!

Our voices must be heard on this matter.
See you at the meeting on September 26th, 6:30 PM at the Bennington Firehouse.

58 Bard Rd.
Bennington, VT 05201
Penny Rich Smith
Sandra Smith

-----Original Message-----

From: Pamela Monroe [mailto:happyapp@comcast.net]

Sent: Tuesday, October 03, 2017 9:44 AM

To: Kenneth.Sikora@dot.gov

Cc: Ramsey, Jeff <Jeff.Ramsey@vermont.gov>

Subject: PFOA

Dear Sir

Gary and Myself are property owners adjacent to where you want to put the PFOA dump.

Questions:

Big Boys Toys store offered to take this contaminated soil and he was refused, WHY?

Can you explain why you would take the contaminated soil away and put fresh soil back in the ditch with PFOA soil on either side of the ditch? We are trying to make sense of that.

We have a swallow well in the back of our property that feeds our horse barn. I would guess that will make that well more polluted.

Why can't this material be taken to a haz mat dump site?

I'm guessing if this was your neighborhood you would not be happy at all and it probably wouldn't even happen. The neighborhood strongly opposes this.

We will be looking forward to hearing from you.

Thank You

Gary and Pam Monroe

Dear Sir,

I am writing to express my concerns about the Bennington PFOA Trench Spoils Disposal plan and to ask some specific questions about the EA. I am a resident of the historic Village of Old Bennington and a former US EPA Superfund Remedial Project Manager.

1. What requirement dictates the removal and disposal of the trench spoils? Use of this material as backfill should be reconsidered? If this material is clean enough to be dumped in the environment along Route 279, then it should be clean enough to be backfilled into the excavated trenches, particularly considering that the residences along the excavation are already being supplied with clean waterlines. Even if there is some PFOA contamination in the soils, the impact of its replacement in the excavated trenches should be small compared to the contamination presumably already existing in the vicinity of the excavation.
2. What criteria will be used to determine whether the spoils need to be disposed? What testing will be done to minimize the amount of spoils that need to be disposed? Minimizing the volume to be disposed also minimizes the impacts on roads and transportation.
3. If trench spoils are too contaminated to use as backfill, then they are too contaminated to dump along Route 279. If that is the case environmentally-protective disposal and/or treatment options such as disposal in hazardous waste facilities need to be reconsidered.
4. Alternative routes for disposal which do not require thousands of truckloads to traverse the Village of Old Bennington should be reconsidered. The Village has narrow roads, traffic that is already heavy, and a Village-wide speed limit of 25 mph. The impact of this plan on the community would not be insignificant.
5. The Village of Old Bennington Trustees have not been given adequate opportunity to consider the impacts of this proposed action on the Village and on traffic within the Village. The Village should be given the opportunity to participate in planning efforts to minimize traffic impacts and impacts on road conditions.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

I appreciate the call from John Schmeltzer following up on questions I had regarding PFOA Trench Spoils issues. I have looked at the EA Appendix C and would like to add the following comments regarding capping of trench spoils.

The EA states that *"Therefore, moving soils around in this area will not contaminate groundwater that is currently below Vermont's standards to levels that could go above Vermont's standards"* and *"Therefore, the proposed "excess" soil from the water line project would not add any substantial mass of PFOA to this area."*

I read these statements to reflect the remedial practice of moving wastes around within an "Area of Contamination" (AOC). While this practice may expedite remedial action, I believe the state should manage the wastes so as to minimize their impact, where practical, even if the impacts are small. Cleanup programs generally include criteria that identify a preference for *"reduction of toxicity, mobility or volume through treatment"* (40 C.F.R. § 300.430(e)(9)(iii)). I do not see this objective being either evaluated or being met. Since capping is generally considered to be a form of "treatment", it should be considered along with other alternatives.

Neither does the use of the AOC relieve the EA of the need to address a reasonable range of alternatives. One alternative I did not see addressed in the EA was the option of capping the trench spoils to prevent any additional contribution to the existing groundwater contamination. The contribution may be relatively small, but to adequately address the range of alternatives, the EA should include options for capping the trench spoils.

Since treatment and disposal options are limited in this case, the plan is effectively to create new disposal cell(s) (e.g. along Route 279). The public is less concerned with the concepts of "AOC" and "range of alternatives" than with the fact that the remedy still allows contaminants (even if in small quantities) from spoils to escape to groundwater. Since the primary purpose of the EA is to inform the public regarding the decisions being made and their bases. Including capping would address this apparent gap in consideration of alternatives.

In addition, if capping were included as part of the remedy, it might no longer be necessary to limit spoils placement to the area that is believed to be "already contaminated". The range of disposal sites to be considered could then be expanded and reduction of related impacts (such as traffic) given greater consideration.

Along with impermeable cap options, engineered evapotranspiration (ET) caps should also be considered. These are vegetated, environmentally friendly, and act passively to prevent infiltration of water.

Thank you for considering these comments. I believe the public would benefit from additional information regarding these issues.

Thanks

Julie Monroe
609 Austin Hill Road
Bennington, VT 05201
jmonroe49@gmail.com

October 10, 2017

Kenneth Sikora
Environmental Program Manager
Federal Highway Administration
Federal Building, Suite 216
87 State Street
Montpelier, VT 05602

Dear Mr. Sikora,

As much as it's not shocking, I'm appalled at the struggle we have had with this entire situation. From day one, the misinformation and half-truths have been unsettling and discouraging. To say we have lost faith with our elected officials and state hired employees is an understatement to say the least.

Saint Gobain is currently fighting a lawsuit from the part they have played in contaminating and poisoning local lands and water supply. Now the town and state wants to do the same by dumping contaminated soil on a right of way that borders wetlands and privately owned hillside land, not far from residential homes which includes many that have wells that were considered within safe limits (<http://dec.vermont.gov/sites/dec/files/co/pfoa/documents/Area-of-Interest-No-Bennington.pdf>). This location is also uphill from the Walloomsac River. At the public meeting it was stated that there was limited erosion in the area that is being considered. I am not an engineer or a scientist, but as a teacher I can assure you that your local elementary school children understand the concepts of pollution and water run off. I'm sure many of these children also are quite knowledgeable about ethics and how to be a good citizen. That statement makes me question the knowledge and/ or the integrity of the team that was presenting the information. From day one I have felt like I could not completely trust the people who are supposed to be working on "our side" and this misinformation again reaffirms my beliefs.

I understand that it's the town's job to do things as efficiently but also as cheaply and quickly as possible. I am aware that there is a cost and effort involved in proper disposal of contaminated soil, but I don't think that it should be at the expense of myself, my neighbors, and the future of the surrounding lands, streams and rivers. In April, a statement was released by Vermont Governor Phil Scott, Attorney General TJ Donovan, Senator Dick Sears, Senator Brian Champion, Representative Mary Morrissey, Representative Tim Corcoran, Representative Kiah Morris, and Representative Rachael Fields that assured us that this matter would be resolved and that it would not be at the expense of those who have already been victimized by this matter. As quoted by these individuals:

"We will continue to hold Saint-Gobain responsible because the 'polluter pays' model is critical to cleaning up contaminated sites across the state. The entire state team is actively engaged in moving toward resolution for the people of Bennington and North Bennington, and my commitment has not and will not waver." - Governor Phil Scott

"the ultimate resolution is protective of public health and holds the polluter responsible"- Dick Sears

"We're working toward a commonsense solution that gives the people of Bennington and North Bennington comfort that their public health and water is being protected and we will continue moving forward on that track." - Attorney General TJ Donovan

As hopeful as we are with the progress that has been made towards the construction of the waterline, it sickens me to think that dumping contaminated soil is considered a "resolution", "moving forward" or "protective of public health". If the "polluter pays model" really is considered critical to cleaning up contaminated sites across the state, then why are we even considering blindly dumping contaminated soil on lands that neighbor and leach into privately owned properties? Why are we not requesting that the polluter pay to have this soil deconstructed. It was stated at the public meeting that there are facilities to do this but they do not yet have the permits in place to deconstruct soil of this contaminate. Are we really incapable of filing for permits or do we not want to ruffle any more feathers with our friends from Saint Gobain?


It is publicly known that the owner of Big Boy's Toys, a local business that is located within the contamination zone requested that the soil be used as fill on his property. Due to their location, their levels are among the highest in the area. It was stated at the meeting that that area was turned down because they might have other contaminates on the property. Wouldn't the soils from the water line project be an improvement to what is already there and in fact improve what they already have? An

even larger concern to me is that they want to dump the soils from their roadside (with all of the **other contaminates**) to trickle down and further contaminate the properties of Austin Hill, Murphy Road, and the Walloomsac River. Again, I'm not a scientist but common sense just does not see the logic (or lack of).

It is also concerning to me that assumptions and judgements were made about the level of contamination at the proposed dumping site without any data being available as to the actual contamination levels of the site and of the spoils being trucked in from the construction areas. Drilling for soil samples occurred in September just prior to the public meeting and the results will not be released by Saint Gobain until December. Again, I'm feeling like the scientists and engineers involved in this project do not care about the local land or the people involved and think that we are incapable of realizing the injustice they are bringing to us. We have already been robbed and raped by Saint Gobain, does that make it acceptable for them to do as well?

How is this any different than the harm that Saint Gobain has been causing to our town for many years? I urge you to make the ethical and environmentally kind decision to not dump toxic waste on the 279 right of way. Prove to the world that the powers that be in Vermont, really do care about the health of its environment and its citizens and will in fact hold up to the "polluter pays model".

Sincerely,

A redacted signature, appearing as a dark, irregular shape, likely representing the name of the sender.

Contaminated Soil Dumping Concerns and Comments:

After attending the public meeting I have generated a list of comments and concerns.

- It was interesting to see that ALL of the officials who had been involved in the decision to recommend this site for dumping were not from the area.
- The discussion about the extra dirt and building the obstruction berm in an attempt to justify dumping more soil did not take into account this was only the dirt local to the area as opposed to all the dirt with much higher levels from areas around the source of contamination. **QUESTION-** In discussion it was revealed that the soil near the plant has ADDITIONAL contaminants in it that were NOT found in the Austin Hill soil, why would anyone knowingly introduce new contaminants?

QUESTION- Why would contaminated soil dumping start BEFORE the testing results are compiled or released? Many have asked to see the results but during the meeting, the release date was said to be sometime in December.

QUESTION- During the meeting it was stated that the polluter was subcontracting the testing company and would be releasing the results? I have spoken with the testing crews (contracted by Saint Gobain) at multiple sites but have not seen the other crew contracted by the state. Can we see the map of testing locations from BOTH teams showing who has tested where?

QUESTION- Why is it not acceptable to dump soil in locations like Big Boy's Toys? The owner has requested the soil and is located within the contamination zone. I have heard that he was not allowed to have the material due to being in a flood plain but the geologists have stated multiple times the contaminant will work its way down from the Austin Hill dumping location and into the river. This location has been said to have multiple contaminants so what is brought in would be cleaner than what is already there.

QUESTION- It was stated the EPA would not be concerned about the chemicals going into the river, this does not sound correct to me. During the meeting the geological data was mapped to show all runoff headed to the river. Given that

they were still drilling and taking samples just before the public meeting, how would this have been determined to be an acceptable amount of contaminants complying with EPA standards if the results of the testing have not yet been compiled? Has the EPA been informed of this project's plan to dump contaminated soil on land that is near wetlands and will runoff into the river?

QUESTION- Specifically what is the soil being tested for? As anyone knows, soils at the edge of a road will be more prone to have Transmission oils, Engine oils, Antifreeze, Gasoline additives from spills or leaks, Blacktop byproducts, etc. In the meeting it was stated this soil would only be an additional 2% by volume BUT this 2% is from the road side, NOT from the woods and may contain a higher concentration of chemicals.

QUESTION- I am trying to understand why the soil that was dug out, can't be put back in the trench? I have worked for two local excavators and have seen or dug many holes and trenches. (I also have and use my own equipment.) It is understood that large rocks would not be contacting the pipe, as a bed of sand contacting the pipe makes sense but not all the backfill. Why not smooth out the remaining material around or behind the trench adding a possible couple of inches to the roadside ditch, also reducing the cost of the project by eliminating trucking.

My thoughts- It was great to see a plan of action come together in a timely manner to extend the waterlines but it seems the idea of collecting all material from each zone and dumping them in someone's backyard was not thoroughly discussed at the time. It seems that this location was selected and approved before anything was discussed with the public. Equipment was in and signs were posted at the site as contractors were told this is where the material would be dumped. After the meeting it sounded more like this was a potential site that needed to be approved as it was not a true highway use as the R.O.W. was intended. After spending 10 years building my house, we are forced to discuss relocation due to contamination we had nothing to do with. To knowingly add more contamination to the area would add insult to injury. I paid for my well, pump, tank, electronics, wire, etc and before it is used, have been told the subcontractors were asked to quote filling it with concrete and removing filters from the basements. The home owners would be asked to pay quarterly fees to

use the town water and this wouldn't be paid by the offenders, also discouraging. Seeing the town manager at the meeting was also a positive, hearing him agree it was not optimum to bring soil that had a higher level of contamination and dump it at this proposed site also was good to see. We have contributed much to this town and have tried to keep a positive outlook. As many people and businesses are relocating away from Vermont, we are trying to keep our roots in the area and build a home for our future. Recently I have considered moving to North Carolina. Our hope is, the Federal Highway Right of Way will remain true to its intended use and not become a dumping zone for questionable material.

Sincerely

[REDACTED]

October 12, 2017

Kenneth Sikora
Environmental Program Manager
Federal Highway Administration
Federal Building, Suite 216
87 State Street
Montpelier, VT 05602-9505

Jeff Ramsey
VTrans Environmental Section
Vermont Agency of Transportation
One National Life Drive
Montpelier, VT 05633-5001

Re: Proposed 279 Soil Disposal-Revised

Dear Mr. Sikora and Mr. Ramsey,

Please consider the following written comments needing your feedback in regards to the "Environmental Assessment for PFOA disposal" at the Route 279 location. On behalf of the local residents being directly affected by the soil disposal the following questions are being submitted prior to the October 13, 2017 public comment deadline.

Upon review of the Environmental Assessment (EA) dated September 11, 2017 and the public meeting on September 26, 2017, we have several questions we would like you to answer and observations that we would like you to consider.

1. Why have you not done a more comprehensive Assessment such as an Environmental Impact Assessment (EIA) that takes into consideration the storm water, traffic and community in addition to many other areas of concern. This report is considered an environmental due diligence report that is a more detailed investigation and would answer many of the questions raised in the September 26, 2017 Public Meeting and in this letter.
2. We have reviewed EA report dated September 11, 2017. We were told that this report was comprehensive and did not recommend a more comprehensive EIA. We feel the EA presented was minimal at best (only 8 pages). In the September 26, 2017 you mentioned that some EA's are ½ to an inch thick. Please explain why this EA is so minimal and rushed for such an important issue. Please comment.

3. Why have you not considered more offsite disposal locations for the “spoils”? Why were we told there were no other disposal options for the soil? Based on our investigation as citizens we have found an approved landfill in Seneca, NY with a current Part 360 permit that will accept the soil immediately for disposal (upon presentation of laboratory analysis and detailed waste profile submitted for approval). This Seneca landfill among others we researched in Pennsylvania is fully equipped to handle and properly treat not only surface runoff in addition to treatment of leachate in a controlled environment. This would not hold up the water line installation project and would reduce the traffic due to loading at the point source instead of hauling to one location with limited access. The disposal locations you discussed were for thermal treatment and do not currently have the permits to thermally treat PFOA contaminated soils. Based on our discussion with these thermal treatment facilities they may be years from being able to add PFOA to their list of acceptable contaminants.

4. Why has there not been a more detailed report and investigation of the nearby wetlands? Based on what you discussed there was only one firm that made the ultimate decision that nearby wetlands would not be affected. This report was performed by Gilman & Briggs Environmental, Inc. on July 11, 2017. Once approximately 45,000 cubic yards of soil is put in place how will this impact nearby existing wetlands. Please direct us to where this potential impact was investigated. If not, we feel this should be addressed properly. Note that there is an extremely large wetlands pond complex along the Western boundary that was not addressed.

5. An independent wetlands biologist assessed the area on the Southwest corner of 279 and Austin Hill Road. Existing pink delineation flags are in place from your wetlands survey. Note that “Wetland A” begins immediately below the area where prior fill material has been placed from prior projects. It is in question if this area has enough space to allow for the proposed cubic yard placement and does not fulfill Criteria 2.0 of the “EA” where fill material will be placed 100 feet from a wetland.

6. It is our understanding that there are 5 phases and 5 separate contracts in our area of concern with approximately 3 to 4 of the phases (please detail this for us) dumping the overburden generated from installation of the water line at the 279 location. We would like to see a work plan for each phase along with proposed start dates including but not limited to the traffic control plan for Austin Hill, Murphy Road, and Vail Road along with other streets that will be impacted by truck traffic.

We have reviewed the documents pertaining to this dump site. The average number of truck trips per day is not often the values used or realistic in a traffic study (as presented in the EA). The maximum number of trucks per day should be used traveling through a residential area when completing traffic study. Based on our review we could not locate where the following concerns related to truck traffic to the dump site have been addressed:

- hours of operation
- school bus schedule
- tourist traffic
- informing schools (MAU for example) and other organizations that have Austin Hill and Vail Road as training routes? Have they been informed to seek alternate routes for their training for the duration of this project?
- will Jake breaks be allowed
- dust control (have you considered providing the nearby homes with car washes, window cleaning and pressure washing of siding that will be affected with the dust generated from this project
- noise control barriers
- distance from truck tipping for a sound analysis in decibels to the closest residential locations (note extreme noise generated from back gate of truck when tipping)
- trucks to be lined and covered to reduce dust
- housekeeping (truck wash at dump site and street sweeping on a daily basis)
- using your calculations provided in a slide you presented at the September 26th meeting we can estimate 19 trucks per day (containing soil) going up or down Austin Hill and 19 (empty) for 200 days. Based on these calculations there will be a truck passing our homes or in the immediate area approximately every 12.6 minutes to access the dump site. We would like you to address what plans and measures you have in place to make this not only safe for our residents but with as minimal disruption to our daily lives.
- local animals such as cats, deer, fox, chickens that use Austin Hill on a daily basis to cross

7. Will continuous air monitoring be set up at the dump site for the protection of not only the workers but the nearby neighborhoods? We feel this is necessary unless you can guarantee that all soil levels will be below detection limits and there is no chance of hitting a pocket of heavier contamination throughout the duration of the project.

8. Have you identified the existing level of contamination at the 279 dump site through soil sampling? If so, can you please provide these results to us? Do you plan on dumping any levels of PFOA contaminated soils greater than the levels that currently exist at the 279 site?

9. Will C&D such as asphalt, concrete, stone and debris generated from saw cutting the roadways also be dumped at the 279 location? If so, what is the estimated volume of C&D vs soil you plan on dumping at this site? Does C&D require additional permitting?

10. What are your plans for future monitoring of the dump area? Such as groundwater testing? Plans for site restoration? Planting trees, reseeding? We were told there may be an architectural drawing of what this will look like after the soil is dumped. We would

like to be given a copy of this drawing. This will give us a visual impact of the area of concern that we feel is our right to see prior to project startup.

11. Why have you not considered loading dump trucks/dump trailers as you are generating the spoils (live loading)? As each truck is filled it is then sent directly to an approved landfill for offsite disposal that we have referred to in #3 above. This method would reduce truck traffic greatly. It also reduces the potential spread of contamination in areas where the wells were not contaminated. This method is best since it is a simple process of excavation, loading and offsite disposal.

In conclusion, please consider our recommended options addressed in items #3 and #11 associated with proper off site disposal above. Water line installation would not be delayed and the 279 dump sites in addition to all other local dumpsites in consideration will not be necessary.

Upon request we can provide a signature page that includes names, address and numbers of residents that are in support of this letter.

Sincerely,







Kenneth R. Sikora
Environmental Program Manager
Federal Highway Administration
Federal Building, Suite 216
87 State Street
Montpelier, VT 05602-9505

October 13, 2017

Jeff Ramsey
VTrans Environmental Section
Vermont Agency of Transportation
One National Life Drive
Montpelier, VT 05633-5001

via e-mail

Re: Environmental Assessment for the Proposed Use of Vermont Route 279 Right-of-Way

Dear Mr. Sikora and Mr. Ramsey,

We write to comment on the Environmental Assessment for the Bennington PFOA Remediation Trench Spoils Disposal Site. We are concerned that open placement of the excavated PFOA contaminated soils at an alternate location will simply contaminate groundwater at that location. Page 7 of the Environmental Assessment states:

"Soils are presumed to contain PFOA at levels that can impact groundwater to levels above Vermont groundwater standards because a majority of the water supply wells within this area have PFOA concentrations above Vermont's PFOA standard (20 ppt) and the site investigation work that has been completed to date indicates that soil deposition from air emissions and the leaching of PFOA is the major pathway for the presence of PFOA in groundwater within CAA I OU A. Therefore, moving soils around in this area will not contaminate groundwater that is currently below Vermont's standards to levels that could go above Vermont's standards. "

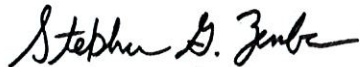
Based on this information we offer the following for the Department's consideration:

1. The first line of this statement indicates that groundwater is currently being contaminated by these soils at their current location. The last line indicates that there is no expectation that the soils will contaminate groundwater at a new location. These statements are inconsistent. Soils containing PFOA at concentrations of the order of 10 parts per billion contain enough PFOA to continue through leaching to contaminate underlying groundwater at levels above the 20 parts per trillion groundwater standard for perhaps hundreds of years (as can be demonstrated by mass balance calculations). No additional PFOA deposition is necessary to engender this result as the soils already contain a sufficient reservoir of PFOA. Consequently, prior to moving these soils, we recommend a detailed fate and transport assessment to predict levels of groundwater contamination that might result at the new location.

2. Any placement of these soils in an open environment would prudently be accompanied by long-term groundwater monitoring in a downgradient direction to ensure that leaching is not taking place.
3. Given that the Bennington Landfill has restricted access and currently has a monitoring well network in place which could be used to monitor the effects of soil placement at this location on groundwater quality, it would be prudent to re-evaluate the Bennington Landfill as the selected disposal site.
4. Has the installation of a low permeability soil or cap (to reduce infiltration through the placed soils) been evaluated as part of remedy selection, regardless of location?
5. Were alternatives such as off-site disposal (e.g., landfilling) and ex-situ thermal treatment of the soils evaluated?

We thank you for consideration of our comments.

Very truly yours,

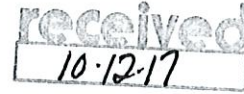


Stephen G. Zemba, Ph.D., P.E.
Project Director
Sanborn Head & Associates
2 South Main St., Suite 2
Randolph, VT 05060

Timothy M. White, P.G.
Senior Project Manager
Sanborn Head & Associates
20 Foundry St.
Concord, NH 03301

October 9, 2017

Dear Sirs:



This letter is to address concerns about using Austin Hill, Bennington, Vermont as a dump site for contaminated by-products of water line placement.

I know this has been difficult for everyone since discovery of PFOA, etc. the last nineteen months. There is no doubt everyone is trying their best; however, not taking the time to really plan and think through issues of placing the contaminants on Austin Hill adds to the injury.

Some of, but not all concerns, I will try to be as clear as possible. The area of Austin Hill is rural, as you know, but I am not sure the extent of farming is understood. It has not been helpful to have the powers that be say "don't eat the lettuce leaves, but you can eat the tomatoes." Never was there a clear understanding if the animals or their products were affected either. All that was said is "there is a half-life" to the contaminant. To have 66,000 tons of contaminated soil dumped on top of property with livestock and vegetation and 1,500 feet (at a 45 degree downhill slope) to the river that supposedly does not have contaminated fish is inconceivable. If the maple trees weren't considered contaminated, they will be. These entities are peoples' livelihoods. While we are on the subject of animals, the increase in traffic of heavy equipment of the "we haven't started yet" has already had an effect on the breeding population.

Another concern is the traffic that is normally in the area. Outsiders might not understand that this hill has a high traffic pattern for bikers, mainly because of its terrain. Bikes, cars, and even the Shultz vehicles do not slow down coming down the hill much less fully stopping at the stop sign. Adding more heavy duty trucks all day for a year is problematic. This area is also used for ski training and the National Guard for their pre-deployment training, which will be starting again soon. I am sure the tourists will really enjoy being behind these trucks as they try to navigate from one bridge to the other two bridges.

Equally frustrating is the aspect of debris from the trucks, because there will be, especially considering the before mentioned groups. Even more frightening is the actual dumping and letting the contaminant become airborne once again.

Two things were confusing from the meeting that was not addressed to any satisfaction. The first is having a map showing that this was a floodplain. The presenter mumbles something that was inaudible. If he said it became the "berm" then I would think it would be a violation of the floodplain rule. Second, being told that the bypass is slated to be expanded would indicate that the 66,000 tons will be disturbed again adding insult to injury.

I try not to bring up problems without trying to offer a solution. I would think that since North Bennington, Vermont is also involved; why not use the train system with the container

cars (that will be more confining than dump trucks) and transport the contaminated by-product to one of the contaminated abandoned towns of Erin Brockovich fame. No one lives there and no further harm would be incurred.

Sincerely,



B Greene

PO Box 633

Bennington, VT 05201-0633

October 3, 2017

Kenneth "Rob" Sikora
Environmental Program Manager
Federal Highway Administration
Federal Building, Suite 216
87 State Street
Montpelier, VT 05602-9505

received
10.5.17

Jeff Ramsey
VTrans Environmental Section Vermont Agency of Transportation
One National Life Drive
Montpelier, VT 05633-5001

Re: Proposed Austin Hill/279 Disposal of Trench Soils

Dear Mr. Sikora & Mr. Ramsey,

The following is to be considered official comments regarding the proposed disposal of the "spoils" from the waterline extension project in North Bennington and Bennington:

After our initial letter to you, a phone conversation with Richard Spiese, reading newspaper articles, doing research online, meeting with John Schmeltzer and lawyer Matt, attending the Hearing on Sept. 26th in Bennington, listening to public officials and staff of the environmental agencies and highway departments and town officials, listening to project engineer Jason Dolmetsch, and using just plain common sense, we are more convinced than ever that this proposal to dump 66,000+ tons of contaminated dirt on a right-of-way along Austin Hill Rd and Rte. 279 is absolutely **NOT** the right thing to do nor the right place to dump it!

We are glad to have the opportunity to be connected to the municipal waterline and we are most appreciative for all the hard work that has gone into this process as we have endured many difficult and stressful months since the PFOA was detected in our wells, but we have major concerns and objections with regards to this chapter of the nightmare.

We were told that the Federal Highway Dept. would require an environmental impact statement that truly takes a "hard look" at the impacts, and so we have taken a hard look at several impacts on our neighborhood and have determined that dumping that "poison dirt" near our homes would be most unwise, unfair, irresponsible, outrageous and totally unacceptable.

[Redacted signature area]

October 9, 2017

received
10.12.17

Dear Sirs

I am writing this letter before Friday, October 13th which is the last day to submit complaints and comments regarding the dumping site for the PFOA tainted soil.

Friday the 13th is traditionally a bad omen – a day to worry about ones well-being. This day is appropriate because our neighbors are very much worried about our well-being.

Dumping tainted PFOA material in a residential area off Austin Hill road is wrong.

How will it be contained?

How will it be monitored?

The reason we are having water piped in is because our ground water has been contaminated by PFOA.

I feel like we are being bullied – If you want clean water, then deal with a dumping site for PFOA contaminated soil.

We already have a “hot spot” in the town of Bennington at the former Johnson Controls site. Why not put the material there to be monitored and contained in one area. Containment and monitoring seems crucial to me. Monitor the environmental impact – not waiting for birth defects from both the land and water sources.

It’s like saying “We’ll dump it here and hope for the best”

It’s pretty creepy thinking that someday in the future there might be a child fishing in the Walloomsac River saying “Look Dad, I just caught a three eyed trout”


201

APPENDIX H

Environmental Screening for two locations where petroleum contamination was suspected

PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
(802) 440-1559

P.O. Box 4302
BENNINGTON, VT 05201

August 31, 2017

MSK Engineering & Design, Inc.
150 Depot Street
P.O. Box 139
Bennington, VT 05201
Attn: Mr. Jason Dolmetsch, P.E.

**RE: Town of Bennington Municipal Water System Remedial Expansion
Preliminary Environmental Investigation
Bennington, VT**

Dear Mr. Dolmetsch:

A Preliminary Environmental Investigation was conducted by Paul D.G. Miller (Miller) as part of the Town of Bennington Municipal Water System Remedial Expansion.

This Preliminary Environmental Investigation included: a review of land use history along the four (4) water line extension areas; advancement of soil borings [Geoprobe] for one (1) day in the area of Walt Smith's Garage and VT Tissue to a depth of seven (7) feet; field screening of soils encountered during the boring process with a PID; laboratory sampling of soil via EPA Method 8260 for soil registering volatile organic compound concentrations above twenty (20) ppm; and the submittal of a brief report of land use history and soil boring findings.

Land Use History & Potential Sources of Contamination

Land use history of the four (4) water line extension areas was researched by Miller. The areas researched include those outlined in the following four (4) sets of plans: Town of Bennington Municipal Water System Remedial Expansion (Contract 1); Town of Bennington Municipal Water System Remedial Expansion (Contract 2); Town of Bennington Municipal Water System Remedial Expansion (Contract 3); and Town of Bennington Municipal Water System Remedial Expansion (Contract 4). All of these plans were prepared by MSK Engineering and Design, Inc. of Bennington, VT and dated 6-08-17.

Research of the land use history was conducted through all of the following: visual inspections of land use along each proposed water line extension; a review of pertinent Vermont Department of Environmental Conservation (VT DEC) records focusing on spills, underground and above ground storage tanks, hazardous waste sites, and hazardous waste usage (i.e. waste generators); a review of city directories produced by H.A. Manning Company for the years 1893 through 1967; a review of aerial photographs produced by USGS and USDA for the years 1951 through 2016; a review of historic topographic quadrangles produced by USGS for 1898, 1944, 1954, and 1997; a review of historic maps, including: the D.L. Miller & Company Map of Bennington of 1894, the F.W. Beers & Company Atlas/Map of 1869, and the Rice-Harwood Map of 1856; and a review of Sanborn Fire Insurance Maps for past commercial/industrial land use.

From a review of all these sources, it is apparent that the bulk of the properties (abutting or in close proximity to the proposed water line extensions) are currently of a residential usage and have had a history as either a residential or agricultural usage. A small number of commercial/industrial usage properties exist or have existed along North Bennington Road with the bulk of those occurring near the intersection of Murphy Road. Past land use appears to be consistent with today's usage with the only notable change being further residential development over time creating a denser residential setting and the corresponding disappearance of the larger farms which were present in the site areas approximately forty (40) years ago.

In addition to land use, Potential Sources of Contamination (PSOC) along the water line extensions were identified and then evaluated for their potential to impact the actual excavation areas. The only PSOCs identified were:

- 1) Walt Smith's Garage, 1414 North Bennington Road
- 2) Vermont Tissue North, 1505 North Bennington Road
- 3) Vermont Tissue South, 1514 North Bennington Road
- 4) Vacant Lot (Former Daniel Fager's Facility), 1092 North Bennington Road

A review of these four (4) PSOCs indicated that the only likely sources of impact near or in the water line extension work areas would be Walt Smith's Garage and Vermont Tissue North. The investigation of these two (2) PSOCs is documented in the following section of this report.

The other two (2) PSOCs appear to be either remediated to an acceptable degree and/or their respective extents of contamination are not close to the area of the proposed water line excavation.

Various residential UST releases (including those at Bennington College) were noted in the water line extension areas. Also, various spills have been noted. Each of these residential UST releases and spills have been investigated and remediated to acceptable standards per the VT DEC and therefore are not believed to require further subsurface investigation. Also, no land uses or activities were noted during the visual inspection which would require these properties to undergo further subsurface investigation.

Subsurface Investigation

A subsurface investigation was conducted at two (2) properties located on North Bennington Road which were considered to be potentially contaminated by petroleum. This contamination, if present, was believed to potentially extend toward North Bennington Road in the areas of the proposed water line extension. These properties are Walt Smith's Garage and VT Tissue North. Both of these properties are located within the "Contract 2" area.

On August 3, 2017, a total of five (5) soil borings (WSG-1 through WSG-5) were advanced at Walt Smith's Garage and a total of four (4) soil borings were advanced at VT Tissue North by T&K Drilling of Fitzwilliam, New Hampshire through the use of a truck-mounted Geoprobe drill rig utilizing the direct push technique. Each soil boring was two and a half (2.5) inches in diameter. No soil borings were completed as monitoring wells.

Soil borings were advanced in the water line extension areas where actual excavation is proposed to occur. If petroleum contamination were to be present in any of these soil borings, then a subsequent “outlying” soil boring would be advanced until conditions were found where no volatile organic compound (VOC) concentrations were detected in the soil.

All drilling equipment that came in contact with soil from the boring process was decontaminated on-site between each respective boring. The locations of these soil borings are shown on the Site Map presented as Appendix A. The soils encountered during the boring process are shown on the Soil Boring/Monitoring Well Construction Logs presented in Appendix B.

During the soil boring operation of August 3, 2017, soil was continuously sampled via a Macro-Core Sampler (MCS). Soil samples were retrieved from the MCS at three (3) foot intervals for subsequent field-screening. Field-screening of the soil for potential soil contamination (from petroleum) was performed through olfactory (odor), visual (staining) methods, and via headspace analysis using a calibrated Thermo Environmental Model 580B Organic Vapor Meter photoionization detector (PID). The PID can detect VOC concentrations to a level of 0.1 parts per million volume (ppmv). For headspace analysis, soils were placed within plastic ziplock bags and filled approximately $\frac{1}{2}$ to $\frac{2}{3}$ to allow an area in the bag for soil vapor to accumulate. The sensor tip of the PID was then inserted into the bag and the VOC measurement taken. Any soil boring soil samples, which showed elevated PID readings (above twenty [20] ppmv), would then be placed within four (4) ounce clear glass jars. Each jar would then be labeled and immediately stored in a cooler at four (4) degrees Celsius. Any samples would then be delivered by Miller to Phoenix Environmental Laboratories, Inc. in Niskayuna, NY with the proper chain-of-custody documentation. The samples would then be transported to the Phoenix Environmental Laboratories, Inc. headquarters in Manchester, CT for a subsequent analysis via EPA Method 8260 for VOCs.

Each soil boring was drilled to a depth of seven (7) feet which is the depth that will be encountered during the excavation/trench work for the extension of water lines. In general, the soil encountered within the five (5) soil borings at the Walt Smith’s Garage site consisted of the following: the top approximate one (1) to two (2) feet of black-gray SILT & fine GRAVEL, some fine sand, little medium gravel; and the bottom five (5) to six (6) feet of dark brown SILT & coarse SAND, some fine to medium sand. All soils were noted as dry with no groundwater encountered. The Soil Boring Logs showing the soil encountered in each boring are presented in Appendix B.

In general, the soil encountered within the four (4) soil borings at the VT Tissue North site consisted of the following: the top approximate six (6) feet of brown SILT & fine SAND and/or fine GRAVEL; and the bottom one (1) foot of brown medium to coarse GRAVEL, little medium to coarse sand. Groundwater was encountered within each boring at a depth of approximately five (5) feet below ground surface. The Soil Boring Logs showing the soil encountered in each boring are presented in Appendix B.

All nine (9) soil borings (WSG-1 through WSG-5 and VT-1 through VT-4) had continuous three (3) foot soil samples taken as part of the soil boring process. Field screening with the PID was performed on each three (3) foot section.

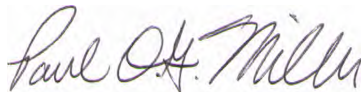
No VOC concentrations were detected by the PID in any of the soil samples from either of the properties investigated as shown in Appendix B. Also no soil staining or odor was noted in any of those samples. Therefore, no soil samples were taken for subsequent laboratory analysis.

Recommendation

Based on the findings of the land use (current and past) review within the proposed water line extension areas (along with associated potential sources of contamination) and the findings of the soil boring investigation, no further investigation of the water line extension areas is currently recommended. Any soil/groundwater contamination that is discovered during the excavation for the water line extensions will be handled as outline in the Environmental Contingency Plan produced by Miller and dated June 20, 2017.

If you have any questions or comments regarding this report, please contact me at (802) 440-1559 or (575) 644-6911. Thank you.

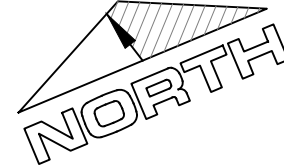
Sincerely,



Paul D.G. Miller
Hydrogeologist

Enclosures: Appendix A: Site Map
Appendix B: Soil Boring Logs

Appendix A
Site Map



Site Map

22-50-20
RONALD H. LOOMIS JR
9 WILKIE WAY
BENNINGTON VT 05201
BK. 359, PG. 237
2 UNITS

22-50-17
SPARKY LLC
1505 N BENNINGTON RD
BENNINGTON VT 05201
BK. 435, PG. 128
OFFICES, STORAGE WAREHOUSES

22-50-16-01
RICHARD BOUTIN
1477 N BENNINGTON RD
BENNINGTON VT 05201
BK. 339, PG. 23
AUTO DEALERSHIP

22-50-18
LAWRENCE E. GOODELL JR
1517 N BENNINGTON RD
BENNINGTON VT 05201
BK. 323, PG. 116
SINGLE FAMILY HOME

22-50-16-02
RICHARD BOUTIN
1463 N BENNINGTON RD
BENNINGTON VT 05201
BK. 430, PG. 19
GARAGE

22-50-15
ANDREW B AND JEANNETTE D CANCELLIERI
1433 N BENNINGTON RD
BENNINGTON VT 05257
BK. 376, PG. 41
SINGLE FAMILY HOME

22-50-19
LAWRENCE E AND SHIRLEY A GOODELL
1535 N BENNINGTON RD
BENNINGTON VT 05201
BK. 221, PG. 117
SINGLE FAMILY HOME

22-50-21-01
LARRY AND RUTH SNOW
1575 N BENNINGTON RD
BENNINGTON VT 05201
BK. 509, PG. 193
3 UNITS

22-50-34
CARBON ZERO LLC
1514 N BENNINGTON RD
BENNINGTON VT 05201
BK. 502, PG. 109
INDUST BLDG

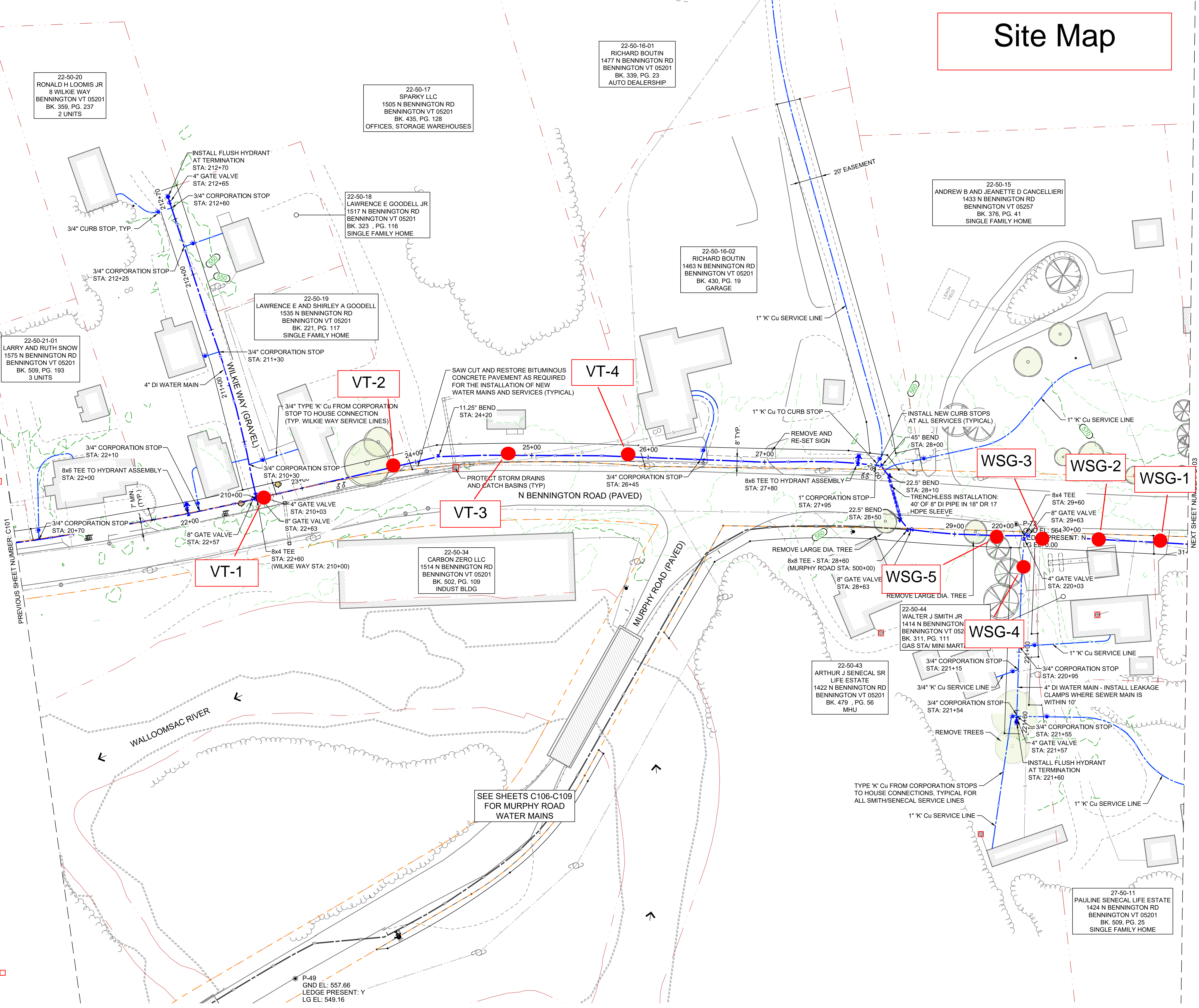
22-50-43
ARTHUR J SENECA SR
LIFE ESTATE
1422 N BENNINGTON RD
BENNINGTON VT 05201
BK. 479, PG. 56
MHU

22-50-44
WALTER J SMITH JR
1414 N BENNINGTON
BENNINGTON VT 052
BK. 311, PG. 111
GAS STA/ MINI MART

27-50-11
PAULINE SENECA LIFE ESTATE
1424 N BENNINGTON RD
BENNINGTON VT 05201
BK. 509, PG. 25
SINGLE FAMILY HOME

PREVIOUS SHEET NUMBER: C101

NEXT SHEET NUMBER: C103



MSK ENGINEERING AND DESIGN, INC.
P.O. BOX 139, 150 DEPOT STREET
BENNINGTON, VERMONT 05201
PH: (802) 447-1402 FAX: (802) 445-1291

NO.	DATE	DESCRIPTION
1	04-11-2017	20% DESIGN FOR STATE REVIEW
2	06-09-2017	60% DESIGN FOR STATE REVIEW
3	06-19-2017	FOR PERMITS
4	06-23-2017	85% DESIGN FOR STATE REVIEW

TOWN OF BENNINGTON
MUNICIPAL WATER SYSTEM
REMEDIATION EXPANSION
BENNINGTON, VERMONT

DRAWINGS THIS SHEET
SERVICE DISTRICT "A"
PLAN

NUMBER	DATE
1001-019.4	04-24-2017
DRAWN	CHECKED
MSK	JMD

SHEET NUMBER
C102

1 NORTH BENNINGTON ROAD (VT ROUTE 67A)
CONTRACT 1 (PLAN) Scale: 1:40

Proposed Soil Boring Location

ALL DRAWING DATA IS THE PROPERTY OF MSK ENGINEERING AND DESIGN, INC. AND IS TO BE KEPT CONFIDENTIAL AND NOT REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

Appendix B
Soil Boring/Monitoring Well Construction Logs

**PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
SOIL BORING/MONITORING WELL CONSTRUCTION LOG**

Project #: <u>2017-519</u> Date: <u>8/03/17</u> Project Name: <u>Bennington Municipal Water System Remedial Expansion</u> Location: <u>Walt Smith's Garage – Bennington</u> Driller: <u>T&K Drilling</u> Miller Field Personnel: <u>Paul D.G. Miller</u> Boring/Well #: <u>WSG-1</u> Sheet <u>1</u> of <u>1</u>	<u>SITE LOCUS</u> See Site Map
--	---------------------------------------

Depth	Blow Counts				Rec. (in.)	PID (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0'-3'					30"	0.0	Black-gray SILT & fine GRAVEL, some fine sand, little medium gravel (0'-1.9') (dry)	
						0.0		
						0.0		
3'-6'					32"	0.0	Dark brown SILT & coarse SAND, some fine to medium sand (1.9'-7.0') (dry)	
						0.0		
						0.0	End of Boring at 7.0'	
6'-7'					10"	0.0		

Drilling Method: <u>DPT</u>	Screen Diameter: <u>N/A</u>	Length: <u>N/A</u>	Slot Size: <u>N/A</u>
Groundwater Depth: <u>N/A</u>	Riser Diameter: <u>N/A</u>	Length: <u>N/A</u>	
PVC Elevation: <u>N/A</u>	Roadbox Elevation: <u>N/A</u>	Total Well Depth: <u>N/A</u>	

- Notes:
1. Samples are collected using a Macro-Core Sampler unless otherwise indicated.
 2. Macro-Core Sampler has a 2.5" outside diameter and is driven continuously during the drilling process.
 3. Soil samples are screened for organic vapors via a headspace method using a ThermoElectron Model 580B OVM.
 4. HSA = Hollow Stem Auger, AR = Air Rotary, DPT = Direct Push Technology, HA = Hand Auger

**PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
SOIL BORING/MONITORING WELL CONSTRUCTION LOG**

Project #: <u>2017-519</u> Date: <u>8/03/17</u> Project Name: <u>Bennington Municipal Water</u> System Remedial Expansion Location: <u>Walt Smith's Garage – Bennington</u> Driller: <u>T&K Drilling</u> Miller Field Personnel: <u>Paul D.G. Miller</u> Boring/Well #: <u>WSG-2</u> Sheet <u>1</u> of <u>1</u>	<u>SITE LOCUS</u> See Site Map
---	--

Depth	Blow Counts				Rec. (in.)	PID (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0'-3'					32"	0.0	Black-gray SILT & fine GRAVEL, some fine sand, little medium gravel (0'-1.6') (dry)	
						0.0		
						0.0		
3'-6'					35"	0.0	Dark brown SILT & coarse SAND, some fine to medium sand (1.6'-7.0') (dry)	
						0.0		
						0.0		
6'-7'					8"	0.0	End of Boring at 7.0'	

Drilling Method: <u>DPT</u> Groundwater Depth: <u>N/A</u> PVC Elevation: <u>N/A</u>	Roadbox Elevation: <u>N/A</u> Total Well Depth: <u>N/A</u>	Screen Diameter: <u>N/A</u> Length: <u>N/A</u> Slot Size: <u>N/A</u> Riser Diameter: <u>N/A</u> Length: <u>N/A</u>
---	---	---

- Notes:
1. Samples are collected using a Macro-Core Sampler unless otherwise indicated.
 2. Macro-Core Sampler has a 2.5" outside diameter and is driven continuously during the drilling process.
 3. Soil samples are screened for organic vapors via a headspace method using a ThermoElectron Model 580B OVM.
 4. HSA = Hollow Stem Auger, AR = Air Rotary, DPT = Direct Push Technology, HA = Hand Auger

**PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
SOIL BORING/MONITORING WELL CONSTRUCTION LOG**

Project #: <u>2017-519</u> Date: <u>8/03/17</u> Project Name: <u>Bennington Municipal Water System Remedial Expansion</u> Location: <u>Walt Smith's Garage – Bennington</u> Driller: <u>T&K Drilling</u> Miller Field Personnel: <u>Paul D.G. Miller</u> Boring/Well #: <u>WSG-3</u> Sheet <u>1</u> of <u>1</u>	<p><u>SITE LOCUS</u></p> <p>See Site Map</p>
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Depth	Blow Counts				Rec. (in.)	PID (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0'-3'					27"	0.0	Black-gray SILT & fine GRAVEL, some fine sand, little medium gravel (0'-1.5') (dry)	
						0.0		
						0.0		
3'-6'					33"	0.0	Dark brown SILT & coarse SAND, some fine to medium sand (1.5'-7.0') (dry)	
						0.0		
						0.0	End of Boring at 7.0'	
6'-7'					11"	0.0		

Drilling Method: <u>DPT</u> Groundwater Depth: <u>N/A</u> PVC Elevation: <u>N/A</u>	Screen Diameter: <u>N/A</u> Length: <u>N/A</u> Slot Size: <u>N/A</u> Riser Diameter: <u>N/A</u> Length: <u>N/A</u> Roadbox Elevation: <u>N/A</u> Total Well Depth: <u>N/A</u>
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- Notes:
1. Samples are collected using a Macro-Core Sampler unless otherwise indicated.
 2. Macro-Core Sampler has a 2.5" outside diameter and is driven continuously during the drilling process.
 3. Soil samples are screened for organic vapors via a headspace method using a ThermoElectron Model 580B OVM.
 4. HSA = Hollow Stem Auger, AR = Air Rotary, DPT = Direct Push Technology, HA = Hand Auger

**PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
SOIL BORING/MONITORING WELL CONSTRUCTION LOG**

Project #: <u>2017-519</u> Date: <u>8/03/17</u> Project Name: <u>Bennington Municipal Water System Remedial Expansion</u> Location: <u>Walt Smith's Garage – Bennington</u> Driller: <u>T&K Drilling</u> Miller Field Personnel: <u>Paul D.G. Miller</u> Boring/Well #: <u>WSG-4</u> Sheet <u>1</u> of <u>1</u>	<u>SITE LOCUS</u> See Site Map
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Depth	Blow Counts				Rec. (in.)	PID (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0'-3'					29"	0.0	Black-gray SILT & fine GRAVEL, some fine sand, little medium gravel (0'-0.9') (dry)	
						0.0		
						0.0		
3'-6'					28"	0.0	Dark brown SILT & coarse SAND, some fine to medium sand (0.9'-7.0') (dry)	
						0.0		
						0.0	End of Boring at 7.0'	
6'-7'					7"	0.0		

Drilling Method: <u>DPT</u>	Screen Diameter: <u>N/A</u>	Length: <u>N/A</u>	Slot Size: <u>N/A</u>
Groundwater Depth: <u>N/A</u>	Riser Diameter: <u>N/A</u>	Length: <u>N/A</u>	
PVC Elevation: <u>N/A</u>	Roadbox Elevation: <u>N/A</u>	Total Well Depth: <u>N/A</u>	

- Notes:
1. Samples are collected using a Macro-Core Sampler unless otherwise indicated.
 2. Macro-Core Sampler has a 2.5" outside diameter and is driven continuously during the drilling process.
 3. Soil samples are screened for organic vapors via a headspace method using a ThermoElectron Model 580B OVM.
 4. HSA = Hollow Stem Auger, AR = Air Rotary, DPT = Direct Push Technology, HA = Hand Auger

**PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
SOIL BORING/MONITORING WELL CONSTRUCTION LOG**

Project #: 2017-519 Date: 8/03/17
 Project Name: Bennington Municipal Water .
 System Remedial Expansion
 Location: Walt Smith's Garage – Bennington .
 Driller: T&K Drilling
 Miller Field Personnel: Paul D.G. Miller
 Boring/Well #: WSG-5 Sheet 1 of 1

SITE LOCUS

 See Site Map

Depth	Blow Counts				Rec. (in.)	PID (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0'-3'					28"	0.0	Black-gray SILT & fine GRAVEL, some fine sand, little medium gravel (0'-0.8') (dry)	
						0.0		
						0.0		
3'-6'					32"	0.0	Dark brown SILT & coarse SAND, some fine to medium sand (0.8'-7.0') (dry)	
						0.0		
						0.0	End of Boring at 7.0'	
6'-7'					9"	0.0		

Drilling Method: DPT Screen Diameter: N/A Length: N/A Slot Size: N/A
 Groundwater Depth: N/A Riser Diameter: N/A Length: N/A
 PVC Elevation: N/A Roadbox Elevation: N/A Total Well Depth: N/A

- Notes:
1. Samples are collected using a Macro-Core Sampler unless otherwise indicated.
 2. Macro-Core Sampler has a 2.5" outside diameter and is driven continuously during the drilling process.
 3. Soil samples are screened for organic vapors via a headspace method using a ThermoElectron Model 580B OVM.
 4. HSA = Hollow Stem Auger, AR = Air Rotary, DPT = Direct Push Technology, HA = Hand Auger

**PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
SOIL BORING/MONITORING WELL CONSTRUCTION LOG**

Project #: <u>2017-519</u> Date: <u>8/03/17</u> Project Name: <u>Bennington Municipal Water System Remedial Expansion</u> Location: <u>Vermont Tissue – Bennington</u> Driller: <u>T&K Drilling</u> Miller Field Personnel: <u>Paul D.G. Miller</u> Boring/Well #: <u>VT-1</u> Sheet <u>1</u> of <u>1</u>	<u>SITE LOCUS</u> See Site Map
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Depth	Blow Counts				Rec. (in.)	PID (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0'-3'					25"	0.0	Brown-black SILT & fine GRAVEL, some fine sand, little medium gravel (0'-1.2') (dry)	
						0.0		
						0.0		
3'-6'					35"	0.0	Brown SILT, little clay & fine gravel (1.2'-4.9') (dry)	
						0.0		
						0.0	Tan-brown SILT & fine SAND (4.9'-5.3') (wet)	
6'-7'					7"	0.0		
							Black SILT, trace fine sand & fine gravel (5.7'-6.3') (wet)	
							Light brown medium to coarse GRAVEL, little medium to coarse sand (6.3'-7.0') (wet)	
							End of Boring at 7.0'	

Drilling Method: <u>DPT</u> Groundwater Depth: <u>~4.9'</u> PVC Elevation: <u>N/A</u>	Screen Diameter: <u>N/A</u> Length: <u>N/A</u> Slot Size: <u>N/A</u> Riser Diameter: <u>N/A</u> Length: <u>N/A</u> Roadbox Elevation: <u>N/A</u> Total Well Depth: <u>N/A</u>
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- Notes:
1. Samples are collected using a Macro-Core Sampler unless otherwise indicated.
 2. Macro-Core Sampler has a 2.5" outside diameter and is driven continuously during the drilling process.
 3. Soil samples are screened for organic vapors via a headspace method using a ThermoElectron Model 580B OVM.
 4. HSA = Hollow Stem Auger, AR = Air Rotary, DPT = Direct Push Technology, HA = Hand Auger

**PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
SOIL BORING/MONITORING WELL CONSTRUCTION LOG**

Project #: <u>2017-519</u> Date: <u>8/03/17</u> Project Name: <u>Bennington Municipal Water System Remedial Expansion</u> Location: <u>Vermont Tissue – Bennington</u> Driller: <u>T&K Drilling</u> Miller Field Personnel: <u>Paul D.G. Miller</u> Boring/Well #: <u>VT-2</u> Sheet <u>1</u> of <u>1</u>	<u>SITE LOCUS</u> See Site Map
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Depth	Blow Counts				Rec. (in.)	PID (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0'-3'					28"	0.0	Brown-black SILT & fine GRAVEL, some fine sand, little medium gravel (0'-1.5') (dry)	
						0.0		
						0.0		
3'-6'					29"	0.0	Gray-black medium to coarse SAND, some fine gravel, little fine sand (1.5'-2.0') (dry)	
						0.0		
						0.0	Dark brown SILT & fine GRAVEL (2.0'-2.3') (moist)	
6'-7'					9"	0.0		
							Black SILT, trace fine sand & fine gravel (5.1'-5.8') (wet)	
							Light brown medium to coarse GRAVEL, little medium to coarse sand (5.8'-7.0') (wet)	
							End of Boring at 7.0'	

Drilling Method: <u>DPT</u> Groundwater Depth: <u>~5.1'</u> PVC Elevation: <u>N/A</u>	Screen Diameter: <u>N/A</u> Length: <u>N/A</u> Slot Size: <u>N/A</u> Riser Diameter: <u>N/A</u> Length: <u>N/A</u> Roadbox Elevation: <u>N/A</u> Total Well Depth: <u>N/A</u>
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- Notes:
1. Samples are collected using a Macro-Core Sampler unless otherwise indicated.
 2. Macro-Core Sampler has a 2.5" outside diameter and is driven continuously during the drilling process.
 3. Soil samples are screened for organic vapors via a headspace method using a ThermoElectron Model 580B OVM.
 4. HSA = Hollow Stem Auger, AR = Air Rotary, DPT = Direct Push Technology, HA = Hand Auger

**PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
SOIL BORING/MONITORING WELL CONSTRUCTION LOG**

Project #: <u>2017-519</u> Date: <u>8/03/17</u> Project Name: <u>Bennington Municipal Water System Remedial Expansion</u> Location: <u>Vermont Tissue – Bennington</u> Driller: <u>T&K Drilling</u> Miller Field Personnel: <u>Paul D.G. Miller</u> Boring/Well #: <u>VT-3</u> Sheet <u>1</u> of <u>1</u>	<u>SITE LOCUS</u> See Site Map
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Depth	Blow Counts				Rec. (in.)	PID (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0'-3'					31"	0.0	Brown-black SILT & fine GRAVEL, some fine sand, little medium gravel (0'-0.9') (dry)	
						0.0		
						0.0		
3'-6'					27"	0.0	Gray-black medium to coarse SAND, some fine gravel, little fine sand (0.9'-2.5') (dry)	
						0.0		
						0.0	Dark brown SILT & fine GRAVEL (2.5'-5.5') (wet @ 5.3')	
6'-7'					8"	0.0		
							Tan-brown SILT & fine SAND (5.8'-7.0') (wet)	
							End of Boring at 7.0'	

Drilling Method: <u>DPT</u> Groundwater Depth: <u>~5.3'</u> PVC Elevation: <u>N/A</u>	Screen Diameter: <u>N/A</u> Length: <u>N/A</u> Slot Size: <u>N/A</u> Riser Diameter: <u>N/A</u> Length: <u>N/A</u> Roadbox Elevation: <u>N/A</u> Total Well Depth: <u>N/A</u>
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- Notes:
1. Samples are collected using a Macro-Core Sampler unless otherwise indicated.
 2. Macro-Core Sampler has a 2.5" outside diameter and is driven continuously during the drilling process.
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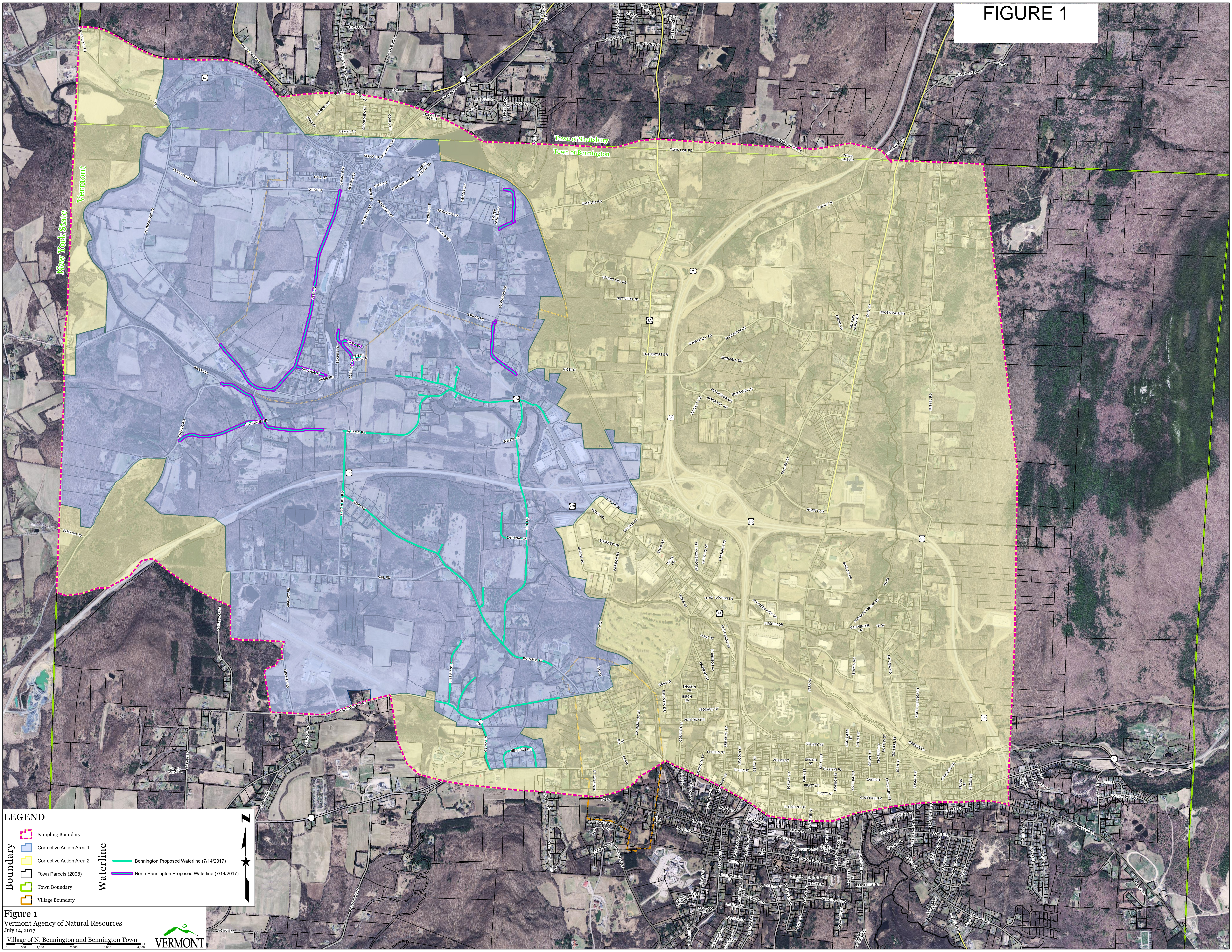
**PAUL D.G. MILLER/CONSULTING HYDROGEOLOGIST
SOIL BORING/MONITORING WELL CONSTRUCTION LOG**

Project #: <u>2017-519</u> Date: <u>8/03/17</u> Project Name: <u>Bennington Municipal Water System Remedial Expansion</u> Location: <u>Vermont Tissue – Bennington</u> Driller: <u>T&K Drilling</u> Miller Field Personnel: <u>Paul D.G. Miller</u> Boring/Well #: <u>VT-4</u> Sheet <u>1</u> of <u>1</u>	<u>SITE LOCUS</u> See Site Map
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Depth	Blow Counts				Rec. (in.)	PID (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0'-3'					35"	0.0	Brown-black SILT & fine GRAVEL, some fine sand, little medium gravel (0'-0.9') (dry)	
						0.0		
						0.0		
3'-6'					30"	0.0	Gray-black medium to coarse SAND, some fine gravel, little fine sand (0.9'-2.6') (dry)	
						0.0		
						0.0	Red-brown SILT & fine SAND, trace clay (2.6'-4.8') (moist)	
6'-7'					11"	0.0		
							Tan-brown SILT & fine SAND (5.3'-7.0') (wet)	
							End of Boring at 7.0'	

Drilling Method: <u>DPT</u> Groundwater Depth: <u>~4.8'</u> PVC Elevation: <u>N/A</u>	Screen Diameter: <u>N/A</u> Length: <u>N/A</u> Slot Size: <u>N/A</u> Riser Diameter: <u>N/A</u> Length: <u>N/A</u> Roadbox Elevation: <u>N/A</u> Total Well Depth: <u>N/A</u>
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- Notes:
1. Samples are collected using a Macro-Core Sampler unless otherwise indicated.
 2. Macro-Core Sampler has a 2.5" outside diameter and is driven continuously during the drilling process.
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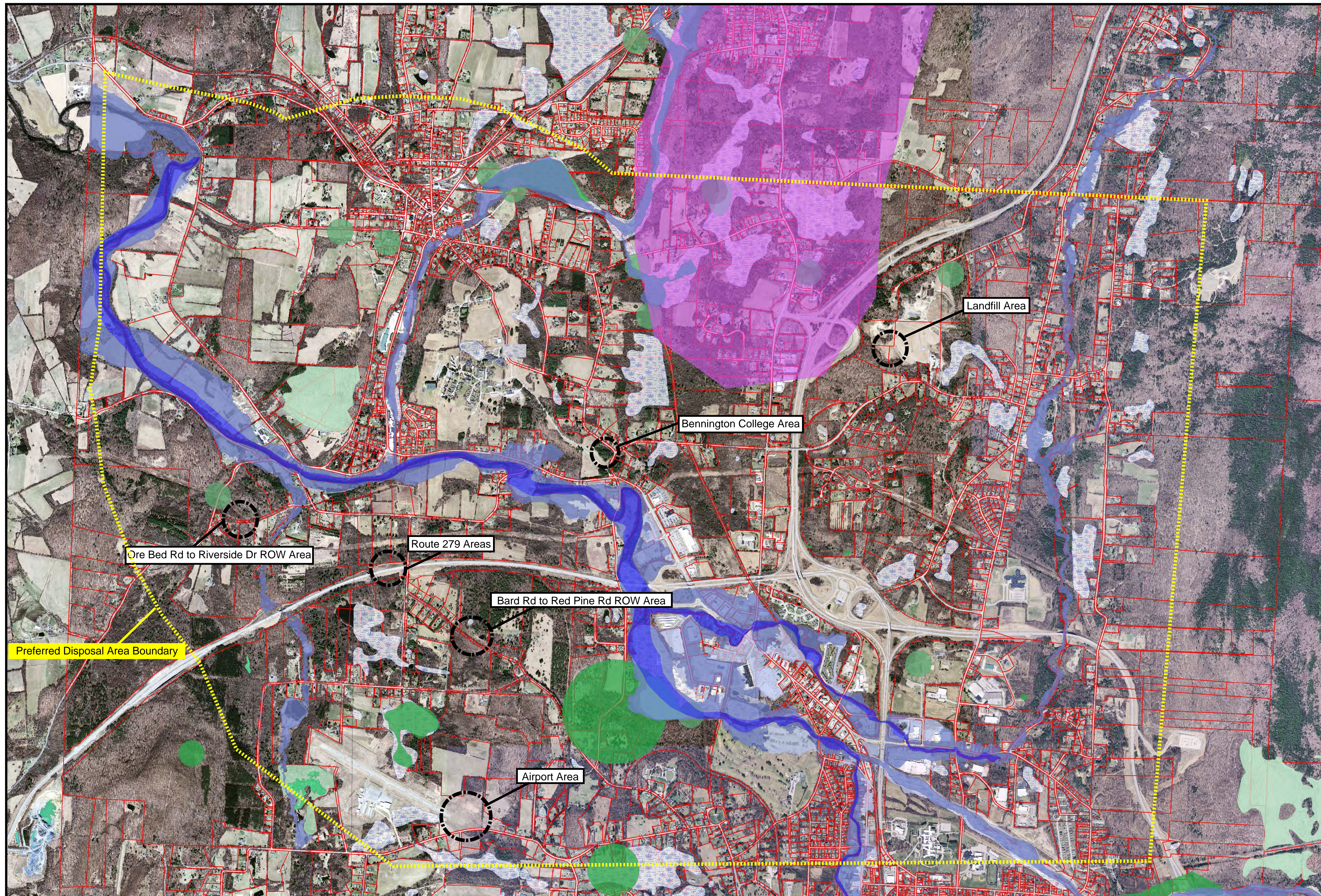
LEGEND

	Sampling Boundary		Bennington Proposed Waterline (7/14/2017)
	Corrective Action Area 1		North Bennington Proposed Waterline (7/14/2017)
	Corrective Action Area 2		
	Town Parcels (2008)		
	Town Boundary		
	Village Boundary		

Boundary

Waterline

FIGURE 2



Vermont Department of Environmental Conservation
 Bennington and North Bennington
 Excess Soil Disposal Option Analysis
 June 2017

Data Sources:
 Weston & Sampson Engineers
 Vermont Center for Geographic Information (1)
 FEMA Flood Hazard Maps (2)

Disclaimer:
 This information is for planning purposes only and should not be considered exact. Field inspection and verification is required. This data was created from aerial maps.

- Flood Hazard (Dark Blue)
- Flood Hazard (Light Blue)
- Floodway (Medium Blue)
- Significant Natural Communities (Light Green)
- Biological Hotspots (Dark Green)
- Wetland (Light Blue/Green)
- Parcel Boundary (Red Line)

FIGURE 1

