

May 31, 2022

Joy Dubin-Grossman
Assistant Town Manager
Town of Hinesburg
10632 VT Route 116
Hinesburg, Vermont 05461

Stone Project No. 20211205
Subject: Hinesburg Landfill ID # CH280, Annual Landfill Inspection

Dear Joy,

As required by the Certification for the Hinesburg Landfill ID #CH280 (the landfill, Figure 1), Stone inspected the landfill on May 6, 2022. Additionally, Stone performed soil borings using a hand auger to determine the thickness and extent of the existing cap. There is no gas control system at the landfill. Stone performed the inspection following tree removal which occurred in February 2022. The following items were inspected:

1. Landfill cover system
2. Erosion control measures
3. Drainage Systems
4. Groundwater Monitoring Networks

A photographic log is attached.

1. Soil Borings

Stone installed eight soil borings using a hand-auger to approximately 2 to 3- feet below ground surface or until refuse and debris was observed (SB-1 through SB-8, Figure 2). Soils were be logged for texture, color, grain size, moisture content and visual evidence of refuse and debris. Table 1 below includes the boring locations and description of cover material beneath the sod layer that was observed to be approximately 3- inches thick:

Table 1: Soil Boring Summary

Soil Boring ID	Depth (feet)	Description
SB-1	0-1	Brownish gray, moist F-SAND and SILT
	1-3	Brownish gray, moist F-M SAND, some F-gravel
SB-2	0-0.5	Brownish gray, moist F-SAND and SILT
	0.5-2	Brownish gray, moist F-M SAND, some F-gravel
SB-3	0-1.5	Brownish gray, moist F-SAND and SILT
	1.5-2	Brownish gray, moist F-M SAND, some F-gravel

Soil Boring ID	Depth (feet)	Description
SB-4	0-2.5	Brownish gray, moist F-SAND and SILT
	2.5-3	Brownish gray, moist F-M SAND, some F-gravel
SB-5	0-1	Brownish gray, moist F-SAND and SILT
	1-2	Brownish gray, moist F-M SAND, some F-gravel
SB-6	0-1.5	Brownish gray, moist F-SAND and SILT
	1.5-2	Brownish gray, moist F-M SAND, some F-gravel
SB-7	0-2	Brownish gray, moist F-M SAND, some F-gravel, refuse and debris at 2 feet
SB-8	0-2	Brownish gray, moist F-M SAND, some F-gravel

Based on the soil borings, Stone confirmed the extent of the landfill was as shown in the Closure Plan drawing titled Hinesburg Landfill Closure, and prepared by Donald L. Hamlin Consulting Engineers, Inc, dated October 9, 1990. Cover material was determined to not be adequate at locations SB-7 and SB-8, due to a lack of low permeability soils (silt or clay) and shallow depth to refuse and debris, observed at approximately 2 feet below ground surface.

2. Conclusion and Recommendations

During the landfill inspection, the following observations were made:

- Refuse and debris were observed at the surface of the landfill on the eastern slope and where a tree uprooted on the western extent. The cover of the landfill within the central portion is adequate.
- Small erosion channels were observed on the southern boundary of the landfill.
- The drainage swale on the northern edge of the landfill has been cleared of tress and is promoting surface water runoff and erosion control.
- The groundwater monitoring well network is in good condition and the monitoring wells were locked. The uprooted trees surrounding MW-2S/-2D have been cleared.

Based on the conclusions, Stone recommends the following:

1. The woody debris remaining from the tree removal shall be raked off the cover of the landfill. The stumps remaining from the tree removal shall be grinded between 4 and 6 inches below the ground surface.
2. Six inches of topsoil and seed shall be placed in the eastern and western extent of the landfill (Figure 2) to properly cover refuse and debris and to promote vegetative growth. A native grass seed mix shall be used.

- a. Prior to the addition of topsoil on the western extent, the uprooted tree stump shall be removed, and the cover material replaced within the root hole.
 - b. For the eastern extent, an erosion control blanket shall be placed on top of the seeded area due to a steep slope. The erosion control blanket will provide cover for bare soil and support for emergent vegetation from the time of seeding until root density and top growth are capable of long-term erosion protection.
 - c. Topsoil and seed shall be added to areas where stumps are grinded down and where small erosion channels were observed on the southern portion of the landfill.
3. Following the growth of vegetation, the landfill shall be mowed.

3. Schedule

Stone presents the following schedule for the corrective action implementation. Stone understands the Town of Hinesburg had a tree service company inspect the landfill on May 27, 2022.

Table 2. Schedule for Corrective Actions

Corrective Action	Start Date	End Date
1. Rake woody debris and grind down tree stumps	June 13, 2022	July 13, 2022
2. Topsoil and seed	July 13, 2022	August 13, 2022
3. Mow	August 13, 2022	September 13, 2022

Sincerely,



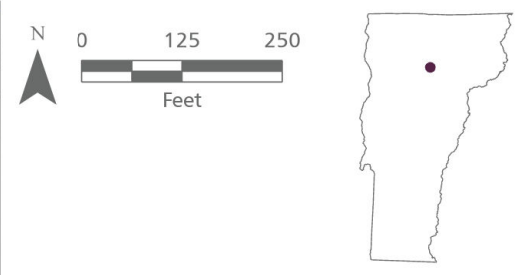
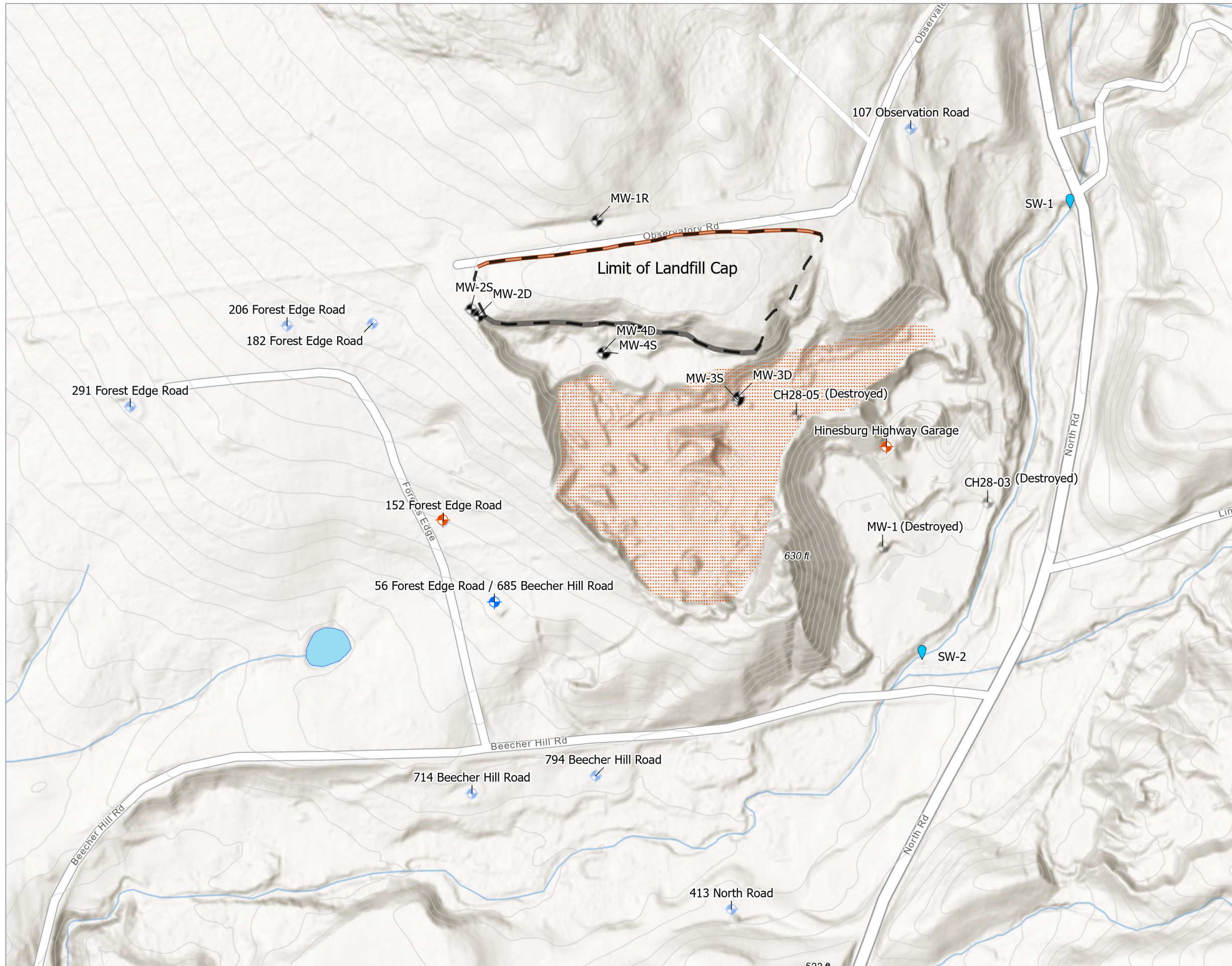
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Attachments: Figure 1 and Figure 2, Photographic Log

CC: Dennis Fekert, VT DEC Solid Waste Management Program,

Kasey Kathan, VT DEC Solid Waste Department



LEGEND

- Site Boundary
- Property Boundary
- Sand and Gravel Pit
- Limit of Landfill Cap
- VT 10 ft Contour Lines
- Stone Apron
- Drainage Swale
- Historic Sample Location
- D Drinking Water
- M Monitoring Well
- Post-Closure Monitoring Sample Locations
- M Monitoring Well
- D Drinking Water with POET System
- D Drinking Water
- T Surface Water

Source: Esri World Imagery, VCGI, Holt Gilmour survey December 29, 2021

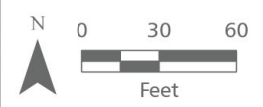
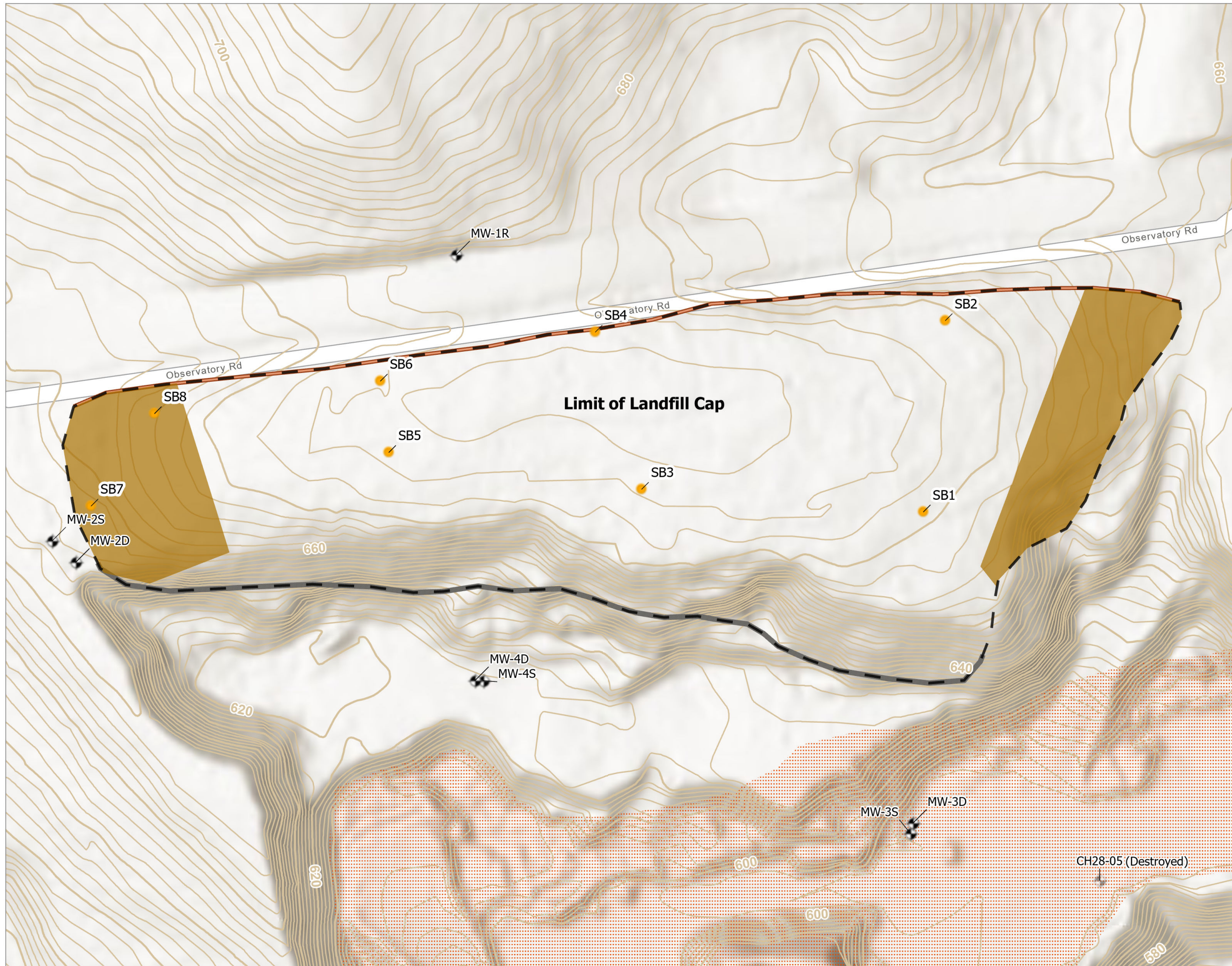
Path: O:\PROJ-21\EAR\20211205 Town of Hinesburg Landfill\GIS\20211205 Hinesburg Landfill\20211205 Hinesburg Landfill.aprx Figure 3 - Site Map Exported: 5/31/2022 2:46 PM by rmitcell

Figure 1: Site Map with Post-Closure Monitoring Locations

Hinesburg Landfill

Prepared For Town of Hinesburg

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LEGEND

- Site Boundary
- Property Boundary
- Sand and Gravel Pit
- Limit of Landfill Cap
- Stone Apron
- Drainage Swale
- 6" Topsoil - 27,950 Square Feet
- Landfill Inspection Sample Locations
- Soil Boring
- Post-Closure Monitoring Sample Locations
- ⊕ Monitoring Well
- ⊕ Historic Sample Location
- ⊕ Monitoring Well
- ⊕ Lidar 2-Foot Contour Interval
- Contour Line, Index Major
- Contour Line, Index Minor
- Contour Line, Intermediate Even

Source: Esri World Imagery, VCGI, Holt Gilmour survey December 29, 2021

Path: O:\PROJ-21\EAR\20211205 Town of Hinesburg Landfill\GIS\20211205 Hinesburg Landfill\20211205 Hinesburg Landfill.aprx Figure 4 - Landfill Cap Inspection Exported: 5/31/2022 3:17 PM by rmitchell

Figure 2: Landfill Cap Inspection

Hinesburg Landfill

Prepared For Town of Hinesburg



Photograph #1: Landfill cover with woody debris.



Photograph #2: View of uprooted tree on western extent.

Hinesburg Closed Municipal Landfill
907 Beecher Hill Road, Hinesburg, Vermont

Source: Site Reconnaissance

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Photograph #3: View of adequate cover in central portion.



Photograph #4: View of exposed debris on eastern slope, shown on Figure 2 as area requiring topsoil.

Hinesburg Closed Municipal Landfill
907 Beecher Hill Road, Hinesburg, Vermont

Source: Site Reconnaissance

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