Mill Seat Landfill Expansion

Facility ID No. 8-2648-00014

Town of Riga, New York

Draft Supplemental Environmental Impact Statement

Attachment G

Visual Impact Assessment

Mill Seat Landfill Expansion
Facility ID No. 8-2648-00014

Town of Riga, New York

Visual Impact Assessment

WASTE MANAGEMENT

June 2014

Barton & Loguidice

For the Proposed Mill Seat Landfill Expansion
303 Brew Road
Town of Riga, Monroe County, New York
Facility ID No. 8-2648-00014

Visual Impact Assessment

Prepared For:

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Glossary of Terms

AMSL – Above Mean Sea Level

County – Monroe County, New York.

DEM – Digital elevation model

Disposal Capacity – The amount of capacity available in the solid waste management facility available for the disposal of waste.

Landfill Lease Agreement – The Agreement by and between Monroe County, New York (Lessor) and WMNY (Lessee) dated January 14, 2002 and any Amendments thereafter.

LFG – Landfill gas

LFGTE Facility – Landfill Gas to Energy facility for collection and destruction and renewable energy generation of LFG in internal combustion engines to generate electricity.

Mill Seat Landfill – Currently permitted landfill and associated operations.

MSW – Municipal solid waste

NYCRR – New York Official Compilation of Codes, Rules and Regulations

NYSDEC – New York State Department of Environmental Conservation

O'Brien Road Wetland Restoration – The removal of O'Brien Road within the limits of Wetland RG-7 to allow the reconnection of the wetland and the hydrologic continuity of Hotel Creek's tributary b.

Owner – Monroe County is the owner of the Mill Seat Landfill

6 NYCRR Part 360 – NYSDEC's solid waste management regulations, codified at 6 NYCRR Part 360 (Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York), effective May 12, 2006.

Permitted Footprint – The existing 98.6 acres of the Permitted Site allocated for solid waste disposal within a double composite liner system.

Permitted Site – The land on which the Permitted Footprint and associated support features (including a Maintenance Building, Administration Building, Scale House, LFG collection system, leachate collection and storage facility, stormwater management features, access roadways, two (2) soil borrow areas and a LFGTE Facility) is located,

and the land included as part of the Landfill Lease Agreement. The Permitted Site totals 485 acres.

Proposed Action – The Proposed Landfill Expansion; final cover design modifications to the Permitted Footprint; the proposed wetland impacts and mitigation; the proposed stream impacts and mitigation; as well as required actions, including extension of the Landfill Lease Agreement between Monroe County and WMNY, abandonment of a portion of O'Brien Road and a portion of Brew Road, County and Town of Riga approvals of property transfers, and receipt of noise easements.

Proposed Footprint – The 118.3 acres allocated for solid waste disposal within the proposed double composite liner system in addition to and directly adjacent to the Permitted Footprint.

Proposed Landfill Expansion – The addition of a contiguous footprint to the south of the Permitted Footprint. This defined term is specific to the Proposed Footprint of an additional 118.3 acres, 39.2 acres of overlay onto the Permitted Footprint, and any support features (stormwater management structures, access roads, LFG collection and control infrastructure, and leachate conveyance infrastructure).

Proposed Site – The land on which the Proposed Action would be located, including the 485-acre Permitted Site, the Proposed Wetland Mitigation Area, the O'Brien Road abandonment, and any land acquisitions included in the Proposed Action. The Proposed Site totals approximately 828 acres.

Riga Host Community Agreement – The Amended and Restated Host Community Agreement by and between Monroe County, NY and the Town of Riga, NY dated January 4, 2011.

SHPO – New York State Historic Preservation Office

1.0 Introduction

The County is the Owner and permittee of the Mill Seat Landfill. The Mill Seat Landfill is operated by WMNY under a Landfill Lease Agreement with the County. The Mill Seat Landfill's Solid Waste Management Facility NYSDEC Permit I.D. number is 8-2648-00014. The Permitted Site is located in the Town of Riga, Monroe County, New York. The mailing address is 303 Brew Road, Bergen, New York 14416.

The County currently owns 485 acres that includes the Permitted Footprint and associated support features (including buildings and structures, stormwater ponds, access roads, and two (2) soil borrow areas). Operations are still occurring in the Permitted Footprint. The Permitted Footprint covers a total area of 98.6 acres within the roughly 485 acres owned by the County that are dedicated for solid waste management.

Of the 485 acres owned by the County, approximately 385 acres is leased to WMNY under a long term Landfill Lease Agreement. The leased parcel includes an active landfill area and associated support facilities for the disposal of MSW from households and commercial and institutional entities. It also accepts selected industrial wastes, biosolids, ash, asbestos, petroleum-contaminated soils, and C&D debris. In accordance with the Riga Host Community Agreement, the Mill Seat Landfill receives waste generated in communities within the State with the exception of Kings, Queens, New York, Richmond and Bronx counties. On average about 90% of the waste disposed at the Mill Seat Landfill is generated within the County. The Permitted Site also includes operation of a LFGTE Facility that was opened in 2007.

The County is seeking a 6 NYCRR Part 360 Solid Waste Management Permit modification from the NYSDEC to construct and operate portions of the Proposed Action. The Proposed Action would allow the Mill Seat Landfill to continue to operate beyond the permitted Disposal Capacity, providing sufficient capacity to satisfy the community's long-term disposal needs. The Proposed Action is expected to include 118.3 acres of additional double composite liner system directly south of the Permitted Footprint, 39.2 acres of overlay on the Permitted Footprint, and approximately 30 acres of disturbance associated with additional support facilities for operation of the Proposed Landfill Expansion including the stormwater management structures, access roads, LFG collection and control infrastructure, and leachate conveyance infrastructure. Other aspects of this Proposed Action include final cover design modifications to the Permitted Footprint; the proposed wetland impacts and mitigation; the proposed stream impacts and mitigation; as well as required actions, including extension of the Landfill Lease Agreement between the County and WMNY, abandonment of a portion of O'Brien Road (O'Brien Road Wetland Restoration), abandonment of a portion of Brew Road, County and Town of Riga approvals of property transfers, and receipt of noise easements.

The purpose of this *Visual Impact Assessment* is to evaluate potentially adverse visual impacts related to the Proposed Landfill Expansion. The Proposed Landfill Expansion was the focus of the analysis, as the other portions of the Proposed Action are expected to have little to no visual impacts. Included in this report is a project description and overview of the study area, methods used to assess potential adverse visual impacts, and a summary of findings.

2.0 Existing Visual Character

2.1 Landforms and Vegetation

The Permitted Site and surrounding areas are generally flat with gently rolling topography and a few small drumlins to the south and east of the Proposed Site. Prior to any site development, natural elevations on the Permitted Site ranged from 644 feet AMSL in the wetlands to the northeast to roughly 730 feet AMSL (from 1989 Draft Environmental Impact Statement). The Mill Seat Landfill and other developed areas have altered the existing topography on the Permitted Site; the Mill Seat Landfill will have a maximum elevation of 875 feet AMSL upon completion. The Permitted Footprint is visible from isolated areas generally within the five (5) mile radius study area, typically from cleared areas of higher elevation. Although the Mill Seat Landfill has not yet reached this final elevation, it is part of the existing viewshed, and will be used as the baseline condition to assess potential visual impacts of the Proposed Landfill Expansion.

2.2 Land use

Land use adjacent to the Proposed Site is generally agricultural and rural residential. Although the Mill Seat Landfill has much steeper slopes than is typical of farm fields and residential areas, land surrounding the Mill Seat Landfill is lightly forested which provides visual cover from surrounding low-lying areas. The temporally-variable cover on adjacent farm fields, fallow or vegetated, allows the Mill Seat Landfill to somewhat blend into its surroundings, even active areas without a vegetated cover.

2.3 Utilities

No major utility lines intersect the Proposed Site with the exception of electric service to the Mill Seat Landfill buildings. Although located off-site, a New York Power Authority power transmission line is located north of the Proposed Site.

2.4 Historic and Aesthetic Resources

The SHPO web database and National Register of Historic Places were consulted for information regarding the presence of state and nationally recognized historic or cultural sites, structures, or archaeologically sensitive areas within or adjacent to the Proposed Site. Together with review of this information and consultation with the Citizens Advisory Board, two (2) features in the surrounding area were identified: The Lake Street Historic District in the Village of Bergen, located in neighboring Genesee County and Riga Academy,

located in the Town of Riga, Monroe County. The Lake Street Historic District is located one and one-quarter (1.25) miles northwest of the Proposed Site. Riga Academy is located two and six-tenths (2.6) miles northeast of the Proposed Site. The Lake Street Historic District is located in a low spot in the Village of Bergen, with nearby residences and tree lines shielding the Mill Seat Landfill from view. Several small drumlins are located between the Mill Seat Landfill and Riga Academy, blocking it from the viewshed. There are no additional parcels of land in the vicinity of the Proposed Site that were dedicated to public observation or enjoyment on behalf of their scenic qualities, nor are there any National or State Wild, Scenic, or Recreational Rivers, National Natural Landmarks, or other state or nationally recognized outstanding natural features.

3.0 Proposed Visual Character

3.1 Proposed Landfill Expansion

The Proposed Landfill Expansion is generally consistent with the existing visual character in the vicinity of the Proposed Site. The construction and operation of the Proposed Landfill Expansion itself is consistent with the current visual character of the Mill Seat Landfill, as the Proposed Site currently contains an active landfill area and two (2) soil borrow areas. In addition, no vertical increase is proposed. Due to the relatively large area encompassed by the Proposed Landfill Expansion, and its elevation above existing grade in the immediate development area, it was determined that a visual assessment of the development should be conducted.

Final grades for the Proposed Landfill Expansion include developing the side slopes at 33% [three (3) horizontal to one (1) vertical] per 6 NYCRR Part 360 to an elevation ranging from approximately 852 feet AMSL to 874 feet AMSL. Top slopes will be developed at the regulatory minimum of four percent (4%) to an elevation of approximately 875 feet AMSL to promote proper surface water collection and drainage in accordance with 6 NYCRR Part 360 regulations. The Proposed Landfill Expansion would have a maximum permitted elevation of 875 feet AMSL, the same as the existing maximum permitted elevation of the operational Mill Seat Landfill.

3.2 Visual Impact Assessment Study Area

Based upon project-specific needs and established visual assessment methodologies, the study area was defined as the area within a five (5) mile radius of the Permitted Footprint and Proposed Footprint. Standard visual assessment procedures for landfills require a project assessment area defined by a five (5) mile radius. Specific vantage points were identified within the five (5) mile radius along local roadways or in the vicinity of sensitive areas where potential visual impacts could be found. Pictures were taken at the locations in the direction of the Mill Seat Landfill to assess potential visual impacts.

4.0 Visual Impact Assessment methodology

The *Visual Impact Assessment* procedures utilized for the Proposed Landfill Expansion are consistent with methodologies developed by the NYSDEC. Specific techniques used to assess potential project visibility and impacts associated with the Proposed Landfill Expansion are described herein.

An evaluation of potential visibility was conducted in order to identify those locations within the five (5) mile study area where the Proposed Landfill Expansion may be visible from ground level vantage points. This evaluation included utilizing GIS-based viewshed mapping and field verifying the visibility of the Proposed Landfill Expansion utilizing a balloon-fly technique.

4.1 Viewshed Analysis

Topographic viewshed maps were produced for the five (5) mile radius study area utilizing U.S. Geological Survey (USGS) digital elevation model (DEM) data and ESRI's ArcInfo desktop GIS software with the Spatial Analyst extension. Because USGS DEM's represent topography only, forested areas were modeled with a conservative vegetative cover height of 50 feet in those areas where tree cover is prominent per the National Land Cover Dataset (2006). The viewshed analysis was based upon the location of the waste elevations of the Proposed Landfill Expansion, and was superimposed over USGS topographic Quadrangles, as illustrated in Figure 1.

The GIS Spatial Analyst software delineates the viewshed utilizing topography data from the DEMs. The software interprets every cell of the DEM data and assigns a value based upon the visibility within the five (5) mile radius study area. Figure 1 depicts the areas within a five (5) mile radius from which the Proposed Landfill Expansion will be visible or not visible with existing vegetation. The viewshed map defines the maximum viewable areas from which any portion of the Mill Seat Landfill and Proposed Landfill Expansion could potentially be seen within the study area. The evaluation was done incorporating screening that would be provided by vegetation to more accurately convey real-world conditions.

4.2 Visibility

The viewshed map with modeled vegetation delineates the areas where the Proposed Landfill Expansion has potential visibility based upon topography with the real-world screening effect of existing vegetative cover. Figure 1 indicates that the Mill Seat Landfill and the Proposed Landfill have the potential

to be visible from approximately three percent (3%) of the five (5) mile radius study area which is shown in orange on Figure 1.

4.3 Field Evaluation

To verify actual visibility of the Proposed Landfill Expansion from specific locations, the balloon fly technique was performed to assist in the visual analysis. This technique was performed within the project area on April 26, 2013 with three (3) round 15 foot by six (6) foot helium-filled balloons tethered at key locations of the Proposed Landfill Expansion (i.e., breakpoints in the slope and the highest proposed elevation point). The balloons were elevated so that the balloon was tethered at an elevation representative of the Proposed Landfill Expansion . The intent of the field evaluation and balloon flying was to:

- Verify location and scale references to determine visibility of the Proposed Landfill Expansion, and
- Obtain photos from identified vantage points for development of photo simulations illustrating proposed conditions, where visible.

While the balloons were elevated in the sky, personnel drove adjacent local public roads to specific vantage points within the five (5) mile project radius study area to document those areas from which the balloons could or could not be seen. Photos were taken from multiple locations around the Proposed Site utilizing a Ricoh Caplio 500SE GPS-equipped camera. This device automatically stores the GPS coordinates of the photo location for maximum accuracy. Figure 2 shows the locations of vantage points from which photos were taken and rendered to depict the Mill Seat Landfill and Proposed Landfill Expansion at full build-out.

4.4 Photo Simulations

Beyond evaluating the potential visibility of the Proposed Landfill Expansion, the *Visual Impact Assessment* also examined the aesthetic impact of the Proposed Landfill Expansion on nearby areas representative of viewer locations, specifically within road right-of-ways and at historically significant locations within the five (5) mile radius project area. This evaluation was done by using the photographs taken with balloons in the sky at a predetermined elevation and superimposing a model of the Proposed Landfill Expansion into the respective photo, resulting in a simulation of what the Mill Seat Landfill and Proposed Landfill Expansion would look like from each specific location around the Proposed Site. These simulations were performed only for the maximum elevations after the placement of waste and final closure system and represent a

moment in time several years in the future. No adjustments were made accounting for the continuous growth of vegetation over this period of time.

The Proposed Landfill Expansion was inserted into the photos taken in the field on April 26, 2013, and were scaled accordingly using the top of the balloon or a similar reference point to locate the boundary elevations of the Proposed Landfill Expansion. Colors added to the model were consistent with the colors of the Mill Seat Landfill, which are earthen materials such as grass, soil, and other low-growing vegetative cover. The results of this visual simulation are presented in the attached Photo Renderings, Vantage Points 1 through 8.

4.5 Analysis of Existing and Proposed Views

To illustrate anticipated visual changes in the landscape associated with the Proposed Landfill Expansion, photographic visual simulations of the Proposed Landfill Expansion from eight (8) selected vantage points were used to evaluate project visibility and aesthetic quality. Each vantage point from which visual simulations were produced is numbered on Figure 2, and labeled accordingly on the photo renderings. As discussed in the methodology, photos were taken from these locations while balloons were elevated to elevations of the Proposed Landfill Expansion. The photographical representations in Vantage Points 1 through 8 depict existing conditions with the balloons flying as well as visual simulations showing potential visibility of both the Mill Seat Landfill at full build out and the Proposed Landfill Expansion, based upon balloon elevation and location.

A more detailed description of each viewpoint is included below.

- Vantage Point # 1

  Brew Road at Route 33A, looking south towards the Proposed Site.

- Vantage Point # 2

  Brew Road at Bovee, looking north towards the Proposed Site.

- Vantage Point # 3

  Sheridan Road on I-490 overpass, looking southwest towards the Proposed Site.

- Vantage Point # 4

  First Presbyterian Church, 38 S. Lake Ave., Bergen, NY. Part of the Lake Street Historic District, looking southeast towards the Proposed Site.

- Vantage Point # 5

Edgewood Lane, 235’ north of intersection at Bovee Road, looking northwest towards the Proposed Site.

- Vantage Point # 6

  Stone Church parking lot next to the Bergen Museum of History, looking northeast towards the Proposed Site.

- Vantage Point # 7

  Riga Academy, corner of Route 36 and Route 33A, looking southwest towards the Proposed Site.

- Vantage Point # 8

  945 Johnson Road, looking southwest towards the Proposed Site.

5.0 Visual Impact Assessment Results

5.1 Potential Impacts

Due to the location of the Proposed Landfill Expansion in a somewhat flat area with rolling topography, all aspects of operations will not be effectively screened from all surrounding viewpoints.

5.2 Mitigative Measures

Mitigation measures will be employed at the Proposed Site to reduce visual impacts. These mitigation measures will include keeping the size of the working face of the landfill and the area of exposed soils to the smallest practicable area, strategically locating soil stockpiles, and revegetating areas of exposed soils as soon as practicable and whenever feasible, to help screen the working face of the landfill. Natural vegetation and topographic changes features on and surrounding the Proposed Site aid in the help buffer of the Mill Seat Landfill and Proposed Landfill Expansion from the surrounding viewshed.

Due to the elevation of the Proposed Landfill Expansion, screening with earthen berms, fences, or planted vegetation would be partially effective in eliminating landfill visibility or visual impact. The effectiveness is dependent upon proximity and geographic location to the Proposed Landfill Expansion. Any of the techniques will work to a certain extent, along roadways immediately adjacent to the Proposed Site as well as along roadways within the viewshed.

The natural colors of the Mill Seat Landfill and Proposed Landfill Expansion were demonstrated by the visual simulation in the *Visual Impact Assessment* to generally minimize contrast with the surroundings and background under most conditions. As such, the use of typical final cover system on the Proposed Landfill Expansion will continue to minimize potential visual contrasts. In addition to the mitigative measures discussed above, other measures that incorporated into the project design including uniform design grades, colors, and elevation for the Proposed Landfill Expansion.

6.0 Conclusions

The *Visual Impact Assessment* of the Proposed Landfill Expansion warrants the following conclusions to be drawn:

- Viewshed mapping and field evaluations indicate that the Proposed Landfill Expansion would be visible from various locations within the five (5) mile study area, depending on the field conditions, but particularly in areas of open agricultural fields adjacent to the Proposed Site.
- Areas generally screened by vegetation, surrounding buildings, and/or topography prohibit the visibility of the Proposed Landfill Expansion in much of the study area.
- There are no new locations of historical significance that will be affected by the visual impacts of the Proposed Landfill Expansion.
- Evaluations as presented in this study indicate that the Proposed Landfill Expansion's overall impact on the visual character of the area will vary depending upon distance of the viewer from the Proposed Site.
- Mitigative measures were considered in accordance with NYSDEC Program Policy for Assessing and Mitigating Visual Impacts (DEP-00-2).

According to NYSDEC Program Policy, "Assessing and Mitigating Visual Impacts" (DEP—00-2, July 2000), aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Significant aesthetic impacts are those that may cause diminishment of the public enjoyment and appreciation of an inventoried resource, or that impairs the character or quality of such a place. The landscape surrounding this Proposed Site will retain its open space character and overall spatial organization. Although there are some intrusions to the vertical and horizontal views in the landscape within the Proposed Site and those immediately adjacent, these intrusions are minimal. The surrounding landscape will retain its integrity because the forested lands, topography, and existing land use patterns will remain.

As is evident from the visual analysis, the Proposed Landfill Expansion will not significantly impact the surrounding properties, will not impair the character of the community, and will be in compliance with the Mill Seat Landfill's long-term plan to provide solid waste services. The Proposed Landfill Expansion will not have significant adverse impacts on community aesthetics or cultural features.

Figures

Figure 1

Viewshed Map

Legend

- Landfill Area
- Viewshed of Landfill Expansion Area
- Distance From Landfill (1-Mile Increments)

Sources: Basemap - USGS;
Viewshed Derived From 10m Digital Elevation Model (DEM) & Esri Desktop GIS Software With Spatial Analyst Extension. An Assumed Height of 50' Is Assigned To Modeled Forested Areas.

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N W E S

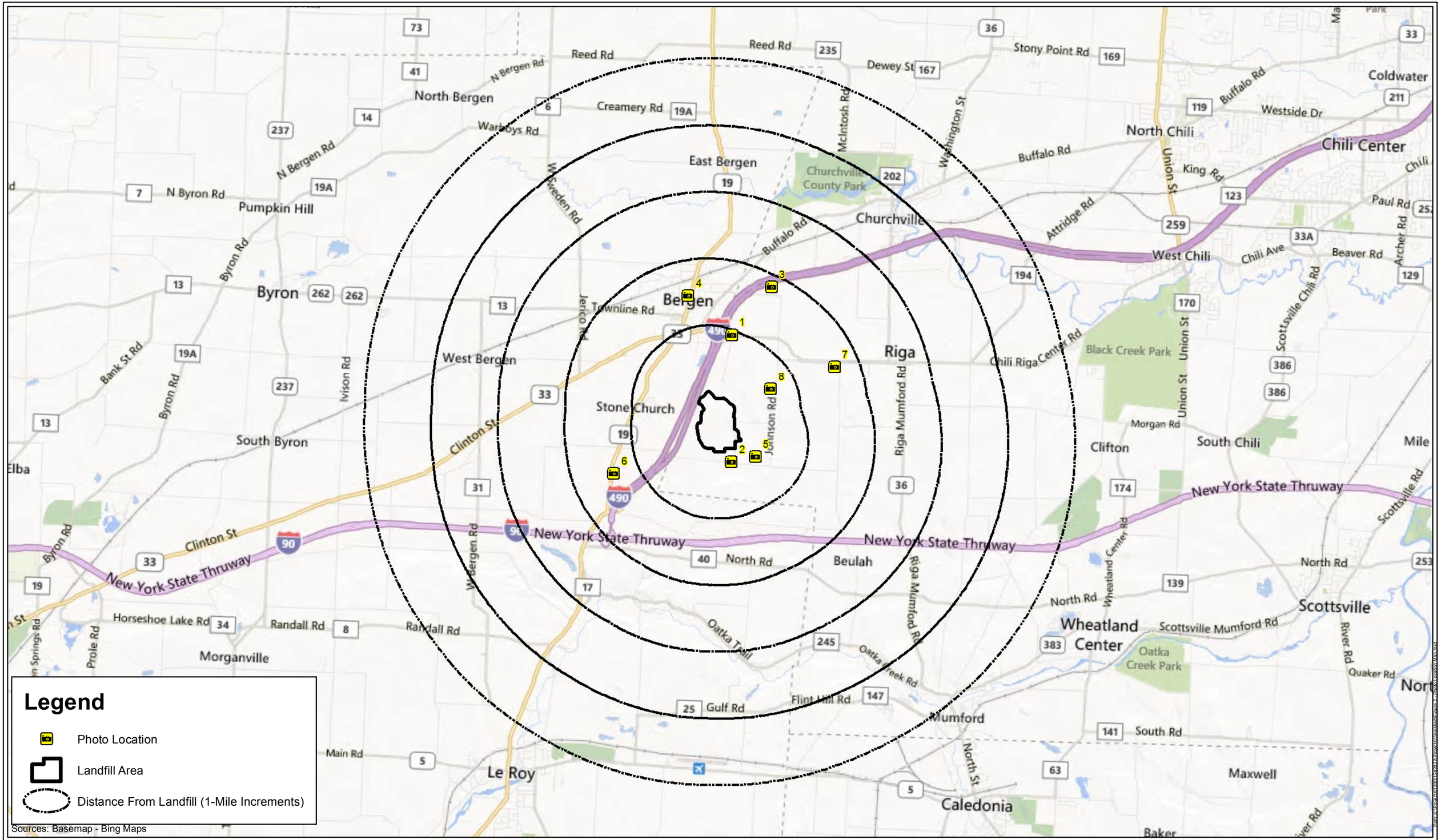
0 0.5 1 Miles

Mill Seat Landfill Expansion
Visual Assessment
Viewshed Map
Monroe County April, 2014 New York

Figure 1
Project No. 1242.022

Figure 2

Photo Location Map



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Mill Seat Landfill Expansion
Visual Assessment

Photo Location Map

Monroe County April, 2014 New York

Figure 2

Project No. 1242.022

Photo Rendering – Vantage Point 1

Permitted Conditions

Proposed Conditions

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Intersection of Brew Road & Chili-Riga Center Road

Mill Seat Landfill Expansion
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Vantage Point 1
Project # 1242.022

Photo Rendering – Vantage Point 2

Permitted Conditions

Proposed Conditions

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Intersection of Brew Road & Bovee Road

Mill Seat Landfill Expansion
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4/2014
Monroe County NY

Vantage Point 2

Project # 1242.022

Photo Rendering – Vantage Point 3

Permitted Conditions

Proposed Conditions

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Sheridan Road at I-490 Overpass

Mill Seat Landfill Expansion
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4/2014
Monroe County NY

Vantage Point 3
Project # 1242.022

Photo Rendering – Vantage Point 4

Permitted Conditions

*Landfill Not Visible

Proposed Conditions

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First Presbyterian Church
38 S. Lake Ave, Bergen, NY

Mill Seat Landfill Expansion
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Monroe County NY

Vantage Point 4

Project # 1242.022

Photo Rendering – Vantage Point 5

Permitted Conditions

Proposed Conditions

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235' North of Intersection of
Edgewood Lane and Bovee Road

Mill Seat Landfill Expansion
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Vantage Point 5

Project # 1242.022

Photo Rendering Vantage Point 6

Permitted Conditions

Proposed Conditions

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Stone Church Presbytarian Church Back Parking Lot

Mill Seat Landfill Expansion
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Vantage Point 6
Project # 1242.022

Photo Rendering – Vantage Point 7

Permitted Conditions

*Landfill Not Visible

Proposed Conditions

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Riga Academy - Intersection of Chili Riga Center Road and Riga Mumford Road

Mill Seat Landfill Expansion
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Monroe County NY

Vantage Point 7
Project # 1242.022

Photo Rendering – Vantage Point 8

Permitted Conditions

Proposed Conditions

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945 Johnson Road

Mill Seat Landfill Expansion
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Monroe County NY

Vantage Point 8

Project # 1242.022