# CONCEPTUAL SITE MODEL

## Glass Manufacturing Waste Disposal in the Greater Corning Area of New York

## Corning, Steuben County, New York

Prepared for:

NEW YORK STATE | Department of Environmental Conservation

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## Introduction

A conceptual site model (CSM) identifies the current understanding of the potential sources of contamination, types of contaminants and affected media, potential release mechanisms and contaminant pathways from source areas to offsite areas, and how potential human and environmental receptors may be exposed to this contamination. The CSM for Glass Manufacturing Waste Disposal in the greater Corning area of New York (greater Corning area) is generalized and does not depict any particular neighborhood, municipality, or portion of the greater Corning area. The CSM was developed based on NYSDEC's *Technical Guidance for Site Investigation and Remediation*, also known as DER-10. A graphical depiction of the CSM for Glass Manufacturing Waste Disposal in the greater Corning area, that is not drawn to scale, is presented on **Figure 1**.

Various investigations across the greater Corning area to date have included collection of surface soil, subsurface soil, sediment, surface water and groundwater samples. Analytical sample results have had elevated concentrations of inorganics (most frequently arsenic, cadmium, and lead) and semi-volatile organic compounds (SVOCs) above the applicable New York State Department of Environmental Conservation (NYSDEC) soil standards (i.e., soil cleanup objectives [SCOs]; NYSDEC 2006) at residential, recreational, and commercial/industrial properties. As further site investigations and remediation are conducted across the greater Corning area, additional contaminants of concern (COCs) may be identified that are present at elevated concentrations above the applicable soil standards.

## Sources of Contamination

Various manufacturing and industrial facilities have operated in the greater Corning area since the mid-19$^{th}$ century. The City of Corning is well known to this day for its long history of glass making and glass product manufacturing from 1868 to present day. By 1944, five industrial scale glass production plants were in operation and increased to at least 16 plants and supporting facilities by the 1970s in the greater Corning area (Gaffer August 1944; Cherill 1976b). In the more than 150-year history of glass manufacturing operations in the greater Corning, area, millions of tons of glass were produced for a wide variety of products.

A large amount of waste was generated by glass manufacturing operations as a result of the large volume of glass and glass products produced. Waste streams included cullet (waste glass), refractory brick from glass furnaces that were frequently repaired or demolished and re-built, wood and coal ash from the glass furnaces and other processes, and building brick from demolished structures. Ash, brick, and/or glass (ABG) is defined as an industrial waste consisting of a heterogeneous mixture of residual materials generated from industrial processes associated with historical glassmaking in the greater Corning area. ABG that has been observed *in situ* includes:

- Ash that is typically black, gray, orange, and/or white;
- Various brick types (e.g., red construction brick, refractory brick); and
- Various types, colors, and sizes of glass.

ABG is often found intermixed with other industrial by-products such as slag and furnace residues and is generally uncompacted and loose. ABG has been observed in discrete layers as well as discontinuously throughout the soil column and has been observed at depths ranging from ground surface to greater than 10 feet below ground surface (bgs). ABG has been observed, or is suspected to be present, at numerous locations throughout the greater Corning area, as shown on **Figure 2**.

Other manufacturing and industrial facilities that operated in the greater Corning area and may have contributed to the disposal of wastes found in the greater Corning area include brick and terra cotta manufacturing, foundries and machine shops in Corning and Painted Post, a coal-fired power plant in Big Flats, municipal and hospital incinerators in the City of Corning, and a manufactured gas plant (MGP) in the City of Corning.

Sources of ABG and concentrations of COCs above the respective soil standards include:

- Solid wastes such as ABG that were generated from glass manufacturing activities. ABG has been observed to contain numerous types of solid waste including, but not limited to, thermometer tubing, filter rods, glass lenses, uranium glass, glass cullet (i.e., waste glass), ash, slag, and refractory brick, along with various other glass products.
- Liquid wastes such as process coatings and solutions from glass manufacturing activities.
- Fugitive dust and particulate air emissions from glass manufacturing facilities.

Prior to the enactment of the Resource Conservation and Recovery Act (RCRA) in the early 1970s, glass manufacturing waste was disposed of at or near manufacturing facilities, at local landfills, and/or given away to local property owners to be used as fill material. Available documentation suggests that these practices significantly reduced and eventually stopped once RCRA was in place. ABG and soils containing ABG have been documented to exceed RCRA hazardous criteria due to the elevated concentrations of metals, including barium, cadmium, and lead, present in the waste. These and other metals such as arsenic and boron as well as SVOCs have been detected at concentrations above the respective SCOs.

Numerous metals were used in glass manufacturing and other related operations for a wide variety of purposes including, but not limited to, as colorants, to impart various physical, chemical, optical, electrical, or thermal properties, and as fining agents to remove bubbles. Notably, radioactive metals including thorium and uranium were also used in the manufacturing of various glass products. The elevated concentrations of SVOCs are likely attributable to the combustion by products of burning fuels including, but not limited to, wood, coal, oil, diesel, and gasoline. While SVOCs are generally present at higher concentrations in urban areas due to vehicle and industrial emissions, the concentrations of SVOCs in locations where ABG is present are generally higher than the surrounding area.

Analysis for other potential contaminants including volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), pesticides, and herbicides is performed for samples collected during site characterizations as required in DER-10. Analysis for emerging contaminants, including per- and polyfluoroalkyl substances (PFAS), is conducted for all environmental media as part of the requirements in Title 6, Part 375 of the New York Codes, Rules and Regulations (NYCRR). Additionally, there is evidence that PFAS have been used for various purposes in glass manufacturing operations and in some finished glass products.

## Other Sources of Contaminants of Concern

In addition, other potential sources of metals (particularly arsenic, barium, boron, cadmium, and lead) and SVOCs may contribute to the overall exposure for receptors in the greater Corning area. These other non-glass manufacturing related secondary sources of arsenic, cadmium, and lead in the area may include:

- The historical use of leaded gasoline
- Household paint made before 1978
- The potential historical use of arsenic-containing pesticides and herbicides

- Emissions and aerial deposition of metals and SVOCs from manufacturing and industrial facilities and transportation (passenger and commercial vehicles and trains).
- Coal-derived ash contains numerous metals that are variable with the type and source of the coal including, but not limited to, aluminum, antimony, arsenic, barium, boron, cadmium, chromium, iron, mercury, nickel, lead, selenium, and uranium.
- Naturally occurring metals in local soils, rocks, and groundwater

Although these other potential sources of COCs are known or likely to be present in the greater Corning area, elevated concentrations of COCs have been detected in samples collected from sites in the greater Corning area, particularly at sites with observed ABG.

## Contaminant Release Mechanisms

The primary contaminant sources described above (solid and liquid wastes and emissions from glass manufacturing) contain metals and SVOCs. Contaminants can be released from solid materials through a variety of mechanisms including physical weathering and erosion, chemical weathering, and desorption. Solid wastes have the potential to impact surface and subsurface soils when present in direct contact with these soils. Infiltration of rain and snowmelt can leach contaminants from soils and impact soils deeper in the soil column as well as groundwater. If solid wastes were placed in areas that have direct contact with groundwater or surface water, the release of contaminants can occur through physical transport and leaching. The discharge of groundwater to surface water represents a secondary release mechanism to surface water and sediment. Surface water and sediment can also be further impacted by surface runoff and erosion of soils impacted by contaminants. Surface water can be impacted through surface runoff and erosion. Particulates from waste materials can also become entrained in the air as a result of wind or human activities.

Liquid wastes may have been discharged to the ground surface, to dry wells, and/or to surface water. The contaminants have the potential to impact surface and subsurface soils directly when present in direct contact. Infiltration of rain and snowmelt can leach contaminants from soils and impact soils deeper in the soil column as well as groundwater. The discharge of groundwater to surface water represents a secondary release mechanism to surface water and sediment. Surface water and sediment can also be further impacted by surface runoff and erosion of soils impacted by contaminants.

Air emissions from the historical stacks from glass manufacturing plants and waste stockpiles or exposed deposits of waste material have the potential to impact surface soils and surface water. Historical air emissions have not been evaluated to determine if they are potentially significant contributor to the contamination observed. However, fugitive dust emissions caused by wind or human activity from sites with exposed soils that contain elevated concentrations of COCs represent an ongoing potential release mechanism.

## Contaminant Transport

Metals are found naturally occurring in soils. A statistical comparison of background concentrations in soils was outside the scope of this CSM; however, a qualitative examination of the data was performed. Based on this examination, the disposed waste may be a source for arsenic, cadmium, and lead. Metals generally adsorb to fine-grained and organic materials, although under various redox and pH conditions they may become soluble or precipitate from solution. Metals adsorbed to sediment can travel downstream until the velocity of the stream flow slows, at which point the particles may settle out. The

metals contaminated sediment particles can also be remobilized during storm events and deposited further downstream or in the floodplain soils. Metals can also leach from soils to groundwater.

SVOCs generally adsorb to soil and organic material and therefore do not dissolve easily. Therefore, they are not easily removed with infiltrating precipitation. SVOCs in surface soil and waste can erode from upland areas and enter streams adsorbed to fine-grained soil and organic matter. Because SVOCs do not tend to dissolve, the contaminants will likely remain on the particles and settle out into the sediments at some point downstream of their entry point.

SVOCs and metals in surface soil and waste can erode from the upland areas and enter streams adsorbed to fine-grained soil and organic matter. Generally, these contaminants do not tend to dissolve and will likely remain on the particles and settle out into the sediments at some point downstream of their entry point. As with surface water, the presence of SVOCs and metals in stream sediments may be due to upstream sources. SVOCs can also leach from soils to groundwater.

## Potentially Impacted Receptors

Potentially impacted receptors in the greater Corning area include residents, industrial workers, construction workers, recreational users, park and school users, commercial users, and ecological receptors, as shown on **Figure 1**.

Passive recreational users are defined as those conducting activities with limited potential for contact with soil, such as artificial surface fields, paved courts and facilities (for tennis, basketball, roller hockey, etc.), outdoor pools, indoor recreational facilities, golf courses, and paved (raised) bike or walking paths. Given the limited potential for soil contact and similar potential exposure pathways, passive recreational users are considered under commercial users.

Other recreational users are defined as those conducting activities that have a reasonable potential for contact with soil, surface water, and/or sediment, such as recreation at playgrounds, natural grass playing fields, picnic areas, fishing, wading, and swimming. In this CSM, park and school users are considered separately from general recreational users based on age, anticipated activities, and potential exposure frequency.

Additional sensitive receptors include daycare participants, gardeners, and landscapers. For the purpose of this CSM, these additional sensitive receptors are considered under broader categories of receptors. Daycare participants are included under park and school users as the same exposure pathways (surface soil, surface water, drinking water, and outdoor air) are applicable. Gardeners are included under residential receptors as the same exposure pathways (surface and subsurface soil, drinking water, and outdoor air) are applicable. Landscapers are included under the construction worker category as they would have the same exposure pathways related to performing intrusive work (surface and subsurface soil, surface water, sediment, groundwater, and outdoor air). Exposure mediums and routes for potential receptors are detailed in the following subsections.

### Outdoor Air

Inhalation is a potentially complete pathway for all receptors, in instances where soil with elevated concentrations of COCs is exposed (e.g., bare surface soil) or disturbed (e.g., intrusive work such as digging). The main exposure pathway would be through inhalation of particulates that contain metals and/or SVOCs. Ambient air monitoring has been conducted during intrusive site characterization and remediation activities conducted in the Corning Study Area and at other sites suspected or known to contain glass manufacturing waste. In accordance with the general air monitoring requirements in

DER-10, data is collected for total concentrations of VOCs and total particulate matter (i.e., dust) with a diameter less than 10 microns (PM10). Although VOCs are not a current COC associated with glass manufacturing waste, VOCs were used for various purposes in glass manufacturing operations and are monitored to be conservatively protective of the community. Potential contaminants in soil such as SVOCs and metals adsorb to soil particles and therefore can be present in airborne particulate matter (i.e., dust). Particulate (PM10) monitoring is conducted to be protective of the community and serve as an indicator if additional dust mitigation measures are needed to prevent visible dust and specified particulate concentrations.

The NYSDEC and NYSDOH are working with the property owners, municipalities and utility providers in the greater Corning area to inform individuals, companies and workers performing intrusive work of the potential presence of ABG and associated COCs in soil, the proper practices for minimizing potential exposure to COCs and the management and disposal of ABG, and the importance to notify the NYSDEC or NYSDOH if ABG is encountered.

Best management practices include maintaining a cover of grass, mulch, or other material to prevent exposed surface soils and minimize the potential for dust generation, minimizing the disturbance of soils, and minimizing the generation of dust during soil disturbance activities by wetting the soils with water. Observations of ABG should be reported to the NYSDEC or NYSDOH.

### Surface Soil

Results from surface soil samples collected between 0 and 6 inches bgs within the greater Corning area indicate concentrations of metals and SVOCs greater than the applicable soil standards for the land use. Other analytes have generally not been detected at concentrations greater than the applicable soil standards.

- Dermal exposure to surface soil is a potentially complete exposure pathway for all potential receptors.
- Ingestion of surface soil is a potentially complete exposure pathway for all potential receptors. Receptors such as ecological receptors and residents who garden are more likely to be exposed to contaminants, if present, than other receptors. Other receptors such as construction workers or recreational users may be exposed by eating or drinking after touching impacted surface soils and not washing their hands.
- Inhalation of surface soil is a potentially complete exposure pathway for residents, construction workers, recreational users, park, school, and daycare users, and ecological receptors. Inhalation of surface soil may occur when airborne dust containing soil particles with contaminants is generated, due to bare surface soil and windy conditions and/or disturbance of the surface soils. Other examples of potential exposure scenarios are recreational users on a dirt path where ABG and/or associated COCs are present in surface soil and dust is generated. Industrial receptor exposure to surface soil inhalation is expected to be minimally significant, therefore it is considered a potentially complete exposure pathway.

The NYSDEC and NYSDOH are continuing to evaluate sites in the greater Corning area with reports of ABG. The NYSDEC and NYSDOH are also working with property owners, municipalities and utility providers in the greater Corning area to inform individuals, companies and workers performing intrusive work of the potential presence of ABG and associated COCs in groundwater, the importance to notify the NYSDEC or NYSDOH if ABG is encountered, and the proper practices for management and disposal of ABG and potentially impacted groundwater.

Best management practices include maintaining a cover of grass, mulch, or other material to prevent exposed surface soils and minimize the potential for dust generation, minimizing the disturbance of soils, and minimizing the generation of dust during soil disturbance activities by wetting the soils with water. Observations of ABG should be reported to the NYSDEC or NYSDOH.

### Subsurface Soil

Results from subsurface soil samples collected within the greater Corning area indicate concentrations of metals and SVOCs greater than the applicable soil standards for the land use, to a limited extent, VOCs. Other analytes have generally not been detected at concentrations greater than the applicable soil standards.

- Dermal exposure to subsurface soil is a potentially complete exposure pathway for residents, construction workers and ecological receptors. Residents and ecological receptors may be exposed to shallow subsurface soils; however, exposure would generally be limited to soils within the upper two feet. Construction workers may be exposed to subsurface soils at all depths, including below two feet. Contact with subsurface soil is expected to be minimally significant for industrial workers, recreational users, park, school, and daycare users, and commercial receptors; therefore, dermal exposure is considered an incomplete pathway for these potential receptors.
- Ingestion of subsurface soil is a potentially complete exposure pathway for residents, construction workers, and ecological receptors. Ingestion of subsurface soil is likely for ecological receptors such as burrowing animals. Ingestion of subsurface soil is likely limited to incidental exposure and exposure through gardening for human receptors. Contact with subsurface soil is expected to be minimally significant for industrial workers, recreational users, parks users, school users, and commercial receptors; therefore, ingestion is considered an incomplete pathway for these potential receptors.
- Inhalation of subsurface soil is a potentially complete exposure pathway for residents, construction workers, and ecological receptors, and may occur when dust is generated during subsurface activities where ABG and/or associated COCs are present. Contact with subsurface soil is expected to be minimally significant for industrial workers, recreational users, park, school, and daycare users, and commercial receptors; therefore, inhalation is considered an incomplete pathway for these potential receptors.

The NYSDEC and NYSDOH are continuing to evaluate sites in the greater Corning area with reports of ABG. The NYSDEC and NYSDOH are working with property owners, municipalities and utility providers in the greater Corning area to inform individual, companies and workers performing intrusive work of the potential presence of ABG and associated COCs in groundwater, the importance to notify the NYSDEC or NYSDOH if ABG is encountered, and the proper practices for management and disposal of ABG and potentially impacted groundwater. Best management practices include minimizing the disturbance of subsurface soils and the generation of dust during soil disturbance activities by wetting the soils with water. Observations of ABG should be reported to the NYSDEC or NYSDOH.

### Groundwater

In this CSM, groundwater is defined as non-drinking water and drinking water is discussed in the following section. Results from groundwater samples collected within the greater Corning area indicate concentrations of metals than the groundwater standards. Other analytes including SVOCs, VOCs, and PFAS have been detected to a lesser extent at concentrations greater than the respective groundwater quality standards. Construction workers performing subsurface activities may have incidental exposure to groundwater through dermal, ingestion, and inhalation. For this reason, construction workers are

considered to have a potentially complete exposure pathway for all exposure routes (dermal, incidental ingestion, and inhalation). Contact with groundwater is expected to be minimally significant for residents, industrial workers, recreational users, park, school, and daycare users, commercial receptors, and ecological receptors; therefore, dermal, ingestion, and inhalation of groundwater are considered incomplete pathways for these receptors.

The NYSDEC and NYSDOH are working with the municipalities and utility providers in the greater Corning area to inform companies and workers performing intrusive work of the potential presence of ABG and associated COCs in groundwater, the importance to notify the NYSDEC or NYSDOH if ABG is encountered, and the proper practices for management and disposal of ABG and potentially impacted groundwater.

### Drinking Water

The majority of potential receptors in the greater Corning area are located in areas served by public water systems. As a result, sampling of public and private drinking water wells has been limited to date as part of investigation activities in the greater Corning area. As described in the previous section, metals, and to a less extent, SVOCs, VOCs and/or PFAS, have been detected in groundwater samples collected as part of site characterization activities at concentrations greater than the respective groundwater standards. However, the majority of these groundwater samples have been collected from shallow monitoring wells that are generally shallower than 25 feet bgs and in a limited number of cases are up to 40 feet bgs. In contrast, the public supply wells in the greater Corning area have depths ranging from approximately 63 to 100 feet bgs. Private wells have variable depths but are expected to generally be deeper than 25 to 40 feet bgs. The NYSDEC and NYSDOH are continuing to evaluate if ABG and/or elevated concentrations of COCs in shallow groundwater are impacting deeper groundwater that is used for drinking water.

The public water supply in the greater Corning area is sourced from the Lower Cohocton River and Upper Cohocton River Aquifers. Public supply wells are sampled regularly for parameters regulated by federal and/or state agencies, and results are published in annual drinking water reports. Public water supply data does not indicate concentrations of COCs above drinking water limits that are included in routine testing. However, the NYSDEC and NYSDOH are conducting further evaluation of the water quality in public supply wells near confirmed locations of ABG and elevated shallow groundwater concentrations of COCs associated with glass manufacturing waste. The NYSDEC and NYSDOH are also continuing to evaluate the potential for exposure to COCs associated with glass manufacturing waste in private drinking water wells in the vicinity of locations with ABG and/or elevated concentrations of COCs in shallow groundwater. Observations of ABG in the vicinity of private drinking water wells in the greater Corning area should be reported to the NYSDEC or NYSDOH.

### Surface water

Limited surface water sampling has been conducted to date. Results for surface water samples collected in the greater Corning area indicate concentrations of metals greater than surface water standards. Dermal contact with surface water and ingestion of surface water is expected to be minimally significant for residents, industrial workers, and commercial receptors; therefore, dermal contact and ingestion are considered to be incomplete exposure pathways for these receptors. Dermal contact with surface water for park users may occur at parks where surface water is present. Similarly, recreational users may have dermal contact with and/or accidentally ingest surface water through swimming or other activities. Ecological receptors are likely to have dermal contact with and ingest surface water. Therefore, dermal contact of surface water is considered a potential exposure pathway for recreational users, park users,

and ecological receptors and ingestion of surface water is considered a potential exposure pathway for recreational users and ecological receptors.

The NYSDEC and NYSDOH are continuing to evaluate the potential for exposure to surface water impacted with COCs associated with glass manufacturing waste. Observations of ABG along ponds, creeks, rivers or other bodies of water in the greater Corning area, should be reported to the NYSDEC or NYSDOH.

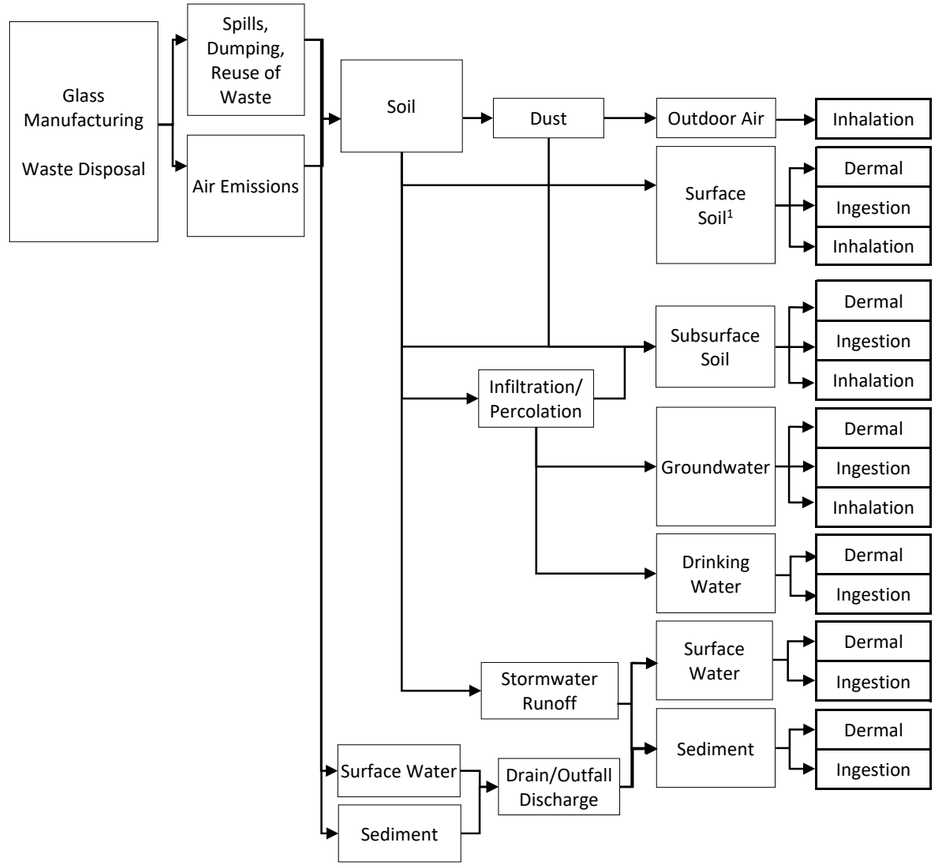
### Sediment

Results for sediment samples collected within the greater Corning area indicate concentrations of metals above sediment guidance values, and to a limited extent, pesticides. Construction workers, recreational users, park users at parks where a surface water body is present, and ecological receptors have the potential to be exposed to contaminated sediment through dermal contact or incidental ingestion; therefore, these are considered to be potentially complete exposure pathways. Exposure to sediment is expected to be minimally significant for residents, industrial workers, users of schools and daycares, and commercial receptors; therefore, dermal contact and ingestion of sediment are considered incomplete exposure pathways for these potential receptors.

The NYSDEC and NYSDOH are continuing to evaluate the potential for exposure to sediment impacted with COCs associated with glass manufacturing waste. Inspections of the flood control berms in the greater Corning area are routinely conducted in conjunction with the NYSDEC Department of Water that is responsible for the management of these flood control structures. Short-term response actions are conducted when ABG is observed at the surface of the flood control berms to address the potential exposure to ABG and the associated COCs. Observations of ABG along ponds, creeks, rivers or other bodies of water in the greater Corning area, should be reported to the NYSDEC or NYSDOH.

# FIGURES

Figure 1 - Conceptual Site Model Summary
Greater Corning Area, New York




| PRIMARY SOURCE | POTENTIAL RELEASE MECHANISM | SECONDARY SOURCE | SECONDARY RELEASE MECHANISM | POTENTIAL EXPOSURE MEDIUM | POTENTIAL EXPOSURE ROUTE | POTENTIAL RECEPTORS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Resident[2] | Industrial Worker | Construction Worker[3] | Recreational User[4] | Park, School, or Daycare User[5] | Commercial User[6] | Ecological |
| Glass Manufacturing; Waste Disposal | Spills, Dumping, Reuse of Waste; Air Emissions | Soil | Dust | Outdoor Air | Inhalation | ● | ● | ● | ● | ● | ● | ● |
| | | | | Surface Soil[1] | Dermal | ● | ● | ● | ● | ● | ● | ● |
| | | | | | Ingestion | ● | ● | ● | ● | ● | ● | ● |
| | | | | | Inhalation | ● | ● | ● | ● | ● | ● | ● |
| | | | | Subsurface Soil | Dermal | ● | -- | ● | -- | -- | -- | ● |
| | | | | | Ingestion | ● | -- | ● | -- | -- | -- | ● |
| | | | | | Inhalation | ● | -- | ● | -- | -- | -- | ● |
| | | | Infiltration/ Percolation | Groundwater | Dermal | -- | -- | ● | -- | -- | -- | -- |
| | | | | | Ingestion | -- | -- | ● | -- | -- | -- | -- |
| | | | | | Inhalation | -- | -- | ● | -- | -- | -- | -- |
| | | | | Drinking Water | Dermal | ● | -- | -- | -- | -- | -- | -- |
| | | | | | Ingestion | ● | -- | -- | -- | -- | -- | -- |
| | | | Stormwater Runoff | Surface Water | Dermal | -- | -- | ● | ● | ● | -- | ● |
| | | | | | Ingestion | -- | -- | -- | ● | -- | -- | ● |
| | | | | Sediment | Dermal | -- | -- | ● | ● | ● | -- | ● |
| | | | | | Ingestion | -- | -- | ● | ● | -- | -- | ● |
| | | Surface Water; Sediment | Drain/Outfall Discharge | Surface Water; Sediment | | | | | | | | |

**Legend**

● Potentially complete exposure pathway (based on current CSM; to be evaluated on a site-specific basis)

-- Incomplete exposure pathway (based on receptor activities and current CSM)

**Notes**

1. Surface soil is defined as 0-2 inches for human health receptors and 0-6 inches for ecological receptors.
2. The residential user included gardeners.
3. The construction worker receptor includes landscapers.
4. Recreational users include those conducting activities with reasonable potential to have contact with soil, surface water, and or sediment.
5. Park, school, and daycare users are considered as active recreational users, with the potential for contact with soil, surface water, or sediment. Only park users at parks with surface water would have a potentially complete exposure pathway for dermal contact with surface water or sediment.
6. Passive recreational users with limited potential for contact with soil, surface water, or sediment are considered under commercial users.

# Figure 2 - Suspected or Confirmed Locations of ABG

- ABG Positive Samples (AWS)
- Potential ABG Observed Samples (AWS)
- ABG Negative Samples (AWS)
- ABG Confirmed
- ABG Suspected
- No ABG Detected

0 2,500 5,000 10,000 Feet

0 0.5 1 2 Miles

Plotted By:

Plot Date: 4/11/2025

N

1. Residential Study Area OUs 1 to 5 (Site # 851046)
2. Guthrie Center Way Property (Site # 851051)
3. Guthrie Clinic North (Site # 851062)
4. City of Corning Fire Department (Site # 851050)
5. Post Creek (Site # 851053)
6. Stewart Park (Site # 851060)
7. McKinney Park (Site # 851056)
8. William Street/Hillvue Park (Site # 851055)
9. Woodview Avenue (Site # 851065)
10. West Road (Site # 851052)
11. Centerway Pedestrian Bridge Approach (Site # 851047)
12. Denison Park (Site #851066)
13. Vine Street (Site # 851067)
14. City of Corning Sewer Right of Way (Site # 851057)
15. Connector Street (Site # 851064)
16. Van Etten Road (Site # 851061)
17. Conhocton Street Flood Control Berm Area (Site # 851063)
18. South Corning Spoils Area (Site # 851068)
19. South Corning Road (Site # 851069)
20. River Road Spoils Area (Site # 851070)
21. Dodge Avenue (Site # 851071)
22. Townsend Avenue (Site # 851072)
23. Rose Road (Site # 851073)
24. Erwin Town Landfill (Site # 851003)
25. Allen Landfill on Bailey Creek Road (Site # 851001)
26. Allen Properties
27. Sterling Street
28. Fuller Avenue A
29. Vycor Plant
30. Hugh Gregg Elementary
31. Sly Avenue A
32. Sly Avenue B
33. Bridge Street
34. Corning Incorporated Corporate Headquarters (Site # 851042)
35. River Road
36. East Corning Road
37. Baker Street/VFW/Cinderella Softball Fields
38. Brown Hollow Road
39. Canfield Park
40. Charles Street/Cutler Creek
41. Chestnut Street and West Third Street (Monkey Run)
42. College Avenue
43. Duvall Road, Dix, New York (not shown)
44. Hornby Road/Cutler Creek
45. Lamphear Court
46. Oneida Place
47. Pine Hill Road
48. South Corning Driving Range
49. Florentia Lane
50. Watuaga Ave Extension
51. Fuller Avenue B
52. West 4th Street
53. Tioga Avenue Site (Site # C851031)
54. Former Corning Hospital and Related Parcels (Site # C851049)
55. Corning Family YMCA (Site # V00357)
56. Former Days Inn (Site # 851054)
57. Gibson Scrapyard (Site # 851058)
58. Steuben Glass Facility (Site # C851037B)
59. Former Fulton Finishing Plant (Site # C851037)
60. Corning Refractories Plant (Site # 851048)
61. World Kitchen, LLC (Site # 851039)
62. Hakes C&D Landfill (not shown)
63. Charles St/Hamilton Road
64. Benedict Gravel Pit (not shown)
65. Rhinehart Sand and Gravel
66. Davis Road Dump (not shown)
67. William E Severn Elementary