

3.7.2 GLENDALE LANDFILL

Facility Name: Glendale Landfill

A.K.A.: N/A

Location: North Troy Avenue. East of the railroad and immediately south of the north corporate line of the Village of Glendale.

Parcel(s): 59600010001, 59600010002

Lat, Long: 39.278029 -84.456947

Region: Glendale, OH 45246

Owner: Village of Glendale

Operation (yrs): 1950's ? – 1980's



FACILITY OVERVIEW

Former Glendale Landfill is located in the Village of Glendale, Ohio, at the north end of North Troy Avenue, bordering the railroad tracks. The site is elongated extending approximately 250' to 300' east of the railroad and approximately 1,100' south of the north corporate limit of Glendale.

A well-defined creek or drainage course proceeds from the northwest corner to the southeast corner, flowing south into the tributary of Mill Creek. Figure 3.7.2-A illustrates the topography of the site.

FIGURE 3.7.2-A



An August 29, 1969, letter from the village indicated that combustible waste is burned at an incinerator in Sharonville while non-combustible waste is "disposed of in the deep ravine in the extreme northeast corner of the village". The letter also indicates that burning of "trimmings from shrubs, tree limbs and trunks" occurs on the "south end of the dump". No documentation exists for the site from 1970 through 1985 and therefore activities at the site are unknown. In 1986 an Ohio EPA letter to the village indicates that a solid waste transfer station is operating on the site. The letter also thanks the village for "your cooperation in closing the old dump and the measures taken to provide a complete earth covering of the site." Figure 3.7.2-B shows the progression of filling from 1973 through 1986.

FIGURE 3.7.2-B



Prior to January 2009, the north end of the site had been used to store wood chips by the Village of Glendale. It is unclear when this practice was initiated, but the amount of wood chips increased each year. In a 2003 letter to the Village of Glendale's Ron Hafner, the Health District informed him that the wood chip pile was encroaching on the northern drainage course and the practice of storing the wood chips in such a way was a potential fire hazard.

In early January 2009, the Glendale Fire Department received a call that the wood chip pile was on fire. It was determined that the heat and decomposition of the wood chips sparked a fire deep in the pile. Following the incident, the 5,480 cubic yard wood chip pile was removed from the site. The Village no longer stores wood chips at the site.

SAMPLING RESULTS

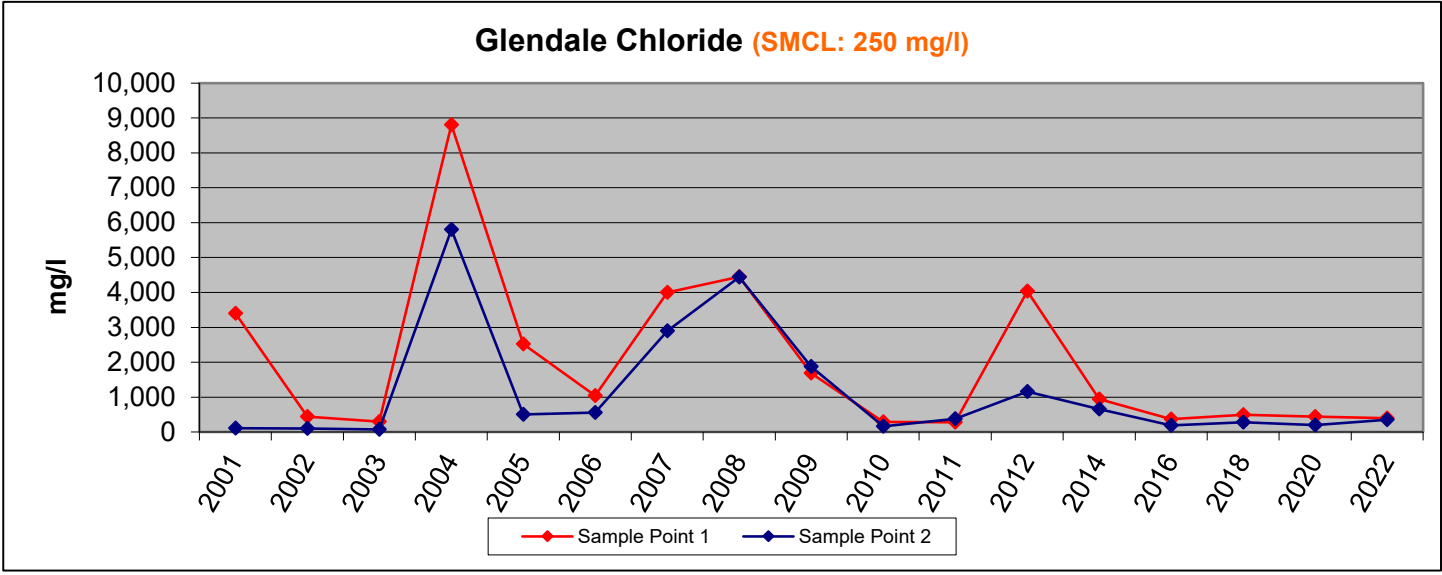
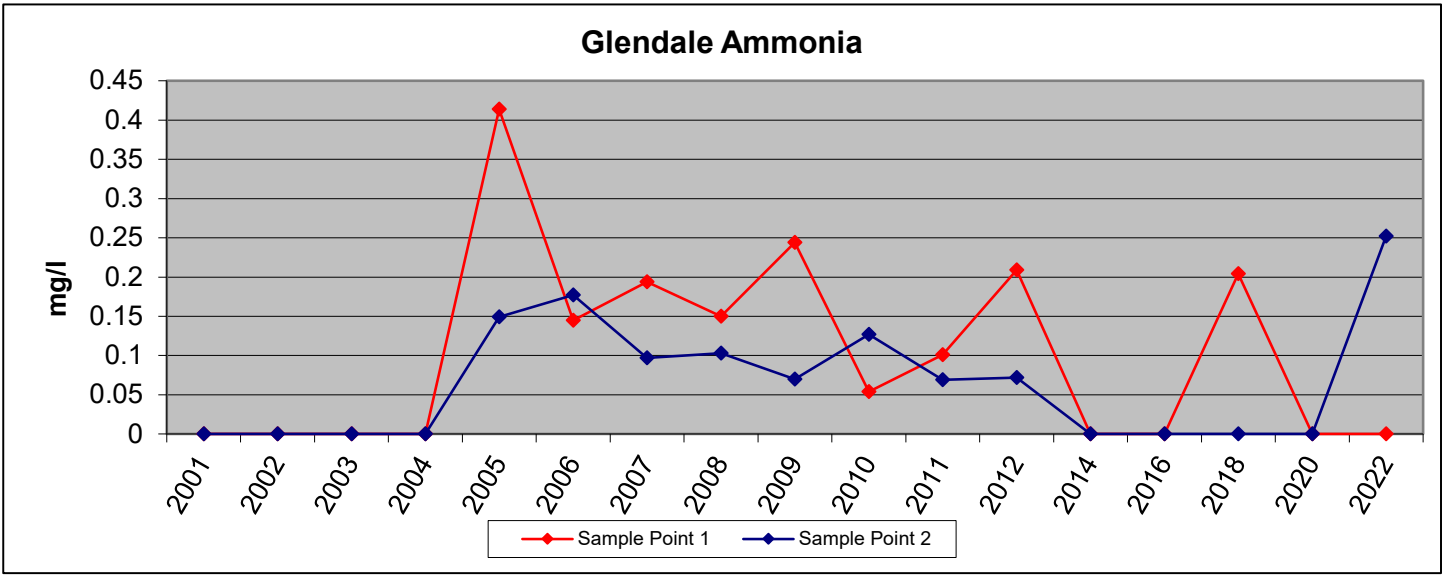
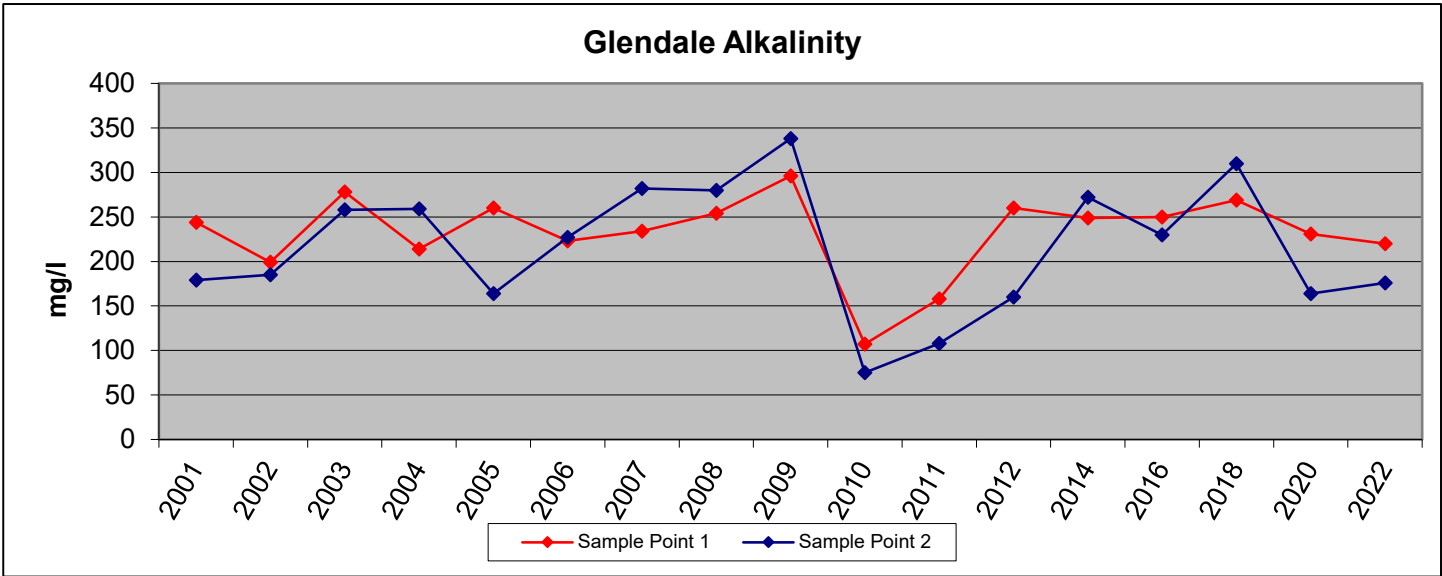
A small, unnamed stream flows from north to south along the eastern side of the Glendale Landfill. Samples are taken near the north end of the landfill (S-1) and below the landfill (S-2). Samples around Glendale Landfill were collected on October 19, 2022 (Appendix A). The northern and southern sample sites are comprised of a series of small, shallow pools and low flow areas over a gravel bottom. A surface water pipe discharges from an upstream area to a pool and then a riffle area north above the landfill. The referenced locations are shown on Figure 3.7.2-C.

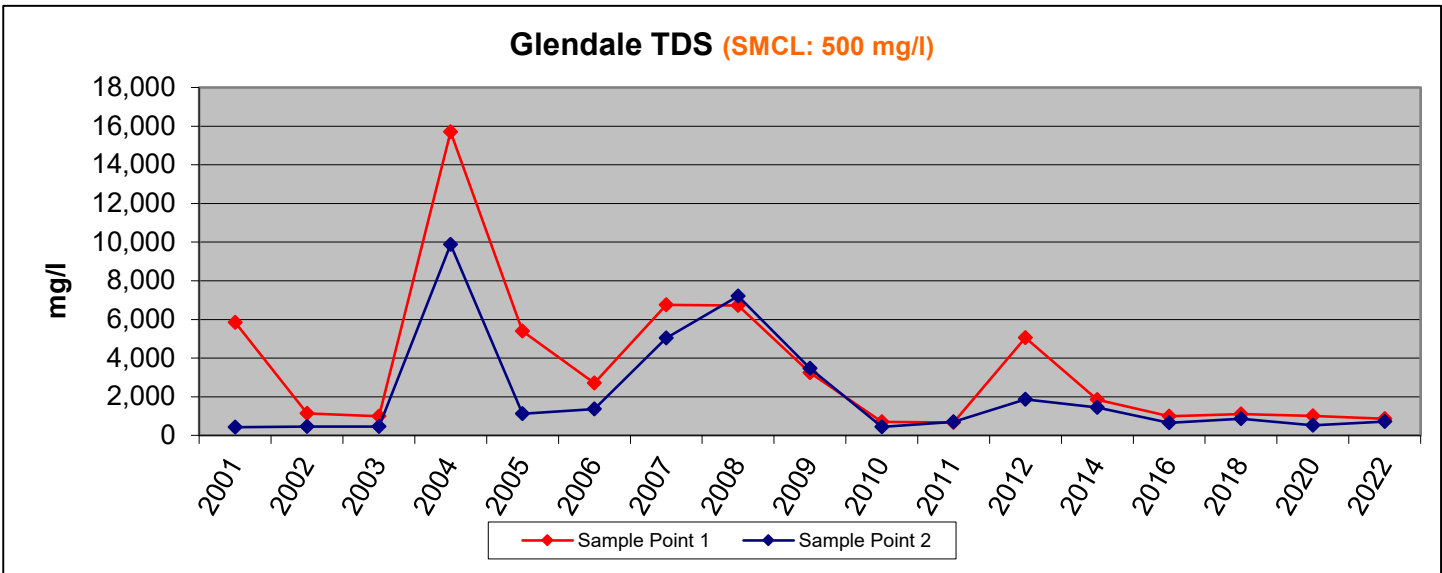
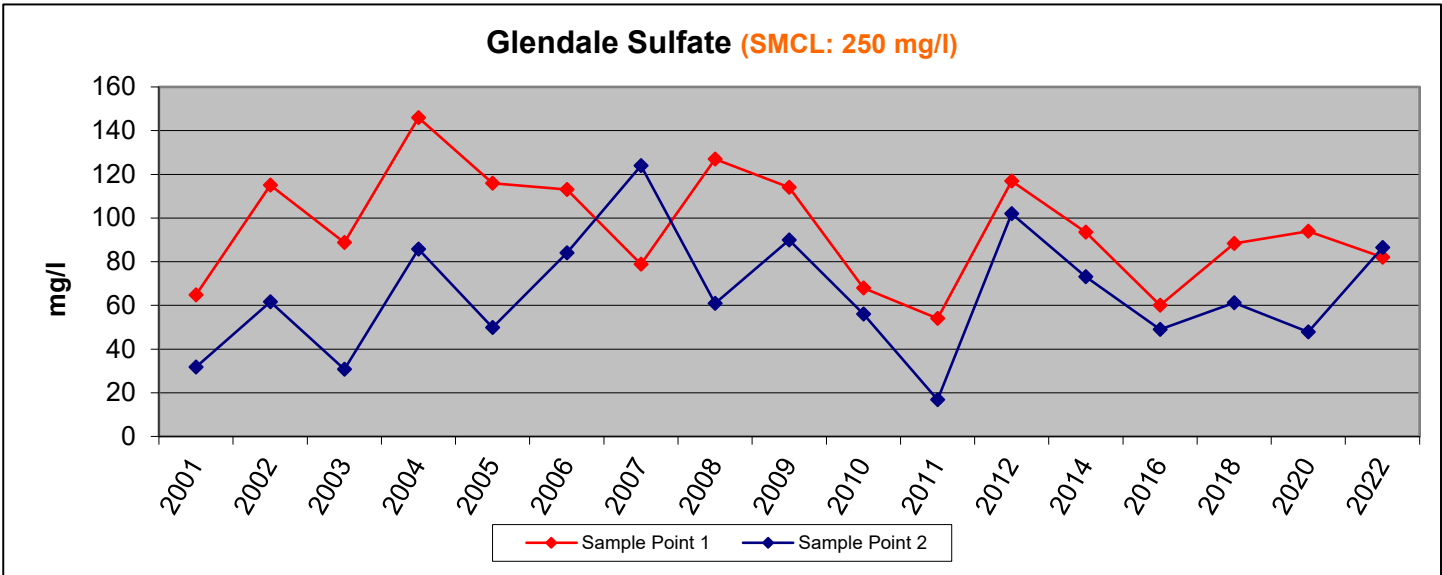
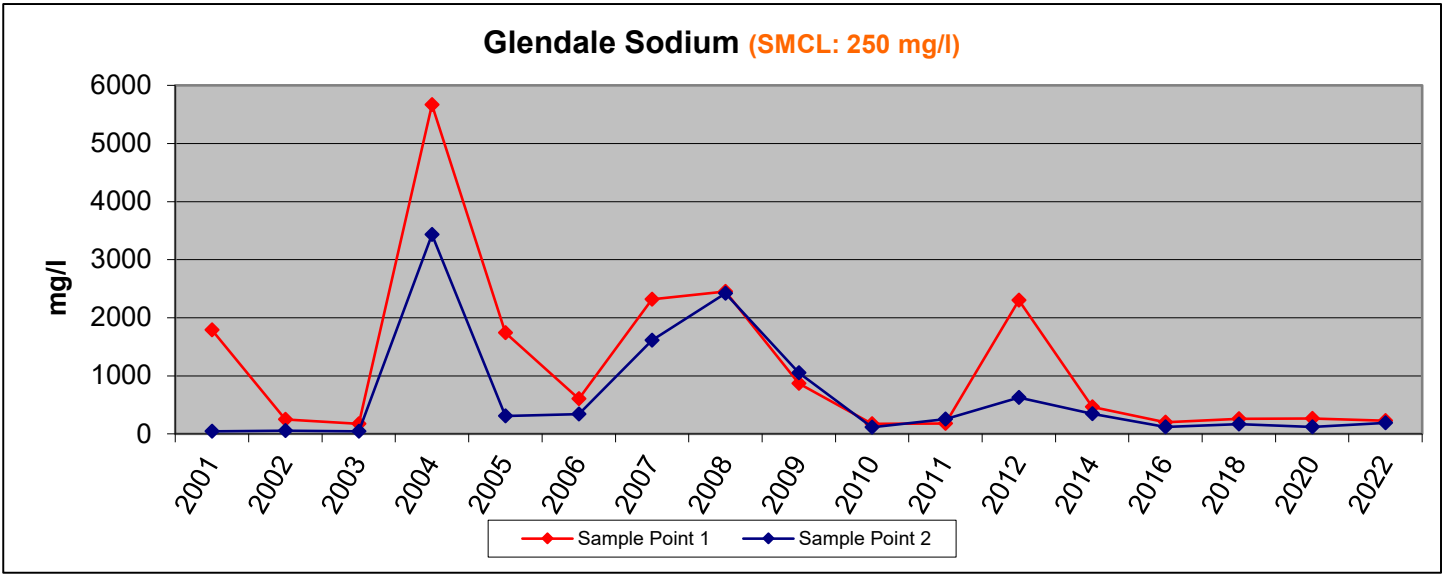
Both sample points have historically resulted in elevated concentrations of chloride, sodium, and TDS. From 2004 through 2009, sample points demonstrated high levels of these parameters relative to the secondary drinking water standards. In 2010, concentrations dramatically dropped and were below the drinking water standards at S-2 for the first time in seven years. However, in 2011 concentrations of these parameters were again observed at elevated levels although not quite to the levels seen prior to 2010. These parameters have remained at these high concentrations through 2020 sampling. This trend holds true for S-1 during the 2022 sampling with chloride and TDS above their SMCLs. With a result of 226 mg/L, the concentration of sodium at S-1 came in slightly below the SMCL. Respective SMCLs were exceeded for Chloride and TDS at sample point S-2. However, all downstream concentrations were lower than upstream concentrations for these parameters.

During 2020 monitoring ammonia was non-detect at both locations and alkalinity dropped to the lowest levels observed since 2011. In 2022 alkalinity levels were similar to 2020 however, ammonia was detected at S-2 (0.252 mg/L) just above the detection limit of 0.2 mg/L. After registering historically high concentrations of manganese at both sample points in 2014, concentrations at both locations have returned to levels annually observed across the watershed during the four sampling events completed since. S-2 did exceed the SMCL of 0.05 mg/L with a concentration of 0.0878 mg/L in 2022. Iron concentrations have occasionally exceeded the SMCL of 0.3 mg/L at both sampling points. During 2022 monitoring both locations fell below the SMCL. Antimony concentrations (0.00975 mg/L) were above the MCL of 0.006 mg/L at sample point S-1 during 2018 but have fell below the detection limit during 2020 and 2022 monitoring.

The majority of parameters observed at S-2 this year remain equal to or below the levels observed at S-1. Considering both the similarity of results for S-1 at the north end of the landfill and S-2 below the landfill and the fact that majority of parameters actually decrease when comparing S-1 to S-2, Glendale Landfill does not appear to be impacting the water quality of the stream.

Hamilton County Public Health has hypothesized that the historical cause of generally higher parameters was likely due to an undetermined upstream source. In the past, staff had explored areas, which drain to this stream location, for any other signs of dumping, spills, or misuse. No clear source could be identified at the time. Starting in 2014 Ohio EPA, Springdale Public Works, HCPH's Water Quality Division, and MSD began working to determine the source of the elevated parameters. This work included reviewing processes at businesses and installing monitors in various locations upstream from sample point 1. The investigation did discover some improper discharges from upstream industry which have been corrected. Staff will continue to monitor this stream. Surface water chemical data is illustrated for Glendale Landfill in the graphs on the subsequent pages.





Gas monitoring was conducted along the south and southeast perimeter of the Glendale Landfill on December 22, 2023 (Table 3.7.2-B). The punch bar locations are shown on the Glendale map (Figure 3.7.2-C). During 2023 there was one detection of methane at a very low level (2% LEL) at sample point 13. There were no methane detections from 2019 - 2022. In 2018 methane was detected in sample points 6 through 12 at very low concentrations (0.1 – 0.2% methane). During 2017 sampling only one detection of 0.1% methane was encountered at sample point 4. Methane was detected at sample point 11 at 1.35% during 2016 sampling. Prior to 2016 sampling, no methane had been detected during sampling since 2006 when 0.4% methane was detected at sample location 12. When required, sampling further out from the landfill in these areas has indicated no methane gas. There was one detection (2 ppm) of Carbon monoxide (CO) at sample point 9 in 2023. Carbon monoxide was detected at five sample points in 2022 ranging from 2-10 ppm. Prior to 2022 carbon monoxide (CO) had not been detected since 2016. Carbon monoxide was detected at three sample points in 2016 ranging from 1-3 ppm. Prior to 2016 carbon monoxide had not been detected at any sample points since 2006. *(Sampling data for this landfill is in the files at Hamilton County Public Health)*

TABLE 3.7.2-B (12/22/23)

Sample #	O2 %	LEL %	CH4%	CO ppm	NH3 ppm	H2S ppm
1	20.9%	0	0	0	0	0
2	20.9%	0	0	0	0	0
3	20.9%	0	0	0	0	0
4	20.8%	0	0	0	0	0
5	20.9%	0	0	0	0	0
6	20.9%	0	0	0	0	0
7	20.9%	0	0	0	0	0
8	20.9%	0	0	0	0	0
9	20.9%	0	0	2	0	0
10	20.9%	0	0	0	0	0
11	20.9%	0	0	0	0	0
12	20.9%	0	0	0	0	0
13	20.3%	2	0.1	0	0	0

SITE INSPECTIONS

The site was inspected by HCPH on December 22, 2023. No violations or nuisance conditions were observed on the site. An area of exposed waste remains on the southeast corner of the former landfill. The area remains unchanged when compared to previous inspections and is already covered with established vegetation therefore removal/re-covering is not practical at this time.

SITE PRESENT DAY

Today, the entrance to the site is gated off. The site is mostly overgrown with trees and honeysuckle on the slopes of the landfill and tall weeds and grass on top of the landfill. The Village occasionally dumps clean hard fill (soil and/or concrete) at the site. A dumpster is maintained on the site for disposal of solid waste generated by the village.





Figure 3.7.2-C
Glendale Closed Landfill
North Troy Avenue

- ◆ = Surface Water Sampling Location
- = Approximate Limits of Waste
- ▲ = Gas Monitoring Location

