

3.3.2 CARMICAL LANDFILL

Facility Name: Carmical Landfill

A.K.A: N/A

Location: 5451 East Miami River Road.
Situated north of East Miami River Road, approximately 0.5-mile west of the Gum Run Road intersection.

Parcel(s): 57001300008

Lat/Long: 39.200205 -84.709686

Region: Miami Township

Owners: Hamilton County Park District

Operation (yrs): 1970's-1993 (*based on records and aerial photography*)

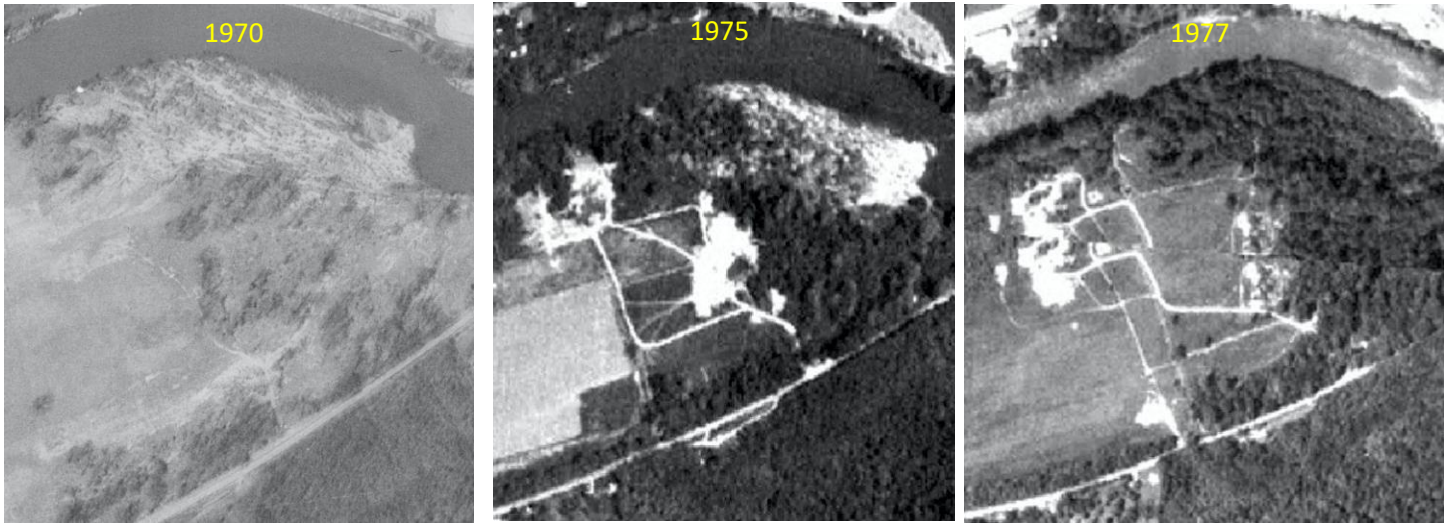


FACILITY OVERVIEW

Based on records obtained from the Hamilton County Auditor website, the property was purchased by a sand and gravel company in 1975. Mining of the property likely occurred after the property changed hands and the aerials in figure 3.3.2-A support this. The figure shows aerial photographs from 1970 to 1977. It does not appear as though filling or mining activities are occurring in the 1970 photograph. Activities are occurring on the central and northwest portions of the property in the 1975 and 1977 photographs. This suggests that filling began

sometime between 1970 and 1975. Based on records, filling of the gravel pit likely occurred both during the operation of the gravel pit and after.

FIGURE 3.3.2-A



Mining likely continued until 1987 when the property was sold to the Monfort Heights Athletics Association. An Ohio EPA letter dated June 24, 1986, and a Hamilton County letter dated May 15, 1986, outlined specific guidelines that the then operating landfill was to only accept earth, rock, stone, brick, concrete, pavement, tree debris, material from construction and demolition operations such as brick, concrete, stone, glass, wallboard, framing and finishing lumber, roofing materials, plumbing, plumbing fixtures, wiring, and insulation materials.

A Hamilton County letter dated May 1, 1987, indicated that proper control and restrictions were not being adequately maintained to prevent open dumping of solid waste materials, which should be put only in a licensed sanitary landfill. Some items observed in an April 29, 1987, inspection included concrete, timbers, metal tubing, electric, boxes, bedding, water heaters, furniture, insulation, metal cabinets, trees, tires, and roofing. Control measures were recommended by Hamilton County to avoid potential violations and/or prohibiting the landfill's operation.

Two additional letters indicating guidelines that the landfill could only accept construction and demolition debris were sent by Hamilton County on February 12, 1992 and May 19, 1992. No closure records of the landfill are available. Figure 3.3.2-B shows aerials from 1980, 1986, and 1994. It appears as though filling is occurring on the property in both 1980 and 1986.

FIGURE 3.3.2-B

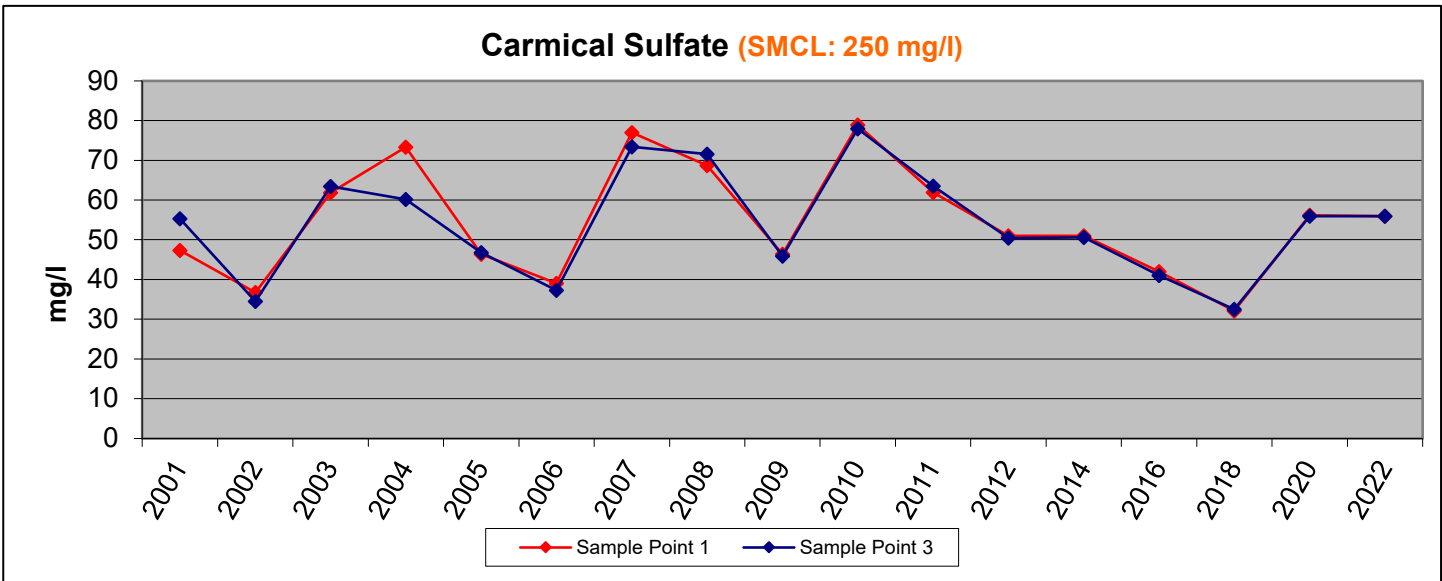
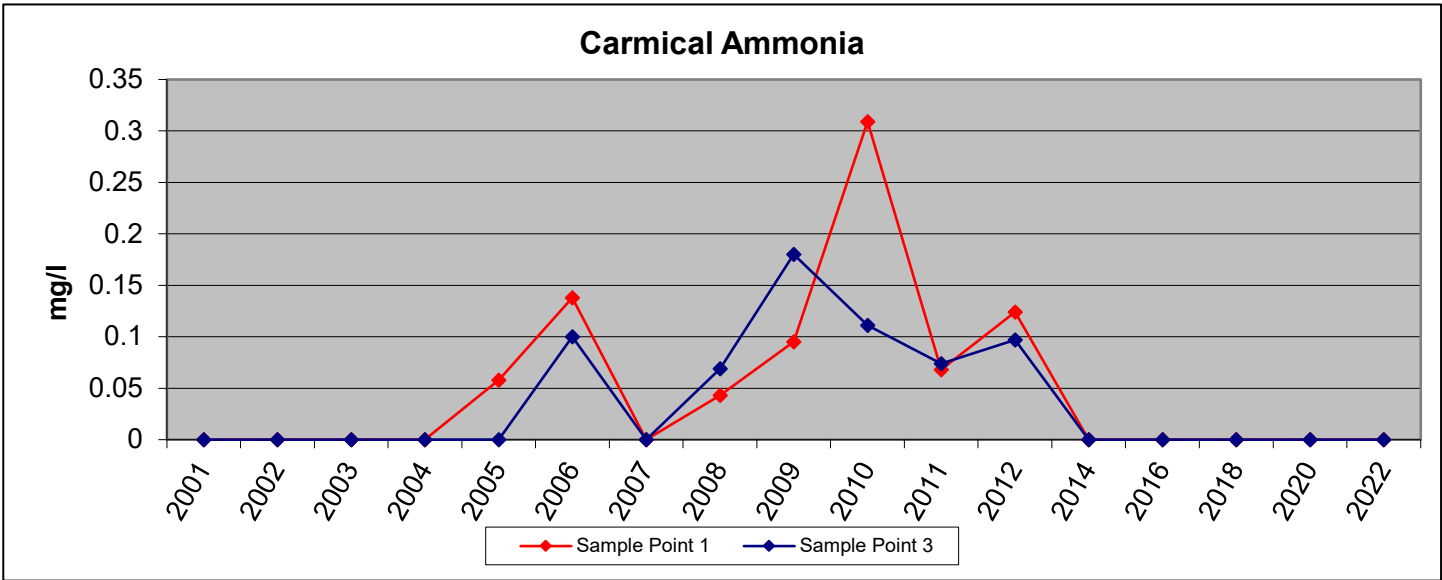
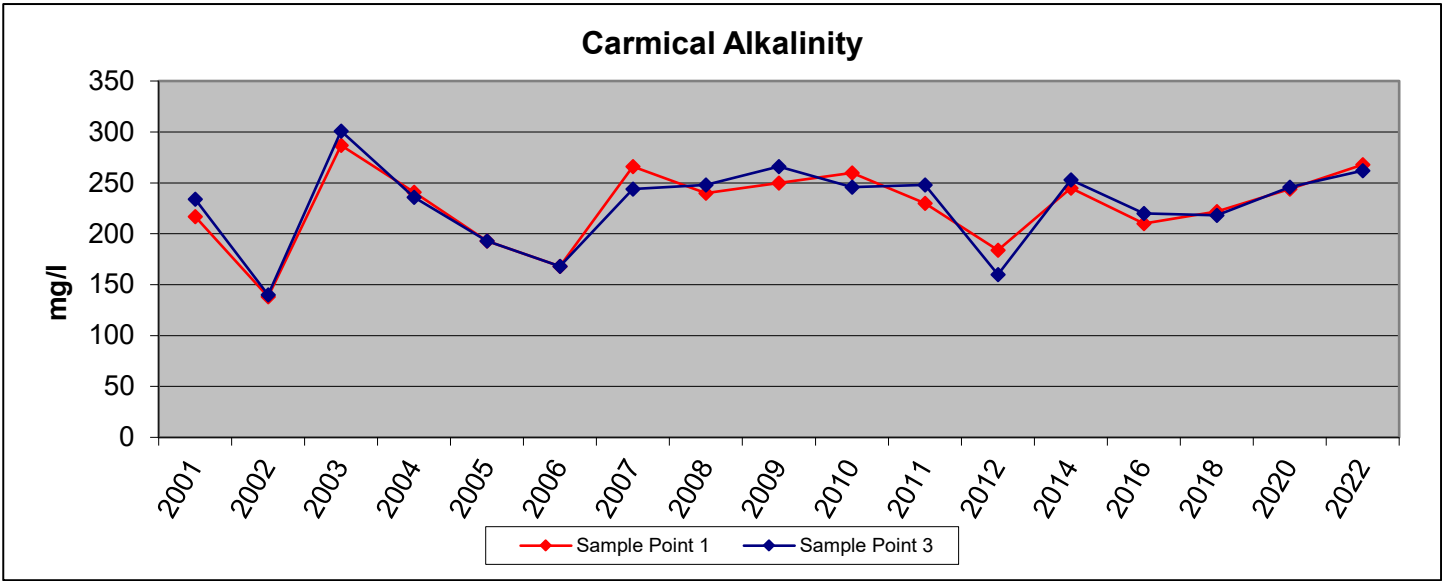


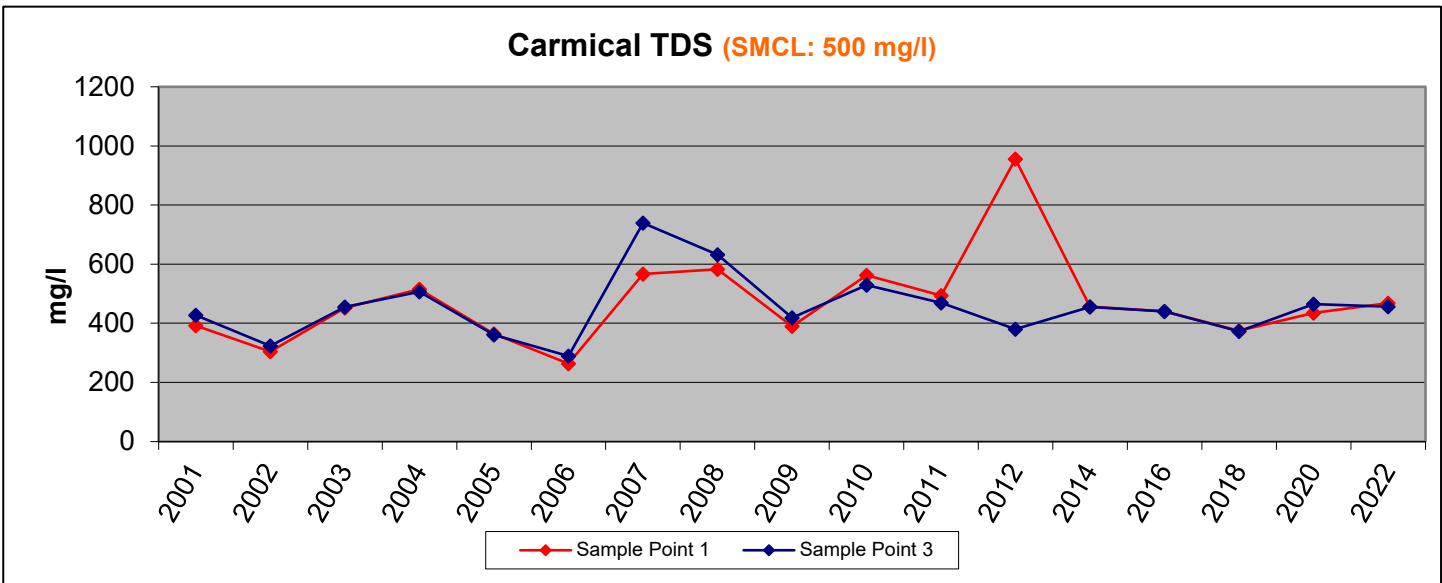
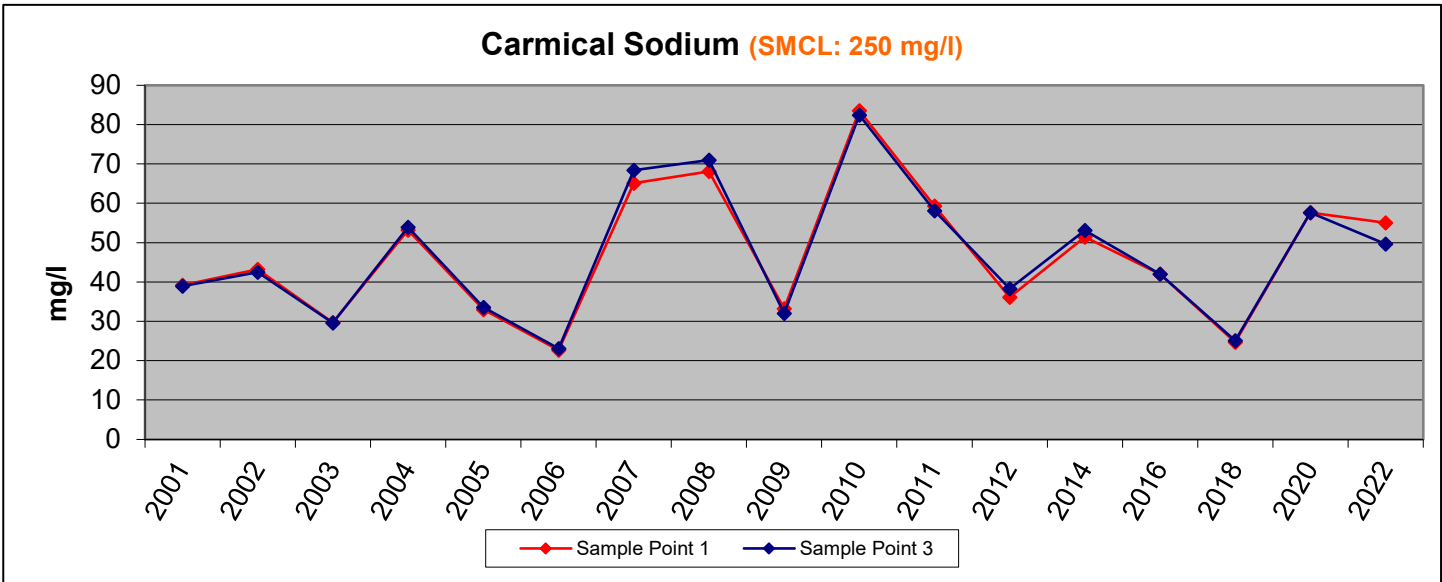
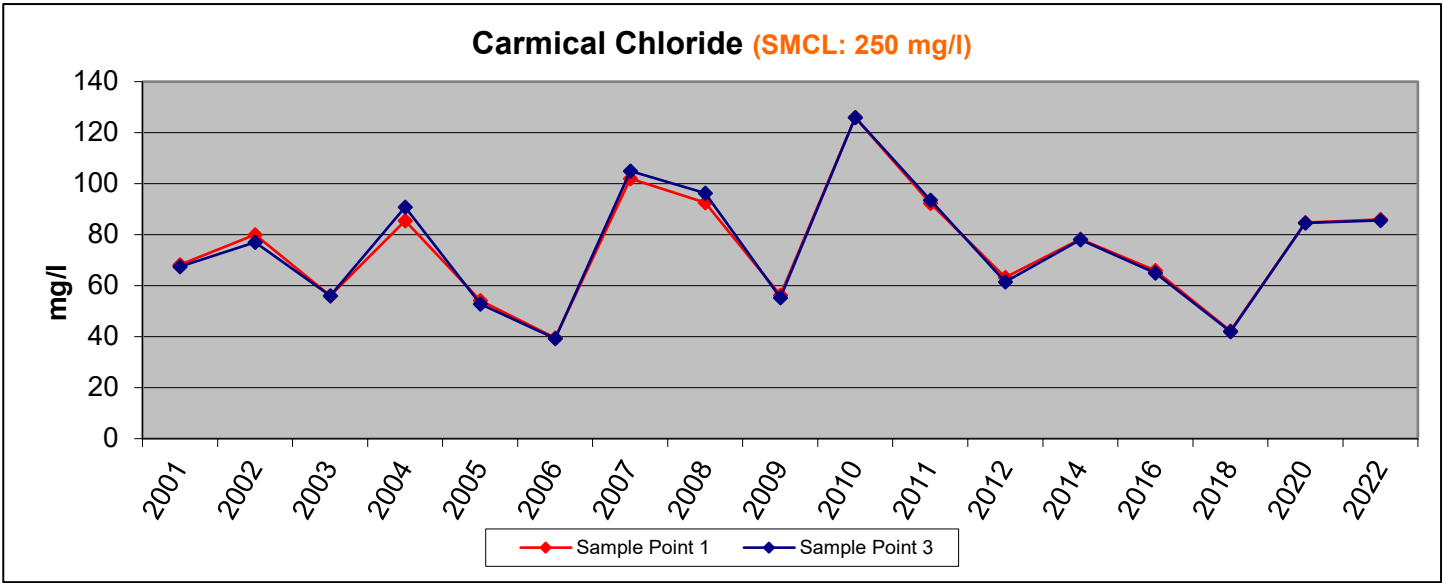
In the 1994 aerial it appears as though filling has ceased and the property has been converted to athletic fields. Until 2011, the property had been used by the Monfort Heights Athletic Association as recreational baseball and soccer fields with gravel parking areas and a gazebo. In 2011, the recreational ball fields and gravel parking areas were removed, and the property is now vacant green space owned by the Hamilton County Park District.

SAMPLING RESULTS

The Great Miami River runs along the north side of the Carmical Landfill. Samples are taken above and below the landfill. Historically, stream samples have been taken above (S-1), next to (S-2), and below (S-3) the landfill (Appendix A). Given the steady findings of S-2 and that both upstream and downstream samples are collected around Carmical landfill, sample site S-2 was removed from the sampling protocol in 2007. Samples around Carmical Landfill were collected on October 19, 2022. The upstream sample was in shallow (1'), gravelly, rocky riffle area of the river. The shallow area had rapid flow across the rocks. The downstream sample was taken in a pool about 2 to 3 feet deep with a rocky, silty bottom. Both locations had low flow at the time of sampling. It was noted during the 2010 and 2011 sampling that the riverbank had been significantly reshaped by the owner for recreational use since the 2009 sampling. The referenced locations are shown on Figure 3.3.2-C.

Except for a decrease observed at both sampling locations during 2012, alkalinity has been consistent during sampling events over the last 15 years at both the upstream and downstream sample points. However, a slight increasing trend is evident over the last 3 sampling events. Similarly, TDS has been relatively consistent since 2009 outside of an elevated result at the upstream location in 2012. From 2010 to 2018 sulfate, sodium, and chloride had been on a downward trend. During 2020 sampling however, all three increased in concentration and 2022 results were similar. The recent results (2020 & 2022) remain within the historical ranges seen during past sampling events and remain well below the respective SMCLs for sulfate, sodium, and chloride. After historical high concentrations for iron were observed at both sampling locations during 2018 sampling, 2020 concentrations of iron decreased significantly at both sampling locations. This trend continued during 2022 when iron concentrations were below the SMCL of 0.3 mg/L at both sampling points for the first time since monitoring for this parameter began in 2010. The SMCL pH range has occasionally exceeded the upper limit (8.5) during previous sampling events with both S-1 and S-2 consistently near or above the high end of the pH range for SMCL. Recently however, the SMCL pH range has been below the upper limit during the last 4 sampling events. Manganese has been below the SMCL (0.05 mg/L) at both sample locations during the last 4 sampling events including in 2022. All other parameters were below their respective SMCL or MCL in both the upstream and downstream samples. Surface water chemical data is illustrated for Carmical Landfill in the graphs on the subsequent pages.





The Great Miami River borders the Carmical Closed Landfill (Figure 3.3.2-C) to the north and east. The adjacent property to the west has a gravel pit pond along much of the west boundary of the landfill. A drainage ditch runs along the southern edge of the landfill. No gas monitoring is conducted at this location.

FACILITY INSPECTIONS

The site was inspected by HCPH on December 28, 2023. No violations or nuisance conditions were observed on the site.

SITE PRESENT DAY

Today the site is open space owned by the Hamilton County Park District. The topography of the former landfill is primarily flat, with gentle south/southwest to north/northeast slope. The site is completely covered by grass and weeds with trees around the perimeter of the former landfill. A locked gate blocks vehicle entry to the area. The property is bordered to the north and east by the Great Miami River. The property is bordered to the south by East Miami River Road. A former gravel pit (currently being filled) is located west of the landfill. The former Miamitown C&DD landfill (3.13.2) is located west on the north bank of the Great Miami River as shown in Figure 3.3.2-C.



Figure 3.3.2-C
Carmical Closed Landfill
East Miami River Road

- ◆ = Surface Water Sampling Location
- = Approximate Limits of waste (Carmical)
- = Approximate Limits of waste (Miamitown)

