

3.4.1 DEBOLT LANDFILL

Facility Name: Debolt Landfill

A.K.A.: N/A

Location: 3711 Debolt Street. Northeast corner of the intersection of Debolt Street and the railroad tracks in Newtown, Ohio; Short Park.

Parcel(s): 50100020025

Lat, Long: 39.128602 -84.363454

Region: Newtown, OH 45244

Owner: Village of Newtown

Operation (yrs): 1962 – late 1980s (based on records)



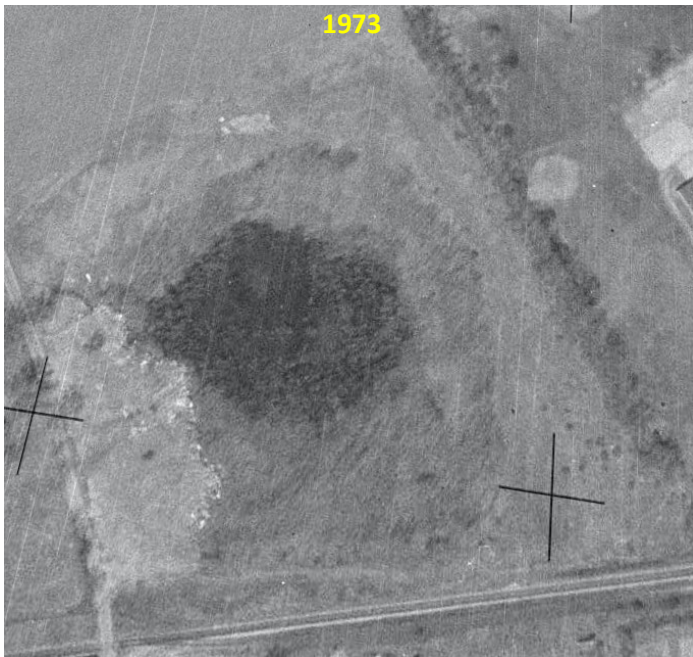
FACILITY OVERVIEW

Former Debolt Landfill is located in the Village of Newtown, Ohio, between Debolt Street and Church Street, north of the railroad tracks. Hamilton County Auditor records address the property as 3711 Debolt Street, Newtown, Ohio 45244. The property is also known as Short Park.

Topography of the former landfill is primarily flat, with a 6'-8' slope located on the northern property. This 6'-8' slope is possibly the northern border of the former landfill. Debolt Street borders the landfill to the West, the railroad tracks to the South and a wooded buffer area to the East.

Review of Hamilton County Auditor records shows the property was owned by various gravel companies until the property was sold to the Village in 1964. This suggests that the landfill was a gravel pit until 1964 and filling of the gravel pit likely occurred after 1964.

According to a 2017 Rule 13 request the site began operating as a landfill between 1962 & 1964 and ceased operations sometime between 1975 & 1977. However review of aeriels (below) shows filling at the site continued until at least the late 1980's although the site may have transitioned to C&DD or clean hard fill. An Ohio EPA letter dated February 3, 1975 indicates that the area was used principally by Hamilton County and the Village of Newtown for the disposal of demolition debris, stumps, brush and solid fill. The information also notes that the area had problems with open dumping at this time. Control measures such as fencing, signage, and routine covering were recommended by Ohio EPA.



In March of 2017 Ohio EPA received a complaint that the Village had constructed a bathroom facility on the landfill in 2010 without obtaining proper authorization. As a result a warning letter was issued to the Village of Newtown advising that such construction activities require obtaining prior authorization subject to the requirements of OAC 3745-27-13.

From 2016 to 2018 the Village of Newtown in conjunction with Miami Valley Christian Academy proposed to redevelop the property. Football, soccer, lacrosse, baseball, walking paths, track and field facilities, as well as viewing stands and expanded/new restroom facilities were included in development plans. The facility submitted a request pursuant to OAC 3745-27-13 in reference to these improvements. The request was approved by the Ohio EPA but later rescinded by the village because *"the redevelopment of Short Park has evolved differently than originally anticipated"*. On October 5, 2017, the village submitted a request pursuant to OAC 3745-27-13, in order to perform a *"Landfill Cover Thickness Investigation"*. The request was approved by Ohio EPA in a November 1, 2017 letter and the requested activities were completed on November 28, 2017. Fifteen test pits were excavated into the landfill cover and down to the first occurrence of solid waste materials. According to the report it was discovered that *"beneath the landfill cover material, a second sequence consisting of a mixture of fill and solid waste materials was encountered."* However in a March 22, 2018, letter Miami Valley Christian Academy notified the village that they were ceasing the redevelopment efforts due to *"escalating costs and escalating complexity of the project"*.

SAMPLING RESULTS

No surface water sampling or biological sampling is performed at this landfill due to the lack of bodies of water immediately adjacent to the landfill.

Gas monitoring has generally been completed on an annual basis. During 2014 methane was detected in one of the additional sampling points on the south side of the railroad tracks. As a result gas sampling at Debolt landfill was performed at an increased frequency in 2015 and 2016. Due to the possible redevelopment of the former landfill WM staff offered to perform the gas monitoring at an increased frequency in 2017 to aid in the planning of any redevelopment. Four additional monitoring locations (14-17) were also added, in 2017, on the southern end of the eastern boundary of the landfill. In 2019 gas monitoring returned to an annual frequency. During monitoring events WM staff punch-barred at the perimeter locations indicated on Figure 3.7-B. No occupied structures lie within a 1000 feet of the north boundary; so gas monitoring was not conducted in this area.

Debolt gas sampling was conducted on December 14, 2021 (Table 3.4.1-A). Methane was detected at low levels (2-4% LEL) in sample points 3 through 6. No detections of methane occurred during the 2020 or 2019 monitoring. Gas monitoring was conducted on three occasions in 2018. Excluding sampling points 12, 13, 16, and 17, methane was detected at all sampling locations during at least one sampling event. The concentrations encountered during 2018 sampling were low and ranged from 2% to 5% LEL or 0.1% to 0.25% methane. During 6 sampling events completed in 2017 methane was detected at each sample point during at least one sampling event. The concentrations encountered during 2017 ranged from 1% LEL (0.05% methane) to 10% LEL (0.5% methane). Sampling was completed 3 times in 2016 and 2015 with the highest concentrations encountered in a given year being 0.15% and 0.6% methane respectively.

Carbon Monoxide (CO) was detected at 11 of 17 monitoring locations in 2021 with concentrations between 2 and 26 ppm. This is similar to the 2020 and 2019 monitoring when CO was detected at 10 and 11 locations respectively with concentrations between 2 and 49 ppm. CO has been detected during each of the 18 sampling events completed from 2015 through 2021 with the highest concentration encountered being 128 ppm in 2018. The CO detections show a clear pattern with less frequent detections at lower levels observed at the East and West edges of the sampling area. According to landfill fire experts, CO levels over 1000 ppm with lab confirmation indicate a subsurface fire. CO levels between 100 – 1000 ppm are suspicious. OSHA's eight-hour time weighted average (TWA) for carbon monoxide is 50 ppm. The immediate danger to life and health (IDLH) level for carbon monoxide is 1200 ppm. This is an open area, so one would not expect carbon monoxide levels to reach the IDLH level in the park. (*Sampling data for this landfill is in the files at Hamilton County Public Health*).

TABLE 3.4.1-A (12/14/21)

Sample Number	Time	Hydrogen Sulfide (ppm)	Carbon Monoxide (ppm)	LEL (%)	Methane (%)	Oxygen (%)
1	2:18 PM	0	4	0	0	20.5
2	2:20 PM	0	3	0	0	20.7
3	2:23 PM	0	26	4	0.2	15.5
4	2:25 PM	0	13	2	0.1	19.7
5	2:27 PM	0	21	2	0.1	20
6	2:29 PM	0	22	2	0.1	16.9
7	2:31 PM	0	22	0	0	19.7
8	2:34 PM	0	4	0	0	20.8
9	2:36 PM	0	12	0	0	19.8
10	2:38 PM	0	4	0	0	20.6
11	2:41 PM	0	0	0	0	20.8
12	2:43 PM	0	0	0	0	19.2
13	2:45 PM	0	0	0	0	20.7
14	2:16 PM	0	2	0	0	20.8
15	2:14 PM	0	0	0	0	20.8
16	2:12 PM	0	0	0	0	20.8
17	2:10 PM	0	0	0	0	21

SITE INSPECTIONS

The site was inspected by HCPH on December 14, 2021. No violations or nuisance conditions were observed on the site.

SITE PRESENT DAY

The property is currently used by the Village of Newtown as a recreational area, known as Robert W. Short Park. A paved trail, parking lot, bathroom, basketball courts and gazebo exist on the property. One may access the park off Debolt Street or Church Street.



Figure 3.4.1-B
Debolt Closed Landfill
3711 Debolt Street

- = Approximate Limits of Waste
- ▲ = Gas Monitoring Location

