

**Elizabethtown Landfill
Elizabethtown, Pennsylvania
Region 3
PAD980539712**

Site Exposure Potential

The Elizabethtown Landfill occupies six hectares in Lancaster County, 1.5 km southwest of Elizabethtown, Pennsylvania (Figure 1). The landfill is an abandoned, unlined sandstone quarry in an agricultural and rural residential area. The unpermitted landfill operated under various owners from 1958 to 1973, accepting unknown quantities of industrial and municipal wastes from surrounding communities. A Consent Decree filed by the State of Pennsylvania ordered operations at the landfill to cease by July 1974. Waste

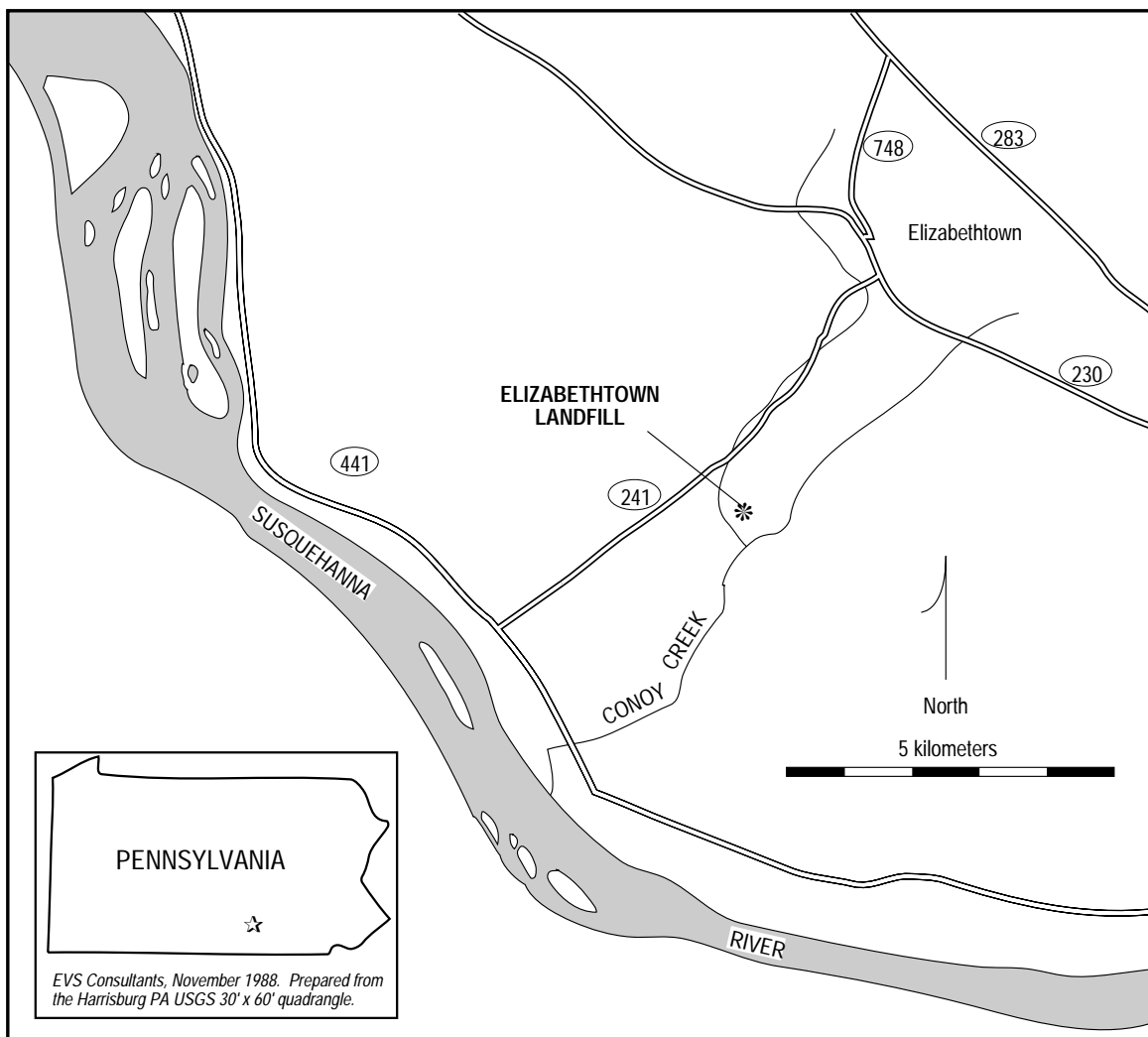


Figure 1. The Elizabethtown Landfill site in Elizabethtown, Pennsylvania.

Management, Inc. (WMI) acquired the site in October 1984. In 1986, WMI covered the site with 60 cm of clay and 15 cm of topsoil, installed vents to control migration of methane, installed a system to collect leachate, constructed a sedimentation basin, and installed a drainage system to channel runoff to the basin (EPA 1986a).

Surface waters of interest near the site include Conoy Creek and the Susquehanna River. Conoy Creek originates 250 meters below the site and flows for 8 km before it discharges into the Susquehanna River. The Susquehanna River discharges into the Chesapeake Bay 85 km downstream.

Possible contaminant migration pathways to NOAA trust resources include groundwater and surface water flow to Conoy Creek and the Susquehanna River.

Site-Related Contamination

The contaminants of concern to NOAA include benzene, 1,1-dichloroethane, and chlorobenzene (Table 1). Manganese and lead have also been detected in some samples, but the values obtained were not considered valid because they failed to pass EPA quality assurance/quality control review.

Table 1. Concentrations of selected contaminants at the Elizabethtown Landfill site (EPA 1986a); AWQC for the protection of freshwater aquatic life (EPA 1986b); concentrations in µg/l.

Contaminant	soil leachate	well water	well leachate	AWQC	
				Acute	Chronic
ORGANIC COMPOUNDS					
<u>Volatiles</u>					
benzene	16.0	ND	14.6	5,300.0*	N/A
chlorobenzene	112.0	54.0	236.0	250.0*	50.0*
vinyl chloride	ND	15.6	17.7	N/A	N/A
1,1-dichloroethane	ND	18.1	50.7	N/A	N/A
INORGANIC SUBSTANCES					
<u>Trace Metals</u>					
copper	22.0	ND	17.0	18.0†	12.0†
<u>Other</u>					
cyanide	15.0	ND	ND	22.0	5.2
ND: Not detected; N/A: Not available; * LOEL; † Hardness-dependent (based on 100 mg/l CaCO ₃)					

NOAA Trust Habitats and Species in Site Vicinity

Conoy Creek is a small, coolwater, continuously flowing, low-gradient stream. The creek is shallow, only one meter wide and 15 cm deep, with a gravel/sand substrate in the riffle reaches. At its confluence with Conoy Creek, the Susquehanna River is 0.8 km wide, 1.5 meter deep, and has a gravel/cobble substrate in its riffle reaches. This river is generally considered to have good water quality with some minimal problems from agricultural runoff (Koffman 1988).

The fisheries resources in this area have been greatly altered by a series of dams on the Susquehanna River. The largest of these dams is at Conowingo, Maryland, 75 km downstream of the mouth of Conoy Creek. The Conowingo Dam has prevented the natural migration of coastal fish species into the upper Susquehanna River. American shad and American eel are trapped below this dam, but stocked above the dams on the Susquehanna. American eel do migrate up to the mouth of Conoy Creek.

The Susquehanna River Anadromous Fish Restoration Committee (of which NOAA is a member) has revived interest in restoring shad runs to the river. In 1986, construction was ordered for a new fishway and improvements in an existing, inadequate fish lift for Conowingo Dam. Agreements were also reached for the construction of fishways at Holtwood, Safe Harbor, and York Haven (Goodger 1987). Once the fishways are complete, the Susquehanna River and Conoy Creek will likely play an important role in supporting NOAA trust resources.

Response Category: Federal Enforcement Lead

Current Stage of Site Action: RI/FS Workplan

EPA Site Manager

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NOAA Coastal Resource Coordinator

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References

EPA. 1986a. Hazardous Ranking System Package. Elizabethtown Landfill. Elizabethtown, Pennsylvania. Philadelphia: U.S. Environmental Protection Agency, Region 3.

EPA. 1986b. Quality Criteria for Water. Washington, D.C.: Office of Water Regulations and Standards, Criteria and Standards Division. EPA 440/5-86-001.

Goodger, T., ecologist, Habitat Conservation Branch, NOAA National Marine Fisheries Service, personal communication, June 1987.

Koffman, M., fisheries biologist, Pennsylvania Fisheries Commission, Revere, Pennsylvania, personal communication.