

# GEDDES BROOK/ NINEMILE CREEK

Fact Sheet #9:  
A Sub-Site Of The Onondaga Lake  
Superfund Site and NYS Superfund Site  
Registry #7-34-057

## Contacts For More Information And Comments

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### Documents for this Site are Available for Public Inspection at:

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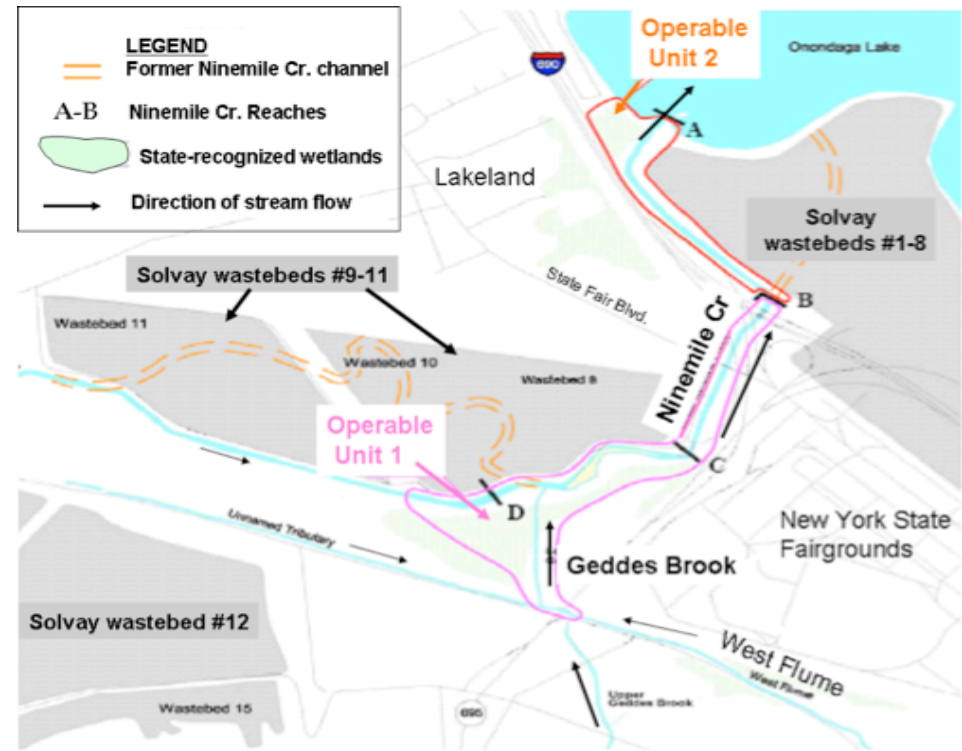


Figure 1: Geddes Brook/Ninemile Creek Superfund sub-site, divided into two Operable Units

## Description

Geddes Brook and Ninemile Creek are located in Onondaga County, NY, to the southwest of Onondaga Lake. **Geddes Brook** originates in the town of Camillus and flows through the town of Geddes before it enters Ninemile Creek just west of the New York State Fairgrounds. The LCP Bridge Street site, which includes the West Flume, is a source of mercury and other contaminants to Geddes Brook, Ninemile Creek, and eventually the lake. Geddes Brook also receives surface runoff from roads, and both residential and industrial areas. Numerous municipal and industrial/construction and debris landfills (e.g. the Mathews Ave landfill, an Allied/Honeywell site) are located in the watershed of Geddes Brook.

**Ninemile Creek** begins at Otisco Lake, flows through Camillus, and flows between seven Solvay wastebeds before entering Onondaga Lake at Lakeland. The wastebeds contain millions of tons of industrial waste from the Solvay process and other chemical manufacturing (Allied Chemical and LCP). Some of these wastes were released into or have leached into Ninemile Creek.

## Environmental Issues

The sediments and floodplain soils of Geddes Brook and Ninemile Creek have been highly contaminated with mercury and other metals; chlorinated organic compounds (e.g. dioxin and hexachlorobenzene); and non-chlorinated organics (e.g. PAHs).

### Mercury

Environmental studies indicate that mercury is transported into Onondaga Lake from the Geddes Brook/Ninemile Creek system in two ways:

- 1) A drainage ditch connecting the LCP plant with Geddes Brook (called “West Flume”) has been the main conduit of mercury contamination in the Ninemile Creek watershed. This source has been essentially eliminated since the cleanup of the West Flume as part of the LCP site remediation (see Fact Sheet # 8).
- 2) “Pulses” of mercury are mobilized during high-flow periods (e.g. after rainfall). This occurs because mercury-contaminated sediments in the creeks and floodplains are re-suspended and carried out into the lake. This remediation is intended to stop this source of mercury to the lake.

### Polycyclic Aromatic Hydrocarbons (PAHs)

There appear to be two sources for PAHs within Geddes Brook and Ninemile Creek: one far upstream in Geddes Brook and one in Ninemile Creek, less than a kilometer upstream of Onondaga Lake. Sediments in both of these areas have elevated concentrations of PAHs, including anthracene, benzoperylene, chrysene, fluoranthene, phenanthrene, and pyrene.

### Polychlorinated Biphenyls (PCBs) and Hexachlorobenzene

The sediments of lower Ninemile Creek are also contaminated with PCBs and hexachlorobenzene. Both bioaccumulate in fish, and are toxic at relatively low concentrations.

### Dissolved solids (salts)

Groundwater, and probably surface runoff from Solvay wastebeds adjacent to the site (#9—15) contribute large amounts of dissolved calcium, chloride, and sodium to Ninemile Creek starting upstream of Geddes Brook. The wastebeds also contribute iron, magnesium, manganese, potassium, and ammonia to the creek. Historically, these salt inputs were much greater, and had a major impact on the chemistry of Onondaga Lake (Effler et al., 1986). These impacts have been significantly reduced after the closure of the Allied-Honeywell facility in 1986.

## What’s been done to address the problem?

The cleanup of a Superfund site can be divided into a number of “operable units,” depending on the complexity of the problems encountered at the site. The NYSDEC has divided the GB/NMC site into two Operable Units, shown in Figure 1.

**OU1** includes the channel sediments and floodplain soils of lower Geddes Brook (from the West Flume to Ninemile Cr.) and lower Ninemile Creek from ~600 ft upstream of Geddes Brook to just downstream of the I-690 overpass. This part of OU1 has been further subdivided into two reaches (BC and CD). **OU2** includes the channel sediments and floodplain soils/sediments of the AB section of lower Ninemile Creek, which extends from the downstream end of OU1 to Onondaga Lake. This section flows along the west side of Wastebeds 1- 8.

**OU1 will be remediated first.** The proposed Plan calls for complete removal of contaminated sediments and soils in and around Geddes Brook, and removal of most contaminated sediments (up to 5-ft deep) and floodplain soils (up to 3-ft. deep) from reaches BC, and CD in Ninemile Creek. Areas where contaminated sediments are more than 5-ft. deep will be capped. The current plan calls for disposing of the contaminated materials at the now-remediated LCP Bridge St. site. Eventually this site will be capped.

<sup>1</sup> These contaminated sediments and soils are called “deferred media” by USEPA and NYSDEC. This does not include the Ley Creek Dredgings which are piled along the creek (see Fact Sheet No. 7).