

Big Hill (BEMS) Sanitary Landfill

Big Hill & Old Forge Roads Southampton Township, Burlington County

BLOCK: 2702 **LOTS:** 3, 4, 5, 7 & 8

Community Relations Coordinator: Heather Swartz (609) 984-7135

SITE DESCRIPTION/RESOLUTION OF ENVIRONMENTAL CONCERNS:

This site was operated as a sanitary landfill between the late 1960s and 1982. Municipal wastes, septic sludges and some hazardous wastes were deposited in the landfill during this time. The waste fill occupies 40 acres of the 113-acre property. Two sides of the landfill closely border the LeisureTowne housing development, a large retirement community. Burlington Environmental Management Services Incorporated (BEMS, Inc.), which operated the landfill between the mid-1970s and 1982, installed a soil cover over the site in 1983 but it failed to perform properly. Precipitation continued to infiltrate the landfill, generating large quantities of leachate that contaminated the ground water and surface waters and caused foul odors. In addition, storm water runoff from the landfill occasionally caused nearby properties to flood, and methane gas generated by the decomposing waste migrated through the soil and into private yards. NJDEP directed BEMS, Inc. to investigate and remediate the site in 1985, but shortly thereafter the company declared bankruptcy.

NJDEP implemented several Interim Remedial Measures (IRMs) to address the problems experienced by residents living adjacent to the landfill. The IRMs included installing a methane collection system and a flare to address off-site soil vapors, constructing a storm water retention basin, improving surface water drainage, and dredging sediments contaminated with landfill leachate from Canterbury Pond in LeisureTowne. In 1991, NJDEP signed a Decision Document that required capping of the landfill with an impermeable membrane cap and installation of a site-wide methane gas collection and treatment system. NJDEP completed construction of these remedial measures in 1999 and currently operates and maintains them.

NJDEP also conducted a Remedial Investigation/Remedial Action Selection (RI/RAS) to identify the extent of the contamination at the site and evaluate cleanup alternatives. The RI/RAS revealed that ground water at the landfill is contaminated with organic and inorganic compounds at levels above New Jersey's Ground Water Quality Standards. Landfill-related contaminants were also detected in several nearby surface water bodies, but at levels that do not present an immediate threat to human health or the environment.

Based on these findings, NJDEP issued a Decision Document in 1995 that required remediation of the ground water and re-dredging of Canterbury Pond. NJDEP re-dredged Canterbury Pond in 2006 and completed installation of the ground water remediation system in 2008. The ground water remediation system will remain in operation until testing shows the levels of contaminants in the aquifer are reduced to Ground Water Quality Standards. Sampling of the ground water monitoring wells in 2013 showed contaminant levels remain low or continued to decline. NJDEP is conducting a detailed evaluation of the ground water to determine future monitoring program and remedial action needs.