

# Ramapo Landfill

## New York

EPA ID#: NYD000511493

### EPA REGION 2

#### Congressional District(s): 17

Rockland

Route 59, 1 mile northeast of the Village of Hillburn

#### NPL LISTING HISTORY

Proposed Date: 12/1/1982

Final Date: 9/1/1983

## Site Description

The Ramapo Landfill, covering 96 acres, opened in 1972. In 1978, the New York State Department of Environmental Conservation (NYSDEC) denied the landfill operators an operating permit because of an incomplete permit application and violations of state codes, since the municipal landfill had reportedly received sludge from a cosmetic company, sludge-like material from a pharmaceutical company, and paint sludges from an automobile manufacturer, as well as wastes from other facilities. In addition, unauthorized dumping may have occurred at the landfill. In 1980, about 50 drums containing an unknown waste were found near the landfill.

The Town of Ramapo constructed a leachate collection system along the downgradient edge of the landfill in 1984 and 1985. Surface water and leachate were conveyed to an on-site wastewater treatment pond, allowed to settle and aerate, and discharged to the Ramapo River. Beginning in 1990, the wastewater was discharged to the Village of Suffern Wastewater Treatment Plant via a sewer line. In 1996, the pond was replaced by a direct hook up to a force main for off-site treatment/disposal of the extracted contaminated ground water at the Rockland County Sewer District No. 1 treatment facility. A 250,000 gallon leachate storage tank was constructed (within the footprint of the former leachate holding pond) to hold contaminated water at the landfill during peak flow conditions. The leachate storage facility and secondary containment area resulted in about a 0.3-acre loss of a wetland area. An equivalent area of wetlands was constructed south of the leachate storage pond.

Historical ground water quality data show the presence of various metals and organics. Approximately 50,000 people reside within 3 miles of the site, while only about 200 people live within a mile. Four public water supply wells serving the Spring Valley Water Authority systems, which provide water to 200,000 users, are located within 1,500 feet west of the site, just across the Ramapo River.

Site Responsibility: This site was addressed through federal, state, and municipal actions.

## Threat and Contaminants

The ground water underlying the landfill is contaminated with volatile organic compounds, including benzene, toluene, and xylene, and heavy metals, including mercury, lead, chromium, and cadmium. Before the site was remediated, surface water was contaminated with heavy metals, semi-volatile compounds, and phenols. In addition, direct contact with or ingestion of contaminated soil, ground water, or surface water posed a health threat.

## Cleanup Approach

The site is being addressed in a single long-term remedial phase focusing on the cleanup of the entire site.

#### Response Action Status

Entire Site: The Town of Ramapo, under state authority, undertook a remedial investigation and feasibility study (RI/FS) to determine the nature and extent of contamination at and emanating from the site and to evaluate alternatives for the cleanup of the entire site. In March 1992, based upon the results of the RI/FS, EPA signed a Record of Decision, calling for the landfill to be capped using a multimedia system, ground water extraction wells to be installed to supplement the existing leachate collection system, and discharge of the collected leachate and ground water to a publicly-owned treatment works facility for treatment. The design of the selected remedy commenced in June 1992. In December 1994, following the completion of the remedial design, construction activities at the site commenced. Construction was completed in September 1997. A Preliminary Close-Out Report documenting the completion of construction at the site

was approved on September 30, 1997.

Five-year reviews are undertaken at sites to ensure that implemented remedies protect public health and the environment and that they function as intended by site decision documents. In December 1999, EPA issued a Five-Year Review Report, which concluded that the remedy at the site was implemented in accordance with the remedy selected in the ROD and that the remedy set forth in the ROD is fully protective of human health and the environment. The five-year review found that the landfill's soil cover has been eroded in several locations and that the geocomposite membrane under the soil cover is either exposed or severely damaged (the damage was attributable to several storms, including Hurricane Floyd in September 1999). The Town undertook the necessary repair work in 2001.

EPA conducted a second Five-Year Review in December 2004. This review raised a concern regarding elevated levels of antimony in downgradient drinking water wells. Based upon the collection of samples in May 2005 and using a lower laboratory detection limit, it was concluded that antimony was not present in the downgradient drinking water wells. It was, therefore, concluded that the remedy was functioning as intended by the decision documents and protects human health and the environment.

EPA conducted the third Five-Year Review in December 2009. The five-year review report concluded that the remedy is functioning as intended by the decision documents and is protecting human health and the environment in the short term. Additional investigative work is being performed now. Corrective measures will be undertaken, if necessary. A report addendum is expected to be issued by June 2011. EPA will conduct another Five-Year Review by December 2014.

Site Facts: The State entered into an Administrative Order on Consent on February 8, 1985 with the Town of Ramapo to construct a final leachate treatment system. On February 1, 1988, the State and the Town of Ramapo signed an Administrative Order on Consent which required the Town of Ramapo to conduct an RI/FS and to undertake site cleanup activities.

## Cleanup Progress

After adding the Ramapo Landfill site to the National Priorities List, EPA conducted a preliminary evaluation and determined that no immediate cleanup actions were required at the site while further investigations leading to final remedy selection are taking place.

The capping of the 50-acre landfill has significantly reduced the threat to public health and the environment.

## Site Repositories

Finkelstein Public Library, 24 Chestnut Street, Spring Valley, NY 10977

Suffern Free Public Library, Washington and Maple Avenues, Suffern, NY 10901

EPA Region 2 Superfund Records Center, 290 Broadway, 18th Floor, New York, NY 10007-1866