

# Burnt Fly Bog

## New Jersey

EPA ID#: NJD980504997

### EPA REGION 2

Congressional District(s): 12  
Middlesex, Monmouth, Marlboro Township

#### NPL LISTING HISTORY

Proposed Date: 12/30/1982

Final Date: 9/8/1983

## Site Description

Burnt Fly Bog is located in a semi-rural area and covers about 1,700 acres, mostly in Marlboro Township, Monmouth County, but extending into Old Bridge Township in Middlesex County. It is located on the periphery of the New Jersey Pine Barrens. An auto salvage yard, a few scattered residences, and a horse farm are located nearby. Contamination of a portion of the Bog began during the 1950s and the early 1960s, with the direct dumping and spreading of hazardous materials resulting from recycled waste oil operations. The area of contamination was later designated as a Superfund site, which became known as the Burnt Fly Bog Superfund site. The Burnt Fly Bog site is divided into two major areas of contamination, namely, the Uplands Area and the Westerly Wetlands. In the portion referred to as the Uplands Area, lagoons were constructed and used to store reprocessed waste oil. Under several owners, these facilities were allowed to degenerate, leaving several waste oil lagoons containing residual oil sludges and aqueous wastes, contaminated waste piles, drummed wastes, and areas of contaminated soil resulting from associated waste oil reprocessing activities. In addition to the oil reprocessing activities, the site was also the former location of a landfill and dump, located north of the Uplands Area. Uncontrolled discharges from the Uplands Area waste sources have resulted in surface water and soil contamination moving downstream into the adjoining Westerly Wetlands. The Westerly Wetlands is located in a groundwater discharge area of the Englishtown Aquifer, where groundwater flows to the surface and ultimately drains into Deep Run via Burnt Fly Brook. The nearest people are located about 1,000 feet away from the site and the nearest well is 200 feet away. Streams and wetlands drain the site and surface water is used for recreation.

Site Responsibility: This site is being addressed through Federal and State actions.

## Threat and Contaminants

Soils and sediments contain polychlorinated biphenyls (PCBs) and lead. People may come into contact with site contaminants by accidentally ingesting polluted soils or dusts; eating fish, wild berries, or wild game from the Bog; or, potentially, by inhaling the toxic products of burning PCBs from a fire such as occurred on the site in 1973. The site is located in a fringe area of the environmentally sensitive New Jersey Pine Barrens. Since the start of cleanup activities at the site, a fence was built that completely surrounds the site and prevents access from all directions. Large portions of the site, contaminated with lead and PCBs, have been excavated and the contaminated soil transported off-site for disposal at appropriate facilities. The implementation of Deed Restrictions must still be completed to assure that the site remains protective and is not subjected to future intrusive activities.

## Cleanup Approach

Cleanup Approach The site is being addressed in four stages: immediate actions and three long-term remedial phases focusing on cleanup of the Uplands Area and the Westerly Wetlands.

#### Response Action Status

Immediate Actions: In 1982, EPA repaired an earthen dike which the State had built in the Uplands Area to hold back lagoon contents. EPA also installed a security fence around the lagoons and drums to restrict access. Construction of a dike and security fence around the lagoons and drums, and the removal and disposal of the contaminated soils and sludge in the Uplands Area, have greatly reduced the potential for accidental contact with hazardous materials and for contaminated liquids to migrate from the site.

Uplands Area: EPA selected a remedy to clean up the Uplands Area (referred to as Operable Unit #1) in November 1983. It included: (1) excavating hazardous substances in lagoon 1, the asphalt pile area, the tar patch area, and the drummed waste area - and disposing of them at EPA-approved off-site facilities; (2) excavating and removing hazardous

materials in lagoons 2, 3, and 4; (3) excavating and removing contaminated soil in other areas for off-site disposal; (4) excavation and removal of sludge contaminated with high levels of PCBs for off-site incineration; (5) restoring the original site contours and replanting the area; (6) designing a comprehensive five-year groundwater monitoring program and testing eight residential wells; and (7) studying the Westerly Wetlands further to determine the extent of contamination there. Work on the Uplands Area was completed in 1993.

**Westerly Wetlands:** In September 1988, EPA selected an Interim Remedy for the Westerly Wetlands area (referred to as Operable Unit #2). It included: (1) excavating approximately 6,000 cubic yards of contaminated materials that migrated through the Westerly Wetlands to the Downstream Area; (2) disposing of these materials in the same manner in which Uplands Area wastes were handled; (3) containing the contaminated soil and sediment in the Westerly Wetlands by means of a sedimentation basin and appropriate diversion controls; and (4) installing security fencing and constructing an access road into the Westerly Wetlands from Spring Valley Road.

The New Jersey Department of Environmental Protection (NJDEP) completed an engineering design for the Interim Remedy in March 1995. Construction of the Interim Remedy was initiated in late 1995 and completed at the end of December 1996.

**Final Remedy:** In September 1998, EPA selected the Final Remedy (referred to as Operable Unit 3) for the site. The Final Remedy covers three portions of the Burnt Fly Bog Site known as the Westerly Wetlands Area, the Tar Patch Area, and the Northerly Wetlands Area. The selected remedy requires excavation and off-site disposal of PCBs and lead contaminated soil from the Tar Patch Area and the Northerly Wetlands, with subsequent wetlands restoration. The Westerly Wetlands Area, Tar Patch Area and Northerly Wetlands Area will also be completely fenced off. A Declaration of Environmental Restriction will be imposed on the Westerly Wetlands Area and a chemical and biological monitoring program will be implemented with emphasis in this area to determine the effectiveness of natural containment of residual contaminants. The 100% remedial design for OU3 was completed in September 2002. The remedial action contract was signed in April 2003 with mobilization in May 2003. All construction work was substantially completed by May 2004. The wetlands restoration was scheduled to be monitored on a quarterly basis. The site is now being monitored in accordance with the long term monitoring plan approved in 2004. NJDEP submitted the Remedial Action Completion Report on February 1st, 2006. For purposes of comparison, an Ecological Assessment study similar to the 1991 study was completed in March 2008. The results of this study were finalized in March 2008 and indicated that total petroleum hydrocarbon, lead and PCB levels in the bog soils were at significantly lower concentrations than were found in 1991. A follow up Ecological Assessment is currently being planned for Fiscal Year 2012.

Five properties in Marlboro Township and nine properties in Old Bridge require deed notices under the ROD. Two deed restriction notices are scheduled to be filed in accordance with the United States/State of New Jersey versus Dominick Manzo Consent Decree entered in 2011. The remaining deed restrictions will be filed with the appropriate authorities to control future use of the Westerly Wetlands area and prevent intrusive activities in the Uplands Area. The fencing of the Site, coupled with the use/deed restrictions which NJDEP anticipates placing on the properties comprising the Site, will prevent the Site from being subject to intrusive purposes that could create exposure pathways. Enforcement Status

In the early 1980's, EPA sent notice letters to Champion Chemical, Imperial Oil, and Emil Stevens. Notice letters were also sent to Dominick and Carmella Manzo and their corporation Ace-Manzo, Inc.

On behalf of EPA, the U.S. Department of Justice (DOJ) initiated a cost recovery action on January 14, 1997 against Dominick and Carmella Manzo and their corporation, Ace-Manzo, Inc.

The litigation process EPA and DOJ undertook to recover costs from the Manzos included three phases. They are the Liability phase, the Divisibility phase, and the Damage phase. EPA and DOJ succeeded in winning all three phases of the litigation process. The judge issued an order to the Manzos (PRPs) to pay EPA. The PRPs were considering appealing the order. EPA, DOJ, and the PRPs filed a consent decree in April 2011, settling the case.

## Cleanup Progress

### Cleanup Progress

All of the contaminated soil and sludge from the Uplands Area (OU1) has been excavated. Nearly 85,000 tons of contaminated soil, including about 10,000 tons of stabilized sludge, have been removed and disposed of off-site at EPA-approved disposal facilities. In addition, about 1,000 tons of sludge contaminated with high levels of PCBs have been removed and incinerated off-site.

For the Interim Remedy (OU2), approximately 6,000 tons of PCBs-contaminated soil was excavated and removed from the portion of the Westerly Wetlands referred to as the Downstream Area. A sedimentation basin was completed in the Downstream Area to prevent sediment from migrating off-site into Burnt Fly Brook. These actions, in conjunction with the State's periodic removal of sediment accumulating in the basin, will mitigate the effects of the Burnt Fly Bog site on downstream potable watershed areas. Based on monitoring data obtained by the State since the sedimentation basin

was completed, it appears that surface water and sediment contamination levels in Burnt Fly Brook have been significantly reduced.

For the final phase (OU3), NJDEP contractors removed about 46,000 tons of contaminated soil from the Tar Patch Area and transported off-site for disposal. In addition, about 600 tons of "hot spot" material was excavated from the Tar Patch Area and transported off-site for incineration. From the Northerly Wetlands Area, approximately 9,400 tons of contaminated soil was excavated and transported off-site for disposal. The only part of the ROD not yet implemented involves the deed restrictions which NJDEP is currently in the process of working on. A total of fourteen deed notices will be required to include the township lots and private lots.

NJDEP is currently monitoring the site in accordance with a Long Term Monitoring Plan. EPA provided funds for an Ecological Assessment of the Westerly Wetlands after construction work was completed. The new Ecological Assessment consisted of a small mammal study and the analyses of selected soil and vegetation. The primary purpose of this study was to compare tissue contaminant levels in the existing small mammal population to contaminant levels in equivalent species evaluated in an earlier 1991 Ecological Assessment study. The results of this study were finalized in March 2008 and indicated that total petroleum hydrocarbon, lead and PCB levels in the bog soils were at significantly lower concentrations than were found in 1991. A follow up Ecological Assessment is currently being planned for Fiscal Year 2012.

In March 2001, EPA issued a Five Year Review Report which indicated that remedial actions remained protective of public health and the environment. In June 2006, EPA completed work on the 2006 Five Year Review Report. This second Five Year Report indicated that the remedial actions were still protective of human health and the environment. The third Five-Year Review was completed in 2011. The report concluded that remedies at the Site protect human health and the environment because contaminated soils and sediments have been excavated, the sedimentation basin prevents migration of the contaminants into surface water and Site access is restricted by fencing. In order for the Site to be protective in the long term, institutional controls need to be implemented.

## **Site Repositories**

Marlboro Township Municipal Building, 1979 Township Drive, Marlboro, New Jersey 07746.