

The jackson township landfill essay

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IntroductionThe Jackson Township Landfill is a former municipal waste landfill located in Ocean County, New Jersey. The site-related contamination at present poses an indeterminate public health hazard due to the existence of insufficient data for some environmental media to which humans may be exposed. There is no evidence supporting the fact that humans are presently being exposed to various contaminants at levels expected to cause adverse health effects.

As indicated by various Environmental data indicate, the former landfill continues to impact the quality of underlying ground water. Surface water, sediments, and air have been negligibly impacted by former landfill activities. The landfill also poses a public health hazard due to the fact that site information indicates the past human exposure to volatile organic compounds (VOCs) in drinking water that has occurred at levels that may result in adverse health effects. The landfill accepted a large quantity of sewage sludge and septic waste during the period of year 1972 to the year 1980.

Various industrial and chemical wastes were illegally disposed of at the site. VOCs were detected in about 100 residential wells near the site in the year 1978. Hence, local residents were provided with an alternate source of potable water. However, the local residents raised several questions about the possible exposure to site-related contaminants through ingestion of garden produce and municipal water supplies.

Site DescriptionThis site consists of a large open sandy area covered with sparse vegetation mainly grasses, shrubs and pine

trees. The site contains a large number of mounded areas consisting of mostly gradual changes in elevation. Also, there are several deeper depressions present. Most part of the site is surrounded by a chain link fence.

A small post and wire fence surrounds a small portion of the site along the western boundary where as no fence was present at the western corner of the site boundary. The West End Buck Club is situated down-gradient on a wooded dirt road on the south side of Toms River Road. It consists of a consisting of one small structure. It has been reported by the OCHD officers that the building is used seasonally for deer hunting. The source of water for the building is unknown. The site is situated in quite un-developed semi-rural area within the New Jersey Pine Barrens. The Pine Barrens is mainly known for its pine-dominated vegetation and sandy soil.

A large Number of oaks are predominantly found in the vicinity of the site with increasing swamp vegetation in the direction of the Ridgeway Branch. The natural sands and clay have been replaced with backfill material, consisting of sand, mine tailings, and waste through out the site, as a result of former mining and landfill operations. Use of Land and ResourcesThe area that is surrounding the site is used primarily for residential purposes. Various residential dwellings are located adjacent to the site along Homestead Road, Dorathy's Lane, Ollie Burke Road, and Lakehurst Avenue. Few more residences are situated near the site along Toms River Road. Most of these homes were built during the 1940's and 1950's. Many newer

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residences in the vicinity of the site are the result of a steady growth in the area.

The closest residence that includes a family business is located immediately adjacent to the south-western boundary of the site. Two schools are also situated along the south side of the Toms River Road. The site is located on the Cohansey Sand Formation which is a water table aquifer that provides an important source of water to the Coastal Plain region of New Jersey.

The ground water inside the shallow Cohansey aquifer flows to the south and southeast. Cohansey Formation underlie by the water-bearing Kirkwood Formation. There is a hydraulic connection between upper Kirkwood and the Cohansey aquifer.

Mostly, the nearby residences are built prior to 1979. They usually receive their potable water from shallow wells screened within the Cohansey aquifer. A large number of residences are located down-gradient of the site along with the north and south sides of Lakehurst Avenue and towards the north side of Toms River Road. A well survey to identify the location of any down-gradient potable wells was performed in the year 1988-89. It was found out in the survey that most of the residents living near the site are currently receiving water from the Jackson Township Municipal Utility Authority (JTMUA) water system. The 1700 foot deep JTMUA well draws water from a confined aquifer which is located about one-half mile to the southeast of the site in order to serve Legler residents. The closest residence to

the landfill with a potable well is situated about 1,000 feet down-gradient of the site.

It was found to be severely damaged and uninhabited. There were three more residences with potable wells located from 2,000 to 3,000 feet down-gradient of the site. These residences have since been connected to the JTMUA system as per the reports of OCHD officials. According to JTMUA, shallow Cohansey wells were sealed. Homes either have been built with deep potable wells or were connected to the municipal water system since year 1979. The shallow Cohansey aquifer at last discharges into the Ridgeway Branch.

This Branch is located about 3,000 feet down-gradient of the site. The Toms River and the Ridgeway Branch are used mainly for the recreational purposes. Bibliography Jackson Township Landfill. Jackson Township, Ocean County, New Jersey. "PUBLIC HEALTH ASSESSMENT".

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Page cdlxxvii. ISBN 0070391564. Porter, Richard C. "The Economics of Waste". Resources for the Future, 2002. Page 55.

ISBN 1891853430. Appendix Pic 1: Site Map Source : <http://www.atsdr.cdc.gov/HAC/pha/jackson/jtl-f1.gif> Pic 2: Land Use Map Source: <http://www.atsdr.cdc.gov/HAC/pha/jackson/jtl-f2.gif>