



Drinking Water Well Sampling and Assessment

The U.S. Environmental Protection Agency (EPA) has sampled drinking water wells near the Mansfield Trail Dump Superfund site, in Byram Township, New Jersey three times after detecting unusual levels of the contaminant 1,4-dioxane in regularly sampled monitoring wells. Results of all recent sampling events from August, September and November 2022 show that no residential drinking water wells or supply wells at the Byram Township elementary or intermediate schools are impacted by 1,4-dioxane contamination.

EPA is continuing to sample all monitoring wells as part of its work to determine the reason for elevated levels of 1,4-dioxane detected in monitoring well sampling conducted in March 2022. EPA is scheduled to resample the Byram Township Intermediate School and Byram Lakes Elementary School wells in March 2023. EPA will also continue sampling for 1,4-dioxane, trichloroethylene (TCE) and other site contaminants at residential wells on a semi-annual basis and at the school supply wells more frequently. EPA is conducting the engineering design work needed to connect residents who have been impacted by contaminants from the Mansfield Trail Dump site to a public waterline, as well as the engineering design work to clean up contaminated groundwater, soil and address contaminated vapors.



EPA has been sampling the groundwater underlying the site for 1,4-dioxane and other contaminants since 2014. Since sampling began, EPA has detected 1,4-dioxane in site groundwater, with the highest concentrations found in deep wells located below the former dump areas. Concentrations of 1,4-dioxane have never exceeded the New Jersey groundwater standards in residential wells, though other site contaminants have been found in a number of residential wells. All residential drinking water wells impacted by site contamination have been fitted with Point of Entry Treatment Systems (POETS), as EPA completes the design and construction of the waterline. In March 2022, EPA found higher concentrations of 1,4-dioxane than previously detected in some groundwater monitoring wells. Out of an abundance of caution, EPA provided bottled water to residents near the monitoring wells and to the Byram Township school district while investigations continued.

EPA conducted extensive groundwater sampling in August, September, and November of 2022. The August 2022 sampling results did not show any contamination above federal or state drinking water standards in the drinking water wells at the school or at the residences.

EPA resampled the drinking water wells and groundwater monitoring wells again in September 2022 for 1,4-dioxane, trichloroethylene (TCE) and other site contaminants including per- and polyfluoroalkyl substances (PFAS). The September 2022 results did not show any contamination above federal or state drinking water standards in the residences drinking water wells or at the school wells.

EPA resampled the drinking water wells at nearby residences and the school wells again in November 2022, and the results showed no contamination above federal or state drinking water standards in the drinking water wells at the school or at the residences.

All of the results indicate that no drinking water wells are impacted by 1,4-dioxane contamination. In addition, the resampling indicated that the 1,4-dioxane concentration in the site monitoring wells where it has been regularly detected, have decreased significantly from levels detected in March 2022. Based on the groundwater monitoring data, EPA discontinued bottled water service to residences and the school in January 2023.

EPA is continuing regular drinking water sampling as we study the site hydrology, geology, weather events, groundwater level fluctuations, water sampling methods, well construction, and other factors to determine what may have caused the increased levels of 1,4-dioxane in the deep groundwater monitoring wells during the March 2022 sampling event.

EPA is actively monitoring the extent of contamination at the site and plans to sample the Byram Township Intermediate School and Byram Lakes Elementary School wells again in March 2023.

Site Activities

EPA divided the contamination at the Mansfield Trail Dump Superfund site into two distinct areas called operable units (OU1 & OU2). EPA is addressing the impacted drinking water in OU1. The New Jersey Department of Environmental Protection (NJDEP) had previously installed POETS on impacted residential wells. EPA developed a long-term cleanup plan in 2017 for OU1 documented in a Record of Decision to connect 20 impacted residences to a public water supply. EPA is currently designing a waterline and a treatment building that will house the necessary equipment to supply drinking water to the impacted residents. In January 2023, EPA shared the engineering design of the treatment building and associated waterline with the Community Advisory Group (CAG) for the site and the Byram Township Planning Board.

EPA is addressing contamination of the site itself, including in the groundwater and soil, and resulting vapors as OU2. EPA finalized a cleanup plan for this portion of the site in a 2019 Record of Decision. EPA is conducting the engineering design work to begin the cleanup work, which includes capping former dump areas, treating contaminated groundwater, and digging up and removing contaminated soil, drilling monitoring wells in the former dump areas, and regularly sampling monitoring wells. EPA plans to complete the engineering work in late 2023.

Site Background

The Mansfield Trail Dump Superfund site is in a residential neighborhood in Byram Township, New Jersey. The site was used as a waste dump from the late 1950s to the early 1970s and includes various waste disposal trenches in a wooded area that contaminated the groundwater in the shallow and deep bedrock aquifer. The groundwater plume, which is an area where contaminants disperse, extends beyond the ridge containing the dump areas into an adjacent residential neighborhood.

NJDEP found TCE in a private drinking water well in 2005. NJDEP then completed extensive sampling and installed water filtration systems called point of entry treatment systems (POETs) in impacted homes. NJDEP collected indoor air samples from homes throughout the affected neighborhood between 2006 and 2008 and installed vapor intrusion mitigation systems or modified existing radon systems in five homes. During an effort to determine the source of contamination, NJDEP discovered the former waste disposal trenches at the site in 2009. EPA began investigating the site in 2010 and removed contaminant source areas in 2012. EPA added the site to the Superfund program's National Priorities List in March 2011.



MANSFIELD TRAIL DUMP SUPERFUND SITE
BYRAM TOWNSHIP, NEW JERSEY
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EPA Contact Information

Pat Seppi
Community Involvement Coordinator
(646) 369-0068
seppi.pat@epa.gov

Sandra Richards
On-Scene Coordinator
(732) 452-6402
richards.sandra@epa.gov

Selina Rahman
Remedial Project Manager
(212) 637-4394
rahman.selina@epa.gov

Timothy Brutus
Remedial Project Manager
(212) 637-4405
brutus.timothy@epa.gov

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