



## 3M - Oakdale Disposal Site June 2016

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### Background

The 3M - Oakdale Disposal Site (sometimes called the Oakdale or Granada Dump) is located along Hwy 5 in Oakdale, just west of Interstate 694, and is listed as a Superfund site on EPA's National Priority List (see [Additional information](#) below for map). It consists of three old chemical waste dump sites (Abresch, Brockman, and Eberle sites) that were used during the late 1940s-1950s for waste burial, drum reclamation, and open burning of combustible materials. 3M has indicated that perfluorochemical (PFC) waste was disposed at this site. Ground and surface water near the area is contaminated with a wide variety of organic chemicals. Soil contamination also occurred at the site.

The Minnesota Pollution Control Agency (MPCA) first investigated the 3M - Oakdale Disposal Site in 1980. A variety of hazardous substances, particularly volatile organic compounds (VOCs), were found at the site. Some nearby shallow residential wells had VOCs at concentrations above levels of health concern in the past, but these homes are now on city water.

3M completed several remedial actions in the 1980's to address soil and groundwater VOC contamination: a large volume of waste material and contaminated soil was removed from the site; the site was covered with clean soil; monitoring wells were put in to sample the groundwater on a regular basis; and a groundwater pump-out system was constructed at the site in 1984-85 to intercept the pollutants in portions of the shallow aquifer. The pump-out system is still in operation today.

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### PFCs at the 3M - Oakdale Disposal Site

More recently, perfluorochemicals (PFCs) have also been detected in the monitoring wells at the 3M - Oakdale Disposal Site. Perfluorochemicals are a family of manmade chemicals that have been used for decades to make products that resist heat, oil, stains, grease and water. They were produced from the late 1940s until 2002 by 3M at its Cottage Grove facility. PFC-containing wastes, disposed of in the 3M-Oakdale Disposal Site and the former Washington County Landfill, seeped into the groundwater. PFCs from both sites also entered Raleigh Creek, which flows from the Oakdale Disposal Site eastward into the city of Lake Elmo, where it discharges to Eagle Point Lake in the Lake Elmo Park Reserve. PFCs from both sites have created large groundwater plumes extending to the south-southwest of the disposal areas, while PFCs traveling in Raleigh Creek have also infiltrated to the groundwater, so that in Lake Elmo, the groundwater and some lakes are contaminated by PFCs from both sites.

PFCs have been detected in one private well in Oakdale (now sealed) and approximately 300 private wells in the southwest part of Lake Elmo. Low levels of PFCs from the Washington County Landfill have been detected in one of Lake Elmo's municipal wells, but are below MDH drinking water criteria. PFCs primarily from the 3M-Oakdale Disposal Site have been detected in most of the Oakdale municipal wells, some of which exceed MDH drinking water criteria.

### What is being done?

**Exhibit  
3639**

State of Minnesota v. 3M Co.,  
Court File No. 27-CV-10-28862

All homes where drinking water wells exceed MDH drinking water criteria are provided with granular activated carbon (GAC) filter systems, which the MPCA monitors and maintains, or were connected to city water. In 2006, 3M funded the construction of a GAC treatment plant to treat water from Oakdale's primary municipal water wells and also funded the installation of a new city well outside the area of PFC contamination. More information about Oakdale city water can be found at: [Oakdale Public Water Supply and Perfluorochemicals \(http://www.health.state.mn.us/divs/eh/hazardous/sites/washington/oakdalewell.html\)](http://www.health.state.mn.us/divs/eh/hazardous/sites/washington/oakdalewell.html). 3M also funded the extension of city water to approximately 200 homes in Lake Elmo.

In 2008, 2010, and 2014, MDH completed biomonitoring studies of selected residents in Cottage Grove, Lake Elmo, and Oakdale who were known to have been exposed to PFOA and/or PFOS in their drinking water. The average concentration of PFCs in the participants' samples were higher than the averages for the general U.S. population. The studies also showed that over time, as the participants drink treated water, the PFC concentrations in their bodies decreased. More information about the biomonitoring studies can be found at [PFC Biomonitoring: East Metro \(http://www.health.state.mn.us/divs/hpcd/tracking/biomonitoring/projects/emetro-landing.html\)](http://www.health.state.mn.us/divs/hpcd/tracking/biomonitoring/projects/emetro-landing.html).

In 2008-2011, 3M completed additional cleanup actions at the site to further reduce both VOC and PFC contamination. This included soil vapor extraction to reduce VOC concentrations prior to additional soil excavation. Contaminated soils were disposed of off-site at lined containment facilities. The groundwater pump-out system was expanded to increase the area of capture and a large GAC filter system was added to remove PFCs from the water before it is discharged to the sanitary sewer. More information about the cleanup actions can be found on the MPCA site. (See the 3M PDF document "[Construction Completion Report \(RA Implementation Report for the Oakdale Site\)](https://www.pca.state.mn.us/sites/default/files/c-pfc3-16.pdf)" (<https://www.pca.state.mn.us/sites/default/files/c-pfc3-16.pdf>)).

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### Additional Information:

- 2005 3M Oakdale Site Map: [Locations of the 3 Dump Sites that Constitute the "Oakdale Dump"\(PDF\) \(http://www.health.state.mn.us/divs/eh/hazardous/sites/washington/oakdale/oakdaledmp.pdf\)](http://www.health.state.mn.us/divs/eh/hazardous/sites/washington/oakdale/oakdaledmp.pdf)
- [2016 City of Oakdale Public Water Supply and Perfluorochemicals \(http://www.health.state.mn.us/divs/eh/hazardous/sites/washington/oakdalewell.html\)](http://www.health.state.mn.us/divs/eh/hazardous/sites/washington/oakdalewell.html)
- [Public Health Assessment: Perfluorochemical Contamination in Lake Elmo and Oakdale, Washington County, Minnesota, August 2009 \(PDF\) \(http://www.health.state.mn.us/divs/eh/hazardous/sites/washington/lakeelmo/phaelmoOakdale.pdf\)](http://www.health.state.mn.us/divs/eh/hazardous/sites/washington/lakeelmo/phaelmoOakdale.pdf)
- Environmental Protection Agency: [EPA Superfund Program: Oakdale Dump, Oakdale, MN \(https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=0503840\)](https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=0503840)
- MDH [Perfluorochemicals and Health \(http://www.health.state.mn.us/divs/eh/hazardous/topics/pfcshealth.html\)](http://www.health.state.mn.us/divs/eh/hazardous/topics/pfcshealth.html) webpage
- Minnesota Pollution Control Agency: [Perfluorochemicals \(http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/perfluorochemicals-pfc/perfluorochemicals-pfcs.html\)](http://www.pca.state.mn.us/index.php/waste/waste-and-cleanup/cleanup-programs-and-topics/topics/perfluorochemicals-pfc/perfluorochemicals-pfcs.html)

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