

# FACT SHEET

## Trichloroethylene (TCE)

### What is TCE?

Trichloroethylene (TCE, also trichloroethene) is a chemical that is commonly used as a solvent. TCE has a pleasant, sweet smell, though you can breathe it in without smelling it. TCE vapors can also be absorbed through your skin. TCE is a volatile organic compound, or VOC. This kind of organic chemical compound evaporates under normal indoor temperatures and pressure. TCE is part of some industrial and commercial processes. The vast majority of TCE use is in commercial or manufacturing facilities and sold through industrial supply chains as refrigerant chemicals and degreasers. While not widely marketed to consumers, there are products containing TCE that consumers can purchase.

### Why is there discussion about TCE in Des Moines?

TCE is a contaminant of concern (COC) at a site known as Lot 46 Valley Gardens, located south of George Flagg Parkway in Des Moines. TCE was used by a company located at the site, and its use led to the compound soaking into the ground. In 2004, the Iowa Department of Natural Resources (IDNR) began investigating groundwater in the location. IDNR first discovered groundwater contamination in 2007, and then notified Des Moines Water Works.

In 2019, IDNR referred the site to the U.S. Environmental Protection Agency for assessment. In late 2023, EPA plans to list the site on the National Priorities List (NPL) to support long-term cleanup efforts, impede further plume migration, and prevent exposure to site contamination.

This pending Superfund Site is a TCE-contaminated groundwater plume located southeast of Des Moines Water Works' Fleur Drive Treatment Plant infiltration gallery, a series of underground water collection pipes adjacent to the Raccoon River, and a vital water source for 600,000 central Iowans.

### What is a plume?

A plume is an underground pattern of contaminant concentrations created by the movement of groundwater beneath a contaminant source. A contaminant will spread in the direction of groundwater movement.

### What is a Superfund site?

A "Superfund Site" refers to hazardous waste site and EPA's cleanup process. It is the common name for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a federal law that authorizes the EPA to clean up contaminated sites.

### What do we know?

Des Moines Water Works provides water that meets all state and federal drinking water standards.

Both Des Moines Water Works and IDNR test for TCE and its degradation products. In 2009, IDNR installed four sets of two wells on Des Moines Water Works' property to test for TCE.

TCE degrades and changes state over time. Its degradation products are called Cis-1,2-Dichloroethylene and trans-1,2-Dichloroethylene. Neither TCE nor its degradation products have been detected in the infiltration gallery at concentrations exceeding safe drinking water standards. Monitoring and investigation will continue.

The EPA is working with DMWW to sample water from along the infiltration gallery and from the site groundwater monitoring well network.

**What are the next steps?**

It is Des Moines Water Works' goal to ensure its infiltration gallery is protected from all contaminants, including TCE. The TCE plume is .5 miles by .25 miles wide and moving toward Des Moines Water Works' gallery system, which is why the utility is supportive of the EPA taking action to clean up the site and protect Des Moines Water Works' water source.

Des Moines Water Works will continue to work with the EPA, IDNR and City of Des Moines on the Superfund Remedial Process, which will include official placement of the site on the National Priorities List and receiving a hazard ranking, selection of a remedy for cleaning up the site, and the cleanup process.

**Where can I learn more?**

Go to the EPA's website: [Fact Sheet: Trichloroethylene Fact Sheet | US EPA](#)