

Durham Meadows Superfund Site

U.S. EPA | HAZARDOUS WASTE PROGRAM AT EPA NEW ENGLAND



THE SUPERFUND PROGRAM protects human health and the environment by investigating and cleaning up often-abandoned hazardous waste sites and engaging communities throughout the process. Many of these sites are complex and need long-term cleanup actions. Those responsible for contamination are held liable for cleanup costs. EPA strives to return previously contaminated land and groundwater to productive use.

Site Background & Cleanup Plan

The Durham Meadows Superfund Site, located in Durham, Connecticut (the "Site"), includes a large area of contaminated groundwater and the associated industrial facilities where the contamination originated and is generally centered on Main Street in the Town of Durham, Connecticut. The Durham Manufacturing Company, an operating manufacturer, and the former location of Merriam Manufacturing Company, both located on Main Street, are the two major sources of the contamination. Both companies manufactured metal cabinets, boxes and other items. The companies' past disposal of wastewater to the soil and inadequate drum storage practices at Merriam Manufacturing Company, among other things, contributed to the contamination at each facility and in the overall area of groundwater surrounding both facilities.

In 2005, EPA signed a Record of Decision selecting a cleanup plan for the Durham Meadows Superfund Site. The five major components of the 2005 ROD, as amended by the September 2011 Explanation of Significant Differences (ESD), are:

- Merriam Manufacturing Company (MMC) Study Area: Soil excavation and off-site disposal to address risks to human health from contamination in soil and soil vapor. This component of the remedy is complete.
- Durham Manufacturing Company (DMC) Study Area: Excavation and off-site disposal of soil hot spot areas in order to address

risks to human health from contamination in overburden (shallow) groundwater and to address source contamination. This component of the remedy is in the design phase.

- Site-Wide Groundwater Study Area Alternative Water Supply: Connection to the Middletown Water Distribution System to provide an alternative source of public water to all residences currently affected by groundwater contamination and a buffer zone of residences located near the contaminated area. This remedy component addresses current and future risk to human health from ingestion of contaminated groundwater. The design

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for this component of the remedy is completed and EPA is working with the U.S. Army Corps of Engineers to procure a contractor for installation of the water line.

- **Site-wide Groundwater Study Area Source Zone and Dissolved Plume:** Long-term monitoring of the groundwater contamination along with a technical impracticability waiver for the bedrock groundwater throughout the Site.
- **Site-wide Groundwater Study Area Contingency Groundwater Extraction for Hydraulic Containment:** A contingency to implement a groundwater extraction system for hydraulic containment if monitoring indicates that the overall plume or source zone is spreading or migrating beyond its current general boundary. Based on the current understanding of the extent of contamination, the new water line will provide clean water for all areas where the groundwater is impacted by Site related contamination. As a result, EPA does not expect to invoke the contingency component of the remedy at this time.

The ROD also includes institutional controls, further delineation of areas posing potential indoor air risks on and outside of the MMC and DMC Study Areas, and five-year reviews. Figure 1 shows the location of the Site study areas along with the extent of the groundwater contamination.

SITE PROGRESS TO DATE:

Field studies and design activities were performed for the MMC Area from 2007-2011. EPA implemented the cleanup of the MMC Study Area from 2011-2012, with the work deemed complete in 2013. As a result of the cleanup, 58,000 tons of contaminated soil were removed from the MMC Study Area. The historic home on the MMC Study Area was retained and the area subject to the cleanup was restored and is currently a vegetated lot.

Field studies and design activities for the Site-Wide Groundwater Study Area- Alternative Water Supply (Durham Water Line) were performed from 2013-2015. This effort built upon the work performed from 2008-2012 by the Town of Durham and Connecticut Department of Energy & the Environment

(CTDEEP) to develop a comprehensive approach to address all areas with water quality issues in Durham. The Durham Water Line design was initially completed in August 2015 and further revised in 2016 when the decision was made to include the three schools in Regional School District 13 (Korn Elementary, Strong Middle School, and Cuginchaug High School). EPA provided the initial funding for the water line installation in 2015 and retained the United States Army Corps of Engineers (USACE) to support the implementation of the Durham Water Line. The USACE will manage the bid, contract award, and construction activities for the Durham Water Line. The current plan is to issue the project for bid in the fall of 2016 with the expectation that construction activities will begin in 2017. Hand dug test pits will be performed at numerous locations along Route 17 and on private property (subject to landowner permission) to assess the potential presence of historic artifacts in advance of the water line construction. Figure 2 provides a schematic of the water line.

THE KEY COMPONENTS OF THE DURHAM WATER LINE ARE:

- Water will be provided from the City of Middletown.
- A water storage tank will be constructed off Talcott Ridge Drive in Middletown. The volume of the tank is about 900,000 gallons. The tank will provide gravity pressure for the system and support fire protection.
- About 29,000 linear feet of water main ranging from 20 inch diameter to 6 inch diameter will be installed in Durham and Middletown.
- About 120 water lines service connections will be installed and about 120 exiting water supply wells will be formally closed to prevent future use. The water line connections include RSD 13 School District and the Durham Fairgrounds. The water line will also connect to and provide water to the existing Durham Center Water Service which will allow the municipal water supply wells at the Fairgrounds to be closed.

EPA, CTDEEP, CTDPH, the Town of Durham, and City of Middletown have been meeting monthly throughout the process to coordinate the required activities and provide for state and local input on the design. Town of Durham and City of Middletown have reached an agreement for Middletown to sell water to Durham, ensuring support and maintenance of the water line by both Middletown and Durham.

The Town of Durham enacted a Groundwater Ordinance, with an effective date of January 1, 2016. The Groundwater Ordinance restricts the use of groundwater within the Groundwater Management Zone, as defined in the Ordinance. All properties within the Groundwater Management Zone must connect to the water line when service becomes available and cease use of their private well unless granted an exception pursuant to the requirements of the Groundwater Ordinance. The Groundwater Ordinance can be found at: <http://www.ecode360.com/30752082>.

Additional studies and design activities were implemented for the DMC Study Area cleanup from 2007-2015. The design for the DMC Study Area cleanup is expected to be finalized in 2016. The DMC Study Area cleanup involves the excavation and off-site disposal of soil contaminated with volatile organic compounds, including trichloroethene. The soil is generally located along the north side of the DMC building and in a portion of the parking lot. In addition, reactive backfill will be placed in areas where the

excavation extends below the water table to address contamination that may migrate from beneath the DMC building or from the bedrock groundwater. In 2013, a sub-slab depressurization system was installed beneath portions of the DMC building to address the potential for contaminated vapor to migrate into the DMC building.

In 2010, EPA and CTDEEP entered into a State Superfund Contract to allow for the implementation of the MMC Study Area cleanup action. Under the State Superfund Contract, CTDEEP committed to paying for 10% of the cleanup action and being responsible for the maintenance and monitoring of in-house potable water treatment systems installed in private properties within the MMC Study Area. DMC is responsible for the maintenance and monitoring of in-house potable water treatment systems for the areas outside the MMC Study Area. The in-house treatment systems will be decommissioned once the properties are connected to the Durham Water Line.

In 2015, EPA and CTDEEP entered into a State Superfund Contract to allow for the implementation of the Durham Water Line, DMC Study Area, and all other cleanup actions at the Durham Meadows Superfund Site. Under this State Superfund Contract, CTDEEP committed to paying for 10% of the cleanup action and being responsible for the operation, maintenance, and monitoring activities associated with the Durham Water Line, DMC Study Area, and all other cleanup actions at the Durham Meadows Superfund Site.

UPCOMING SITE ACTIVITIES:

EPA, with the support of USACE, expects to hire a contractor to perform the Durham Water Line installation by the end of 2016 or early 2017 and initiate construction of the water line in 2017. The construction activities are expected to require two years. There will be substantial construction activity along the route of the Durham Water Line during the implementation, as well as preliminary work along the route to investigate the potential presence of historic artifacts.

EPA is currently performing a Five Year Review of the Durham Meadows Superfund Site. A Five Year Review is performed whenever cleanup activities result in contamination remaining at a site at concentrations that would not allow for unrestricted use. The primary focus of the Five Year Review is the completed MMC Study Area cleanup. The remaining Study Areas of the Site are also being evaluated to determine whether there are any potential issues that should be addressed to protect public health and the environment.

EPA recently initiated the design for the Site-Wide Groundwater Study Area Source Zone and Dissolved Plume component of the cleanup, which includes development of a long-term monitoring program. EPA has retained a contractor to evaluate all of the groundwater data collected to date and to identify the locations for long-term monitoring wells. EPA hopes to install the long-term monitoring wells in 2016 or early 2017 to obtain baseline data before the implementation of the water line.

For more information about the Durham Meadows Superfund Site, please visit the EPA website:

www.epa.gov/superfund/durham.

FIGURE 1



FIGURE 2

