

NATIONAL PRIORITIES LIST (NPL)

NPL Site

September 2020

ORANGE COUNTY NORTH BASIN | California Orange County

Site Location:

The Orange County North Basin site includes a contaminated groundwater plume and the sources that caused the contamination in Orange County, Southern California. The site is located in mixed residential, commercial, and industrial areas in the cities of Anaheim, Fullerton, and Placentia and includes the Orange County Groundwater Basin, which supplies water to 22 cities serving 2.4 million residents.

Site History:

The site is a comingled groundwater plume of chlorinated solvents and other contaminants covering over five square miles and impacting drinking water resources. The North Basin groundwater is contaminated with volatile organic compounds (VOCs) and other chemicals from industrial activities in the area. Comingled contaminant releases from industrial facilities have resulted in a groundwater contamination plume that is spreading horizontally and vertically.

Site Contamination/Contaminants:

Site groundwater is contaminated with trichloroethylene (TCE), tetrachloroethylene (PCE), and 1,1 dichloroethylene (1,1-DCE) at concentrations above the Safe Drinking Water Act Maximum Contaminant Levels (MCLs) and California MCLs. The groundwater is also contaminated with the chemical perchlorate and with 1,4-dioxane in exceedance of the California Notification Level. The EPA is also evaluating the frequency of detection and concentrations of perchlorate and perfluorinated compounds as they relate to the site.

Potential Impacts on Surrounding Community/Environment:

The groundwater contamination continues to migrate vertically and laterally, threatening drinking water supply wells in the principal aquifer including at least 46 active downgradient production wells that serve Orange County. Four municipal wells and one commercial well have been shut down due to this contamination. All drinking water currently being served by water purveyors meets federal and state drinking water standards.

Response Activities (to date):

The state, through the California EPA Department of Toxic Substances Control (DTSC Cypress office) and the Regional Water Quality Control Board (Santa Ana RWQCB), is currently overseeing the investigation and remediation of several source facilities. Orange County Water District is conducting an interim Remedial Investigation/Feasibility Study (RI/FS) under EPA oversight pursuant to an Administrative Order on Consent (AOC) to characterize the plume in the most contaminated area of the plume and to evaluate an interim cleanup remedy. The EPA negotiated toward a Superfund Alternative Approach agreement for a comprehensive RI/FS with several Potentially Responsible Parties (PRPs) that had requested delay of site listing. However, the parties were unable to reach agreement.

Need for NPL Listing:

California EPA referred the site to the EPA to prevent further migration of contaminated groundwater into the area's principal aquifer, the primary drinking water source for Orange County. Other cleanup programs were evaluated but could not adequately address the plume as a whole due to the number of sources and jurisdictions involved. The EPA received a letter from the state of California in support of placing this site on the NPL.

[The description of the site (release) is based on information available at the time the site was evaluated with the HRS. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.]

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. [ATSDR ToxFAQs](https://www.atsdr.cdc.gov/toxfaqs/index.asp) can be found on the Internet at <https://www.atsdr.cdc.gov/toxfaqs/index.asp> or by telephone at 1-800-CDC-INFO or 1-800-232-4636.