



Frontier Fertilizer Superfund Site



U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • May 2010

Request Comment on Treated Groundwater Reuse Proposal

The United States Environmental Protection Agency (EPA) is proposing to reuse treated groundwater from the Frontier Fertilizer Superfund Site (Site), located at 3901 Second Street, in Davis, California, for landscape and possibly agricultural irrigation. As a first step, EPA submitted a treated water reuse request, or Report of Waste Discharge, to the Regional Water Quality Control Board, Central Valley Region (Regional Board). The Regional Board has determined that this proposed groundwater reuse will not create or threaten to create a condition of pollution or nuisance. The purpose of this fact sheet is to help the public understand EPA's proposal and to request public comment no later than June 11, 2010 to contacts on the back of the fact sheet.

What happens to the groundwater that comes from the Frontier Fertilizer Superfund Site now?

EPA has been operating an on-site groundwater extraction and treatment system since the mid-1990s. The treated water from this process meets Federal and state primary drinking water standards for Site contaminants and is currently piped to the City of Davis (City) Wastewater Treatment Plant for disposal.

The chemicals of concern (COCs) in groundwater include pesticides (e.g., 1,2-dibromoethane, 1,2-dibromo-3-chloropropane, 1,2-dichloropropane and 1,2,3-trichloropropane) and a chlorinated solvent, carbon tetrachloride. Once the contaminated groundwater is extracted, it is pumped through large carbon filter vessels where the contaminants adsorb to the carbon. The carbon filters are essentially very large-scale versions of those that are commonly found in home water filtration systems. Once the carbon is nearly saturated with chemicals, which for this system is usually around two months, it is removed and sent off-site for regeneration or disposal and the vessels are refilled with fresh carbon.

What does EPA want to do with a portion of the treated water as part of its proposal?

EPA wants to provide a portion of the treated groundwater to irrigate landscaping and agricultural areas near the Site, and for construction activities such as dust control on dirt roads. Using the treated groundwater for landscape irrigation will reduce the volume of water sent to the Wastewater Treatment Plant and, additionally, the need to use other City groundwater for irrigation. Figure 1 illustrates the possible locations where the treated groundwater could be used near the Site. Prior to selecting the final reuse locations, EPA plans to meet with City staff, City Council and community members, including the Frontier Fertilizer Superfund Oversight Group (FFSOG). Currently, fall 2010 is the earliest timeframe in which treated water could be reused under the terms of the Regional Board review and approval process. Public review and comment is part of this review process, and the April 2010 "Report of Waste Discharge for the Frontier Fertilizer Superfund Site" is available on-line and at other information repositories (see last page for more information.)

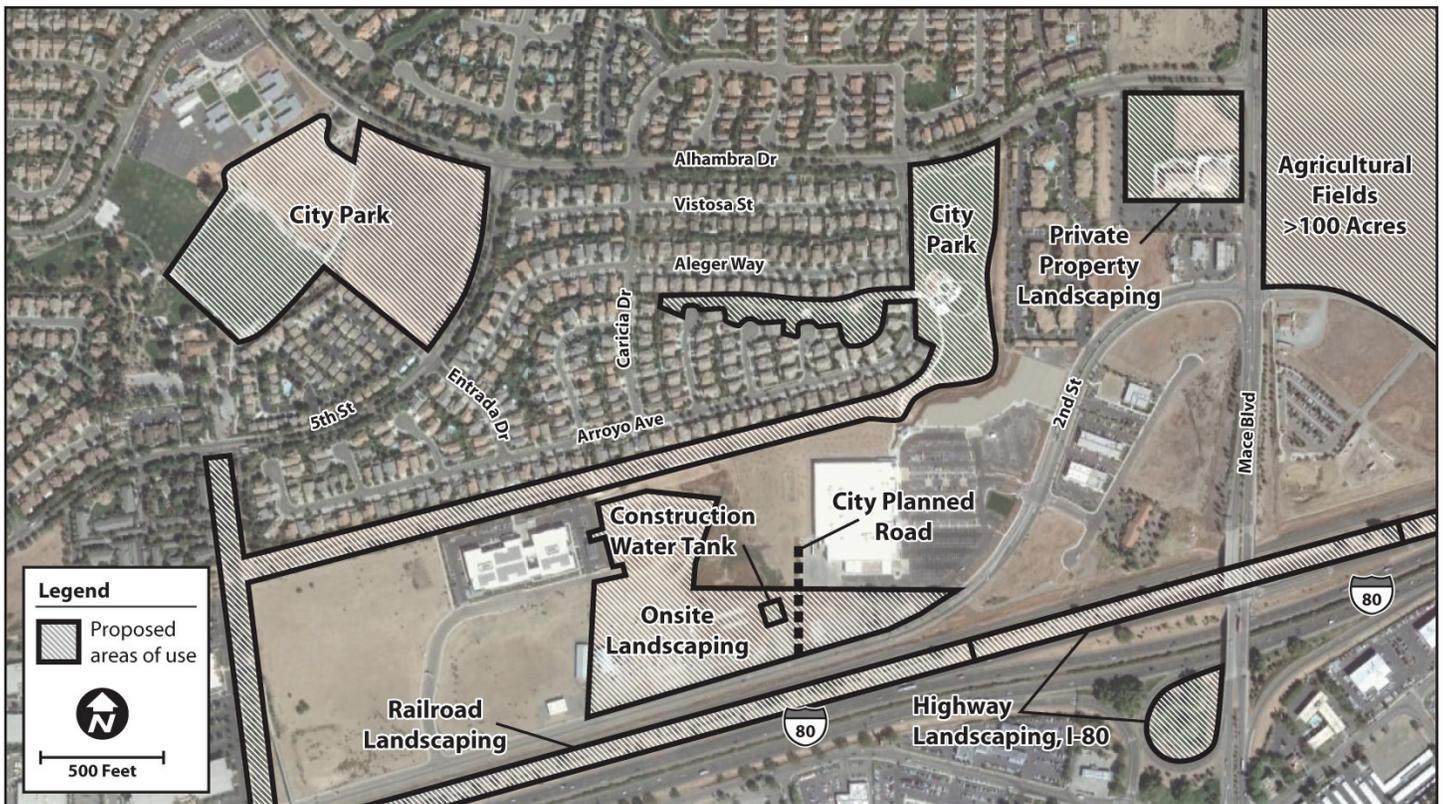


Figure 1: Frontier Fertilizer Water Reuse Options

Is the treated water safe for use as proposed?

EPA samples and analyzes the treated water, in accordance with the City permit, just before it is sent to the Wastewater Treatment Plant, or about every two months, to make sure it meets permit requirements. The water meets or exceeds Federal and state primary drinking water quality standards for Site contaminants. In addition to the COCs mentioned above, EPA tests for a larger list of chemicals (see Table 1). For EPA's proposed water reuse system, there will be more frequent sampling (at a minimum of monthly, for the first 6 months). The treated water will be re-tested within 48 hours if there are any chemicals detected above Federal and state primary drinking water standards for Site contaminants. If the water is found to still exceed drinking water standards, the water reuse system will be discontinued until the cause for the exceedance is determined and corrected.

EPA also will institute other safeguards to ensure the groundwater treatment system works safely, including weekly treatment plant inspections and inspections of the irrigation piping and water distribution system.

How Can the Public Comment on this Proposal?

You can review the report on-line at: <http://www.epa.gov/region09/frontierfertilizer/> or at the Site's Information Repositories listed on the back page of the fact sheet.

The Regional Board and EPA welcome your comments, concerns or questions about this reuse proposal. You can call or send your comments by mail, fax, or email to the contacts listed on the back of the fact sheet, postmarked no later than **June 11, 2010**.

Table 1: Treated Water Sample Action Levels, Detection Levels, and Methods

Analyte	Action Level	Action Level Basis	Reporting Limit	Units	EPA Sample Method
1,1,1-Trichloroethane	200	MCL	0.5	µg/L	524.2
1,1,2,2-Tetrachloroethane	1	MCL	0.5	µg/L	524.2
1,1,2-Trichloro-1,2,2-trifluoroethane	1200	MCL	0.5	µg/L	524.2
1,1,2-Trichloroethane	5	MCL	0.5	µg/L	524.2
1,1-Dichloroethene	7	MCL	0.5	µg/L	524.2
1,2,3-Trichloropropane	0.005	CDPHNL	0.005	µg/L	524.2 SIM
1,2,4-Trichlorobenzene	5	MCL	0.5	µg/L	524.2
1,2-Dibromo-3-chloropropane	0.2	MCL	0.02	µg/L	504.1 or 524.2 SIM
1,2-Dibromoethane (EDB)	0.05	MCL	0.02	µg/L	504.1 or 524.2 SIM
1,2-Dichlorobenzene	600	MCL	0.5	µg/L	524.2
1,2-Dichloroethane	0.5	MCL	0.5	µg/L	524.2
1,2-Dichloropropane	5	MCL	0.5	µg/L	524.2
Benzene	1	MCL	0.5	µg/L	524.2
Carbon tetrachloride	0.5	MCL	0.5	µg/L	524.2
Chlorobenzene	100	MCL	0.5	µg/L	524.2
cis-1,2-Dichloroethene	6	MCL	0.5	µg/L	524.2
Dichloromethane	5	MCL	0.5	µg/L	524.2
Ethylbenzene	300	MCL	0.5	µg/L	524.2
m&p-Xylene	1750 (total xylenes)	MCL	1	µg/L	524.2
o-Xylene	1750 (total xylenes)	MCL	0.5	µg/L	524.2
Styrene	100	MCL	0.5	µg/L	524.2
tert-Butyl methyl ether (MTBE)	13	MCL	2	µg/L	524.2
Tetrachloroethene	5	MCL	0.5	µg/L	524.2
Toluene	1000	MCL	0.5	µg/L	524.2
trans-1,2-Dichloroethene	100	MCL	0.5	µg/L	524.2
Trichloroethene	5	MCL	0.5	µg/L	524.2
Trichlorofluoromethane	150	MCL	0.5	µg/L	524.2
Vinyl chloride	0.5	MCL	0.5	µg/L	524.2

Notes:

CDPHNL - California Department of Public Health Notification Level

MCL - Maximum Contaminant Level



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Request Comment on Treated Groundwater Reuse Proposal by June 11, 2010

Send Comments to:

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or

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Information Repositories

The information repositories below house Site documents available for public review and a copy of EPA's Waste Water Discharge Report.

**Yolo County Library,
Davis Temporary Branch**
2801 Second Street
Davis, CA 95616
(530) 757-5593

Shields Library
Government Documents Dept.
University of California
Davis, CA 95616
(530) 752-6561



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United States Environmental Protection Agency, Region 9
75 Hawthorne Street (SFD-6-3)
San Francisco, CA 94105
Attn: Jackie Lane (Frontier 5/10)

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