



EPA

FRONTIER FERTILIZER SUPERFUND SITE

United States Environmental Protection Agency • Region 9 • October 1999

Extraction Wells and Additional Groundwater Monitoring Wells to be Installed in Mace Ranch Park

During mid-November, the U.S. Environmental Protection Agency (EPA) will begin installing additional groundwater monitoring wells at six locations in the Mace Ranch Park development as part of the EPA's ongoing groundwater investigation. Figure 1 illustrates the likely locations where this work will be conducted. Figure 1 also shows the actual locations of monitoring wells installed in October 1997 and May 1998.

These activities are part of on-going work by the EPA at the Frontier Fertilizer Superfund site, located along Second Street, south of Mace Ranch Park. Soil in the vicinity of the former disposal basin and groundwater under the facility are contaminated as a result of past pesticide storage and distribution activities. The principle chemicals in groundwater are three pesticides: ethylene dibromide (EDB), 1,2-dichloropropane (DCP), and 1,2-dibromo-3-chloropropane (DBCP) as well as the solvent, carbon tetrachloride. Recently, contamination has appeared in monitoring wells on Valerosa Way, Vistosa Street, and the park. (see Figure 1). This shows that contaminated groundwater has moved north of the site and is beneath the Mace Ranch Park Development. The EPA will install additional monitoring wells to determine how far contaminated groundwater has migrated. Groundwater contamination from the Frontier Fertilizer Superfund site does not currently affect any of the City of Davis municipal water supply wells. Household water supplied by the City of Davis continues to meet all state and federal safe drinking water standards.

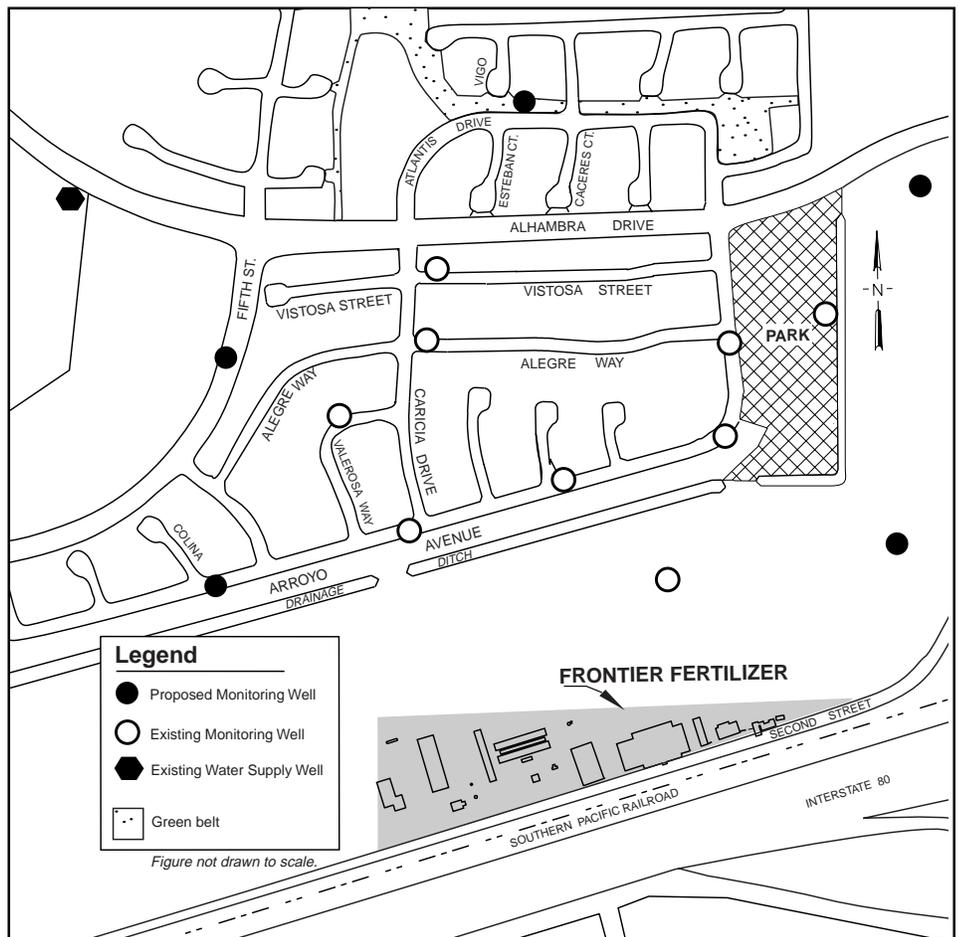


Figure 1: Locations of New and Existing Groundwater Monitoring Wells

Once the extent of contamination has been determined, additional extraction wells will be installed in order to prevent further migration of chemicals. The extraction wells will be connected to the existing interim groundwater treatment system. EPA anticipates that extraction well construction will begin in April 2000. We will notify the community before we begin construction.

EPA's January 1999 Baseline Human Health Risk Assessment determined that there is no risk to residents of Mace Ranch from volatile chemicals in groundwater moving up through soil and into homes. EPA evaluated the potential risk posed by volatile chemicals entering homes through cracks in the floor or subsurface walls. The results of this indoor air risk assessment showed that if chemicals were to volatilize into indoor air, the concentrations would be very low and would not present a risk to human health. As stated above, the drinking water supply

for the City of Davis has not been affected by chemicals from the Frontier Fertilizer site.

Monitoring well installation will occur over a two month period, beginning in mid-November. Monitoring well drilling is a safe procedure and will not pose a health risk to residents in the area. EPA will minimize disruptions to residents near the work, but a certain amount of minor traffic inconveniences and noise are inevitable. Wells will be installed in the public right-of-way either within the street or in landscaped areas. Wells will be installed below ground and appear similar to sewer manhole covers. They will not interfere with vehicle or foot traffic. The wells will be closely spaced at each location but will be drilled to different depths. Groundwater samples will be collected from the wells on a quarterly basis to ensure that contamination does not continue to migrate and ultimately to monitor the progress of cleanup.

Most of the personnel performing this work will be wearing protective clothing that is required by the Occupational Safety and Health Administration for this type of work. This is a standard precautionary measure for worker safety. In conformance with a City of Davis ordinance, EPA will limit working hours in residential areas to Monday through Friday, 7:00 AM to 6:00 PM.

What Happens When Groundwater Monitoring Wells are Drilled?

- 1. DRILLING THE BOREHOLE FOR THE WELL.** A BOREHOLE APPROXIMATELY 16 INCHES IN DIAMETER IS DRILLED TO THE MAXIMUM DEPTH THAT WILL BE STUDIED.
- 2. CONSTRUCTION.** A LONG VERTICAL PIPE, CALLED A WELL CASING AND A SCREEN ARE INSTALLED IN THE BOREHOLE. SAND IS PLACED AROUND THE SCREEN TO FILTER WATER PUMPED FROM THE WELL AND THE TOP PART OF THE CASING IS CEMENTED IN PLACE.
- 3. DEVELOPMENT.** GROUNDWATER IS REMOVED FROM THE WELL THROUGH THE SCREEN TO CLEAN THE MUD AND SAND LEFT IN THE WELL AFTER DRILLING.
- 4. COMPLETION.** SAMPLING HARDWARE, A WELL CAP, AND A PROTECTIVE BOX OR VAULT ARE INSTALLED AROUND THE TOP OF THE WELL, BELOW THE GROUND SURFACE.
- 5. SAMPLING.** GROUNDWATER SAMPLES ARE COLLECTED FROM THE WELL. SAMPLES ARE AGAIN COLLECTED FROM THE WELL ON A QUARTERLY BASIS.

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If you have **Questions and Concerns** about EPA's cleanup efforts for the Frontier Fertilizer site, please contact:



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