



Fresno Sanitary Landfill Superfund Site



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION IX • SAN FRANCISCO, CALIFORNIA

FRESNO, CALIFORNIA

AUGUST 2001

GROUNDWATER TREATMENT SYSTEM CONSTRUCTION UNDERWAY

Under the direction of the United States Environmental Protection Agency (EPA), the City of Fresno (City) has started the construction of the Groundwater Treatment System that is part of its efforts to clean up the Fresno Sanitary Landfill Superfund site. This fact sheet gives you information on the landfill cover and landfill gas control systems, the Early Groundwater Remedial Action, the groundwater treatment plant, and the Regional Park and Sports Complex. Terms shown in **bold type** are found in the Glossary on page 4.

WHAT HAS HAPPENED?

Landfill Cover and Landfill Gas Control Systems Status

The four layers of the landfill cover system (the foundation layer, the geomembrane layer and drainage and filter layers) have been installed. When the weather permits, the City will begin seeding and landscaping the landfill cover. The purpose of the cover system is to help stop the production of leachate, which is a liquid that results from water collecting contaminants as it trickles through the wastes. The leachate liquid can then enter and contaminate the **groundwater** under the landfill.

The City completed the installation of the landfill gas extraction wells, gas monitoring probes and landfill gas flare. The flare will be used to burn any landfill gas generated from the

decomposition of refuse. In addition, it will burn off gas generated from the groundwater treatment system.

The construction of the overall landfill cover and gas control systems

will be complete once the groundwater treatment plant becomes fully operational and the landfill cover vegetation has successfully grown.

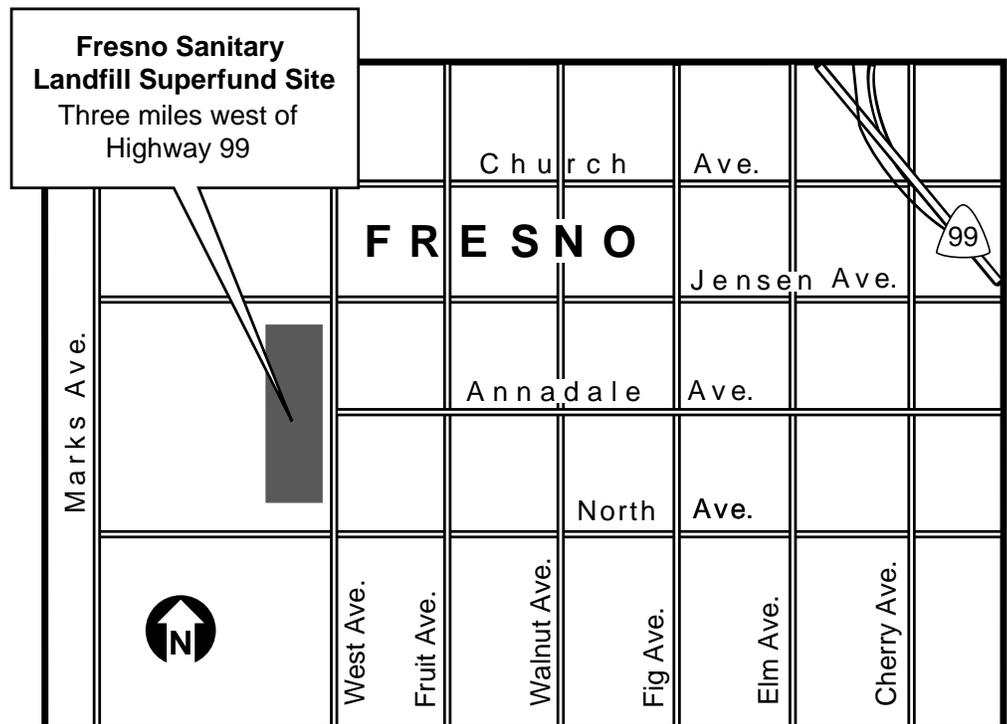


Figure 1: Area map

(Continued on page 2)

Early Groundwater Remedial Action Status

As the permanent groundwater treatment system was being designed and constructed, the City constructed the Early Groundwater Remedial Action (EGRA) in an effort to control the movement of **volatile organic compounds** (VOCs) that impact the groundwater under the landfill. The EGRA treatment system consists of two air stripping units, four **extraction wells**, and existing **monitoring wells** on the site. The unit has been operational since June 1999. The City has gathered data from this process to help refine the design for the permanent groundwater cleanup remedy. The EGRA also helps to keep the groundwater contamination plume underneath the landfill from moving farther away from the landfill property. Once the groundwater treatment system is up and running, the EGRA treatment units will be dismantled and stored.

Construction of Groundwater Treatment System

With EPA oversight, the City began constructing the Groundwater Treatment System. The permanent **groundwater** remedy is to be implemented in three phases. The objective of the Phase 1 remedial action is to contain the contaminated groundwater underneath the landfill. Groundwater extraction wells have been installed along the edge of the

landfill to remove contaminated groundwater. The objective of Phase 2 is to prevent the spread of the contaminants into clean portions of the **aquifer**. The objective of Phase 3 is to reduce existing contaminant levels in the contained groundwater plume by pumping and treating the contaminated groundwater.

Phase 1 Construction

Presently, there are a total of five existing extraction wells installed as part of the groundwater remedial action at the site (see Figure 2). Additionally, fifty-five groundwater monitoring wells are currently being used to track the movement of the contaminated groundwater over time. Eleven of the fifty-five well locations monitor different depths within the aquifer. Nine new monitoring wells will be drilled shortly (three wells at different depths).

A pipeline has been constructed to transport the VOC contaminated water to a new groundwater treatment plant (GTP). The treatment process transfers VOCs from the water into the air. After transfer of the VOCs from the water to the air, the air will be directed to the landfill gas flare station for treatment. A discharge pipeline will take the treated water to the Regional Park and Sports Complex's lake. The treated water will be pumped from the lake to irrigate the park and the landscape over the landfill cover. Construction of a control building that will be used to monitor the operation of the system has been

initiated and should be completed by the end of August 2001.

The Phase 1 remedial action will operate for two years. Performance of the Phase 1 system will be evaluated before starting the design and construction of the Phase 2 groundwater remedial action.

Regional Park and Sports Complex Construction Status

The City of Fresno is developing its closed landfill area into a park and sports complex for residents' use. The complex will include nine soccer fields, six softball fields, two concessions, three picnic areas, a lake, a parking area and a walking trail area. The park's construction is scheduled to be completed November 2001 and the park will open a few months later. The facility will accommodate large softball and soccer tournaments. For park information in the interim, please contact Ronald P. Primavera, Parks Director at (559) 498-1145.

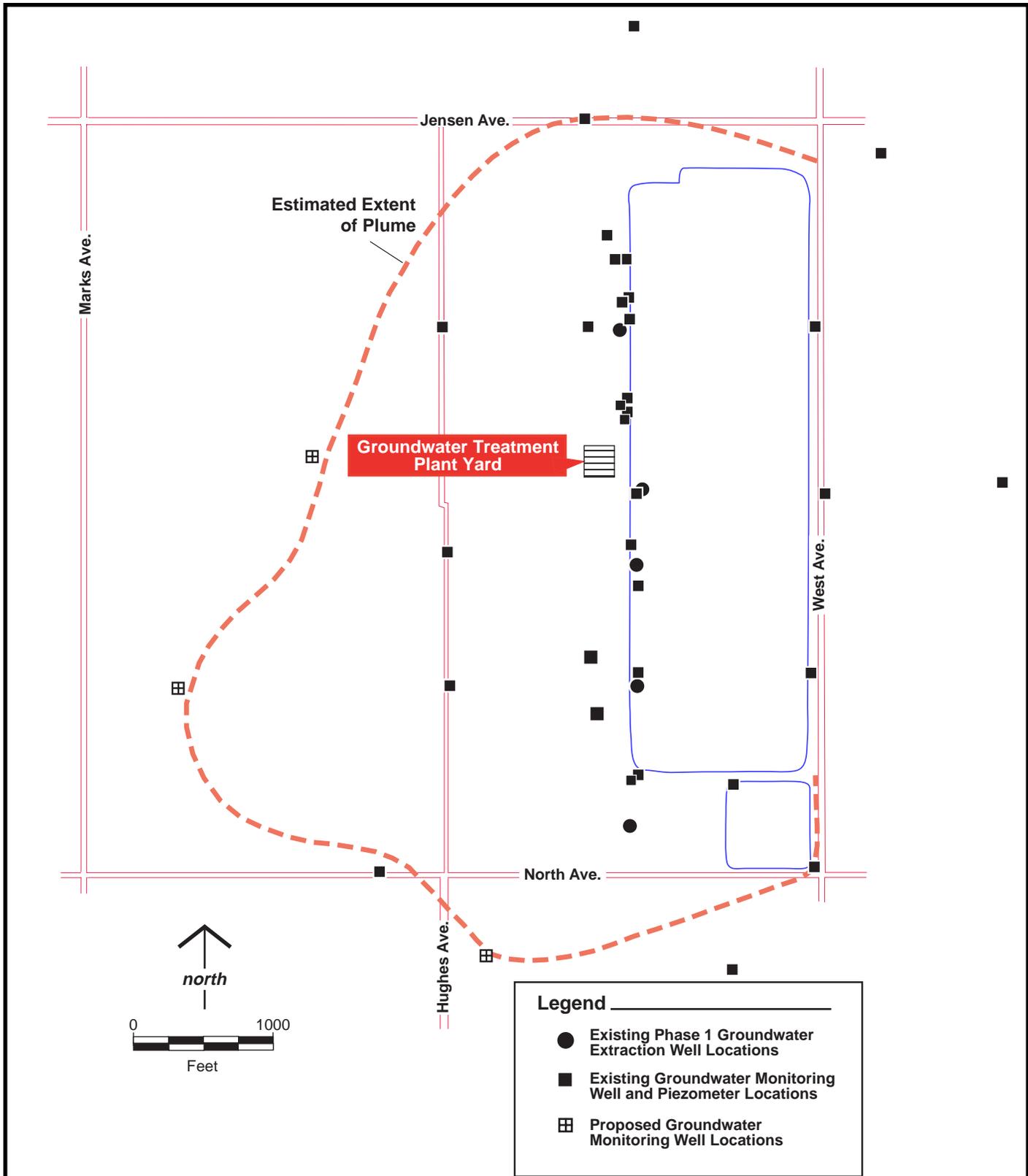


Figure 2: Groundwater Treatment System, Phase 1 at the Fresno Sanitary Landfill Superfund Site

SITE DESCRIPTION AND HISTORY

The Fresno Sanitary Landfill is four miles southwest of the City of Fresno in Fresno County, California. The landfill is approximately 145 acres in size and rises approximately 60 feet above the surrounding land. It is located along West Avenue between North Avenue and Jensen Avenue. The area surrounding the landfill is primarily agricultural. The Fresno Sanitary Landfill is owned and was operated by the City of Fresno. The landfill began operating in 1937 and stopped accepting trash in 1989. A protective liner was never installed beneath the landfill. Groundwater, soils, and air are all impacted by the release of contaminants from the landfill. The most common forms of contamination at landfills are landfill gas and leachate, which contributes to the contamination of the groundwater.

GLOSSARY OF TERMS

Aquifer is an underground geological formation containing usable amounts of groundwater that can supply wells and springs.

Extraction wells are wells drilled at a Superfund site facility to extract water or gas contaminants from under the ground and move them to a facility for treatment.

Groundwater is water found under the ground, which often supplies wells and springs. Groundwater is a major source of drinking water and other water needs.

Monitoring wells are wells drilled at a Superfund site facility to collect groundwater samples for the purpose of physical, chemical, or biological analysis to determine the amounts, types and distribution of contaminants in the groundwater beneath the site.

Volatile Organic Contaminants (VOCs) are organic compounds that easily evaporate at room temperature. Examples include solvents, gas, paint thinner, and nail polish remover.

HOW DO I GET MORE INFORMATION ABOUT THE PROJECT?

The Superfund program places a high value on community input in addressing hazardous waste clean-ups. The EPA invites and encouraged your comments. If you have any questions or concerns about the site cleanup activities, please contact the following people for further site information:

Jackie Lane
 U.S. EPA Community Involvement
 1-800-231-3075 or
 Direct at (415) 744-2267

Beatriz Bofill
 U.S. EPA Project Manager
 1-800-231-3075 or
 Direct at (415) 744-2235

Lisa Fasano
 Media Officer
 1-800-231-3075 or
 at (415) 744-1587

ADMINISTRATIVE RECORDS

Copies of the Fresno Sanitary Landfill Superfund site Administrative Records and documents are at the following locations:

Fresno County Central Library
 2420 Mariposa Street
 Fresno, CA 93721

Superfund Records Center
 95 Hawthorne Street
 San Francisco, CA 94105



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To help us maintain an accurate mailing list for the Fresno Sanitary Landfill Superfund site, please mark the appropriate box below. ***If you would like to continue receiving site information, there is no need to send in the coupon.*** If you received this fact sheet from someone else, you will need to send your address to become part of the site mailing list.

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FRESNO SANITARY LANDFILL SUPERFUND SITE UPDATE

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