



# Laboratory for Energy-related Health Research (LEHR)

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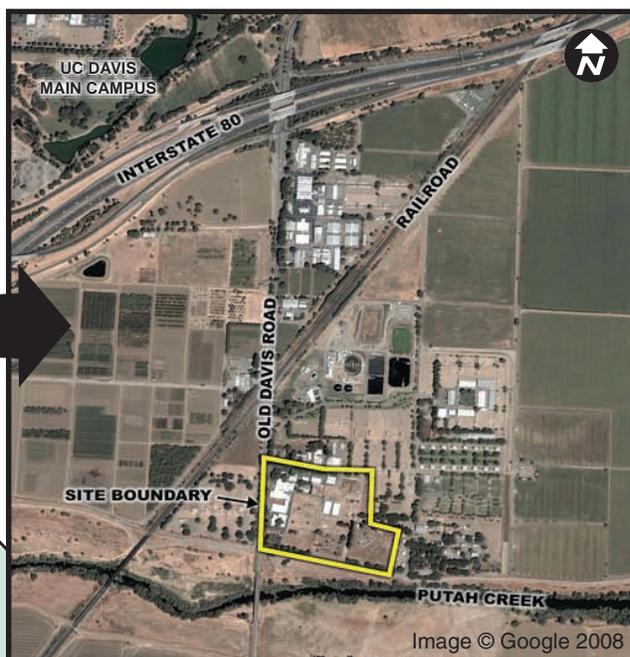
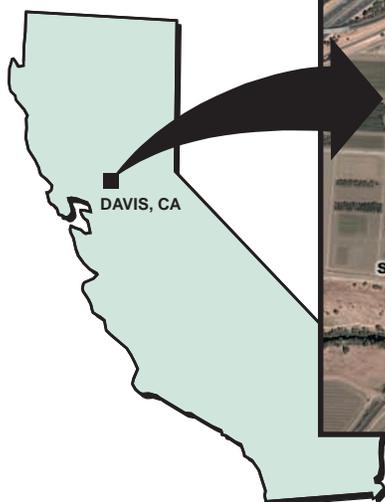
## Community Update

This fact sheet by the U.S. Environmental Protection Agency (EPA) provides information on the cleanup plans and activities being conducted at a portion of the University of California, Davis formerly called the Laboratory for Energy-related Health Research (LEHR).

Two parties, the U.S. Department of Energy (DOE) and UC, Davis, are responsible for the cleanup of the former research facility. Regulatory oversight of the cleanup has always been under the authority of EPA. Responsibility for the public participation element of that cleanup has shifted from DOE to EPA.

The DOE has completed the cleanup of the land contamination that came under their responsibility. EPA provided regulatory oversight for DOE's project to insure that the cleanup was performed as planned. Please see Figure 2, Page 2, for a map of the buildings at the former LEHR Site.

UC Davis is now developing cleanup plans for their portion of the land contamination and for the groundwater cleanup. Again, EPA provides the regulatory oversight. Please see Figure 3, Page 4, for a map of the groundwater contamination from the former LEHR Site.



**Figure 1:** Laboratory for Energy-related Health Research Site

### Help EPA Update the LEHR Community Involvement Plan

EPA organizes its public participation effort through a Community Involvement Plan. To update the existing plan, EPA will be conducting community interviews to learn about the public's issues and concerns, and information needs about the LEHR cleanup.

EPA plans to conduct the interviews November 1-10. Interviews are conducted at the time and place convenient to the interviewee, and specific comments are kept private. A summary of the comments is used to update the Community Involvement Plan.

If you would like to share your thoughts with us, please contact David Cooper, Community Involvement Coordinator (see Page 5).



## What cleanup has already been completed?

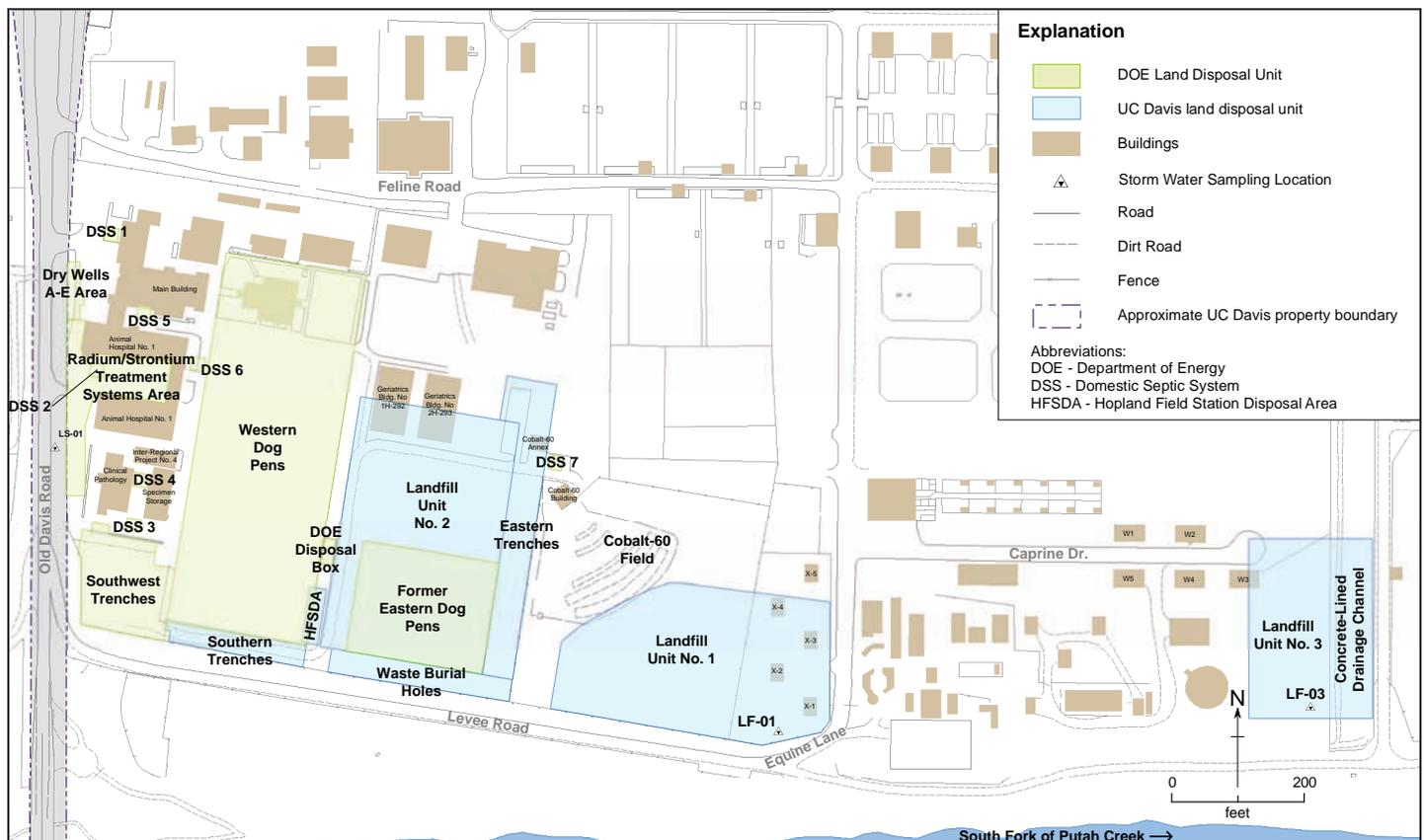
DOE has decontaminated all of the buildings used in their research and has transferred ownership back to UC Davis for continued use. Except for the Eastern Dog Pens area, most of the contaminated soil in the DOE areas (8,500 cubic yards) has been removed and disposed of in a licensed off-site disposal facility. Excavations were backfilled with clean soil.

Because the Eastern Dog Pens were located over one of UC's landfills, DOE's cleanup in this area consisted of removing the dog pens, asphalt, concrete, and chain link fences. Gravel and subsurface soils have not been disturbed because of the presence of the underlying contamination in the landfill, which will be addressed by UC Davis.

All of the cleanup was conducted to risk-based standards selected by DOE and EPA, with the concurrence of the California State agencies: the Department of Toxic Substances Control (DTSC), the Regional Water Quality Control Board (RWQCB), and the Department of Public Health Radiological Health Branch (DPH-RHB).

The cleanup actions and levels for the DOE areas were selected in a Record of Decision in 2009. Portions of the land are restricted to prohibit future residential development.

UC Davis has installed a pilot system to clean up groundwater contaminated with chloroform. This system controls contaminated groundwater from moving off-site and removes contaminants from the groundwater in source areas. UC Davis also removed radioactive waste from former burial holes in 1999.



**Figure 2:** Site Features - Laboratory for Energy-related Health Research/Old Campus Landfill, University of California, Davis

## Site Background

The former Laboratory for Energy-related Health Research (LEHR) is located south of the main UC Davis campus and is owned by the University. UC formerly operated a wastewater treatment plant and disposed of waste in landfills, trenches and pits. From the 1950s until 1988, DOE sponsored research involving the irradiation of beagle dogs to study the long-term effects of radiation.

Contaminants left on-site included strontium-90, radium-226, metals, semi-volatile organic compounds, nitrate and pesticides. Most site-related contamination was in soil and gravel, although some contaminants have migrated into the groundwater.

In 1990, after DOE-sponsored research had ended, they began a decommissioning program. In 1994, EPA added the site to the National Priorities List (NPL). In 1997 a Memorandum of Agreement divided responsibility for environmental cleanup between DOE and UC Davis.

DOE was responsible for cleaning up the Western and Eastern Dog Pens, the Southwest Trenches, the Radium and Strontium Treatment System, the DOE Disposal Box, and the Domestic Septic Systems.

UC Davis is responsible for cleaning up the three landfills, the southern and eastern disposal trenches, waste holes, the former wastewater treatment plant, and groundwater contaminated by these areas. DOE and UC Davis are each also responsible for storm water runoff from their respective areas.

## What cleanup decisions remain to be made?

UC Davis is conducting a Feasibility Study to identify and evaluate alternatives for cleaning up contaminated waste and soil in their areas of responsibility (see Site Background sidebar) as well as contaminated groundwater. At the conclusion of the Feasibility Study, EPA will identify a series of cleanup options for public consideration, including a preferred option. A public comment period will be advertised, with a public meeting held in the middle of the period.

EPA will give consideration to the preferences of the State agencies involved in the cleanup and input from the community. Following that process, EPA will select cleanup remedies that are protective of human health and the environment. Then UC Davis will perform the cleanup.

## What are the contaminants of concern?

The following table lists the contaminants that pose a potential health risk given their concentrations and location.

It should be noted that no drinking water wells are currently contaminated or threatened by contaminants from the LEHR site.

### Groundwater Contaminants

Chloroform, chromium, tritium, carbon-14, nitrate, 1,4-dioxane.

### Soil Contaminants of concern to groundwater

Chloroform, carbon-14, tritium, 1,1-dichloroethane, 1,2-dichloroethane, 1,2-dichloropropane, 1,4-dioxane, copper, selenium, cadmium, acetone, barium.

### Soil Contaminants of concern by vapor intrusion\*

Chloroform, tetrachloroethene, 1,2-dichloropropane

\*Vapor intrusion is the term used to describe how, under certain circumstances, vapors from soil contamination can move upwards and become trapped inside buildings.



## For More Information

One convenient place to find major site documents is to go to EPA's web site: [www.epa.gov/region09/LEHR](http://www.epa.gov/region09/LEHR)

DOE also maintains site documents on its web site: [www.lm.doe.gov/lehr/Sites.aspx](http://www.lm.doe.gov/lehr/Sites.aspx)

Also, you can find an extensive amount of information at EPA's Information Repositories listed below.

### Site Information Repositories

Copies of technical documents, reports and fact sheets related to the LEHR site are available for review at the locations listed below.

#### U.S. EPA Superfund Records Center

95 Hawthorne Street, Suite 403S  
San Francisco, CA 94105-3901  
Telephone: (415) 820-4700

#### Yolo County Public Library

Davis Branch, Reference Desk  
315 East 14<sup>th</sup> Street  
Davis, CA 95616  
Telephone: (530) 757-5593

#### Shields Library

Reserve Desk  
UC, Davis  
Davis, CA 95616  
Telephone (530) 752-9848

### US EPA Contacts

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Or you may leave a message on EPA's Office of Community Involvement toll-free line at **(800) 231-3075**.



## Mailing List Coupon

If you are not already on EPA's mailing list for the Laboratory for Energy-related Health Research Site, please send an e-mail or return the coupon below to David Cooper.

Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City, State \_\_\_\_\_ Zip \_\_\_\_\_

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**Community Update**

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