

Hanford Wastes Pose a Risk

For more than 40 years, the federal government produced plutonium for America's nuclear weapons program at Hanford in southeast Washington. That process created huge amounts of radioactive and chemically hazardous waste. Since plutonium production ended in 1989, the focus at Hanford has shifted to the world's largest and most expensive environmental cleanup, with more than \$40 billion spent so far and another \$300-600 billion needed.

Hanford's extensive contamination includes hundreds of solid waste burial trenches and contaminated facilities, including nine former plutonium production reactors and five large chemical reprocessing plants. An estimated 444 billion gallons of contaminated liquid was dumped into the soil, causing extensive groundwater contamination. The most hazardous of the liquid waste was pumped to underground storage tanks.

The extent of the contamination is so widespread, and some of the challenges so difficult, that the U.S. Department of Energy (USDOE) expects cleanup to continue for another 45 years or more.

Oregon's Role

Oregon has a tremendous stake in ensuring the safe and timely cleanup of Hanford. Hanford sits on the Columbia River, just 35 miles from Oregon's border. Radioactive and chemical contamination poses a potential long-term threat to farm and fishery resources. Accordingly, the Oregon Department of Energy's (ODOE) primary role is to ensure cleanup decisions are protective of the river.

ODOE staffs the Oregon Hanford Cleanup Board, which provides input to USDOE and its regulators on the cleanup. ODOE and the Board keep important cleanup issues visible; provide expert advice and comment; hold the USDOE, its contractors, and its regulators accountable; ensure good public involvement and outreach; and convey that the cleanup is a *regional* issue and Oregon has a stake in the outcome.

Significant progress has been made on several Oregon cleanup priorities. Surface cleanup is nearly complete along the Columbia River shoreline and treatment of the groundwater has greatly reduced the amount of contaminants reaching the Columbia River.



HANFORD AND OREGON

What You Should Know



Hanford's D and DR reactors, both of which have been put into safe interim storage.

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Hanford Nuclear Site

Plutonium Production Reactors
Nine reactors were built along the Columbia River. All are shut down.

Tank Waste Treatment
Hanford's biggest challenge is treatment of the tank waste. Full treatment capability is not scheduled to start before 2036.

Groundwater Treatment
Groundwater treatment systems have reduced the size of the contaminant plumes. Some will likely operate for decades.

Groundwater Contamination
Some contaminants have reached the Columbia River. More are moving through the soil column to the groundwater.

Cleanup to Last Decades
The Hanford cleanup is expected to last into the 2060s or beyond and cost another \$300-600 billion.

177 Aging Underground Tanks
These tanks hold 56 million gallons of high-level radioactive waste. Dozens have leaked over the years.

The Columbia River
After flowing through Hanford, the river forms the Oregon-Washington border.



Hanford Site is 586 square miles.

