Cleanup Catchup

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A newsletter series from

Washington Ecology's Nuclear Waste Program

Cleanup Catchup is a newsletter series sharing information and updates about cleanup at one of the largest nuclear cleanup sites in the world. Hear from the Washington State Department of Ecology's Nuclear Waste Program on progress and activities at the Hanford Site that's keeping Washington's communities, water, land, and air safe for current and future generations.

In this edition, we explore Hanford's budget outlook and what funding is needed for the next two years and beyond to keep up with cleanup milestones. Our team has also been busy overseeing a key environmental testing step ahead of the anticipated hot commissioning of the Low-Activity Waste Facility. Lastly, we debut a new infographic about the planning and reporting that goes into closing Hanford's single-shell tank systems.

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Hanford's Low-Activity Waste Facility on the site's central plateau. Photo: U.S. Department of Energy



In this edition

Four stories progressing cleanup

Hanford's budget outlook—Sustained progress at Hanford requires sufficient funding from Congress every year to meet cleanup milestones. Our updated budget one-pager, utilizing data from the U.S. Department of Energy's 2025 Hanford Lifecycle Scope, Schedule, and Cost Report, dives into how current congressional funding for Hanford is divvied up at the site, what level of funding is needed to meet cleanup milestones on time, and why a compliant budget is crucial for cleanup.

Environmental testing at Waste Treatment Plant—In one of the final tests before real waste begins getting pumped into the Low-Activity Waste Facility melters, Ecology is overseeing the U.S. Department of Energy and its contractor, Bechtel, in their Environmental Performance Demonstration Test. Learn about the heating, spiking, filtering, and testing being done right now to ensure the plant's operations has no adverse effects on human health or the environment.

Closing Hanford's single-shell tank system: A tiered approach—Ecology applies layers of planning, testing, and reporting to ensure that as single-shell tank farms are emptied, they protect groundwater from waste contamination. This infographic outlines the three tiers of planning which spans from sitewide tank regulations, waste management areas, to individual tank or pump components.

In case you missed it—Recent and upcoming happenings around the Nuclear Waste Program. Whether in-person at community events, or virtual with *Let's Talk about Hanford*, stay connected with the progress of the Program.

EXHAUST FESTING

TANK

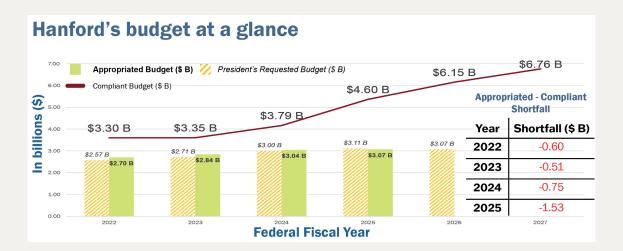
IN CASE YOU MISSED IT

Hanford Budgel

Funding the cleanup

View the Lowering Hanford's Price Tag One Pager

Environmental cleanup at Hanford can't be accomplished without sufficient federal funding. Each year, Ecology updates its Hanford budget report that compares our estimate of the compliant level of funding Hanford needs to meet cleanup milestones, the funding level proposed by the President, and the final budget that is ultimately appropriated by Congress. Our analysis shows higher levels of sustained funding are needed to finish the cleanup this century.



Our agency calculated a compliant budget to the tune of \$6.15 billion is needed in 2026, and \$6.76 billion in 2027. We calculate a compliant budget number using the U.S. Department of Energy's 2025 Lifecycle Report. Compliant funding from Congress will keep cleanup on track and continue the site's progress and success, with expected completion by 2086.

View the 2025 Lifecycle Cost and Schedule Report U.S. Department of Energy

An escalating shortfall between the funding that is needed and the funding Congress actually provides will continue to result in delays to projects, higher overall costs, and increased environmental risk. We continue to advocate for Congress to adequately fund the cleanup to protect Tribes, communities near the site and down the Columbia river, and the environment.

Exhaust Testing Environmental testing underway at Hanford's waste treatment plant

RICHLAND, WA – Environmental testing at one of the world's largest nuclear and hazardous waste treatment plants located in Washington State marks the latest step in the mission to treat millions of gallons of waste.

The Environmental Performance Demonstration Test is a critical step in ongoing commissioning of the Low-Activity Waste Facility at the Hanford Site. Once operational, the facility will mix millions of gallons of liquid nuclear and hazardous waste with glass-forming materials (a recipe of specialized sand) into a melter, heat the mixture converting it to glass.

EXHAUST TESTING

This process of vitrification makes for a safer, stable form of low-activity waste which will be collected in containers and moved for permanent disposal at the Hanford Site.

Before the U.S. Department of Energy (Energy) starts treating real waste at Hanford, the permit for the plant requires robust environmental testing to ensure its operations are protective of human health and the environment. Ecology oversees the testing process, results, and raises any concerns for Energy to address. The U.S. Environmental Protection Agency and Ecology work closely on regulatory issues and decisions.

"This testing is crucial in ensuring this facility will be protective of people, soil and air," said Suzanne Dahl, Ecology's Nuclear Waste Program Tank Waste Treatment Section Manager.

(continued)



The Environmental Performance Demonstration Test takes place at the Low-Activity Waste Facility. Photo: Ecology



Suzanne Dahl Section Manager Tank Waste Treatment

Exhaust Testing

Energy and its prime contractor, Bechtel National, Inc., are now running simulated waste through the plant's massive melters with the test following these steps:

- **1. Heat**—Glass-forming materials and simulated waste are heated in the facility's melter to its 2,000° F operating temperature.
- 2. Spike—Different materials and chemicals are added to the simulated waste. Examples include metals like chromium and lead, organic compounds, and chlorine at different concentrations.
- 3. Filter—Exhaust from the melter is filtered through HEPA filters, carbon beds, and catalytic oxidizers to remove contaminants before entering the air. These systems remove various chemicals and radionuclides once real waste begins to be processed.
- **4. Test**—Energy tests the resulting exhaust from the roof and report their findings to Ecology. This ensures they are within regulatory requirements and show no effects on human health or the environment.



Moises GuevaraUnit Supervisor
Tank Waste Treatment

"Our team is actively monitoring the environmental testing in the field," said Moises Guevara, Tank Waste Treatment Unit Supervisor with the Nuclear Waste Program. "If these tests are successful, it will demonstrate that when the facility begins operating with actual waste, appropriate measures are in place to ensure protection of the environment—particularly regarding emissions from the exhaust stack and into the air column."

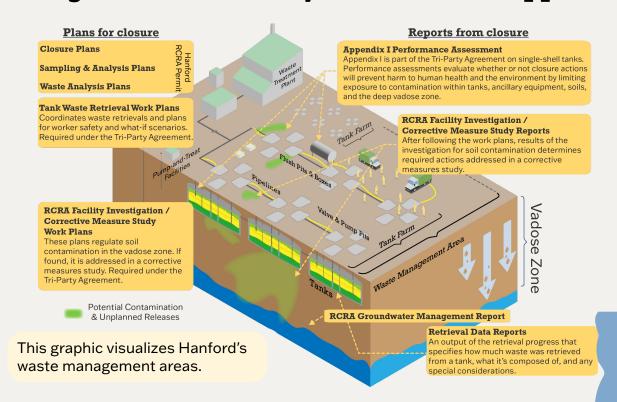
Once Ecology verifies the environmental test is successful, the agency will authorize Energy to begin vitrifying real nuclear waste.

About 56 million gallons of radioactive and chemical waste are currently stored in 177 large, aging underground tanks. Much of this waste will be vitrified at Hanford's Low-Activity Waste Facility.

"We're on the brink of beginning the vitrification of Hanford's tank waste – a landmark achievement that's decades in the making," said Dahl. "Getting waste out of the tanks, turned into a stable glass form, and properly disposed of is vital to protect the environment and communities in the region."

Learn more about <u>Hanford's Waste Treatment Plant</u> and <u>public involvement</u> <u>opportunities</u> on our website or in our latest *Let's Talk About Hanford* livestream.

Closing Hanford's tank system: A tiered approach



Three liers of safely

About 56 million gallons of radioactive and chemically hazardous waste are currently stored in 177 massive underground tanks, all of which are decades old. Long-term plans are in place to treat this waste and convert it into more stable forms, but a key focus is on the safety and integrity of the tanks themselves. Protecting human health and the surrounding environment requires lavered approach to monitoring, maintenance, and decision-making with Hanford's tanks.

To help explain this process, we developed a new infographic that illustrates the tiered planning and regulations guiding tank safety at Hanford. It outlines how planning efforts span from sitewide strategies all the way down to inspections on individual tank-system components. This visual tool is designed to make the complicated process а bit accessible and transparent anticipation of upcoming public comment periods.

View the full graphic:

Closing Hanford's Underground Waste Tanks:

<u>A Tiered Approach to Cleanup</u>

I.C.Y.M.I.

Our program has an active schedule, both in-person and virtual



Migration to Community: Latinos/as at Hanford, a part of the Let's Talk About Hanford series.

5:30 p.m. PT—Thursday, Sept. 18

Join the live event on our <u>Hanford</u> <u>Facebook page</u> or via <u>Zoom stream</u>.

For this conversation, we're welcoming Drew Gamboa, a history PhD student at Washington State University. Drew is involved with heritage and public history projects that have pertained to Mexican American and rural communities of the Pacific Northwest.

Upcoming events:

Come find our outreach team at:

- Fiery Food Festival, Sept. 13, Peanuts Park in Pasco, WA
- Homeschool Night at The REACH museum, Sept. 16, Richland, WA
- Fiesta de Salud, Sept. 19, Othello, WA
- Wenatchee River Salmon Festival,
 Sept. 20, Rocky Reach Dam Discovery
 Center in Wenatchee, WA
- RiverFest '25, Oct. 4, Columbia Park in Kennewick, WA

Recent Ecology blog posts:

- Behind the scenes at the Nuclear Waste Program: Records and public disclosure – Ecology Blog, May 2025
- <u>Let's Talk About treating</u>
 <u>Hanford's tank waste</u> *Let's Talk About Hanford* video series, April 2025
- Behind the scenes at the Nuclear Waste Program: Teamwork and tank waste Ecology Blog, February 2025

N CASE YOU MISSED IT

Hanford Advisory Board

The Hanford Advisory Board is holding meetings for three of its committees Sept. 9 and Sept. 10. You can see agendas and meeting information on our <u>Hanford</u> public involvement webpage.

The Nuclear Waste Program goes beyond Hanford. We also regulate the Puget Sound Naval Shipyard, Perma-Fix Northwest, and other facilities with radioactive and hazardous waste components. You can read more about the non-Hanford facilities we oversee on our website.