



Fact Sheet: Hanford River Corridor Cleanup Plan

U.S. Dept. of Energy Wants to Leave Dangerous Pollution Along the Columbia River

Comments Deadline: December 9, 2019
Submit Comments at ColumbiaRiverkeeper.org/Take-Action

The Pacific Northwest is at a crossroads: leave dangerous radioactive and toxic waste along the Columbia River or protect all people and creatures that rely on clean water?

Use this fact sheet to learn more and submit public comments on a critical cleanup proposal at the Hanford Nuclear Site (Hanford). Hanford is the most contaminated site in the Western Hemisphere. Help hold the government accountable for Hanford's toxic and radioactive legacy.

What is proposed?

- The U.S. Department of Energy (Energy) proposes a long-term cleanup plan for 112 waste sites and groundwater in Hanford's 100-BC Area.¹
- The cleanup plan addresses pollution spanning 4.5 square miles along the Columbia River, roughly the size of 79 football fields.
- Energy proposes "no action" at 82 waste sites, and Energy will monitor radioactive decay at another 30 waste sites.²

Why is the area so polluted?

- The so-called 100-B/C area was once home to two nuclear reactors that operated from 1944 to 1969.³
- The reactors generated plutonium for the U.S. nuclear arsenal and produced hazardous and radioactive pollution that infiltrated soils and groundwater.

¹ U.S. Dep't of Energy, Notice of Upcoming Public Comment Period (2010).

<https://ecology.wa.gov/Waste-Toxics/Nuclear-waste/Public-comment-periods> (last visited Oct. 10, 2019).

² See Proposed Plan for Remediation of the 100-BC-1, 100-BC-2, and 100-BC-5 Operable Units, William F. Hamel (Sep. 9, 2019), available at <https://pdw.hanford.gov/document/AR-03055>.

³ Environmental Protection Agency, Superfund Site: Hanford 100-Area,

<https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=1001114> (last visited Oct. 10, 2019). B Reactor operated 1944-1968, C Reactor from 1952-1969.

- Cleanup of the 100 Area began in 1990. Government contractors have removed over 18 million tons of contaminated soil from the banks of the Columbia River and moved to the Environmental Restoration Disposal Facility (ERDF) in the Central Plateau.

How does Energy plan to address radioactive and toxic pollution in the area addressed by the 100 B/C-Area Cleanup Plan?

- Energy's proposal includes six alternative cleanup plans for 112 waste sites, along with a recommended alternative, Alternative-2.
- For the 112 waste sites, Energy proposes:
 - 82 Waste Sites → NO ACTION.
 - TIME ESTIMATE: Indefinitely.

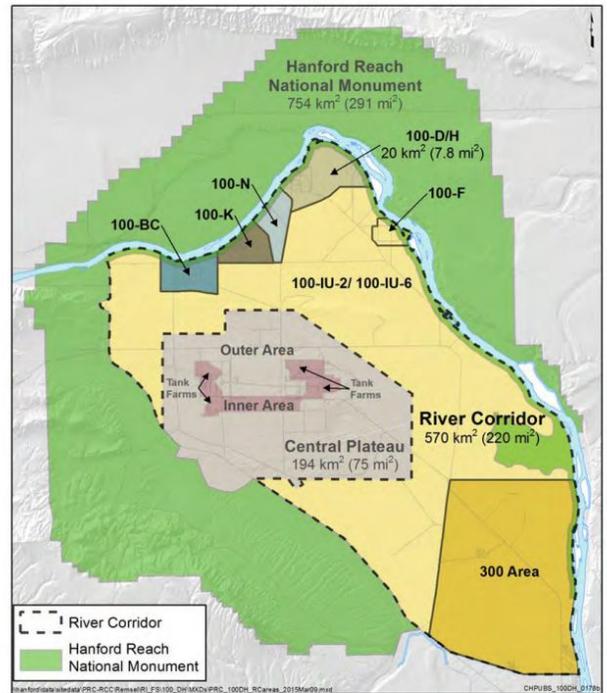


Figure 1. Hanford Site River Corridor

- Seven Shallow Waste Sites → WAIT AND SEE. Energy would use so-called "institutional controls" such as signs, fences, and land use restrictions—such as prohibiting irrigation—while waiting for radioactive decay to reduce pollution levels.
 - TIME ESTIMATE: At least one of the shallow soil sites will remain hazardous for up to 184 years. Other shallow soil sites will remain dangerous for decades.
- One Waste Site → ACTIVE CLEANUP. Energy would excavate contaminated soil and debris and treat the soil and debris as necessary to meet disposal restrictions. The agency would dispose of the contaminated soil and debris at an onsite landfill.
 - TIME ESTIMATE: Five years.
- 29 Deeper Soil Contamination Sites → WAIT AND SEE. Energy considers 15 feet to be "deep". For deep soil contamination, Energy proposes to leave soil pollution in place. Energy acknowledges a "potential risk from inadvertent exposure through deep excavation activities," but plans to address these risks by placing long-term restrictions on deep digging, well-drilling, and other soil disturbance below 15 feet.
 - TIME ESTIMATE: In some cases, deep soil pollution will exceed acceptable levels for tens of thousands of years.

- Over 300 acres of groundwater → WAIT AND SEE. Energy proposes “monitored natural attenuation”—allowing radioactive decay and other natural pollution decay, while Energy monitors the progress. Energy also proposes long-term institutional controls (i.e., signs, fences, and land use restrictions to keep people out of the area and to prevent further contamination).
 - TIME ESTIMATE:
 - Hexavalent chromium Cr(VI): 60 years to meet surface water standard; 15 years to meet drinking water standards.
 - Strontium-90: 70 years to meet drinking water standard
 - Trichloroethene: 25 years to meet drinking water standards.
 - Tritium: currently meets drinking water standards.

Why does Energy’s plan fail to protect people, fish, and wildlife that depend on clean water?

- Highly contaminated soil remains along the Columbia’s shores.
- A groundwater plume with elevated levels of chromium continues to enter the river and Energy’s plan will allow it to continue for 60 years, a direct violation of the Tri-Party Agreement.⁴ Energy should include a pump and treat approach for Hexavalent chromium CR(VI), a proven technique to actually remove the contaminant from the water, instead choosing to leave it in the groundwater.
- Energy has declared this area to be a national historic site, invites the public on tours, but is stopping short of finishing the critical cleanup that’s needed.

Are “institutional controls” an effective approach to protect the people, fish, and wildlife?

- No. Institutional controls for cleanup plans exceeding 100 years is unreasonable for areas close to the Columbia River.⁵
- Energy’s proposed plan estimates over 180 years for contamination associated with the B-Reactor spent fuel basin to naturally attenuate. However, if shallow soil pollution were removed, attenuation would drop to only 39 years. Successful removal of spent fuel basins and the surrounding contaminated soil would shorten the persistence of dangerous pollution.
- Energy fails to address whether very long-term controls are likely to succeed. For example, can Energy restrict future site users from doing deep excavation (below 15 feet) for hundreds, and in some cases, thousands, of years?

⁴ See HAB Advice 296.

⁵ See HAB advice 278, Bullet 2, and HAB Advice 290, bullet 2.

Does long-term reliance on institutional controls account for tribes' treaty-guaranteed rights to use the area?

- No. The federally recognized tribes of the Confederated Tribes and Bands of the Yakama Nation (Yakama Nation), Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and Nez Perce Tribe have treaties with the United States reserving the rights to hunt, fish, and gather in the places that they have done so since time immemorial. The proposed cleanup plan fails to account for treaty rights.
- Hanford encompasses a large area within culturally significant lands of the Yakama Nation, CTUIR, Nez Perce Tribe, and the Wanapum people.⁶
- Energy's proposal to leave contamination in both shallow and deep soil sites, as well as in hundreds of acres of groundwater, conflicts with potential future use of the area by tribal members who have treaty-guaranteed rights to use the area.

This product is funded through a Public Participation Grant from the Department of Ecology. The content was reviewed for grant consistency but is not necessarily endorsed by the agency.

⁶See Competing Visions for the Future of Hanford, Columbia Riverkeeper (2018)
https://www.columbiariverkeeper.org/sites/default/files/2018-07/2018.6.1%20Hanford%20Vision%20Report_j_INTERACTIVE.pdf.