

# **HANFORD SITE**

### **History**

Hanford is home to the world's first full-scale nuclear reactor, the B Reactor, which produced plutonium for the world's first nuclear explosion (the Trinity test) and for the nuclear bomb which was dropped on Nagasaki, Japan. Hanford's plutonium production mission continued until the late 1980s, ultimately producing 65% of the nation's stockpile.

Over the course of Hanford operations, 20 million pieces of uranium metal fuel were used in Hanford's nine nuclear reactors, 110,000 tons of fuel was processed at five large plants, 450 billion gallons of liquids were disposed into the soil, and 53 million gallons of radioactive waste were stored in 177 large underground tanks.

Hanford Site
(S86 Square Miles)

State Highway 24

ISRM Barrier
100 DR
100 KE, KW
100 Area
(Reactors)

O R E G O N

And Lands Ecology

Reactors

Geographic location and principal facilities at the Hanford Site.

Richland

Richland

Hanford cleanup began in 1989, when a landmark agreement was reached between the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and Washington state. Known as the Tri-Party Agreement, the accord established hundreds of milestones for bringing the Hanford site into compliance with federal and state environmental regulations. After nearly three decades of cleanup, considerable progress has been made at Hanford, reducing the risk the site poses to the health and safety of workers, the public, and the environment.

#### **Primary Focuses**

- Waste Management and Environmental Cleanup
- Further development of the Manhattan Project National Historical Park

#### Cleanup Issues

- A majority of the solid wastes, contaminated soil, and building debris will be taken to the <a href="Environmental">Environmental</a>
  Restoration Disposal Facility (ERDF) located on the Hanford Site.
- Some of the more hazardous chemical or radioactive solid wastes are not taken to ERDF. For example, the fuel rods that came out of the reactors but never had their plutonium extracted are stored in a facility called the Canister Storage Building at Hanford. 2,100 tons of spent fuel are packaged in multi-canister overpacks, ready for shipment to Yucca Mountain.
- Transuranic (TRU) waste at Hanford will be securely packaged and shipped to the Waste Isolation Pilot Plant in New Mexico where it will be permanently and safely buried.
- Of the liquid wastes generated at Hanford, much of the waste that is currently stored in the underground tanks
  on the Site will ultimately be transformed into a stable, glass product in a process called vitrification. Low level
  vitrified waste will be placed in the Integrated Disposal Facility on site and high-level vitrified waste is destined for
  a yet unidentified deep geologic repository.



#### **Host Local Communities**

- City of Richland
- City of Kennewick
- City of Pasco
- City of West Richland

- Benton County
- Franklin County
- Port of Benton

# FY 2019 Budget

FY 2017 Enacted	FY 2018 Enacted	FY 2019 Request
2,339,725	2,423,192	2,096,684

(Defense environmental cleanup, Richland and Office of River Protection. Amounts in thousands of dollars. Click <a href="here">here</a> for the latest site budget.)

# **Primary Operating Contractors**

- <u>Bechtel National, Inc. (BNI)</u> Bechtel is constructing Hanford's Waste Treatment and Immobilization Plant (WTP), also known as the vitrification (or Vit) Plant.
- Washington River Protection Solutions LLC (WRPS) WRPS carries out the work associated with monitoring and managing the 177 underground storage tanks at Hanford.
- <u>CH2M HILL Plateau Remediation Company (CHPRC)</u> CHPRC is tasked with environmental cleanup of the Central Plateau and cleanup of waste sites and contaminated groundwater to eliminate risks to the Columbia River.
- <u>Mission Support Alliance (MSA)</u> MSA oversees security, site infrastructure and utilities, information management, fire services, and business management.
- <u>Wastren Advantage, Inc. (WAI)</u> WAI operates the 222-S Laboratory complex, the primary on-site lab for analysis of highly radioactive samples in support of all Hanford projects.
- HPM Corporation (HPMC) HPMC provides occupational medical services to DOE and the Site contractors.

## **Hanford Communities**

**Mission:** The Hanford Communities organization coordinates local government involvement in DOE decision making on issues affecting our jurisdictions. The organization works to increase public awareness and involvement in Hanford cleanup issues. Board members interact with DOE, the Washington State Department of Ecology, the EPA and others regarding Hanford environmental contamination, remediation, waste management, emergency response, and work force and site transition issues.

- Contact: Pam Larsen, plarsen@ci.richland.wa.us
- Website: <a href="https://www.ci.richland.wa.us/government/hanford-communities">https://www.ci.richland.wa.us/government/hanford-communities</a>

# Tri-City Development Council (TRIDEC)

**Mission:** TRIDEC's mission is to improve the economic health of the Tri-Cities area. To achieve this mission, TRIDEC promotes economic diversification, facilitates job creation and retention, pursues new federal missions to support stability in federal operations, and leads the Tri-Cities community on issues of economic importance. TRIDEC has been actively involved in advocacy regarding Hanford and DOE-related policy and funding issues for over 50 years.

- Contact: David Reeploeg, <a href="mailto:dreeploeg@tridec.org">dreeploeg@tridec.org</a>; Phone: (509) 735-1000
- Website: https://www.tridec.org/



# **Community Priorities**

- Cost effective cleanup progress to demonstrate that taxpayer dollars are effectively managed
- Removal to the extent practicable, of waste from underground tanks and close tank farms
- Sustained progress in design, engineering and construction of all WTP facilities
- Relocation of Cesium and Strontium Capsules to Dry Storage
- Continued progress in cleaning up groundwater contamination
- Continued progress in remediation of contaminated soil beneath the 324 building
- Complete remediation of the Plutonium Finishing Plant (PFP) to slab on grade
- Remove and package sludge material from the K West Basin and transport to the Central Plateau
- Advocate for improving site infrastructure in support of long-term site operations
- Advocate for fair and equitable Payment in Lieu of Taxes to schools and government entities

# Congressional and State Government Elected Leadership

#### **Federal Government**

- U.S. Senator Patty Murray (D)
- <u>U.S. Senator Maria Cantwell (D)</u>
- U.S. Rep. Dan Newhouse (R) (WA-04)

#### **State Government**

- Governor Jay Inslee (D)
- State Sen. Sharon Brown (R) (District 8)
- State Rep. Brad Klippert (R) (District 8)
- State Rep. Larry Haler (R) (District 8)
- State Sen. Mark Schoesler (R) (District 9)
- State Rep. Mary Dye (R) (District 9)

#### **Local Government**

- Richland Mayor Bob Thompson
- Kennewick Mayor Don Britain
- Pasco Mayor Matt Watkins
- West Richland Mayor Brent Gerry

### Site News

Hanford Site Newsroom

# **Media Contact Information**

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  - Kristen Holmes, Public Involvement
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- State Rep. Joe Schmick (R) (District 9)
- State Sen. Maureen Walsh (R) (District 16)
- State Rep. Bill Jenkin (R) (District 16)
- State Rep. Terry Nealey (R) (District 16)





#### • Office of River Protection

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### • City of Richland Media and Outreach

o Phone: 509-942-7730

## By the Numbers

- 12,500 cubic meters of waste stored underground have been removed for disposal.
- 100% or about 2,300 tons of the site's spent fuel, a type of radioactive waste, has been removed from areas around the Columbia River and placed in safe, secure dry storage.
- Six of Hanford's nine reactors have been "cocooned" or demolished down to the reactor building and covered with steel and cement.
- Two more reactors will be "cocooned" in coming years, with the final (B Reactor) remaining as a National Historical Landmark.