

Layers of Oppression at Washington State's Hanford Nuclear Reservation: Teaching Hanford history through the eyes of stakeholders

NWTSJ conference

October 23, 2021 (1pm PDT) on zoom

Amy Hagopian & Liz Mattson

Hagopian@uw.edu & lizm@hanfordchallenge.org

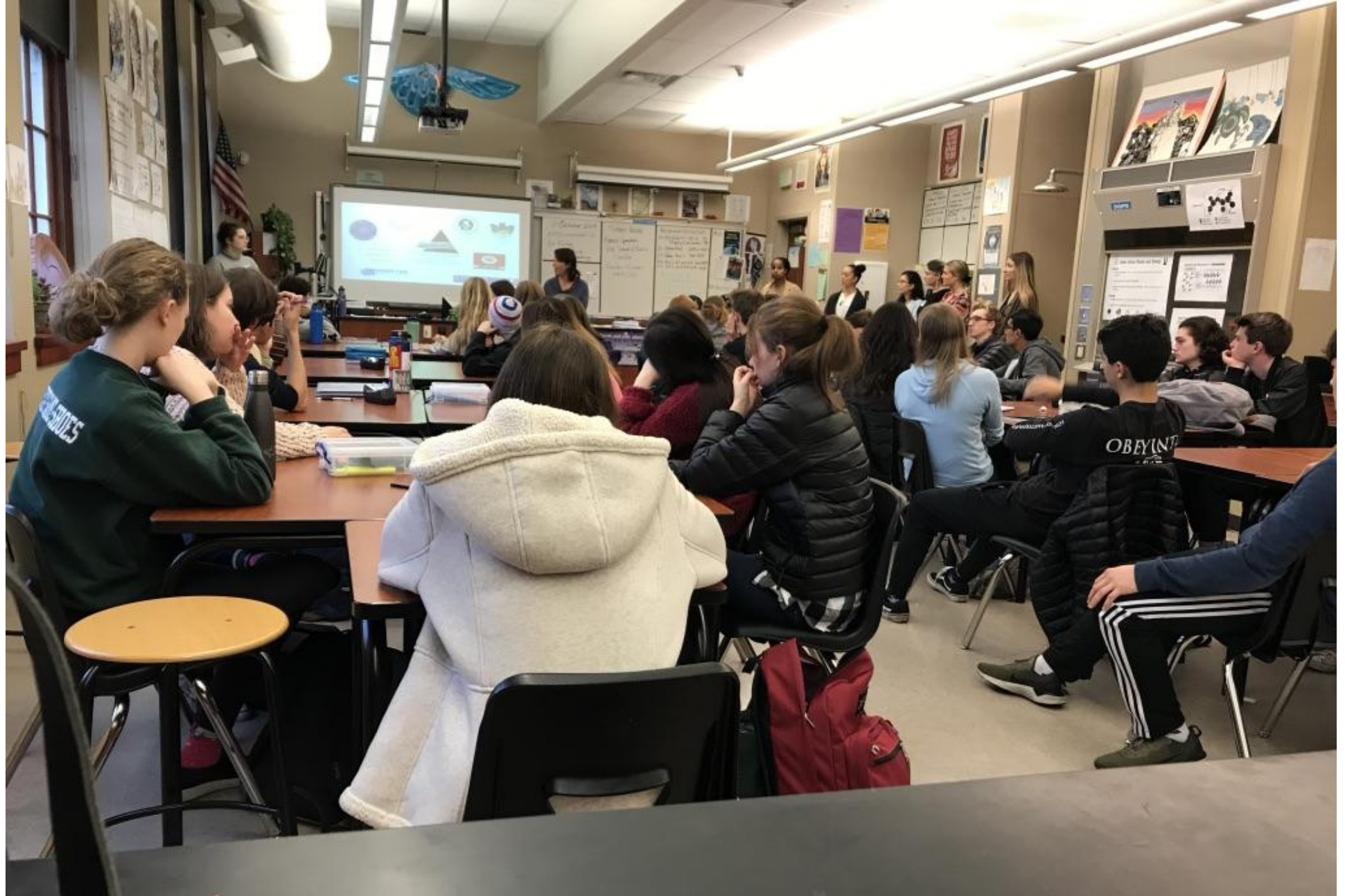
Welcome!

We've taught
Hanford at Garfield
High for many years

UW grad students
teach high school
students



This is best
taught in a
classroom
with small
group set ups



Garfield High School, 2019



Seattle teachers' strike 2018

Amy Hagopian, UW Professor

hagopian@uw.edu

206-616-4989



SCHOOL OF PUBLIC HEALTH
UNIVERSITY of WASHINGTON



Liz Mattson, Senior Program Strategist

lizm@hanfordchallenge.org

828-279-8445





Introductions

Please share in the chat:

- your name/pronouns
- subject/s, grades you teach
- what attracted you to this workshop
- anything else you'd like to share



Conference Ground Rules



- Mute yourself on Zoom when not talking.
- Respect opinions and ideas of others.
- Be open to learning.
- Challenge people respectfully.
- Be aware of the impact of your words and acknowledge/take responsibility when they hurt other people (even when that wasn't your intent).
- Make space/take space. (If you're the one who usually speaks up, wait for others to speak. If you're the one who usually keeps quiet, share thoughts and feedback.)
- Be aware of power and voice in the workshop.
- Please respect privacy. Do not record the keynote or any other sessions. Do not take or post pictures of the keynote or conference participants without their permission.

Plan for Today

- Overview of Hanford
- Power mapping exercise
- Other Hanford teaching ideas
- Reflection
- Resources for teaching Hanford



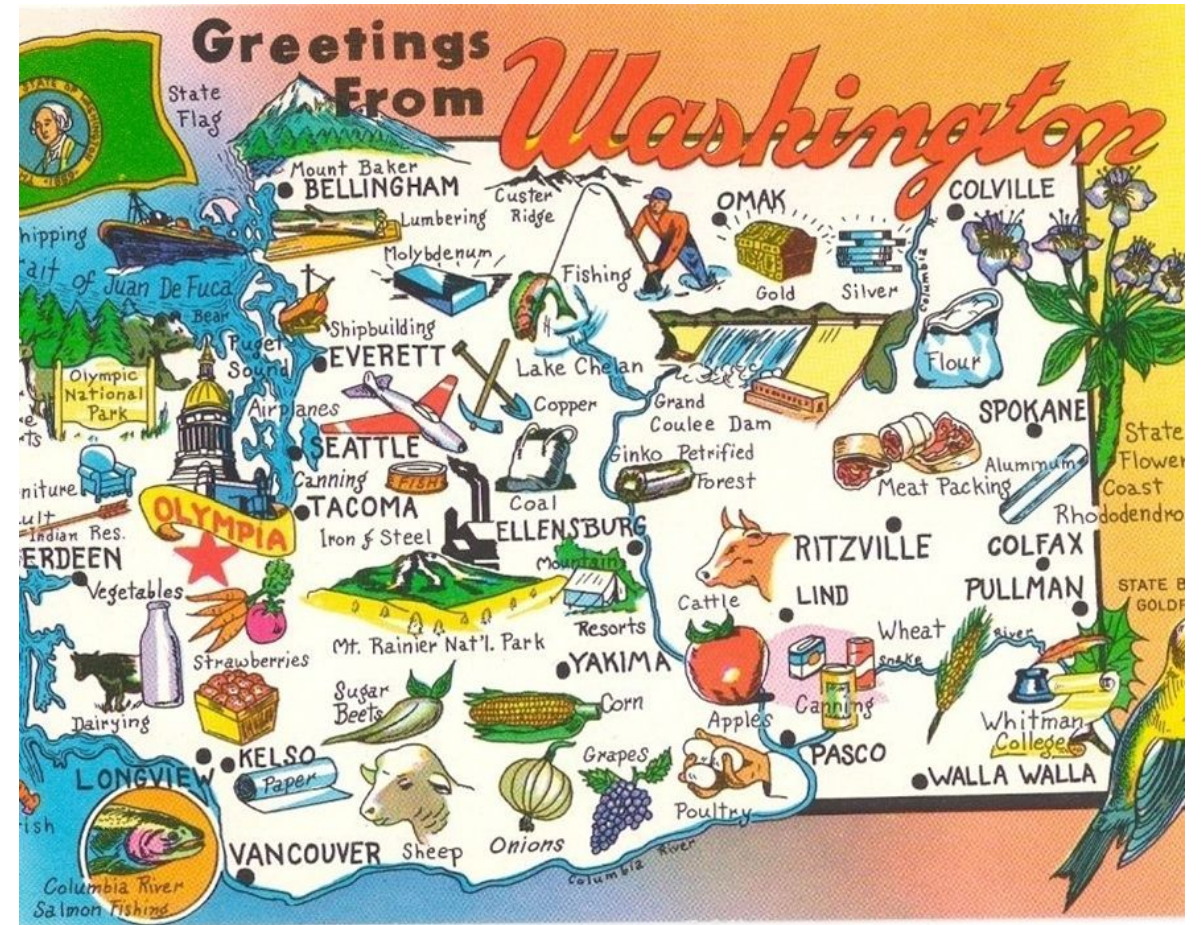
Learning objectives

Students can describe the historical significance of the Hanford Site, identify the current and historical actors in what has happened there, explain why Hanford is a threat to the environment and human health today, and map the power and influence potential of stakeholders at this largest Superfund site in North America.



Garfield High, 2017

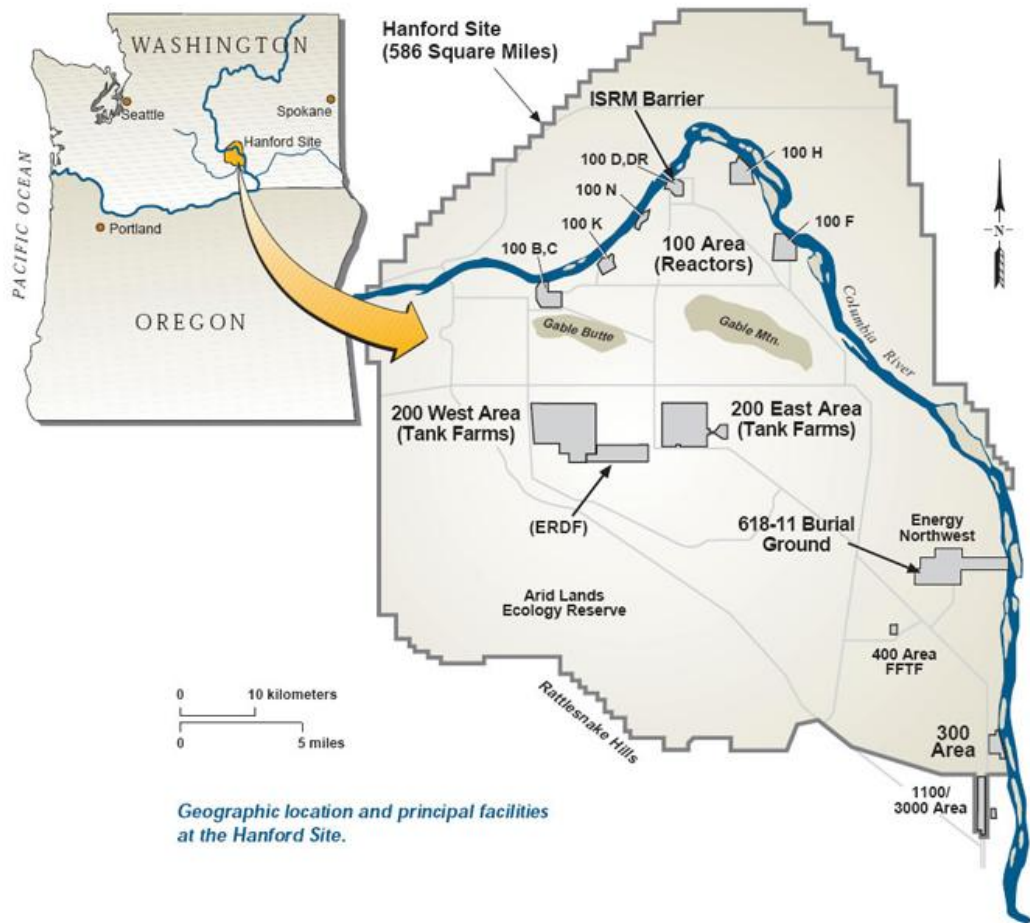
What comes to mind when you think about Washington State?



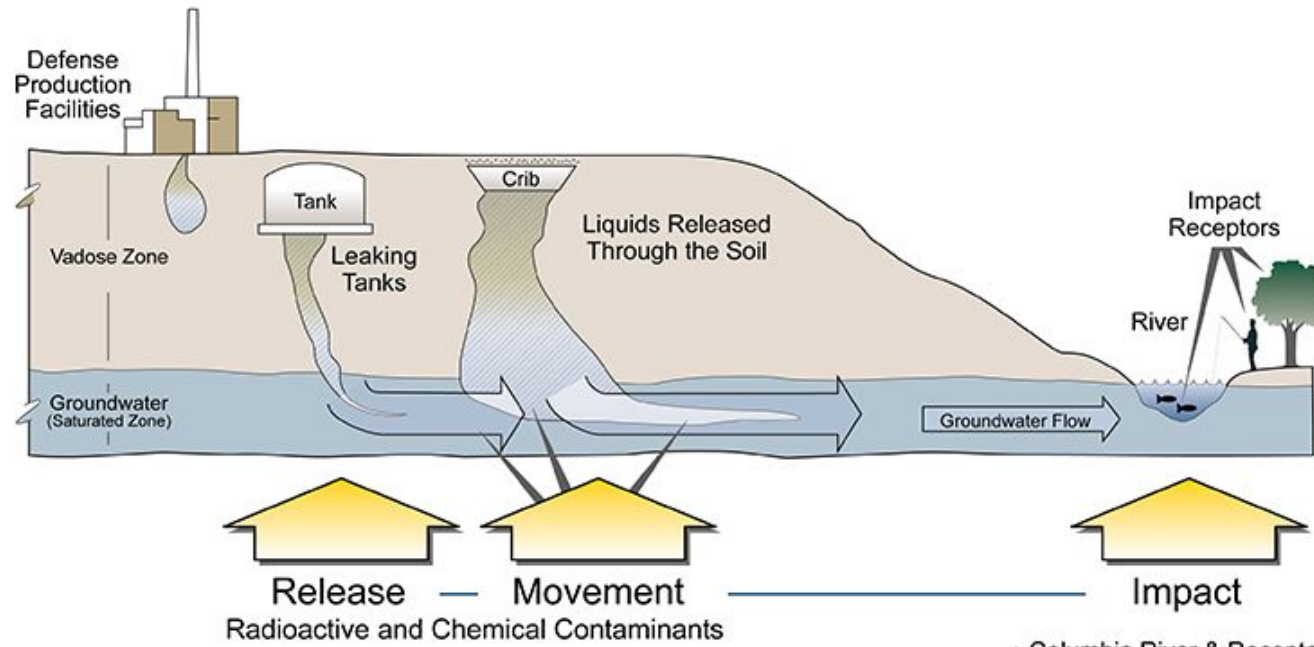
What do you know about Hanford?



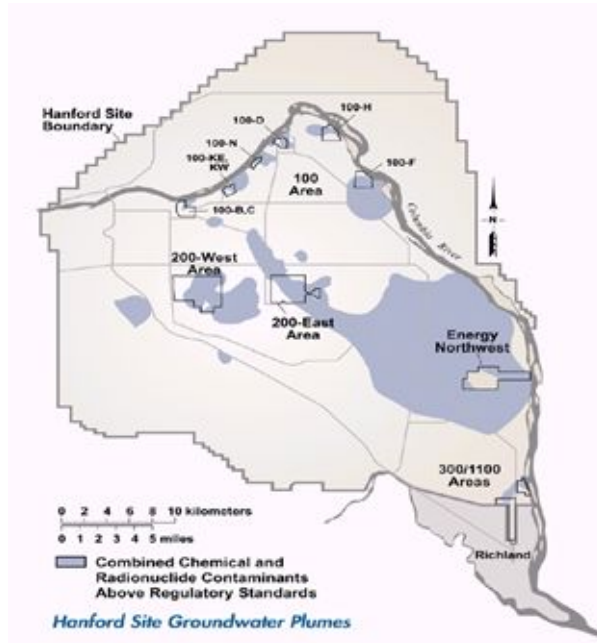
The Hanford Nuclear Site



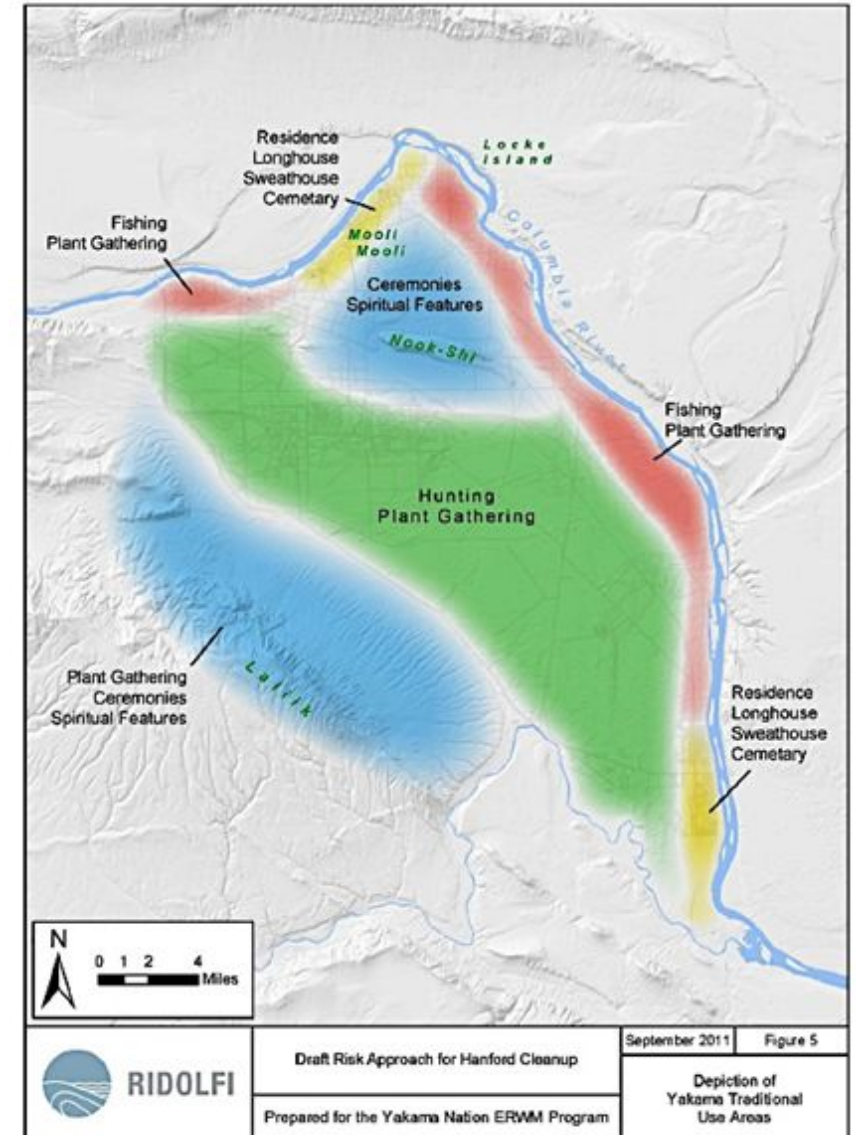
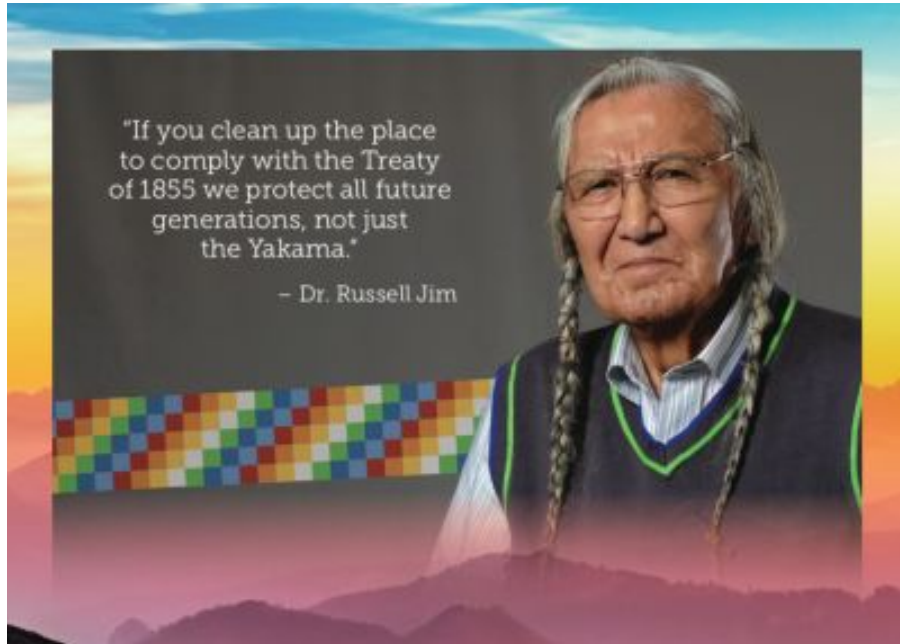
October 2015, UW students tour Hanford site



- Columbia River & Receptors
- Human & Ecological Health
- Regional Economy
- Social & Cultural Well-Being



Native Americans and Hanford



Workforce Exposures

Local News | Northwest | Science

Study: Traces of radioactive contamination found in homes of six Hanford workers

Originally published June 14, 2018 at 6:00 am



The Plutonium Uranium Extraction Plant, right, is next to a dirt-covered rail tunnel, left, containing radioactive waste, at the Hanford nuclear reservation near Richland. (Nicholas K. Geranos/AP)



Circle Of Radioactive Waste Spread Keeps Growing At Hanford

By ANNA KING • DEC 21, 2017

- Tweet
- Share
- Google+
- Email



This map shows the extent of radioactive contamination near the Plutonium Finis
U.S. DEPARTMENT OF ENERGY



HANFORD

57% of Hanford nuclear site workers surveyed by WA state report toxic exposures

BY ANNETTE CARY
UPDATED JULY 07, 2021 2:27 PM

-
-
-
-

HANFORD

Hanford ill worker compensation case appealed to U.S. Supreme Court

BY ANNETTE CARY
UPDATED SEPTEMBER 14, 2021 1:44 PM

-
-
-
-

African Americans and Hanford



Fig. 5.--Group of Negro dwellings, Pasco, Washington.



Getting the uranium

U.S. Brigadier General Leslie Groves, created the [Combined Development Trust \(CDT\)](#) in 1944, which extracted more than 3.4 million pounds of uranium from the Belgian Congo alone for the Manhattan Project. Daily laborers worked for minimal wages around the clock to meet demand for the United States. Many died. Closed in 1960, but radioactivity from the uranium's decay continues to be released into the environment and some remaining uranium has been smuggled out.

After exploiting the Congo for uranium, mining companies turned to the Navajo Reservation, where more than 1,000 mines were established across the Navajo Nation reservation, with almost 4 million tons of uranium being mined there from 1944-1989.

<https://www.atomicheritage.org/history/uranium-mining>



Owned by The Union Minière du Haut-Katanga during the 1940s, Shinkolobwe uranium mine was located in the Belgian Congo.

Downwinders

“Downwinders” are loosely defined as those individuals that lived “downwind” from nuclear production facilities or nuclear test sites. In the United States, Downwinder communities exist primarily in the Pacific Northwest and intermountain range between the Cascades and the Rockies, in states like Nevada, Utah, Washington, Idaho, and New Mexico.

Downwinders also exist at former Manhattan Project sites including, but not limited to, Oak Ridge, Fernald, and Rocky Flats, where airborne radiation was released offsite. Due to American atmospheric nuclear testing, Downwinder communities also exist throughout the Marshall Islands.

<https://www.atomicheritage.org/tour-stop/hanford-downwinders-struggle-justice#.YW4huBDMLAw>

Cancer experts help downwinders apply for financial compensation before the law expires



The Radiation Exposure Compensation Act is set to expire in July 2022.

Hanford sent up a cloud of radioactive iodine and xenon into the atmosphere on December 2, 1949. Known as the “Green Run,” this radiation rained down on Walla Walla.

Bombing Nagasaki

On August 9, 1945, three days after the bombing of Hiroshima, the U.S. bombed the Japanese city of Nagasaki, population 263,000, with the Fat Man plutonium bomb, a bomb much more sophisticated than the Little Boy bomb used at Hiroshima, which used uranium-235 in a fairly conventional explosive mechanism. Detonated 1,650 feet over Nagasaki with a yield of 21 kilotons, it was 40 percent more powerful than Little Boy had been.

People had heard the all-clear after an earlier aircraft raid warning, and had left their shelters. Everything within a mile of ground zero was annihilated. Fourteen thousand homes burst into flames. People close to the blast were vaporized; those unlucky enough to be just outside that radius received horrific burns and, there and further out, radiation poisoning that would eventually kill them. Perhaps 40,000 people were killed by the initial detonation. By the beginning of 1946, 30,000 more people were dead. And within the next five years, well over 100,000 deaths were directly attributable to the bombing of Nagasaki.

<https://www.nationalww2museum.org/war/articles/bombing-nagasaki-august-9-1945>

Nagasaki Medical College after the atomic bomb blast on 9 August 1945.



Making more bombs

The Hanford site was one piece of the Manhattan Project puzzle. It developed plutonium for the Trinity Test, the bomb dropped on Nagasaki, and Cold War weapons. By 1965, there were nine weapons reactors, five reprocessing plants, hundreds of support and research buildings, and 177 underground waste tanks. Ultimately, Hanford produced 74 tons of plutonium, roughly two-thirds of the US's [stockpile](#). The production facilities were phased out as the Cold War ended and the Dept. of Energy delegated cleanup to various private companies. (ICAN website)

<https://www.washington.edu/uwired/outreach/cspn/Website/Classroom%20Materials/Pacific%20Northwest%20History/Lessons/Lesson%2024/24.html>

Construction of the three Washington Public Power Supply System (WPPSS) reactors continued during the 1970s, fueling the local economy, but by 1982 it had become clear that nuclear power plants would not be an anchor for the future.



Nuclear reactors line the riverbank at the Hanford Site along the Columbia River in January 1960. The N Reactor is in the foreground, with the twin KE and KW Reactors in the immediate background. The historic B Reactor, the world's first plutonium production reactor, is visible in the distance.

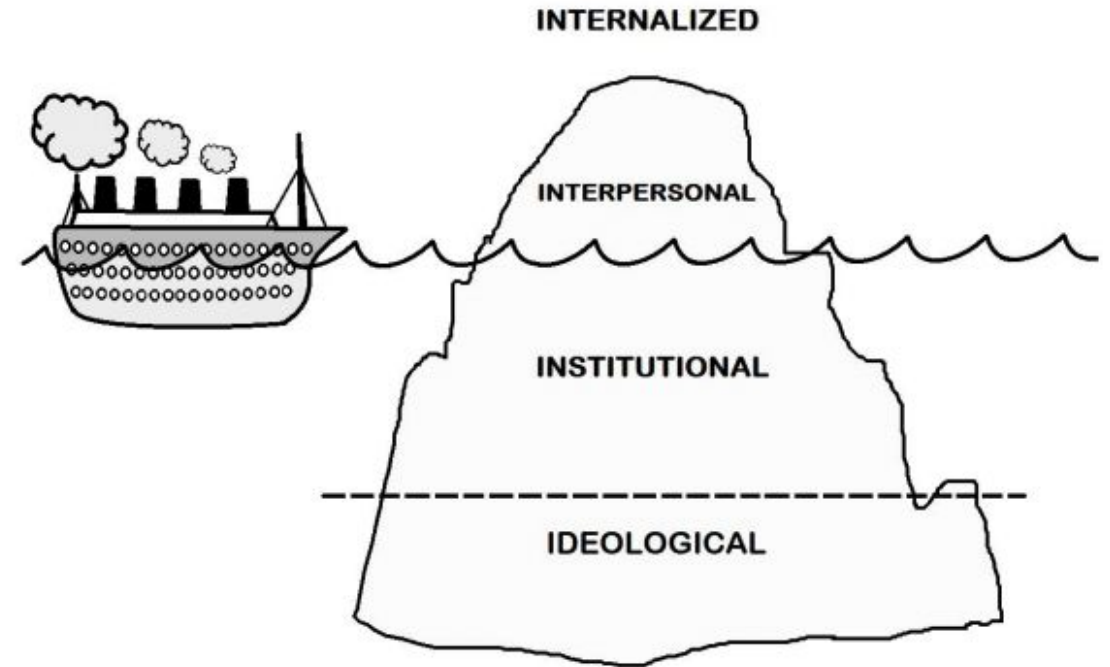
<https://magazine.wsu.edu/web-extra/gallery-historical-hanford/>

Whistleblowers



Overview of the layers of oppression

- clearing the land-tribal treaties broken
- mobilizing a segregated workforce
- harvesting the uranium
- making a mess
- bombing Nagasaki
- making more bombs
- finally pivoting to clean up in response to pressure/dissolution USSR



Why is Hanford the Cold War's Hot Mess?



EarthFix video
2016
3 minutes

Who's in charge?

Tri-Party Agreement (TPA) Agencies

- The United States Department of Energy (DOE) is the owner and operator of the Hanford Nuclear Site.
- WA State and EPA are the regulators.



U.S. DEPARTMENT OF
ENERGY



DEPARTMENT OF
ECOLOGY
State of Washington



EPA

United States
Environmental Protection
Agency

Your Task: mapping the stakeholders

Group # ____

Reporter: _____

From what perspective are you mapping?

Group 1- US Dept. of Energy (DOE)

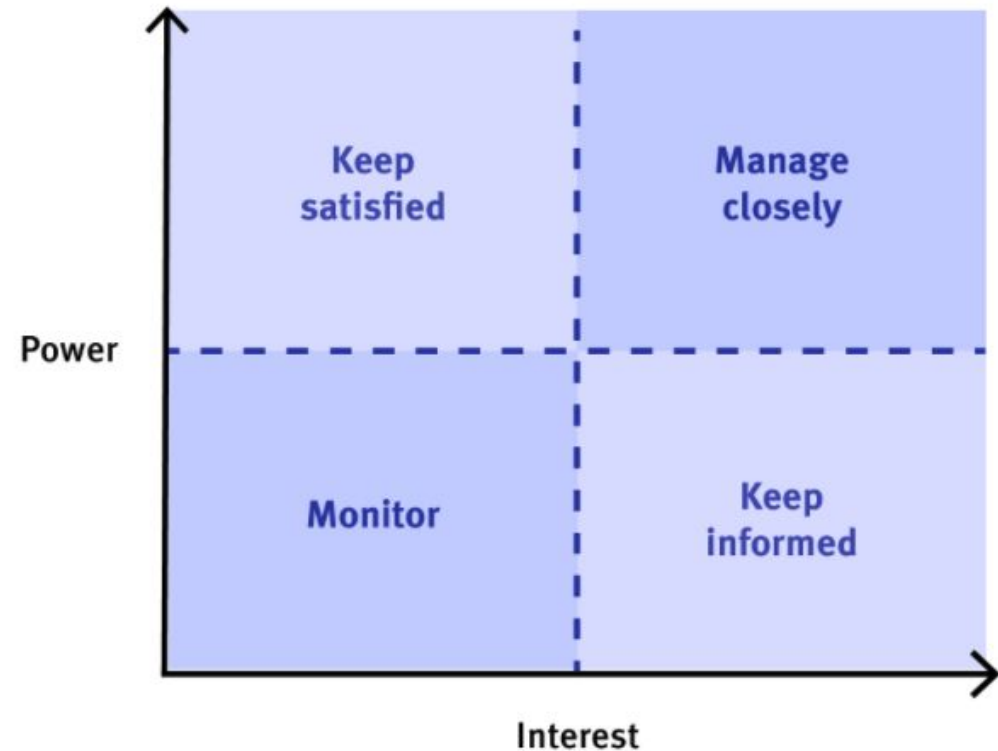
Group 2 - Hanford Workforce

Group 3 - Contractors

Group 4 - Public Interest Group

Group 5 - Washington State Dept. of Ecology

The Power-Interest Matrix



Template Mapping Document here:

<https://docs.google.com/document/d/1XoGjcHrbTErcSaueFQgjcUidZrx2p7TqKztwr06uzRc/edit>

Break out groups and report backs



What about? Did we get all these actors?

- Tribes
 - Yakama Nation
 - Confederated Tribes of the Umatilla Indian Reservation
 - Nez Perce Tribe
 - Wanapum (note no treaty rights)
- Workforce - Unions, Non-Union/Non-Management
- Contractors
- Interested Public
- Public Interest Groups/Watchdog Groups
- Local Government
- Future Generations
- Retired Workers
- Department of Energy - Headquarters, Local Offices
- Local Business Groups
- Government Agencies
- Hanford Advisory Board
- Washington State
 - Dept. of Health
 - Dept. of Ecology
 - Elected officials: Legislators, Governor, Attorney General
- Oregon State Department of Energy
- Academics
- Congress

Where do these stakeholders gather to debate Hanford's cleanup mission and make decisions?

- Hanford Advisory Board
- Natural Resources Damage Assessment
- Court
- Media
- Oregon Hanford Cleanup Board
- State Tribal Government Working Group
- Congressional hearings
- Public meetings (used to be more common)



The Hanford Advisory Board

- 32-Member Advisory Board that provides consensus advice and recommendations to the Tri-Party Agreement Agencies
- Meets in committee to learn about cleanup issues and forms issue manager teams to develop advice for consideration.
- Before advice can come before the full HAB, the committee has to come to consensus.



Various scenarios you could use to present this to students

- Mock HAB meeting to discuss a “piece of advice”
- Frank closed-door meeting of DOE officials to debate strategy
- Congressional debate over a budget and/or policy question
- Press conference with agency officials
- Environmental activist group meeting debating tactics
- Lobbyist trade group meeting
- Manhattan Project National Park - Hanford exhibits, how to tell the story/history of Hanford
- Writing op-eds from perspective of different stakeholders



Learning Objectives

I can describe the historical significance of the Hanford Site, identify the current and historical actors in what has happened there, explain why Hanford is a threat to the environment and human health today, and map the power and influence potential of stakeholders at this largest Superfund site in North America.



SURVEY

More
resources

Take
Action!



Liz Mattson | lizm@hanfordchallenge.org | 828-279-8445 | hanfordchallenge.org

Amy Hagopian | hagopian@uw.edu

Optional Affinity Spaces and Groups to Continue Conversation

2:45pm to 3:15 pm pst



1. **Affinity Spaces** are for individuals who identify with the group identity. Please only join groups if you share that identity. There will be a facilitator.
2. **Themed Discussions** are open to anyone and will be facilitated.
3. **Open Rooms** are for those who would like to lead their own debrief of the conference with friends/colleagues.

Thank you for completing the survey!



- Your feedback helps us reflect on our time together and helps NWT SJ plan for next year.
- Please take a few minutes now to fill out the workshop evaluation form by clicking “Feedback Survey” in the Sched workshop description or via this link: tinyurl.com/nwtsjeval