

## Teaching for Social Justice Conference | October 23, 2021 | Virtual Platform

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

*Living document, new resources will be added [click here](#) for the google doc.*

This is a handout for participants who seek to teach about Hanford, prepared by By Liz Mattson, <lizm@hanfordchallenge.org>

#### **Lesson Plan for Stakeholder Power Mapping**

The “teaser lesson” we provided today could be scaled up or down depending on the class time you have available. Suggestions are below including ways you could extend it. Hanford history, cleanup and work imagining the future is a wealth of material.

**Overview:** Plutonium for the bomb dropped on Nagasaki was produced at the Hanford nuclear reservation in Richland, WA. Uranium to produce the plutonium was extracted from the “Belgian Congo.” Until the Manhattan Project prohibited it, Indian tribal land use was protected under 1855 Treaties. The racially-segregated 51,000-person workforce was exposed to multiple hazards. Students, most of whom have never heard of the highly-contaminated Hanford site,.

**Learning Objective:** 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.

**NOTE:** Please contact Hanford Challenge if you are looking for a resource or want to brainstorm ideas. We want more of Hanford in the classroom, and are happy to help make that a reality. Liz Mattson, [lizm@hanfordchallenge.org](mailto:lizm@hanfordchallenge.org), 828-279-8445. We also try to coordinate virtual hour-long events with educators, so email Liz to be added to that specific “Teaching Hanford” list.

Content	Extend It
Set the Stage: Introduction to Hanford	Invite speakers to class. Contact Liz Mattson at <a href="mailto:lizm@hanfordchallenge.org">lizm@hanfordchallenge.org</a>

### Intro Activities

- **Word cloud** - what comes to mind when you think about WA state - are nuclear waste or weapons on the list?
- **Poll students:** What do you know about Hanford?

### Potential Assignments

#### **Readings**

- **Fall 2021 | VQR Article “[Cold War, Hot Mess](#)” by Lois Parshley.** Covers: Hanford background, worker exposures.
- **[What is Hanford?](#) Hanford Challenge website.**
- **2019 INLANDER article “[Hanford: The big, expensive, environmental dilemma plaguing the Pacific Northwest](#)” by Samantha Wohlfeil.** Covers: cleanup overview, challenges, why it is so complicated.
- **2020 Dec NW Public Broadcasting “[Past As Prologue: Remembering A Pasco Civil Rights Protest And Discrimination That Built Tri-Cities](#)”** by Robert Franklin.

#### **Videos**

- **2016 EarthFix Video: [Why is Hanford the Cold War’s Hot Mess?](#)** Covers: Hanford cleanup, issues with treating tank waste. (3mins)
- **2021 Sept “[Let’s Talk About Hanford, Hanford History Part II](#)” Presentation by historian [Robert Franklin](#).** Presentation starts at 15:35. 7 mins on African Americans and Hanford (timestamp: 25.28-32.40)
- **[2019 Voices of the Manhattan Project Interview with Jackie Peterson](#)**, curator of the NAAM exhibit “Black Life at Hanford.” Transcript of interview included.
- **[Oral History Videos](#), various** from Voices of the Manhattan Project.
- **Atomic Bomb Testing - [53 Years of Nuclear Testing in 14 Minutes: A Time Lapse Film](#)**

for connections/suggestions.

### **Take Action Opportunities**

- [Petition to Protect Hanford](#)
- [Workers Access to Compensation](#)
- More ideas [advocacy google doc](#).

<p>by Japanese Artist Isao Hashimoto</p>	
<p><b>Stakeholder Power/Interest Mapping</b></p> <ul style="list-style-type: none"> <li>● Large group brainstorm of stakeholder groups - could also be done in small groups</li> <li>● Divide class into small groups and assign a Hanford stakeholder perspective</li> <li>● Provide basic information about each group <i>or</i> have students research and create their own stakeholder fact sheets</li> <li>● Students generate list of Hanford stakeholders</li> <li>● Students map stakeholders into the Power/Interest matrix from their assigned perspective. <a href="#">Template Power/Interest matrix</a>.</li> <li>● Students present their matrix to the class.</li> <li>● Large group discussion of who is missing.</li> <li>● Potential large group activity - power/interest mapping</li> <li>● Community Toolbox out of the University of Kansas has lots of great exercises for community organizing, including a lesson on <a href="#">stakeholder mapping</a>.</li> </ul> <p><b>Resources: Readings, Videos</b></p> <p><b>Readings</b></p> <ul style="list-style-type: none"> <li>● <b>Hanford Advisory Board <a href="#">convening report</a></b></li> <li>● <b><a href="#">Particles on the Wall</a></b>, art collection with extensive website. Exhibit has been on display around moved around the region. <i>“Particles on the Wall is a multi-disciplinary exhibit that explores elements of the nuclear age and in particular the world wide implications of the Hanford WA nuclear site. The exhibit strives to display and unite core pieces in four disciplines: visual, literary, science, and history/memorabilia to explore the nuclear age.”</i></li> </ul> <p><b>Videos</b></p> <ul style="list-style-type: none"> <li>● <b><a href="#">2016 Culture of Silence at Hanford</a></b></li> </ul>	<p><b>Additional assignments from perspective of a stakeholder group:</b></p> <ul style="list-style-type: none"> <li>● Op-ed on a Hanford cleanup topic. (future land use, building new waste tanks, grouting Hanford waste)</li> <li>● Creative writing to “the future”</li> <li>● Mock scenario debating an issue (ex: public meeting comments: How should the Hanford site be used when cleanup is complete, define complete; present exhibit design proposals for the <a href="#">Manhattan Project National Historic Park</a>)</li> <li>● Trade student-created stakeholder fact sheets as last minute twist and have students work from that information in a mock scenario.</li> </ul> <p><b>Invite speakers to class to talk from a certain perspective.</b> Contact Liz Mattson at <a href="mailto:lizm@hanfordchallenge.org">lizm@hanfordchallenge.org</a> for connections/suggestions.</p> <ul style="list-style-type: none"> <li>● <i>Examples:</i> whistleblowers, unionized workers, non-unionized workers, injured workers, State of WA, EPA, Yakama Nation Environmental Restoration Waste Management (ERWM) office, Nez Perce ERWM office, Umatilla ERWM office, Hanford scholars, Hanford Advisory Board members, TRIDEC - Tri-Cities Development Council, Oregon Department of Energy, <a href="#">Downwinders</a>, local agriculture)</li> </ul> <p><b>Interview someone who is connected with Hanford cleanup.</b></p> <p><b>Podcast Assignment</b> - create a podcast to teach people about Hanford, explore</p>

<p><a href="#">Nuclear Site</a>   <a href="#">EarthFix Covers</a>: worker exposures to toxic chemicals (10min)</p> <ul style="list-style-type: none"> <li>● <a href="#">2017 Hanford's Dirty Secrets</a>   <a href="#">King5 news Covers</a>: cleaning up Hanford tank waste, leaking tank, whistleblower Mike Geffre (44min) (all of Su</li> </ul>	<p>a topic related to nuclear waste cleanup. <a href="#">Examples</a> from WA Physicians for Social Responsibility.</p> <p><b>Art Project</b> (see <a href="#">Particles on the Wall</a> website for inspiration)</p> <p><a href="#">Attend a Hanford-Related Event</a> and write a reflection paper. Visit Hanford Challenge's events page or get in touch about upcoming opportunities <a href="mailto:lizm@hanfordchallenge.org">lizm@hanfordchallenge.org</a></p>
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## Extra Resources

### Websites for Agencies, Stakeholders, Tribes Involved with Hanford

- [U.S. Department of Energy](#)
- [WA State Department of Ecology](#)
- [EPA Region 10 office \(Hanford history, \)](#)
- [Oregon Department of Energy](#)
- [WRPS - Washington River Protection Solutions](#) (tank farms contractor)
- [Hanford Advisory Board](#) - any info they provide, it's consensus advice . [Board values white paper.](#)
- [Hanford Challenge](#)
- [Columbia Riverkeeper](#)
- [Yakama Nation](#)
- [Nez Perce Tribe](#)
- [Confederated Tribes of the Umatilla Indian Reservation](#) (CTUIR)
- [The Wanapum](#)
- [Energy Communities Alliance](#)
- [Tri-Cities Development Council](#)
- [Hanford Communities](#)
- Labs, [PNNL](#) - models
- **Unions:** [Local 598 Plumbers and Pipefitters](#), [Hanford Atomic Metal Trades \(HAMTC\)](#), [Washington Building Trades](#)

### **Public Interest Group Websites**

- Columbia Riverkeeper website Hanford [resources](#).
- Hanford Challenge: [www.hanfordchallenge.org](http://www.hanfordchallenge.org)
- [Heart of America Northwest](#)

## **Books/Reports**

- [Plutopia](#), by [Kate Brown](#)
  - “While many transnational histories of the nuclear arms race have been written, Kate Brown provides the first definitive account of the great plutonium disasters of the United States and the Soviet Union. In *Plutopia*, Brown draws on official records and dozens of interviews to tell the extraordinary stories of Richland, Washington and Ozersk, Russia-the first two cities in the world to produce plutonium.”
- [Plume](#) by Kathleen Flenniken - Book of poetry
- [Crisis of Conscience: Whistleblowing in an Age of Fraud](#) (Chapter 5) by Tom Mueller
- [Cold War, Hot Mess](#) by Lois Parshley
- [The Hanford Whistleblowers](#) by Ephraim Payne and Ray Ring
- [Hanford Cleanup: The First 25 Years](#) by the Oregon Department of Energy
- **Columbia Riverkeeper report: [Competing Visions for the Future of Cleanup](#)**
- [On the Home Front](#) by Michelle Gerber
- [The Apocalypse Factory: Plutonium and the Making of the Atomic Bomb](#) by Steve Olsen
- Working on the Bomb: An Oral History of WWII Hanford by S.L. Sanger
- [The Fifth Risk](#) by Michael Lewis
- Hanford: A Conversation about Nuclear Waste and Cleanup by Roy E. Gephart
- [The Language of Conservation](#) by The Nature Conservancy

## **Cleanup Documents**

- [The Tri-Party Agreement](#) - Legally enforceable document that guides cleanup.
- [The Hanford Site Administrative Record](#) - where documents related to cleanup are posted

## **Articles**

- Oct 2019 INLANDER article [“Hanford: The big, expensive, environmental dilemma plaguing the Pacific Northwest”](#) by Samantha Wohlfeil.
- Fall 2021 | VQR Article [“Cold War, Hot Mess”](#) by Lois Parshley. Covers: Hanford background, worker exposures.

## **Videos**

- [King 5 videos on Hanford](#) - investigative pieces by reporter Susannah Frame
- [Hanford’s Dirty Secrets](#) | King5 News (first in the series by reporter Susannah Frame)
- [America’s Chernobyl: Inside the Most Toxic Place in the Nation](#) | Today Show
- [A Culture of Silence at the Hanford Nuclear Site](#) | Earthfix

- [Arid Lands](#) | Grant Aaker & Josh Wallaert (Documentary film)
- [Nuclear Waste](#) | Last Week Tonight with John Oliver
- Into Eternity | Michael Madsen ([trailer](#)) Deals with themes of how to deal with nuclear waste disposal.
  - Into Eternity is a feature documentary film directed by Danish director Michael Madsen, released in 2010. It follows the construction of the Onkalo waste repository at the Olkiluoto Nuclear Power Plant on the island of Olkiluoto, Finland.
- [Nuclear Lands: A Story of Plutonium](#) | Kenichi Watanabe (documentary)
  - Nuclear Lands examines three areas in the world whose landscapes are dominated by nuclear sites: the US, France and Japan. The film traces the story from the birth of plutonium production in the 40's in Hanford, USA to the nuclear reprocessing plant in La Hague, France and tells of the Rokkasho nuclear site in Japan which is actually built on a seismic fault line.
- [Columbia Riverkeeper videos](#), various recordings from past events.
- EPA - Environmental Justice for Tribes and Indigenous People, [video series, recorded meetings/presentations](#)

### **Peer Reviewed Articles on Hanford**

- Cram, Shannon. "Becoming Jane: The making and unmaking of Hanford's nuclear body." *Environment and Planning D: Society and Space* 33.5 (2015): 796-812.
- Cram, Shannon. "Wild and scenic wasteland: Conservation politics in the nuclear wilderness." *Environmental humanities* 7.1 (2016): 89-105.
- Cram, Shannon. "Living in dose: Nuclear work and the politics of permissible exposure." *Public Culture* 28.3 (80) (2016): 519-539.
- Cram, Shannon. "Escaping S-102: Waste, Illness, and the Politics of Not Knowing." *The International Journal of Science in Society* 2.1 (2011): 243-252.
- Krupar, Shiloh R. "Alien still life: Distilling the toxic logics of the Rocky Flats National Wildlife Refuge." *Environment and Planning D: Society and Space* 29.2 (2011): 268-290.
- Kinsella, William J. "Nuclear boundaries: Material and discursive containment at the Hanford nuclear reservation." *Science as Culture* 10.2 (2001): 163-194.
- Kinsella, William J., and Jay Mullen. "Becoming Hanford downwinders: Producing community and challenging discursive containment." *Nuclear legacies: Communication, controversy, and the US nuclear weapons complex* (2007): 73-107.

- Kinsella, William J. "Environments, risks, and the limits of representation: Examples from nuclear energy and some implications of Fukushima." *Environmental Communication: A Journal of Nature and Culture* 6.2 (2012): 251-259.
- Richards, Linda Marie. "The B Reactor National Historic Landmark. The Hanford Site Manhattan Project National Historical Park, Hanford, WA." (2016): 305-317.
- Findlay, John M. "The nuclear West: national programs and regional continuity since 1942." *J. Land Resources & Envntl. L.* 24 (2004): 1.
- Jain, S. Lochlann. Chapter 8: "Fallout: Minuets in the Key of Fear" in *Malignant: How cancer becomes us*. Univ of California Press, 2013.
- Jain, S. Lochlann, and Jackie Stacey. "On writing about illness: a dialogue with S. Lochlann Jain and Jackie Stacey on cancer, STS, and cultural studies." *Catalyst: Feminism, Theory, Technoscience* 1.1 (2015): 1-31.
- Mercer, Doug. "Future-histories of Hanford: the material and semiotic production of a landscape." *cultural geographies* 9.1 (2002): 35-67.
- Bohnee, Gabriel, et al. "Nez Perce involvement with solving environmental problems: history, perspectives, treaty rights, and obligations." *Stakeholders and scientists*. Springer, New York, NY, 2011. 149-184.
- Masco, Joseph. "Mutant ecologies: radioactive life in post-Cold War New Mexico." *Cultural Anthropology* 19.4 (2004): 517-550.