

Fossil Fuel Transportation in the Ceded Lands of the Yakama Nation

*Brady Kent,
YN Environmental Coordinator
November 6, 2014
Anacortes, Washington*

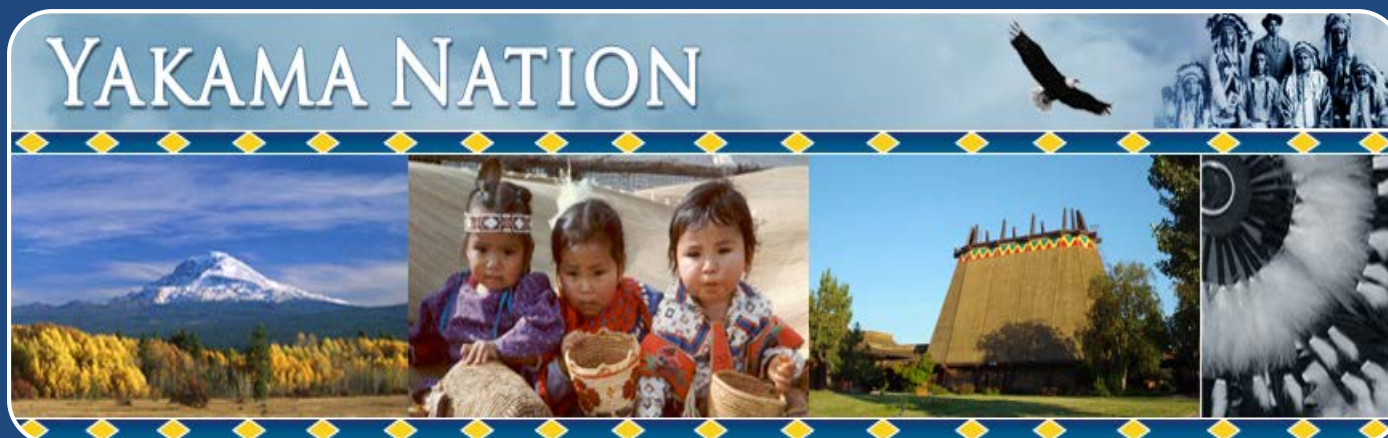


Chip Smith
Army Corps of Engineers

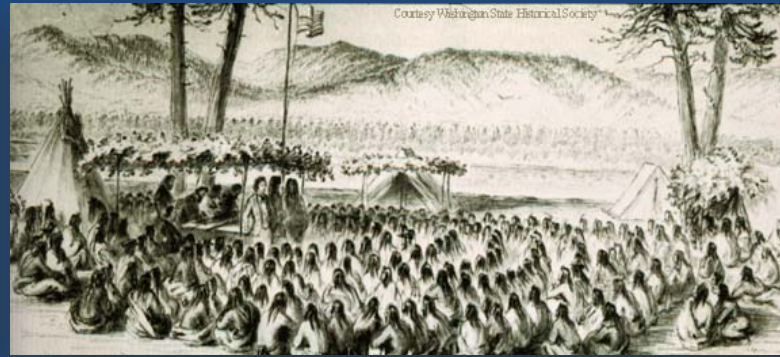


The Confederated Tribes and Bands of the Yakama Nation

- The Yakama Nation is a Federally Recognized Sovereign Government pursuant to the Treaty of 1855 (12 stat. 951) with the United States of America.
 - Ratified by Congress; U.S. Constitution, Article 6
 - Rights, Privileges and Guarantees



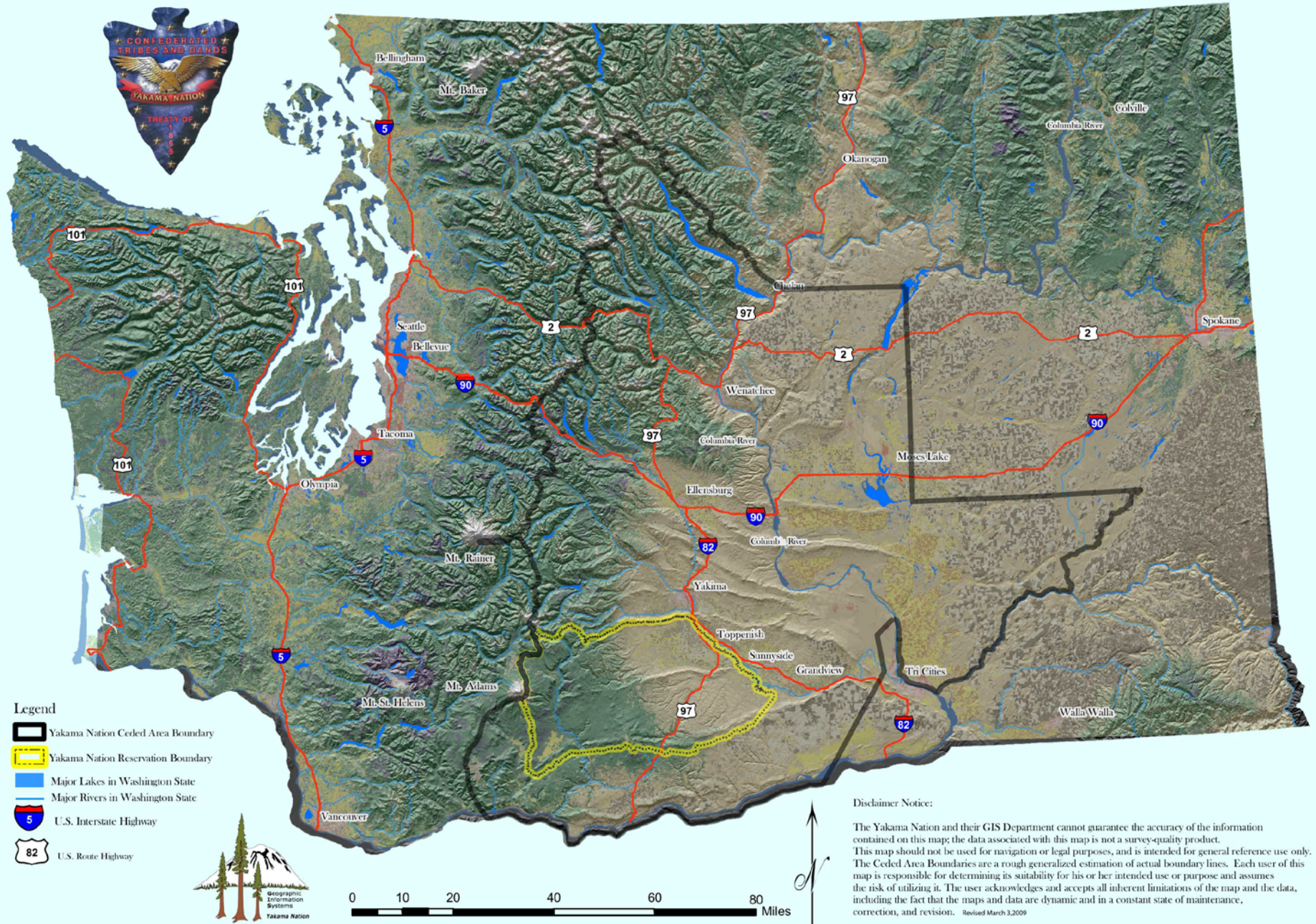
The Yakama Treaty of 1855: Article III



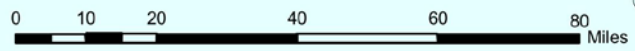
- The Reservation, Ceded Lands, and Usual & Accustomed Areas

Since time immemorial, the health, spirit, and cultures of the Yakama have been sustained by the water, salmon, game, roots, and berries of our homeland— our sacred First Foods.

Reservation & Ceded Lands of the Yakama Nation



- Legend**
- Yakama Nation Ceded Area Boundary
 - Yakama Nation Reservation Boundary
 - Major Lakes in Washington State
 - Major Rivers in Washington State
 - U.S. Interstate Highway
 - U.S. Route Highway



Disclaimer Notice:

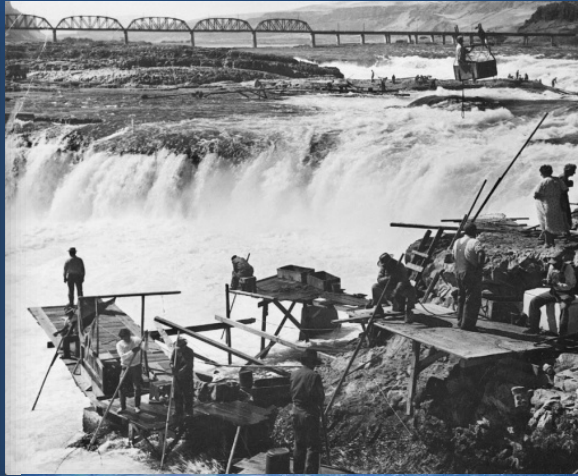
The Yakama Nation and their GIS Department cannot guarantee the accuracy of the information contained on this map; the data associated with this map is not a survey-quality product. This map should not be used for navigation or legal purposes, and is intended for general reference use only. The Ceded Area Boundaries are a rough generalized estimation of actual boundary lines. Each user of this map is responsible for determining its suitability for his or her intended use or purpose and assumes the risk of utilizing it. The user acknowledges and accepts all inherent limitations of the map and the data, including the fact that the maps and data are dynamic and in a constant state of maintenance, correction, and revision. Revised March 3, 2009

The Yakama People have been Impacted by a History of Energy Development

Hanford



Hydro-Electric



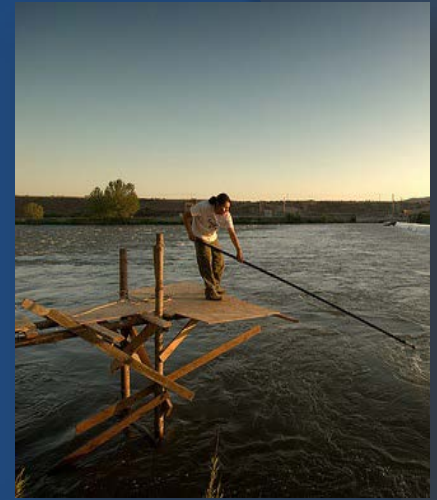
Wind



Impacts to Our Reserved Resources

○ Impacts to Our Natural & Cultural Resources

- Loss and fragmentation of access
- Known and unknown cumulative effects



○ Significance of Resources

- Our Natural resources are our Cultural Resources
- We have a responsibility to protect them for generations yet born.
- We continue to hunt, fish and gather for subsistence and ceremonial purposes

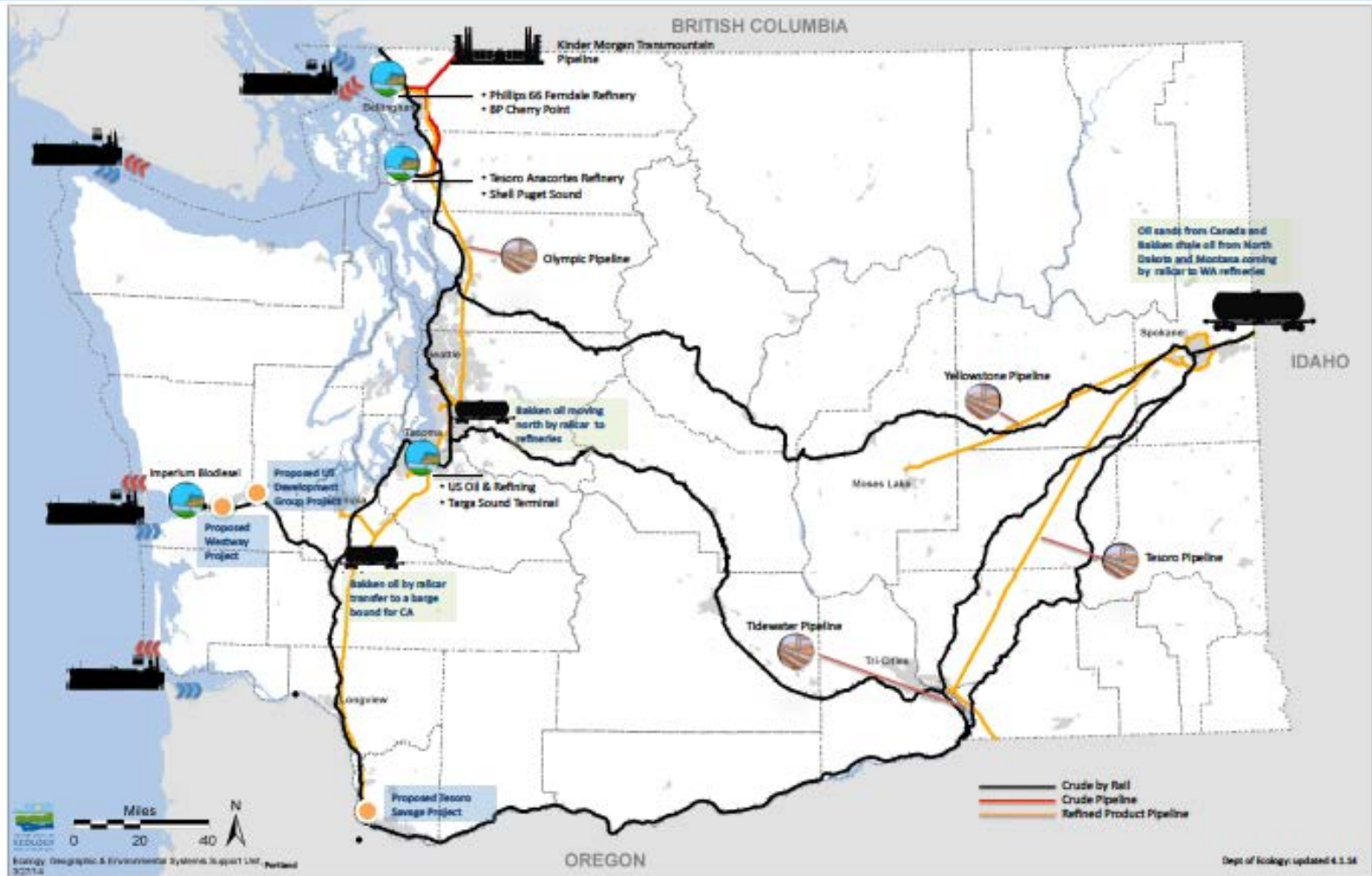
○ Significance of Archaeological Resources

- Sacred and sensitive resources
- Part of a living Culture; Irreplaceable
- Protected by Treaty, State and Federal Law



The Degradation and Injustice to Our Land and Resources Continues with Fossil Fuel Transportation

CONCEPTUAL MODEL OF OIL MOVEMENT IN & OUT OF WASHINGTON STATE



Coal Transportation

- Not Very Many Research Projects or Studies Conducted
- EPA 1978 – Environmental Assessment of Coal Transportation
- Three Current Studies – Preliminary
 - ❖ USGS – Mobility/Accumulation
 - ❖ NOAA – Fish Embryos
 - ❖ UW – Air Quality



Coal Transportation

- Need to Quantify & Discuss the Cumulative Impacts
- From the Origins to the End
 - Uncovered, Open Top
 - BNSF “500-2000 lbs lost per car”
 - Typical 125 car train up to 250,000 lbs LOST
 - Powder River Basin Coal is Softer, Breaks Down Faster
- Chemical Surfactants are Applied to Minimize Dust
 - No Spray in 100% Effective
 - Surfactants may threaten Human Health
 - Also Contaminate Surface Water, Ground Water, and Soil
 - Pollute the Air
 - Harm Flora and Fauna



Coal Transportation

- Contains Harmful Contaminants
- Heavy Metals
 - Arsenic, Lead, Mercury, Chromium, Nickel and Selenium
- PAHs (Polycyclic Aromatic Hydrocarbons)
 - Benzopyrene and 6 others are Carcinogens
- Extras of Transporting
 - Diesel Exhaust
 - Global CO₂
 - Air Pollution from Asia



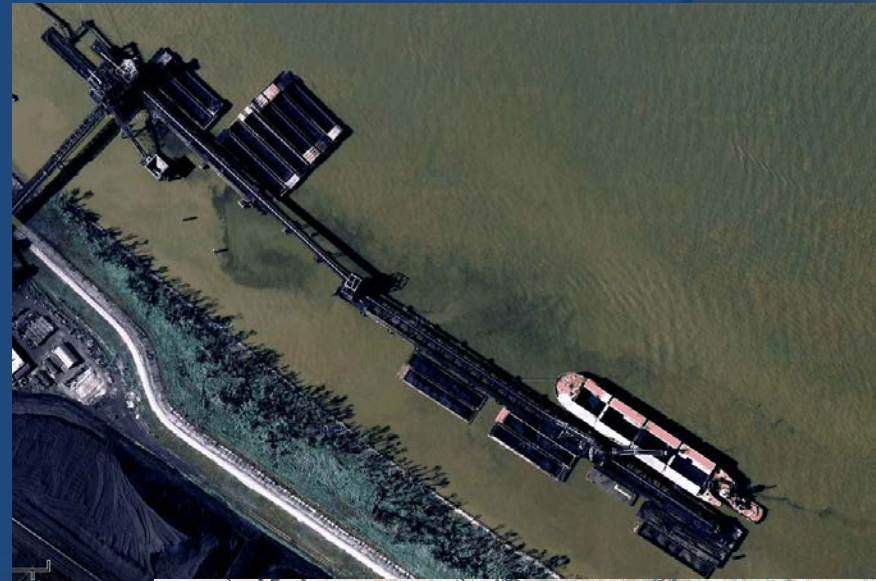
Coal Transportation

- Coal Dust Harms Aquatic Life
- Salmon and Steelhead runs through the Columbia River Basin
 - Fish Habitat & Growth
 - \$\$ Spent to Restore
- Filter Feeders: Mussels, Eels & Oysters
 - Bioavailable Toxins Enter Easily
- Rain Run-Off, Storm Water and Waste Water
 - Contains: Copper, Aluminum, Iron and Nickel
 - Highly Acidic
 - Devastate Delicate Aquatic Chemistry



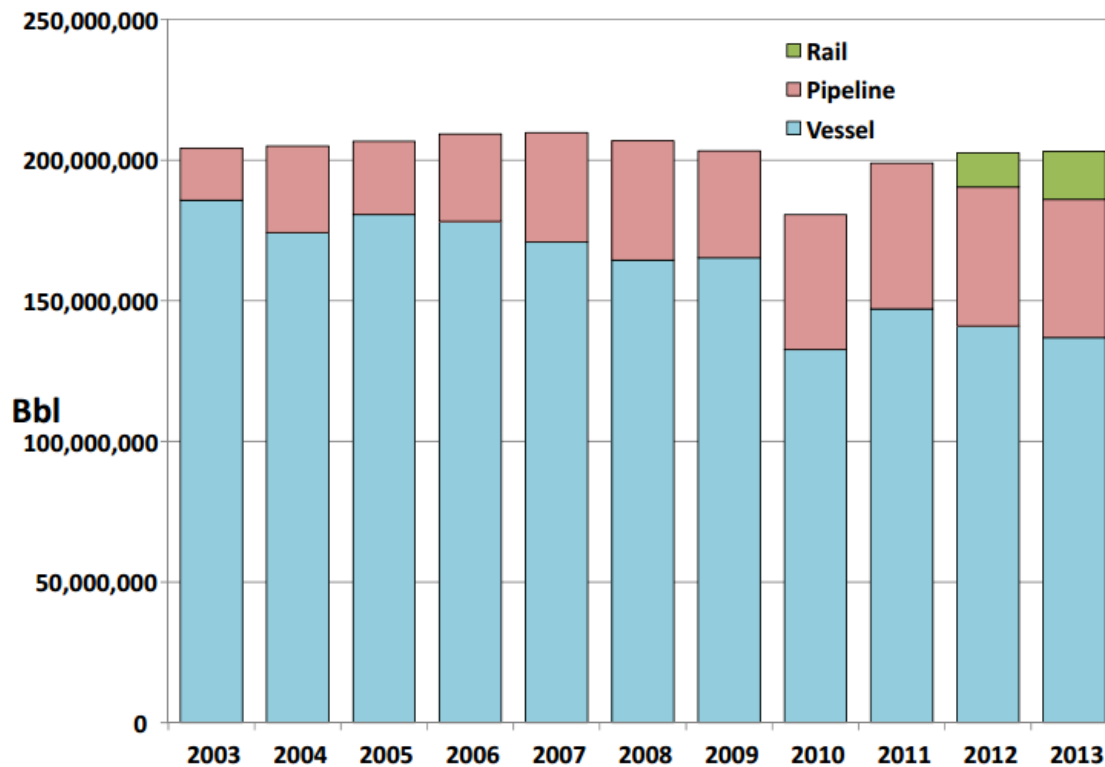
When is it Going to Stop?

- The Transport of Oil by Rail is New and on the Rise



Washington Marine and Rail Oil Transport Study

Oil imports to WA by Mode (2003-2013)



19 Trains a Week

30,000+
Gallons per Car

100+ Cars per
Unit Train

3 Million+ Gallons
per Train

~60 Million
Gallons per Week

The Yakama Nation is yet again bearing the costs of energy development.

Bakken Crude

vs

Tar Sands Oil

- Lighter, Sweet Crude – Floats on Water
- Higher concentrations of light end petroleum hydrocarbons, PAHs (Methane, Propane, Ethane and Butane)
- Highly Flammable and More Volatile than other Crude Oils
- May Contain Hydrogen Sulfide in High Concentrations
- Record Volumes moving by Rail

- A combination of clay, sand, water, and heavy black viscous oil called *bitumen*.
- Dense and Extremely Viscous – Sinks in Water
- **Bituminous sands**, a type of Unconventional Petroleum Deposit
- Must be diluted with a cocktail of other petroleum compounds before it is able to flow through pumps or pipelines for transport

The Yakama Nation is yet again bearing the costs of energy development.

Aliceville, AL

and

Kalamazoo, MI



Protecting our Treaty Reserved Rights and Resources

- In the Yakama Language, there is no word for “Mitigation” – No word to describe repairing the Lands and Waters that have been Degraded or Destroyed.



Mesa, WA – 2012



Protecting our Treaty Reserved Rights and Resources

- The Yakama Nation has demonstrated success in protecting Treaty resources through litigation:
 - US v Oregon
 - US v Washington
- The Yakama Nation is prepared to take all necessary measures to protect its resources guaranteed by the Treaty of 1855 (12 Stat. 951).





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- Aneja, Viney, “Characterization of Particulate Matter (PM10) in Roda, Virginia,” 2008.
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- Bounds, William and Karen Johannesson, “Arsenic Additions to Soils from Airborne Coal Dust Originating at a Major Coal Shipping Terminal,” 21 June 2007, *Water, Air & Soil Pollution*, Volume 185
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*Philip Rigdon, Deputy Director
YN Department of Natural Resources
(509) 865-5121 x 4655
prigdon@yakama.com*

*Brady Kent, Environmental Coordinator
YN Environmental Management
(509) 865-5121 x 6074
bkent@yakama.com*