

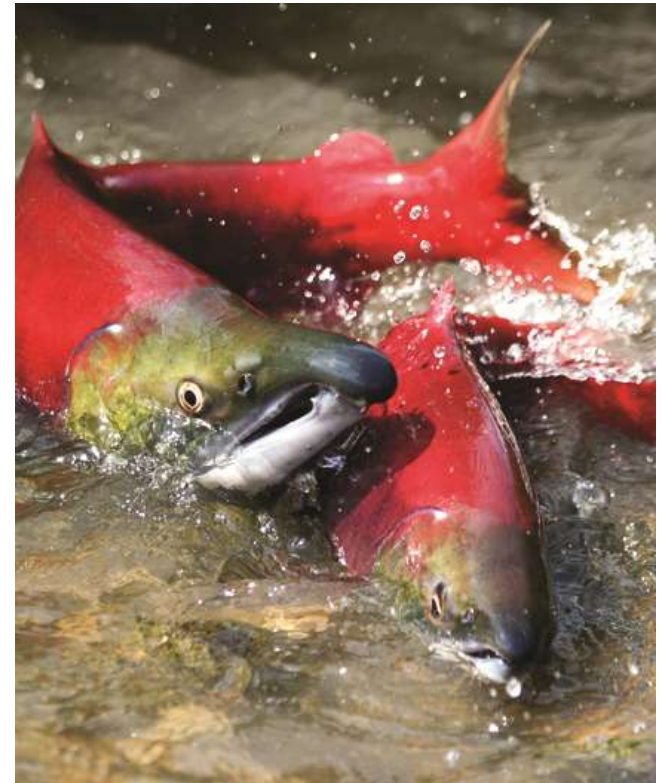
# Columbia River

Honor. Protect. Restore.



# Presentation Outline

- **About Me**
- **Yakama Nation Background**
- **Issue: Columbia River Toxics**
- **Columbia River Site Prioritization**
- **Summary**



# About Me

- **Name: McClure Tosch**
- **B.S. Entomology (2007) and M.S. Environmental Science (2009) from the University of Idaho**
- **Remediation and Restoration Specialist for the Yakama Nation Since 2010**
- **Project Manager for Holden Mine, Astoria Marine Construction Company, and Goldendale Aluminum Cleanup Sites**



# Yakama Nation

## Quick Facts:

- Treaty of 1855
- 10,361 tribal members
- 14 tribal council members
- 1.3 million acre reservation

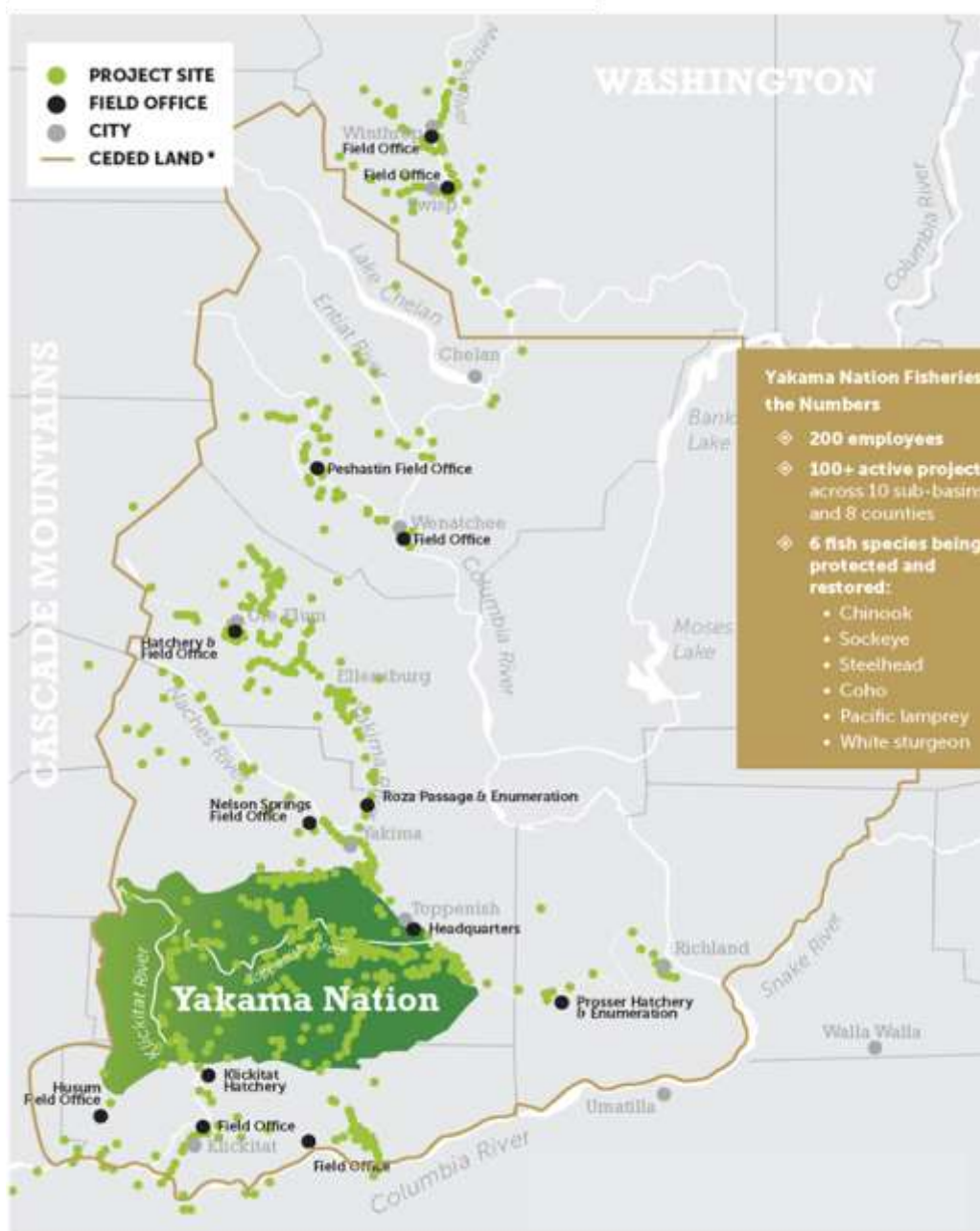
## Core businesses:

- Yakama Nation Cultural Center
- Yakama Nation Forest Products
- Yakama Nation Land Enterprise
- Yakama Nation Legends Casino
- Yakama Nation Museum
- Yakama Nation Resort RV Park
- Yakama Power
- Yakama Transit



## *Núsux*

Since time immemorial, the Columbia River Basin has given its salmon, to sustain the Yakama people; in turn, the Yakama have honored and protected the salmon.

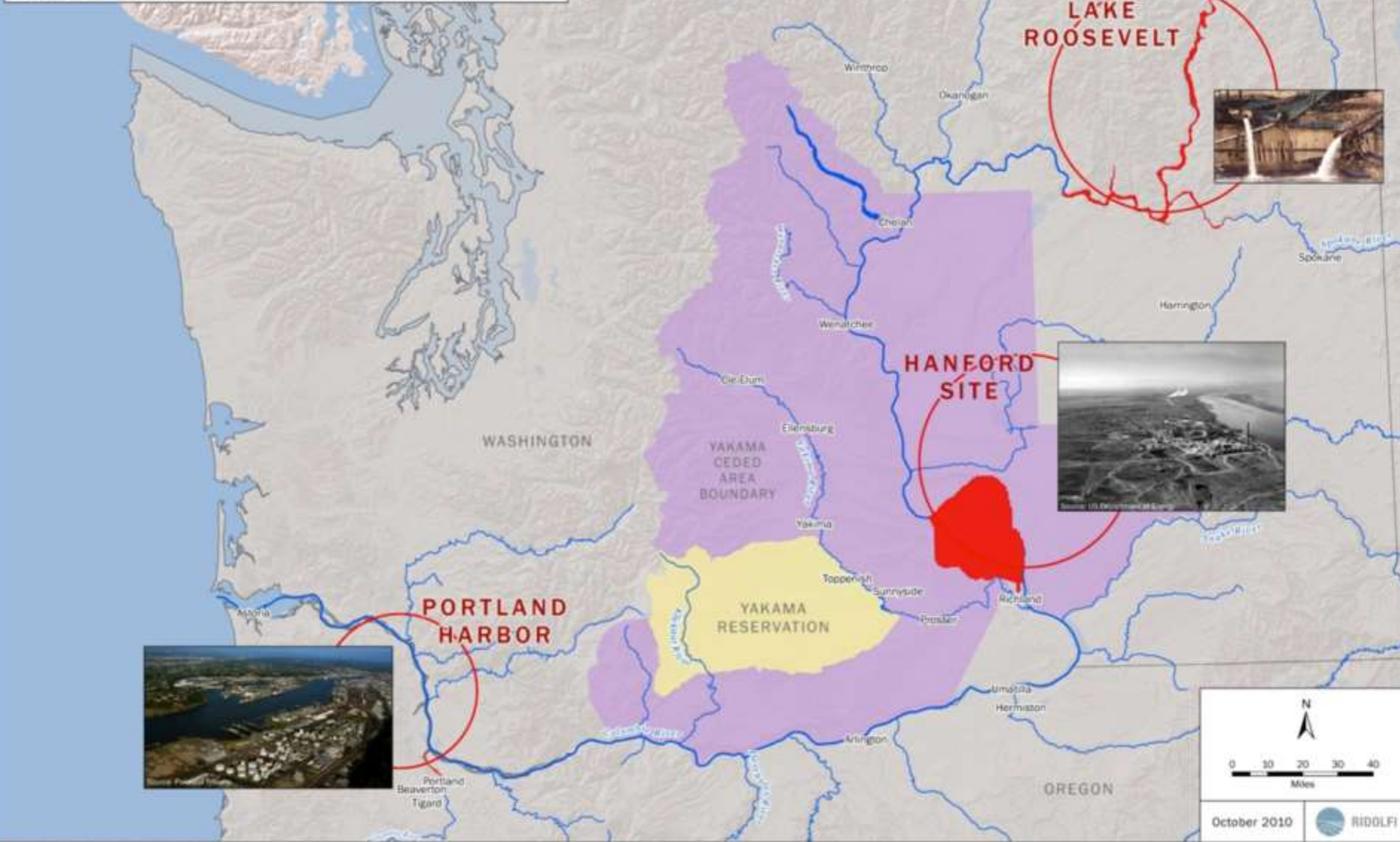




# Issue: Columbia River Toxics

- Our goal is to have a healthy Columbia River and to restore salmon runs so that there will be fish to sustain the Yakama now and in the future.
- Studies indicate that juvenile salmon have harmful concentrations of contaminants in their tissue
  - Reduced resistance to disease
  - Increased developmental problems
  - Increased mortality
- The Columbia River will soon have over 70% of its stream length in the U.S. associated with a fish consumption advisory for resident fish.

**Yakama Nation Bracketed by Three of the Largest Superfund Sites in the Pacific Northwest**





# Columbia River Site Prioritization: Objective

- “Identify hazardous waste sites impacting the Tribe’s aquatic resources along the Columbia River and its tributaries.”
- Task 1: “Site Identification Master List and Map”
- Task 2: “Screening and Prioritization”

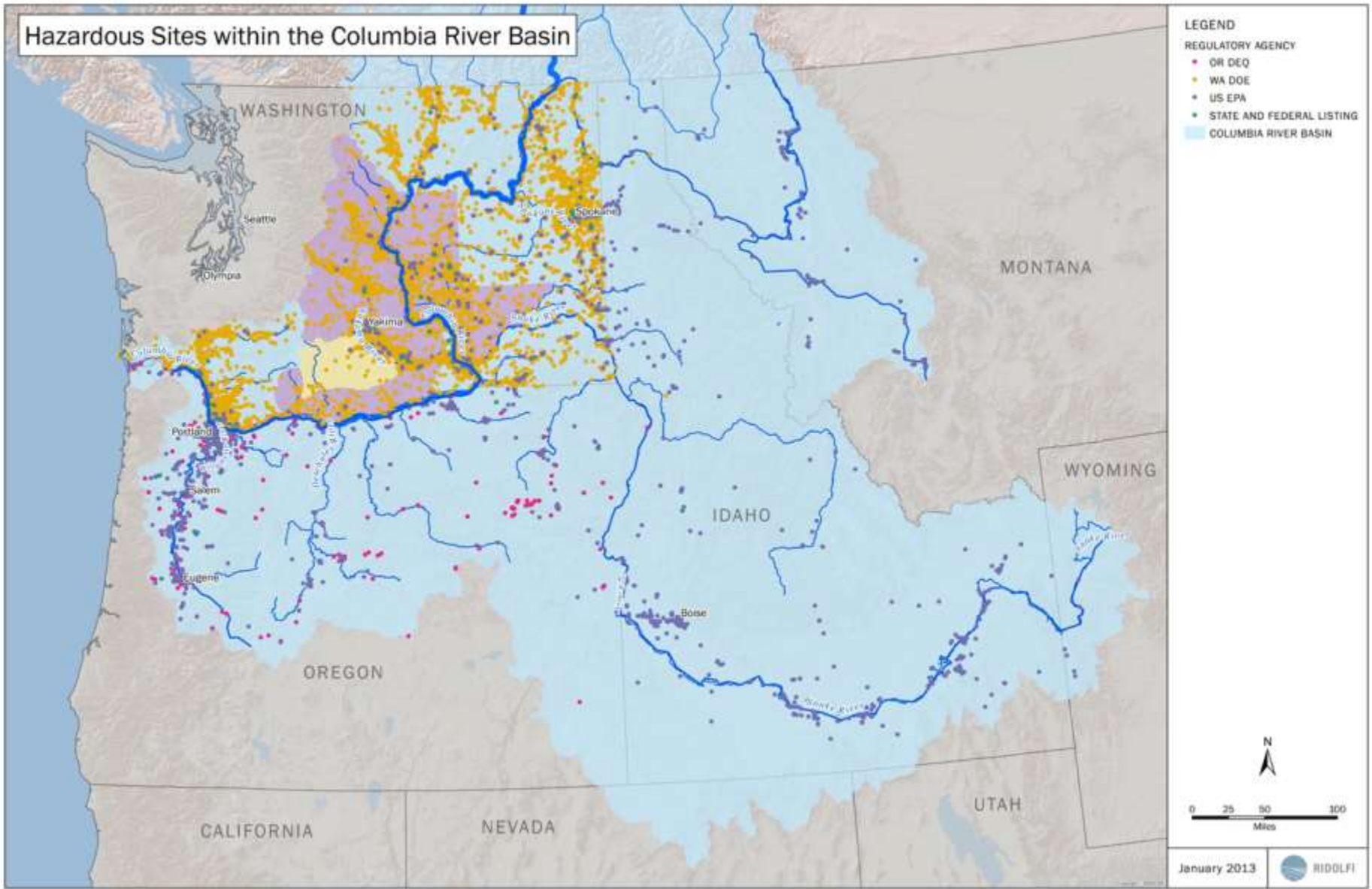




# Columbia River Site Prioritization: Data collection

- Federal-Level: EPA Facility Registry System (FRS)
- State-Level: WA Ecology, OR Dept. of Environmental Quality
- Tribal: Yakama Nation TRP Sites of Interest dataset.
- Merging databases and addressing conflation issues.
- 114,000 individual sites identified

# Hazardous Sites within the Columbia River Basin



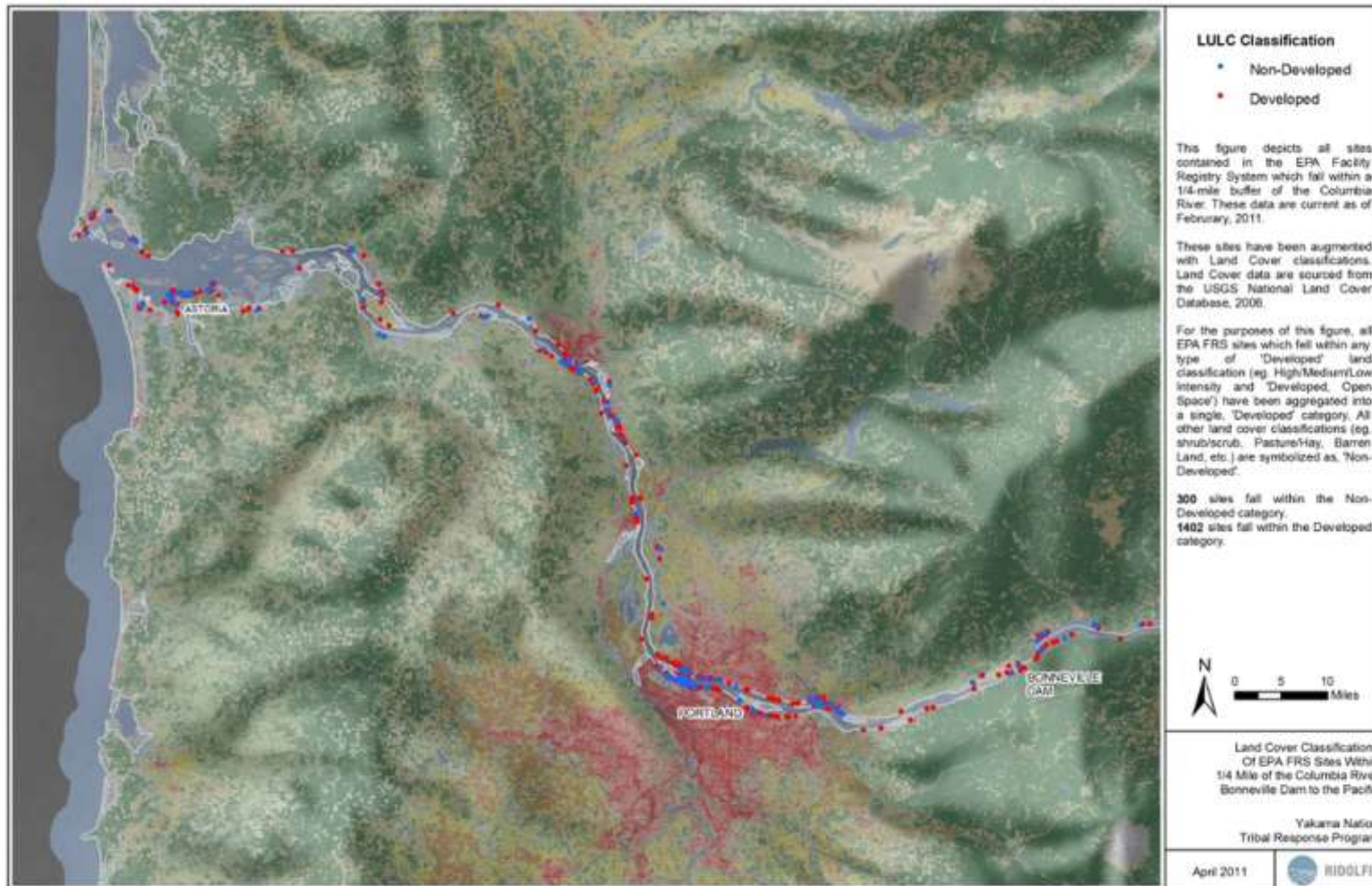
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# Columbia River Site Prioritization: Pre-Screening

- Occur within a half-mile of the Columbia River, downstream of Bonneville Dam.
- Occur within select land use types, focusing on un-developed areas.
- Proximity to existing restoration projects.

# Lower Columbia Pre-Screen





# Columbia River Site Prioritization: Criteria

- Include sites which are members of specific Federal- and State-level programs.
- Exclude sites which are members of the Superfund program, or associated with Portland Harbor.
- Include sites previously tracked by Yakama Nation TRP in the Lower Columbia River.



# Columbia River Site Prioritization: Process

- Gather site-specific background information using Federal- and State- agency online tools. Examples Include:
  - EPA Enforcement and Compliance History Online (ECHO) database
  - EPA's Environmental Interest Profile Online Tool.
  - WA Ecology's Integrated Site Information System (ISIS)
  - ORDEQ's Environmental Cleanup Site Information (ECSI) Database
- Conduct Quality Control (QC).
- Meet with State and Federal site managers to check for omissions.

# Lower Columbia River – Site Background Information

ORDEQ Webpage for Zidell Waterfront Property:  
<http://www.deq.state.or.us/air/ru/ruw/Zidell/index.htm>

From the project webpage: The Zidell Waterfront Project site is located at 3121 SW Moody Avenue, Portland OR. The Zidell Company operated a ship dismantling, ship building, welding, and other miscellaneous industrial businesses at the site from 1926 to the mid 1980s. Barge building operations began in 1968 and are currently ongoing. The cleanup investigation has been completed at the site and cleanup approach selected. The Record of Decision was issued in June 2005. The cleanup at the site will include soil excavation, sediment dredging and capping, bank stabilization, and site capping. The work will be conducted in three phases: the first phase consists of completion of permitting and the remedial design, the second phase consists of site cleanup on the north end of the site and in-water sediments, and phase three consists of cleanup on the southern end of the site.

The Zidell Waterfront Property Site is contaminated with metals, petroleum hydrocarbons including diesel, motor oil and lube oil, polycyclic aromatic hydrocarbons, and PCBs. Additionally, pesticides and herbicides have been detected on-site, but are thought to originate from the adjacent Schnitzler site.

<http://www.deq.state.or.us/air/ECR/ECRdetail.asp?seqnr=582>. The indicated manner and time of releases at the site include, "spills to surface soils and river, past operating practices, open burning, and uncontrolled filling from the 1940s through the 1980s".

In addition to the site's membership in ORDEQs program databases, the site is an active member of the Conditional Exempt Small Quantity Generators (CESQG) program, tracked under EPA's Resource Conservation and Recovery Act (RCRA) Information System ([http://inspub.epa.gov/invinfo/query\\_dtl\\_disp\\_program\\_facility?o\\_registry\\_id=110004781772](http://inspub.epa.gov/invinfo/query_dtl_disp_program_facility?o_registry_id=110004781772)).

Astoria Marine Construction Company (110043437769)



Image Source: ORDEQ Facility Profiler 2.0

In 2009, Ecology entered into a legal agreement (Agreed Order) with Union Ridge Investment Company to begin investigating contamination found on and around the property. An investigation to determine the nature and extent of contamination is underway. Once this is complete, a Feasibility Study will examine possible cleanup alternatives.



Above: Park Laundry property, undated (<http://www.ecy.wa.gov/pubs/0909155.pdf>)

Chinook Ventures (Former Reynolds Aluminum Plant)

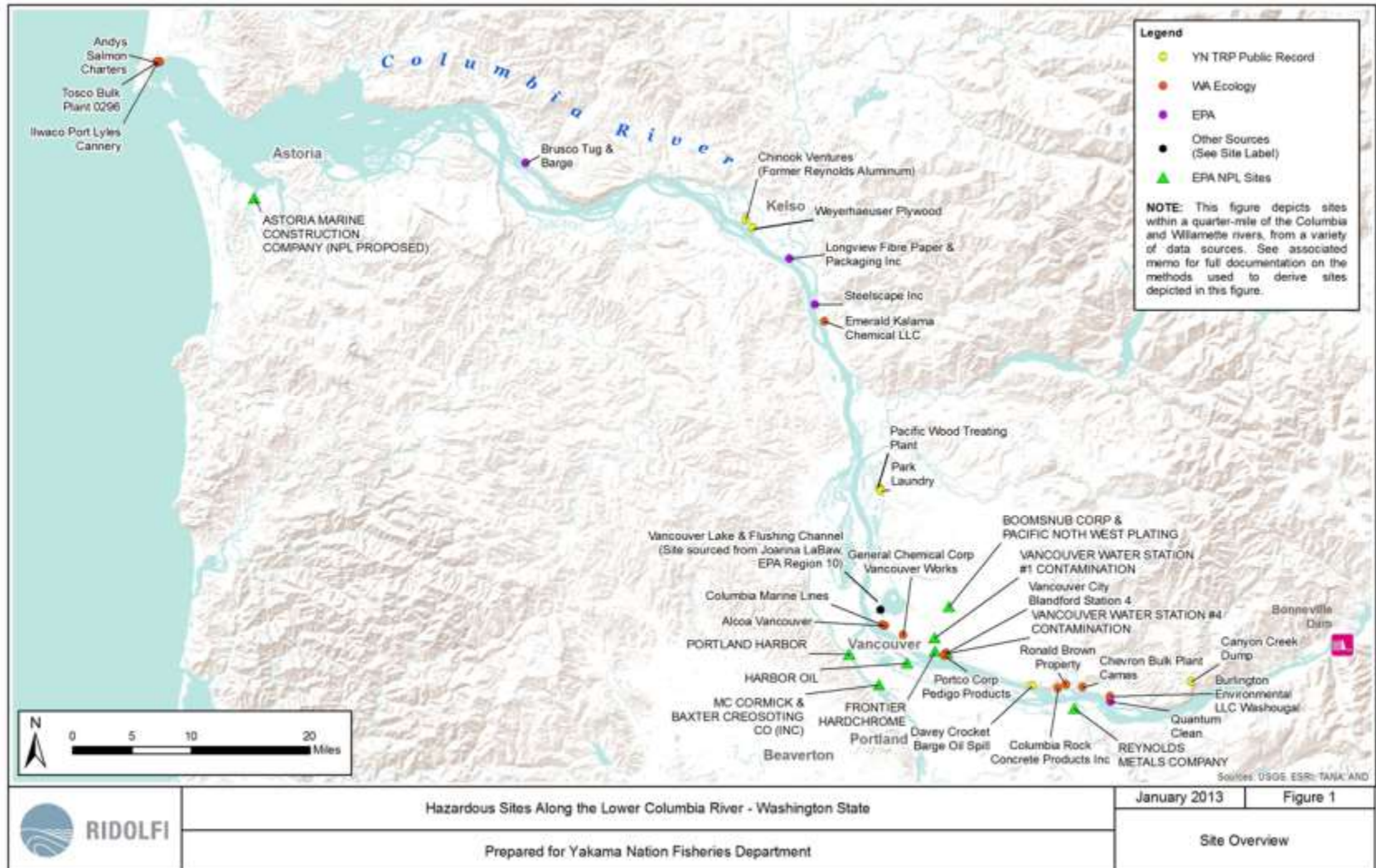
Source: <https://fortress.wa.gov/ecy/lsp/CleanupSiteDocuments.aspx?csid=4863>

The old Reynolds Aluminum smelting facility is located at 4029 Industrial Way on the north bank of the Columbia River in Cowlitz County, near Longview, Washington. The site covers approximately 416 acres with approximately 100 acres of developed area. The southern portion of the facility (South Plant) began aluminum smelting and casting operations during WWII in 1941. The larger North Plant began smelting and casting in 1967. The Longview facility was shut down in March of 2003.

The current owner, Chinook Ventures, LLC has removed the smelting apparatus in each potroom and converted the empty buildings to dry bulk storage. Chinook Ventures proposes to further develop the site into a private port facility after cleanup.

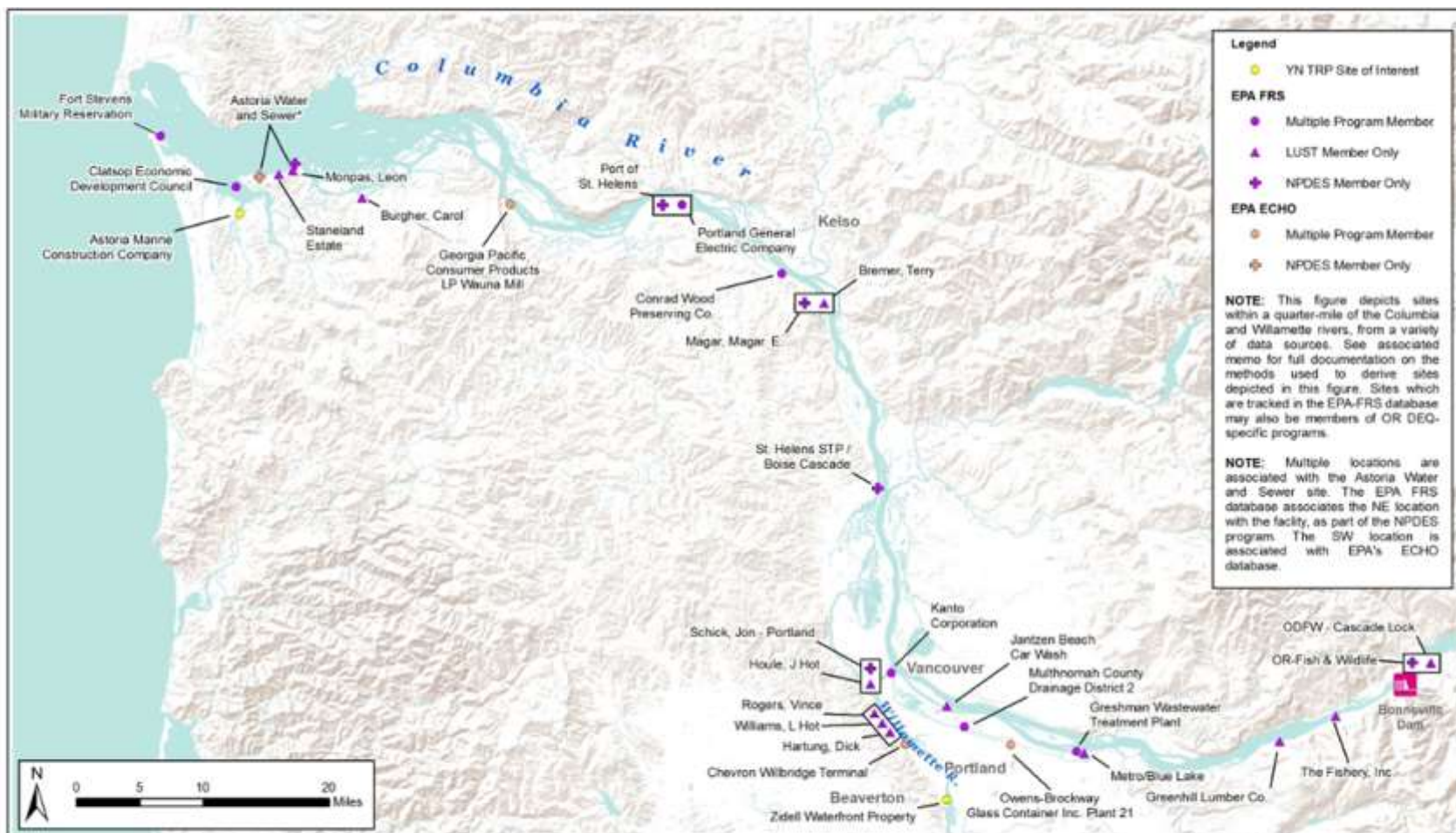
Chinook Ventures commenced environmental investigations in July of 2002 and completed the activities in late 2003. The initial data set shows elevated levels of cyanide, fluoride, and polynuclear aromatic hydrocarbons (PAHs) in soils and fluoride and cyanide in groundwater at the site. The current draft Agreed Order directs Chinook/Alcoa to fill in data gaps with further characterization of soil and groundwater at the site. The sampling plan will include data collection to develop site boundary groundwater conditions and critical values which will be used in a site-wide groundwater model.

# Lower Columbia River - WA



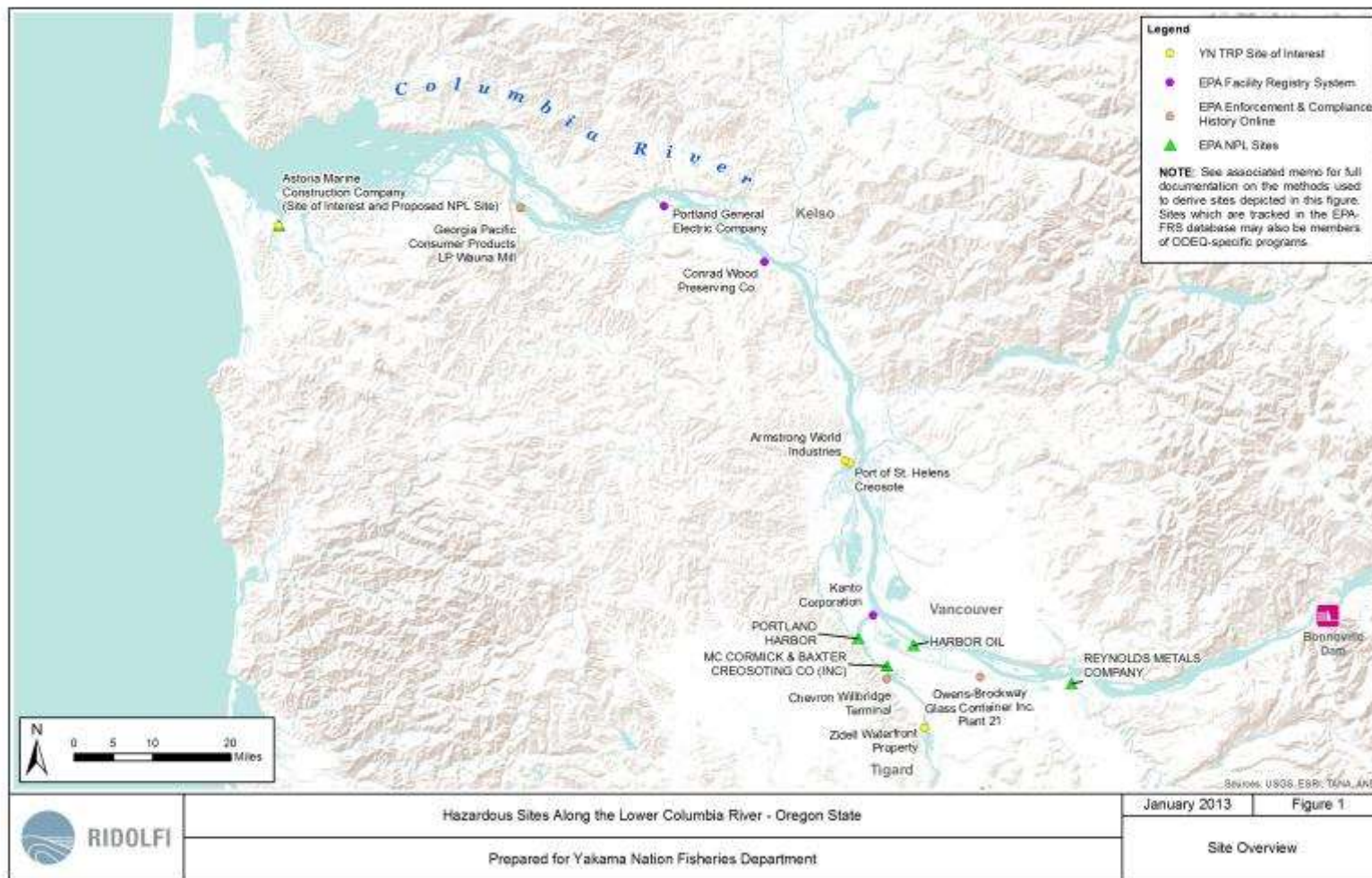


# Lower Columbia River - QC



	Hazardous Sites Along the Lower Columbia River - Oregon State		March 2012	Figure 1
	Prepared for Yakama Nation Fisheries Department		Site Overview	

# Lower Columbia River - OR





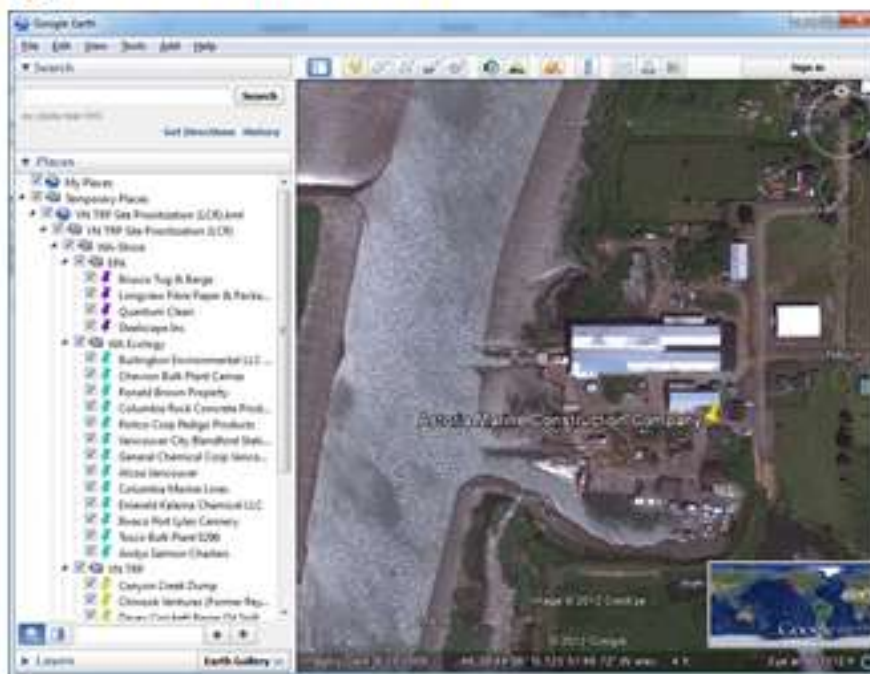
# Lower Columbia - Outcomes

- 114,000 sites in the Columbia Basin have been screened to 766 sites along the River. The Lower Columbia identified 24 sites in WA and 9 sites as priority sites in OR in the Lower Columbia River.
- Iterative Process - Site Inventory / Prioritization is based on databases that are publically available.
- Discussion with Federal and State site managers is ongoing.

# Lower Columbia - Outreach



## Google Earth KML





# Toxics and Habitat Restoration

- Toxics need to be considered during habitat restoration planning.
- Avoid the “Attractive Nuisance” scenario.
- YNF has developed a chapter on toxics for the “Lower Columbia River Ecosystem Restoration Program” document.
- An interactive map is available at <http://yakamafishnsn.gov/restore/projects/yakama-nation-brownfields-project>



# Columbia River Site Prioritization: Next Steps

- Engage in high priority sites where possible.
- Continue work with Federal and State agencies to ensure all sites are being captured in our database.
- Complete site prioritization for the Middle and Upper Columbia.



# Summary

- The Columbia River has become a polluted and life threatening environment for fish.
- With limited resources work needs to be prioritized to have the greatest benefit.
- It is possible to take 114,000 sites and prioritize them to a manageable size based on specific criteria.
- Prioritization will save you time but quality control is essential.



**HONOR. PROTECT. RESTORE.**

**Yakama Nation Fisheries  
Columbia River Site Prioritization**

[Yakamafish-nsn.gov](http://Yakamafish-nsn.gov)