

Dam Removal Funder Symposium - Washington DC

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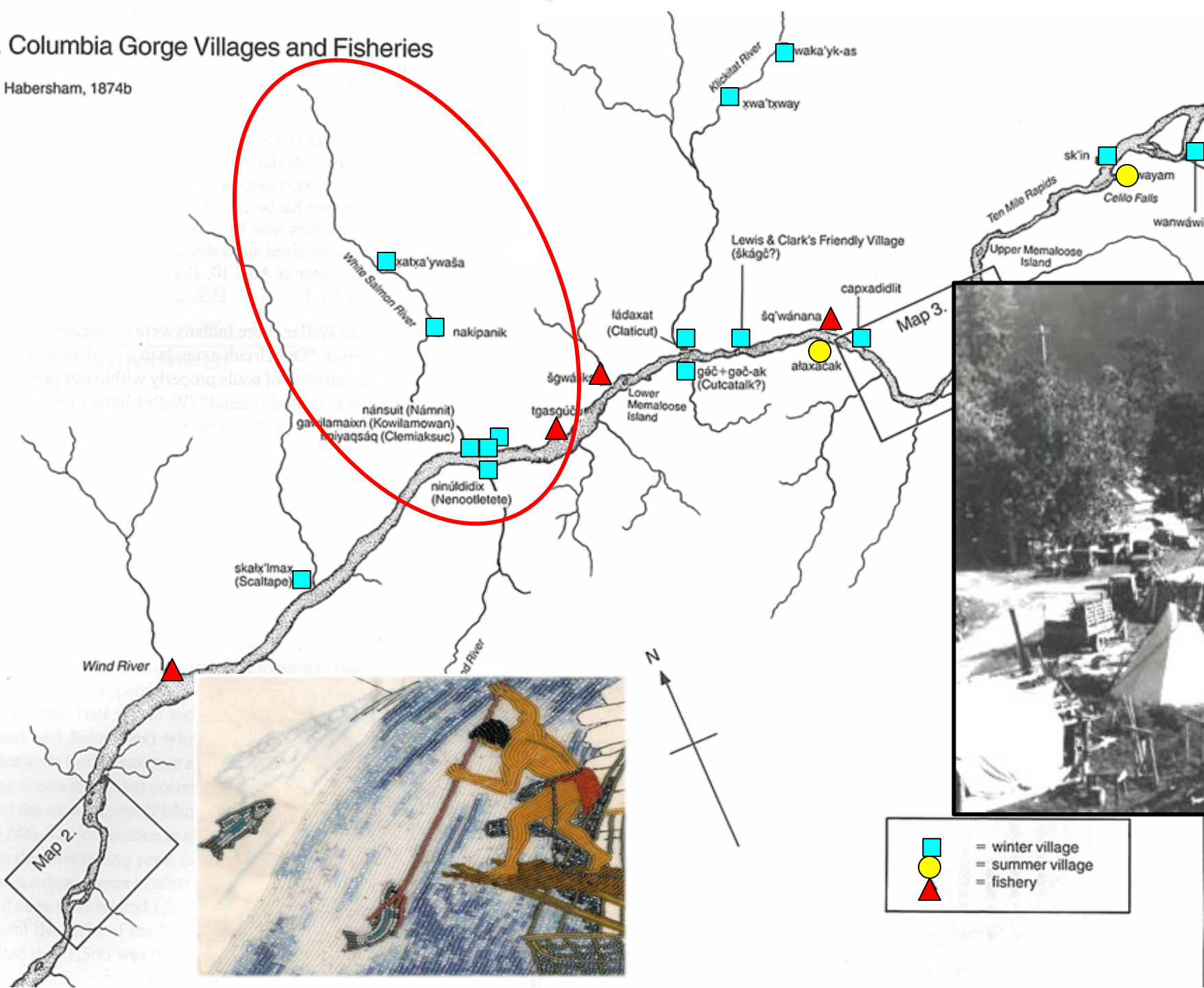


The 1855 treaties negotiated between the U.S. and the Native American groups that now comprise the Yakama, Umatilla, Nez Perce, and Warm Springs tribes contained a substantially identical provision securing to those tribes "**the right of taking fish at all usual and accustomed places in common with citizens of the Territory.**"

Treaty fishing rights include the right to have fish present for purposes of harvest. *United States v. Washington*, 853 F.3d 946, 964-66 (9th Cir. 2017), *aff'd Washington v. United States*, 138 S. Ct. 1832 (2018).

Map 1. Columbia Gorge Villages and Fisheries

Base map: Habersham, 1874b



Condit Dam “Blow & Go” - October 26, 2011

- at the time the largest dam removal project in the US
- now the 3rd behind the Klamath and Elwha removals



Sediment volume behind the dam

- Estimate of 2.4 million cubic yards
- Sediment line accumulation – 125 tall dam





Post Breach Activities

Sediment management – the former reservoir





Columbia River Hydrosystem Sediment Impacts

- Prior to Bonneville Dam (1935) the Columbia River transported 16.4 million tons of sediment each year.
- Despite a significant increase in soil runoff from agriculture and other human development, only around 8 million tons of Columbia River sediment reaches the Pacific Ocean each year.
- Significant deltas (sediment fans) have formed at the mouths of the Klickitat, Hood, White Salmon, Wind, and Deschutes Rivers.
- Each delta creates dangerous conditions for out-migrating smolts (predation hotspots). Avian and piscine predations take advantage of these altered/simplified habitats.
- Zone 6 of the Columbia River has multiple tributaries that provide important Cold Water Refuges to a warming Columbia River. Broad sediment fans diminish the strength of these cold water plumes entering the reservoirs.
- USG & Six Sovereign's Columbia Basin Restoration Initiative members, are now taking steps to address these impaired delta habitats, and build off the USACE-Portland Dist. & Yakama Nation Planning Assistance Agreement that is focusing on the Wind-White Salmon-Klickitat Deltas to identify opportunities to improve conditions for salmon and provide an overall eco-lift to these impaired habitats.



Sediment Negatively Impacts Treaty Fishers

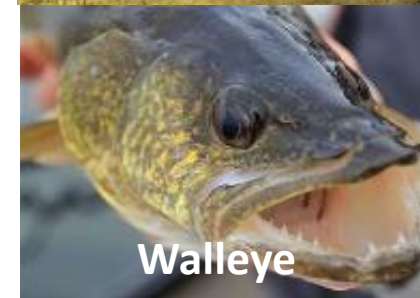
- Sediment can impede both scaffold-based and boat-based tribal fishers.
- Build-up at in-lieu treaty sites restricts access to docks and boat launches.
- Traditional fishing holes become filled in.
- Increase avian and piscine predators impacting juvenile survival
- Navigation hazards are created:
 - Sand bars appear in new locations.
 - Changes to the river flow create unpredictable currents, increasing risk for fishers.



California Gull



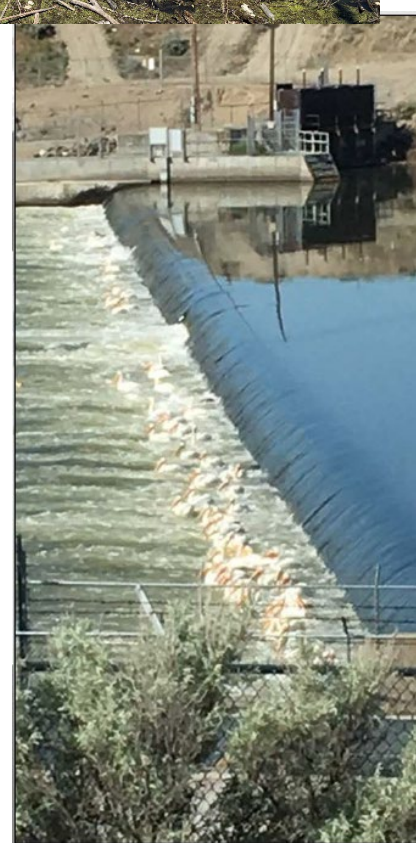
Small Mouth Bass



Walleye

Nelson Dam Removal





Fish Passage Improvement Projects

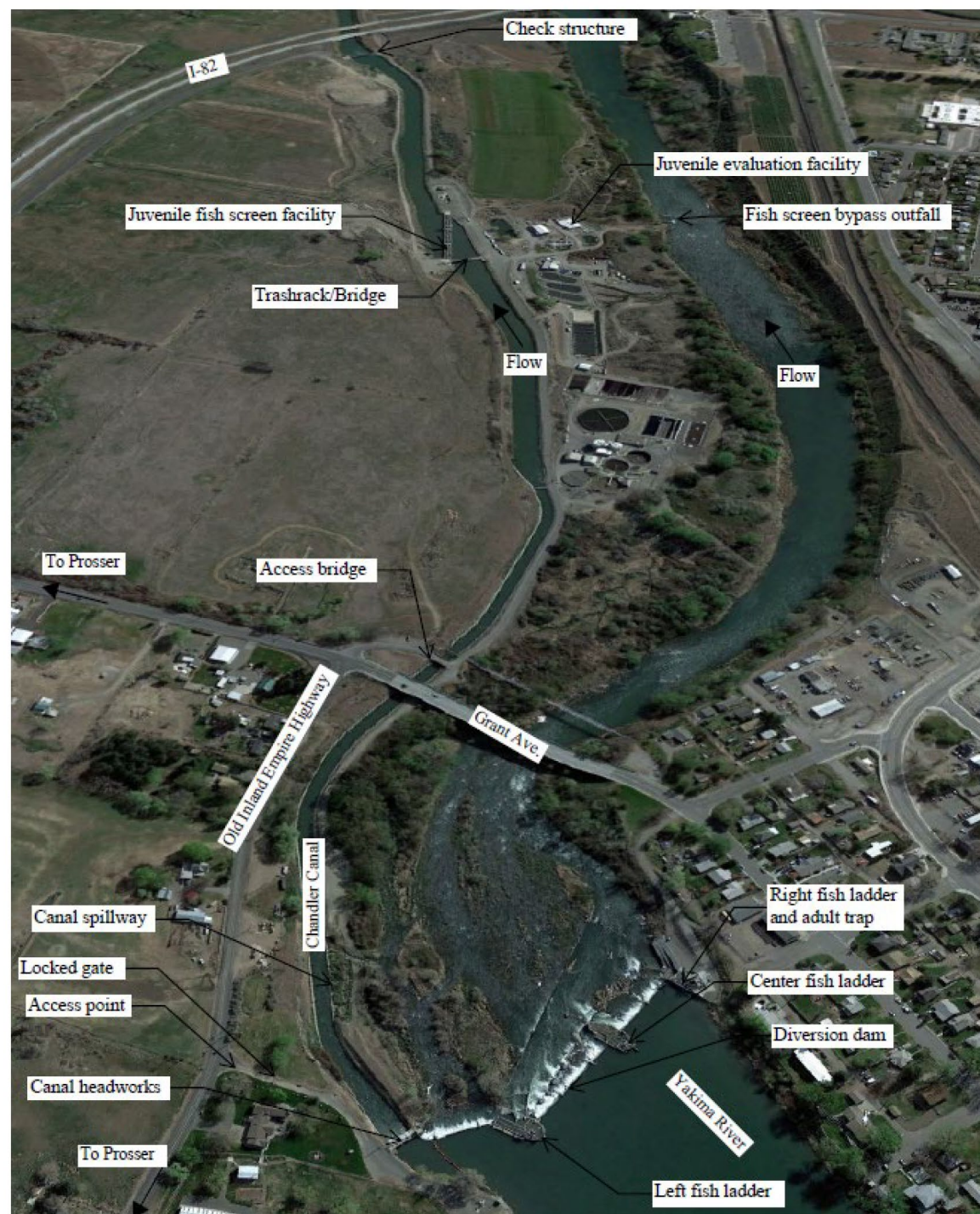
Wapato Dam

PRIMARY FEATURES

- 1 Main Canal Headworks
- 2 West Diversion
- 3 East Diversion
- 4 Earthen Embankment
- 5 Overflow Spillway
- 6 Rock Weirs
- 7 Fish Ladder



Prosser Dam



Wanawish Dam



Courtesy Scott Evans USGS



Mid-Columbia Fisheries Enhancement Group
Bateman Island
Causeway Concept Design Project
Figure 1.1
Project Location Map



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Orthophoto Source: Google Earth