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June 9, 2015

MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Stacy Horton, Policy Analyst/Biologist, Washington
Mark Fritsch, Manager, Project Implementation
Jim Ruff, Manager, Mainstem Passage and River Operations

SUBJECT: Presentation on Northern Pike in the Upper Columbia

BACKGROUND:

Presenters: Fish and wildlife managers from the Upper Columbia have coordinated a presentation on northern pike. **Joe Maroney**, Director of Fishery and Water Resources for the Kalispel Tribe, **John Whalen**, Eastern Region Fish Program Manager for the Washington Department of Fish and Wildlife, **Chris Donley**, Inland Fish Program Manager for the Washington Department of Fish and Wildlife, Dr. **Brent Nichols**, Fisheries Program Manager for the Spokane Tribe, and **Bret Nine**, Resident Fish Program Manager for the Colville Confederated Tribes will bring the Council up to date on efforts to address this non-native invasive species.

Summary: Presenters will describe the status of efforts to reduce and manage the non-native northern pike population in the Pend Oreille River. They will also discuss a recent invasion of northern pike into the Kettle River, and the management implications and actions needed.

Relevance: The northern pike is an introduced, non-native fish species which is known as a voracious fish predator. Preserving Fish and Wildlife Program effectiveness by aggressively addressing non-native and invasive species is the Council's third highest emerging priority.

Workplan: This presentation addresses Council work plan item 2.B, which promotes regional fish and wildlife recovery by prioritizing and implementing 2014 Fish and Wildlife Program actions.

Background: At the Aquatic Invasive Species session at the Lake Roosevelt Forum meeting on April 22, 2015, Joe Maroney presented information about northern pike range expansion in the upper Columbia basin, and in particular into the Kettle River arm of Lake Roosevelt. The management goals for this non-native predator species are to: a) minimize their impact to native species; b) reduce the spread of northern Pike to other waters downstream, particularly the mainstem Columbia River; and c) reduce the northern Pike population in the Pend Oreille River and elsewhere in the upper Columbia.

In 2011, the WDFW Commission approved a reclassification of northern Pike from a game fish to a “prohibited species.”

In 2012, the Spokane Tribe of Indians classified Northern Pike as a non-native invasive species through passage of Spokane Tribal Resolution 2012-153.

More Info: None at this time.

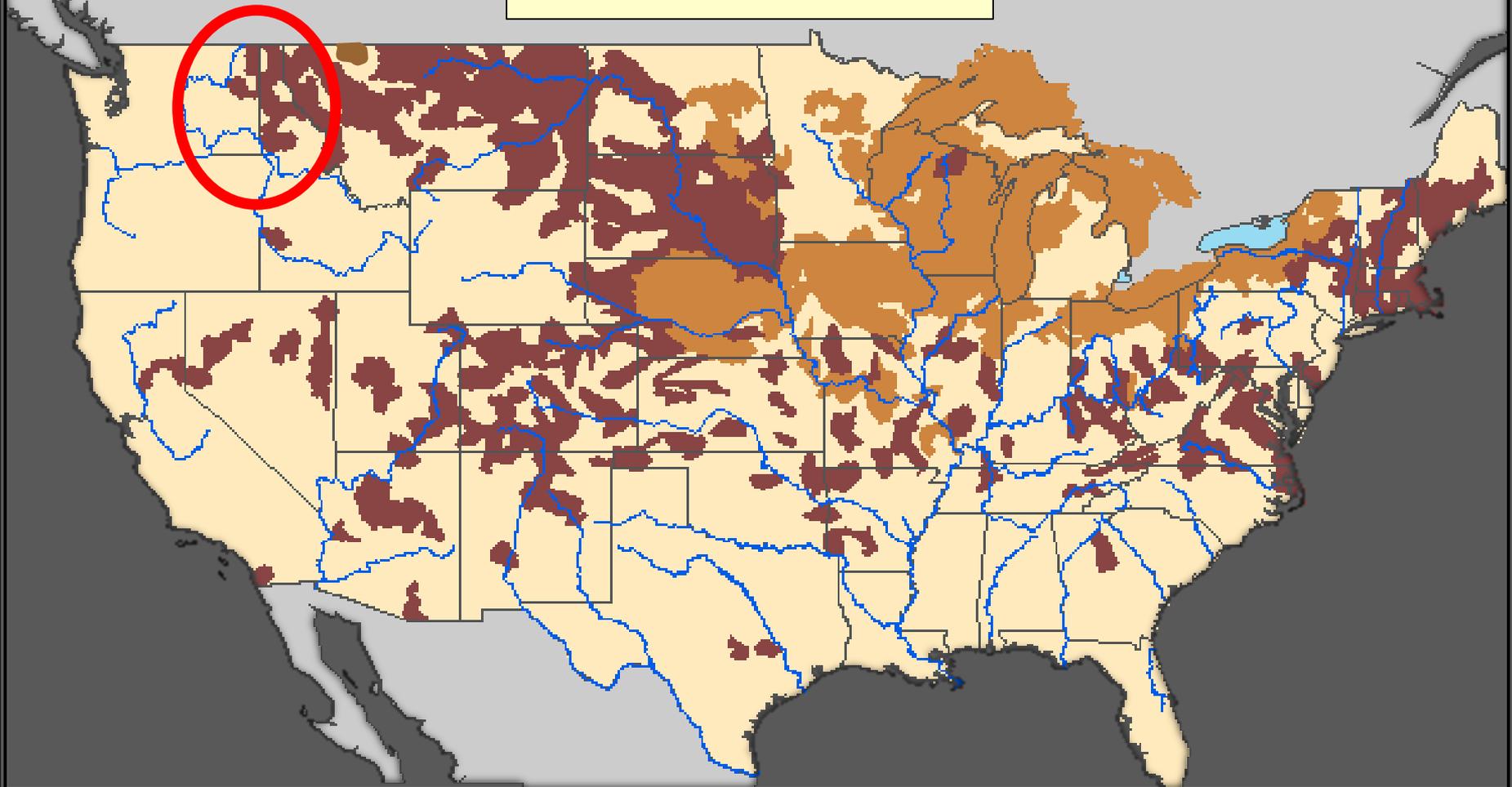
Status of Reducing Northern Pike in the Pend Oreille River and Implications Downstream



Joe Maroney
Director of Fishery & Water Resources
Kalispel Natural Resource Department

June, 2015

Northern Pike



Non-Native Range

Native Range

Northern Pike Expansion in Upper Columbia





Box Canyon Reservoir

Background

- **Established in 2004; Monitored 2005 to present**
 - Exponential increase from ~400 in 2006 to >5,500 in 2010
 - Range expanded throughout reservoir as well as downstream
 - Most species except smallmouth bass & tench declined significantly
- **Threats: Local and Downstream (Columbia River)**
 - Native species recovery in Lower Pend Oreille
 - FERC license implementation
 - Illegal introductions
 - ESA recovery; Tribal, recreational, commercial salmon & steelhead fisheries
 - Lake Roosevelt mitigation/native fisheries



Kalispel Tribe and Washington Dept. of Fish & Wildlife Thinking

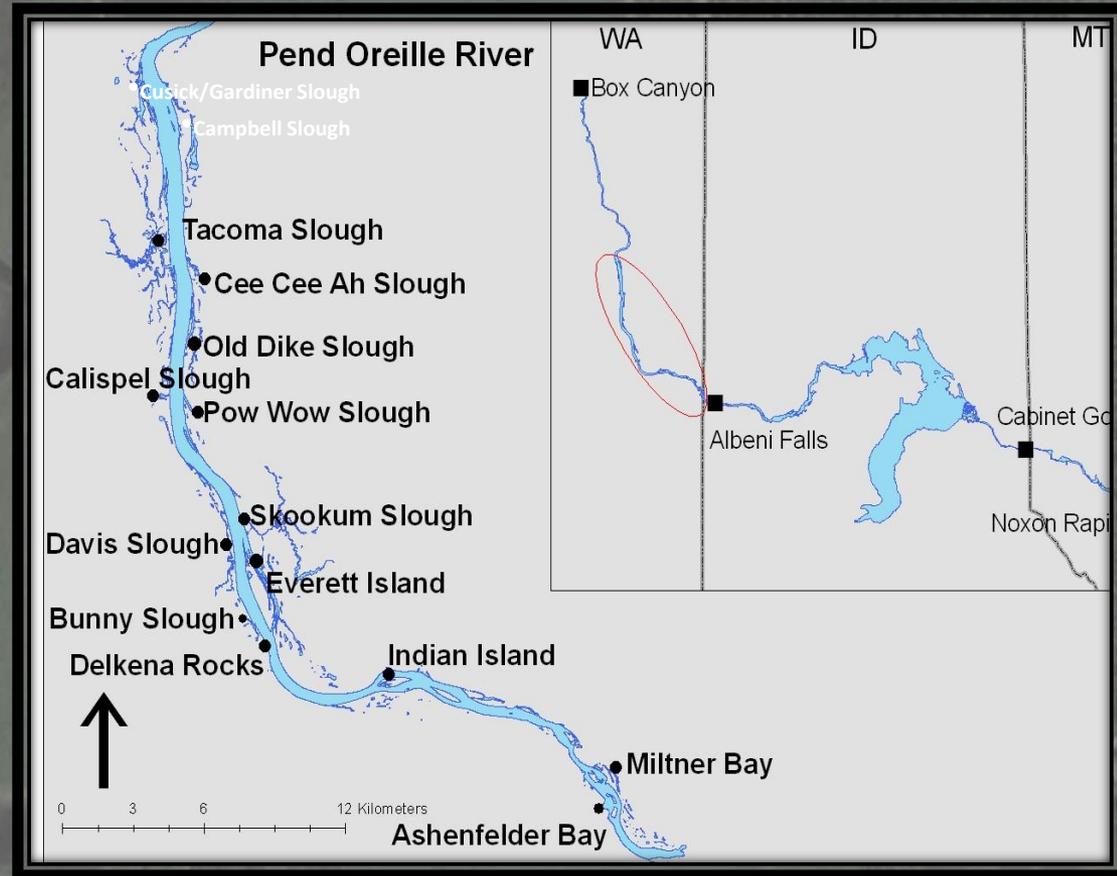
Pike are a problem, not an opportunity

Management goals:

- **Minimize impact to native species**
- **Reduce spread of pike to other waters, including the Columbia River**
- **Reduce numbers of pike in Box Canyon Reservoir**



Mechanical Suppression: Location



- 55 mile long reservoir
- 8,788 surface acres

Mechanical Suppression: Implementation Strategy

- Phase I (March-Late April)
 - Start at ice-out
 - Gillnet spawning locations
- SPIN (Late April/Early May)
 - Target < 1.73 NP/night in southern ½ of BCR
 - Target < 0.5 NP /night in northern ½ of BCR
- Phase II (Post SPIN-Mid June)
 - Gillnet until 87% reduction in daily catch at each location



Suppression Results: 2012 - 2015

Gillnets Set/Pulled				Northern Pike Removed			
Year	Phase I	Phase II	Total	Phase I	Phase II	Total	CPUE
2012	524	507	1,031	4,552	1,256	5,808	5.6
2013	1,027	190	1,217	5,953	499	6,452	5.3
2014	862	0	862	3,965	0	3,965	4.6
2015	854	0	854	751	0	751	0.88
Total	3,267	697	3,964	15,221	1,755	16,976	

- 112.4 miles of gillnet
- 2012-14 bycatch: 21 fish species, 38,749 individuals, >90 % survival
- Yellow Perch & Tench accounted for 63%, 65%, and 72% of total

Where do we go from here?



Mowing the grass

FOUR H'S: HABITAT, HATCHERIES, HARVEST AND HYDROPOWER



I...INVASIVE SPECIES



Non-Native

Coordination



Non-Native Invasive Species

.....species that establish and reproduce rapidly outside of their native range and may threaten the diversity or abundance of native species through competition for resources, predation, parasitism, hybridization with native populations, introduction of pathogens, or physical or chemical alteration of the invaded habitat.

State of Washington

- RCW 77.08.010(34) "Invasive species" means a plant species or a nonnative animal species that either:
 - (a) Causes or may cause displacement of, or otherwise threatens, native species in their natural communities;
 - (b) Threatens or may threaten natural resources or their use in the state;
 - (c) Causes or may cause economic damage to commercial or recreational activities that are dependent upon state waters; or
 - (d) Threatens or harms human health.

2011 Northern Pike Reclassification

- WDFW Fish and Wildlife Commission Vote
- Reclassification of Northern Pike from Game Fish – Prohibited Species
- Other prohibited species: Red-Bellied piranha and snakeheads.



Water flows downhill & so do fish

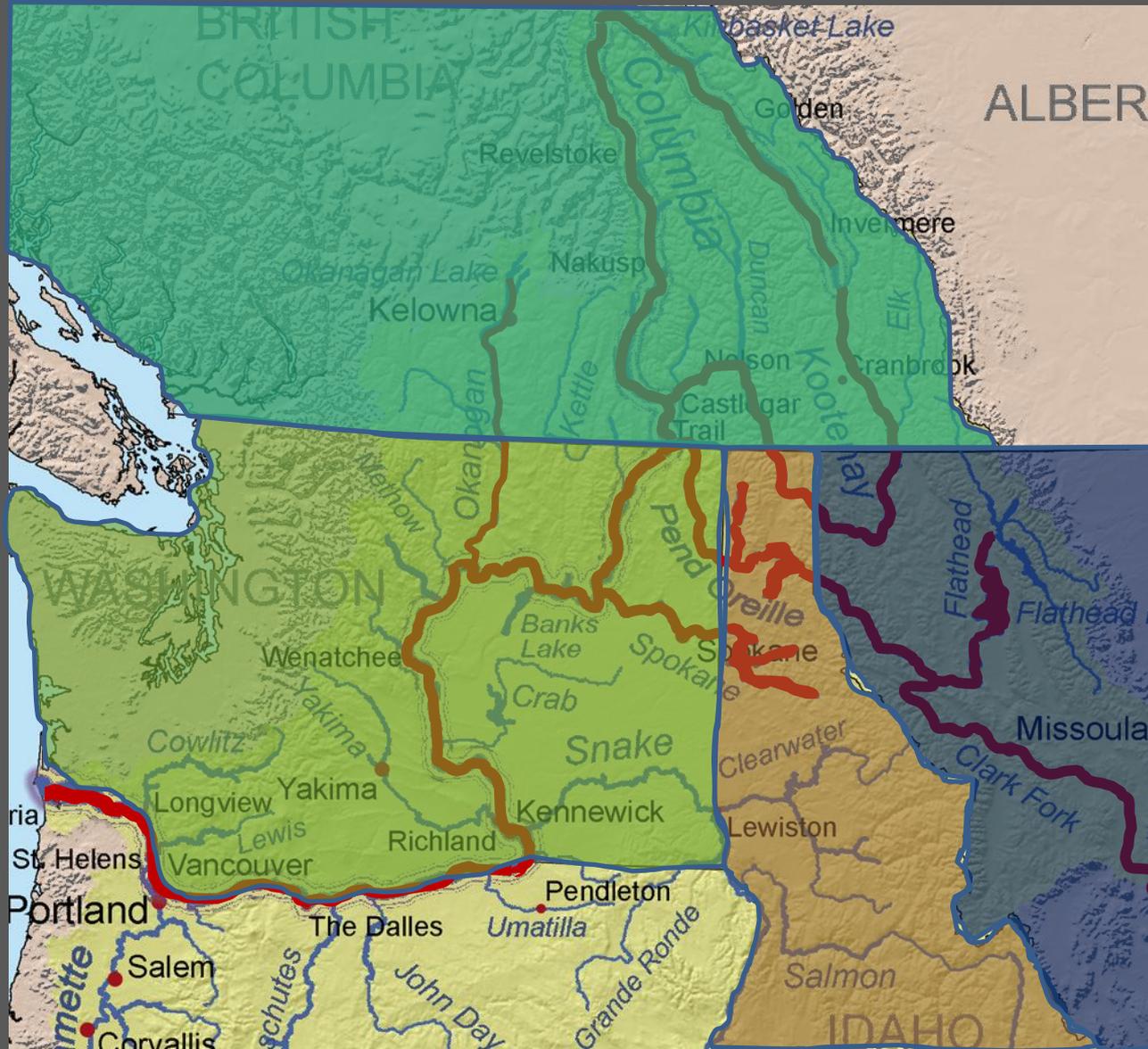




Photo Credit: Mike Rayton, Colville Confederated Tribes

Mouth of Okanogan River

Is it too late?



Kettle River Campground slough , March 2015

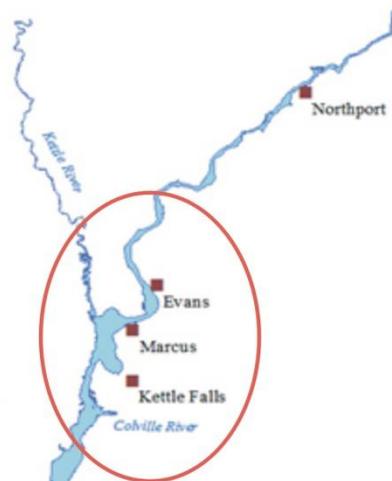
Lake Roosevelt

John Whalen, Eastern Region Fish Program Manager for the WDFW

Chris Donley, Inland Fish Program Manager for the WDFW

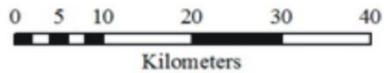
Dr. Brent Nichols, Fisheries Program Manager for the Spokane Tribe

Bret Nine, Resident Fish Program Manager for the Colville Confederated Tribes

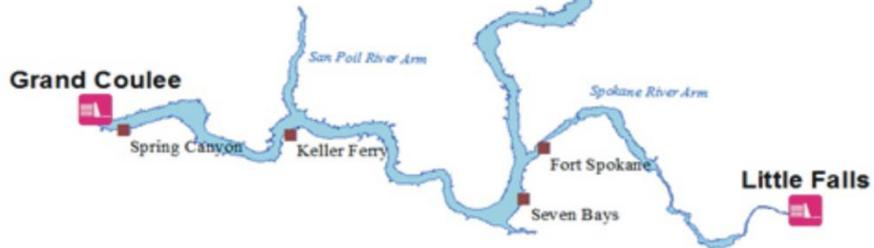


Legend

-  Hydropower dam
-  Town

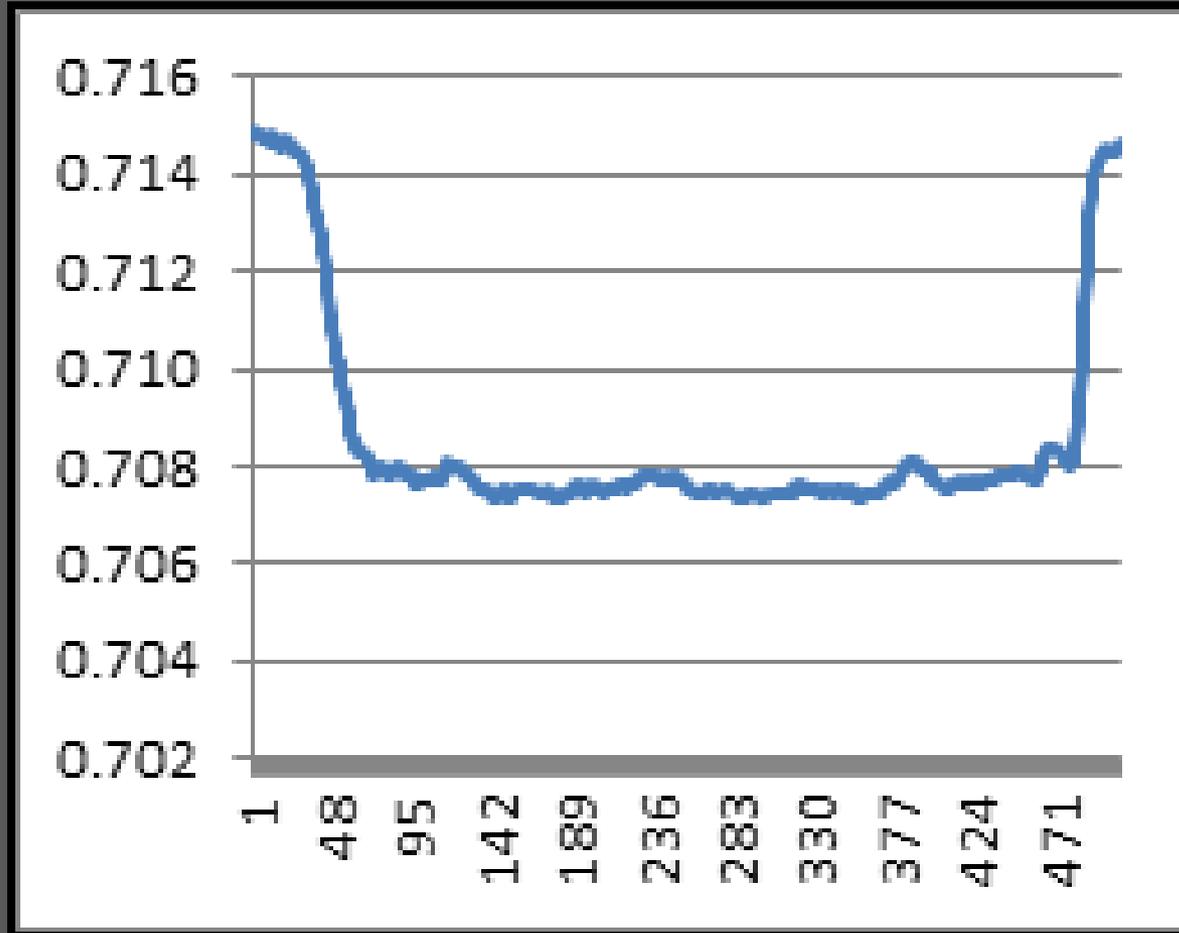


Grand Coulee





Strontium Ratio on Pike Otolith



Kettle River is the only tributary that is close to 0.708. Assume that this pike spent its entire life in the Kettle River except for a final destination to Lake Roosevelt where it was caught.

Next Steps

- 5 day pilot sampling
- Additional water and strontium samples
- Public outreach and education
- Development of suppression efforts

Acknowledgements

- **Bonneville Power Administration**
- **Washington Department of Fish & Wildlife**
- **US Bureau of Indian Affairs**
- **Avista Corporation**
- **Seattle City Light**
- **Kalispel Tribe of Indians**
- **KNRD Field Crew and Senior Staff**
 - Jason Connor, Nick Bean and Shane Harvey
- **Eastern Washington University**
- **Spokane Tribe**
- **Colville Confederated Tribes**