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## Northwest Power and Conservation Council

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September 7, 2016

### MEMORANDUM

**TO:** Fish and Wildlife Committee members

**FROM:** Stacy Horton, Policy Analyst/Biologist, Washington

**SUBJECT:** Update on Northern Pike

### BACKGROUND:

**Presenter:** Dr. Brent Nichols, Fisheries Manager, Spokane Tribe of Indians

**Summary:** Dr. Nichols will provide a brief overview and update on Northern Pike removal efforts in Lake Roosevelt by the co-managers (Spokane Tribe of Indians, Confederated Tribes of the Colville Reservation, and Washington Department of Fish and Wildlife).

**Relevance:** Ensuring the Council's emerging priority 3 is implemented effectively to preserve program effectiveness by supporting: **(1) expanded management of predators**; (2) mapping and determining hotspots for toxic contaminants; and **(3) aggressively addressing non-native and invasive species**

**Background:** Northern pike have been found with increasing frequency in Lake Roosevelt since 2009. They are a non-native predator known to be able to quickly establish and alter the native aquatic species assemblage. In early 2015 in association with Annual Fall Walleye Index Sampling (FWIN) and juvenile white sturgeon sampling an alarming increase in pike abundance caused concern among co-managers (Spokane Tribe of Indians, Colville Confederated Tribes and Washington Department of Fish and Wildlife). Concurrently, the 2015 spring angler catch rates increased significantly and anglers now routinely capture pike in the shallow bays in the

Columbia River near Kettle Falls and on the Kettle River. The co-managers are concerned about the continued expansion of pike in Lake Roosevelt, especially to the Spokane and Sanpoil rivers where native redband trout populations are already hindered by non-native Walleye predation. In addition, pike pose an enormous threat to salmon and steelhead recovery efforts below Chief Joseph Dam on the Columbia River.

In June 2015, the Council authorized emergency gillnetting for northern pike in Lake Roosevelt and recommended funding of \$28,000 to assist the Colville and Spokane tribes. The Spokane Tribe submitted a proposal, which was sent to and reviewed by the ISRP. In March, Council staff received the final peer review from the ISRP that it met scientific review criteria.

In February 2016 the Council unanimously approved \$8,507 in funding for *Project 1994-043-00 Lake Roosevelt Data Collection*. Any further support was conditioned on favorable ISRP and Council review for all remaining efforts associated with the removal of northern pike.

In April 2016 the Council voted unanimously to recommend that Bonneville implement Project #1994-0400, Lake Roosevelt Data Collection, through FY 2018 for activities associated with removal of northern pike in Lake Roosevelt, conditioned on the ISRP qualifications being addressed in contracting, as presented by the staff. There is a request to use \$69,529 from the FY16 Budget Oversight Group placeholder to implement the study design to suppress northern pike in Lake Roosevelt. It has a time deliverable at the end of 2018, and funds for 2017–18 will be addressed as part of the start-of-year effort through Bonneville.

**More Info:** Final Review of Lake Roosevelt Northern Pike Suppression Proposal (1994-043-00)

<https://www.nwcouncil.org/fw/isrp/isrp2016-6/>

Catch and Kill: Trying to Reduce Northern Pike in Lake Roosevelt

<https://www.nwcouncil.org/news/blog/northern-pike-in-lake-roosevelt/>

A boost for northern pike removal

<https://www.nwcouncil.org/news/blog/pike-removal-from-lake-roosevelt-update/>

# Northern Pike in Upper Lake Roosevelt

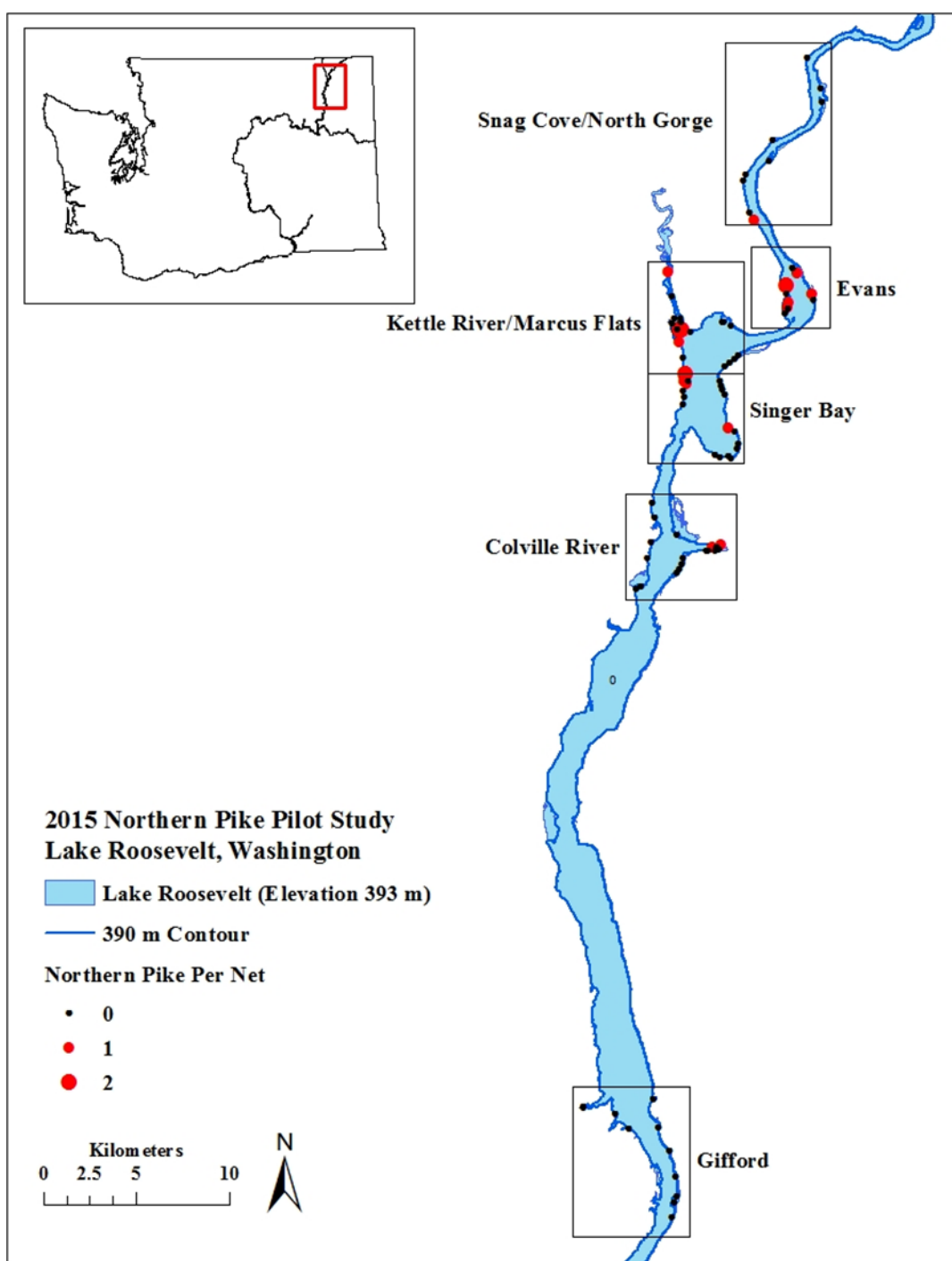
Brent Nichols, STI Fisheries Manager

Bret Nine, CCT Resident Fisheries Manager

Chris Donley, WDFW Eastern Region Fish Program Manager

# Update on Northern Pike Management in Lake Roosevelt

- Brief Historical Background
- Results from Pilot Efforts
- Spring 2016 Effort
- Summer 2016 Effort
- Fall 2016 Effort



# Study Locations

6 Locations selected based on N. Pike Preferences for:

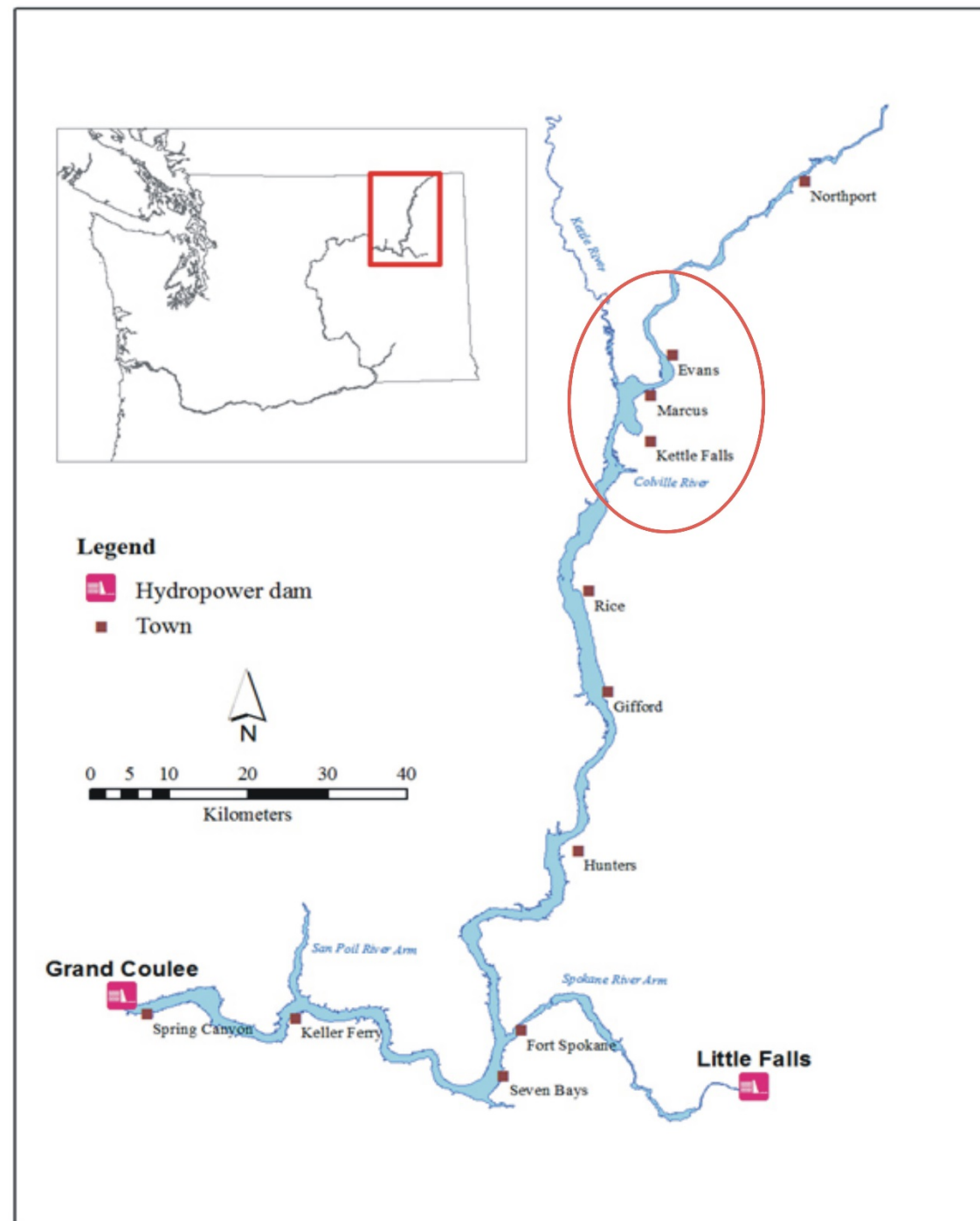
Depth  
Velocity  
Aquatic Vegetation



“While jigging for walleyes near the mouth of the Colville, I caught a 15-pounder.”\*



“My friend who lives at Kettle Falls has caught more than 20 in the past couple of months.”\*



\*Spokesman Review, May 2015

# Surveys

## Participants

- Washington Department of Fish and Wildlife
- Spokane Tribe of Indians
- Colville Confederated Tribes

## Total Effort

June 2015

February 2016

June 2016

August 2016

# Random Gill Netting Results

	Net Sets	Effort Hours	Pike Captured	CPUE (fish/hr)
Summer 2015	87	332	21	0.08
Spring 2016	64	252	22	0.09
Summer 2016	78	290	4	0.01



# Site Specific Surveys

## Random Surveys

	Summer 2015	Spring 2016	Summer 2016
Kettle River	0.159	0.269	0.037
Singer Bay	0.049	0.107	0.000
Evans			0.014

## Targeted Surveys

	Summer 2015	Spring 2016	Summer 2016
Kettle River	n/a	0.454	0.074
Singer Bay	n/a	0.219	0.036
Evans			0.062



# June 2016 Northern Pike Length Frequency distribution

Cohort	Age	n	TL (SD)	Range of TL	Wt (SD)	Range of Wt.
2014	2	9	653 (34)	600-732	2,175 (331)	1,700-2,800
2013	3	4	817 (96)	705-935	3,920 (1,085)	2,800-5,400
2012	4	1	931		5,800	





FEBRUARY 2016



AUGUST 2016





# AUGUST 2015

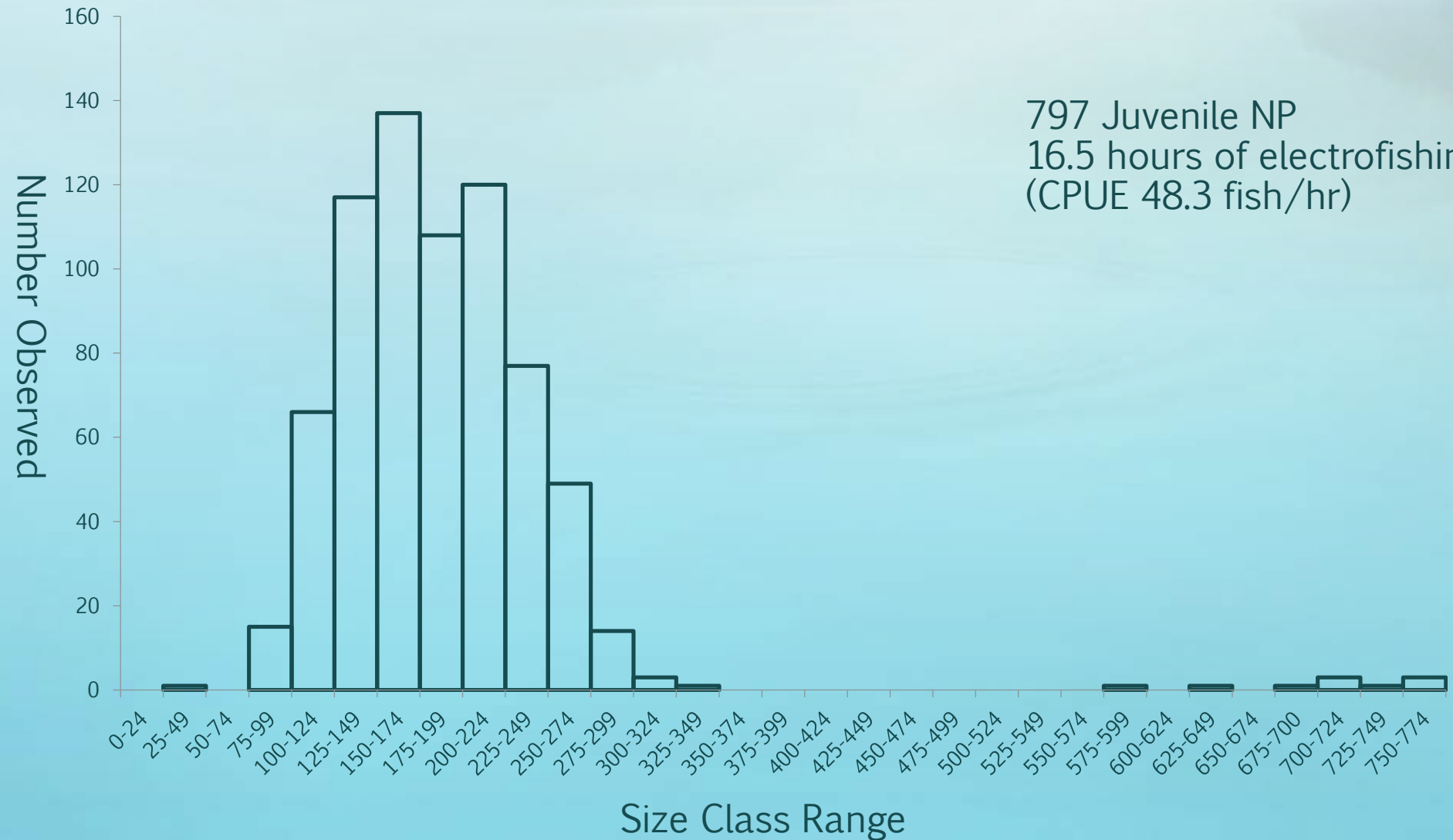




# JUVENILE PIKE



# JUVENILE PIKE





# What have we done?

- Developed standardized site selection parameters using GIS tools.
- Identified potential spawning locations and areas used by juvenile Northern Pike.
- Developed R code to simplify data analysis.
- Installed signage at 43 locations throughout the reservoir.

# What are our next Steps?

- Continue targeted efforts through 2018
  - Continue to monitor trends in abundance, biometrics and demographics
  - Continue targeted removal using gill nets to reduce adult abundance
  - Determine Natal Origin
  - Continue Targeted removal of juvenile Northern Pike in late summer
- Continue public outreach to improve awareness.

## STOP THE SPREAD OF INVASIVE NORTHERN PIKE



Northern Pike (*Esox lucius*) are a Prohibited Species in Washington State. Anglers are encouraged to kill **ALL** Northern Pike encountered. Harvested Northern Pike must be dead before anglers leave the water where they are caught.

### No minimum size or possession limit.

Northern Pike are now present in Lake Roosevelt. This fish species is known to have negative impacts on native fish populations and popular sport fisheries. In addition, further spread of Northern Pike into downstream portions of the Columbia River pose a severe threat to Salmon and Steelhead recovery efforts.

**It is illegal to transport or release live fish without a WDFW permit.**

Penalty includes up to \$5,000 in Fines and A Year in Prison (RCW 77.15.250) and a person found guilty can also be ordered to pay all costs of capturing, controlling or killing those fish or their progeny (in excess of \$100,000).

If you see someone transporting or releasing live fish, please call the Washington State Patrol. They will contact the nearest WDFW officer.

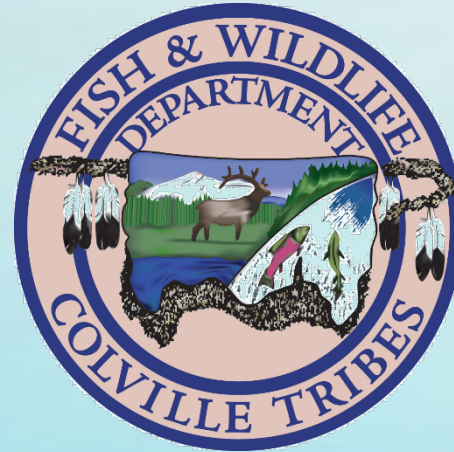
Spokane County WSP Dispatch: 509-456-4101

Stevens County WSP Dispatch: 509-684-7431



Spokane Tribe of Indians

# Acknowledgements



Northwest **Power** and  
**Conservation** Council