

Committed to the environmental and economic well being of our community

Lake Roosevelt Forum

NEWSletter

SUMMER 2023

Salmon Reintroduction Q&A with Conor and Casey2

Upper Columbia Fishery Enhancement, Canadian Style3

Students Sprang into Action with Discovery Days and Fur Trade Festival in May3

Lake Roosevelt Updates.....5

New Educational Outreach Materials for the Upper Columbia River6

EPA RI/FS Update7

Midnite Mine Superfund Cleanup Update7

SPONSORS

- Bureau of Indian Affairs
- Bureau of Reclamation
- Colville Confederated Tribes
- Ferry County
- Lincoln County
- National Park Service
- Spokane Tribe of Indians
- Stevens County
- Teck American
- Upper Columbia United Tribes
- Washington Department of Ecology
- Washington Department of Fish & Wildlife

2023 Lake Roosevelt Fishery Highlights



Congrats to Steve Pozzanghera (left), WDFW Eastern Region Director and Lake Roosevelt friend, he retired in May

Year after year, Lake Roosevelt continues to provide extraordinary and diverse angling opportunities that attract enthusiasts from near and far. Thousands of hours of angling time are happily spent catching up to 200,000 fish annually. Rainbow trout, kokanee, white sturgeon, walleye and smallmouth bass are the most targeted species.

And the fight to suppress northern pike, a voracious predator that devastates other fish populations, provides additional angling opportunities.

Co-managers from the Washington Department of Fish and Wildlife (WDFW), the Spokane Tribe of Indians, and Colville Confederated Tribes summarized highlights for our readers. Annually, they invest over \$9 million dollars to develop and maintain the fishery.

RAINBOW TROUT AND NET PENS

Over 544,000 rainbow trout were released into Lake Roosevelt in May. They ranged from 7 to 13 inches in length and 1 to 7 fish to the pound. Many will grow to about 18 inches by September and are often available in the system for at least 2 angling seasons. The long-term goal is to release up to 750,000 annually.

All rainbows released are triploids, meaning they are sterile and will not interbreed with wild trout. In addition, their adipose fin is clipped. Wild fish with an intact adipose fin should be released to assure only keeping hatchery fish in Lake Roosevelt.

The goal is for a 5% annual return to creel, the estimated amount caught by anglers based on survey data collected by co-managers. The return to creel goal has not been met since the onset of the COVID-19 outbreak, a streak that managers want to break in 2023.

Salmon Reintroduction Q&A with Conor and Casey

In 2015, the Upper Columbia United Tribes began actively exploring reintroduction of salmon above Chief Joseph and Grand Coulee dams. Many considered it to be a fanciful albeit romantic effort with minimal chance of success. It's now a mainstream initiative that's gaining momentum by the day.

The Forum checked in with Conor Giorgi (Anadromous Program Manager for the Spokane Tribe of Indians) and Casey Baldwin (Research Scientist for the Colville Tribes) for some quick updates and a little history lesson.

Did Grand Coulee Dam ever have a fish ladder?

Yes. From 1937 to 1939, logs impounded pools of water to create water-filled staircases. Then Washington Department of Fisheries started trapping and hauling salmon around Grand Coulee and releasing them as far north as the Canadian border. Sadly, that all ended when dam construction was completed. Tribes from throughout the Northwest gathered at Kettle Falls for a three-day "Ceremony of Tears" to mourn the loss.

Why are you optimistic you can bring them back?

Our Phase 1 studies (2015 – 2019) show the tremendous opportunity our region poses for salmon. There are non-ESA list species (primarily summer Chinook and sockeye) that are well suited for the river system as it is today. There is plenty of habitat for spawning, and fish passage technologies exist to get fish safely around Grand Coulee and Chief Joe.

And it's not just us saying it. Our works have been peer reviewed by independent science review panels. But really, it's the fish that have us optimistic. We're encouraged by success with the juveniles and adults we've released to the blocked area, especially the fish that have returned from the Pacific. Also the small scale cultural and educational releases have brought awareness and support to the effort.

So how are you planning on getting adults back?

We'll start with trap and haul from Chief Joseph, like the old days. At the same time, we're partnering with fish passage experts to evaluate our data and see which options will work best; looking at everything from ladders to elevator lifts to pneumatic tubes to push them over.

And going downstream?

Initially, spill over the dams and travel through the turbines. In 2022 we started a major outmigration study



A temporary fish ladder at Grand Coulee Dam - April 11, 1938

to see how juveniles do with survival and a number of other key variables. Like upstream passage, we'll research and develop alternatives to see which will work best.

There have been some high profile cultural and educational releases for juveniles and adults. Anything else in the works?

Big time. We're now in the process of developing interim hatchery facilities to produce over 150,000 chinook and 50,000 sockeye annually to help with our feasibility studies. We'll also be using net pens and land-based acclimation to grow and release them locally. We'll study these fish again once they return to the Basin as adults.

How's this getting funded?

We pegged the cost of Phase 2 implementation at about \$350 million over 21 years. Most of that is research, infrastructure development, and operations. We've estimated \$50 million in federal participation and environmental compliance/permitting over the 21-year plan too. In the last two years, over \$16 million has been raised or pledged to the Upper Columbia Tribes through state and federal appropriations and competitive grants from agencies. And you can add to that in-kind support from agencies and others.

We're on our way and we're not looking back. 🌐

Upper Columbia Fishery Enhancement, Canadian Style



Team at work on Murphy Creek Spawning Channel

Karen Trebitz and Al Mallette, Trail Wildlife Association

The Columbia River flows unobstructed for 57 km (35 miles), from Hugh Llewellyn Keenleyside Dam near Castlegar, BC into Lake Roosevelt in the U.S., making this the longest free flowing reach of the Columbia River north of Hanford reach. In British Columbia we call this West Kootenay section the “lower” Columbia River. In Washington State, the same reach is called the “upper” Columbia River. Fish swim freely across our borders.

The West Kootenay reach of the Columbia River has limited access to spawning streams. Its two largest tributaries, the Pend d’Oreille River (Waneta Dam) and the Kootenay River (Brilliant Dam), are bounded by dams without fish structures. Furthermore, many streams in the area flow through highway culverts that make fish passage impossible. Human intervention is needed to

increase spawning opportunities for fish, including trout and salmon.

The Murphy Creek Spawning Channel (MCSC) is a local success story. It’s an important collaborative partnership of the Trail Wildlife Association (TWA), the Fish & Wildlife Compensation Program (FWCP), the Okanagan Nation Alliance (ONA), landowner Teck Metals Ltd. (Teck), and the adjacent Birchbank Golf Course.

Murphy Creek is known to have excellent trout spawning habitat with one big problem: an impassible highway culvert. Dating back to 1987, TWA had uneven success capturing spawning trout, transporting them over the highway and releasing them on the upstream side. The TWA began building the first 100 meters of a spawning channel system in 1990 and expanded it to 225 meters in 1994, for a total

CONTINUED ON PAGE 5



Students Sprang into Action with Discovery Days and Fur Trade Festival in May

144 students took Discovery Days field trips to explore the ecological and cultural wonders of Lake Roosevelt. Thank you to the tribal, agency and private sector natural resource experts for volunteering their time to lead students through hands-on, minds-on activities.

Over 250 4th grade students took a step back in time with the National Park Service, Friends of Spokane House and Kettle Falls Historical Center to learn about the fur trade and what life looked like in this area more than 150 years ago! Activities included Sign Talk, Women of the Fur Trade, Primitive Bow and Arrow, Life of a Free Trapper, Fur Trade Items, Local Fur Trade History and more! 🌟

2023 Lake Roosevelt Fishery Highlights CONTINUED FROM PAGE 1

Supporting this effort are the WDFW Sherman Creek and Ford Hatcheries, the Spokane Tribal Hatchery and 63 net pens located between Keller Ferry and Kettle Falls. Over 40 volunteers support maintenance of net pens and feeding needs from October through their release in May.

In 2023, there were white, green, blue, and orange research tags deployed in rainbow trout raised in Lake Roosevelt net pens. The information will be used to inform catch and angler return to supplement the annual creel survey on Lake Roosevelt.

SPOKANE ARM RAINBOW TROUT SUPPLEMENTAL RELEASE

The Spokane Tribal Hatchery annually supplements traditional net pen releases of rainbow trout by releasing fish in the Spokane Arm to add fishing opportunities in a part of the reservoir where net pens are not operated. This year, 13,000 trout averaging 2.5 lbs. each and 30,000 trout averaging 1 lb. each were sequentially released from April through mid-June.



Peone family catches 6.5 lb rainbow trout

WALLEYE

Since 2002, the co-managers have conducted Fall Walleye Index Netting (FWIN) to monitor the walleye population. Monitoring enables managers to track the abundance, age, growth, condition, sex ratio, and age at maturity.

WDFW reports that the walleye fishery has remained stable and resilient over time. Abundance (and therefore availability) has taken a dip in recent years. Due to the strong 2018 and previous year classes that are still in the system, however, larger walleye (16 to 22") are particularly available. In addition, managers found a large year class of age-1 fish in 2022 that will show up in 2024 as a nice 14-16" fish.

WHITE STURGEON

Since 2017, a white sturgeon fishery has been open thanks to surplus fish from U.S. and Canadian hatchery programs put in place in the early 2000s to help stem a decades-long population decline.

For 2023, the angling season is moving to September 16 – November 30th. Cooler water temperatures during these months are expected to result in less stress on wild sturgeon caught incidentally by anglers targeting harvestable fish. The size of sturgeon that can be retained is now 53 – 63 inches (fork length). Lastly, the entire expanse from Grand Coulee Dam to the Canadian border will be open. Other regulations generally remain the same.

Looking forward, managers expect to maintain a harvest opportunity for the next few years. In order to protect weak 2011 to 2016 year-class releases, a period of catch and release only is expected to begin sometime around 2029.

Go to tinyurl.com/3m3wsb4d for a 15-minute WDFW Lake Roosevelt White Sturgeon fishing presentation. Background on the effort to rebuild the sturgeon population, the need to alter the fishing season, 2023 regulations, and future expectations are provided.

NORTHERN PIKE

This non-native invasive species is a voracious predator that devastates other fish populations. In addition to threatening trout and other Lake Roosevelt fisheries, they

CONTINUED ON BACK COVER

Help Lake Roosevelt Fishery Managers!

REPORT 2023 RESEARCH TAGS



Research tags deployed in rainbow trout have a phone number to report your catch. Please be prepared to provide information such as angler name, phone number, date of capture, color of tag and tag number, approximate location (please use well known landmarks or public boat ramps), whether the fish was harvested, and if you were angling from a boat or shore. You can ask managers additional questions through the tag return line at 509-919-3319. Thank you for participating in this study!

Tags can be physically returned to Lake Roosevelt Fish Tag Study, 1100 S Garfield Rd, Bldg A, Airway Heights, WA 99001.

Lake Roosevelt Updates

National Park Service

Fish cleaning stations will remain closed until further notice due to accumulated oil from fish clogging septic systems.



A self-certification form is required to protect against quagga/zebra mussels. Visit bit.ly/3Ruc63j to download the form, complete and place in the windshield of your launch vehicle where it can be easily seen. Boats must be clean, drained and dry.

Campgrounds are reservation only. Check availability and book at recreation.gov. Go to nps.gov/laro/planyourvisit for complete recreation area information and resources.

Visit the Forum's Lake Roosevelt recreational map and guide at lrf.org/recreation/lake-guide for fishing, camping, concessions, regulations, lake levels and more.

Bureau of Reclamation



— BUREAU OF —
RECLAMATION

The Grand Coulee Dam laser light show and public tours of the John W. Keys III Pump-Generating Plant began May 26. Visit usbr.gov/pn/grandcoulee/visit/ for additional information.

Visit www.lrf.org/recreation/boatlaunch-lake-levels to check daily lake levels and the availability of boat launches. Visit usbr.gov/pn/grandcoulee/lakelevel/ to learn more about when and why lake levels fluctuate.

Spokane Tribe of Indians



The tribe continues to engage in a mediation process to resolve challenges to the Columbia River System Operation 2020 Environmental Impact Statement and Biological Opinions for salmon and steelhead. Pending success or failure of mediation, a stay in litigation extends to August 31, 2023. The tribe contends federal agencies are failing to provide appropriate mitigation for the on-going impacts of salmon, steelhead, and lamprey being cut-off from the Columbia River above Chief Joseph and Grand Coulee dams.

U.S. State Department



A Columbia River Treaty listening session was held April 19th. Both the U.S. and Canada remain committed to the goal of modernizing the treaty before a change to “called-upon” flood control provisions take effect in September 2024. Negotiators also met May 16-17 in Kelowna, British Columbia for the 17th round of negotiations toward a modernized Columbia River Treaty.

If the treaty is not modernized, current provisions and an annually calculated cost to compensate Canada to assure flood control benefits would stop. A change to called-upon means the U.S. would request and compensate Canada for flood control operations as necessary. The economic, operational, and ecological uncertainties of such a switch are well documented. 🌐

Upper Columbia Fishery Enhancement, Canadian Style CONTINUED FROM PAGE 3

of 27 spawning pools plus a sediment-settling pond. The MCSC system runs parallel to Murphy Creek, and is fed by two crank-controlled intake pipes.

The TWA partnered with the ONA in 2016 to jointly manage the MCSC. In 2021 the Murphy Creek project was added to the FWCP's “Core Funding” model, meaning that basic annual operational costs are now secure. Because of this funding, the team was able to upgrade the barrier walls from the pool system and around the intakes, and replace one of the intake pipes.

Monitoring with ONA installed PIT tags combined with visual spawning counts by volunteers shows an

increasing number of spawning trout. Learn more at www.trailwildlife.com/projects/murphy-creek.

Like our American friends, this is one of many projects needed to address barriers such as culverts and habitat restoration. Reintroduction of salmon makes these efforts that much more important. By May 2022, the ONA had already confirmed three chinook catches from anglers on the mainstem Columbia River, from Arrow Lakes, just above Hugh Keenleyside Dam, to the mouth of the Pend d'Oreille River.

International border or not, it's “one river.” Our fish visit you and vice versa. Here's a toast to hoping cross-border fishery partnerships get stronger and stronger over time. 🌐



New Educational Outreach Materials for the Upper Columbia River

The Upper Columbia Valley covers about 100 square miles east and west of the Columbia River and extends from the U.S.-Canada border to China Bend (about 20 river miles). From the sounds of the Columbia to the stillness of forested areas and pasture lands, a rich array of plants and wildlife abound. Nature calls to visitors and residents alike.

The area also has a history of mining and processing metals. EPA's Remedial Investigation and Feasibility Study (RI/FS) has been addressing contaminants in the Columbia River and Valley uplands for almost two decades. EPA has

identified the Trail Smelter as the primary source of legacy contaminants.

A Washington Department of Ecology grant to the Forum was used to help educate children to play it safe around legacy contaminants, particularly lead in soil. The resulting read-along coloring book and activity book are now available to teachers, agencies and community events.

"This is an amazing place to live and recreate," said Forum Executive Director Andy Dunau. "Our outreach is a way to help kids and families increase awareness and stay healthy."

TO ORDER COPIES, CONTACT THE FORUM AT INFO@LRF.ORG

EPA RI/FS Update

As reported in the Winter 2023 newsletter, EPA divided the Upper Columbia River Site into multiple operable units (OUs) to complete the Remedial Investigation and Feasibility Study (RI/FS). The RI/FS began in 2006 as part of a Settlement Agreement between Teck American Incorporated (TAI) and EPA. The RI will determine whether and where there may be unacceptable risks to people or the environment due to legacy smelting operations. The FS will identify various remedial alternatives to address unacceptable risks documented by the RI risk assessment process.

OU 3 will encompass upland portions of the Site where the health of terrestrial plants and animals may be adversely affected by contaminants in the soil. The boundaries of OU3 are expected to cover the northernmost portions of the Site – likely from around China Bend to the U.S.-Canadian border based on existing data review.

TAI submitted two major RI/FS documents for the OU 3 Upland portion of the UCR Site in 2021. The 2021 documents included the draft Upland Baseline Ecological Risk Assessment (BERA) and the draft Upland RI Report. EPA provided comments to both documents, including the draft final version of the Upland BERA received in February 2023. In May 2023, EPA disapproved TAI's draft/final Upland BERA. By taking this action, EPA assumed responsibility for revising and finalizing the Upland

BERA as allowed for by the 2006 Settlement Agreement. EPA is working with TAI to ensure that the upcoming draft final version of the Upland RI will address EPA's major comments.

TAI is currently preparing BERA and RI reports for the two aquatic OUs at the UCR Site. OU 1 primarily consists of the upper, river-dominated, section of the Site north of Kettle Falls; OU 2 consists of the lower, reservoir-dominated (Lake Roosevelt) section of the Site extending down to Grand Coulee Dam. The draft Aquatic BERA will evaluate risks to plants, fish and other wildlife living in and near the water at OUs 1 and 2. TAI will submit the draft Aquatic BERA document to EPA later in 2023.

Also, EPA has started an investigation to evaluate potential risks to plants and wildlife in upland lakes and wetlands in the northern part of the Site. The investigation is a follow-up to earlier lake studies, including those Ecology conducted in 2010 and 2012. These prior studies identified elevated metal concentrations in selected lake and wetland-area sediments. EPA will collect the necessary environmental samples and present study results as supplements to the Upland BERA and RI reports. The schedule for the upland lakes and wetlands study will be set later in 2023.

TAI is developing a work plan for a sediment transport study in consultation with EPA. The purpose of the study is to predict how contaminated sediment moves and/or is buried in the UCR over time. How sediment moves in the river is important in understanding the nature of and how widespread the contamination is, and how to clean it up.

CONTINUED ON BACK COVER

Midnite Mine Superfund Cleanup Update

The Midnite Mine Superfund Site is a 350-acre, inactive uranium mine on the Spokane Indian Reservation. A legacy of the Cold War, uranium mining from 1954 to 1981 left more than 33 million tons of waste rock, unprocessed ore and low-grade ore (also known as protore) laced with contaminants. Contaminants include radionuclides and heavy metals resulting from mining, transport activities and related operations.

EPA reported "great progress" for the 2022 cleanup season. This included:

- "Removal of over 1.3 million cubic yards of waste rock
- Completed crushing and screening aggregate rock for Pit 3 and the cover for Pit 4
- Completed the cleanup design for the South Pond
- Treated 42.1 million gallons of water
- Started construction on the new water treatment plant"

In April, EPA hosted an in-person and virtual community information meeting. Topics covered included:

- Scheduled 2023 activities, including construction of the new water treatment plant and the effluent pipeline connection to the Spokane Arm of Lake Roosevelt; completing backfill of Pit 4 and regrading to its final configuration; and dewatering then replacing a leaky liner serving the South Pond.
- The third Five-Year Review of the Midnite Mine cleanup, which will begin in June. EPA stated the purpose "... is to make sure the selected cleanup actions effectively protect people's health and the environment."
- Completion of the Midnite Mine Superfund Site Community Involvement Plan, which expresses how EPA and the Spokane Tribe will inform and engage with the local community.

Slides and video of the April meeting as well as other Midnite Mine resources can be found on EPA's website at <https://tinyurl.com/yradn2d8>. 🌐

Lake Roosevelt Forum

2206 S. Sherman St.
Spokane, WA 99203
1-509-535-7084
email: info@lrf.org

ADDRESS SERVICE REQUESTED

PRESORTED STANDARD

US POSTAGE

PAID

SPOKANE, WA

PERMIT #4

2023 Lake Roosevelt Fishery Highlights

CONTINUED FROM PAGE 4

can potentially move down the Columbia River to threaten salmon, steelhead and other fisheries.

Suppression efforts, which include multiple strategies from gillnetting to offering rewards for their capture, continue to show promising results. The number of fish caught per net was down from 4.37 in 2017 to 0.38 in 2022. In 2022, fishery managers started to capture more pike in the Gifford and Hunters area, indicating they are moving downstream slowly. Managers plan to spend more time suppressing in this area in 2023.

From April through November, WDFW, Colville Confederated Tribes and Spokane Tribe of Indians used gillnetting to suppress northern pike before spawning in nearshore shallows. Said Holly McLellan with the Colville Tribes, "Gillnetting is the most effective capture method for pike. We release all non-target fish alive and keep the pike. We target pike habitat, which is in shallow weedy areas. This helps keep our bycatch low."

The Colville Tribes encourage anglers to participate in their \$10 Pike Reward Program to help protect the Lake Roosevelt fishery. Visit www.cct-fnw.com/northern-pike to learn more. 🌐

EPA RI/FS Update

CONTINUED FROM PAGE 7

The sediment transport study is primarily an evaluation of existing data and is not expected to include field sampling or data collection efforts. EPA must first approve the work plan before it can set a schedule for the study.

For details about RI/FS progress over the years, visit lrf.org/publicguides and the lrf.org/lake-roosevelt/news. 🌐

Paper vs. Web? It's Your Choice.

If you'd prefer only receiving the web version of the newsletter, send an email to info@lrf.org. The Forum does not distribute member emails or postal addresses to any other organization.

This project is funded through a Public Participation Grant from the Department of Ecology. The content was reviewed for grant consistency but is not necessarily endorsed by the agency.