

Committed to the environmental and economic well being of our community

Lake Roosevelt Forum NEWSletter

SUMMER 2017

Getting to Know Elliott Kittel	2
Lake Roosevelt recreational fishery continues to excel	3
The hunt for Northern Pike continues	3
National Park Service updates	4
Interim mosquito measures in place for Kettle Falls area	4
EPA Remedial Investigation updates	5
Ecology recommends additional air quality monitoring in the upper Columbia River Valley	5
Spokane Tribe teams up Spokane Indians Baseball to rally for redband	7
Student Discovery Week	7

SPONSORS

Bonneville Power Administration
Bureau of Indian Affairs
Bureau of Reclamation
Ferry County
Lincoln County
National Park Service
Spokane Tribe of Indians
Stevens County
Upper Columbia United Tribes
Washington Department of Ecology

White sturgeon fishery reopens

For the first time in a generation, anglers are catching white sturgeon in Lake Roosevelt.

Fishery managers from the Spokane Tribe of Indians, Colville Confederated Tribes and Washington Department of Fish and Wildlife opened the fishery because hatchery origin sturgeon produced from wild adult broodstock from 2001 -- 2010 had much higher survival rates than anticipated.

Said Jason McLellan, Colville Confederated Tribes Research Scientist, "We didn't know how well they would survive since this was a brand-new program. Because of our facilities in Washington, which have ideal water temperatures straight out of the ground, we were releasing sturgeon that were twice the size of what was being released in Canada. Despite equalizing numbers at release, the larger Washington produced fish and those fish released in Canada during the first two years of the program survived at disproportionately greater rates. Collectively, this has led to an over-abundance of some release groups or families."

To help thin the population of hatchery fish and preserve genetic diversity, current estimates are that tribal and non-tribal anglers will collectively have the opportunity

to harvest approximately 20,000 hatchery sturgeon over the next 10 years.

Helping Hands

In the late 1990s, researchers documented a steep decline in white sturgeon from Grand

Coulee Dam to Revelstoke, Canada. Studies showed the population dwindled to about 3,000 adults with few signs of successful juvenile production.

In 2000, the Upper Columbia White Sturgeon Recovery Team was formed with over 25 partners from the United States and Canada. The recovery team has focused on both trying to supplement wild sturgeon to restore demographics and preserve genetic diversity, and researching the causes of decline.

The supplementation program has been evolving since it started in 2001. Initially, adult broodstock were captured in Canada and spawned to produce offspring for release

in Canada. Beginning in 2004 (broodyear 2003), Washington received eggs, larvae, and juveniles from Canada and raised them at a WDFW hatchery for release in to Lake Roosevelt. In 2006, Washington became self-sufficient by collecting and using adult broodstock captured on the U.S. side of



Student helping with white sturgeon release

Getting to Know Elliott Kittel



Elliott Kittel

A common refrain the Forum hears is “What about the number of people retiring? Where’s the new leadership, management and vision going to come from?”

Elliott Kittel, a fisheries biologist for the Spokane Tribe of Indians, is one of many millennials stepping up to secure the future.

Elliott began working for the Tribe in 2013.

He’s part of an influx of talent dedicated to research and monitoring efforts which sustain both the sport fishery and protect the native fishery. For instance, he leads the creel survey and other research that allows co-managers to evaluate the performance of hatchery raised fish such as rainbow trout, kokanee and sturgeon. Managers use this information along with how people are using the fishery to make management decisions that maximize both angler enjoyment and protection of species.

Talking with Elliott is an interesting blend of hearing a stream of analytic thought combined with a passion for working with others. A sentence rattling off statistics and research papers is followed by talking about relationships and partnerships that are central to his work.

For him, relationships start with his team members at the Spokane Tribe. Said Elliott, “When I come to work there is always a clear, consistent message about protection and enhancement priorities that comes from an intimate and meaningful connection to the resource that spans generations.” That, combined with his singing the praises of co-managers with the Colville Tribe and WDFW, and you can

see why he’s lit up about what he’s doing and the future.

That future is more than about the fishery. Elliott has been passionate about outreach to tribal and non-tribal youth. “I had good mentors that spent a lot of time with me. They taught me about being a professional with character, and how that fits with care and responsibility for the science and the resource.”

Elliott has walked the talk by helping mentor high school and college students, taking them into the field to learn the technical ropes and connect with the resource. This includes co-mentoring seven American Fisheries Society Hutton Junior Fisheries Biologist Scholars. “Many of the students I work with,” said Elliot, “don’t even realize there are fishery jobs out there. I want to get them excited about possibly joining the field and stress the importance of improving diversity in our ranks.”

Specific to Lake Roosevelt, Elliott is generally optimistic. “The sport fishery is stable with rainbow trout, walleye and kokanee doing well the last couple of years. Opening of the hatchery white sturgeon fishery is exciting because it gives people something new to go after. My biggest concern is beating back the northern pike that are now reproducing in the system. As long as we keep improving the quality of our research, I think things will just keep getting better.”

Elliott’s background is as diverse as his job. He was born in the Philippines and grew up living on aquaculture research facilities in the Philippines, Indonesia, and Hawaii. He received his BS in Aquaculture from the University of Arkansas Pine Bluff in 2010; his master’s degree in Animal Science from Southern Illinois University in 2013; and did a brief stint with the US Fish and Wildlife Service in Kalamazoo, MI.

With talent like Elliott coming to Lake Roosevelt and the upper Columbia, rest assured the future is indeed bright for two-legged and fin alike. 🌐

Put yourself in the picture

Visit www.lrf.org/enjoylakeroosevelt

Your interactive guide to camping, fishing, boating and other recreational opportunities.

Lake
Roosevelt
Forum

www.lrf.org

Lake Roosevelt recreational fishery continues to excel

The Lake Roosevelt sport fishery continues to attract anglers to its bounty. 2016 creel surveys show over 41,000 rainbow trout and almost 11,000 kokanee were caught.

To support this fishery, up to 750,000 rainbow triploids and 250,000 kokanee triploids are released from hatchery and net pen operations. Said Mitch Combs, manager of the Sherman Creek State Hatchery, "Our goal is for upwards of 5 percent of the fish we release to be caught by anglers."

Add to this naturally reproducing rainbow (redband) trout, walleye, smallmouth bass and other fish, and estimates from the 2016 creel are that over 154,000 fish were caught in Lake Roosevelt. That represents over 58,000 angler trips, including local aficionados who come back multiple times.

2017 rainbow and kokanee angling

The rainbow trout and kokanee being caught are generally from the classes of 2013-16. A rule of thumb according to Combs is that the fish which are released at 18 months old will grow about an inch a month in Lake Roosevelt. Half pounders were generally stocked that spring, two pounders are about three years old, and the 4-5 pounders tend to be 4-5 years old.

Fishery managers are concerned fish may be less plentiful this year. The big water year and snowpack from the Canadian Rockies led to steep drawdown and swift current conditions in the lake. As such, fish are more likely to be swept downstream past Grand Coulee Dam to Rufus Woods Lake and points below.



Managers were also challenged by when they could release fish from the net pens. They like the water to be at or above 1260' above sea level. At this level the spring runoff is generally done and water retention (the amount of time it takes water to pass through the lake) is about 45 days.

Said Combs, "This spring drawdown was unusual in that along with the large snowpack the water was colder than usual and that helped us hold on to the net pen fish through the drawdown period. This simple fact of holding them until the reservoir is back up above 1,260' really helps to lessen entrainment and provide a more successful and consistent fishery."

It's a balancing act

In a year like this, lake drawdowns that can be tough on fish are needed to control flooding as far south as Portland. Communications between the Bureau of Reclamation and fishery

CONTINUED ON PAGE 6

The hunt for Northern Pike continues

Lake Roosevelt fishery managers continue to see a disturbing increase in the presence of Northern Pike. This non-native invasive species is a voracious predator of other fish that, once established with breeding populations, commonly causes significant impacts to resident fish populations.

How voracious? A study in Montana's Flathead River estimated that a Northern Pike consumed over 250 fish a year. For the 1,000 Northern Pike in their system, that translated into a loss of over 250,000 fish each year.

In Lake Roosevelt, managers were particularly troubled when 2016 marked the first time yearling Northern Pike were discovered. Yearlings are fish less than a year old, which indicated the presence of breeding populations in

the lake and tributaries. Previously, Northern Pike in Lake Roosevelt were identified as adults washing down from upstream.

With emergency funding from the Bonneville Power Administration's Fish and Wildlife Program, 2016 saw fishery managers employing gillnets and electrofishing to remove over 1,200 pike. With continued funding, 2017 has already seen over 1,000 more Northern Pike removed from the system. Most of these fish are being found in the Kettle River and Evans boat launch areas.



Pike in Lake Roosevelt

In addition to gillnetting and electrofishing, managers are increasing angler outreach to help rid this species from the system. And the Colville Tribe stepped up in May with a \$10 a head reward for Northern Pike caught in Lake Roosevelt. 🌊

National Park Service updates

Help stop the spread of invasives: All boats (including kayaks, canoes, and stand up paddle boards) or other water use equipment (including fishing waders, vests, wetsuits, etc.) that have been out of the State of Washington need to be fully cleaned, dried, and free of invasive aquatic species. All agencies within Washington State are working together to keep invasives, particularly Quagga and Zebra mussels, out of our waters. These invasive species are not only unsightly, but mitigation costs and lost economic development can run into millions of dollars annually.

Clean White Sturgeon at Home: Fish cleaning stations located at Spring Canyon, Keller Ferry, Fort Spokane, Porcupine Bay, Hunters, Gifford Ferry, and Kettle Falls are not suited for cleaning white sturgeon. Their boney plates (scutes) along their back are thicker and harder than other fish species with softer bones such as trout, kokanee, bass, and walleye. Three fish stations have already been damaged from people trying to use them to clean sturgeon.

Fire Restrictions: The threat of wildfires from escaped outdoor burning is highest during the hot and dry days of

summer. Wildfires are serious threats to public safety, adjoining property and wildlife habitat. Check www.nps.gov/laro for updates on restrictions such as campfires in undeveloped park-managed lands.

Porcupine Bay Campground Closed: Porcupine Bay Campground located in Lincoln County on the Spokane River arm of Lake Roosevelt is closed. Historically, this is the third most popular site for visitation in the park. Landslides at the beginning of April severely damaged the road, preventing all vehicle access to the campground and surrounding area.

Kettle Falls Marina Improvements: This spring, the park service provided a one year extension for the long-time concessionaire to operate Kettle Falls Marina. Part of receiving this extension included requirements for facility upgrades to address environmental and visitor safety needs. The park service reports these upgrades have occurred or are in the process of being made. Meanwhile, the park service is continuing to work on a long-term strategy for visitor services at Kettle Falls. 🌐



Interim mosquito measures in place for Kettle Falls area

I say summer camping, you say mosquitos. Early memories of swatting them away, followed by discussions about whether some people get bit more than others. For the record, about 20 percent of people are more delectable and get bit more consistently.

In the upper reaches of Lake Roosevelt, however, mosquito infestations led to concerns of the West Nile Virus (WNV) disease being spread in the Kettle Falls area. Through monitoring conducted by the National Park Service (NPS) with the Washington State Department of Health, WNV was identified once in Stevens County during the summer of 2016. In other areas of the state, WNV has been found in various and changing locations for over 10 years.

Lake Roosevelt staff has developed an interim measure to deal with mosquito populations while working with the public to develop and implement an integrated pest management plan. The interim measures include the following components:

- Surveillance (monitoring levels of mosquito activity, and where virus transmission is occurring),
- Reduction of mosquito breeding sites,



- Possible control of both mosquito larvae and adult mosquitoes, including use of pesticides and biological methods, as indicated to be necessary by surveillance results, and
- Community outreach and public education.

The Zika virus, which has also been in the news, is not considered a threat in Washington due to low wintertime temperatures.

The best proactive steps individuals can take is to do what the CDC recommends and parents have said for years: use insect repellent and wear protective clothing to prevent mosquito bites. 🌐

EPA Remedial Investigation updates

Over a decade has passed since EPA reached agreement with Teck to conduct an Upper Columbia Remedial Investigation and Feasibility Study (RI/FS) to identify the nature and extent of contamination, and assess possible risks to human health and the environment.

Each newsletter carries an update. To learn about the history of this investigation and what's been learned, visit our Public Guide at www.lrf.org/2015publicguide.

Residential Soil Sampling

In addition to sampling and residential soil cleanup activities that took place in 2014-2015, a new round of soil sampling occurred in 2016. Extending through the river valley as far south as China Bend, 144 residential properties were sampled. Results were sent to landowners in April 2017. EPA found lead in sampled soil above 600 parts per million at six properties.

White Sturgeon Sampling

A Lake Roosevelt fishery success story has been using hatchery supplementation to rebuild white sturgeon populations. In 2017, success reached a point that Lake Roosevelt Fishery co-managers decided to allow a recreational and tribal subsistence fishery catch for hatchery white sturgeon (see full article in this newsletter).

As part of opening a hatchery white sturgeon fishery, a determination also needed to be made if they are safe to eat. To answer this question, sampling of 72 hatchery white

sturgeon of different sizes and from various locations occurred in the summer of 2016. Fillets were taken from the fish and combined into composite samples for analysis. A draft data summary has been reviewed by EPA and is in the process of being revised and finalized. Data reviewed by WA Department of Health supported reopening of the hatchery white sturgeon fishery, placing them in the healthy choice category along with kokanee, rainbow trout, and lake whitefish.

Mussel and Crayfish Sampling

The main purpose of this sampling is to investigate possible human health and ecological risks of chemicals concentrating in tissues of fresh-water mussel and crayfish. In the spring and fall of 2016, samples were collected at various depths throughout the river/lake system. A draft data summary report is due for EPA review in 2017.

Bossburg Flats

2011 beach sampling showed high levels of lead in sediments at Bossburg Flats Beach, which is located adjacent to the historic remains of the Bossburg town site about 4 miles north of Evans campground. As a result, additional sampling took place on beaches and upland areas in a 6-mile river corridor in 2015. As reported in the final data summary report approved by EPA in 2016, results showed the highest lead levels are localized in the area of the historic Bossburg town site. 🌐

Ecology recommends additional air quality monitoring in the upper Columbia River Valley

In March, the Washington Department of Ecology recommended to EPA additional air quality monitoring in the upper Columbia River Valley.

In response to requests from residents in the area, Ecology reviewed existing air monitoring data. They used data that was last collected in 2009 from a station near Northport and more current data from Canadian stations along the Columbia River Valley. Their program specialists concluded readings for lead, arsenic and cadmium remain above natural conditions.



While Ecology does not believe air quality conditions pose an acute health risk to residents, the agency concluded that renewed monitoring is appropriate to enable an accurate assessment of potential ongoing risks. In addition, Ecology considers this work to be a necessary component of the human health risk assessment that is part of the 2006

settlement agreement between EPA and Teck American to conduct an Upper Columbia Remedial Investigation and Feasibility Study (RI/FS).

See the RI/FS Updates in this newsletter for the status of this investigation. 🌐

White sturgeon fishery reopens

CONTINUED FROM PAGE 1

the border. And finally in 2011, the Washington program transitioned to using wild caught larvae that provide greater genetic diversity.

Juvenile Survival Still a Challenge

While sturgeon released into the system are doing well, naturally reproducing sturgeon are not making it to adulthood.

Specifically, they fail to survive to their first fall.

Researchers speculate this is due to a combination of factors, including changes in water flow due to hydropower operations (e.g., lower summer flows), habitat alteration, predation, contaminants and food availability. Until this bottleneck is successfully addressed, the need for supplementation will likely continue. 🌐

Rules of the road for white sturgeon fishing

Visit the WDFW web site for detailed Lake Roosevelt white sturgeon fishing regulations. Go to www.lrf.org/sturgeonfishing.

Season: There are two seasons and areas when angling is allowed:

Season 1: From Grand Coulee Dam to China Bend Boat Ramp (including the Spokane River): Open 7 days a week May 27 through September 17.

Season 2: From China Bend Boat Ramp upstream to the international border. Open seven days a week August 1 through September 17.

Daily limit: One sturgeon with an annual limit of two.

Catch Size: Only retain sturgeon between 38 inches and 63 inches fork length. Fork length is measured from the tip of the snout to middle of the fork in the caudal fin (tail).



Historic photo of sturgeon caught on upper Columbia

Recording: All harvested sturgeon must be recorded on a Catch Record Card (Catch Code 549). And all anglers are encouraged to record the pit tag by stopping at the fuel

station located at the intersection of highways 20 and 395 where a pit tag wand is available. Wave the wand over the dorsal musculature on the left side of the fish and the scan will automatically be recorded.

Cleaning: Do not use Lake Roosevelt National Recreation Area's fish cleaning stations. They are not designed to handle the skeletal mass and scutes of the White Sturgeon. Take sturgeon home for cleaning and disposing of remains. Do not clean or dispose of any remains in shallow water or along the shoreline as this creates unsafe and nuisance conditions for visitors and wildlife. 🌐

Lake Roosevelt recreational fishery continues to excel

CONTINUED FROM PAGE 3

managers are an on-going and an essential part of working together to minimize impacts.

Fishery managers from the Spokane Tribe, Colville Tribe and WDFW are also equally committed to conservation, enhancement and restoration of native species. 2017 was an exciting year for them because the white sturgeon recovery program opened a fishery season for hatchery sturgeon.

Support the Creel

Creel surveys, tagging and radio telemetry are examples of on-going research and evaluation managers do to strike an

effective balance. Program funding for research, management and stocking comes from the Bonneville Power Administration (BPA) Fish and Wildlife program as part of mitigating the effects of Columbia River dam operations.

Accurate and useful creel data is the key for the continued success of the Lake Roosevelt Fishery. All anglers are encouraged to participate in the creel survey. When creel clerks interview you, they take up as little of your time as possible. The data collected is a valuable tool used by managers to develop strategies to sustain and improve the fishery for all anglers.

Spokane Tribe teams up Spokane Indians Baseball to rally for redband



Redband trout are a native species with home turf on the Spokane River and upper Columbia. They're hard fighting, never quitting, resilient and adaptive under any circumstances. They are also struggling to survive in a fast changing world.

The tribe and the Spokane Indians baseball team have partnered with the City of Spokane and local non-profits to rally public support for the redband. At a news conference at the end of June, Spokane Tribal Business Council chair Carol Evans called the redband a bridge to "... a land where my ancestors lived." A time and a culture that taught us "The river isn't something we owned, it was a gift."

For Brent Nichols, Spokane Tribal Fisheries Manager, it was also an opportunity for healing. Randy Peone, an avid fisherman and member of the tribe, died in an automobile accident in December. The fisheries department had already decided to dedicate a new research vessel "Big Dog," an affectionate nickname for Randy, in his honor. Said Brent, "When I saw the logo the baseball team was putting together to rally for the redband, I knew it needed to be on the boat with Randy. He would have loved it."

This summer, the baseball team is going all out, introducing:

- an alternate jersey and hat to be worn by the team five times,
- a redband headband to be distributed at games and used to cheer the team on,

- hats and jerseys that can be bought on line or at the team store to help carry the message to the community,
- educational messages and programs at ballgames, schools and community events.

By working with the Inland Northwest Community Foundation, the team will channel contributions and a portion of proceeds from redband merchandise to fund organizations working on the river. This will help the tribe work with community partners to rally for redband. 🌟



New research vessel

Student Discovery Week 2017

Each May the Forum offers Student Discovery Week. This year, the Forum partnered with the National Park Service River Mile program to host this event. Said Andy Dunau, the Forum's Executive Director, "This is a great way to leverage resources. Janice Elvidge and Dorea Martin with the park service were great to work with, bringing new ideas and

energy to the program."

This year, natural resource managers from 11 agencies and groups hosted discovery zones, each focusing on ecological, social and economic complexities of Lake Roosevelt's watershed. Over 220 students participated. 🌟



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

Paper vs. Web? It's Your Choice

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

Get On The List

THE LAKE ROOSEVELT FORUM NEWSLETTER is a free publication. If you'd like to be added to our quarterly mailing list, please call us at 1-509-535-7084 or write us at the address listed above. Be sure to spell out your name and street address. Don't forget to include your zip code. 🌟

