

\*The Watershed Wrap is now the q'e'yminn he 'ulhsikwe'n. The translation in the Coeur d'Alene language is, "about the Watershed". The term for watershed means literally everything belonging to the watershed: the water, people, plants, fish, wildlife, cultural uses and air, as well as the impact of our activities!

FALL/WINTER 2018

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*Semi-annual newsletter from the Coeur d'Alene Tribe's Natural Resources programs describing watershed management efforts. Offering readers food for conversation and paper for wrapping.*

## SUCCESSFUL PIKE REWARD PROGRAM CONCLUDES

*By Angelo Vitale, Fisheries Program Manager*

For the last three years, the Coeur d'Alene Tribe has sponsored a program that pays anglers to harvest northern pike in the southern end of Coeur d'Alene Lake. The program was developed in an effort to collect data on northern pike and is in support of the larger efforts to restore a harvestable cutthroat trout fishery in the Coeur d'Alene Basin. While cutthroat recovery will continue in full force, the pike reward program officially came to a close on September 30, 2018.

Historically, migratory cutthroat trout were prevalent throughout the Coeur d'Alene Basin in large quantities and sizes; reaching in excess of five pounds. "According to our oral stories as well as the writings of early settlers we can tell that our waters were teeming with cutthroat. One account mentions how our people would fill our canoes within just a few hours of fishing," said Caj Matheson, Director of Natural Resources for the Coeur d'Alene Tribe. "Even at the time I was a child we would catch and eat good amounts in Benewah Creek," he added.

The ability of long-lived cutthroat to freely utilize areas of the lake, where there was little threat of predation and little competition for space and food, was paramount to achieving this unprecedented growth. "Overfishing, degradation

of water quality, changing land uses and alteration of the fish community in the lake have all played a part in the demise of this important fishery," said Angelo Vitale, Manager for the Tribe's Fisheries Program. "We now only have about 25 adults returning from the lake to spawn in Benewah Creek."

"When the Jesuits were trying to convince our people to move from the Old Mission down to the DeSmet area, they claimed a day and time was coming when we wouldn't have our salmon or our trout," said Matheson. "We didn't really buy it, and I'm not sure if even the priests making this claim thought of it as a literal prediction, but here we are. Now we must do what we can to prevent that from becoming a complete reality," he added.

Cutthroat trout are an important fishery in this region. A recent survey of anglers indicated significant public support for recovering a harvestable cutthroat population in Coeur d'Alene Lake. "The problem we've had with our recovery efforts has been the presence of northern pike in our system," said Vitale. "Our research has indicated that they feed primarily on kokanee and cutthroat, often killing more than half of all adult cutthroat that are returning to area streams to spawn," he said. The end result is that less than 2% of all cutthroat trout that enter the lake are able to survive in order to produce the next generation.

Since their illegal introduction to Coeur d'Alene Lake in the mid-1970s, northern pike have become a voracious apex predator, exerting an

undue influence on other preferred fisheries. They have decimated cutthroat populations and have made their way downstream into Washington where they have had similar impacts. The State of Washington and other government entities consider northern pike an invasive species. In the Coeur d'Alene Basin, the Tribe has been actively engaged in programming to limit their impacts on recovery efforts and to better understand their movements and behaviors.

The pike reward program was a research effort that went into effect in October 2015 to encourage anglers to harvest pike from the southern end of Coeur d'Alene Lake. The Tribe paid a reward of \$5 for each fish turned in to a check station that was located at the Heyburn State Park Headquarters. An additional reward of \$50-\$1,000 was paid for pike having a special tag.

The results have been successful. More than 1,130 pike were turned in by 148 anglers. The anglers logged no less than 429 days fishing from the inception of the program through the end of September this year. This resulted in more than \$8,000 being paid out to anglers with the highlight coming from a \$1,000 payout to a Fairfield, Washington resident who was fishing with his two sons in Heyburn State Park in June 2017.

According to Dr. Jon Firehammer, fisheries research biologist for the Tribe, the reward program has provided valuable information for management. "We've been able to recreate the movements of these pike in the southern end of the Lake and now know that we are dealing with a highly mobile predator population," he said. "We also see that the nature of these movements relative to spawning and rearing habitats creates a situation where encounters with trout and other potential prey can occur over a large contiguous expanse of the lake," he added.

"There's still much more to be done and much more to learn," said Vitale. "The interactions of these fish species are undoubtedly complex, and minimizing the contact between native cutthroat and pike will likely take years and a lot of creative thinking. In the meantime, we are grateful to have successfully completed this most recent step and the angler community has been an incredible partner to work with."

## FISHERIES PROGRAM RECEIVES GRANTS TO EXPAND RESTORATION OPPORTUNITIES THROUGHOUT THE COEUR D'ALENE WATERSHED AND BEYOND

*By Thomas Biladeau, Habitat Restoration Biologist*

In 1991, the Coeur d'Alene Tribe initiated a lawsuit to compensate for the damages to natural resources in the Coeur d'Alene watershed due to mining activities. In 2007, the first settlement was reached and the Tribe, along with the US Dept. of Interior and the USDA (the Trustees), developed an Interim Restoration Plan and initiated a number of restoration projects within the Coeur d'Alene River corridor. By 2011, a final major settlement was reached and the original recipients, along with the State of Idaho, began developing a final plan under a collaboration known as the Restoration Partnership.

In May of 2018, the Trustees released the final Restoration Plan which outlines the framework for Natural Resource Damage Assessment Restoration (NRDA) activities to begin. At this time, the Restoration Partnership made available approximately \$140 million for project implementation to restore and mitigate lost resources due to mine waste contamination.

The Coeur d'Alene Tribe Fisheries Program conducts a variety of restoration projects, the majority of which are funded through the Bonneville Power Administration. The Restoration Partnership has provided opportunities to expand the scale and magnitude of the current restoration program and to initiate projects to help restore natural and culturally significant resources lost throughout the reservation and beyond.

The following are two of six Coeur d'Alene Tribal projects that were awarded funding through the Restoration Partnership:

### *Gul Hnch'mchinmsh Native Willow Nursery for Support of Restoration Actions throughout the Restoration Partnership Project Area*

Many restoration actions prescribed for streams, wetlands, and lakes in the Coeur d'Alene Basin Restoration Plan emphasize the habitat functions and values of native plant communities. Native willows are typically a very important part of these plant communities and the projected need for

these plants during restoration is likely to exceed their availability in the local natural environment.

Seventeen acres of what is now composed of mainly reed canary grass, will soon be a nursery for native riparian plants and willows. At least seven endemic species of willow and cottonwood will be established within this easily accessible area and used for restoration projects well into the future.



The Hepton Lake mitigation property owned by the Coeur d'Alene Tribe near the St. Joe River is the location of a planned plant nursery.

### ***Smlich Cultural Fish Harvest Opportunities***

Over 100 years ago, Hangman Creek supported a robust run of salmon and steelhead which the Coeur d'Alene Tribe relied upon for sustenance. During this same period of time, native cutthroat in the Coeur d'Alene River also provided an important food source. Due to dam construction in the Spokane and Columbia Rivers, and mine waste contamination in the Coeur d'Alene River, both of these sources of food are now unavailable to the Coeur d'Alene Tribe.



Stretch of Hangman Creek where a put-and-take fishery will occur.

The Smlich Cultural Fish Harvest Opportunities project will provide a put-and-take salmon harvest, along with access to other culturally significant natural resources for tribal members in

an uncontaminated location: the Hangman Creek watershed. During the summer of 2019, an access site will be constructed on wildlife mitigation property owned by the Tribe. In the following years, when live adult salmon are available, the fish will be transported from donor facilities to the designated stretch of Hangman Creek and planted for tribal members to harvest. The Partnership has awarded enough funding to support the transplant of adult salmon for multiple years.

## **PIKE MANAGEMENT IN SOUTHERN END OF LAKE COEUR D'ALENE TAKES NEXT STEP**

*By Jon Firehammer, Fisheries Research Biologist*

For the last three years, the Coeur d'Alene Tribe's Fisheries Program has been paying anglers to turn in northern pike harvested in the southern end of Lake Coeur d'Alene to provide information that would allow Program biologists to more effectively manage pike in this area of the lake. Pike are a non-native, invasive fish illegally introduced into the Coeur d'Alene Basin back in the 1970's and have been shown to be a serious threat to native cutthroat trout populations due to their highly predatory nature. The reward program was just one of the measures that the Tribe's Fisheries Program has initiated since 2015 as part of an overall strategy to minimize the impact of pike on native trout recovery in the lake.

The reward program was terminated at the end of September of this year, and we'd like to thank all the anglers who participated in this venture. The information that was gained with their help proved instrumental for the ongoing development of management strategies in the lower end of the lake. For one, we found that pike move extensively across the southern end; some fish were found to move all the way from Benewah Lake to north of the bike bridge in Hidden Lake. This suggests that efforts to control the pike population must address the entire southern end because reducing pike numbers in one location, such as Chatcolet Lake, could readily be offset by pike moving in from nearby areas. We also found that the pike population in the southern end may total upwards of 2500 fish in any given year. The estimated size of this population is much greater than the pike population found in Windy Bay, where annual suppression efforts have already been

instituted, and accordingly much more effort will be required in the southern end to effectively control this population.

One strategy for increasing the efficiency of management efforts in the southern end would be to identify where pike congregate to spawn in the spring. Spawning pike prefer shallow water areas with extensive vegetation for laying their eggs. Though this type of habitat is widespread in the southern end of the lake, the identification of localized, core spawning centers, if they exist, would help focus suppression efforts.

Thus, this fall the Fisheries Program is planning on surgically implanting radio-tags into twenty-five pike across the southern end of the lake, and tracking these fish over the winter and spring to find out where they go. Radio-tags work by emitting a certain frequency, and by using an antenna that is hooked up to a receiver you can ‘tune in’ to this frequency to determine where it is coming from (similar to tuning your car receiver to a radio-station that is in the vicinity). By using this technology, the Fisheries Program will be able to evaluate whether many of the tagged pike are found concentrated in a few locations in the spring suggesting spawning centers.

Because the additional information obtained from this radio-tagging study will greatly help the Tribe’s Fisheries Program with its pike management endeavors, we are again asking anglers for their help. If you happen to harvest a radio-tagged pike, you can retrieve the tag and mail the tag back to the Fisheries Program for a \$25 reward. Our program can then re-implant the tag into a different pike. A tagged pike can be recognized by a wire coming out of its belly and trailing along its underside. This is part of the tag so please don’t clip it thinking that it is fishing line because it will render the tag inoperable. When you are cleaning the fish, just pull the main part of the tag out of the body cavity and the wire will slip right through the body wall. A

### Angler Alert!

If you harvest a radio-tagged pike you are eligible for a \$25 reward when you return the tag to the Fisheries Program in Plummer.

radio-tagged pike should also have another external colored tag inserted near its top fin with a readable number on it. Even if you don’t happen to harvest the fish

but release it back into the lake, write down this number and give us a call. Knowing where this fish was caught will also provide useful information on its movements. All of this information will be included on placards placed at Heyburn state park headquarters and at boat ramps in the southern end of the lake for a reminder.

## TRIBE, AGENCIES AND STUDENTS COME TOGETHER TO EXPLORE THE WATERSHED IN YEAR-LONG CONFLUENCE PROJECT

*By Laura Laumatia*

Nothing helps us understand our watershed better than exploring it from mountaintop to Lake Bottom. At least that’s the belief of the partners from the Coeur d’Alene Tribe, Kootenai Environmental Alliance (KEA), Idaho Department of Environmental Quality and twelve area high schools who have kicked off another year of wading into scholarship and research focused on our area waters.

The Confluence Project has been a multi-year partnership between seven north Idaho schools that was originally launched by the University of Idaho, but when grant funding ended, was “rehomed” in Coeur d’Alene with the administrative support of (KEA). Technical staff from both the Tribe and IDEQ’s Lake Management programs and the UI Community Water Resource Center work with teachers to implement a hands-on curriculum that focuses on student exploration of water quality and quantity issues in the Basin. This year’s students will participate in three field trips, including water quality testing, snow science, and groundwater exploration. Using standard field tools, they will collect and share data with the other schools. Through these experiences, they see how issues like changes in precipitation, water, and land use impact the health of our streams, rivers and lakes.

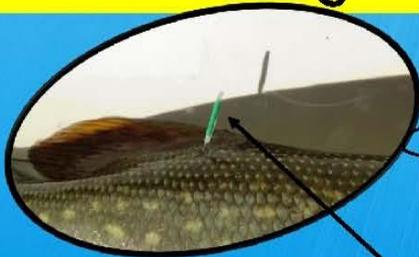
The project culminates in the students identifying an issue to research that is of importance to them, their communities and the broader ecosystem. Once they have gained a thorough scientific understanding of the issues, they propose solutions. These solutions will be presented at the Second Annual Youth Water Summit on Tuesday, May 21<sup>st</sup>.

# ATTENTION ANGLERS

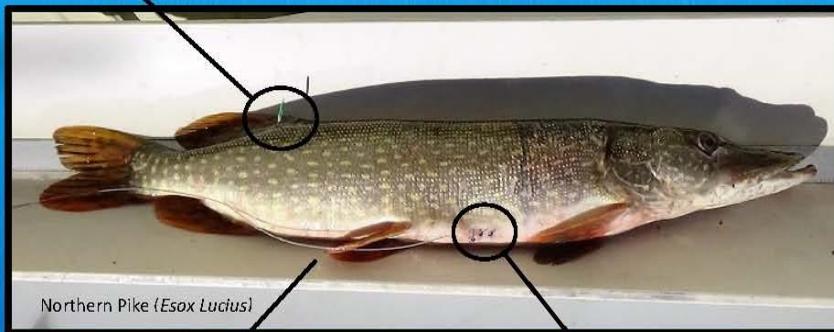
## \$25 REWARDS

Northern Pike have been radio-tagged in this area to identify spawning locations in the southern end of Lake Coeur d'Alene that would lead to more effective management strategies. In the event that you harvest one of these fish, there is a reward for returning the radio-tag.

### How to recognize a radio-tagged pike



Tagged fish should have an external colored floy tag inserted near the dorsal fin.



Northern Pike (*Esox Lucius*)



Wire attached to a surgically implanted tag is seen exiting the abdomen and trailing along the underbelly of the fish



Mailing info can also be found on the radio tag



### What to do if a radio tagged pike is harvested?

- Record when and where you caught the fish
- When cleaning, just pull the main part of the tag out of the body cavity and the wire will slip right through the body wall. Rinse the tag with water.
- Then, drop off the tag at the tribal fisheries office on **401 Anne Antelope Ave in Plummer ID**, or simply mail it in c/o of Jon Firehammer to **PO Box 408 Anne Antelope Ave, Plummer ID, 83851** for a \$25 reward

### What to do if a radio-tagged pike is caught and released?

- Record the number written on the external colored floy tag and call the tribal fisheries office to report the number, date and location in which the fish was caught.

### Looking for more information?

Find us on our Facebook Page:  
[www.facebook.com/edatribefishandwildlife](http://www.facebook.com/edatribefishandwildlife)  
or call Jon Firehammer @ 208-686-7037



## The Director's Corner

FALL 2018



Dear Regional Partner,

The past decade has marked a growing awareness and concern regarding non-native, invasive northern pike where they can negatively impact salmon, steelhead and native resident fish within the Columbia River Basin. Issues that deserve increasing attention include the management of northern pike in source areas where they have become established and the mechanisms that promote downstream movement; the lost economic opportunities resulting from the effects of pike on preferred fisheries; education and outreach efforts; and development of coordinated, early and rapid responses to invasion.

A number of entities deserve recognition for taking proactive steps to manage and minimize risks, and build capacity for an effective, coordinated response to northern pike. These include a growing list of tribal and state resource managers, federal agencies, and public utility districts that are fully engaged in these efforts. The Northwest Power and Conservation Council's 2014 Fish and Wildlife Program included a good foundation of principles and general measures for addressing non-native and invasive species. Interagency forums are providing an important venue for organizing management efforts, prioritizing research and monitoring, pooling funding and resources, and developing consistent messaging to the public.

The Coeur d'Alene Tribe has pursued its own research and targeted suppression efforts for non-native northern pike to benefit native westslope cutthroat trout populations that have been adversely affected following their illegal introduction in Coeur d'Alene Lake. The early responses have been promising. Localized suppression efforts have reduced pike numbers in Windy Bay following several years of spring gill netting and survival rates for adult and juvenile cutthroat have increased dramatically. Notably, the angling public has expressed broad support for both native species conservation efforts as well as for management strategies that aim to reduce negative impacts of pike on more desirable fisheries.

In this context, the Coeur d'Alene Tribe is planning to expand suppression efforts beyond Windy Bay to reduce northern pike numbers within the exterior boundaries of the reservation. We will begin implementing in earnest a large-scale suppression strategy in early 2019 to remove northern pike from the southern end of Coeur d'Alene Lake. The aim is to bolster the production of culturally important species like westslope cutthroat trout and threatened bull trout that enter the southern lake from large rivers and myriad smaller tributaries, and to reduce predation on other popular sport fisheries.

This strategy aligns with the overarching mission of the Tribe as caretakers of the natural resources entrusted to them by the Creator - to promote the recovery of native fish populations to sustainable and harvestable levels for the benefit of future generations. We also see this strategy as an important component of a coordinated regional approach to managing non-native and invasive species and protecting the significant investments being made in salmon, steelhead and native resident fish conservation. We invite your support and comments as regional partners in this endeavor.

Sincerely,

Caj Matheson  
Director, Natural Resources Department

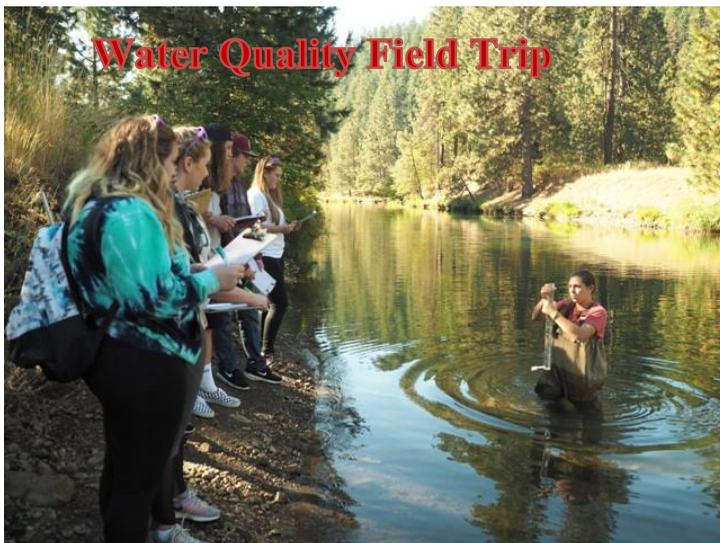


Last year's Youth Water Summit was attended by more than 400 high school students, as well as 100 judges from area natural resources agencies and community leaders. The Summit gives the students the opportunity not only to share their research in a professional setting, but to engage with professionals and learn about academic and career opportunities in environmental fields.

Seeing the student research is a highlight for teachers and the agency staff. Past projects have focused on subjects like the impact of declining snowpack on hydropower generation, techniques that might be able to mitigate metals in Coeur d'Alene Lake, and the impact of pollutants on zooplankton (the tiny creatures that provide food for our trout and salmon). Student surveys indicate that participants express an increased interest not only in environmental issues, but in careers in these fields.

The Confluence Project has received generous funding for the past two years from the Women's Gift Alliance, the Kootenai County Aquifer Protection District, the Coeur d'Alene Tribe, and Alliance Data. The funding covers transportation and materials, and helps school districts cover the costs of substitutes during the field experiences.

This year, the Tribe is especially excited to be working with both St. Maries and Lakeside High School, who are returning to the project after a hiatus due to staff changes. We look forward to wonderful water experiences with our community! If you are interested in volunteering as a judge, or have questions about the project, please contact Laura Laumatia ([lLaumatia@cdatribe-nsn.gov](mailto:lLaumatia@cdatribe-nsn.gov)) or Marie Schmidt ([mschmidt@uidaho.edu](mailto:mschmidt@uidaho.edu)).



## LANDOWNER INTERVIEW WITH JOHN BAUER

By Stephanie Hallock, *Habitat Biologist*

The Coeur d'Alene Tribe Fisheries Program recently started a multi-year project with Lake Creek landowner John Bauer. I recently sat down and talked with John about the project and his thoughts on our efforts to improve habitat to benefit westslope cutthroat trout.

As we started our interview, John and I had a clear view, through his kitchen window, of the beautiful farm fields and mountains on the south side of Mica Peak that make up the upper Lake Creek Watershed. The tamaracks had just turned a brilliant yellow making the trees glow in the sun. We could also see a new culvert that was just installed by Tribal staff working in the Fisheries Program. The new fish friendly culvert is one of many tasks we have agreed to complete in order to improve fish habitat on his property.

We talked about how beautiful the fall weather has been before discussing why John chose to settle in the area. He moved to the area in 1976 after finishing with college (he has had a long career in the Spokane area as a consulting engineer). He was looking to stay in the area - his mother's family hails from nearby Valleyford, Wa - and he saw that this property was for sale. The natural beauty of the area and abundant resources were a perfect fit for his family. Though there was electricity, there was no telephone and no all-season road. He placed a single wide trailer on the property and the rest is history.

John talked about some of the interesting history of the area that preceded his arrival. From the 1930s to the 1970s, the Cruise and Coopersmith families ran sheep in the late spring through the summer along thousands of acres of the upper Lake Creek watershed. He mentions that there was also a saw mill on the property that was used to manufacture lumber from the trees harvested off the hills nearby. The mill burned down before he moved there, but John still plows up metal pieces when he works his fields. The logs and lumber were moved down to Coeur d'Alene Lake via a narrow gage railroad which terminated at the north end of his fields. After hearing all of this, I can't help but think of how my coworkers and I will be part of a new chapter in the history of this place.

John's family raises timothy hay on his lands which run along either side of upper Lake

Creek. He also selectively thins his forest lands which are bordered by large timber company holdings. He says what he likes most about the area is the privacy. His family values being able to take advantage of year-round activities outside, including hunting, hiking, cross-country skiing, and riding ATVs. He isn't able to fish because the streams have been closed to fishing since the early 1990s. But he used to fish the creeks when they were open and he hopes these joint efforts with the Tribe will help make that happen soon.

John grew up in Spokane on a farm where he developed a strong work ethic. He points out that successful farmers have to be good stewards of the land. Controlling soil erosion is important for all farmers. It effects crop production and is bad for fish. He says that there is a "state of the art" on how you leave your ground over winter to protect against soil loss. When he first bought the property, John had to repair lost farm land where severe erosion had caused deep gullies to form. This had occurred in areas that were left with no roots or crop residue. He mentions that cover is very important in minimizing soil erosion. John believes that "effectively managing the land is an important part of living here".

John learned of the Tribe's efforts in the Lake Creek Watershed through a number of outreach activities over a period of years: attending informational meetings, public workshops, and witnessing first hand some of the habitat restoration projects that were completed nearby. He became more interested in what was going on when the streams on his property were closed to fishing; a management action that was deemed necessary to allow westslope cutthroat trout to rebound from their depressed status. In the late 1990s, the Tribe started completing fish population surveys on his property and this also increased his awareness of the issues as data was shared back and forth.

We next discussed the collaborative process that is part and parcel of these projects, and the benefits he envisions for both the fish and himself as a landowner. He mentions that being able to take advantage of the financial, labor, and equipment resources offered by the Tribe has made this project possible. Many landowners simply do not have these resources.

From his perspective, the goal for our project is to improve water quality and the health of the riparian area adjacent to his agricultural lands. He wants them returned to a more natural state by

planting trees to eliminate the reed canary grass. (Reed canary grass is a non-native species that has come to dominate riparian areas in the west. One way to manage the grass is to shade it out.) To date, the Fisheries Program has planted and fenced 60 aspen trees (to protect them from wildlife browse), and we plan to plant another 560 next year. John's long-term goals are to continue to use the property for agricultural and forest production while maintaining a good riparian zone that is fish friendly and healthy.

Toward the end of the interview, John shares his admiration for the broader vision that the Tribe's Fisheries Program has for the Lake Creek Watershed: to protect the water quality and improve stream habitats, from the headwaters all the way down to Windy Bay, so that cutthroat trout can recover and sustain a fishery for future generations. He feels that this insight is especially important to smaller landowners living in the area since the watershed is much larger than any single property.

As I drive over the new culvert to leave, I can't help but be thankful that there are ways that land managers and landowners can all work

together to improve the water quality in the watershed while respecting the needs of everyone. Landowners like John Bauer are an inspiration!



A newly installed culvert in upper Lake Creek near the Bauer residence will open more than 1.5 miles of habitat to cutthroat trout migrating from Coeur d'Alene Lake during their spring spawning run.

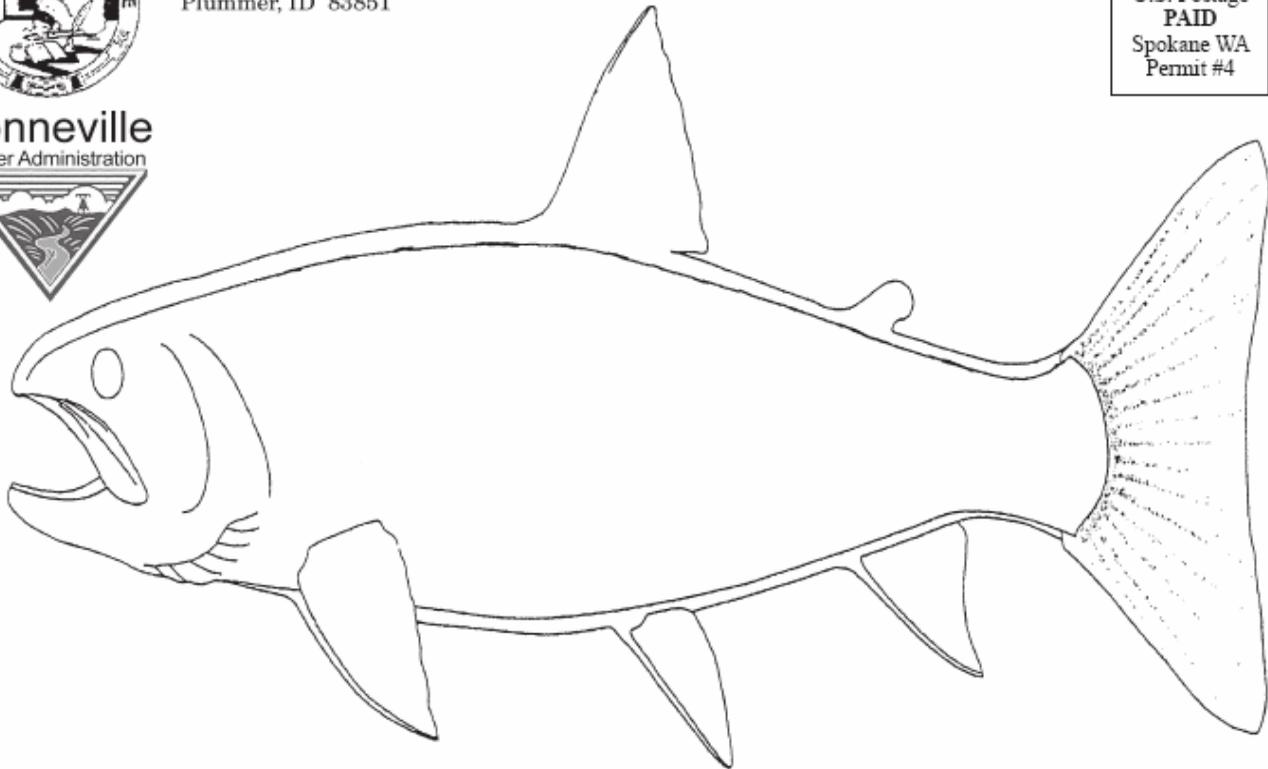


Members of the Coeur d'Alene Tribe conduct a canoe blessing ceremony in late October as part of the Water Potato Celebration held at Hawley's Landing, Heyburn State Park.



Fish, Water And Wildlife Program  
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The Coeur d'Alene Tribal Fish and Wildlife Programs work in a variety of cooperative, governmental and educational arenas in efforts to protect enhance and restore our fish and wildlife resources. This publication is intended to provide all people interested in Fish and Wildlife of the Coeur d'Alene Reservation information about our program, and to solicit your support as well as constructive criticism. Thank you for your interest.



*To see more photos and to be the first to know about events happening in our community follow us on the Fish & Wildlife Facebook page @cdatribe.fishandwildlife*