

WATERSHED WRAP

Semi Annual Newsletter from the Coeur d'Alene Tribe's Fish & Wildlife Program describing watershed management efforts. Offering readers food for conversation and paper for wrapping!

Autumn Equinox / Winter Solstice 2011

(Vol. 13 No. 2)

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.

Outreach and Education

By Gina Baughn and Bobbie White

Since the last newsletter we're busy organizing activities such as the annual Fishing Derby, assisting in the planning of Culture week, and Rockin the Rez. We are looking forward to our planning effort for the next event, Water Potato Day, to be held October 26-27 at Benewah campground in Heyburn State Park. Please feel free to call us for more details as we get closer to the dates.

We are happy to report that we received notice on May 6th, that we were the recipients of the BPA-Tribal Financial Assistance Grant in the amount of \$10,000. Work on this grant will directly involve students in camas research and expose them to restoration science, improve public access to restoration sites through construction of walking bridges and interpretive trails signs, and organize a community camas-bake. We hope the camas celebration grows into an annual event to highlight the importance of this traditional food to the Coeur d'Alene People.

This year's Water Awareness Week held during the second week of May was a great success, with five local schools and a combined 252 student participants. The Fisheries Program

joined efforts with other tribal programs and departments including Wildlife, Forestry, Water Resources, and the Coeur d'Alene Language Department, as well as, the University of Idaho Extension Office to allow students to rotate through informational stations with opportunities to see how Tribal Natural Resources staff trap and tag fish, age and measure trees, monitor water quality, identify plants, address erosion issues, and many other engaging activities. This event also included welcoming addresses from tribal elders as well as traditional drumming and singing activities.



Banks full at the Worley Trout Pond

The 2011 Trout Pond Fishing Derby held on Thursday, June 23rd was a great success with more than 83 participants signing in to fish and compete for prizes. We had participants lining up well before it even started to collect on the 40 free fishing poles that were donated by Cabelas! In our kids competition, the largest fish was over 1 ½ pounds. In the adult competition, the largest fish caught surpassed the 5 pounds mark. The event was rewarded with great weather and lots of

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participants ready to have fun. To our Summer Youth, a special “lim lemtsh (Thank You)” – they had a hand in all aspects of planning and running the derby, including shopping and distributing the \$3000 worth of prizes to the lucky participants. They did a fantastic job.

The Rockin the Rez summer program, which ran from July 11th through July 28th, was a success with nearly 200 kids rotating through three separate camps: Rockin the Arts, Life Skills, and the Science and Culture camp. The Fisheries program assisted in directing the Science and Culture camp in which kids were able to participate in activities such as NASA camp, hosted by faculty from the University of Idaho, hands-on experiments on the properties of water, and a field trip to the Museum of Arts & Culture (MAC) in Spokane, WA to see an interactive exhibit on the artist/inventor Leonardo Da Vinci. At the conclusion of the program, campers and their families were invited to participate in family fun day with an inflatable water park and barbeque held at the football field of Lakeside High school.

some of them will be back next summer to build on what they learned this year from our great staff.



Jordan Meshell and Jonathon Nomee smoking meat



Summer youth cleaning the fish trap in Benewah creek

Our Summer Intern program was a success with twelve different youth working for the different programs housed in the Felix Aripa Shi'ttsin Building. The Fisheries Program was able to take on eight of these young people and provided them with opportunities to learn about stream restoration, camas mapping and inventory, stream habitat monitoring, and fish population census techniques. We enjoyed having some youthful energy in the building and hope that

The week of June 20th we had the opportunity to collaborate on Culture Week which was held at the Rose Creek Longhouse in Worley. The public was invited as well as Lakeside and Coeur d'Alene Tribal schools' summer school programs. Our summer youth were able to participate in the camas bake spearheaded by Kim Matheson in the Language Department as well as assist in the setting up of the drying racks and meat smoking. In addition, during the week the Fisheries Program hosted a field trip to Lake Creek where students were familiarized with the Tribe's management of cutthroat trout and provided an opportunity to view and participate in the processing of fish at the Lake Creek migration trap. We can be reached at 208-686-0131. ♦



Jonathan Nomee and Jordan Meshell at the Benewah trap site.



Lower Benewah Fish Trap Update

By Daniel Jolibois, Senior Fisheries Technician

This summer season the Fisheries staff broke ground on the latest cutthroat trout fish trap. It is located just upstream of the mouth of Benewah Creek under the Highway 5 bridge. This is the forth and largest resistance board weir type of trap that we are attempting to construct so far. It is being installed with hand tools only, so many hours of personal labor is involved. Moving dirt, gravel and rock, plus driving many pins and anchors into the substrate are by far the most strenuous part of the install. All of the hard work is necessary if we want to have any chance of it holding during the high water flow conditions to come.



Willie Davis, Joseph Brown, and Darnell Pluff assisting

We have used all the help possible during the various early stages of the project and all of our summer youth had a chance to participate in some part of the construction. Many of the youth had little or no experience with the proper use of

the tools and equipment used in the construction. So with the guidance of fisheries technicians the summer youth had many first experiences in the construction process. All of the youth had a chance to participate in the ground breaking process and the install of the sill plate, the main support of the pivoting panels. Some of the youth put in considerable time with the next steps which involved moving substrate, then setting and pinning treated timbers. It was a great opportunity for them and they should take pride in their good efforts.



Youth assisting during the early stages of the trap install

The trap is expected to start catching upstream migrating cutthroat trout next spring. As this trap is very low in the Benewah system, below all tributaries, it should catch all of the upstream migrating trout. We are also challenging ourselves with making this trap catch fish that are moving back down stream into the lake after spawning. Making one trap catch fish in both directions, without problems, is challenging. Water flow through the live box is one of the critical concerns and this part of the trap is still in the design stage. Hopefully after next spring's trapping season we will be able to follow up with this projects success. ♦

For more information, please visit our websites at:

www.cdatribe-nsn.gov/fisheries
www.cdatribe-nsn.gov/wildlife

Lake Management Plan is ‘a Hit’ at the North Idaho Fair

By Sandra Raskell, Project Engineer Lake Management

Once again, the Lake Management Plan (LMP) was a hit at the North Idaho Fair which was held in Kootenai County August 24-28th, 2011. This year’s theme was “A Whole Lotta Happy” and with our give-aways and information we made a lotta people happy! The Tribe’s Hazardous Waste Management Program joined forces with Idaho Department of Environmental Quality (DEQ), the Basin Environmental Improvement Project Commission (BEIPC), Panhandle Health District (PHD), and the Environmental Protection Agency (EPA) to present to fair go-ers information on how to keep our surface waters clean and how the clean-up is working in the Silver Valley. The Tribe and DEQ will be involved in restoring the Coeur d’Alene Basin into the future as EPA continues implementing remediation projects.



Throughout the week, kids lined up along the booth to answer questions such as; “What two Rivers flow into Coeur d’Alene Lake”, “What fish are native to the Lake” or “What contaminants are found on the Lake bottom”. For each question answered a prize was given. Children, and even adults, could choose from a Frisbee with the LMP logo on it, a Riley Raccoon (PHD’s mascot teaching children healthy washing habits while living in the Silver Valley) tote, cup, or multiple tattoos, pencils or stickers. In the end we had well over 3,000 visitors to our booth.



While the children spun the “wheel of fun” adults and parents were able to view our Coeur d’Alene Basin map which was produced by the Coeur d’Alene Tribe’s GIS department. It was the focal point of the fair booth. Many thanks to all those in the GIS Department that helped out! Many visitors pointed out their favorite fishing and swimming holes, family property and of course their favorite huckleberry picking spots (shh, I promised I wouldn’t tell!). We also added pictures to the map to give a perspective of the complexities of the Basin. We included the infamous Cataldo Dredge picture, a photo of the Sacred Heart Mission, the South Fork Coeur d’Alene River bank stabilization work that has been conducted over the years, the lateral chain lakes along the main stem of the Coeur d’Alene River, and other pictures of injured natural resources.

The Fair is a great place for the Tribe to share its history, its’ needs, and its’ rich culture. At many different times I was able to share with people the impacts mining has had on the natural resources the Tribe relies on, as well as the endurance of the Coeur d’Alene’s fighting for their aboriginal lands. The booth provided for a good outlet to educate people on the fishing and boating regulations. We also were able to share information about the ‘Trail of the Coeur d’Alene’s’.

All in all, we had another stellar Fair week. We are excited to see what next year brings us at the North Idaho Fair. ♦

For more information, please visit our website at:
[http:// www.cdatribe-nsn.gov/lakemngmt/](http://www.cdatribe-nsn.gov/lakemngmt/)



Fisheries employee George Aripa standing on the new stream channel as it becomes active.

“Hnmulshench” Restoration Project Update on West Fork Lake Creek

By Stephanie Hallock, Habitat Biologist

Construction for the project began in September 2009, continued in 2010, and was completed in September 2011. Tribal employees George Aripa, Jeff Jordan, Bryan Harper, Jason Smith, Mark Stanger, and Mike Allen, Sr. were involved with the construction. New channel habitat was constructed by using imported gravels and logs to create streambed and streambanks. Rock was placed in the channel combined with logs to form riffles and pools. Logs were placed on the new floodplain to provide erosion protection and will be anchored or buried. Water was permanently diverted into the new stream channel on August 8, 2011. ♦

Keeping down the nookie in the Benawah brookie

By Jon Firehammer, Fisheries Biologist

I'd like to provide an update to the brook trout suppression program that the Tribe's Fisheries Program started back in 2004 in the upper Benawah watershed. If you remember from some of the previous Watershed Wrap articles, brook trout are not native to this region of the country but were introduced to this area as a sport fish decades ago. Unfortunately, introduced brook trout can have negative impacts on native trout species, and in some cases, have been shown to displace or 'push' native trout out of their habitats.

This ability for brook trout to 'overrun' native trout species can be partly explained by their reproductive biology and life history. For example, let's compare the reproductive characteristics of brook trout to the cutthroat trout, a native species that is of tremendous concern and importance to both the Fisheries Program and the Tribe. First, brook trout can mature and reproduce at 2 or 3 years of age, which is typically much earlier than our native cutthroat trout which tend to reproduce at 4 or 5 years. This earlier age of reproduction may allow brook trout to more quickly populate a stream that they have invaded. In addition, brook trout spawn in the fall whereas cutthroat trout spawn in the spring. Because of this difference in spawning times, the young brook trout hatch out of the gravels earlier in the spring than the young cutthroat trout. This earlier emergence gives the brook trout a competitive advantage because they start feeding earlier, and consequently are typically larger than cutthroat by the end of their first summer. However, although juvenile brook trout may be larger than juvenile cutthroat trout during their initial years, adult brook in our watersheds may not provide the harvest potential that our migratory cutthroat trout can. Our data show that adult brook trout rarely exceed 12 inches, whereas adult cutthroat trout that rear in Lake Coeur d'Alene are typically greater than 14 inches.

Because of these concerns, one of the goals of the Fisheries Program has been to minimize the negative impacts of brook trout on recovering cutthroat trout populations in our watersheds. One of the watersheds in which brook trout have been found is Benawah Creek, a watershed where a lot of stream restoration actions have been implemented to improve the suitability of rearing habitats for juvenile cutthroat trout. As an additional measure to aid the recovering population of cutthroat in Benawah Creek, the Fisheries Program has been actively engaged in annually removing brook trout from stream reaches in the upper watershed since 2004. Typically, these removal efforts have entailed a lot of hard work, whereby a crew of 3 to 4 staff members spend approximately 3 weeks in late summer hiking stream reaches and using electroshocking techniques to capture and remove brook trout. Over the last 8 years of the program,

we have removed roughly 8000 brook trout from the upper Benewah watershed, and consequently have been able to keep brook trout numbers at a reasonably low level. Our control program has not only evidently kept the brook trout population in check, but has also given us some insight that has allowed us to adapt and improve upon our program.

During our annual removal efforts, we found that the highest concentrations of adult brook trout were repeatedly located in a 1.5 mile reach of upper Benewah Creek upstream of the 12-mile bridge. This reach also seemingly has much more suitable spawning gravels for brook trout than other stream reaches located downriver. Incidentally, we also witnessed brook trout hovering over their redds (fisheries term for a trout's nest) in this reach, and we actually dug up a couple of suspected redds to uncover the buried brook trout eggs. As such, this reach of Benewah Creek may be an area where much of the reproduction for brook trout occurs each year. If we can only keep brook trout from accessing these spawning habitats, we may be able to control the population by preventing them from successfully reproducing, and may not have to invest a lot of time each year shocking a lot of stream habitat. Accordingly, we decided in 2009 to adjust our suppression strategy and installed a temporary barrier in Benewah Creek at 12-mile bridge. Thus, the brook trout that were biding their time in summer rearing habitats downriver of 12-mile bridge, waiting for the fall spawning season to arrive, were blocked when they attempted to ascend upriver to access the good spawning habitat. Hopefully, these trout were forced to spawn in the more seemingly unsuitable habitat further downriver and did not have as much success in their reproductive endeavors. Our crew still removes brook trout from the 1.5 mile stream reach upriver of the barrier, but because this reach is only a fraction of the stream distance that was covered in the past, this electroshocking effort typically requires only 3-4 days to complete which is much less than in previous years.

Data that have been collected in 2010 and 2011 are promising and indicate that our strategy may be working to keep brook trout numbers and their reproductive efforts down. For example, during the early years of our removal efforts

almost 1000 brook trout were annually removed from the 1.5 mile stream reach upstream of 12-mile bridge. Even in 2009, we still removed over 500 brook trout from this reach. However, in 2010 only 290 brook trout were removed from this reach, and in 2011 we only captured 73 brook trout. These numbers suggest a decreasing trend in the brook trout population in the upper Benewah watershed. More importantly, we have also seen a decreasing trend in the percentage of young fish removed. In 2009, roughly half of the brook trout removed were YOY (YOY means young-of-year, or, fish in their first year of life). In comparison, in 2010, one year after the barrier was installed, only 25% of the fish removed were YOY, and in 2011 only 15% were YOY. Thus, not only are the total numbers down, but there is also a lower percentage of YOY captured, which suggests that annual reproduction has been less successful since the barrier was installed. Hopefully, this trend continues into the future so that as we continue to improve rearing habitats in the Benewah watershed, these habitats will be occupied by native cutthroat and not brook trout. Also, it is encouraging that with a reduced amount of applied effort we may be still able to keep the Benewah brookies' nookie in check. ♦

Hangman Restoration Project Update

By Gerald I. Green, Wildlife Biologist

Bob Wills was a singer and entertainer popular in Texas and Oklahoma a half a century ago. He sang dance numbers and uplifting songs from a slower time that were based on common experiences. One of the songs he popularized invited a guest to stay and pass the time in neighborly company. For me, the refrain of that song has taken on a meaning that is much different than the original intent of the song:

Stay all night stay a little longer
Dance all night dance a little longer
Pull off your coat throw it in the corner
Don't see why you don't stay a little longer

One verse to that little ditty told of the troubles a guest would find if they ventured to travel to their own home during the storms and heavy rains of early spring or late fall of mid-continental North America.

Can't go home if you're goin' by the mill
Cause the bridge's washed out
At the bottom of the hill
Big Creek's up Little Creek's level

I'm familiar with this song partly because flood waters were a common occurrence in the land where my childhood chores were done. Once the high waters passed, anyone could travel about as they pleased, but while the flood waters were high it was best to stay dry in good company. So the saying "don't see why you don't stay a little longer" was an invitation not to be ignored. In my work now, however, I find that this "stay a little longer" invitation is extended not to the occasional guest caught away from home while a storm makes travel a foolish endeavor, but to the rain and flood waters themselves. In these days of rapid changes, it's the rainwater that is hustled elsewhere and in its leaving it takes with it the benefits of what could be a good relationship. It's an odd change in attitude and circumstance.

These days, I work in the Hangman Watershed where, in the last century, every effort was made to shunt the water off the landscape as quickly as possible. The intent was to improve production and raise the standard of living for those who live in the Watershed. But there were side effects to all these efforts that diminished the native diversity of the Watershed and have resulted in a flashy hydrologic cycle where flood waters flow with violent intensity. In leaving in such haste, little to no water is left to sustain the native ecosystem.

The Hangman Watershed above the Washington State Line is a classic example of a perched watershed. There is no connection between the streams of the Hangman Watershed within the Coeur d'Alene Reservation and an underlying aquifer. In comparison, the Spokane River pulls water from an aquifer that sustains its flow in August, September and October. The flow of the Spokane River level declines in the dry months, but there is enough water given to the river by the aquifer to keep the river alive. In the upper Hangman, however, once the water is rushed from the landscape and soils dry, so go the streams. And while the water rushes off the landscape during the wet season, a lot of landscape, in the form of stream sediment, is carried away with the water. The stream sediments are so high from Hangman that fish

habitats are diminished throughout the Spokane River downstream of the Hangman/Spokane Confluence.

An average flow during the dry months of August and September for the Hangman Mainstem at the State Line Gauging Station just above Tekoa, Washington, is less than 0.3 cubic feet per second. This is so low that it's not even considered to be a flow at all. A stream that once produced an abundance of resident and anadromous fish, no longer produces running water through the dry season. Unless we are able to change the hydrology of the Hangman Watershed and invite the water to stay through the dry season, there will be no native fish in the larger streams of the Watershed. The only places where fish can persist when the valley bottoms dry is in the few shaded stream reaches in the very upper parts of the Watershed where there remains just the minimum of cool, flowing water.

So my task in improving the native fish and wildlife habitats in the Hangman Watershed amounts to inviting the waters to "stay a little longer." The Coeur d'Alene Tribe owns 1,195.8 acres near DeSmet that is managed to benefit native fish and wildlife species. One of our first management tasks was to breakup or remove drain tile that was laid under the fields to drain the moisture from the soils ("stay all night stay a little longer"). The second task was to create long meandering channels to slow the movement of water so flood volumes and velocities and sediment loads are reduced ("dance all night dance a little longer"). Slow moving water across the flood plain, recharges wetlands with moisture which, in turn, supplies the water for the streams during the dry season ("Pull off your coat throw it in the corner, Don't see why you don't stay a little longer").

Last summer (2010) we completed the majority of the new 630 yard channel to connect the current entrenched channel of Sheep Creek to abandoned channels that meander for 2 miles through forest habitats. Three blockages to that channel remained and this summer we removed all those stops so the water can access that long stretch of meandering stream channel during high waters this winter. The unusually wet spring and early summer left soft soils that would not support the heavy equipment we had expected to use to complete the work. We had to wait till the soils dried sufficiently, and even then we had to position an excavator on solid ground and reach into the softer areas rather than simply push through those areas with a dozer. Once

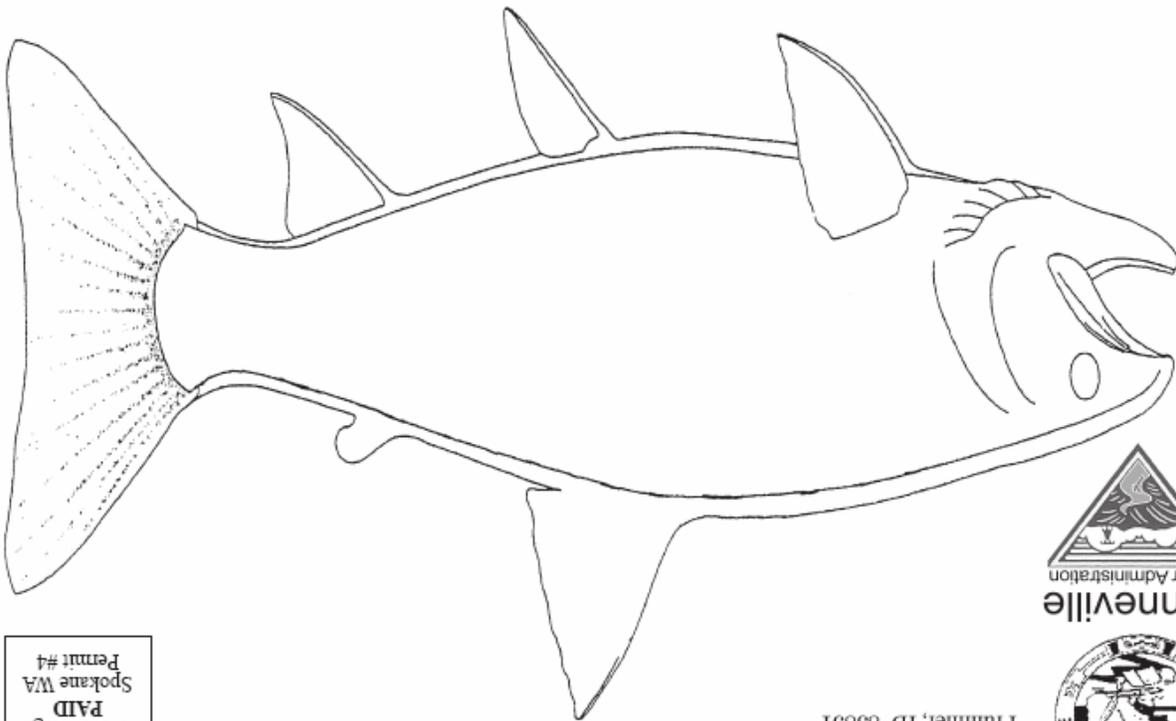
the heavy work was completed with the excavator and the exposed soils dried more thoroughly, then we were able to use a dozer to clean up any rough areas left by the excavator.

A layer of gravel was placed in the bottom of the constructed channel, seed from native grasses were broadcast over the banks that were shaped by the dozer, and coir fabric was rolled out and stapled over those seeded areas to prevent excess erosion and keep the grass seed in place.

The first waters to move through this newly constructed channel will be flood waters that overflow this winter and next spring from the straight line, entrenched Sheep Creek channel. Next summer we will place a bladder over the entrenched Sheep Creek channel to direct the low flows into the newly constructed channel. Once vegetation establishes along the new channel, we will close off the short, straight, deep channel that directs the water off the landscape in a hurry and Sheep Creek will once again meander across the Hangman Valley bottom. The volume of water flowing through Sheep Creek will remain the same. That water will simply take longer to move through the system, it will effectively “dance a little longer.” ♦



CELEBRATE WATER POTATO DAY, OCTOBER 28, 2011!



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