

# WATERSHED WRAP

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

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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.



*New employees – Tom Biladeau and Jason Sholtz*

## **Shootin' the BS – Biladeau and Sholtz** *By Tom Biladeau and Jason Sholtz*

**M**y name is Tom Biladeau and I am thrilled to be a part of the Fisheries crew within the Coeur d'Alene Tribe. I started working for the Tribe on January 30, 2012. The past month has been busy; getting ready for the field season, traveling to various conferences, and learning the ropes here in Plummer. However, it has already been a rewarding experience. Thank you to everyone here in the Natural Resources Department for being so gracious and patient with me as I adapt to this new work environment.

I have lived in Idaho all my life and worked in fisheries for the past twelve years. I am a graduate from the University of Idaho with degrees in both Ecology and Fisheries Resources. Most recently I was a Fish Biologist for the US Fish and Wildlife Service in Orofino, ID. I led field crews in charge of monitoring the status and life history of Snake River Fall Chinook salmon. Previous to that, I worked for the Idaho Department of Fish and Game in Lewiston working on various fisheries projects, most of which were associated with resident fish species. With that, it is nice to be working again with one of Idaho's most precious treasures, the Westslope cutthroat trout. I am especially thrilled to be working and living in an area

of Idaho that has so much to offer in the realm of natural resources. I reside in Moscow with my wife and two daughters. We all love spending time in the outdoors camping, fishing, hunting, and whatever else we can find to do outside.

I hope to be able to provide The Coeur d'Alene Tribe with the experience and enthusiasm I have in the field of fisheries to help recover the Westslope cutthroat and Redband trout throughout their native ranges. Thanks again for the opportunity to work with such a progressive organization within the field of fisheries. Keep your feet wet! – TB

*There were these two Engineers who decided they would go moose hunting in the backwoods of North Idaho. As it happened, they lucked out and got a moose. Unfortunately, they were about a mile from their truck. They were having a tough time dragging the animal by the hind legs when a Wildlife Biologist happened upon them.*

*He said, "You know, the hair follicles on a moose have a grain to them that causes the hair to lie toward the back. The way you are dragging that moose, it increases your coefficient of friction by a huge margin. If you grab it by the antlers and pull, you will find the work required to be quite minimal."*

*The Engineers thanked him and started dragging the moose by the antlers. After about an hour, one Engineer said, "I can't believe how easy it is to move this moose this way. I sure am glad we ran across that Biologist."*

*"Yeah", said the other. "But we're getting further and further away from our truck."*

With that, let me introduce myself; my name is Jason Sholtz, and you guessed it, I'm an engineer. Specifically, I'm a civil engineer who has had the good fortune of being recently hired by the Coeur d'Alene Tribe Fisheries Program. So, with all the biologists running around here, you might say I'm fish out of

water in fisheries. My specialty is hydrology and hydraulics, so, with a little direction from my new Bio-buddies here, I hope to contribute to the habitat restoration program that the Fisheries program is conducting. My capacity here will be to aid in the design, modeling, and construction of in-stream structures, culvert crossings, and forest road improvements, with the goal being restoration of fish supporting habitat.

My wife, 5 year old son, 2 year old daughter, and I moved to Coeur d'Alene a little over a year ago from Memphis, Tennessee. Yes, it's been an adjustment (Ya'll should have told us it snows up here). We really like it here so far, as the people here are warm and friendly and the countryside is incredibly beautiful. I particularly enjoy the many opportunities for outdoor activities in and around North Idaho, as I love to hunt, fish, camp, and go Jeeping.

I earned a Bachelor of Science in Civil Engineering from University of Memphis in 2000. Since then I've worked with various consulting engineering firms designing and managing a wide range of project types: drainage studies and major drainage improvements, water quality, airport, roadway, commercial and residential development, and environmental remediation. I am currently licensed in the State of Idaho as a Professional Engineer.

In closing, I would like to thank everyone involved in affording me the opportunity to expand my career horizons here at the Fisheries program. I hope to make a positive impact here and learn as much as possible along the way...and hopefully, with the direction of a Biologist here and there, not drag the moose the wrong way. - JS ♦



*Hybrid rainbow cutthroat trout*

### **Hybrids – Not always the greener option**

*By Jon Firehammer, Fisheries Biologist*

**T**hese days you'll see a lot more hybrid cars, like the Toyota Prius, on the road. In contrast to the conventional car engine which solely relies on gasoline, hybrid cars are powered by both gasoline and electricity. Some people are choosing to drive hybrids

because these cars get better gas mileage than conventional cars. With the trend in rising gas prices, more miles to the gallon may mean more dollars in the pocket in the long run. Others have chosen hybrid cars because they emit lower toxic emissions compared to conventional gas-powered cars and as a result contribute less pollutants to the environment. Thus, hybrid cars can benefit both the owner and the environment at the same time.

However, not all types of hybrids are considered beneficial for the environment. Take for example hybrid fish. Hybridized fish result when two different species spawn, or reproduce, together. This can happen if males and females from two closely related, but different, fish species are spawning with each other in the same location and at the same time. In the watersheds on the reservation that the Fisheries Program manages, this can happen when non-native rainbow trout spawn with our native trout species, the cutthroat trout or the redband trout. Non-native rainbow trout did not evolve in the stream habitats that support our native trout species. As a result, hybridized young that are produced when these non-native fish mix with our native fish may be less 'fit' for our stream environments. If lots of hybrid young rather than native young are produced and these hybrids are less fit, then the overall health of our native trout populations may be negatively impacted.

Recently, the Fisheries Program conducted an assessment in the Benewah watershed to examine the extent of hybridization of native cutthroat trout with introduced rainbow trout. In some cases, you can tell a rainbow-cutthroat hybrid just by looking at it. A hybrid may have a faint yellow slash on the underside of its jaw rather than the bold, distinct orange slash of the cutthroat. A hybrid also may have a spotting pattern which resembles that of the rainbow – spots distributed down the length of its body – rather than having spots predominantly near the tail fin like the cutthroat. However, to truly determine whether a fish is a hybrid requires collecting genetic material from it, like a small piece of tissue from one of its fins. Analyzing the genetic material will tell you how many of its genes came from a rainbow and how many came from a cutthroat. If the fish has a lot of genes from a rainbow then it is highly hybridized. What we found in the Benewah watershed is that while a lot of trout were still pure cutthroat trout, we did find a number of fish that were highly hybridized and had a lot of rainbow trout genes.

These results indicated that rainbows had been recently spawning with cutthroat in tributaries of the Benewah watershed. We aren't sure from where these rainbows came. They could have come upstream from Lake Coeur d'Alene. Another possibility is that, if

some private ponds that are close to the stream had been stocked with rainbows, they could have escaped from these ponds. If hybridization is the result of recent pond escapees, the Fisheries Program may be able to do something to rectify this situation. Our program can offer landowners the opportunity for sterile rainbow trout to be stocked into their ponds. Sterile fish don't reproduce, so even if they escape from ponds and get into the stream, they will not spawn and interbreed with our native trout. In fact, the Fisheries Program only stocks sterile, or triploid, rainbow trout into the ponds that they manage on the reservation to minimize potential impacts to native fish.

Similar to the win-win situation with hybrid cars, triploids as a stocking alternative can be seen as beneficial to both the pond owner and the environment. For the pond owner, triploids can still provide a fishery in the owner's own back yard, but at the same time, because of their inability to reproduce, triploids minimize potential impacts to the environment and the native fish that live therein. ♦

### **Prioritizing restoration activities**

*By Stephanie Hallock, Habitat Biologist*

**W**here are restoration actions most likely to lead to an increase in cutthroat trout populations? What areas should we focus on? Where do we begin and where do we go from here? Finding answers to these questions has been fundamental to our goal of recovering native cutthroat trout (eltumish) in several key watersheds on the Coeur d'Alene Reservation for more than a decade. We are not alone in asking these questions, and if we have learned anything, it is that the answers are not that easy to come by. So over the last few years we have been working out an approach to identify restoration projects that have the highest priority for implementation and promise to provide "the most bang for the buck".

We started to hone in on the answers when we initiated several recent, comprehensive scientific studies whose aim was to develop much of the information to direct this process. These studies including a large wood recruitment inventory that examined the conditions in more than 46 miles of streams and adjacent lands, and a forest road and fish passage assessment that described conditions associated with more than 336 miles of roads and over 400 stream crossings. These assessments have provided information regarding sediment transport to streams, fish passage barriers, how roads influence drainage patterns, stream channel characteristics related to wood (e.g., number and depth of pools), and the ability of riparian areas to provide wood to streams

to meet fish habitat needs. Understanding these watershed characteristics has given us a tool to focus our restoration efforts and evaluate how landscape processes are affecting critical habitats for fish at both large and small scales.

To help structure the process of identifying and prioritizing restoration actions we utilized a three-step process that connects watershed analyses and monitoring to prioritization through 1) setting clear goals and objectives for restoration activities, 2) using watershed assessments to identify restoration actions, and 3) prioritizing the list of actions. In our initial use of this approach, we selected Benewah and Lake Creeks to develop a list of projects. These watersheds were chosen because they have both a resident form of cutthroat trout as well as the larger, more productive migratory (adfluvial) form that utilizes the lake during a portion of their life cycle. Within these two watersheds, 12 sub-basins were delineated (3 in Lake Creek, 9 in Benewah Creek). These sub-basins encompass the distribution of cutthroat within the watersheds and contain the critical habitats for spawning and early life stage rearing.

Our first step in the prioritization process was developing objectives and criteria for describing the relative degree of impairment to the following processes in each of the identified sub-basins: sediment delivery, flood hydrology, riparian processes, channel condition, water quality, and biological productivity. The delineated sub-basins were ranked according to the overall level of impairment, proximity to restored habitats and the potential for increasing fish production. A weighted impairment value was calculated for each sub-basin, wherein a moderate impairment rating for each process was scored as 1 point and a high rating was scored as 2 points and the scores were summed. Sub-basins with the highest impairment values were considered higher priorities for restoration. We then selected 3 sub-basins in Lake Creek and 6 sub-basins in Benewah Creek and developed a detailed list of projects that focused on reducing the level of impairment for each watershed process and would meet the specific objectives that we had identified. Some examples of these projects include replacing culverts, resurfacing roads, adding large wood to streams, and conserving healthy and robust stream adjacent forests.

Each of these projects were then scored based on several criteria, including the degree to which the action addresses the causes of habitat degradation, the uncertainty associated with projected outcomes and with fisheries responses to the action, and how the project accommodates local socioeconomic goals. Many of these questions are listed below:

- What is the project’s contribution to meeting the objective for the impaired process?
- Does the project directly address a cause of habitat impairment identified in the watershed assessment?
- What is the proximity to source populations and to existing or planned projects?
- What is the likelihood of obtaining funding?
- What are the logistical challenges of the project?
- What is the certainty of project success?
- What is the education and cultural value of the project?
- Does the project have local landowner support?
- What is the project cost?

Total scores were then used to delineate those projects that were considered to have the most potential in achieving restoration goals and providing benefits for cutthroat trout recovery.

A total of 105 projects have now been identified and prioritized using this process. Approximately 49 percent of the lands with identified projects are owned by three private companies, and an additional 39 percent is owned by 18 individual landowners. Therefore, sharing information generated through this project and coordinating planning, implementation and monitoring, with the goal of increasing participation with affected landowners, becomes a critical component of meeting our goals and objectives for recovery. Cumulatively, these projects affect 26 miles of stream and riparian habitats (18.5 miles in Benewah Creek, 7.1 miles in Lake Creek), with 26 identified fish passage projects expected to result in a significant short- and long-term response. The list of projects will be used over the next several years to negotiate landowner agreements for implementation, and serves as the core of on-the-ground work over the next 5-10 years by the Fisheries Program in the Coeur d’Alene sub-basin.

*Presented at 2012 Idaho Chapter of the American Fisheries Society Annual meeting Thursday, March 8th held at Coeur d’Alene Resort, Coeur d’Alene ID themed “Non-native Species: Managing the Uncertainties.” ♦*

**Tribe, Stimson sign cooperative agreement**

*By Angelo Vitale, Fisheries Program Manager*

**T**he Coeur d’Alene Tribe and Stimson Lumber Company recently signed a memorandum of understanding with the purpose of cooperating to complete stream enhancement projects to benefit native fishes on their lands within the Reservation. The agreement was the product of many discussions taking place over nearly a year and involving many people working for both parties. Although the Fisheries

Program has negotiated many other landowner agreements to complete similar work, this is an agreement that sets the stage for on the ground projects on a large scale with significant ramifications for fisheries and water resources into the future and builds on work that was accomplished over many years.

The working relationship that has culminated in the recent agreement was fostered during several comprehensive resource assessments that were initiated by the Tribal Fisheries Program in 2007 and 2008, respectively, to describe forest road conditions, barriers to fish movement, instream habitat conditions and how wood is recruited to streams from adjacent forestlands to provide habitat for fish. Stimson as well as many other private landowners participated in these studies, allowing access to research sites for Tribal staff and providing input that helped inform and improve the work products. In turn, the cooperators in these studies received important information that described the conditions and maintenance needs of infrastructure critical to forest management (e.g., roads and culverts) and resource potentials (e.g., forest growth), as well as information about how management activities are affecting a variety of natural resources important to the Tribe. This early stage of participation was both practical and an opportunity for communicating about management goals and objectives.

*“This is the first time Stimson Lumber Company has negotiated a MOU of this kind. Stimson plans to manage our lands long term. As a result, we feel it is mutually beneficial to work with our neighbors to enhance fish habitat on the streams that flow through these lands. Stimson also has an interest in sustainable forestry, which not only seeks to provide fiber and wood products on a perpetual basis, but also seeks to manage other non-timber resources to the benefit of future generations. By working as a partner with the Tribe, both the Tribe and Stimson Lumber are demonstrating that they want to do the right thing.”*

Stimson Lumber Company

As these studies were completed, the large amount of information that was generated was translated into a list of enhancement projects and this list was then prioritized, based in part on their anticipated benefits for fish (see the article, “Prioritizing restoration activities” in this issue). As we began considering this list of projects and how to put the work on the ground, it became apparent that there were a few key landowners that we would need as partners to achieve our objectives for recovering cutthroat trout. Stimson was clearly one of these

landowners. On their part, Stimson was in the process of negotiating to purchase forestlands from Potlatch Corporation and subsequently purchased 17,252 acres, of which 16,648 are on the Reservation. As of the beginning of this year, Stimson's total ownership on the Reservation is now 39,795 acres. Of the more than 100 projects that we have identified, almost 20 are located on Stimson lands and nearly a third of the projects we want to implement in Benewah Creek are on their lands.

When this land purchase was first made public, the Tribe once again engaged Stimson – this time with a list of concrete projects in hand and the motivation to develop a cooperative agreement. The rest as they say is history. To the credit of both parties, the agreement that has been enacted is far reaching, in that it represents a commitment to not just implement a list of specific projects, but to work together into the future on enhancement projects throughout Stimson's ownership on the Reservation. It also specifies a mechanism to share the costs of this work. There is some general recognition that an effective partnership requires at least four things – communication, coordination, cooperation and collaboration. This agreement covers at least three of these bases, and we hope this leads to collaboration on a variety of management issues into the future and can serve as a model for engaging other landowners. ♦

### Forest carnivore camera stations

By Nathan Albrecht, Fish and Wildlife Biologist

Over the past year, the Wildlife Program has been working on a multi-species survey effort initiated by Idaho Department of Fish and Game. This has been a cooperative effort between several different partners in Idaho designed to detect the presence of wildlife species that either go unnoticed or are particularly difficult to find. In the summer the survey was focused on rare gastropods (snails and slugs) and beetles, and this winter's effort was focused on rare forest carnivores.

The Wildlife Program since 2006 is highly involved in forest carnivore research throughout the Ceded Territory of the CDA Tribe. This started with a systematic survey of the region with hair-snaring devices, and was followed with a fisher satellite-collaring effort. Since then, we have been consolidating all of the fisher and marten survey data into a centralized database for the region. While this current multi-species survey is a continuation of this effort, the focus of this survey focused more on lynx and wolverine.

Both lynx and wolverine are wide-ranging forest carnivores that occur at low densities throughout

their range. Because of this, they are difficult to study and we don't know very much about their population attributes. Lynx are currently listed as a federally threatened species and are considered to be critically imperiled within the state of Idaho. Wolverines have recently been petitioned to be listed as a threatened/endangered species, and are considered to be imperiled in Idaho as well. Our objective of this portion of the study was to detect wolverine and lynx in order to get some baseline data on potential populations. If lynx or wolverines are detected repeatedly in a given area, the next step would be a trapping and collaring effort. Collaring would allow biologists to learn more about their movements in order to determine whether there may be a local population or if an individual was just moving through the area.



Fisher captured at camera station

Five camera stations were deployed in remote areas throughout the Ceded Territory. The stations consisted of a large piece of meat, usually beaver or a deer leg, secured to a tree. Wire brushes were nailed all around the tree below the bait, and a thermal-sensing camera was hung on an adjacent tree. The station is designed to attract carnivores to the tree, where they climb up and leave some hair on the brushes. At the same time the camera takes pictures of whatever is attracted to the bait. The result is pictures of the animals, as well as DNA from the hair samples.

This winter, we did not get any pictures of lynx or wolverine. Due to the limited number of camera stations that were deployed, we cannot say for sure that there are no lynx or wolverines in the area. It would take a large number of camera stations deployed in a systematic effort to determine that the animals do not exist.

Several other species were captured by cameras including some of the other rare forest carnivore species. Fisher, marten, ermine, flying squirrels, and a bobcat were all documented at the stations. In addition, we got several hair samples of whatever species climbed the trees. These will be analyzed this

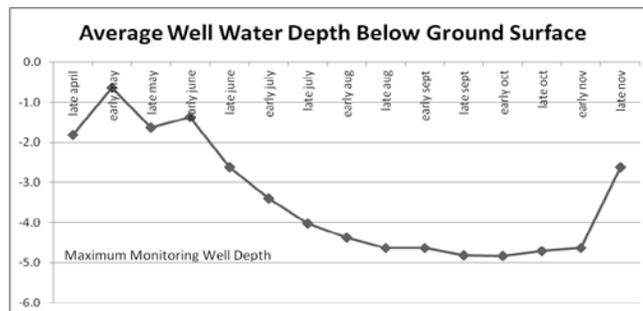
year to see if we detected any other species that were not photographed. We plan on continuing this effort in future winters to get a better understanding of forest carnivore species in the region. ♦

### Hangman restoration project update

By Gerald I. Green, Wildlife Biologist

During 2011, the Northwest Power and Conservation Council requested proposals for projects to implement the Columbia River Basin Fish and Wildlife Program as required under the Northwest Power Act. As part of that process, project proposals were reviewed by the Independent Scientific Review Panel (ISRP) to ensure they are sound and are applying the latest scientific understanding. Projects submitted and reviewed were primarily targeted at restoring native fisheries and will be funded by the Bonneville Power Administration (BPA). The Wildlife Program's Hangman Restoration Project was submitted in that process and passed the scientific review. The process was difficult and time consuming, but the success of passing the review and the future success of the Project itself rests on our claim that we will slow the rate of shallow groundwater loss through the summer months. Our goal is very clear; as we indicated in our last Watershed Wrap article, we will invite the water to "stay a little longer." This seems a simple enough task, but like a game of dominos, one task designed to accomplish our stated goal leads to another, which leads to another, which leads to another, and our work days are full of completing tasks that often seem unrelated to restoring the native fishery to Hangman.

The line that dips through the graph below presents one way of looking at the work ahead of us. The graph illustrates the average decline in shallow groundwater as the growing season progresses within the fields near where Sheep Creek and Hangman Creek meet. The data used to construct the graph came from a group of 18 shallow wells placed within the different fields on either side of Sheep and Hangman Creeks. The 0.0 line on the graph indicates ground level and it's clear that groundwater elevation rapidly declines from early June to early August. This is no doubt obvious to anyone who lives in the area. Typically, the beginning of summer marks the period of moist soils and rapid plant growth. As the season progresses, the soils dry out and by August, plant growth slows and stalls. One of the limitations of the data used in creating the graph below is that the shallow monitoring wells are only a maximum of five feet deep. The decline continues beyond five feet but we could not gather data on water elevation below that level because the wells didn't extend that far below the ground surface.



The slope of the line marking the decline in average shallow groundwater depth from early June to August spells doom to the native trout that would live in the Hangman watershed. In the Hangman watershed there is no underlying aquifer that supports stream flow during the dry season. In the dry months of July through October, streams flow depends completely on the amount of water stored near the ground surface in the surrounding landscape. As the summer progresses, the deep soils dry out and shallow groundwater elevations decline. By August, the streams are at their highest temperatures and lowest levels because there is no longer any water in the surrounding landscape to feed them. Currently, native trout cannot tolerate these late summer conditions. So, during the last BPA project submittal and ISRP review, our proposal stated that we will change the slope of the line that indicates the current decline in shallow groundwater from early June to August. Shallow groundwater elevation will decline during that time period; however, we expect that the water will leave the soils much more slowly as we restore the processes that hold water within soils of the watershed. The end goal of this landscape level work will be a population of native redband trout that provides a harvestable surplus of fish.

Our landscape level work includes restoring the native forests, meadow communities and wetlands and particularly reestablishing the processes that will store and hold the water within the landscape itself. Our restoration efforts will help, but the real "heavy lifter" that we will depend on to actually accomplish the end goal is the beaver. Beaver, and specifically the establishment of beaver dams, can slow the decline of shallow groundwater through the summer. Beaver dams prevent water from draining so quickly from stream channels, which in turn prevents water from draining so quickly from the surrounding landscape. Several studies have documented the revival of streams that were long thought dead after beaver populations were reestablished. The beaver built dams, and the dams held water that fed into the streams. We have every reason to believe that by promoting an increase in the number and size of beaver dams in Hangman Creek we will accomplish our goal of

slowing shallow groundwater loss and increase late summer stream flow.

There is a slight problem, however. The beaver's favorite food is aspen. Beaver also like willow, birch, cottonwood and dogwood and none of these species of shrubs and trees are available in high quantities along the stream courses in Hangman. We have tried simply planting these species, but the beaver in Hangman are hungry enough that they can eat the shrubs and trees as fast as we can plant them.

Since the beaver are so good at their jobs, we have developed a couple of strategies that we are hoping will protect the shrubs and trees until they are well established. The first strategy is to use livestock panels to establish temporary fences around our plantings. The panels are placed in pairs with their ends tied together and their middles pulled apart to form a little protected area between them that beaver, and elk, and deer, cannot reach. We will leave the panels in place for a few years and once the plantings are established, we will move the panels and establish another projected pen somewhere else. The beaver will no doubt harvest the plants we were protecting after the panels are moved, but these plants will re-sprout once they are established and another group of plantings will be establishing while the first group is re-sprouting. A second tactic is to protect a larger area, typically about 100 square yards, with a larger, more permanent fence. In this larger area we will plant willows, cottonwoods and dogwoods. These larger fenced areas will serve as nurseries and we can harvest cuttings from the species planted in them for several years after they are established. The harvested cuttings can be planted wherever they are needed. These larger fenced areas will provide a high number of cuttings rather inexpensively. Currently, we have established four large fenced enclosures in the Hangman valley bottom near where Sheep Creek meets Hangman Creek that will serve as cutting nurseries. We currently don't have a good count on the number of livestock panel enclosures scattered about the watershed, but we will be completing an inventory on those as soon as the weather clears.

What I've just described is like the proverbial game of dominos. To play the game backwards, we go from building fences, to establishing trees and shrubs, to feeding beaver, to beaver dams, to increased water storage in stream channels, to increased shallow groundwater levels through the dry season, to increased stream flows during the dry season, to improved in-stream habitats for fish, to increased fish populations, to a surplus of native trout harvested by Coeur d'Alene Tribal members and residents of the Coeur d'Alene Reservation. Unlike the normal game of dominos, however, this game is not played quickly. I'm hoping

we can begin to see changes in the shallow groundwater elevations by the time we re-submit our projects in three to four years for the next ISRP review. ♦

### **Education and outreach update**

*By Gina Baughn and Bobbie White*

#### **Look for these upcoming events!**

- Water Awareness Week, Tentative dates are scheduled for May 7–10, 2012
- Intertribal Natural Resources Youth Camp, scheduled for June 18–June 23, 2012
- Water Potato Day, Tentative dates are scheduled for October 24-26, 2012

*(Please call 686-0131 for more information.)*

### **American Indian Science and Engineering Society**

Within the Plummer-Worley School District, we are busy getting underway a Lakeside middle school and high school American Indian Science and Engineering Society (AISES) club. We are excited for the opportunities that will be available to students as charter members for this organization. The first meeting in early December 2011 was a success with nearly 30 students participating. On a national level, the AISES program gives students opportunities to participate in a regional knowledge bowl, internships, and scholarships – we plan to include senior projects, science fairs, support of college preparation in the natural resources fields and scholarship opportunities for students in our curriculum.

### **Natural Resources Senior Project Options Offered**

Local high school students will have the opportunity to utilize our Tribal employees as mentors for some great senior projects that will have potential for lasting impacts in our Reservation community. This collaboration with the high school senior projects advisor, Pam Kinkela, and the current year's junior class met to review some ideas for projects that were brainstormed in advance by Natural Resources Department staff. At this point we have received solid ideas for students to be involved in project work activities related to beaver ecology and management, filming science in action, trail construction, as well as some great ideas provided by the Lake Management Department such as designing riparian buffers.

### **Lakeside Elementary Afterschool Program**

We worked to support the partnership between the Lakeside Elementary Afterschool program and their 4-H Camas Club by offering regularly scheduled visits with participating students to work on projects such as moccasin making with buckskin, which

generates much conversation about where buckskin comes from and how it is made. Students will be showcasing their completed projects on May 10th at Lakeside Elementary.

**Early Childhood Learning Center**

ECLC continues to collaborate with Natural Resources Department staff on enrichment activities for preschoolers. Most recently, students were given an activity to demonstrate how beavers are being used to help restore stream habitat on the Reservation.

**Coeur d’Alene Tribe Department of Education**

The “Strengthening the Spirit” Grant award from Office of Juvenile Justice and Delinquency Prevention Tribal Youth Program will include collaboration between Coeur d’Alene Tribe Wellness Center, Plummer-Worley School District, Coeur d’Alene Tribal School and the Department of Education. This grant will fund an afterschool program targeting ages 12 to 17 with a large emphasis on Science, Technology, Engineering, and Math (STEM) activities.

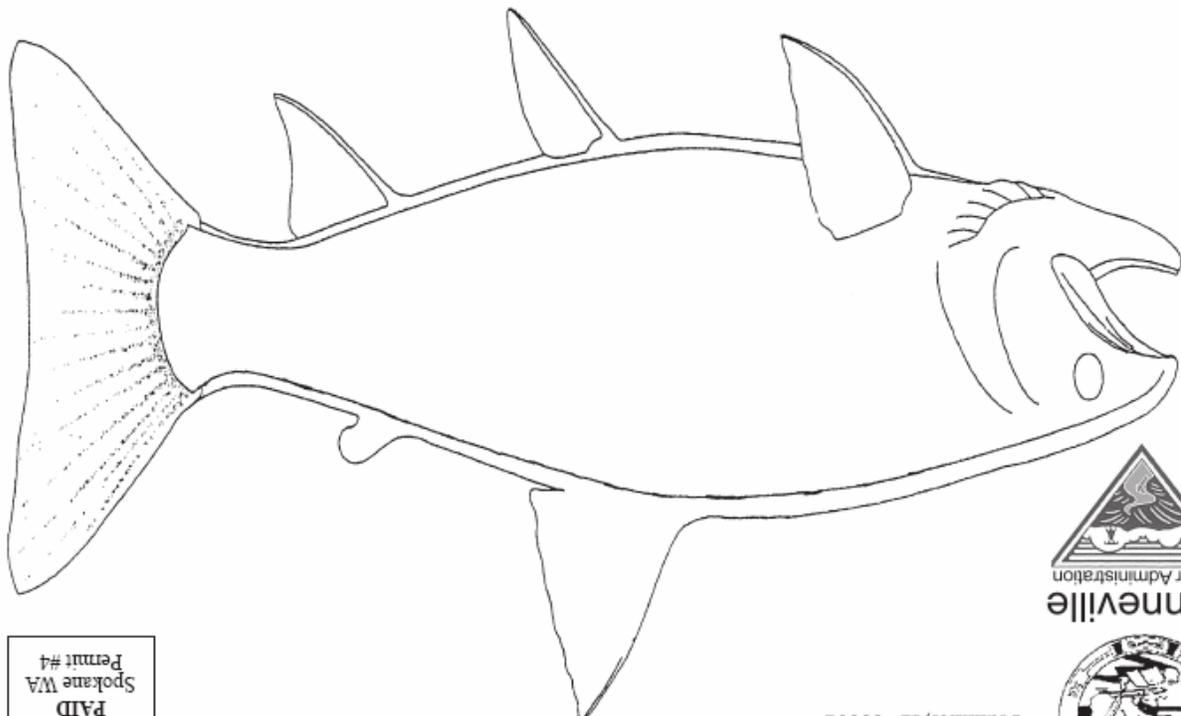
**Hangman Creek Watershed Student Program**

The Bonneville Power Administration’s Tribal Affairs Office awarded \$10,000 to the Fisheries Program for the purpose of supporting restoration efforts in the Hangman Creek watershed to include restoring camas on the Coeur d’Alene Reservation. The

Lakeside high school shop class completed 50 traditional digging sticks (pitse’) fashioned from metal for students to use in the field for both planting and harvesting camas. During spring break (March 26-30th), the first phase of our grant started with youth planting 2,700 camas bulbs on two 20 x 20 plots in an effort to restore this once vital traditional food resource. The grant objectives include connecting tribal elders – another precious cultural resource – with youth in the process of restoration, planting, and harvesting of camas. ♦



*Pitse' were used to plant camas in Hangman Creek.*



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