

# WATERSHED WRAP

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

Spring Equinox 2007

(Vol. 11 No. 1)

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.

Respectfully,

**Mark H. Stanger**, Fish and Wildlife Outreach & Education Specialist  
208-686-0131 mhstanger@cdatribe-nsn.gov

## Attention:

Hangman Creek Watershed Work  
Group Meeting at Tensed  
Grange Hall At 6:00pm on  
Tuesday, April 10

Any questions call **Bruce Kinkead**  
(208) 686-6071 or **Gerry Green** 686-0312



Wood duck nesting box near Hangman Creek

## Wood Duck Nesting Box Installed on Wildlife Mitigation Property

*By Cameron Heusser, Wildlife Program Manager*

Last year, the Wildlife Program received a handmade wood duck nesting box as a gift from Mr. Gene Leach from Chinook, Washington. The box was installed last spring on one of the newly acquired wildlife mitigation properties near Hangman

Creek. Wood ducks prefer to nest in tree cavities along streams or lakeshores, and this particular box was attached to a large ponderosa pine alongside a side channel wetland near the creek. Mating pairs of wood ducks and mallards have been seen in this area before. Most wood ducks in northern Idaho will lay their eggs in April and May, and the ducklings will usually leave the nest box to feed with their mother the next day after hatching. It is hoped that this box will provide nesting habitat to wood ducks for years to come. The Wildlife Program is preparing to clean the box and get it ready for the upcoming nesting season once again. We would like to again extend our thanks to Mr. Leach and his family!

## *hnt'k'wipn* update

*By Gerald I. Green, Wildlife Biologist*

The entrenchment (severe down cutting) of the Hangman Creek Channel offers a considerable challenge to restoring stream flows to Hangman Creek. The channel is cut deeply into the landscape and causes the quick removal of waters from the Watershed. The quick removal of rainwater and snowmelt does not allow for normal wetland function, which is to act as a sponge to hold water long after rainfall and snowmelt and release it slowly into streams. Holding waters on the landscape in functioning wetlands will reduce the extreme high flows we experience all too frequently in Hangman and release waters slowly into the channels such that stream flows continue during the dry months of the year. Under current conditions, waters flow out of the Hangman system so quickly during the wet season that there is no water left during the dry season to sustain flows between pools along the length of Hangman from about Sheep Creek to the Idaho/Washington State line. No stream flow during the critical dry season means no habitat for native fish.

In order to restore wetland functions in the Hangman Watershed to reduce the extreme flood events and provide stream flow during the dry season, the Tribe's Natural Resources Department will need the diligence of energetic helpers. The task of reestablishing native fish populations throughout Hangman is impossible without workers who are not deterred by the difficulty of returning stream flows to Hangman. Fortunately, the Natural Resources Department may have an ally who is not only energetic, effective, and unconcerned about the seeming impossibility of the task, but is also willing to work for very reasonable pay. The ally, and perhaps the only real workforce that will be willing to take on the task, is of course "nature's engineer," the beaver.

A few hydrologists have scoffed at the possibility of beaver fulfilling a vital role in restoring Hangman Creek. But reconnecting Hangman Creek to the wetlands and floodplains that provided stream flows that supported native trout and anadromous fish will cost a human workforce millions of dollars per mile of stream course. Of course, it will take longer and there are some technical difficulties to overcome, but beaver will work for food and not very high quality food at that. The beaver can, and will if given the materials, build a series of small check dams in Hangman that will hold water and trap sediment. Trapping sediment behind check dams may, over an extended period, raise the Hangman streambed and reconnect the stream to its former floodplain and wetlands. There are some serious technical issues to overcome in this scenario, but the possibility exists. If returning flows to Hangman Creek is a goal that is worth pursuing, it seems we are going to need to find a way to accept the beaver as part of a functioning landscape.

Currently the Hangman Restoration Project is saddled with the task of writing a management plan for the *hnt'k'wipn* property in Hangman Creek. The management plan must deal with the immediate future of the property and the steps that the Coeur d'Alene Tribe's Natural Resources Department will take to restore native habitats. The issue of enlisting the beaver to restore fish habitats will not likely be covered in the Plan since it will be largely restricted to the work humans can accomplish. However, the management plan can certainly state a course of action that can allow the beaver to function in their natural capacity.

If you would like to discuss the management plan being developed for the Hangman Mitigation Properties or have some thoughts on the role of beaver in restoration, there will be a public meeting in Tensed on Tuesday, April 10 at 6:00pm at the Tensed Community Ctr. Also, please feel free to call Gerald Green at 686-0312 or Cameron Heusser at 686-5521 to discuss these or other Hangman related issues.

## **Stormwater & Erosion Education Program**

*By Rebecca Stevens, Environmental Specialist*

Stormwater and erosion of soils can complicate life for everyone. If left unmanaged, they threaten water quality, health, and safety of the public and the economy. Pollutants carried by eroded soil and water can contaminate drinking and surface water sources, destroy fish habitat, make recreational surface waters undesirable, and in large amounts, can destroy homes and endanger lives. The Panhandle Stormwater Erosion Education Program (SEEP) is an educational program committed to training individuals, including construction and development industry and agency personnel, in the fundamentals of erosion and sediment control planning and practices. Detailed course items include: nature of erosion and the water cycle and changes caused by development, Local, Tribal, State, and Federal Sediment and Erosion Control Regulations, analysis and site characteristics, and installation, inspection, and maintenance of Best Management Practices.

For more information on the upcoming classes (Benewah course offered April 10 & 11, 2007 at the Coeur d'Alene Tribe Fish, Water, and Wildlife building, cost is \$200 for 12 hour course plus certification) please contact Rebecca Stevens, Environmental Specialist, Coeur d'Alene Tribe Lake Management Department 208-667-5772.

## **Native Plants: Cultural and Ecological value**

*By Carla Marratt, Fisheries Program*

Siyih\* (March/Early Spring) when the landscape cycles plant life back to a vibrant green. This time of year the Schitsu'umsh\* (Coeur d'Alene) people would observe nature's subtle changes. These changes serve as time indicators that mobilized the family groups to gather food resources as ripening occur. The warm temperatures this year may cause an early bloom.

Gathering plants is the most important food collecting efforts of the year for the American Indian people. Finding where the specific plant groups are blooming is the first step. After locating, family elders use storytelling to explain to the youth the ceremonial practice for what, where, when, why and how the plants are to be gathered. The pitse'\* (long pointed stick) is the harvesting tool utilized. Usually the harvesting occurs between late spring and continues through early summer. The following table contains native plants/common Tribal food resources located in the region.

# **Watershed Wrap Reader Survey**

The Watershed Wrap is going to be featuring an exciting new speaker series. Please help us get a feel for what your interests are, what topics you might like to hear more about, how can we improve this newsletter, and what activities you would like to see Tribal Natural Resources staff doing.

## **\$ WIN A \$100 Gift Certificate! \$**

Complete and mail in this survey, and you'll be included in a drawing for a \$100 Gift Certificate to Hastings Books, Music and Video. Surveys must be returned by May 2, 2007. If you wish to be entered into the prize drawing, you need to include your name and mailing address. The winner will be notified by mail by July 16, 2007.

We welcome additional comments. Please feel free to copy and pass this survey along to other interested individuals.

First name: \_\_\_\_\_ Last name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: (\_\_\_\_) \_\_\_\_\_ Email: \_\_\_\_\_

Would you like to be added to the mailing list? Yes  No

Do you live on or near the Coeur d'Alene Reservation? Yes  No

What activities do you participate in and around the Coeur d'Alene Reservation i.e., Lake Coeur d'Alene? Check your top three activities:

Fishing  Hunting  Camping  Canoeing/Kayaking  Motor Boating  Sailing

Water Skiing  Hiking  Cultural  Biking  Picnics  Swimming  Geocacheing

Snowshoeing  Cross country skiing  Other \_\_\_\_\_

Check the Natural Resource topics you would like to have more information on: (Check all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> Tribal Activities                | <input type="checkbox"/> Wildlife Habitat Restoration   |
| <input type="checkbox"/> Kids' Programs                   | <input type="checkbox"/> Local Wildlife                 |
| <input type="checkbox"/> Lake Management                  | <input type="checkbox"/> Invasive Species               |
| <input type="checkbox"/> Fishing (ponds, Lake, streams)   | <input type="checkbox"/> Native Plants                  |
| <input type="checkbox"/> Native Fish Restoration Projects | <input type="checkbox"/> Aquatic Weeds                  |
| <input type="checkbox"/> Metals Contamination             | <input type="checkbox"/> Volunteer Opportunities        |
| <input type="checkbox"/> Career Opportunities             | <input type="checkbox"/> Regional History               |
| <input type="checkbox"/> Using GPS                        | <input type="checkbox"/> Regulations (fishing, hunting) |
|   | <input type="checkbox"/> Other _____                    |

Please answer the following questions (use extra paper if you like):

1. What do you most enjoy about the Coeur d'Alene Reservation?
2. What is the greatest challenge facing the Lake Coeur d'Alene/Spokane River Watershed?
3. What topics or activities would you like to see in Watershed Wrap hosted events, or in the newsletter?
4. Would you be interested in attending Watershed Wrap hosted speaker series or workshops?

Yes  No

If yes, what time of day would be the best?

8am-12noon  1pm-4pm  5pm-8pm

What days of the week would be best?

Monday  Tuesday  Wednesday  Thursday  Friday

Saturday  Sunday

5. Is having meals/refreshments important to you if you were attending a Watershed Wrap speaker series/workshop? Yes  No

If yes, would you be willing to pay a small fee for the speaker series to cover the cost of meals for the event? Yes  No

If yes, how much?

Less than \$3  \$3-5  \$5-10  More than \$10

(Optional)

Ethnic Origin: Cd'A Tribe member  Other Tribe member  Non-Indian

Check, the Coeur d'Alene Tribe Natural Resources materials, or services you think are most valuable.

Newsletter	<input type="checkbox"/>	Water Awareness Week	<input type="checkbox"/>
Brochures	<input type="checkbox"/>	Water Potato Day activity	<input type="checkbox"/>
Public Meetings	<input type="checkbox"/>	Website	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>		

We look forward to hearing from you. You may return the survey by mail to: Coeur d'Alene Tribe Fisheries Program, PO Box 408, Plummer, Idaho 83851, fax it to us at: (208) 686-3021, or submit from the website at <http://www.cdatribe-nsn.gov/fishnews.shtml>

Thank you for your time!

Coeur d'Alene Name	Common Name
etqhwé'	Sweet-Black-Edible Camas
smukwa'shin	Balsamroot, Sunflower
se' cect	BlackTreeMoss- Indian bread
aq mkhw	Springbeauty-Indian Potato
sp it em	Bitterroot, rockrose
stsagwn	Wild Strawberry
sp'ekwench	Wild Carrot-Indian carrot, sweet potato- biscuit root

The habitat required by these plants is varied. Camas plants appreciate areas of moisture-laden soil. Camas blossom resembles the common lilac, the leaves are grass-like, and emerge from the base. Therefore, if the bloom is missed for locating in the early spring, it is more difficult to locate their leaves.

The sqha'wluqtqhwé'\* (raw camas) plant is by far the most important root crop. This native plant and most traditional food resources are more difficult to locate due to increases in human population, their associated land use decisions, and over harvest. As the population of the reservation has nearly doubled in the last twenty years this creates an ever increasing problem.

The Coeur d'Alene Tribe natural resource programs focus on maintaining these traditional uses through the many land acquisitions and restoration actions directed at preserving these native qualities. This would include restoring native fishes and wildlife as well as native plants to traditional habitats with the intent to preserve them for use into the future.

\*Indicates Coeur d'Alene language term

### INITIAL RESULTS OF THE 'ELTUMISH PROJECT SHOW BENEFITS

*By Angelo Vitale, Fisheries Biologist*

This spring the Fisheries Program is preparing to begin the third year of channel reconstruction that is a central part of the 'Eltumish project in the Benawah Creek watershed. As we near this milestone, I thought it would be good to take a retrospective look at some of the recent results of the project.

For those not familiar with the project, the goals are to reconnect the incised (entrenched, on down cut) stream channel with the valley bottom and reestablish a stable channel configuration (Figure 1), recover wetland habitats to the extent possible, reduce

stream bank erosion and provide measurable increases in fish populations over time. The design takes the approach of filling the existing stream channel to historical elevations and reactivating long-abandoned channel alignments where possible.

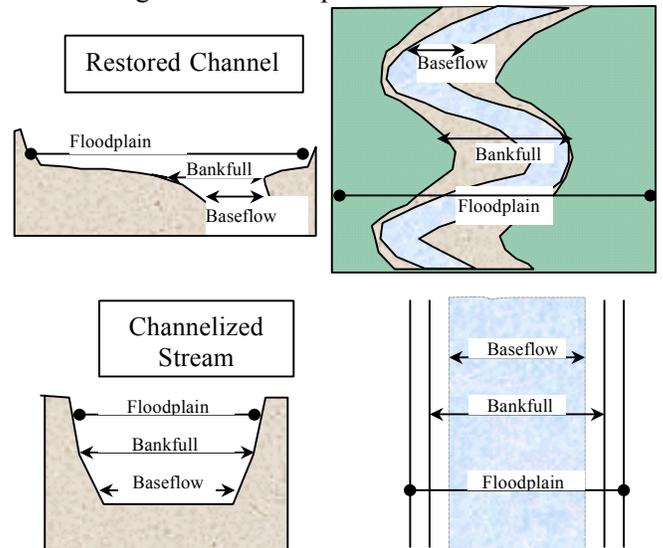


Figure 1. Schematic representation comparing the restored channel with the incised stream.

Over the last two years, we have completed 4,000 feet of channel and floodplain reconstruction. Approximately 9,800 cubic yards of rock (980 truck loads) has been placed at the site to lift the channel and form the shallow riffle habitats that regulate overbank flooding and produce most of the food resources for trout and other fishes. An almost equal amount of fill dirt has been moved on site to fill the degraded channel in places and create new floodplain surfaces. More than 53,000 native plants comprising 17 different species have been planted in areas that were disturbed during construction. In addition, more than 140 MBF of large wood (~35 truck loads) has been placed in the channel and on the floodplain to help control erosion while native plants are established.

The immediate result of construction is a significant increase in the amount of available habitat for fishes (Table 1). Stream length has been increased by 45% as much of the historic stream channel has been reactivated. Both the depth of pools and the total volume of pool habitats have increased by well over 100%, and these pools have a lot of complexity provided through the addition of large wood to the channel. By reconnecting the stream to the valley bottom and allowing flooding to occur on a scale that is consistent with other stable stream systems, we estimate that stream bank erosion rates and sediment yield have been reduced by nearly 50% and 70%,

<b>Habitat Variables</b>	<b>Pre-Treatment</b>	<b>Post-Treatment</b>	<b>%Change</b>
Sinuosity	1.39	2.01	+45
Mean pool depth (feet)	2.1	4.9	+133
Pool volume (ft <sup>3</sup> )	9,555	26,687	+179
Instream wood density (ft <sup>3</sup> /ft <sup>2</sup> )	0.019	0.086	+352
Est. Bank erosion rate (feet/year)	0.47	0.25	-47
Est. Sediment yield (tons/year)	37.4	11.7	-69

*Table 1. Comparison of stream habitat condition before and after restoration.*

respectively. All these changes have implications for improving the native cutthroat trout ('eltumish) fishery.

There are several outcomes from the project that we expect to occur over longer time frames. First, by reconnecting the stream and valley bottom we expect to see an improvement in groundwater storage and recharge resulting in increased exchange of cold water to the stream that will provide refuge for trout during the summer. In addition, there is potential for a 40% increase in wetland habitats in the valley as the groundwater table recovers following restoration. These habitats have been significantly reduced over time and are critical to the survival of many species of wildlife and beneficial plants. Finally, the number and distribution of cutthroat trout should increase as fish begin to take advantage of improved mainstem habitats. These fish will experience better survival and growth that will help enhance of overall productivity of the watershed. Our current monitoring efforts will help track these types of responses and better explain the benefits of this project and others like it – stay tuned!