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!

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The Coeur d'Alene Tribe's 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 the natural resources of the Coeur d'Alene Reservation information about the various programs, and to solicit your support as well as constructive criticism. The Bonneville Power Administration provides funding for this newsletter.

Thank you for your interest.
Respectfully,
Mark H. Stanger, Fish and Wildlife Outreach & Education Specialist
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Fisher by a snare taken 6-8-06 at 5:18pm by a motion-sensing camera!

Tribal Forest Carnivore Study Update
By Nathan Albrecht, Fish and Wildlife Biologist

In the fall of 2005, the Tribal Wildlife Program was awarded a grant by the US Fish and Wildlife Service for a project aimed at detecting the presence of fisher and lynx throughout the Ceded Territory of the Coeur d'Alene Tribe. This grant was awarded to the Tribe with the help of Idaho Department of Fish and Game, US Forest Service, Potlatch Corporation, and Forest Capital Partners, whom have all agreed to be partners in the project. The grant is referred to as the "Tribal Wildlife Grant", and is intended for projects that are submitted by Indian tribes to develop and implement programs for the benefit of wildlife and their habitat, including species of tribal cultural or traditional importance and species that are not hunted or fished. This particular grant proposal focuses on a group of mammals referred to as forest carnivores, and specifically fisher and lynx. This is a 2-year project, and the first season of fieldwork has now been completed.

The goal of the project is to determine where fisher and lynx are located in the Ceded Territory. From April through October of this year, Tribal Wildlife staff spent a great deal of time conducting the fieldwork in order to find these areas. The work consisted of first selecting the areas of the Ceded Territory that have the best potential fisher and lynx habitat. Wildlife technicians then hiked into these areas and deployed hair-snaring boxes, which are pictured here. These hair snares are simply open-ended boxes with some bait and a scented lure inside. Hair snares, in this case wire brushes, are secured on the inside walls of the box. As the animal moves past the brushes to get to the bait, some hair is left behind. Wildlife staff set a total of 278 snares in 2006, and roughly half of them obtained hair samples.

These hair samples were then sent to a laboratory at the Rocky Mountain Research Station in Missoula, so that DNA tests could be conducted in order to determine what species the samples came from. While not all of the results are back yet, the initial results are quite promising. Of the first batch of samples that were analyzed, 51 in all, 40% of them came from fisher. The remainder of the samples came from various species including bobcat, coyote, bear, pine marten, snowshoe hare, and domestic dog. These initial results are encouraging because they indicate that a good method is being used to detect fisher, and that there are actually fisher out there to be detected. No lynx have been detected to date, but results are still pending.

This project is important because the fisher and lynx both are generally associated with remote wilderness. Since fishers rely on habitats that include dense, large-diameter trees in relatively undisturbed forests, they are an excellent indicator of the overall integrity of an ecosystem. In the past century, distributions of these species have declined due to a combination of land development, timber harvest, trapping, and increased road densities in forested areas. As a result, both of these species are considered to be sensitive in the northwest, and lynx are federally listed as "threatened". The Ceded Territory of the Tribe encompasses a large area that contains suitable habitat for fisher and lynx. Scattered surveys to determine the presence or absence of fisher and lynx have been and are currently being conducted by various agencies and organizations in the northern panhandle of Idaho and western Montana. However, very little is being studied in the majority of the Ceded Territory**.** This effort uses standardized methods so that results can not only be combined and duplicated in the project area, but also may be combined with other similar projects throughout the west.

Over the course of this winter, the remainder of the DNA results will be determined. Next year, Tribal Wildlife staff will survey the southern portion of the Ceded Territory. Once those results are in as well, we will have a much clearer picture of where these sensitive forest carnivores are located. At that point, more research will be conducted in these areas to determine the extent of their populations.

UPDATE: THE BROOK TROUT REMOVAL PROJECT: Reducing competition Between Non-Native Brook Trout and native Westslope Cutthroat Trout in Benewah Creek

By Dale W. Chess Ph.D., Fisheries Biologist

This article is an update of the brook trout removal project in Benewah Creek, with accomplishments from last summer. The goal of the brook trout removal project is to reduce the competition and negative impacts that nonnative brook trout have on native westslope cutthroat trout. The Fisheries Program believes that decreasing the impact of brook trout and restoring habitat favorable to native westslope cutthroat trout will increase the production of westslope cutthroat trout in Benewah Creek. The brook trout removal project was developed in late 2003, approved by the Tribal Natural Resource Committee and authorized by the Tribal Council resolution #90 on January 22, 2004.

This past summer the brook trout removal crew, comprised of Dan Jolibois, Bryan Harper, Jason Smith, Debbie Aripa and Jordan Justice (summer youth intern) did an outstanding job under difficult field conditions. The crew used a backpack electroshocker to remove brook trout from the West and South Forks of Benewah Creek and a five-mile segment of the upper mainstem from just above Whitetail Creek to the confluence of the West and South Forks. This increased the amount of stream shocked by two-fold compared to last year. A total of 2,517 brook trout were removed from Benewah Creek, nearly twice as many as last year (Table 1). We found that many more brook trout existed in the mainstem than previously thought. Most of the brook trout removed in 2006 were from the mainstem between Whitetail Creek and Windfall Creek, which was not sampled in 2004 or 2005. In this part of Benewah Creek many more large adults were removed this summer than in the last two years. Brook trout are fall spawners with large females producing over 1,000 eggs. We remove them before they can spawn which will reduce the population significantly. Next year and in future years, fisheries staff will repeat the removal process. We expect that after several years of removal, the density of brook trout will be very low and the removal process may only be needed once every two years to control the brook trout population.

The Fisheries Program expects the outcome of the brook trout removal to be lower densities of brook trout with increasing densities of westslope cutthroat trout in future years. To measure the effectiveness of brook trout removal, the crew samples 35 index sites in Benewah Creek. This sampling provides annual population and density estimates of brook trout and westslope cutthroat trout, so we can track the population trends as we remove brook trout. We will provide another update next year with additional results of the projects effectiveness.

Table 1. Number of brook trout removed from mainstem and tributaries of Benewah Creek.

YEAR	UPPER MAINSTEM	SOUTH FORK	WESTFORK	TOTAL
2004	47	399	225	671
2005	1,153	136	97	1,386
2006	2,260	143	114	2,517

***hnt'k'wipn* update**

By Gerald I. Green, Wildlife Biologist

During this last spring the Wildlife Program contracted with the Forestry Program's Fuels Management crews to remove lateral fuels that could carry wildfire into the upper canopy of the taller trees in the forest on *hnt'k'wipn*. These lateral fuels were composed primarily of ponderosa pine branches, needles, seedlings and saplings. One of ponderosa pine's adaptations to help it persist in dry areas that are prone to fire is to produce a great many seedlings each

year. These dense stands of seedlings should be thinned frequently; low intensity fires naturally burn through these forests about once a decade. When fire is absent for a long time, however, as was the case with the forested stand within *hnt'k'wipn*, the seedlings and saplings become thick stands of fuels within the low and mid canopy segments of the closed dense forest. If a fire were to get started in these stands where the excessive fuels have built up over decades, the fire would burn with great intensity and likely would even be carried into the forest overstory. In such a case the entire stand of timber would be destroyed along with the habitats that the larger trees could provide.

The Forestry Program's Fuels Crews began thinning the regeneration within the pine forest in March of this last spring to reduce the accumulated forest fuels. The Fuels crews removed the pine seedlings and saplings in and around the camas meadow by hand in order to keep the machines away from the camas. They also removed the young pine from near the wetlands to prevent the machines from damaging the wetlands as well. No work was completed during April, May and June to prevent disturbance to the nesting birds. Thinning was resumed, this time with machinery, after the bird-nesting season was completed. The forest understory where dense stands of ponderosa pine once stood are now open and the standing fuels that could carry an intense fire into the forest canopy are gone.

Figure 1. Before and after photos taken from the same point and in the same direction within the *hnt'k'wipn.* The photo on the top was taken on the 17th of May 2006, prior to the machine thinning treatment completed by the Forestry Program. The photo on the bottom was taken on the 15th of November 2006.

Opening up the understory offers several opportunities for managers to improve habitats within the forest of *hnt'k'wipn*. The dense ponderosa pine regeneration was a barrier to establishing a diverse understory populated by such shrubs as serviceberry, chokecherry, dogwood, and various species of willow. Aspen and cottonwood can also be established within the open forest as well; however the larger ponderosa pine trees may need to be thinned in order to effectively establish these trees. The open understory will allow more sunlight to reach the forest floor so an increase in grasses and forbs in the coming warm seasons is expected. The increases in grass, forbs and shrub production are expected to provide greater forage for deer, elk and moose.

The ponderosa pine seedlings will, of course, re-populate the understory if nothing is done to keep their numbers down. The final vegetation community that is most appropriate for the forested area of *hnt'k'wipn* is the pine open woodland that was common in the Hangman Watershed prior to widespread clearing for agriculture. These open woodlands and their inherent diversity were maintained by frequent, low intensity ground fires. This type of fire would readily thin out the pine regeneration and allow a diverse community of low vegetation to flourish within the forest. Fire management and specifically prescribed burning of the forest understory will be a subject of discussion in the management plan that will be developed by the wildlife program to guide the actions taken to restore native habitats within *hnt'k'wipn*.

If there are any questions about the *hnt'k'wipn* property or about the management actions that will be implemented on that property please feel free to call Gerald Green at 208-686-0312 or Cameron Heusser at 208-686-5521.

Monitoring Bird Populations at Goosehaven Wildlife Management Area

By Guy Wagner, Wildlife Habitat Biologist

The Goosehaven Wildlife Mitigation Unit (WMU) was acquired by the Coeur d'Alene Tribe in 2001, as part of Bonneville Power Administration's (BPA) obligation to mitigate for wildlife habitat losses resulting from the construction of Albeni Falls Dam. The 638-acre property is located approximately six miles northwest of St. Maries, Idaho, and it lies adjacent to the St. Joe River and State Highway 3. Approximately, 400 acres are floodplain, with the 238-acre remainder being forested, mountainous uplands that have been logged extensively. The floodplain portion has been used for intensive agriculture, mainly haying and cattle grazing, for decades, and it represents a promising site for

wildlife habitat restoration. The art and science of changing human-dominated lands, such as farm fields, back to natural plant communities, like cottonwood forests and marshes, is termed restoration ecology.

The St. Joe River once regularly flooded portions and occasionally the entire valley bottom during spring snowmelt events or after heavy rains. The river was free to meander across the floodplain, overtime creating a mosaic of plant communities and backwater lakes. The flood-dominated disturbance regime favored the establishment of cottonwood forests, wet meadows, emergent wetlands, and shrub lands. In modern times, dykes were built to confine the St. Joe to its current channel and reduce the impacts of flooding on farms and houses. Also, canals were dug to lower the water table, drainage districts were created to pump-off spring snowmelt and dry out the floodplain each spring for agriculture. Most of the native cottonwood forests and shrub lands were cleared from the floodplain and the wetlands drained. The Tribe's goal at Goosehaven WMU is to re-establish a mosaic of native plant communities and small lakes similar to what occurred before the area was converted to intensive agriculture.

Floodplain area on Goosehaven Wildlife Unit!

For a restoration ecology project, it is important to develop goals and to measure selected plant and animal attributes that respond to the planned changes. Such measurements are called "monitoring", and they track progress, help maximize the knowledge gained along the way, and ensure the project's success. Land birds are a good choice for monitoring because they are sensitive indicators of environmental health, and birds occupy all habitat types.

Point counts are a well-established method of monitoring land birds, and this spring, we used point counts to initiate a bird-monitoring program at Goosehaven WMU. Point counts involve selecting a specific set of locations, and then visiting them to record all the birds seen and heard during a ten-minute period. During the breeding season most species of birds sing to attract potential mates and to stake out territories. Different species have unique songs, and many birds are identified by their songs rather than by sight. Therefore, observers must learn to identify birds by their calls alone, and this requires constant practice. Many of the birds are migratory, and they fly south for the winter, returning in the spring or early summer. The various species arrive at different times during the breeding season, with some species arriving early in April, and others not arriving until mid-June. Consequently, each of the points needs to be visited several times during the breeding season. Additionally, each day most birds sing the loudest and longest early in the morning and quiet down as the sun rises. This means the observers must start at daylight, which in Idaho during spring means about 4 am.

We decided to concentrate on the floodplain, because the emphasis of BPA's mitigation program is on wetlands and floodplain areas. A number of species could be clearly heard from the upland forested portions of the property, from the mature cottonwood galleries surrounding the open hayfields, and from the marshes and wetlands surrounding Goosehaven Lake. Although the lake is relatively small it supports a great number of wetland birds and waterfowl. Most of these species were not encountered out in the hayfields. Our results showed the hayfields support relatively few species compared to shrub lands, marshes, wetlands and the forested portions of the property. European starlings and savannah sparrows were the most common species recorded out in the hayfields. They are grassland species, and are adapted to such environments.

Restoring native riparian forests and shrub lands, and constructing additional lakes and wetlands should greatly increase the number and species of birds inhabiting the floodplain. As the composition and structure of the vegetation becomes more varied, the floodplain should begin to meet the habitat requirements of a greater number of species. This should benefit birds that are declining such as the yellow-billed cuckoo and Lewis's woodpecker both use cottonwood forests. The BPA's target species, such as the yellow warbler and black-capped chickadee, which use shrubs and mixed forests will also benefit. Over time as the habitat is restored, monitoring efforts should show the number of bird species increasing on the floodplain. The restoration efforts should also increase cover for other species, such as deer and elk.

Goosehaven WMU truly has great potential to sustain a wildlife legacy for future generations of the Coeur d'Alene Tribe. So, next spring when the birds start their singing, stop, listen, and remember there is meaning to it all.

Moose Population Monitoring Update
By Nathan Albrecht, Fish and Wildlife Biologist

The Wildlife Program manages the moose population on the Reservation for the primary purpose of hunting by Tribal members as well as the associated aesthetic benefits. All hunting that takes place on the Reservation is through a limited entry system that is monitored very closely by the Wildlife Program. Moose population monitoring is an essential tool in determining the moose hunting regulations, and in overall moose management.

There is a lack of historical data regarding the moose population on the Reservation. Some data exists from historical hunter reports and aerial surveys; however, it is often incidental in nature and lacking in detail. This data is valuable for some purposes, but has limited use as far as determining the total moose population and trends on the Reservation. In an effort to gather current data, the Wildlife Program has made moose hunting reports mandatory, begun tracking incidental sightings of moose and initiated ground-based surveys during the winter of 2005. Wildlife staff is currently conducting the second round of ground surveys. It is hoped that this more current data will help the Wildlife Program make informed decisions in regards to moose management in the future.

The winter moose surveys that were initiated this past winter will provide the Wildlife Program with a better estimate of total population, as well as population composition and population density in different areas. To begin with, the Reservation and some adjacent watersheds that receive heavy hunting pressure were broken down into different units. Three of these units were surveyed in the winter of 2005, namely Upper Hangman, Skyline and West Reservation. Three units will also be surveyed this winter; Skyline, Moses Mountain, and Alder Creek. Units are surveyed by vehicle (truck, ATV or snowmobile) on predetermined, representative routes. Average sight distances for each route were calculated so that a search area could be determined. Each route is conducted on 3 to 4 separate occasions, preferably 2 in the morning and 2 in the evening. The average number of moose sightings per search is then calculated and extrapolated based on the survey area and available habitat.

The current combined data suggests that the Reservation has a steady to increasing population of moose. Hunter success continues to be high, and incidental sightings are frequent. The table below shows that when data from surveys, hunter reports and incidental sightings are combined, a calf to cow ratio of .561 and a bull to cow ratio of 1.108 are obtained

Year	Calf: Cow	Bull: Cow
1997	0.667	1.333
1998	0.833	0.500
1999	0.500	3.500
2000	No data	No data
2001	No data	No data
2002	No data	No data
2003	0.429	0.762
2004	0.647	0.912
2005	0.526	1.269
Totals	**0.561**	**1.108**

These numbers are both indicative of a very healthy moose population; however, these ratios are also averaged across a period of nine years, with varying degrees of survey effort and methods, so trends cannot be seen. Now that Wildlife staff has initiated a standardized moose survey method, estimated population attributes and trends should be more reliable.

Idaho Fish and Game moose population estimates for the State are from 5,000 to 7,000 moose. Before a reasonable estimate can be made for the Reservation population, a third season of moose surveys will need to be conducted. The moose population attributes from this study, combined with data from other big game monitoring will help Wildlife staff in setting Tribal hunting regulations as well as making recommendations on various land-use practices.

Benewah Creek Monitoring Station
By Stephanie Hallock, Habitat Biologist

The Coeur d'Alene Tribe's Fisheries Program in 2005 was awarded a 10-year grant through the Bonneville Environmental Foundation (BEF) to support monitoring of restoration work in the Benewah Creek Watershed. The grant funds received from BEF were used to establish a weather station and a stream gauge station on tribal property. Additional water and air temperature sensors were also distributed throughout Benewah Creek. The weather station will record air temperature, wind speed and direction, precipitation, relative humidity, and barometric pressure. The gauge station will measure water temperature, turbidity, and water stage (i.e. height of water). Staff from both the Fisheries Program and the Water Resources Program will work together to maintain the sensors and analyze the data collected.


Dan Jolibois installs the stream gauge in Benewah Creek.

The gauge station data will be used to detect changes in stream flow and water quality as the result of restoration activities. The water temperature sensors will track how water temperature changes in sections of stream channel upstream, within, and downstream of restoration work. The weather station will help us relate stream temperature with atmospheric conditions. Combined, this data will guide future land management decisions in the watershed.


Jason Smith and Dale Chess build the weather station.

Three-day celebration for the Water Potatoes harvest!

By Mark H. Stanger, Outreach & Education Specialist

Water Potato Day is one of the Coeur d'Alene Tribe's premier outdoor classroom experiences where students enjoy connecting with nature as they go through four learning stations set up by Tribal staff. At this year's Water Potato Day celebration, the Coeur d'Alene Tribe's Natural Resources department hosted the event with support from the Tribe's Lake Management, Education, and Language departments. Planning for this year's event started out earlier than usual due to the increased level of interest from area schools and tribal departments. Topics of interest included environmental resource use, forest and lake ecology, and the traditional ways of the Tribe.

Most of the first day was dedicated to the youngest of students. These students, 3 and 4 year olds, were from the Tribal Early Childhood Learning Center (ECLC). They were taught how to gather water potatoes while listening to stories about their ancestors that came to dig before them. Other students and classes from the Medicine Wheel Academy from Spokane, Washington participated in the first day at Benewah Lake park. Luckily students were treated to good digging, as it was the first time we hosted the celebration at this site. Two types of digging techniques demonstrated. The first used shovels while the second, a more traditional form, used the digger's feet to trench into the mud thus kicking up the potatoes to the water surface. Thursday and Friday we traveled across the lake to Hawley's Landing where the Outreach Specialist gave short talks on the history of Water Potato Day and used a hand drum to sing traditional songs to bless the potatoes and the people who traveled there to dig. Students and elders came from as far away as Polson, Montana, Moscow and Lapwai, Idaho, and Spokane, and Coeur d'Alene.


One of our biggest potatoes, collected by Jeff Jordan!

The learning stations were set up in the four directions, north, south, east, and west, like the circle of life in the medicine wheel in the ways of our traditional teachings taught to us by our elders. The medicine wheel and its representation of the circle of life demonstrate there is a shared path between the plant and the people. The first station showcased native trees, brush and plants and was taught by Laura Laumatia (University of Idaho Tribal Extension educator) and Dave Lamb (Lake Management). The second station manned by Dan Jolibois (Fisheries) and Mr. Lamb highlighted various aspects of marsh habitat. Felix Aripa (Tribal elder), Raymond Brinkman and Kim Matheson (Tribal linguists) manned the third station, history and story telling. Using picture flash cards, representing native species from the area, they

played word games and acted out animal and bird behaviors with the students. The final station manned by Gerry Green (Wildlife), Sue Howard (Education), and Glen Lambert, Jr. (Fisheries) is where water potatoes were harvested.

At most Tribal celebrations its customary to have a feast and this one was no different. Tribal event coordinator, April Mettler was able to sponsor the refreshments hotdogs, smores, hot cocoa, tea, and coffee. Lunch was prepared by staff Mark Stanger (Fisheries), Mr. Jolibois, Janette Taylor (Social Services), and volunteers, Betty Lou Wyatt, Margie Johnson (Tribal School) and John Love (Kootenai High School).

Elisabeth and Paige a little muddy after digging potatoes!

Water Potato Day is an annual holiday celebrated by the Coeur d'Alene Tribe. The Fisheries Program was grateful to see so many friends come join us this year. We especially thank all of the schools that participated with Tribal staff and the teachers and volunteers who helped make this celebration a truly special Coeur d'Alene Tribe traditional holiday.

Trail of the Coeur d'Alenes Update

By Dean Chapman, Recreation Manger

As this article goes to print, all is quiet on the Trail due to the winter weather. The Trail has seen several upgrades to its operation during the biking season (April-October, 2006).

During early summer, a trail counter was installed at the Plummer Trailhead. Use was variable between April and October with a high of trail user days of 1,341 on August 18th to a low of four (4) on October 9th. A total count recorded June through October 2006 was 21,546. The existing counter is located near the parking lot and does not record users coming from the lakeside that turn around at the restroom facility. The plan is to install another trail counter near the tunnel to count those people. The objective of installing these counters is to better quantify the number of people using our Trail and trailhead and begin to assess changes in use over time. This information will be valuable in making sound management decisions in the future.

Here is one of the interpretive panels on the trail!

Also, we installed three new wildlife education interpretive panels along the Trail between Plummer and Harrison thanks to an Idaho Department of Parks and Recreation grant submitted by the Wren Foundation in Coeur d'Alene. The panels depict various types of wildlife and explain their habitats, habits and the role they play in the ecosystem.

Finally, we credit Tribal Forestry, Norris Boothe and Forestry/Fire crew who planted 44 trees and 101 shrubs near the Plummer Trailhead restroom facility.

Fire Crew helps clean trail and plants new shrubs & trees.

The Recreation Program remains busy cleaning up deadfall along the Trail (remember the windstorm in early November). Staff is also working with the State of Idaho to complete all the documents needed to outline the joint management activities our respective governments will undertake to operate and maintain the Trail. We hope to have these documents completed by January 2007. Soon thereafter, the transfer of the deed of ownership will be conveyed from Union Pacific Railroad (who formerly had an easement to operate the railroad) to the State of Idaho and the Tribe. The Tribe will own and manage the portion of the Trail within the Reservation. Both the Tribe and State will manage and own the Trail within Heyburn State Park. See you on the Trail!

From all the Natural Resource programs we wish you a Merry Christmas & Happy New Year!