



CHIEF JOSEPH HATCHERY UPDATE



Once the males and females are spawned, the eggs are mixed with milt and then water to initiate fertilization. An iodine solution is used which kills any disease on the outside of the eggs. The eggs stay in the solution for up to 60 minutes before water is turned on.

- Spring Chinook spawned – 281 females, 169 males and 3 jacks
- Segregated Summer Chinook spawned – 223 females, 156 males and 1 jack
- Integrated Summer Chinook spawned – 271 females and 150 males and 14 jacks

Number of eggs in incubation:

- CJH Spring Chinook – 904,211 eyed eggs
- MetComp Spring Chinook – approximately 240,000 eyed eggs
- Segregated Summer Chinook – approximately 892,000 eggs
- Integrated Summer Chinook – approximately 1,124,650 eggs

Number of fry transported to acclimation ponds:

- Similkameen Pond: 367,527 integrated summer chinook were transported from October 24 - November 1
- Riverside Pond: 235,240 Met-Comp spring chinook were transported from November 7 – November 15
- Brooks Tract Pond: 138,439 integrated summer chinook were transported from November 16 – November 21

Employees of the Month:

October - Leo Amundson
November - Spencer Cleveland



Since October, hatchery staff have spawned hundreds of summer chinook and shocked and picked (the process of removing dead eggs) through thousands of spring chinook eggs. They will continue shocking and picking eggs throughout December. Hatchery staff also had help from Chelan County PUD staff, and transported thousands of fish fry to acclimation ponds where they will continue to grow until they are released in the spring.

Prior to the adult fish being spawned, staff would squeeze the bellies of the fish to see if they were ready. If the eggs of the female fish were loose enough and the male fish were producing milt, staff would take the eggs and milt for fertilization.

“After taking the eggs from the females, they are given a unique number so that their eggs can be tracked in case they need to be culled,” said Matt McDaniel, CJH manager. “Our vet takes kidney samples of each female spawned to determine the level of bacterial kidney disease (BKD). If a female has high levels of BKD, the eggs she produced will be culled due to the high probability that her offspring will also have high levels of BKD.”

SPECIAL THANKS TO THE PROJECT PARTNERS



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COLVILLE CONFEDERATED TRIBES AND PROJECT PARTNERS RELEASE CANADA LYNX IN EASTERN WASHINGTON



Canada lynx numbers are on the upswing in eastern Washington due to successful trapping and hauling efforts in the last two years.

The Colville Confederated Tribes' (CCT) wildlife staff and project partners were recently in Canada and captured 10 Canada lynx and relocated them to their new home on the Colville Indian Reservation (CIR). Nine lynx were released last year when the project first began.

“The trapping went well this year and the team was able to catch and relocate 10 adult lynx in about one month,” said Corey Peone, Inchelium District wildlife biologist for CCT. “Our goal was to catch them before the big snowfall arrived and the final lynx was caught the day after the first big snow storm.” He said, “The trapping efforts started in early October and ended in early November, and at one point, I believe there were up to 60 traps between both trap lines.”

In Canada, lynx are not a listed species so it is legal to trap them there.

In Washington state, Canada lynx are listed as a federally threatened species so multiple permits were required to transport these animals across the border.

“When I was in Canada we caught three lynx in one day, so I got to work with these three toms from the trap to the release site,” said Elizabeth Odell, Inchelium Assistant district wildlife biologist for CCT. “After surveying the trap line, we moved the lynx into a kennel where they can be safely transported to the house we were staying at. We found it is much less stressful to process the animals at the house, where they can calm down in a dark and quiet space, rather than be filled with adrenaline inside the trap in the field.”

Odell said, “We let the lynx calm down and once they are drugged, we proceed to monitor their vitals; including respiratory rate, temperature, gum color, and heart rate. “We take their weight, secure a GPS collar, place an ear tag, and note the body condition and overall health. A veterinarian would con-

firm that it was healthy and we monitored them every few minutes until the animal is awake and alert. Once the lynx is awake, we offer raw chicken to give them some calories for the upcoming trip.”

She said it took about two hours to transport them from Kelowna, B.C. to the border and once through customs, it took another 2.5 to 3 hours to drive them to the release site on the CIR.

“Every lynx that is released is fit with a GPS satellite collar that tracks its movement on a daily basis,” said Rose Piccinini, Sanpoil district wildlife biologist for CCT. “The first year of monitoring showed us so much and

Continues on page 2

INSIDE THIS ISSUE

- 1-2 Canada Lynx
- 3 Fish passage on juveniles & adult
- 4 Chief Joseph Hatchery



it's amazing to document how they are utilizing the landscape. As expected the majority of the lynx dispersed along the backbone of the Kettle Crest with the majority of them staying south of Boulder pass."

"Over the course of the year, we had two males and two females return to Canada," said Piccinini. "One of the females traveled south again and has returned to the North Half. During summer monitoring, we were able to confirm that one female reproduced. We have camera sets out to verify the survival of the kittens and we will continue to monitor her this winter."

The CCT teamed up with Conservation Northwest, Upper Columbia United Tribes (UCUT), Okanagan Nation Alliance (ONA), and others to capture and relocate these large cats to the CIR. The goal of the project is to relocate at least 50 Canada lynx to the reservation in the next five years.

"It was an amazing year," said Dave Werntz, science and conservation director for Conservation Northwest. "The Tribe's wildlife staff, trappers, ONA, UCUT, and other partners showed up strong for another successful year sup-

porting lynx recovery. We made some changes based on last years' experience to improve trap performance, surmount weather and mechanical obstacles, simplify logistics, and ensure efficient and humane lynx care. And it worked!" He said, "It's inspiring to work together with such a competent and productive team to right a historic wrong and boost biological diversity, ecological resilience, and regional lynx recovery."

According to Werntz, lynx numbers have been low in the Kettle Range due to historic overharvesting (fur trapping) and the vast majority of lynx documented in Washington between 1964 and 1984 occurred in northeast Washington, mostly in the Kettle Range. He believes moving them in the Kettle Range from a robust lynx population from the north will work.

"We commissioned a scientific analysis that showed a substantial amount of suitable habitat for lynx in the Kettle Range that could support 12-40 lynx depending on their home range size," said Werntz. "The Kettle Range was also identified by federal biologists a few years ago as one of six "core areas" essential to the continued persistence of lynx due to its extent of suitable habitat,

connection to British Columbia, and quality snow and prey conditions."

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THOUSANDS OF JUVENILE CHINOOK CAPTURED IN THE UPPER COLUMBIA, REINTRODUCING ADULT SALMON YIELDS SUCCESSFUL SPAWNING AND REPRODUCTION



In the past few months, thousands of juvenile chinook were captured in the Sanpoil River, a tributary of the upper Columbia. The juveniles were produced from 178 adult chinook that were released in the river in 2021. These studies in the Sanpoil are part of a larger effort to reintroduce salmon in the blocked area.

Colville Tribes Fish and Wildlife (CTFW) staff set up a rotary screw trap in the Sanpoil River where the river meets the Lake Roosevelt reservoir to monitor out-migrating redband trout and chinook salmon. Since early spring, they have been monitoring and tagging thousands of juvenile salmon.

"We started capturing salmon at the screw trap in mid-March," said Aspen Nelson, fisheries biologist for CTFW. "We collected them in the trap almost every day with 5,278 chinook captured and 4,726 of those being PIT tagged as of November 8, 2022." The fish that were captured do not represent the full outmigration of juveniles as the trap only samples a portion of the river. CTFW staff will conduct further analyses this winter to estimate the number of juveniles that outmigrated in 2022.

Once the fish are tagged and begin their journey migrating downstream, they must survive both Grand Coulee and Chief Joseph dams, the two largest hydroelectric projects on the Columbia, as well as nine additional dams on their way to the ocean. Once they reach Rocky Reach Dam, biologists will be able to detect them as they continue their journey downstream.

The juvenile fish were produced from adult summer chinook that were released last August. Those surplus fish came from the Douglas County PUD's Wells Hatchery. The Washington Department of Fish and Wildlife (WDFW) assisted with disease testing and transport permits.



"WDFW fully supports salmon and steelhead reintroduction efforts into the blocked area of the Columbia River and we are eager to assist where needed with staff expertise and funding, when available," said Chris Donley, regional fish program manager for WDFW. "We embrace the value of reintroduction both ecologically and culturally and continue to look for ways to be helpful to the Colville Tribe and our UCUT partners."

"Releasing these fish in the blocked area met several purposes, including ceremonies, ecological restoration and scientific evaluations," said Casey Baldwin, research scientist for CTFW.

From September to mid-October, CTFW staff surveyed about 22 miles of the Sanpoil River and during that time they counted 77 redds.

"Counting the redds is an important monitoring step because it provides documentation that the fish were able to successfully survive pre-spawn holding and construct the nests (or redds) where they lay their eggs," said Baldwin. "We only found two carcasses this year, which is fewer than what we see in high density spawning areas such as the Okanogan."

He added, "The carcasses are an important part of ecosystem restoration and add nitrogen, phosphorus, and carbon that were accumulated while the fish were in the ocean. It's a tremendous boost to this watershed that has been deprived of marine nutrients for so many decades."

While the staff conducted surveys, they observed bears, eagles, ravens, otters and raccoons along the river, which is likely why so few salmon carcasses were found.

The Colville Confederated Tribes have been working closely with the Upper Columbia United Tribes and the WDFW to pursue a phased approach to reintroducing salmon in the blocked areas upstream of Chief Joseph and Grand Coulee dams. Phase 1 is complete and included science and feasibility evaluations and Phase 2 is currently being worked on. This phase will include multiple studies to test feasibility and determine the best path forward to continue reintroduction efforts of moving salmon into the blocked areas.