



LET'S TALK LAMPREY



the translocation efforts, larval lamprey have begun to reestablish populations in all the release locations," he said. "Successful rearing of larval lamprey in a stream is a critical milestone for rebuilding a viable Pacific lamprey population. Unlike salmon that return to their natal stream to spawn, adult Pacific lamprey locate spawning streams by following pheromones released by larval lamprey."

Adult lamprey translocation work is being funded through a grant from the U.S. Fish and Wildlife Service's Pacific Lamprey Regional Implementation Plan.

Larval lamprey are filter feeders that burrow into fine sediment and can live in our local tributaries for 3 to 9 years. They feed primarily on algae. They are one of the oldest fish in the world appearing in fossil records about 450 million years ago. After the larval stage, lamprey go through a metamorphosis into a juvenile phase. This occurs gradually over several months as developmental changes occur. These changes include the appearance of eyes and teeth. At this point, the juvenile lamprey enter the water column and move downstream as they migrate to the ocean where they mature into adults and begin their parasitic life stage in the Pacific Ocean.



In the last few weeks, a total of 116 adult Pacific lamprey were released in Omak Creek, Salmon Creek, Loup Loup Creek and in the Similkameen River.

Douglas County PUD's fisheries staff trapped the lamprey at Priest Rapids Dam and PIT tagged them at the Wells Hatchery.

"Data from PIT tags allows us to better understand if lamprey are surviving the winter and how they travel through the watershed after they are released," said Matt Young, fish biologist for CTFW. "Biologists then use that information to alter release locations to ensure the translocated lamprey have the best chance to spawn successfully. There are over a dozen PIT tag antennas functioning throughout the Okanogan."

According to Young, Pacific lamprey were presumed to be extirpated from the Okanogan River Basin before translocation efforts began in 2017.

"We have translocated 583 adult lamprey since then and as a result of

SPECIAL THANKS TO THE PROJECT PARTNERS



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CHINOOK SALMON RELEASED IN HISTORIC HABITAT



Recently, hundreds of adult summer chinook were released upstream of Grand Coulee and Chief Joseph dams.

The releases are part of a huge undertaking by the Colville Confederated Tribes (CCT) to reconnect salmon to their historic habitat.

In July and August, 235 adult chinook were released in the Sanpoil River. On August 16, 107 adult chinook were released in Lake Rufus Woods just behind Chief Joseph Dam. The chinook were surplus hatchery fish from the Douglas County PUD's Wells Hatchery.

Casey Baldwin, research scientist for Colville Tribes' Fish and Wildlife (CTFW), said that all of the fish were PIT tagged.

"In the Sanpoil, the PIT tags will tell us if they move out of the river or up the West Fork. In Lake Rufus Woods, the PIT tags will tell us if they move into the Nespelem River, or if they fall back through Chief Joseph Dam and

go to a hatchery or a tributary."

Since 2019, the CCT have held several cultural and educational releases to reintroduce salmon into blocked areas of the Columbia River.

"The CCT have been waiting patiently for salmon to return to the upper Columbia (above Chief Joseph and Grand Coulee dam) for over 80 years," said Joe Peone, director for CTFW. "But now we are taking steps to make it happen. We have transported hundreds of adult salmon around the dams in the last few years."

Peone says the tribes will continue to release salmon into waters above the blocked area in years to come and that there are plans in the works to trap and haul sockeye in the future.

"It is critical that the CCT take a leadership role in restoring salmon to their historic natal waters."

This fall, fisheries staff will go to the release sites and monitor the fish along the Sanpoil River and in the upper watershed to observe the fish spawning.

"In 2020, we observed a lot of spawning near the release sites and this year, we put some fish in the same locations but we also put some fish lower down river, so it will be interesting to see how they do compared to the upper release sites," said Baldwin.

"Next spring, our juvenile trout monitoring program will be able to document out-migrating salmon smolts. We will be able to put tags in them and document their journey to the ocean, and if we are lucky, perhaps even see a few adults return to the Columbia."

The CCT, Washington Department of Fish and Wildlife (WDFW), Upper



Columbia United Tribes (UCUT) and other stakeholders have been working on salmon reintroduction for years.

"As a Colville tribal citizen, to participate and witness the cultural and educational releases of salmon continues to inspire me and we have also heard the same reaction from so many throughout the region about the incredible potential of returning salmon to its historic habitat," said Executive Director for UCUT, DR Michel.

"The recently completed Phase 2 implementation plan cites the cultural and educational releases as key

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HUNDREDS OF JUVENILE WHITE STURGEON RELEASED IN RUFUS WOODS LAKE



Over 600 juvenile white sturgeon were released in Rufus Woods Lake recently.

Colville tribal fisheries staff are hopeful this trend will continue.

Prior to the sturgeon being released in the lake, fisheries staff measured and weighed and PIT tagged each fish. They

also removed a series of scutes to signify that the fish were reared in a hatchery.

“The tags allow us to evaluate the survival and growth rates of hatchery sturgeon, which will inform future stocking rates,” said Jason McLellan, research scientist for Colville Tribes’ Fish and Wildlife (CTFW). “In addition, it allows us to evaluate entrainment rates, which is the proportion of the fish released that move downstream of Chief Joseph Dam out of Rufus Woods. Entrained fish could be captured in ongoing standardized sturgeon stock assessment programs conducted in downstream reservoirs.”

McLellan says that the long-term goal would be to establish a population supported by hatchery supplementation

that could provide a fishing opportunity for the Colville tribal membership.

“Sturgeon are slow growing and thus it will take several years to develop the program to the point where it could support some fishing and we do not have any dedicated funding for a program in Rufus Woods,” says McLellan. “As such, we have been limited to opportunistically stocking hatchery sturgeon that were surplus to the needs of Wells or Lake Roosevelt programs.”

Jill Phillips, trout hatchery manager for CTFW, said they received 279 sturgeon on October 1, 2020, from the Wells Hatchery and those fish were approximately nine grams each. “Later that month our hatchery received three smaller groups of fish ranging between 8-23 grams in size.”

In 2017, the Wells Hatchery and CTFW staff stocked Ru-



fus Woods with 1,362 yearling sturgeon that were surplus from the Wells Hatchery program. The Wells Hatchery is operated by Douglas County PUD.

Sturgeon programs in the Wells Reservoir and Lake Roosevelt are implemented cooperatively by the Colville Confederated Tribes, the Washington Department of Fish and Wildlife, Douglas County PUD, and the Spokane Tribe of Indians.

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activities to provide data that will inform how future fish passage facilities will be designed and placed in the blocked area of the Columbia River,” he said. “The Phase 2 implementation plan is being shared with resource managers throughout the region, it will be a living document that will continue to be developed and improved as information and data are gathered.”

Goals of the cultural and educational releases include:

- Meet cultural and ceremonial needs of the tribes by reconnecting salmon with their historic habitat and reconnecting people with the salmon.

- Contribute to knowledge about movement, survival, and behavior of fish in the streams, reservoirs and dams that will answer key uncertainties or better inform the development of experimental designs for studies in later phases of reintroduction.

- Provide opportunity for salmon to spawn in the natural environment to generate offspring for downstream fisheries and future stock for additional reintroductions.

- Ecosystem benefits such as reintroduction of marine derived nutrients for stream, riparian, forest and wildlife.



CHIEF JOSEPH HATCHERY UPDATE

The past few months have been hectic and exciting to say the least as staff began collecting salmon in early July for the CJH program. They also stocked the community freezer and distributed salmon to Colville tribal members and to other tribes.

“We collected 1,252 fish for the Chief Joseph Hatchery’s broodstock while removing 103 chinook and 1,475 sockeye from the Okanogan River via the purse seiner,” said Isaiah Martin, harvest biologist for CTFW. “The harvest program was able to distribute 2,231 chinook and 120 sockeye to the membership this year from multiple Columbia River hatcheries and the Dreamcatcher.”

The processing crew put 1,355 sockeye, 171 whole chinook, and 697 chinook fillets into the community locker for ceremonial purposes. Additional meat such as buffalo will be added.

“The harvest and CJH crew were able

to supply the Coeur d’Alene, Kootenai, Kalispel, and Spokane Tribes with 654 chinook collectively from the ladder this year,” said Martin. “Two hundred of these fish were traded with the Kalispel Tribe for two buffalo to be received later in the year when temperatures cool down.”

Chinook brood collected for CJH :

- Spring chinook broodstock collected, but none currently on station as spawning has concluded for the season: 324 females, 259 males and 6 jacks

- Wild summer chinook collected to date for integrated program: 330 females, 331 males and 4 jacks

- Hatchery summer chinook collected to date for segregated program: 297 females, 279 males and 11 jacks

“Collection goals have been met for our summer chinook programs, but the spring chinook program fell short on males,” said Matt McDaniel, manager for CJH. “Spring chinook broodstock

were collected at the CJH ladder, with some being brought in from Leavenworth National Fish Hatchery. There were no summer chinook broodstock collected at the ladder this year.”

According to McDaniel, approximately 1,451 hatchery adults and 145 hatchery jacks were removed from the ladder and distributed to tribal members.

In the beginning of August, broodstock collection efforts continued and by August 11, staff shifted their focus to spring chinook spawning which was completed on September 1. They continue to care for thousands of spring chinook eggs and juveniles, and are prepping for summer chinook spawning in September.

Staff began trapping salmon on August 18 at the fish weir in the Okanogan River. Fifty-six chinook were collected and nine of those fish were taken for brood.

