Saving our Salmon

The Fox Creek Chinook Salmon Restoration Project is now in its 15th year! Over the years, this project has seen its share of successes and setbacks, and we thought it was time to reflect on how far we've come, and ask the question – where do we go from here?

This juvenile Chinook was captured in 2020.

Project Background

In 2006, TKC Elders initiated restoration activities on Fox Creek to re-build Chinook salmon stocks. Restoration activities have been ongoing for the last 15 years, and have included: annual fry releases, juvenile monitoring, adult monitoring, beaver trapping and barrier removal. These restoration activities are guided by the Fox Creek Restoration Plan, which was designed to be conducted over two salmon lifecycles. This plan is now almost complete, with Phase 2 coming to an end in 2023.

Fry Releases

Annual fry releases have been happening since 2009 and have been a very important part of this project. Each summer, the Whitehorse Rapids Fish Hatchery would collect salmon eggs from returning Yukon River Chinook and raise them to the eyed stage. The eggs would then get transferred to the McIntyre Creek Incubation Facility, where they would be raised to the fry stage over the winter. The fry would then be transported to Fox Creek where staff, Citizens and members of the public would help release the fry into the creek. A fry release was not possible in 2020, but in prior years, the numbers of fry released annually has ranged from 2500 to 87,000, with a total of 334,608 fry released since 2009 (Figure 1) It was unfortunate that a fire destroyed the McIntyre Creek Incubation Facility in 2018, which has severely impacted this part of the project. TKC has been looking at different options to replace the facility, however, this is a big decision that will depend on the future goals for Fox Creek.

Juvenile Monitoring

Monitoring of juvenile Chinook has been ongoing since the start of the project, and four sites along the creek are monitored monthly during the open water season. Gee traps are set at each site to capture and measure juvenile Chinook and document overwintering success. Both wild and hatchery juveniles have been captured in Gee traps in Fox creek since the fry releases began in 2009. As expected, there were higher numbers of hatchery juveniles captured in most years; however, the number of wild captures increased after 2014, and we assume these to be the progeny of adults that returned to spawn. Some overwintering success of both wild and hatchery juveniles has also been observed, indicating healthy habitat in the creek.

TKC's summer student Brooklyn Massie, with a juvenile Chinook .

Adult Monitoring

Adult Chinook have been observed returning to the creek to spawn since 2013. Until this year, creek walks were the only method being used to look for adults, and the number of adults seen in the creek each year has ranged from 3-42 (Figure 4). This year, TKC piloted a video enumeration weir to better understand the numbers of adults returning to the creek, and whether they are of hatchery or wild origin. The video weir had some technical difficulties, but overall it was a success and a great learning experience we hope to improve in future years.

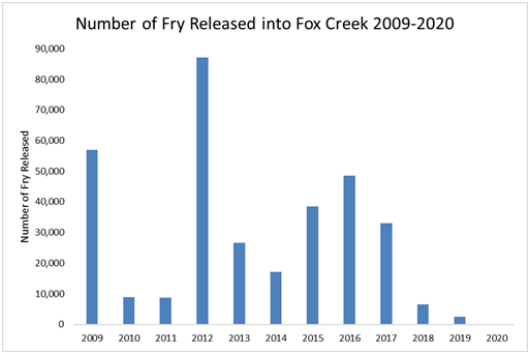

Figure 1: *Number of Fry Released into Fox Creek 2009-2020*

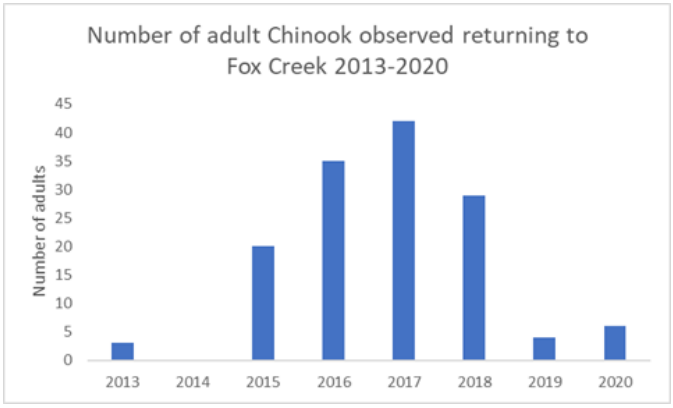

Figure 2: *Number of adult Chinook returning to Fox Creek.*

Coralee Johns and Ta'an youth inspecting the Chinook fry before release, 2016.

Frances Woolsey and her granddaughter Cheryl Kates after Frances offered a prayer for the Chinook at the 2018 fry release.

Alexander Laberge *releasing fry into Fox Creek, 2018.*

Fox Creek - 15 Year Timeline

2006: TKC Elders initiate restoration activities.
2007-2008: Habitat restoration and stewardship.
2009: First annual fry release.
2010-2012: Annual monitoring activities.
2013: First adults seen returning to the creek.
2014-2017: Annual monitoring activities.
2018: McIntyre hatchery fire.
2019: Annual monitoring activities.
2020: Video enumeration weir installed.

Left: Jenna Duncan gets in the thick of it, removing barriers caused by beaver activity **At right: Brooklyn Massie** and staff tackle another beaver dam.

Beaver Activity

Beaver activity on the creek continues to be a concern, as dams can create barriers for adults migrating upstream to spawn. Beaver trapping and dam removal have been ongoing since the project began, and these activities will continue to be important for making sure that salmon can access their spawning grounds.

Citizen Involvement

TKC Citizens have been involved in all aspects of this project, including: sharing knowledge of the creek, tagging fry, releasing fry, juvenile monitoring, creek walks, beaver trapping, report and proposal writing, and much more. After 15 years of restoration activities, TKC has achieved success with bringing salmon back to Fox Creek, but our work is far from finished. We would like your thoughts and ideas on what the future of Fox Creek restoration should look like.

- **What do you think about the work that has been done on Fox Creek over the past 15 years?**
- **What needs to be done on Fox Creek going forward?**
- **How would you like to see TKC citizens involved in Fox Creek restoration?**
- **Are there other salmon restoration projects you'd like to see?**

Please let us know!

Kristina Beckmann,
Fish & Wildlife Coordinator
fishandwildlife@taan.ca
(867) 668-3613 ext. 603