2023 STATUS AND TRENDS ANNUAL REPORT

Yakama Nation Fisheries

Summer 2024

Contents

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Cover photo: Entiat River—Silver Falls Fish Habitat Enhancement Project
Photo this page: Yakima River Canyon

METRICS HIGHLIGHTS

Yakama Nation Restoration Accomplishments 2008-2023*

17,300 Acre-feet/year
Water secured or returned through conservation in-stream

238 Miles
Stream habitats made accessible to fish through barrier/ diversion removal

1,900 Miles
Stream & riparian habitat improved, treated, or protected

319 Miles
Stream habitats made accessible to fish by passage structure installation

14,000 Acres
Wetland habitats improved or protected

3,700 Habitat Features
Large woody material & pool structures created instream

21,500
Unanchored logs, boulders & rootwads installed instream for habitat complexity

6 Fish Species
Being restored (8 populations/runs)

22,000 Pounds
Trash removed

211,000 People
Educated and informed

**Funded by Bonneville Power Administration. Source cbfish.org. Additional restoration work funded from other sources. Reported as of 1/11/2024*

Spotlight: Historic Agreement

Background

Columbia River Basin salmon production was once among the largest in the world. Since then, four out of sixteen stocks that historically spawned above Bonneville Dam have gone extinct, and seven have federal Endangered Species Act protection. Although there have been mitigation and restoration efforts implemented over the last several decades, today many of the remaining stocks are still at risk, unable to replace themselves. After decades of litigation and advocating that more needs to be done to restore fish species to healthy and sustainable levels, today there is a new, ground-breaking commitment in place. The Columbia Basin Restoration Initiative (CBRI) is a first-of-it's-kind science-based strategy jointly developed by the "Six Sovereigns", which include the four Lower Columbia River Treaty Tribes (Yakama Nation, Nez Perce, Umatilla, Warm Springs), and the states of Oregon and Washington. The US Government made significant commitments* in support of the CBRI and those commitments were memorialized in an agreement between the Biden Administration and the Six Sovereigns signed at the White House on February 23, 2024.

"This Agreement is a historic opportunity to help save our salmon and secure a just and prosperous future for everyone in the Columbia Basin. We must restore Columbia Basin fisheries to healthy and abundant levels. The economic and ecological health of our region requires it, and tribal treaty rights demand it. Treaty fishing rights include the right to actually catch fish, not just the right to dip our nets into empty waters without salmon."

"I would like to thank the Biden Administration for its leadership in recognizing the need to depart from 'business as usual' in the Columbia Basin, and work towards effective lasting change. We greatly appreciate the time and effort the Administration has committed to develop this plan to rebuild our salmon and native fish stocks to healthy and abundant levels, and to advance the clean energy transition in partnership."

Jeremy Takala
Fish and Wildlife Committee Chair, Yakama Nation Tribal Council

Photo : Councilman Jeremy Takala providing testimony to Congress in Washington DC advocating for appropriations in support of Tribal environmental, educational and law enforcement concerns, among other topics (March 2023).

Key Elements of the Columbia Basin Restoration Initiative*

1. Develop and advance an urgent, comprehensive strategy to: restore salmon and steelhead to "healthy and abundant levels" and complete the actions and investments necessary to secure continuity of services associated with Lower Snake River restoration prior to dam breaching.
2. Ensure that all native species, regardless of ESA-listing status, are considered in the comprehensive strategy in a way that improves ecosystem function in the Columbia River and its tributaries.
3. Ensure interim fish measures minimize additional generational decline of fish populations.
4. Invest in and support communities and economic sectors in a manner that is consistent with meeting decarbonization goals and mandates and integration of renewables, delivers affordable and clean power, improves resiliency and adaptability to climate change, and supports the many resilience needs of stakeholders across the region, and honors commitments to Tribal Nations.
5. Secure necessary regulatory compliance, authorizations, and appropriations for implementation of the strategy with an urgency reflecting the needs of the fish.
6. Ensure that the comprehensive strategy and associated Federal actions "honor Federal commitments to Tribal Nations" and address past and ongoing inequities related to Columbia Basin development to reflect and uphold Federal Treaty and Trust responsibilities to Columbia Basin Tribes.

*See pages 5-6, this report, for a summary of US Government Commitments.

Columbia Basin Restoration Initiative

“I look out at the crowd and I see some very beautiful people indeed. Those that have worked very hard on behalf of the Tribes that you work for, as well as those from the states of Washington and Oregon, and the United States Government, that have been put together here. Good afternoon. I am glad to be here with you today. It is quite something to see: the Tribes, the States, and the Federal Government, all working together in this way, and it is a process indeed worth celebrating.“

“Since Time Immemorial, the strength of the Yakama Nation and its people have come from the Nch'i-Wána, the Columbia River, and from the fish, game, roots, and berries it nourishes. The Yakama Nation will always fight to protect and restore the salmon, because without the salmon, we cannot maintain the health of our people, or our way of life.“

“The Pacific Northwest is facing some complex and related problems. Columbia Basin salmon are dying from the impacts of human development on our rivers. Our fishers have empty nets, and their homes have empty tables, because the Federal Government has historically not done enough to mitigate these impacts. We need a lot more clean energy, but we need to develop it in a way that it’s socially just. The last time energy was developed in the Columbia Basin, it was done on the backs of Tribal Communities and Tribal Resources. Now we have an opportunity to do better, and to have the Tribes at the table. Our region’s infrastructure is also aging and breaking. It is insufficient to serve the needs of our communities. Finally, the impacts of climate change is putting increased pressure on our lands, our waters, and our communities.”

“The Columbia Basin Restoration Initiative, CBRI, developed by the Six Sovereigns, is a shared, comprehensive vision for restoring healthy and abundant salmon runs to the Columbia River, while ensuring the security of our communities. As we gather here today to affirm our partnership and our commitments to each other, I want to thank President Biden and his administration, for the unprecedented federal commitment they have shown to saving our salmon and upholding tribal treaty rights. We can, and must, restore Columbia Basin salmon, and working together, we can and will do so in a way that ensures that all our communities will have the energy and other resources they need for generations to come.”

Gerald Lewis, Chairman, Yakama Nation Tribal Council
Opening remarks at the Columbia Basin Restoration Initiative signing ceremony
The White House, Washington D.C.
February 23, 2024

Background photo: Celilo Falls ca. 1900. Above: Chairman Gerald Lewis speaking at The White House, February 2024.

Columbia Basin Restoration Initiative

U.S. Government Commitments

In early 2024, the US Government (USG) formally signed a Memorandum of Understanding (MOU) with the Six Sovereigns (Yakama Nation, Nez Perce, Umatilla, Warm Springs, and the states of Oregon and Washington) and the nongovernmental plaintiffs (National Wildlife Federation v. National Marine Fisheries Service). It contains a package of initial federal actions in support of the Columbia Basin Restoration Initiative (CBRI)* which will be implemented over the next 10 years, in exchange for refraining from continued litigation.

Following is a summary of initial commitments:**

1. Lower Snake River Restoration

- PNW Tribal Energy Program to develop Tribal energy projects to replace generation should Congress authorize Lower Snake River (LSR) Dam breach
- Regional energy needs planning to take into account actions necessary to ensure healthy and abundant salmon populations
- Work with Six Sovereigns to address rail and road transportation necessary to improve salmon passage and survival
- Develop alternatives to barge transport (including dam breach), in consultation with the Treaty Tribes
- Conduct a recreation analysis to address potential LSR dam breach impacts
- Conduct water supply replacement study for potential breach of LSR dams
- Consult Treaty Tribes to analyze cumulative and ongoing impacts of Federal dams on Columbia River Basin Tribes

2. Reintroduction of Salmon in the Upper Columbia River Basin

- Funding for Upper Columbia United Tribes for studies of fish reintroduction above Chief Joseph and Grand Coulee Dams
- NOAA funding for Enloe Dam Removal (Similkameen River in Upper Columbia)

3. Restoration of Mid-Columbia Listed Stocks

- Along with the Six Sovereigns, develop suite of actions to rebuild stocks, with funding opportunities across all federal agencies
- Identify funding opportunities for a near-term subset of Mid-C priority actions
- Implement cold water refugia projects in the mainstem Columbia River

4. Other Native Fish and Improved Ecosystem Function

- Contribute or seek more funding for the restoration of other native fish such as Pacific lamprey, white sturgeon, bull trout, and resident fish and shellfish
- Increase restoration on federal lands (e.g. culvert removals and other priorities); additional US Army Corps funding as directed by Six Sovereigns; ocean/ marine environment research

**See pages 3-4, this report, for background on the CBRI.*
***Commitments in detail can be found at https://critfc.org/wp-content/uploads/2024/02/USG-Commitments-toCBRI.pdf*

U.S. Government Commitments

5. Interim Fish Operations

- Considerations for spill amounts and times at Lower Snake River and Columbia River mainstem dams
- Proposal for more earlier spill in spring and winter and less in summer, earlier reduction in summer spill at Snake River projects and McNary Dam
- Implementation of an adaptive management process for unexpected events or outcomes
- Develop Sovereign-driven process on managing operations prior to breach and managing operations regionally in-season
- Funding to address backlog of Columbia and Snake River dam operations and maintenance projects (as identified by the Columbia Inter-Tribal Fish Commission Tribal representatives)

6. Modernization of Energy & Other Economic Sectors for Resiliency

- Study for implementation of a Tribal Energy Sovereignty effort, including fish and watershed health concerns in energy projects
- Reduction of local and regional economic burdens
- Consultation of Tribes in energy project siting consultations
- Including Clean Water Act coordination for tribal concerns

7. Authorizations, Studies, & Timelines

- Budget and authorization requests informed by Presidential Memorandum
- Support in fast-tracking environmental compliance for rapid implementation of habitat and fish passage restoration and interim operations.

8. Additional Basin-Wide Funding Commitments

- Addressing hatchery funding backlog; toxics reductions; habitat restoration funding
- Continued much of Accord Agreement funding; cross-cut budget development for Columbia Basin salmon and steelhead by the White House Office of Management and Budget
- Increased funding for basin-wide restoration

9. Fisheries Management & Other Partnership Commitments

- Mitigation management and contracting reforms, including continued Administration Engagement
- Implementation of a grant pilot project to states and tribes

Background photo: Yakama Nation tribal members gathering roots and medicines in at-risk traditional "usual and accustomed" harvesting places along the Columbia River.

YAKIMA SUBBASIN

Levi George Supplementation and Research Facility — Spring Chinook

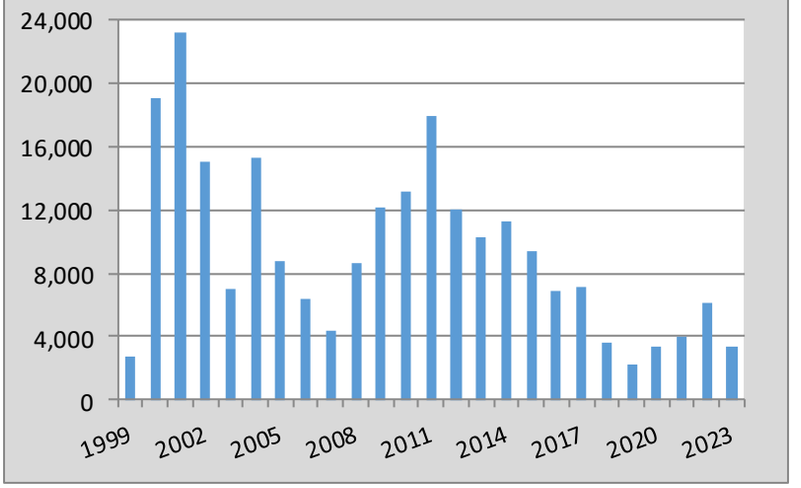
At the time of the 1855 Treaty, about 200,000 adult spring Chinook returned annually to the Yakima River. By the 1990s returns had declined to less than 3,500 fish, limiting tribal harvest.

In 1997, we opened the Levi George Cle Elum Supplementation and Research Facility (CESRF) to enhance spring Chinook returns and provide additional fishing opportunities. The facility was built to test the assumption that artificial production can be used to increase harvest and natural production while maintaining long-term genetic fitness of the fish population being supplemented and limiting adverse genetic and ecological interactions with non-target species.

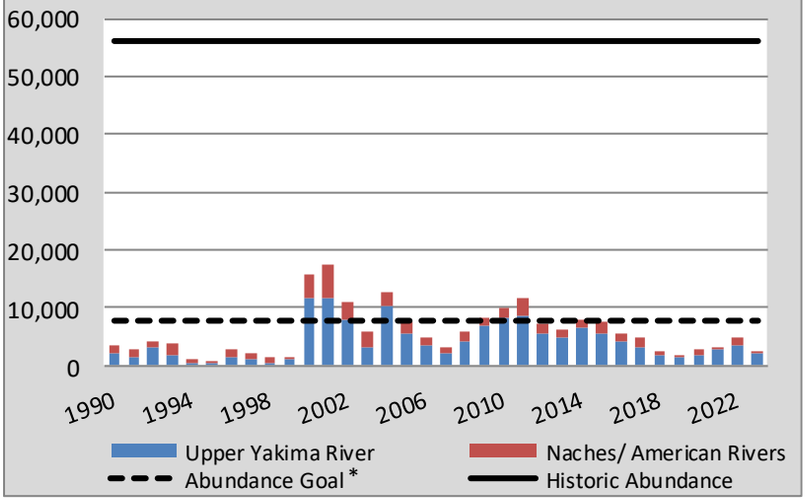
Production activities that occur at the facility include adult holding, spawning, incubation, and rearing of juvenile spring Chinook.

YN hatchery staff spawning spring Chinook at CESRF. Spawned-out fish are distributed for ceremonial purposes and at community events (YN).

Adult Spring Chinook Returns to Yakima River Mouth

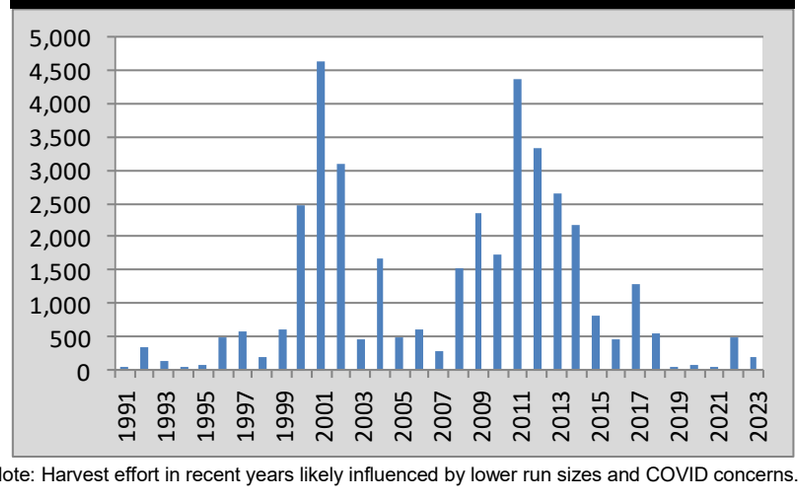


Estimated Number of Spring Chinook Spawning Naturally



**High-range goal is for healthy and harvestable natural populations fully occupying restored habitat. See "Sources" p. 32.*

Spring Chinook Treaty Harvest—Yakima River



Note: Harvest effort in recent years likely influenced by lower run sizes and COVID concerns.

Melvin R. Sampson Coho Hatchery

Photo above: YN hatchery staff spawning coho.

During the fall of 2021, the first coho were spawned at the Melvin R. Sampson Hatchery near Ellensburg.

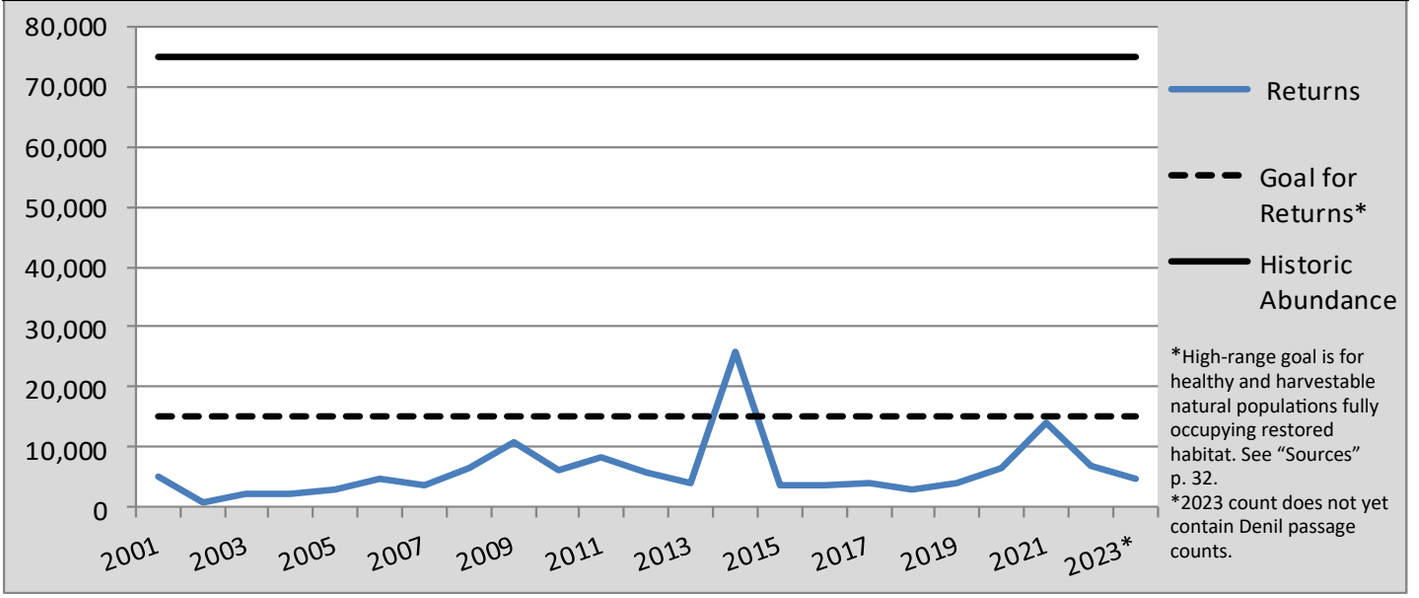
Mel Sampson was instrumental in starting and leading the Yakama-Klickitat Fisheries Project (YKFP) and an inclusive all-stocks initiative that has returned natural populations of summer Chinook, coho, sockeye, and Pacific lamprey to the Yakima Subbasin. As a highly respected tribal elder, Mel served 18 years on the Yakama Nation's Tribal Council, including the role of Council Chairman.

Funded by BPA through the YKFP, the coho hatchery includes several environmentally sustainable features. Because limited water supply is a challenge in the subbasin during the summer and fall, there was a need to develop innovative ways to re-use water. To conserve water, the facility includes a partial recirculation system that allows for 80% of the water to be reused. This technology allows us to use 930 to 1,200 gallons of water per minute during peak demands, compared to more than 12,000 gallons per minute at a conventional facility. Also, to offset energy use via traditional sources, the hatchery is equipped with a solar grid.

Photo above: YN hatchery staff scanning tags and taking genetic samples from coho at MRS coho facility (YN)

With the new hatchery, we will be able to produce 700,000 juvenile coho annually for release into the subbasin in order to increase harvest levels, natural spawning abundance, and spatial/temporal distribution.

Adult Coho Returns to the Yakima River Mouth



YAKIMA SUBBASIN

Prosser Hatchery — Fall Chinook

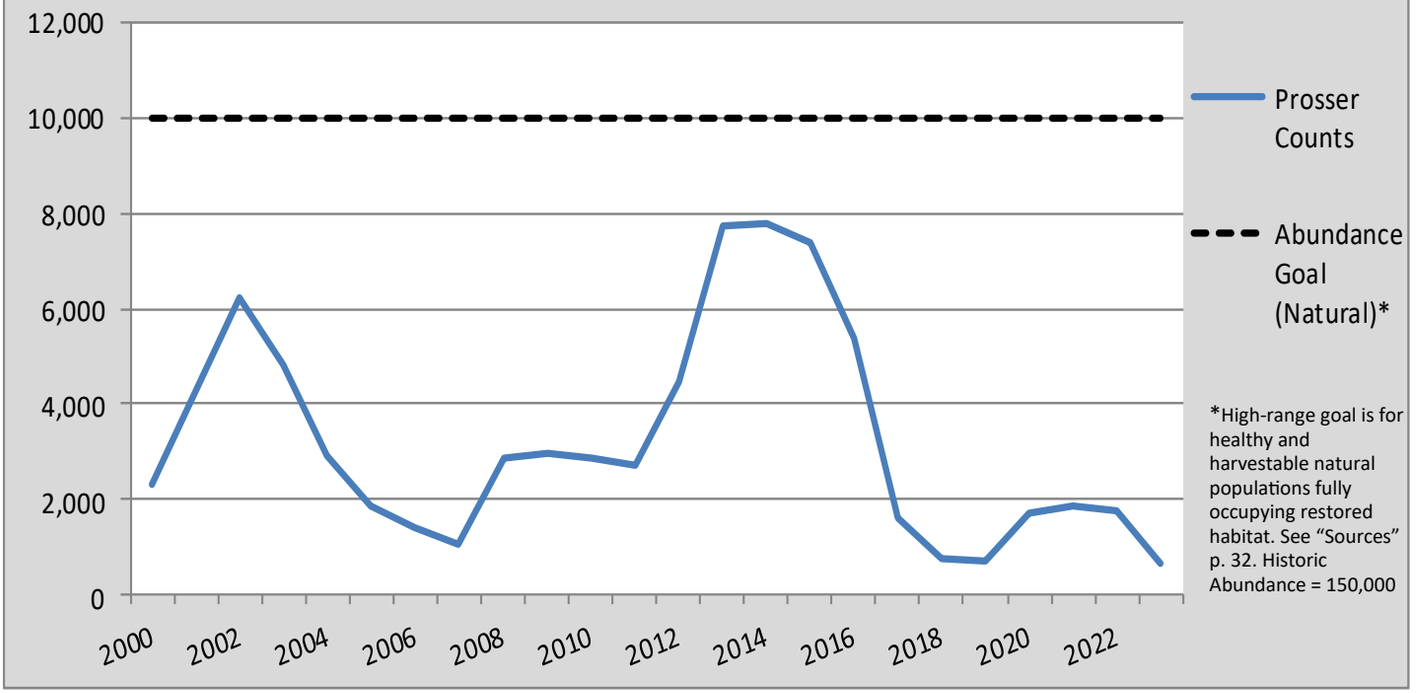
Prior to the Treaty era, up to 100,000 fall Chinook returned annually to the Yakima Subbasin. With the completion of hydroelectric dams, there has been a loss of natural production. One factor contributing to this loss is the inundation of spawning habitat. Consequently, reduced production led to the loss of harvest opportunities.

Above: Hatchery staff and volunteers salvaging fish trapped in a canal near the Yakima River. (YN)

The US v. Oregon Columbia River Management Plan established annual release targets for hatchery fall Chinook in the Yakima Basin to augment harvest opportunity in Zone 6 fisheries and to increase natural spawning abundance. Annual releases have averaged approximately 1.75 million subyearlings since 1983.

Initial hatchery releases consisted of fish originating from outside the subbasin. By 1997, production of Yakima River-origin fish was occurring at Prosser Hatchery. Currently, fall Chinook returning to the Yakima River include upriver brights from Little White Salmon Hatchery and progeny of Yakima River adults.

Adult Fall Chinook Returns to Prosser Dam



Above: reconditioned kelt being processed by YKFP Project Manager Joe Blodgett, prior to release at Prosser Hatchery (YN)

Prosser Hatchery — Steelhead Kelts

Historically, up to 40,000 steelhead returned annually to the Yakima Subbasin. By the 1990s, annual returns declined to around 1,000. Since 1999, we have been developing reconditioning strategies for kelts (post-spawn fish).

Steelhead are capable of spawning more than once; however, their physical condition after spawning combined with having to pass several dams and survive other dangers limit survival as they migrate to the ocean and back. To improve a steelhead's potential to spawn again, we have been developing a process to improve their condition.

A portion of emigrating kelts are diverted into the Chandler irrigation canal and collected at the Prosser Juvenile Monitoring Facility. Upon capture, fish are held and cultured in reconditioning tanks at Prosser Hatchery.

After six months, fish are released to the river at the same time as steelhead are returning from the ocean. Reconditioned kelts naturally choose their mates, spawning location, and upstream migration and spawn timing.

Reconditioned Steelhead Kelts Released in the Yakima Basin

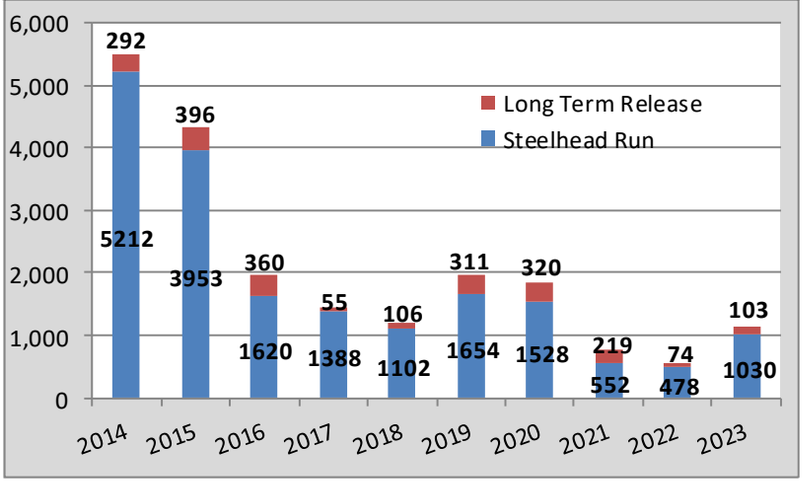
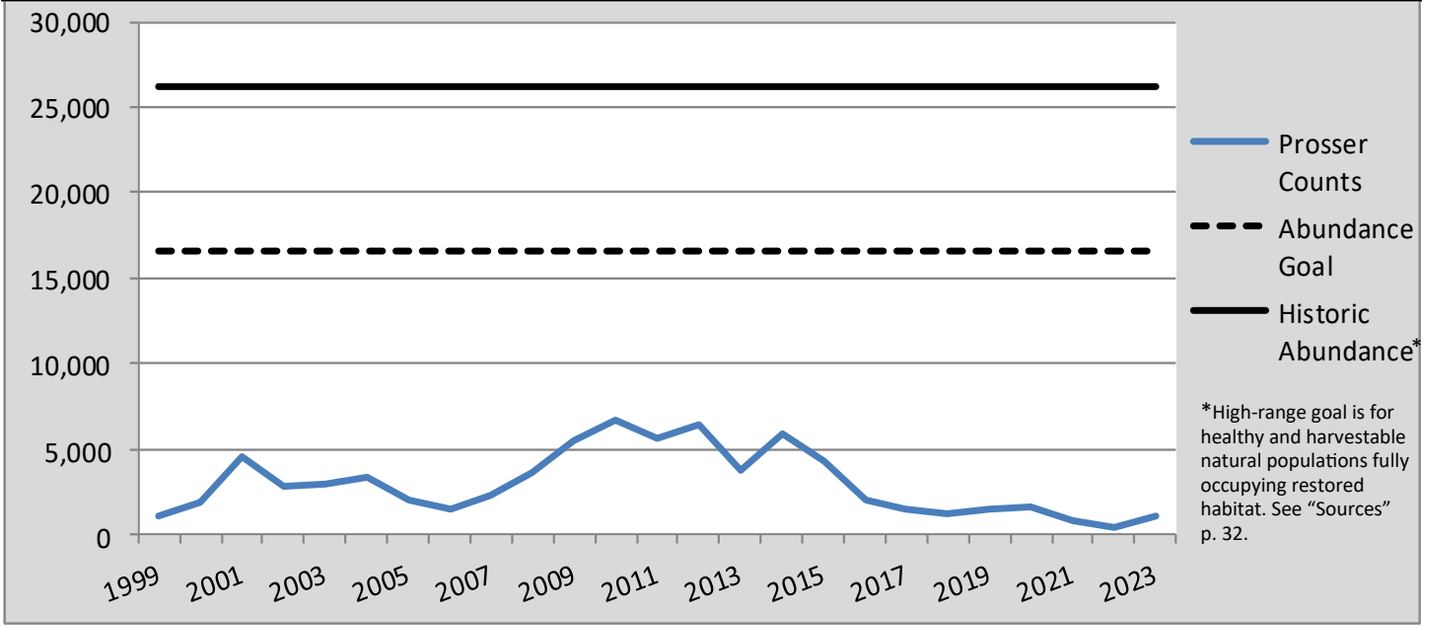


Figure left: Reconditioned kelts comprise a significant portion of the total steelhead run.

Adult Steelhead Returns to Prosser Dam



YAKIMA SUBBASIN

Summer Chinook Reintroduction Project

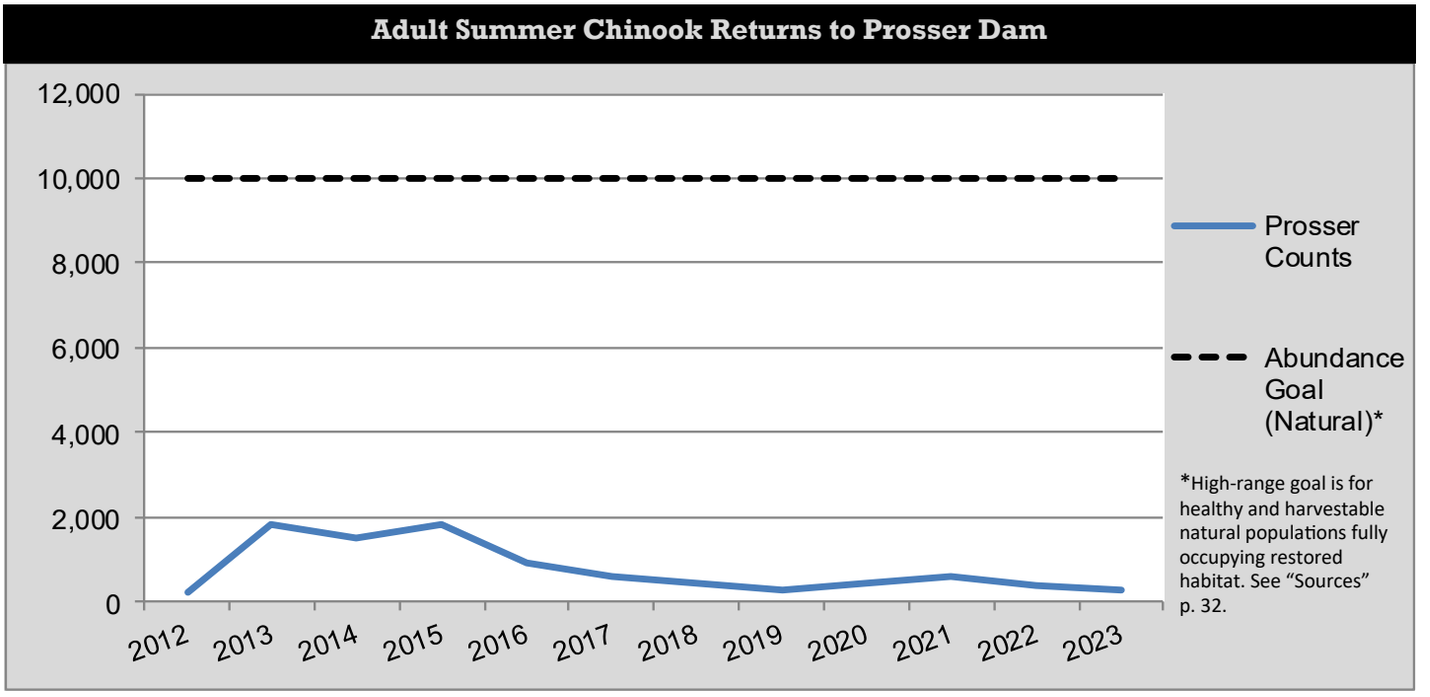
By 1970, summer Chinook were extirpated from the Yakima Subbasin. Summer-run Chinook are being re-introduced to the subbasin using Prosser Hatchery and temporary infrastructure at the Marion Drain Hatchery.

Our summer Chinook Reintroduction Project includes two phases. During the first phase, we have been releasing 1 million fish annually above Prosser Dam to recolonize habitat and provide tribal harvest opportunities. For this phase, juvenile production at the hatchery is dependent on eggs received from the Wells Hatchery. The second phase for the program is to transition to using a local, natural-origin broodstock for production purposes. Combined with improved habitat quality, through our on-going restoration work, this phase will allow us to reach our goal for a self-sustaining and locally-adapted population; however, hatchery supplementation may continue to be essential to realize annual harvest goals.

Current research being conducted by YN staff includes comparing survival rates between groups juvenile fish released at different ages/ sizes, and survival of those reared in different types of tanks versus raceways.



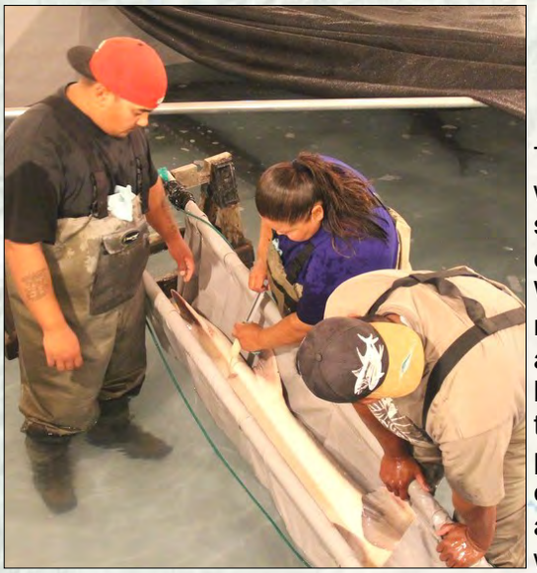
Above: Collected summer Chinook broodstock and YN hatchery staff spawning fish (YN)



Yakama Nation White Sturgeon Hatchery

Background: The productivity of white sturgeon and the opportunity to fish for them throughout the Columbia and Snake River systems has been substantially impacted by the construction and operation of the hydropower system. Although they still occur throughout their historic range in these basins, they are currently well below historic numbers. Recruitment of their young is especially difficult for the isolated populations that are impounded above Bonneville Dam, where altered seasonal flows, impacted spawning and rearing habitat, and impeded sturgeon migrations have all affected reproductive success.

Above: YN staff maintaining juvenile fish in rearing tanks inside the sturgeon hatchery (YN)



Above: Yakama Nation biologists live-spawning white sturgeon (YN)

To mitigate these impacts, the Yakama Nation, in cooperation with and with funding from BPA, Grant and Chelan PUDs, has developed a white sturgeon hatchery process to supplement natural production, which currently releases 3,250 white sturgeon annually into Priest Rapids, Wanapum and Rocky Reach Reservoirs in the mid-Columbia River region. In the production process, captured adult fish are live-spawned and then released back near their capture site. Their offspring, after being raised for about a year in a protected hatchery environment, are then tagged and released into their historic range where natural production is currently not adequate to fully utilize existing habitat capacity. To maintain the genetic diversity and health of individual fish and of the population, the offspring are a result of a 6x6 matrix cross, where genetic material from 6 females are mixed with that of 6 males.

Project Goals are to enhance wild white sturgeon production within their historic range until healthy and harvestable wild populations are self-sustaining, with production constrained within the parameters of what the ecosystem can support, and ensuring the protection and conservation of natural populations.

Future plans currently under review include expansion of hatchery production to support the release of juvenile white sturgeon into the John Day and lower Snake River reservoirs, and to conduct research to monitor production goals and limitations, help identify limiting factors, and learn more about natural history requirements affecting wild populations.

Above: A young hatchery-raised sturgeon (YN)

YAKIMA SUBBASIN

Bull Trout Rescue, Rehabilitation, and Reintroduction — Upper Yakima Subbasin

Seasonal dewatering in the upper Yakima Subbasin often results in stranding and desiccation of juvenile bull trout. The impact can be significant since these isolated populations also face challenges associated with degraded instream habitat, migration blockages, warming temperatures, and invasive species.

We are helping to address these limiting factors by rescuing stranded juvenile fish during low-water periods, rehabilitating them, and reintroducing them to good-quality historic habitats. Rescued fish are fed special diets and grow significantly while in captivity. Thus we are increasing the natural reproductive potential of and reducing risk to populations, since these fish would have died otherwise.

Since 2019, a total of 1,605 rehabilitated bull trout have been released into the Kachess and Keechelus Lake systems. We are currently learning more about the fate and preferences of translocated fish through PIT and acoustic telemetry tag tracking post-release, information that will help inform future reintroduction and habitat restoration needs. Survival rates in captivity have now increased to over 95%. Future project goals include reintroducing bull trout to previously occupied good-quality habitats throughout the Yakima Basin.

Gold Creek			
Year	YOY Transferred	Released	Survival
2019	108	78	72%
2020	64	63	98%
2021	86	84	98%
2022	98	97	99%
2023	34	34	100%
Total Fish	390	356	

Kachess River			
Year	YOY Transferred	Released	Survival
2019	1162	152	13%
2020	596	531	89%
2021	483	466	96%
2022	0	0	NA
2023	107	100	93%
Total Fish	2348	1249	

Photos above: Juvenile bull trout (WDFW) and bull trout night-time rescue operation.

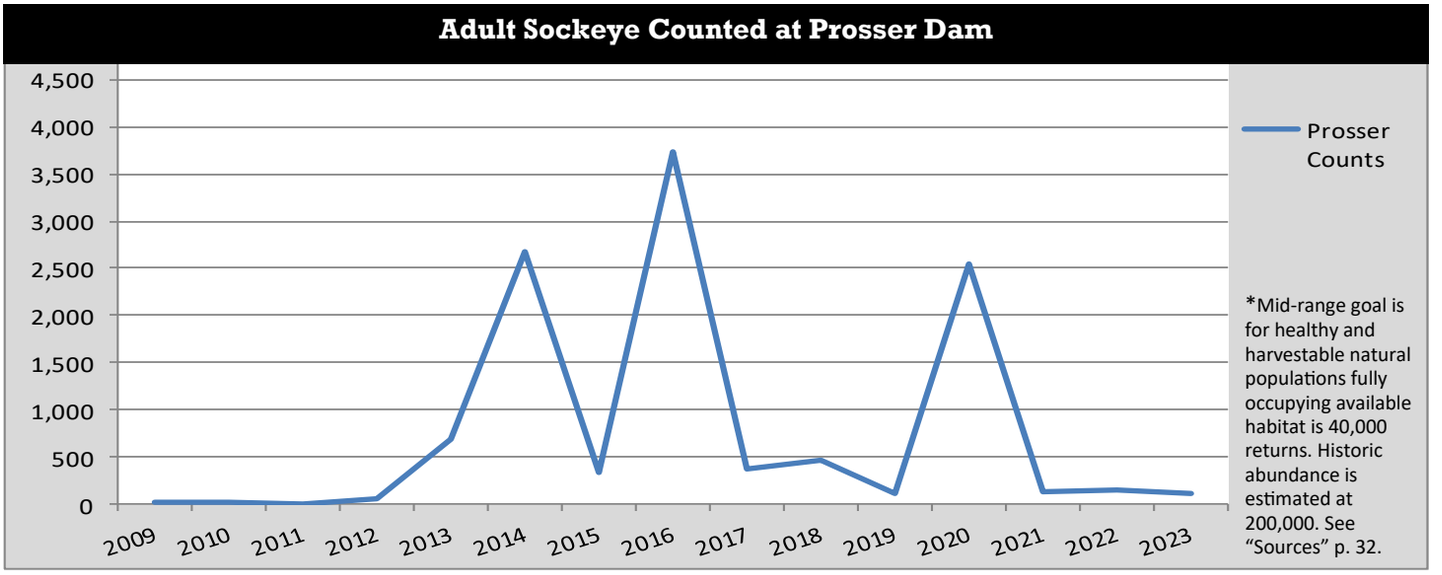
Sockeye Reintroduction — Cle Elum Lake

Above: Adult Sockeye at Cle Elum Lake

Historically, annual escapement of sockeye salmon to the Yakima River Basin exceeded 200,000 spawners, but in the early 1900's irrigation storage dams were built without fish passage, leading to the fish's rapid extirpation. In 2009, with support from several partners and an agreement with U.S. v. Oregon parties, the Yakama Nation began a sockeye reintroduction program in Cle Elum Lake. The goal of this program is to establish and maintain a naturally spawning population that is capable of supporting harvest and restoring tribal cultural connections. Initially the reintroduction program is based on the translocation of adult sockeye salmon trapped in the middle Columbia River, with the eventual goal of the population to be locally sustained. Since 2013, successful spawning has led to the return of naturally produced sockeye to the basin, after an absence of over 100 years.

To ensure success of the program, the Yakama Nation is working with the U.S. Bureau of Reclamation to provide permanent upstream and downstream fish passage at Cle Elum Dam. In July, 2024, the US Department of the Interior Secretary Deb Haaland, Washington State Governor Jay Inslee, and Yakama Nation Tribal Chairman Gerald Lewis, along with other partners, attended a ribbon -cutting ceremony at the site. There, they celebrated the nearly-complete downstream fish passage project, ground -breaking of a new adult fish collection facility, the historic opening up of 30 miles of fish habitat and continued federal financial support for water, fish, and climate resilience projects throughout the region.

Above Right: WA Governor Jay Inslee, Interior Secretary Deb Haaland, YN Chairman Gerald Lewis, at the new adult fish collection facility ground-breaking in July 2024 (Photo: Office of Gov. Inslee, video of event).



YAKIMA SUBBASIN

South Fork Manastash Creek Wood Replenishment at Frost Meadows

Date Completed: Phase 1 complete in 2023, additional phases in 2024 and 2025 as adaptively managed.

Focal Species: ESA-listed steelhead, bull trout

Funding Source(s): Bonneville Power Administration (Funding) and Washington Department of Fish and Wildlife (with in-kind donation of wood)

Goal & Objectives: To enhance instream habitat complexity, climate change resiliency, and contribute to improved flows. This project will provide additional benefits to fish and wildlife by increasing floodplain function through frequent wetting, increasing habitat for riparian vegetation development and water storage. In addition, recent research has shown that proper thinning prescriptions, such as the one used in this project, improve hydrologic function by allowing snowpack to be stored rather than evaporating from trees.

Outcomes: Yakama Nation biologists and four tribal habitat technicians harvested pre-commercial thin material and commercial thin trees ≤ 14" DBH on roughly 3 of the 10 available acres for harvest. All forest materials were harvested by hand with chainsaws, and then skidded near the stream with a tractor and grapple bucket. Biologist outlined areas were slash and larger material would be placed to create habitat and increase likelihood of historic floodplain inundation. If the stream was accessible to the tractor, slash was placed directly in the stream, when not accessible the slash was moved to the stream and hand placed by technicians. Technicians would then use the tractor skid-winch to pull full length logs into place. Occasionally, grip-hoists were needed to get precise alignment or pulling logs into areas the skid winch could not reach. Upon project completion there were an estimated 60 trees and 300 C.Y. of slash placed in 0.5 mi of stream.

Because there is heavy recreational use of this meadow, and there has been extensive damage from this recreational use. YKFP staff worked with the WDFW area manager to approve the placement of a gate where the spur road leaves the main road. Yakama Nation removed a gate that was blocking a collapsed bridge and relocated the gate to eliminate vehicular access. Additionally, boulders will be placed strategically to block all motorized access to this site.

More work will continue in coming years, we can continue to harvest within the designated harvest area to complete the thinning prescription and place the woody materials in the adjacent stream. Pieces of the collapsed bridge that would pollute the stream will be removed and hauled out of the forest. The bridge was built with large larch stringers that will be left behind as habitat. The northern abutment currently blocks floodplain to the east, and plans for its removal will occur after the completion of the forest thinning, in-stream placement and gate relocation.

Above left: Pre-project conditions at Frost Meadows on WDFW's LT Murray Wildlife Area. Right: Typical stream reaches with large wood additions post-construction.

Klickitat Hatchery

Completed in 1954 with funding provided by the Mitchell Act as mitigation for effects of hydropower development and operation on fisheries, the Klickitat Hatchery has been operated by YN since 2006, and allows us to rear and release fish to support Tribal and non-tribal fisheries in the ocean, Zone 6, and the Klickitat River. *See the next page for graphs of treaty harvest in the Klickitat River.*

Above: YN staff incubating eggs at Klickitat hatchery.

Four segregated harvest fish programs are implemented in the subbasin: spring Chinook, fall Chinook, and coho are produced at the Klickitat Hatchery. The Mitchell Act provides the base funds for this production, with Washington state Southern Resident Killer Whale funds also supporting some production of fall Chinook. The steelhead program relies on Washington Department of Fish and Wildlife's Skamania Hatchery for the rearing and release of juvenile fish (also using Mitchell Act funds).

In a segregated program, hatchery fish populations are maintained primarily or exclusively by hatchery-origin adults used as broodstock, with little to no interaction with the naturally spawning population. A project is currently underway, however, to transition Klickitat spring Chinook to an "integrated" program, in support of strengthening wild populations. The integrated program will incorporate natural-origin adults into the hatchery broodstock to provide both harvest and conservation benefits.

Spring and fall Chinook and coho salmon production at the Klickitat Hatchery has been funded by Mitchell Act funding since the hatchery was built, however most facilities have not been renovated since then. A capital construction project funded by the Bonneville Power Administration is getting underway in 2024 (following years of planning and design) to provide much-needed upgrades to the hatchery. Key project elements include: replacement of the water supply pipeline from the spring water source; rehabilitation of an existing surface water pump station; repairs to the existing hatchery fishway; construction of a new adult holding and spawning facilities, circular raceways, and a new distribution box to supply to them; and a new effluent treatment system. These improvements will help support implementation of the expanded spring Chinook integrated restoration program. Additional funds for Mitchell Act hatcheries from the Inflation Reduction Act of 2022 will be used for further upgrades and repairs to existing facilities with the following priorities: adult holding, a river water intake and juvenile rearing pond for coho, an under-river water supply pipeline for fall Chinook rearing ponds, and juvenile raceways. The final scope of all upgrade projects may evolve depending upon construction cost estimates.

Above: Klickitat Hatchery facility.

Spring Chinook

The hatchery annually aims to rear and volitionally release 600,000 juveniles that originate from brood fish collected at Lyle Falls and the Klickitat hatchery. Future goals of an integrated program are to release up to 800k yearling smolts.

Fall Chinook

Beginning in 1986, production at the hatchery switched from tule stock to upriver bright fall Chinook. Today, eggs are transferred primarily from Priest Rapids Hatchery or Little White Salmon National Fish Hatchery to Klickitat Hatchery for rearing and on-site release. Some local brood is used. The program produces up to five million smolts annually.

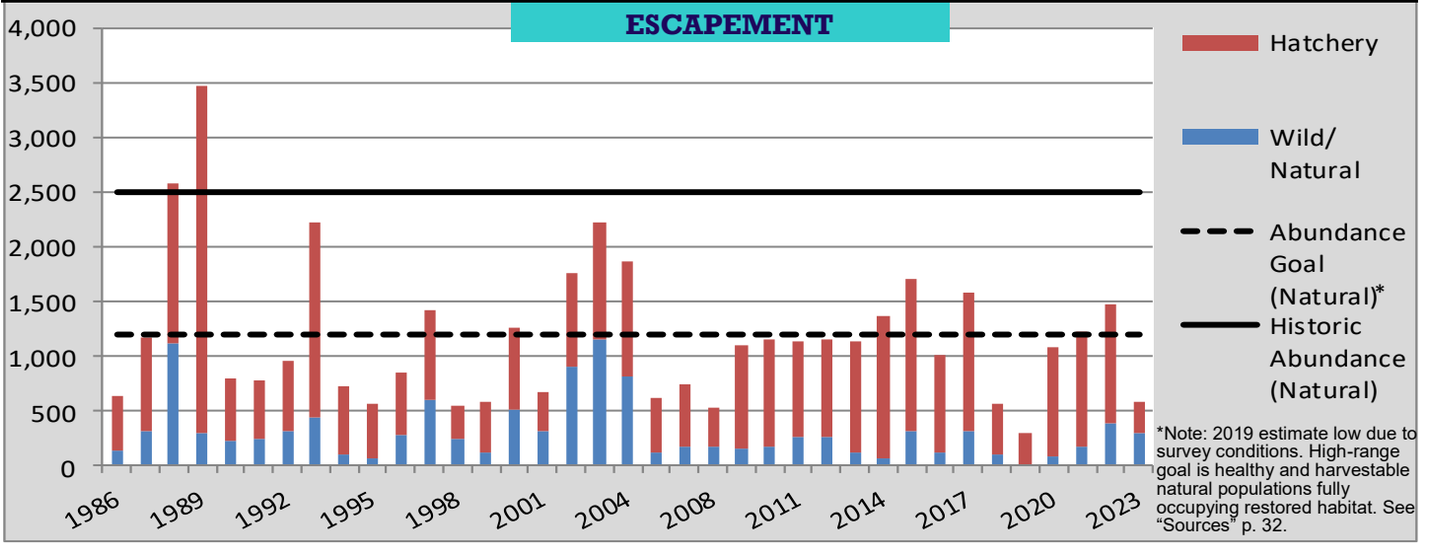
Coho

Coho were introduced in 1952 to achieve harvest obligations. Eggs are collected from Lewis or Washougal hatcheries for a 1 million juvenile release that is reared and released at Klickitat Hatchery. An additional 2.5 million out-of-basin juveniles (reared at Washougal Hatchery) are also released annually directly into the lower Klickitat River.

SOUTHERN TERRITORIES

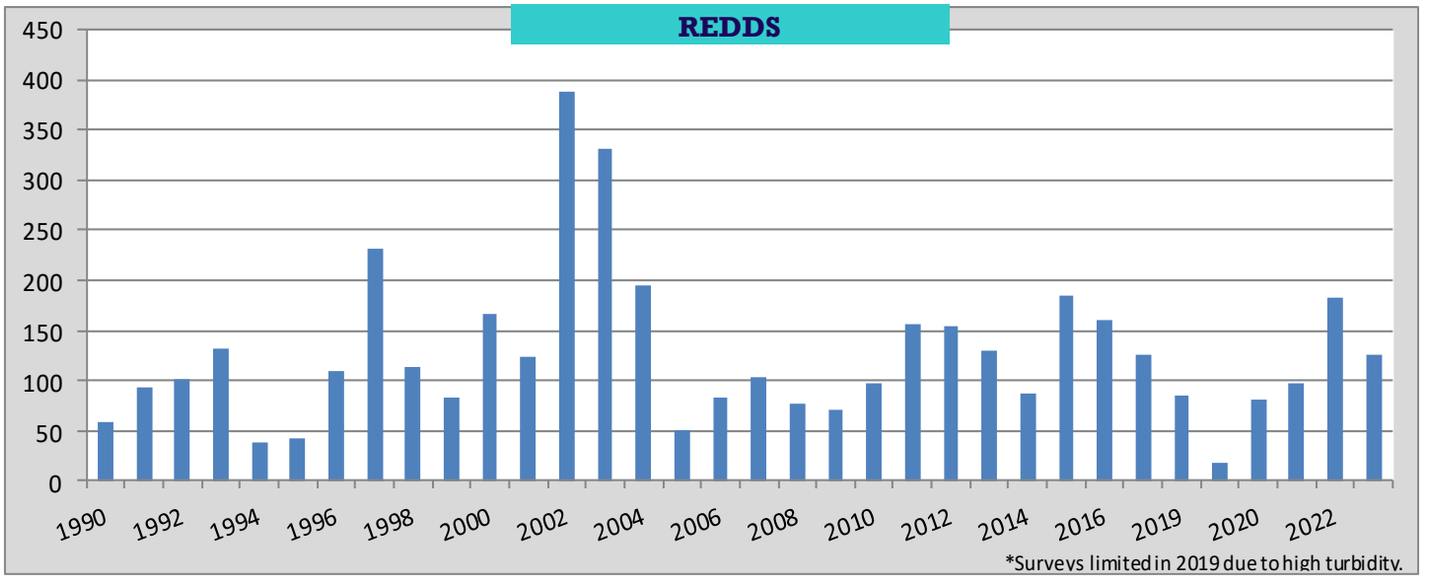
Klickitat Spring Chinook

ESCAPEMENT



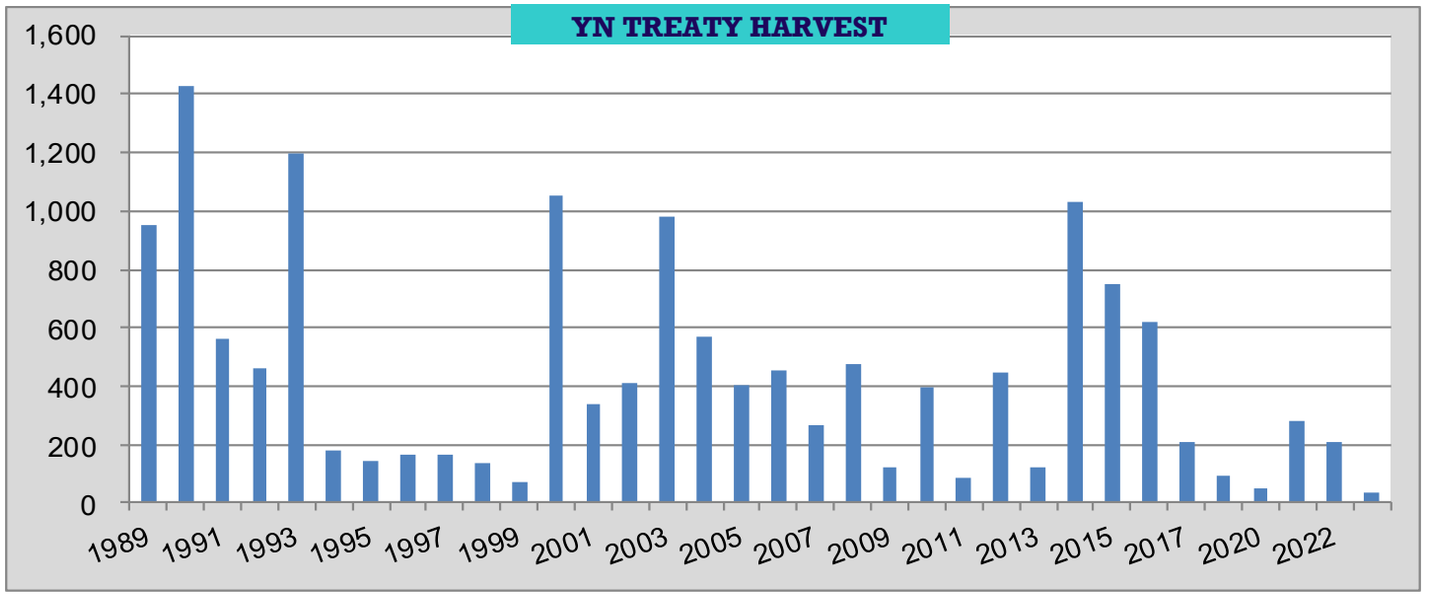
*Note: 2019 estimate low due to survey conditions. High-range goal is healthy and harvestable natural populations fully occupying restored habitat. See "Sources" p. 32.

REDDS



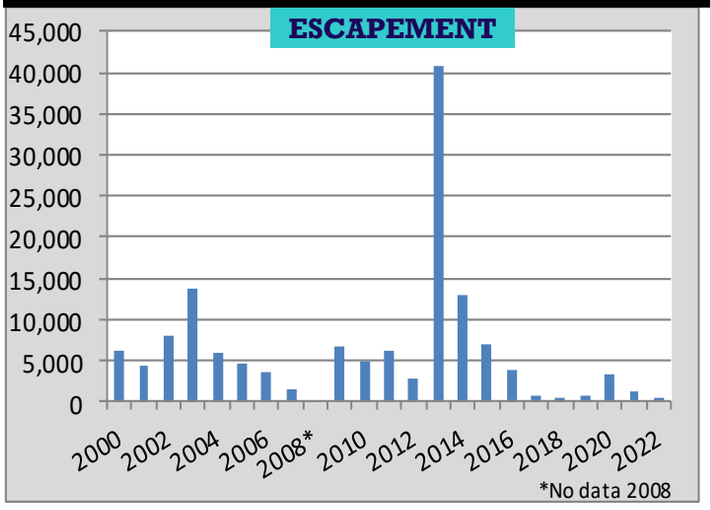
*Surveys limited in 2019 due to high turbidity.

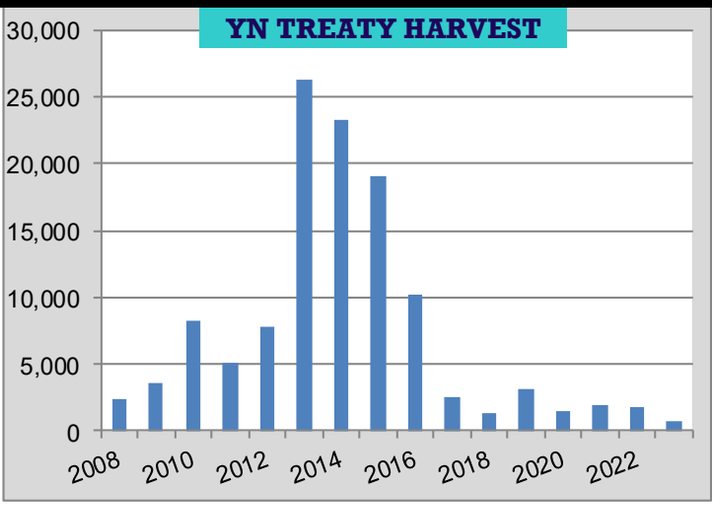
YN TREATY HARVEST



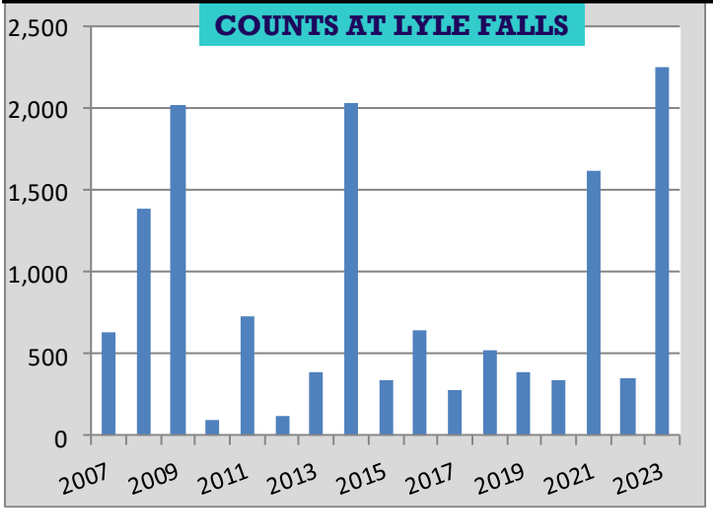
SOUTHERN TERRITORIES

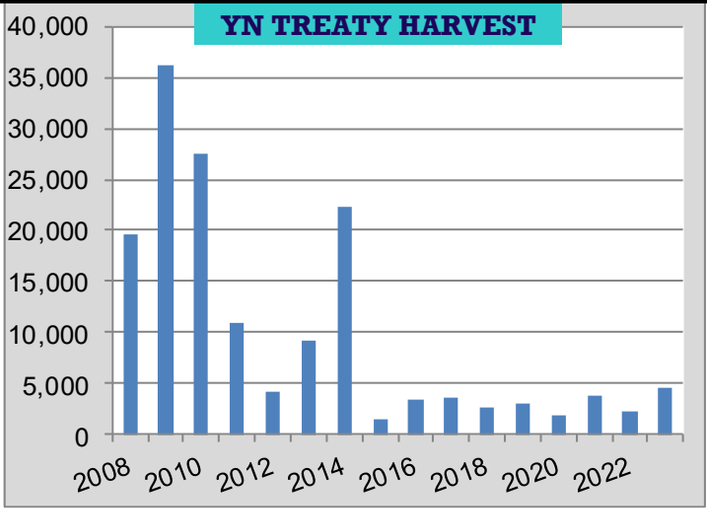
Klickitat Fall Chinook



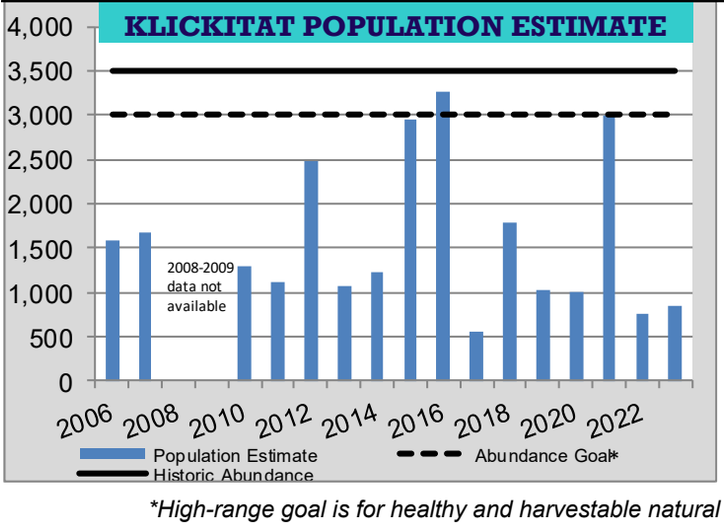


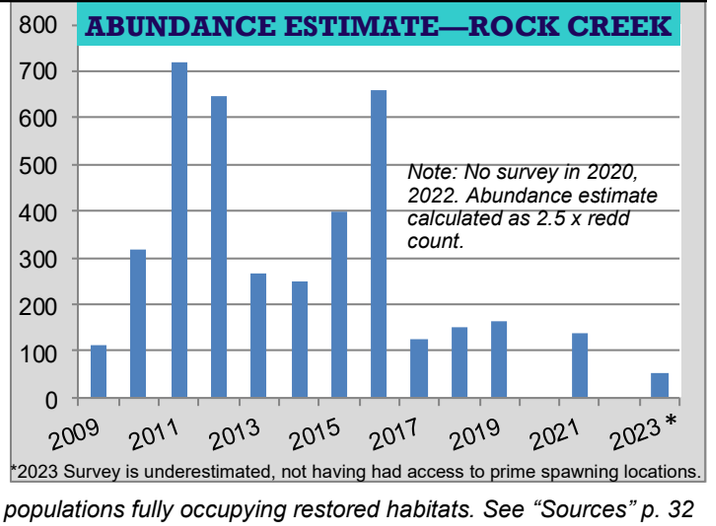
Klickitat Coho





Summer and Winter Steelhead





**High-range goal is for healthy and harvestable natural populations fully occupying restored habitats. See "Sources" p. 32*

SOUTHERN TERRITORIES

Rattlesnake Gulch Fish Passage and Restoration

Date Completed: September 2023

Funding Sources: The project was led by Yakama Nation, with funding from Bonneville Power Administration. Mid-Columbia Fisheries supported the project through the sponsorship of a grant from the Salmon Recovery Board.

Focal Species: ESA-listed Mid-Columbia steelhead (Oncorhynchus mykiss)

Description: Improves fish habitat in a small tributary to Swale Creek, which is an important tributary to the Klickitat River. The project is located on Rattlesnake Gulch Creek, just upstream from the stream's confluence with Swale Creek. Prioritized during a 2019 assessment of tributaries to Swale Creek, Rattlesnake Gulch Creek is one of the largest, draining an area of 3,389 acres. Among Swale Creek tributaries, Rattlesnake Gulch provides the largest contributions of sediment and water, which it enters just half a mile from the Klickitat River. Downstream of the project area, there are no other barriers.

The current culverts were extremely under-sized for the stream and at significant risk of failure in a flood. These culverts were installed after a flood destroyed the previous bridges. The new bridges will have a much larger span to accommodate future floods. These bridges will ensure access across the forks of the Rattlesnake Gulch Creek for decades to come.

Goals & Objectives:

- Provide fish passage and improve habitat for fish, including Mid-Columbia Steelhead, which is listed as Threatened under the Endangered Species Act.
- Improve access to habitat by replacing a culvert on East Fork Rattlesnake Gulch with a single span steel bridge, restoring access to 3.19 miles of habitat.
- Replace another culvert on West Fork Rattlesnake Gulch with a single span precast concrete bridge, restoring access to 0.3 miles of habitat.
- Improve access to habitat by removing a small concrete dam located on the mainstem Rattlesnake Gulch Creek.
- Remove 125 ft. of berm and embedded railroad ties on the right bank of the steam near concrete dam.
- Improve habitat by adding large wood and replanting riparian area with native trees and shrubs.

Implementation Summary: Construction activities began in late August with the delivery of two pre-fabricated bridges. The construction proceeded as designed; the removal of the existing culverts, temporary construction of bypass roads and assembly of bridges occurred in a portion of the stream that was dry. The dam removal portion of the project occurred in a reach with minimal standing/non-flowing water. Exclusion nets were deployed and electroshocking conducted to remove fish from the isolated pools and transfer to a series of pools downstream.

Above: New bridge installed to replace undersized culvert

Tepee and Swale Creeks LTPBR* Implementation

Date Completed: In progress

Funding Sources: Bonneville Power Administration

Focal Species: Swale Creek is part of the Swale Creek Minor Spawning Area (MiSA) for ESA-listed Mid-Columbia steelhead (Oncorhynchus mykiss). In addition to steelhead, ESA-listed Coho (Oncorhynchus kisutch) and Chinook (Oncorhynchus tshawytscha) salmon utilize lower Swale Creek for spawning and rearing. Tepee Creek is part of the highly significant White Creek MiSA for steelhead. This project is steelhead focus only.

Above: BDA constructed in 2022 on Tepee Creek and maintained with addition of new green layer in 2023. Note – a side channel on the left, out of the photo frame, provides fish passage at a range of flows.

Description: Past land management activities including agriculture, road/railroad construction, and the removal of large wood from streams have resulted in decreased quality and quantity of stream habitat, including: reduced wood accumulations (e.g., large wood jams), geomorphic diversity (i.e., pool and off-channel habitat), channel-floodplain connectivity, and riparian vegetation. Swale Creek is listed as impaired on Washington's DOE 303 (d) list for temperature criteria.

These two LTPBR projects will address high-priority habitat elements, benefiting the limiting life stages for steelhead (rearing and spawning) by adding small-diameter wood to increase channel roughness and increase pool frequency. Implementation will result in enhancing floodplain and riparian function.

Outcomes: In Swale Creek, eleven logjam structures installed for complexity, and 6 sites augmented with wood additions for channel roughness (individual logs loosely arranged), totaling 200 individual logs. The installation was done by hand over one week's time. A cultural resources monitor from the YN Cultural Resources Program was on site for the duration of the project. The structures were installed in late October prior to significant rain events, so the stream was at the low-flow point of the hydrograph. Select, larger-diameter alders were felled directly onto log structures to provide ballast and stability. Additionally, log structures were constructed by interlacing logs with standing trees as "posts". Structure persistence and performance will be monitored over time. In 2024, year 2 of the project, additional structures will be constructed, utilizing information gathered from observing year-1 structures post run-off.

Above: Channel-spanning structure constructed at constriction point where wood has been naturally accumulating. Photo taken 12/12/23, under average Swale Creek winter flow conditions.

In Tepee creek, 2.0 river miles of critical fish habitat was improved through the similar installation and maintenance of 18 instream LTPBR log structures. In 2023, 97 pieces of small diameter wood were used for new structures and 55 pieces were added for maintenance of the structures installed in 2022.

**Low-Tech Process-Based Restoration*

METHOW AND WENATCHEE SUBBASINS

Coho Reintroduction — Upper Columbia

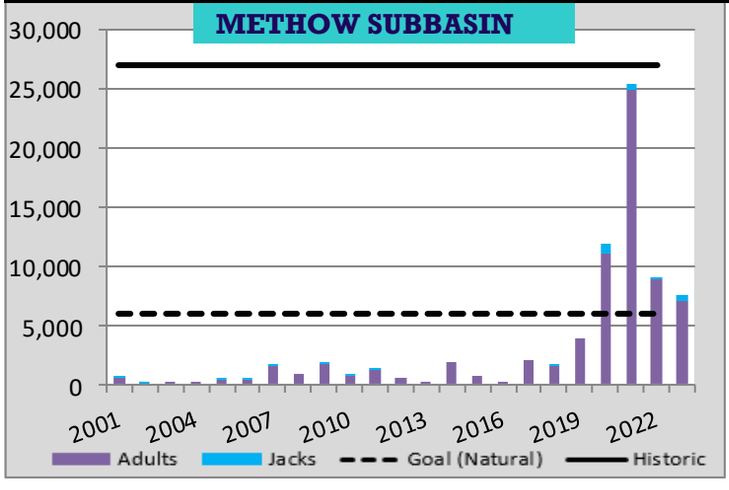
Coho were once abundant in the mid-Columbia region with estimates of adult populations of about 30,000 in the Methow, where they may have once been the most common salmon species. By the end of the 20th century, coho in the mid- and upper- Columbia River basins were extirpated due to hydropower development, unscreened irrigation diversions, overharvest in the lower-Columbia River, and habitat degradation. Because coho spawn in small, low gradient streams and because these streams are often in locations that humans populate, coho are particularly vulnerable.

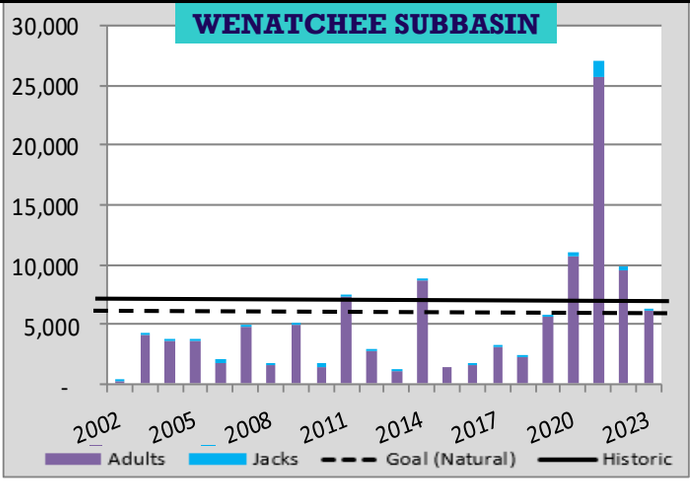
The Yakama Nation recognized the potential to return coho to the Methow and Wenatchee River subbasins, and since 2000, we have been collaborating with the US Fish & Wildlife Service (Willard NFH, Leavenworth NFH, and Winthrop NFH), Oregon Department of Fish & Wildlife (Cascade FH), and various local landowners to re-establish spawning coho populations to levels that can support harvest. Although broodfish were initially sourced from lower Columbia River stocks, a transition to local broodstock occurred as early as 2005. Through guidance of our long-term Master Plan, we continue to expand project releases while initiating natural-origin production within historic spawning areas; ultimately creating sustainable spawning aggregates within target watersheds.

After decades of effort, the Yakama Nation Mid-Columbia Coho Restoration Program is now demonstrating the benefits predicted. Ancestral fishing rights are being supported, the ecological health of the watersheds is being improved, coho species fitness is being strengthened, and both tribal and non-tribal harvests are increasing.

Above: coho in a stream. Left: Icicle Creek tribal platform fishery (photo USFWS)

Coho Escapement Estimates—Natural and Hatchery*





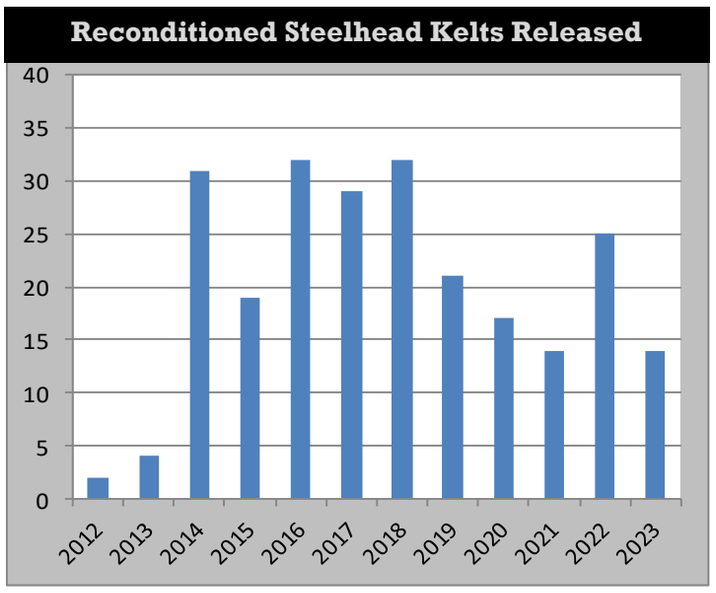
**Note: New model used to calculate estimates from 2019 onwards.*

METHOW AND WENATCHEE SUBBASINS

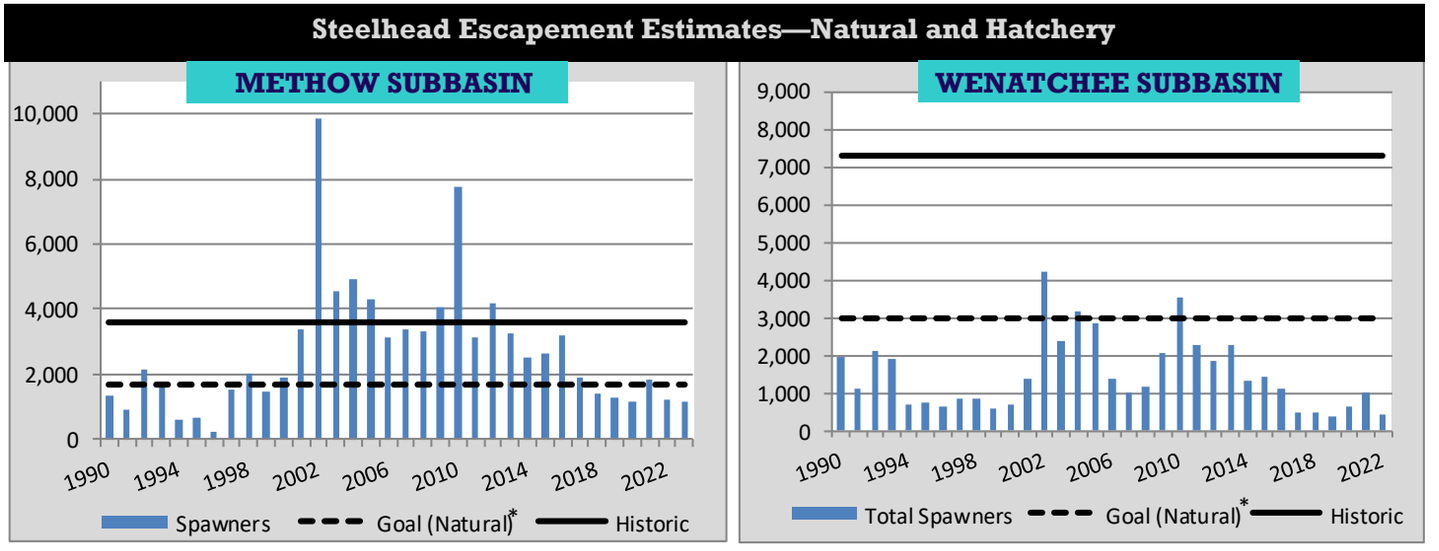
YN Steelhead Kelt Reconditioning at the Winthrop National Fish Hatchery

Upper Columbia River (UCR) steelhead are listed as "Threatened" under the ESA, and naturally-spawning populations currently exist at threshold levels. Steelhead display a variety of life history strategies including the ability to spawn more than once. Low rates of repeat spawning in the upper Columbia River exist likely due to mortality associated with energetic demand, degraded habitat, and post-spawning migration through the Columbia River hydropower system.

Reconditioning post-spawn steelhead (kelts), may help upper Columbia populations that experience high mortality rates maintain genetic diversity. Kelt reconditioning includes a 6 to10 month period in a captive environment where fish reinitiate feeding, grow, and redevelop mature gonads. In 2011, we opened the Methow Steelhead Kelt Facility at the Winthrop National Fish Hatchery, allowing us to recondition up to 136 kelts at any given time. The goal of our Upper Columbia River Steelhead Kelt Reconditioning Project is to determine whether the abundance of naturally-produced steelhead on natural spawning grounds can be increased through the proven increase in lifetime reproductive success. Work is currently focused on the Methow River Basin, with expansion to the Wenatchee Basin planned by 2025.



Above: Number of reconditioned steelhead released over time, and YN staff with a reconditioned steelhead prior to release. (YN)



*High-range goal is for healthy and harvestable natural populations fully occupying restored habitats. See "Sources" p. 32

METHOW AND WENATCHEE SUBBASINS

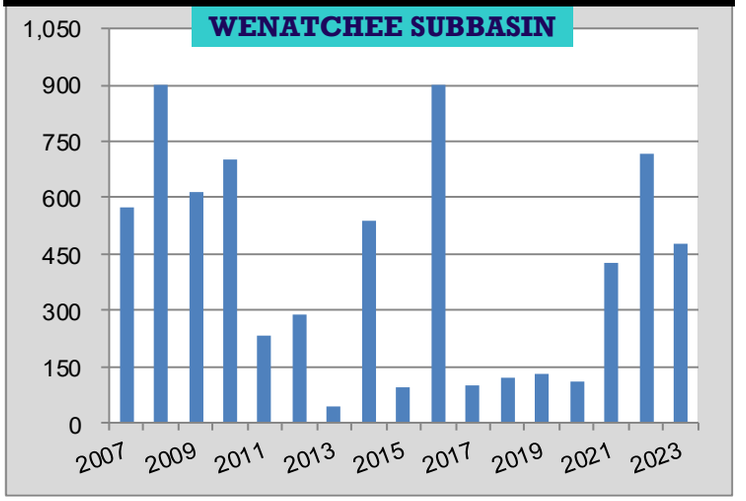
Upper Columbia Salmon and Steelhead Acclimation Project (UCSCA) — Spring Chinook and Summer Steelhead

Our Upper Columbia Salmon and Steelhead Acclimation Project, which began in 2009, is designed to provide additional acclimation opportunities for existing spring Chinook and steelhead hatchery mitigation programs in the Wenatchee and Methow subbasins. Juvenile salmon and steelhead are initially reared at local hatchery facilities and transported as pre-smolts to acclimation ponds in target areas within the respective basins in mid-March. They are reared in the ponds before being volitionally released in mid- to late April. Since 2017, juvenile spring Chinook releases have occurred at Goat Wall Pond in the Methow Basin. Currently work is underway for planned steelhead releases from the Early Winters Ponds in the Methow Basin and Powerline Pond in the Wenatchee Basin in the near future.

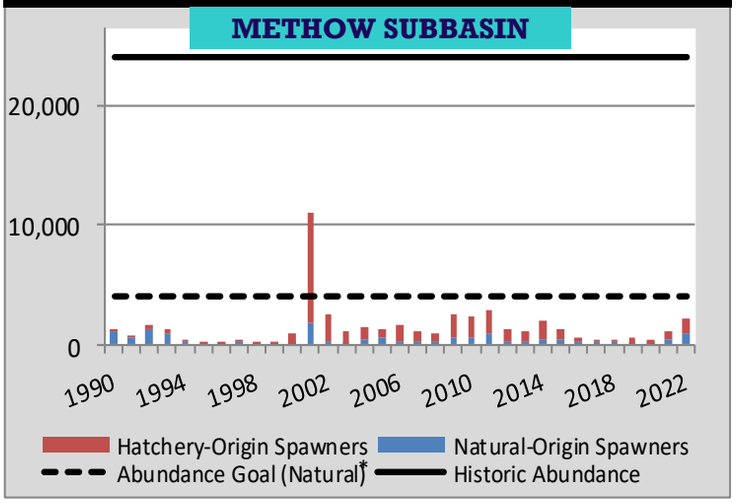
We use natural ponds for short-term acclimation to improve the efficacy of existing supplementation programs, by encouraging returning fish to seek available good quality habitat where they may successfully spawn, thus helping to rebuild natural populations. This effort is important since hatchery produced Wenatchee spring Chinook have been shown to have reproductive success equal to natural -origin spawners when they spawn in areas of high quality habitat and low spawner densities.

Above: Powerline acclimation site, Upper Nason Creek, final water test.

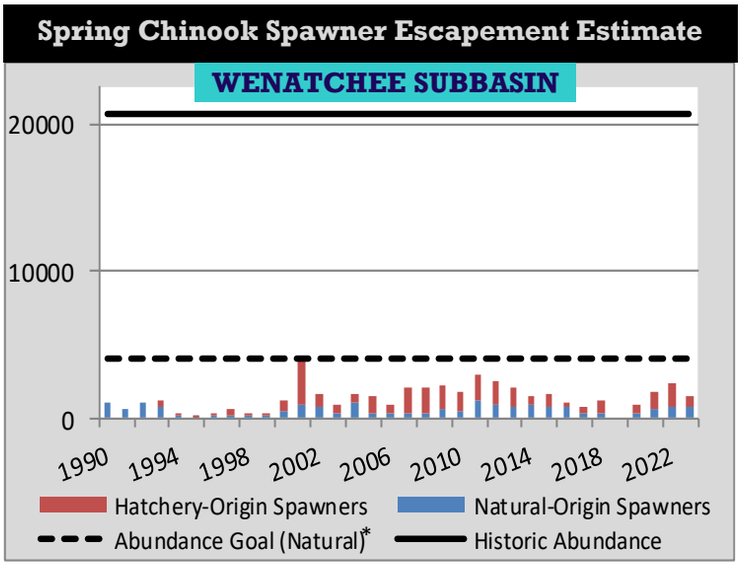
Spring Chinook YN Treaty Harvest—Icicle River



Spring Chinook Spawner Escapement Estimate



Spring Chinook Spawner Escapement Estimate



**High-range goal is for healthy and harvestable natural populations fully occupying restored habitats.* *See "Sources" p. 32*

Twisp River-Scaffold Camp Floodplain Enhancement Project

Date Completed: October 2023

Funding Sources: Bonneville Power Administration and Washington State Recreation and Conservation Office (SRFB Grant)

Focal Species: ESA-listed Endangered Upper Columbia spring Chinook, ESA-listed Threatened Columbia River Steelhead and Threatened Bull Trout

Above: Log structures installed to encourage pool formation and cover habitat.

Description:

The Twisp River is a major spawning and rearing tributary for spring Chinook salmon and steelhead in the Methow Subbasin. Habitat assessments of the Twisp River show that human development and river bank armoring have disconnected extensive amounts of floodplain habitat, and in 2015 the Yakama Nation purchased some at-risk floodplain property in the Scaffold Camp neighborhood to help protect healthy riparian habitat and encourage opportunities for floodplain habitat restoration.

Since acquiring the original 13 acre property in 2015, and an adjacent 2 acre property in 2019, Yakama Nation Fisheries has been designing a floodplain reconnection and side channel enhancement project for the Scaffold Camp site. In 2023, a 0.25 mile long side channel was reconnected to perennial flow and enhanced with new pools and log jam cover to improve rearing habitat. The new side channel now provides connectivity to floodplain groundwater habitats which provide cool conditions for fish during summer high temperatures.

Accomplishments:

- 1,200 ft. of relict side channel habitat reconnected to perennial surface flow
- 200 logs with rootwads installed
- 2 Large Wood Structures installed in the mainstem Twisp River to maintain a split flow condition

Above: The inset wetland benches constructed during the project (along the margins of the channel) will help increase productive foraging habitat for rearing juvenile spring Chinook and steelhead survival.

Project Benefits:

The project re-established perennial connectivity to floodplain off-channel habitat, providing rearing juvenile salmonids better foraging and rearing opportunities. The reconnected side channel has substantially more large wood and riparian cover which has helped restore more productive rearing habitat conditions for ESA listed salmonids.

Upper Nason Creek, Phase 1 Fish Habitat Enhancement Project

Date Completed: October 2023

Funding Sources: Bonneville Power Administration, United States Department of Agriculture – Forest Service, Central Washington Initiative Funding

Landowners: United States Forest Service and privately owned

Focal Species: ESA-listed Endangered Upper Columbia spring Chinook, Threatened Columbia River Steelhead, Threatened Bull Trout, and resident species

Problem:

In 2019, the Yakama Nation completed a Reach Assessment in the Upper Nason Creek Project Area which concluded that multiple reach-based indicators associated with priority ecological concerns were impairing salmonid productivity and that survival was at risk. These indicators included reduced floodplain connectivity, reduced off-channel habitat availability, lack of pools, marginal channel substrate quality, and low presence of large woody debris in the aquatic environment.

Above: Tree tipping into the creek (YN)

Accomplishments:

Phase 1 of this project incorporated a total of 7 in-stream apex large wood structures, 14 deflector structures, 4 habitat cover structures, 11 ballasted floodplain roughness structures and 1,070 willow plantings. Sixty-five trees were tipped into the stream channel, and 1,000 pieces of large wood were delivered via helicopter to reduce disturbance on the ground and in the stream channel.

Benefits:

Tree tipping into the creek corridor provides habitat complexity and floodplain roughness. In this project, a newly developed process was utilized to tip significant sized trees over from up to a half mile away with the use of pulleys and shot trees, minimizing disturbance from heavy equipment. In addition, 1,070 willows were installed on bars along the Nason Creek corridor. Spacing for the willows was 4 feet between plantings, with each row roughly 10 feet apart. This action of the project took a considerable amount of time to complete but the result of it will pay forward as the willows grow for years to come. Access routes and the staging area were also replanted. These actions, along with the installation of large wood habitat and deflector structures, will help address many of the ecological concerns affecting Upper Nason Creek, benefiting salmonid productivity and survival.

Above: Apex, cover habitat, and deflector structures. (YN)

Above: Helicopter delivery of large wood instream (YN)

Entiat River - Silver Falls Fish Habitat Enhancement Project

Date Completed: October 2023

Funding Source: Bonneville Power Administration

Landowner: United States Forest Service

Focal Species: ESA-listed Endangered Upper Columbia spring Chinook, ESA-listed Threatened Columbia River Steelhead and Threatened Bull Trout

Background:

Yakama Nation Fisheries has been working with the Entiat Ranger District to implement salmon habitat restoration projects along the mainstem Entiat River in areas where previous habitat assessments have identified impairments that affect salmonid productivity. The Silver Falls reach is in one of these areas, consequently the Yakama Nation has been planning on doing restoration in there for the last three years. The project area is located on the furthest upstream reach of river that Yakama Nation intends to conduct fish habitat restoration, due to the presence of a natural anadromous fish passage barrier (Entiat Falls) a few miles upstream.

Accomplishments:

Construction of the Silver Falls Habitat Restoration Project was completed in July 2023 with the goal to improve geomorphic complexity, side channel rearing habitat and large wood loading throughout the 1-mile-long project area. The project involved a variety of restoration treatments, including: installation of 6 bank buried log structures and 4 bar apex log structures, reconnection of 2 side channels and salvage of 4 large hazard tress (>100' tall) from the Silver Falls Campground. Additionally, a helicopter was used to install 63 logs with roots within side channels where excavator access was not available. A truck mounted cable winch pulled 33 trees into the river along the channel margin of the mainstem.

Benefits:

Many components of this project were designed to create additional habitat features through interaction with spring freshet high flows. Yakama Nation Fisheries will be monitoring this project area in the coming years to observe how the constructed habitat features interact with river hydraulics to produce desirable fish habitat.

Above: Stream corridor with large wood placements (YN)

CEDED LANDS* LAMPREY

Yakama Nation Pacific Lamprey Ceded Lands Evaluation and Restoration Project

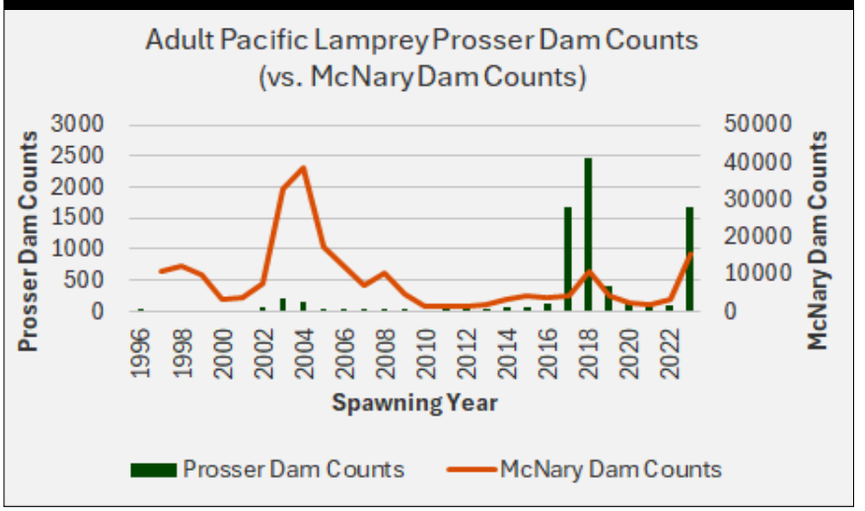
Above: Adult Pacific lamprey navigating a stream.

For over 10,000 years we have depended on Pacific Lamprey for food and medicine. We harvested lamprey in a sustainable manner, taking only what our families needed for subsistence. During this time, lamprey were plentiful and many harvest locations were available across the Treaty Territories. Due to various factors, this is no longer the case.

Our goal is to restore natural production of lamprey to a level that will provide robust species abundance, significant ecological contributions, and meaningful harvest. With only 50% passage at Bonneville Dam and <10% cumulative passage at McNary Dam, the lamprey subpopulations in the Upper Columbia and Snake rivers are severely limited. To mitigate this impact, we annually collect adults at Bonneville, The Dalles, and John Day Dams (in locations where lamprey struggle to pass the dam) for the purpose of translocating the fish to currently blocked productive tributaries and mainstem habitat in the Upper Columbia, including Yakima, Wenatchee, and Methow subbasins.

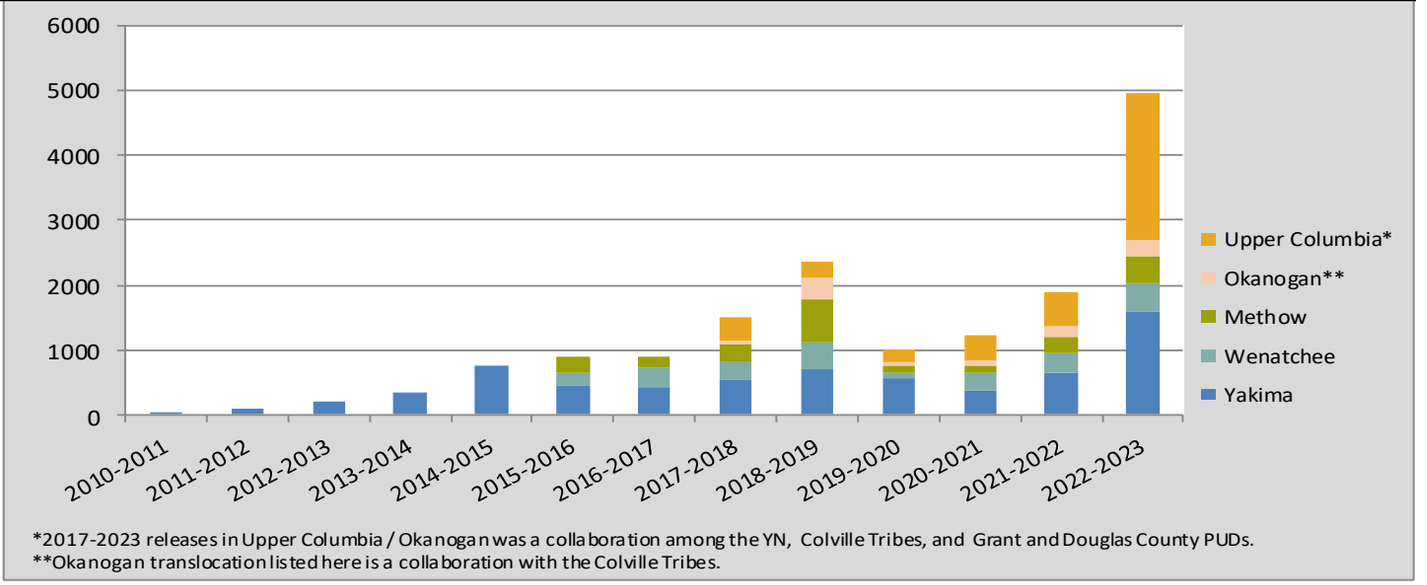
As a result of adult translocation, larval Pacific Lamprey distribution has increased by 2-3 fold in the Yakima Subbasin, and similar increases are observed in other subbasins.

Adult Pacific Lamprey Returns to Prosser* & McNary Dams



Note: Prosser Dam Counts in green above. Starting in 2018, return estimates to Prosser based on PIT tag studies rather than window counts.

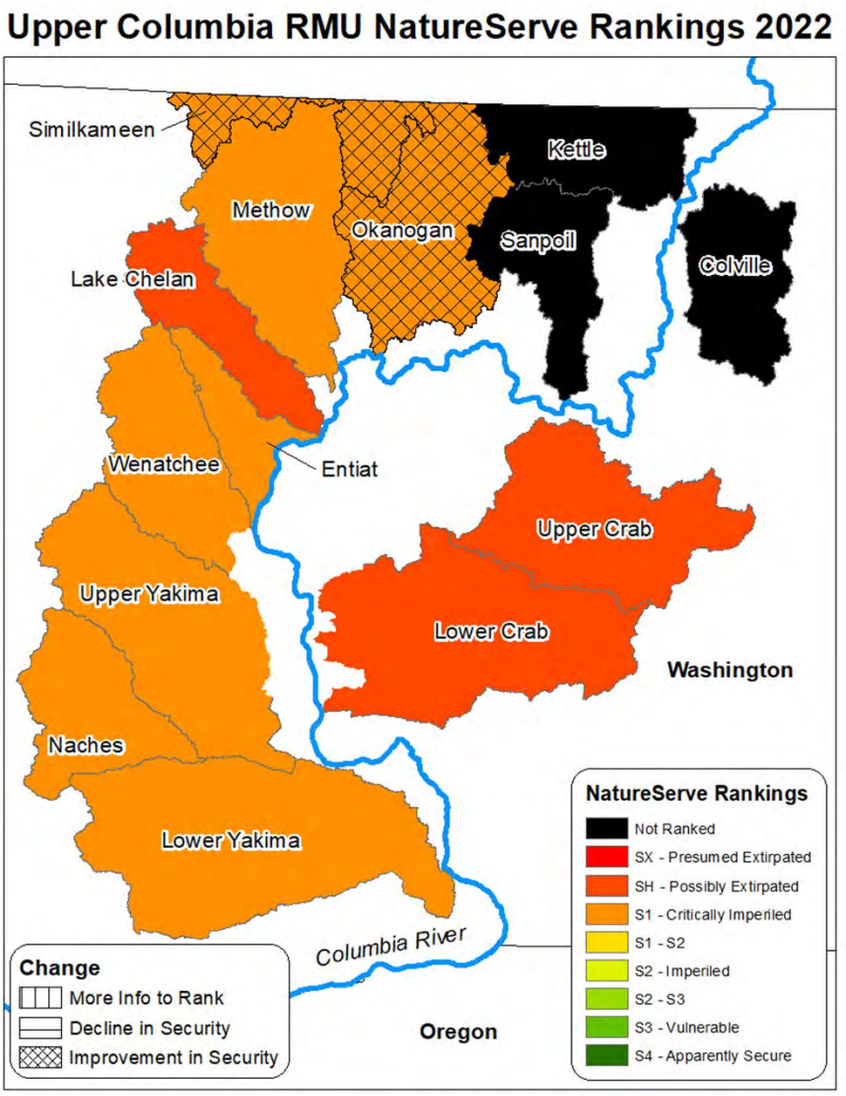
Adult Pacific Lamprey Translocations (All Subbasins)



*2017-2023 releases in Upper Columbia / Okanogan was a collaboration among the YN, Colville Tribes, and Grant and Douglas County PUDs.
**Okanogan translocation listed here is a collaboration with the Colville Tribes.

**Areas covered include all treaty-reserved "usual and accustomed" natural resource use areas of the Yakama Nation.*

CEDED LANDS* LAMPREY



Above: Upper Columbia Regional Management Unit (RMU) Pacific Lamprey distribution as of September 2022. When translocated adults are included in the ranking process, the status of the Similkameen and Okanogan both improve from Possibly Extirpated (SH) to Critically Imperiled (S1).

We are also developing hatchery techniques to reintroduce early life stage lamprey. The first outplanting with approximately 105,500 lamprey (ranging from fertilized eggs to eyed juveniles) occurred in 2021 and this effort continues annually. The primary goals are to understand the best life stage for outplanting survival and furthering our knowledge of their early life history as well as the unique threats they face. In addition to adult translocation, we are improving adult passage by installing lamprey passage structures at problematic dams, rescuing stranded/entrained larval/juvenile lampreys in dewatered canals, monitoring impacts from juvenile migration and predation and legacy and currently used contaminants, and reaching out to schools and the general public to educate folks about lamprey's importance in the Columbia River Basin.

Outmigrating larval and juvenile lamprey in the Yakima Subbasin were virtually absent prior to adult translocation but now Lower Toppenish screwtrap captures as many as ~4,500 eyed juvenile lamprey in a single day. We estimate conservatively that > 30,000 eyed juveniles are outmigrating from most of the translocated small tributaries annually. Based on PIT tagging studies, we estimate that > 500,000 juveniles outmigrated from the Lower Yakima River in 2021. At Prosser Dam, the number of adult returns increased considerably six years after the first adult translocation release and the baseline level increased substantially in comparison with McNary Dam counts.

In 2020, we detected the very first group of translocation offspring that returned to Bonneville Dam as adults after surviving their ocean migration (n = 23) and this return increased by 25-fold (n = 578) in 2021, demonstrating the superior productivity of YN translocation streams. Most of the 2021 translocation offspring returned as 8-year-old adults from the early years of adult translocation releases (primarily from the 2012-2013 release), and we expect even higher returns in the future years, given that lamprey typically have a > 10-year lifespan.

Above: Public participation is encouraged at lamprey release events (YN).

COLUMBIA RIVER ZONE 6 HARVEST

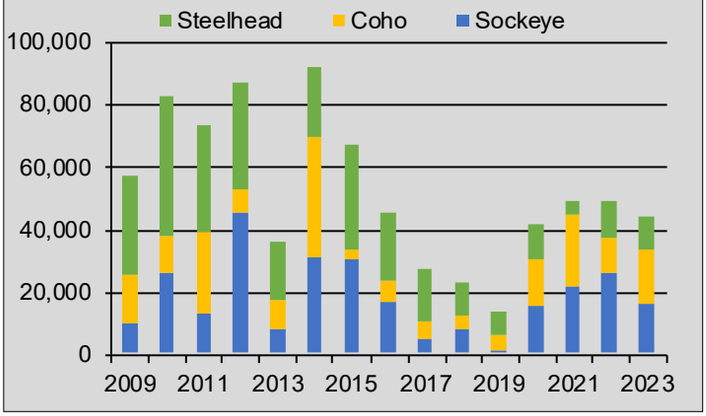
Through the Treaty of 1855*, the Yakama Nation reserved the right to maintain natural resources on which our culture and livelihoods depend, including rights to water, land, and natural foods and medicines at all usual and accustomed places.

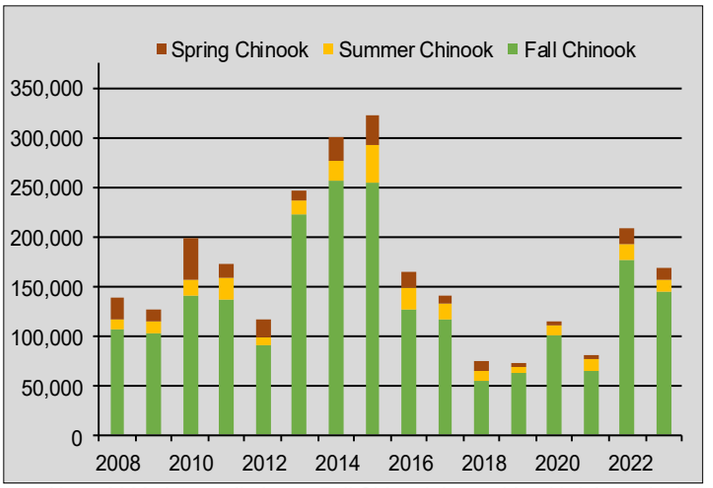
Additional court rulings assured us the right to self-regulation of our own fish management and take, a fair share of all allowable harvest, and the restoration of fish historically present and/or mitigation for losses.

The Yakama Nation manages fisheries resources to ensure continued access by our members to fulfill ceremonial, subsistence, and commercial needs.

**Yakama Nation Treaty of 1855 (12 stat. 951) with the United States of America*

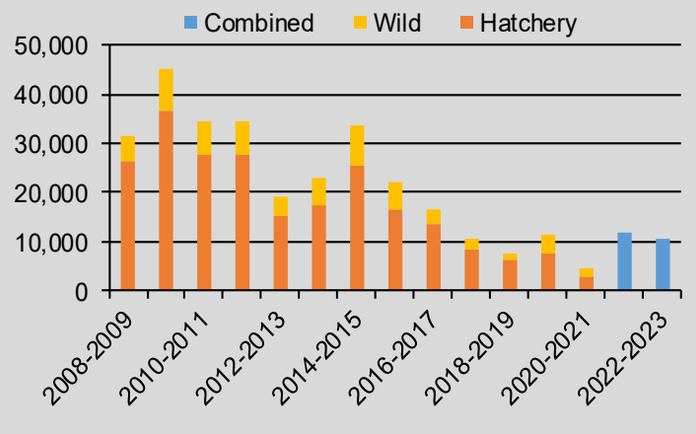
Zone 6 Total Treaty Harvest: Commercial, Subsistence, Gillnet, Platform H&L



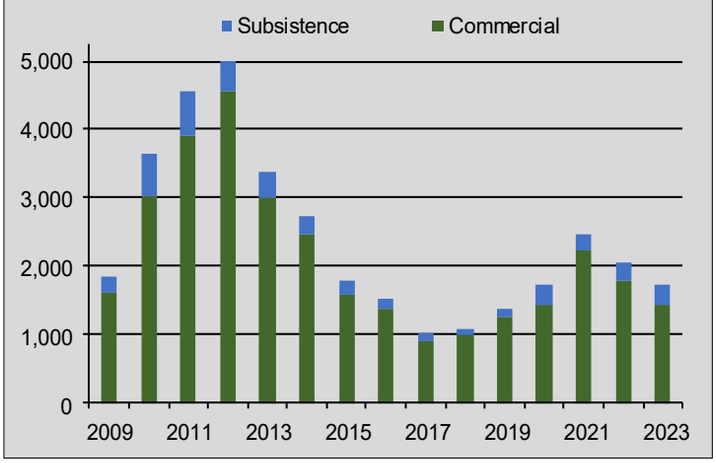


Note: 2023 data preliminary. Fall Chinook is combined bright and tule.

Zone 6 Total Treaty Steelhead Harvest Commercial, Platform H&L

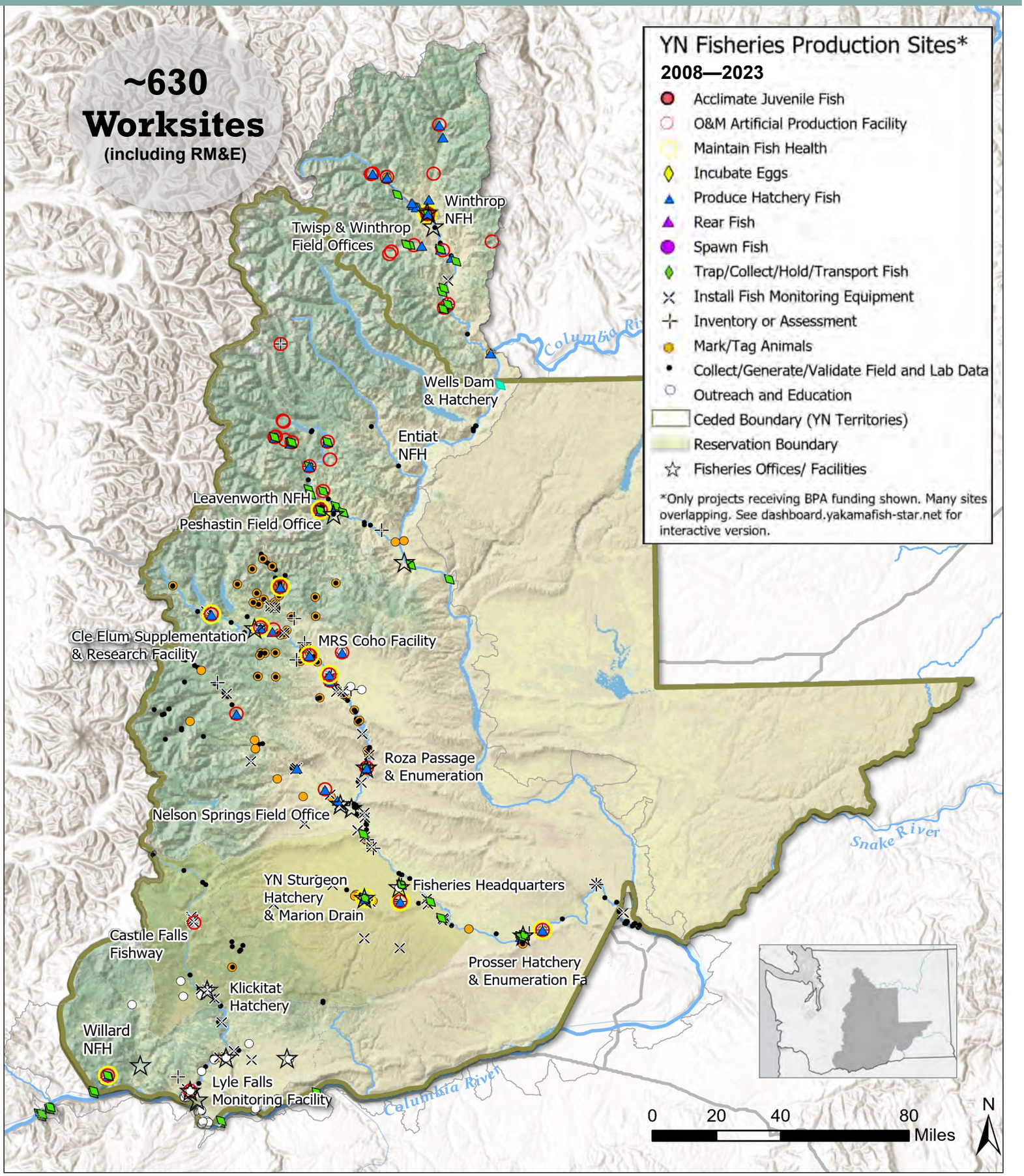


Zone 6 Total Treaty Sturgeon Harvest

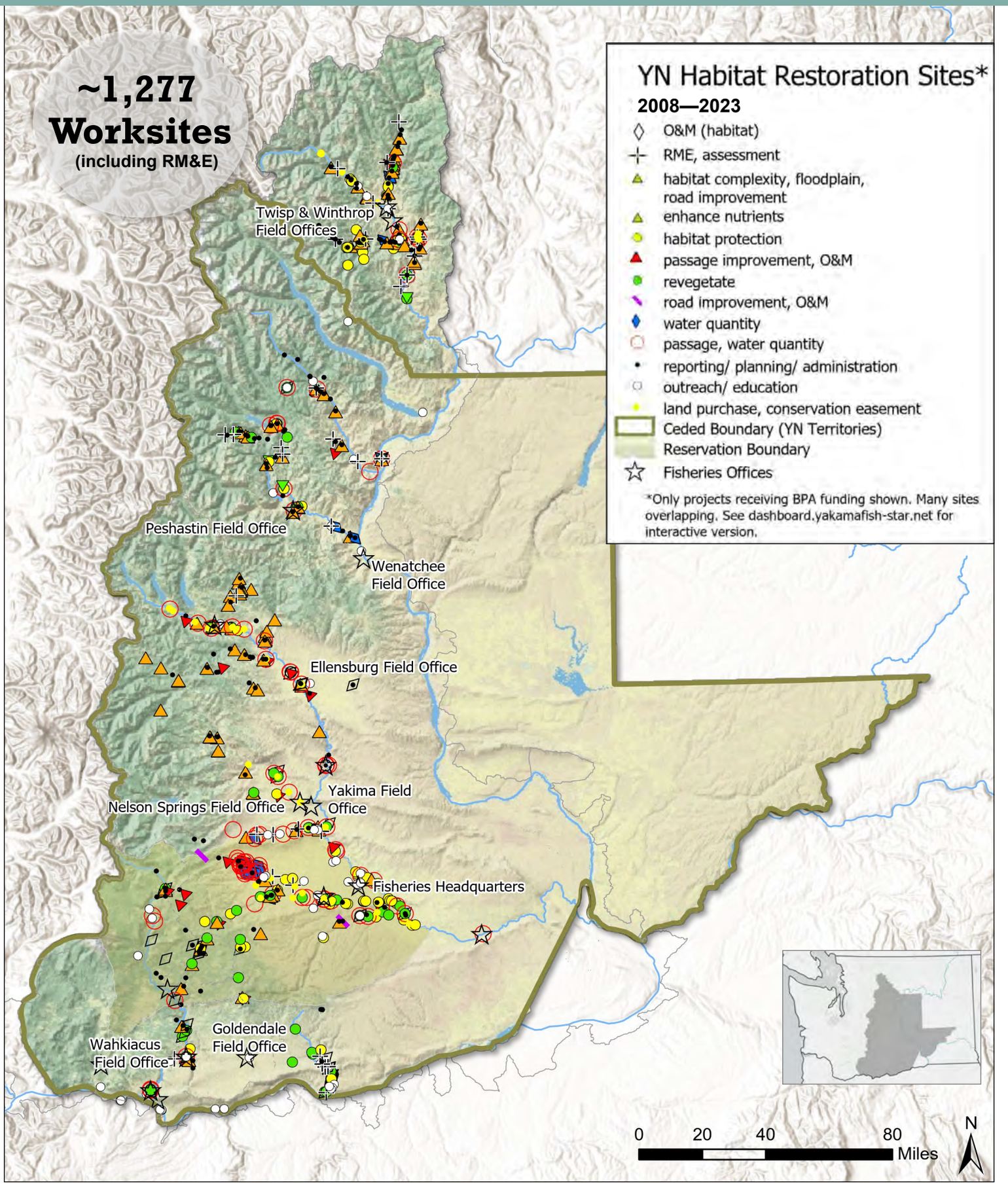


Above: Traditional tribal dipnet fishing, Lyle Falls, Klickitat River.

PRODUCTION & SPECIES RESTORATION SITES



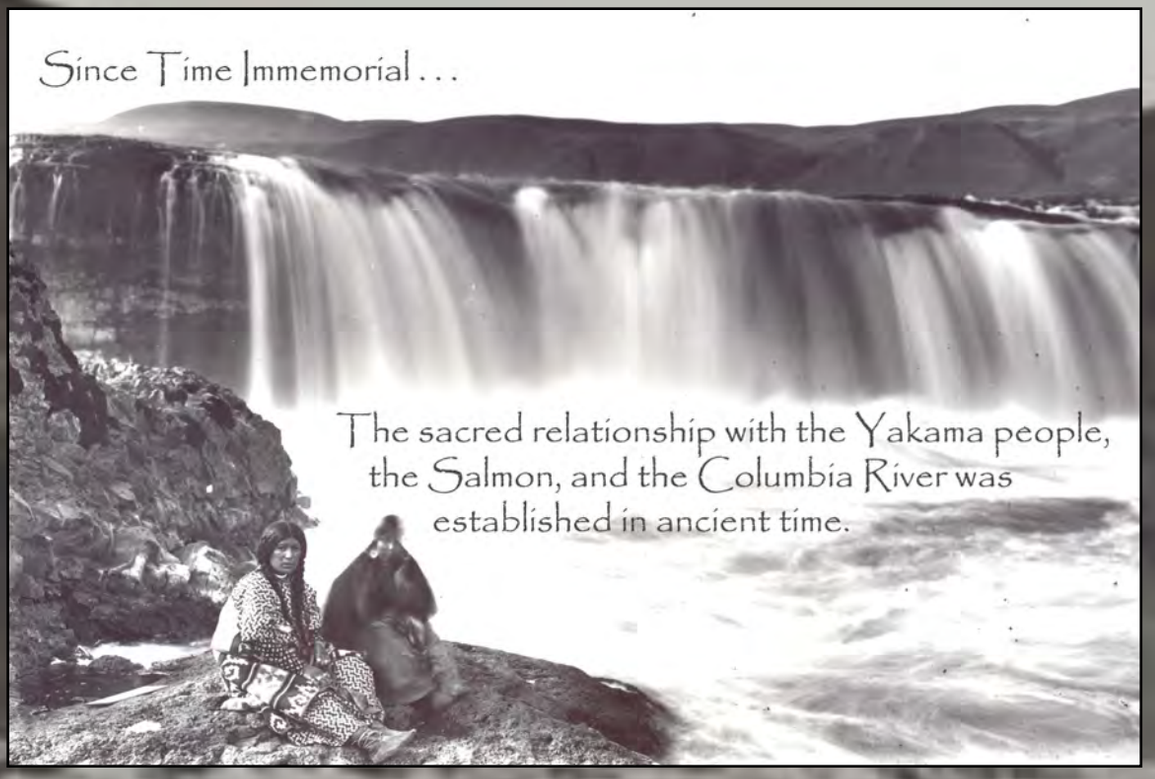
HABITAT RESTORATION SITES



SOURCES

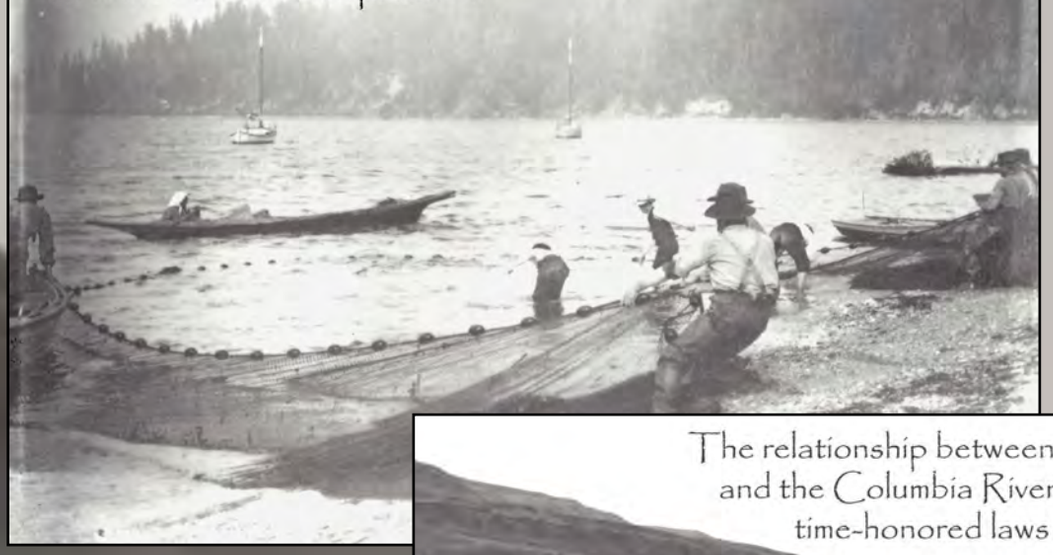
CBRI	White House signing ceremony can be viewed at: WHITEHOUSE.GOV, *Ceremonial Signing for Historic Columbia River Basin Agreement* (https://www.youtube.com/watch?v=22miLFPJ-UI) USG CBRI Commitments in detail can be found at CRITFIC.ORG (https://critfc.org/wp-content/uploads/2024/02/USG-Commitments-toCBRI.pdf)
Species Status and Trends	**Fish population descriptions:** Hatchery reform summaries and BPA annual reports, master plans, subbasin plans and recovery plans, presentations given at the Yakima and Klickitat annual science conferences (https://yakamafish-nsn.gov/our-work/reports-publications-presentations), and from WDFW's species website (https://fortress.wa.gov/dfw/score/score/species) **Abundance Goals and Historic Abundances** as shown in graphs are from Marine Fisheries Advisory Committee [MFAC] Columbia Basin Partnership [CBP] "Vision for Salmon And Steelhead: Goals to Restore Thriving Salmon and Steelhead to the Columbia River Basin" Report, 2019. Goals are shown as "high-range" provisional quantitative goals for natural production, unless otherwise indicated, at which point the natural population is considered "healthy and harvestable" where habitats are restored and populated to maximum capacity. Mid-range goals are generally defined as the number of natural-origin spawners that could effectively use available habitat and sustain high levels of harvest, which is judged as about halfway between low-range goals (of viable population status) and high-range goals.
Yakima	Prosser Dam counts: http://dashboard.yakamafish-star.net/DataQuery/adult_passage_counts Estimated Spawners: Bosch, Bill (YN/ YKFP). Run Size Forecast for Yakima River: Adult Spring Chinook, 2023. [white paper]. Kelts Released: Hatch, D. et. al. Kelt Reconditioning and Reproductive Success Evaluation Research Project Number 2007-401-00 Annual report for BPA, can be found at cbfish.org Sturgeon Project: Cory Kamphaus, YN, personal communication, Draft Master Plan, 2024.
Klickitat	Summer/winter steelhead and spring Chinook population estimates: Joe Zendt, YN, personal communication, 2024; Fall Chinook: WDFW, personal communication. Lyle Falls fish trap counts: http://dashboard.yakamafish-star.net/DataQuery/adult_passage_counts Fall Chinook and coho harvest: Megan Begay, YN, personal communication, 2024, TAC BA tables. Rock Creek steelhead: Tiffany Petersen, YN, personal communication, 2024.
Wenatchee/ Methow	Coho escapement estimates: Cory Kamphaus, YN, BPA Annual Project Reports and personal communication, 2024. Steelhead Kelts Released: Matt Abrahamse, YN, personal communication, 2024. Spring Chinook and Methow steelhead escapement: WDFW's species data website (https://fortress.wa.gov/dfw/score/score/species/species.jsp) "The Score" Wenatchee steelhead escapement: grantpud.org (Monitoring and evaluation of the Chelan and grant county PUDs hatchery programs, 2022 Annual Report, September 15, 2023, Hillman etc.)
Pacific Lamprey	Pacific Lamprey Project: Ralph Lampman, YN, personal communication, 2024; Pacific Lamprey 2022 Regional Implementation Plan for the Upper Columbia Regional Management Unit, December 2023
Tribal Harvest	Harvest Data: Megan Begay, YN , personal communication, and 2024. Joint Staff Report: Stock Status and Fisheries for Fall Chinook Salmon, Coho Salmon, Chum Salmon, Summer Steelhead and White Sturgeon. Joint Columbia River Management Staff (www.dfw.state.or.us), TAC BA tables.
Habitat Spotlights	Habitat Restoration Project staff, YN, personal communication, annual reports, and BPA Funded Project Completion Forms, 2024 (cbfish.org)
Maps	Created by the STAR project on ESRI software. Backgrounds are from ESRI, USGS, National Geographic and NOAA. Worksite locations are downloaded from BPA reporting site (cbfish.org) with STAR Project categories applied (2024).

The Salmon Story

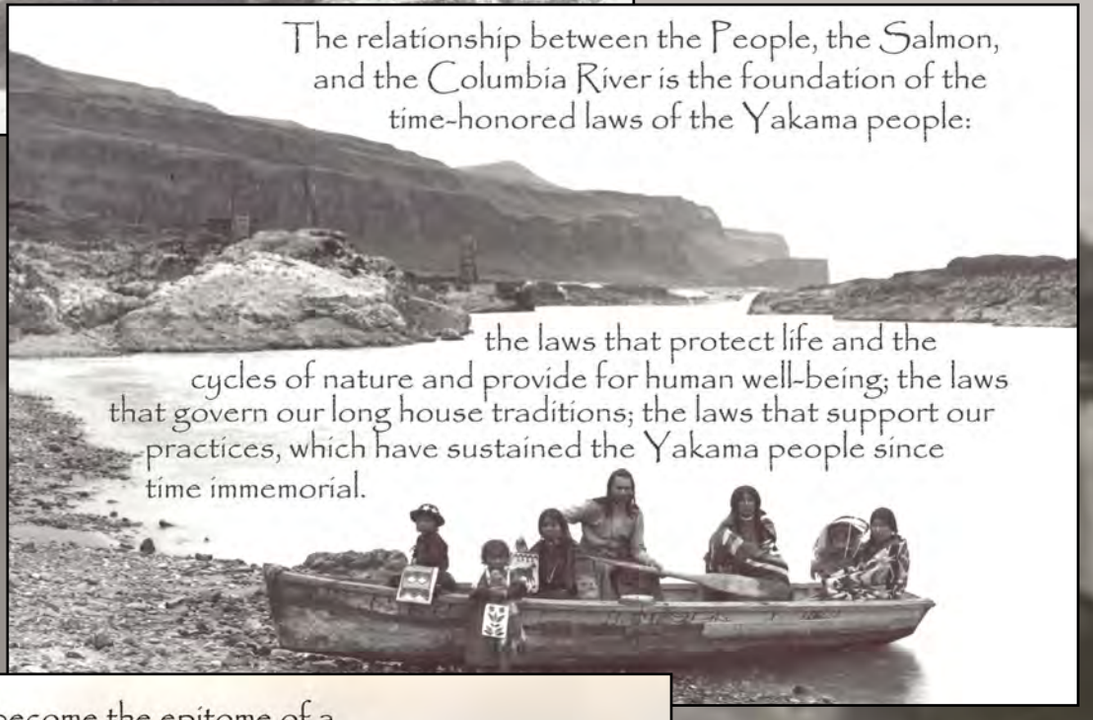


When the first people established themselves in this region, the Creator came and revealed that He was going to make human beings. He advised the first people to take care of these new beings. After lengthy discussions, it was so agreed that the first people would give of themselves to sustain the human beings and that the human beings would honor and take care of the first people. Then the Creator asked who would be the first to volunteer . . . the Salmon came forward.

The sacred relationship of the Yakama people, the Salmon, and the mighty Columbia River is based on an understanding that all life is intertwined and interdependent.

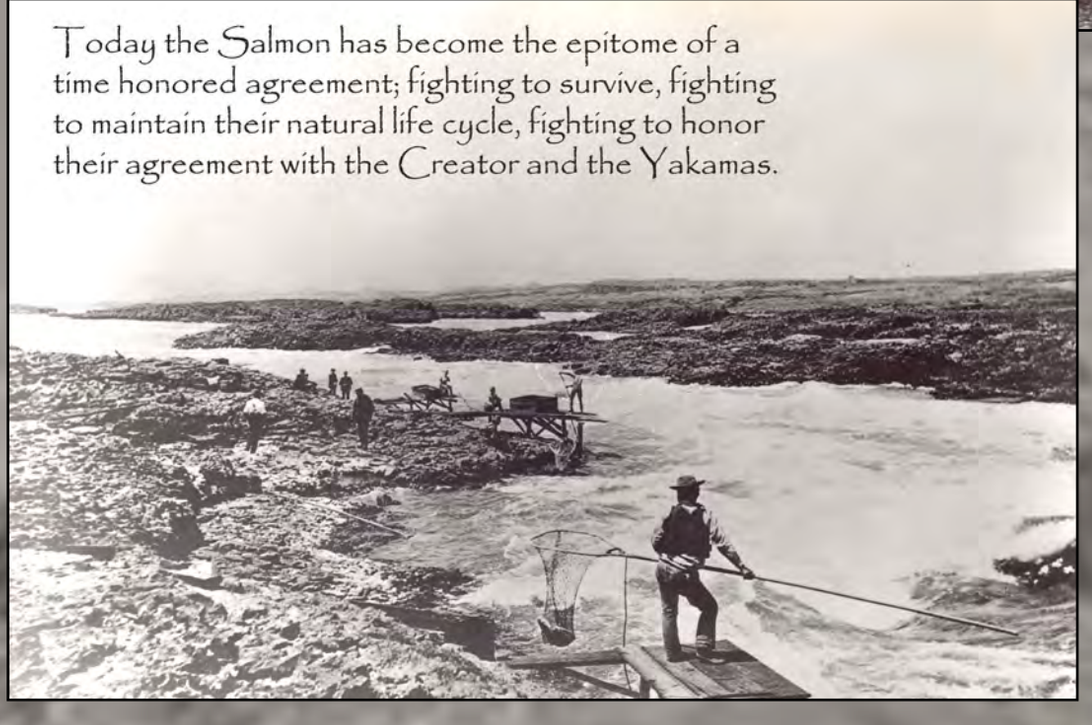


The relationship between the People, the Salmon, and the Columbia River is the foundation of the time-honored laws of the Yakama people:



the laws that protect life and the cycles of nature and provide for human well-being; the laws that govern our long house traditions; the laws that support our practices, which have sustained the Yakama people since time immemorial.

Today the Salmon has become the epitome of a time honored agreement; fighting to survive, fighting to maintain their natural life cycle, fighting to honor their agreement with the Creator and the Yakamas.



HONOR. PROTECT. RESTORE.

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