



# TNG FISHERIES

*The latest information important to T̂silhqot'in fish and fishing activities*



*This is our first weekly in-season fisheries bulletin of the 2024 salmon season. The purpose is to provide an update on the pre-season forecast and outlook for T̂silhqot'in Ts'eman (sockeye) and Jâs (Chinook) populations.*

## State of T̂silhqot'in salmon stocks in 2024

The pre-season forecast for all Fraser River Ts'eman and all Upper Fraser Jâs populations, including all T̂silhqot'in stocks, is anticipated at record low returns. This includes all stocks that return to T̂silhqot'in Territory and that migrate through the Fraser mainstem. This is the "echo" of record low returns in 2019 and 2020, which were the parents of this year's salmon returns. In addition to very low predicted returns, extreme environmental conditions including high river temperatures are anticipated to cause stress and mortality to returning stocks. See the "health report card" below for T̂silhqot'in specific stock details.

### What is the Salmon Forecast?

The forecast is a prediction of salmon returns in the upcoming season based on information that includes:

- Overall health of the stock (long-term and more recent trends)
- Brood (parent year) – how many fish came back to spawn that were the parents for this year's generation
- How many fish are we expecting back from the ocean this year
- Environmental conditions in the river that impact migration (temperature and flow).

## Salmon Health Report Card for T̂silhqot'in Stocks:



**High risk of extinction** for Upper Chezqox Jâs (Upper Chilcotin Chinook) and Dasiqox Ts'eman (Taseko sockeye). These are early timed stocks that return to the Little Chilcotin and Taseko systems to spawn, and migrate through the Chilcotin mainstem from early July to mid August.



**High conservation concern** for later-timed T̂silhqot'in Jâs stocks that return to the Territory from early August to mid September.



**Expecting the lowest year** for T̂silhqox Ts'eman (Chilko sockeye) – this is the "echo" of the worst disaster we've had (2020)

## FISHERIES TEAM

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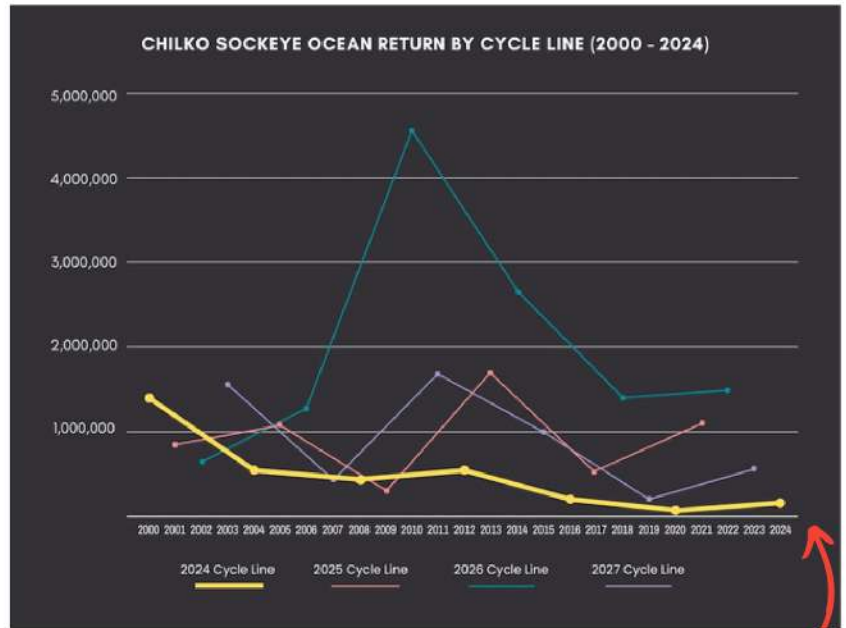
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## Why we expect the next 3 years to be better for Chilko sockeye

- We expect 2025, 2026, and 2027 to be significantly better years for Ts’eman that will support regular T̕ilhqot’in Ts’eman fisheries (based on currently available information).
- Each returning Ts’eman population (“cycle line”) primarily comes back every 4 years, with some contribution from 5 years ago (e.g., 2024 returns are primarily from 2020 parents, with some from 2019 parents).
- 2024 is part of the lowest 4 year “cycle line” for Ts’eman – i.e., 2004, 2008, 2012, 2016, 2020, and 2024 are relatively weaker years.
- 2020 was a critically low ocean return year, and 2024 is forecasted to be the worst return on record.



The thicker yellow line shows the 2024 cycle line

## From the ocean to the spawning grounds: Monitoring and analysing in-season fisheries data

From late June to the end of September, TNG Fisheries is conducting detailed monitoring and analysis of in-season fisheries information from the ocean to the spawning grounds. We report out on current information through these weekly in-season fisheries bulletins.

We use a network of information from outside the Territory combined with information generated from assessment programs within the Territory.

- The Pacific Salmon Commission collects data in the marine area on how many fish are returning from the ocean.
- Mixed-stock data (multiple fish populations migrating up the river together) is collected along the coast and up the Fraser River.
- TNG collects data from the time fish enter the T̕ilhqot’in Watershed until they reach their nursery grounds within the Territory (how many fish are returning, water temperature and flow, potential migration obstacles, etc.).

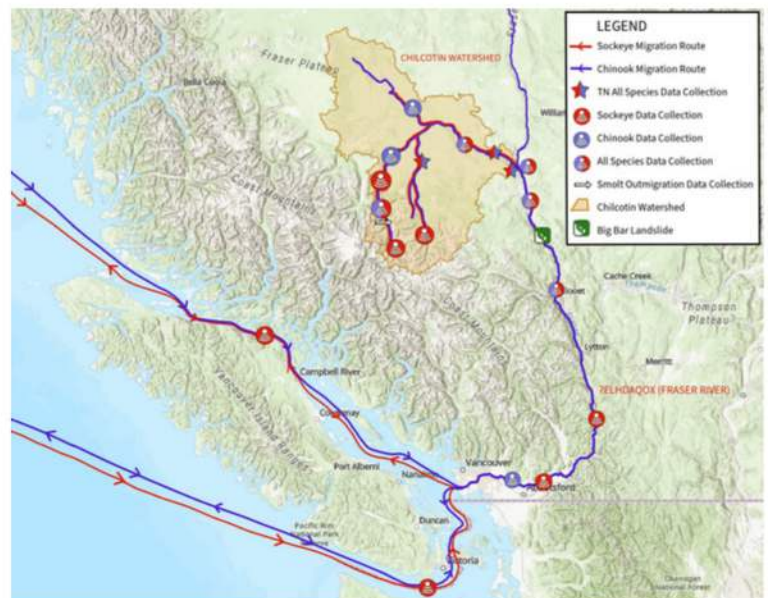


Figure 1. Map of migration pathways and data collection points for Ts’eman and Jaᕐ from ocean to spawning grounds.

As we collect information closer and closer to a salmon’s natal habitat in the Territory, it becomes more population-specific (i.e., not mixed with other populations like in the marine area and in the Fraser River). Information collected from the Territory’s salmon nursery areas is critical – it tells the beginning and the end of the salmon story. We also collect critical information through the T̕ilhqot’in Nation Aquatic Habitat Monitoring Program which provides real time information on water quality and quantity in key natal systems.





Figure 2. Focus on monitoring stations in Tsilhqot'in Territory.

## Field Work Highlights

TNG leads stock assessment and monitoring activities throughout Tsilhqot'in Territory (see map to the left) to inform stock-specific fisheries management to advance our Nation-wide fisheries-related goals. Our expanding programs have resulted in one of the richest fisheries data sets in BC – a powerful technical basis that directly supports priority setting and Leadership decision-making on fisheries.

### TNG-Led Fraser/Chilcotin Junction Sonar:

TNG Fisheries Coordinator Leonard English is leading the Junction Sonar project with technical support from Ecofish. The Sonar was installed July 10. 2024 is the third year of this pilot program to assess salmon as they enter the Chilcotin system from the Fraser mainstem, which provides critical information on the strength of specific Tsilhqot'in stocks including endangered early timed stocks (Upper Chilcotin Jaš and Taseko Ts'eman).

### NEW - TNG-led Upper Chilcotin Sonar:

We are currently preparing to install the new Upper Chilcotin Sonar on July 22, which will provide a real-time spawner estimate for endangered Upper Chilcotin Jaš and inform emergency conservation enhancement activities.

### TNG-led Taseko Sonar:

We are currently preparing to install the Taseko Sonar on July 24, which will provide critical population information about endangered Taseko Ts'eman and inform emergency conservation enhancement activities.

### Lower/Little Chilcotin Sonar (in partnership with DFO):



Leonard English, Gerald William, and Hayden Grinder of TNG Fisheries worked with DFO technicians to install the Lower Chilcotin Sonar on July 10 to assess critically endangered early timed Chilcotin Jaš as they enter the Little Chilcotin nursery area.

### TNG-Led Aquatic Habitat Monitoring Program



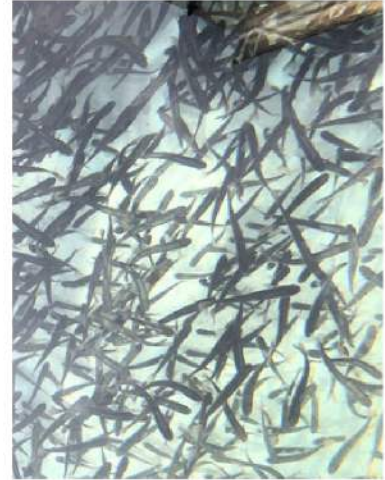
Leonard English (Fisheries Coordinator, left) and Chantelle Paul (TNG Ranger, right) surveying as part TNG's Territory-wide Aquatic Habitat Monitoring Program.



## Emergency conservation enhancement

TNG has led emergency conservation enhancement activities for our most vulnerable salmon populations since 2020 in response to the Big Bar Landslide crisis, which pushed already vulnerable salmon populations to the edge and created an immediate risk of extirpation (local extinction). We are now expanding these activities to broader stock recovery. TNG has been leading brood stock collection on the spawning grounds in our Territory, in partnership with UFFCA and DFO.

TNG Fisheries is preparing to install the **Emergency Enhancement Brood Collection Fence for Upper Chilcotin JaꞤ** on July 23 in partnership with the Upper Fraser Fisheries Conservation Alliance (UFFCA) and DFO.



## What is Emergency Conservation Enhancement?

Emergency enhancement increases the number of offspring produced by spawning salmon by improving their chance of survival - it's essentially performing CPR on our extremely vulnerable salmon populations as a last resort to keep them from blinking out.

In summer and early fall when adult salmon return to their natal streams to spawn, our field crew captures some of them as brood (parent) stock. They collect eggs and milt (sperm), fertilize and incubate the eggs, and rear the juvenile salmon to the fry stage in hatchery facilities. Then in the spring, the juvenile fry are released back into their natal streams.



## First release of T̓silhqot̓in Salmon Conservation Hatchery Chilko JaꞤ fry

We successfully completed the first season of full operation of our own T̓silhqot̓in Salmon Conservation Hatchery in 2023-24, and released our first cohort of 3702 Chilko JaꞤ fry at Henry's Crossing on June 17, 2024. The fish had a great survival rate as they grew in the hatchery.

Congratulations to Winston Bambrick who was recently promoted to Junior Hatchery Manager!



*Hayden Grinder (TNG Fisheries Technician) measuring water quality at the fry release*



*Winston Bambrick (Junior Hatchery Manager) releasing the Chilko JaꞤ fry at Henry's Crossing*



*Gary Stiemann drumming as the fry were being released.*

## TNG FISHERIES WEEKLY BULLETINS

For weekly updates on the status of T̓silhqot̓in salmon stocks, fisheries, and TNG Fisheries Department activities, please see our weekly fisheries bulletins, along with more information about the TNG Fisheries Program, at [www.tsilhqotin.ca/our-territory/fisheries](http://www.tsilhqotin.ca/our-territory/fisheries) and on the TNG Facebook page.

For questions please contact TNG Fisheries Manager Randy Billyboy: [rbillyboy@tsilhqotin.ca](mailto:rbillyboy@tsilhqotin.ca) / 250-392-3918