

# NEEF Report - NWSCC- April 2023 to March 2024

This was the eleventh year of operation for the Nechako White Sturgeon Conservation Centre



(NWSCC). This was an exciting year celebrating 10 successful years of operation and building on those successes with improvements in key areas such as outreach and research. During this period, we conducted various programs including brood capture and adult sampling, spawning, spawn monitoring, aquaculture rearing of juvenile white sturgeon, and juvenile indexing to promote recovery of Nechako White Sturgeon in the Nechako Watershed.

## Brood Capture Program

Spring brood capture was conducted from April 19th, 2023, to May 15th, 2023, by using setlines and angling. Seventy nine individual sturgeon were caught in the Spring Brood/Sampling Program. Of the 79 sturgeon sampled, 33 were males, 20 were females, 15 were of unknown sex, and 11 were juveniles. Of the 11 juveniles, 9 were of hatchery origin.

A total of 13 mature sturgeon, 7 males and 6 females, were brought back to the NWSCC for use in the conservation fish culture program.

Forty six radio tags were applied into adult sturgeon in 2023; 13 tags were applied to previously radio tagged fish, and 33 tags were applied to fish that were not previously radio tagged. Eight expired radio tags were removed from adult white sturgeon in 2023.

## Spawning in 2023

Spawning took place on May 17<sup>th</sup>, 2023 and May 24<sup>th</sup>, 2023. Spawning was very successful with 7 females and 7 males being spawned creating 49 familial crosses. Fertilized eggs were retained for culture in the conservation center. Two of the females spawned in 2023 were already in the facility from the previous year. All sturgeon were released after spawning 3km downstream of the main spawning area near Vanderhoof, BC.

## Spawn Monitoring Program

The NWSCC team participated in the 2023 Adult Spawn Monitoring Program from May 15, 2023, to June 14, 2023. Throughout the spawn monitoring field work, the NWSCC team collaborated with Carrier Sekani Tribal Council (CSTC) and collectively gathered 314 eggs which were brought back to the NWSCC hatchery for incubation. All eggs collected in the field were obtained between May 18<sup>th</sup>, 2022 and June 1<sup>st</sup>, 2023. The viable eggs collected in the river are reared in the NWSCC

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to add more genetic diversity to our program. Overall, 100 of the 314 eggs collected were viable eggs and were reared to the juvenile stage.

## Inventory

During this reporting period the NWSCC had three-year classes at the hatchery.

1. Brood Year 2021: 300 were released in June 2023 at an average size of 2.745 Kgs and 72.1cm. Specifically, 142 juveniles were of “wild collected as egg” origin, and 158 were hatchery crosses.
  - a. All were PIT Tagged, 30 radio tagged, and 20 radio & acoustic tagged.
  - b. Five release sites in total; 3 Nechako River sites, and 2 Fraser Lake sites.
2. Brood Year 2022: 300 for release in June 2024. Reared during this period from approximately 10 months old to 22 months old. Approximately 33% are from “wild collected as egg” origin.
3. Brood Year 2023: 300 for release in 2025. Spawned during this period, incubated, hatched, and reared for approximately 10 months. This group had some of the best growth rates observed and optimal fish health. Approximately 33% are from “wild collected as egg” origin.

## Juvenile Indexing Program

From July 17, 2023, to August 24, 2023, the NWSCC participated in the juvenile indexing program organized by the NWSRI in cooperation with CSTC and Lheidli T’Enneh First Nation. This was also supported in part by staff from a Rio Tinto Student Work Experience Program. Forty-two unique juvenile sturgeon were captured, and of the 42 caught, 29 were caught in the Nechako River and 13 were caught in Fraser Lake; 39 were hatchery origin and 3 were wild origin. The juvenile sturgeon were immediately released in their capture location after biological measurements and samples had been taken. Detailed biological information, including tags applied and measurements taken, is provided to the Nechako White Sturgeon Database managed by the Province of BC.

## Capital Projects

We had two major capital projects this year:

1. Replace 1-ton pickup truck. The previous truck was at the end of its life. The replacement Ford F-350 is working wonderful and has been a great asset to the program.
2. The river intake improvement project was successful in adding a cleanout for year-round cleaning. During this major construction project, we also did some hardware replacement that wasn’t accessible without this excavation. Flows from the intake now are better than they have been in years, and this project should provide years of continued water delivery to the conservation centre.