



Freshwater Fisheries Society of BC

Report for April 2019 to March 2020

For the sixth year in a row, the Nechako White Sturgeon Conservation Centre (NWSCC) has successfully delivered a broad range of services that have contributed to the ongoing efforts to help conserve Nechako White Sturgeon.

On May 3, 2019 the NWSCC released 500 one-year-old (Brood-Year 2018) juvenile white sturgeon into the Nechako River at Riverside Park in Vanderhoof, BC as part of a kids release event organized by the Nechako White Sturgeon Recovery Initiative (NWSRI). The release event was attended by nearly 500 elementary aged school children that had the opportunity to release a fish that they had named. The fish name, biological information, and photo of them holding their fish is recorded on a webpage that children can access in the future to see if their fish has any new information like subsequent captures. These juvenile white sturgeon averaged 286.2 grams each.

In addition to the one-year-old releases we also released 70 two-year-old (Brood Year 2017) juvenile white sturgeon that were reared from wild eggs and 36 three-year-old (Brood Year 2016) juvenile white sturgeon that were reared from wild eggs. These two groups were split into 3 release groups and released on June 4th and 5th 2019 into the Nechako River. For each release group 10 individual juveniles were outfitted with a radio tag to allow provincial biologists to track the movements of these large sized fish.



All juveniles are PIT tagged, screened for polyploidy, scute marked, and have length and weight recorded prior to release. All biological information is recorded in a shared database managed by British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development (BC-FLNRORD).

2019 brood collection efforts included 11 days of angling and 10 days of set-lining between April 24, 2019 and May 14, 2019.

These efforts produced 41 sturgeon

captures (12 first captures and 29 recaptures). 17 of these adults were used for spawning at the hatchery. 2 females that were previously caught and held at the NWSCC were also used for

spawning. 24 sturgeon were released during brood capture. Fish that were not taken for brood stock were sampled and information was recorded on the shared database.



Spawning took place at NWSCC on May 18, 2019, June 3, 2019, and June 4, 2019. Some of the eggs, larvae, and juveniles were sent to University of Northern British Columbia (UNBC), and University of British Columbia (UBC) for various research efforts. A total of 7 females each crossed with 9 or 11 males were spawned. This created 60 unique family groups that were later combined to make 7 maternal families.

The NWSCC also continued with its “wild egg” rearing program. Eggs collected for the spawn monitoring program on the Nechako River were brought back to the NWSCC and reared. This year we had improved hatch rates compared to last year with 1341 eggs collected and 571 hatching in the facility. We were able to get 390 larvae started on feed with an estimated 300 able to rear to release size. The NWSRI Technical Working Group (TWG) specified that 46 of these should be reared to release in 2021 with the others being used to sample genetic diversity within this collection to help inform future wild collected egg stocking decisions.

From July 15, 2019 to September 11, 2019 the NWSCC participated in the Juvenile Indexing Program that is organized by the Nechako White Sturgeon Recovery Initiative (NWSRI). This was also supported in part by staff from a Rio Tinto Internship Sponsorship Program. In July, August, and September our staff captured 40 unique juvenile white sturgeon. Of these, 29 were hatchery (10 of them being recaptures), 10 were wild juveniles (5 recaptures), and one was a unknown origin recapture.

The two capital projects from this reporting period are a replacement Uninterrupted Power Supply (UPS) for the Main computer that operates the Recirculating Aquaculture System (RAS), and outdoor LED lighting to replace outdated and inefficient fixtures.

Work Plan for April 2020 to March 2021

For Fiscal Year 2021, most of the NWSCC’s operations will be very similar to the previous year. We will be releasing 200 juvenile sturgeon in mid-June, 2020 at five different locations in the Nechako Watershed. An exciting addition to the 2020 release plan is one release site in Fraser Lake. Ten individual juvenile white sturgeon at each release site will be outfitted with a radio tag that can be monitored by our crews and other partners in the recovery efforts. We will also be

continuing to rear 200 healthy juveniles that were hatched in 2019 and are planned for release in 2021 as large sized two-year-olds.

Brood capture targets are the same as last year. We are aiming for the maximum genetic diversity possible which translates to 8 females crossed with each of 12 males.

FFSBC crews will participate in the Spawn Monitoring Program with Carrier Sekani Tribal Council (CSTC) in 2020. The NWSCC will continue rearing wild collected eggs as in previous years, as this adds genetic breadth to our program.

The NWSCC will also participate in the juvenile monitoring program that is organized by the NWSRI.

As the NWSCC is a fairly new hatchery, and we have worked out the majority of deficiencies since construction, we currently do not have any major capital projects planned for Fiscal Year 2021.