

NECHAKO WHITE STURGEON RECOVERY

By Michelle Roberge and
June Wood of the Nechako
White Sturgeon Recovery Initiative



A hatchery-raised juvenile Nechako White Sturgeon being released into the Nechako River during the Juvenile Release Event held each year in the spring.

PHOTOS COURTESY OF THE NECHAKO WHITE STURGEON RECOVERY INITIATIVE.

Dwelling in the waters of Nechako River watershed is a survivor from the age of the dinosaurs – white sturgeon (*Acipenser transmontanus*). This magnificent animal is the largest freshwater fish in Canada, and has existed relatively unchanged for millions of years. It is likely that White Sturgeon arrived to the Nechako watershed from the Upper Columbia River system when the two were connected over 10,000 years ago after the last ice age. Since that time, the white sturgeon in the Nechako River appear to have remained almost exclusively within its waters, using the deep waters of the river and lakes

for winter refuge and, in late spring, congregating to spawn in the river. Research to date indicates the Upper Fraser designation unit of white sturgeon (Upper Fraser, Middle Fraser, and Nechako River populations) is genetically distinct from other populations and within that designation unit, the Nechako River White Sturgeon is a unique group.

It is unknown how many adult sturgeon historically inhabited the Nechako watershed. Dakelh Elders share that for centuries their people caught white sturgeon, and a record from the Hudson Bay Company from 1818 reports 21 sturgeon measuring 2.2 to 3.6 metres in length being caught in Stuart Lake.

The most recent estimates suggest there are 630 adult



Freshwater Fisheries Society of BC operate the Nechako White Sturgeon Conservation Centre, and here Mike Manky (left) and Cory Williamson (right) work together fertilizing Nechako white sturgeon eggs with milt, both of which are collected from wild adult sturgeon caught using set-lines in the Nechako River during April and May. Photo courtesy of NWSRI.



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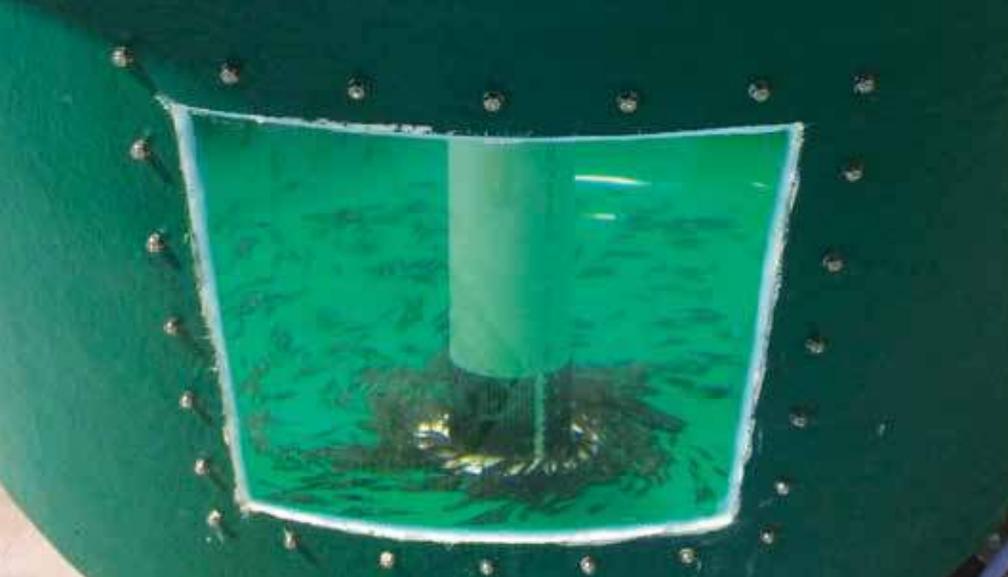


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Juvenile Nechako white sturgeon in one of the tanks at the Nechako White Sturgeon Conservation Centre. Tours of the facility are available everyday during the summer months, and once a week during the fall to spring.

sturgeon and very few naturally-spawned young sturgeon in the Nechako River. Since sturgeon do not begin spawning until 20 to 40 years of age, the lack of young sturgeon means that an entire generation is missing. If nothing changes, there may be too few mature animals to sustain the population and Nechako White Sturgeon could become extirpated. This has led to Nechako White Sturgeon being listed as critically imperiled by the British Columbia Conservation Data Centre, as endangered according to the Committee on the Status of Endangered Wildlife in Canada, and as an endangered species under the Species at Risk Act.

Many factors influence the successful spawning of adults, and the survival and growth of young Nechako White Sturgeon. The building of Kenney Dam in 1952 dramatically changed the flow rate, hydrograph, and sediment transport through the river. These changes in river condition along with changes in food sources (recent recommendations are to list sockeye salmon as an endangered species); habitat alteration from human development and water



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use; predation on young sturgeon; loss of adults from fishing (prior to the fishery closing) and bi-catch in First Nations salmon nets, may cumulatively impact the population.

The Nechako White Sturgeon Recovery Initiative (NWSRI) was formed in 2000 with the goal of returning the Nechako White Sturgeon to a self-sustaining population. The NWSRI has a recovery plan that guides projects and further research. To most effectively and quickly replenish the lost generation of sturgeon in the watershed, the Nechako White Sturgeon Conservation Centre was built in Vanderhoof and started operation in 2014. Here, young sturgeon are reared through a conservation-based aquaculture program that prioritizes genetic diversity, natural river conditions, and fish health. Sturgeon are raised to one-year of age from eggs and milt collected from Nechako White Sturgeon adults, and then released. These young sturgeon are monitored to determine their movement patterns and survival to better understand their interaction with neighbouring populations and to inform future recovery planning.

The NWSRI engages stakeholders, such as industry, governments and First Nations on the importance of Nechako White Sturgeon both ecologically and socially. To reduce harm to fish, First Nations fishing families participate in a program to safely release adult sturgeon caught in salmon nets and, to create future stewards, the NWSRI has developed a sturgeon-specific school curriculum. ●

For more information about Nechako White Sturgeon and the NWSRI, please visit www.nechakowhitesturgeon.org.



Adult Nechako White Sturgeon caught during the brood capture program. The crew inspects the fish to see if it is close to spawning condition. If so, the fish is brought back to the Nechako White Sturgeon Conservation Centre for breeding.



The Nechako White Sturgeon Conservation Centre had two tour guides this past summer that also travelled to communities to raise public awareness and education about Nechako white sturgeon.



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