

INFORMATION BULLETIN/PUBLIC COMMUNICATION MATERIAL

Okanagan Dam Fish Passage Initiative

TOPIC: Fish passage initiatives in 2021 at Okanagan Lake Dam in Penticton

BACKGROUND/HISTORY:

- In 1997, the Syilx Community expressed serious concerns about the potential extinction of the Okanagan Sockeye population. At that time, returning Sockeye spawners had been reduced to a few thousand upstream of Osoyoos Lake.
- The Okanagan Nation Alliance (ONA) has led Sockeye fry out-planting projects at Skaha and Okanagan lakes as part of a broader set of initiatives supported by the three party (ONA, DFO, BC-FLNRORD) Canadian Okanagan Basin Technical Working Group (COBTWG) to restore Okanagan salmon populations within their historic range.
- Introductions of Sockeye Salmon within the Okanagan Basin began with the first capture of wild adults for hatchery brood stock in fall of 2003 followed by introductions of hatchery fry into Skaha Lake in most years since 2004.
- The *kł c̓p̓əl̓k̓ sti̓m̓* Hatchery, owned by ONA and located on Penticton Indian Reserve, was constructed in 2013-2014. Full operation started in the Fall 2014, with the first fry release from *kł c̓p̓əl̓k̓ sti̓m̓* into Skaha Lake occurring in the Spring of 2015.
- The first major introduction of hatchery-origin Sockeye fry (750,000) into Okanagan Lake occurred in spring 2017.
- Hatchery-origin adult Sockeye Salmon originating from the spring 2017 introduction returned in small numbers (a few hundred) as adults aggregating below Okanagan Lake Dam in Penticton in 2019. A large spawning run (25,000+) returned in 2020, and a significant number of adult returns are expected in 2021-2022.
- The Okanagan Lake Dam at Penticton is a barrier to fish passage. The current dam was constructed in 1953 and included a fish-way. However, except for a brief trial period in 2019 and a longer trial in 2020, the fish-way has never been operated. The effectiveness of the fish-way in supporting adult fish passage at varying flows remains unknown.

GOAL:

- A controlled, trial operation of the fish-way in the Okanagan Lake Dam was achieved in the fall of 2020. In 2021, the trial will be repeated given the expected return of similar or slightly lower numbers of adult Sockeye as in 2020.

APPROACH:

- A step-wise approach has been initiated to provide fish passage at Okanagan Lake Dam. The Fish Passage Team/ COBTWG approved the project in 2019.
- Investigation of Okanagan Lake Dam fish passage options and testing of the fish-way began in 2019 and continued in 2020. Activities proposed for 2021 include: (1) activation of the fish-way to test whether salmonids, including adult salmon, can effectively navigate the ladder and access Okanagan Lake; (2) installation of a trap at the lake-side of the fish-way to control the number and species of fish entering Okanagan Lake; and (3) tagging of 100 (including 50-60 telemetry-tagged) adult Sockeye salmon for release into Okanagan Lake. Tagged fish will be monitored and provide information on spawning-site selection, spawn-timing, and interactions with resident stocks. All adult, hatchery-origin Sockeye salmon that are surplus to both brood stock or monitoring needs will support food, social and cultural (FSC) harvest by ONA member nations.
- The approximate timeline for fishway activation and Sockeye tagging is mid-September until mid-October, 2021
- This controlled approach minimizes biological risk to aquatic ecosystems, and provides Provincial, Federal and ONA fisheries staff with data that will inform future management decisions regarding potential impacts to or opportunities for recreational fisheries. Information garnered from fish-passage trials will also inform dam-management and fishway operations by Okanagan Lake Regulation System staff.

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