

Kootenay Lake Kokanee Recovery Update

July 2023



Kokanee Update

Low kokanee survival rates in the main lake have reduced spawner numbers since 2013, with approximately 35,000 spawners counted in fall 2022. Abundant kokanee predators (i.e., Gerrard rainbow and bull trout) were the main driver in kokanee collapse and predation continues to keep kokanee survival below a level that supports quick recovery.

Despite the low kokanee spawner numbers in 2022, other kokanee population data from 2022 indicate that juvenile (i.e., age 1-2) kokanee survival was the highest observed since the collapse, which is likely attributed to continued reductions of rainbow trout and bull trout in Kootenay Lake. Survival for the youngest age class of kokanee (i.e., age 0-1) continues to be low and requires continued action to improve kokanee survival.

Recovery Actions

To date, most actions to recover Kootenay Lake have focused on stocking, and in-lake predator reductions through progressively liberalized Kootenay Lake angling regulations, as well as through tools to encourage angler participation like the Kootenay Lake Angler Incentive Program. This program, which was a collaborative effort led by the B.C. Wildlife Federation and the West Arm Outdoors Club, was highly successful at removing predators from Kootenay Lake (~23,000 head returns between 2020-2023). The improved in-lake survival for age 1-2 kokanee over the last two years is likely due to the success of the program. However, the continued low in-lake survival for the youngest kokanee suggests that predator removal by angling alone will not result in kokanee recovery.

In February 2023, the Ministry held two public meetings to communicate upcoming plans for continued Kootenay Lake recovery action implementation. These actions, as in previous years, include kokanee stocking in fall 2023, and in-lake predator removals. When predators are reduced in the main lake, there is an immediate benefit to kokanee survival (i.e., these predators are no longer consuming juvenile kokanee). In addition to these actions, the Ministry also proposed several rainbow and bull trout projects, aimed towards reducing adult trout prior to spawning to ensure there is future support for kokanee (i.e., the reduction of juvenile trout that would have consumed kokanee in future years). Recent positive juvenile age 1-2 kokanee

survival estimates and continued low juvenile 0-1 survival estimates suggest now is a critical time to continue all kokanee stocking, and predator removal actions.

In spring 2022, the Ministry, in partnership with Indigenous Nations, implemented the first Gerrard rainbow trout recruitment action and removed 167 pre-spawn trout through netting and angling. Last spring, an additional 462 Gerrard rainbow trout spawners were removed at the north end of Kootenay Lake and in the Duncan and Lardeau Rivers. Although spawners were reduced, the number allowed to return was high enough to ensure future conservation of this stock.

To further support future recovery, the Ministry plans to reduce bull trout spawners this fall in the Kaslo River upstream of Keen Creek. This recovery action will include the installation of a fish fence and gillnets on the Kaslo River to intercept bull trout prior to spawning, as well as angling through some of the main bull trout producing tributaries. This action will be conducted by Ministry staff, local contractors, and community members from the Lower Kootenay Band. All fish captured from these actions will be used by local First Nations communities and food banks.

Despite the actions to reduce predation pressure, Kootenay Lake Gerrard rainbow trout and bull trout spawning populations have remained above levels of conservation concern. It takes very few spawners to saturate the available juvenile habitat in streams (i.e. there are usually excess spawners under normal abundance). This means that there is additional room to reduce kokanee predation without risking conservation of these populations. The Ministry will continue the ongoing enhanced predator monitoring programs to ensure the spawning populations remain above levels of conservation concern.

How can anglers help?

Harvest all of your catch, and participate for a chance to win

– The Ministry urges anglers to participate in the Kootenay Lake Angler Incentive Events on Kootenay Lake and harvest all of your catch within daily quota limits to reinforce improved juvenile kokanee survival. The event is underway through July 1st -October 31st, 2023. For more details, please visit <https://kootenaylakeanglerincentiveevents.ca/>

Find more info:

<https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/fish/fish-management/region-4-kootenay> or, google "Kootenay Fisheries".