



Three Designatable Units (DUs) of Sockeye Salmon with Early-Summer Run Timing: DU 196 (Alouette-ES [Original] Population), DU 197 (Coquitlam-ES [Original] Population), and DU 13 (Nahatlatch-ES Population)

Consultations on listing under the Species at Risk Act

Information summary and **survey** for engagement related to potentially adding designatable units 196, 197, and 13 of early-summer run timing sockeye salmon (Alouette-ES [Original], Coquitlam-ES [Original], and Nahatlatch-ES Populations, respectively) to the List of Species at Risk as Special Concern – **Please provide input by March 25, 2024.**

Engagement

Let your opinion be heard

Canada's *Species at Risk Act* (SARA) provides legal protection for wildlife species at risk to conserve biological diversity. It also acknowledges that all Canadians have a role to play in the conservation of wildlife species. Before deciding whether to add sockeye salmon (*Oncorhynchus nerka*) Early Summer designatable unit (DU) 196 (Alouette-ES [original] population; hereafter Alouette sockeye), DU 197 (Coquitlam-ES [original] population; hereafter Coquitlam sockeye), and DU 13 (Nahatlatch-ES population; hereafter Nahatlatch sockeye) to the List of Species at Risk as Special Concern, we would like to hear your opinion, comments, and suggestions regarding the possible ecological, cultural, social, and economic impacts of listing or not listing these DUs under SARA.

Adding a species to the List of Species at Risk

The process of listing a species under SARA consists of several steps. It begins with a status assessment by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and ends with a Governor in Council decision on whether or not to add the species to the List of Species at Risk. Public engagement is conducted to gather the opinions of Canadians, and is an important step in this process.

Facts about these sockeye salmon DUs

- These three DUs are managed, together with additional sockeye populations, as part of the Fraser River Early Summer population aggregate, or stock management unit (SMU), of sockeye salmon

which exhibit similar return timing in the Fraser River in British Columbia (BC).

- Adult sockeye from these DUs begin to migrate up the Fraser River to their spawning grounds between July and August (Early Summer life-history) and spawning can extend into October.
- Alouette and Coquitlam sockeye spawn in reservoir systems in BC's Lower Mainland region (Alouette Reservoir and Coquitlam Reservoir, respectively) (Figure 2). Nahatlatch sockeye predominantly spawn northwest of Boston Bar, BC, in the Nahatlatch River, with a smaller portion of the DU spawning in Nahatlatch Lake (Figure 3).



Figure 1. Male sockeye salmon spawner (credit: Shane Kalyn).

- Eggs incubate in gravel over the winter before emerging as alevins (newly hatched salmon still attached to the yolk sac) in the spring. Following two winters of rearing in their respective lake or



reservoir systems, juveniles smoltify and migrate to the Strait of Georgia between April and June.

- Once in the marine environment, individuals are believed to migrate northward through Johnstone Strait, traveling along the coast to reach their wintering grounds in the Gulf of Alaska. They will then leave the continental shelf to feed and mature in the high seas before migrating back to their natal streams as four year old fish.

All three DUs are of the lake-type sockeye ecotype, meaning they spawn in lake tributaries or outflows or along lake foreshores, and juveniles grow in a rearing lake before migrating downstream.

Following construction of the Alouette and Coquitlam Dams in 1926 and 1914, respectively, fish passage to and from the reservoirs was blocked without human assistance. In 2005, a water management program was established to adjust flow regimes at both dams to allow juvenile sockeye to migrate downstream.

Nahatlatch sockeye inhabit a relatively remote freshwater system north of Hell’s Gate and within the Nahatlatch Provincial Park.

Sockeye salmon is highly significant to Indigenous peoples, both for cultural and subsistence purposes, and a target species for commercial and recreational fisheries.

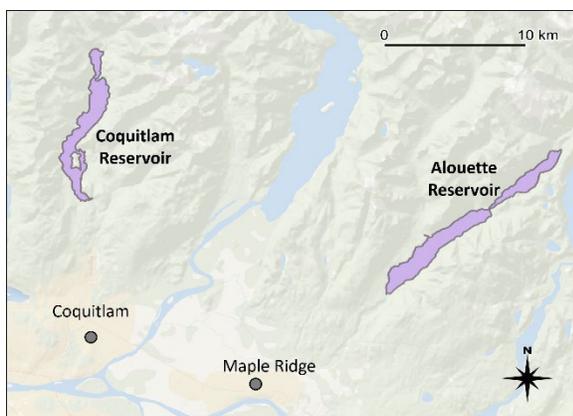


Figure 2. Alouette and Coquitlam Reservoirs

Who assigned the Special Concern status to Alouette, Coquitlam, and Nahatlatch sockeye?

COSEWIC is an independent committee of experts that assesses which wildlife species are in some danger of disappearing from Canada and assigns a status to these species. It conducts its assessments based on the best available information including

scientific data, local ecological knowledge, and Indigenous Knowledge. COSEWIC assessed Nahatlatch sockeye as Special Concern in 2017, which initiated the current SARA listing process. Alouette and Coquitlam sockeye were assessed as Special Concern in 2021 and were added to the current listing process. None of these DUs are currently listed under SARA. Under SARA, a Special Concern species is defined as species that “may become a threatened or an endangered species because of a combination of biological characteristics and identified threats”.

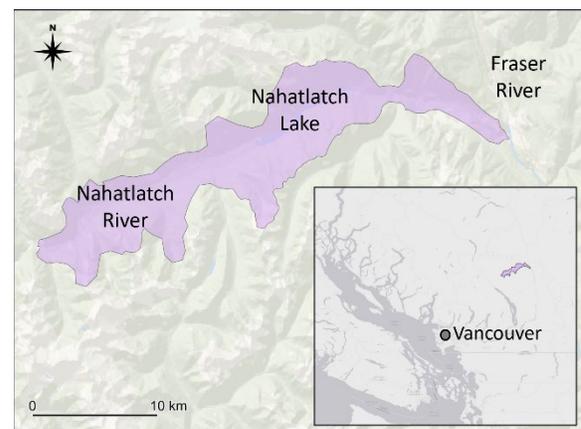


Figure 3. Nahatlatch River and Nahatlatch Lake

Why are Alouette, Coquitlam, and Nahatlatch sockeye at risk?

Despite lake access cut off by dams, Alouette and Coquitlam sockeye retained their anadromous capabilities and lived entirely in the reservoirs since the 1920s. The water management program implemented in 2005 has re-enabled ocean migration for both of these sockeye DUs, but ocean migrants face threats such as incidental mortality from Pacific salmon fisheries and declining habitat quality. Since 2007 anywhere from 0 to 103 adults have returned to the Alouette Reservoir and 0 to 9 adults have returned to the Coquitlam Reservoir. Losing the ability to express this anadromous life history with restoration of fish passage is expected to increase extinction risks for these two DUs.

There are only a small number of adult Nahatlatch sockeye and COSEWIC’s 2017 assessment of the DU concluded that numbers had decreased over the prior three generations. Ninety-five percent of mature individuals are in a single subpopulation which is threatened by declines in habitat quality in both marine and freshwater areas.

Aquatic Species at Risk



If a species is listed under the *Species at Risk Act*

If Alouette, Coquitlam, or Nahatlatch sockeye are listed as Special Concern, the SARA prohibitions (for example, prohibitions against killing, harming, and capturing) would not apply. However, listing would result in the development of a SARA management plan for the DUs and their habitats that would include appropriate conservation measures. Regardless of the SARA listing decision, Alouette, Coquitlam and Nahatlatch sockeye will continue to receive protection under the *Fisheries Act*.

Before completing this survey, you may wish to review the following background information found at the links below:

- [COSEWIC Assessment and Status Report \(2017\)](#)
- [COSEWIC Assessment and Status Report \(2021\)](#)
- [Southern Salmon Integrated Fisheries Management Plan 2023/2024](#)
- Other information can be found on the [Species at Risk Public Registry](#).

Thank you for completing this survey

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We would like to receive your comments on the potential impacts of adding or not adding Alouette, Coquitlam, and Nahatlatch sockeye to the List of Species at Risk under SARA, designated as Special Concern.

Please fill out the survey by **<<DATE>>**: we want to hear from you.



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