

Skookumchuck Dam

The Skookumchuck Dam, owned and operated by TransAlta, was built on the Skookumchuck River for the purpose of providing water supply to the downstream Centralia Steam Generation Facility. The Chehalis Stream Generation Facility is anticipated to close in 2025, and TransAlta has converted their water right to a water bank. The Chehalis Basin Board is considering two future operational alternatives that would modify or remove the dam in support of the Chehalis Basin Strategy's flood damage reduction and/or aquatic species restoration goals. These alternatives are combination fish/flood, dam removal, and dam removal/off-channel storage (see details under "Key Components").

Several factors are important to understand about the Skookumchuck Dam:

- While it was designed and constructed with the sole purpose of providing a steady flow of water downstream and has not been operated for flood storage, it has provided periodic incidental flood damage reduction benefits, particularly during large flood events when the reservoir has been low.
- The reservoir above the dam has also enabled TransAlta to now act as a water bank operator, selling mitigation water rights to new water users downstream to ensure a minimum instream flow on the Skookumchuck River.
- The dam currently blocks upstream and downstream fish passage on the Skookumchuck River, which is home to one of three significant spring Chinook salmon spawning areas in the Chehalis Basin, in addition to also supporting steelhead, coho and fall Chinook populations. Washington Department of Fish & Wildlife currently operates a program to trap steelhead and transport them above the dam for release, however no programs are in place for Chinook and coho salmon. NOAA is currently reviewing a petition to list spring Chinook on the Washington Coast, including in the Chehalis Basin, as "threatened" or "endangered" under the Endangered Species Act.

Potential Principles

- **Principle 1:** The Skookumchuck Dam, and the associated water bank, are currently owned and operated by TransAlta. Regardless of the Board's recommendation, the decision about future operations or modifications of the Skookumchuck Dam will require engagement with TransAlta.
- **Principle 2:** OCB and the Board will continue to coordinate closely with TransAlta when considering any modifications to the dam.
- **Principle 3:** Improving upstream and downstream fish passage on the Skookumchuck River is a key goal of the Chehalis Basin Board.
- **Principle 4:** The consistent downstream water supply provided by the Skookumchuck Dam during low flow summer months has been economically important for downstream

communities. The Board will continue to seek out stakeholder and Tribal input about the future of the dam, recognizing that future operations and management come with potential impacts to downstream water rights users. The Board will continue to explore options to mitigate those impacts, e.g., piping water from the (existing or new off-channel) reservoir directly to users on the Chehalis River.

- **Principle 5:** The incidental flood damage reduction benefit has been important to downstream communities. If the Board recommends the dam be modified or removed, the Board will endeavor to either maintain flood damage reduction benefits by future operations or replace the flood damage reduction benefits by other flood damage reduction measures, e.g., levees, floodproofing, acquisitions, etc.

Key Components

The two future scenarios under the Board's consideration are:

- **Combination fish/flood:** This option would construct modifications to the existing dam facility in order to augment fish passage and increase discharge capacity for flood management. Elements would include improving the fish collection facility, improving the fish sluice, installing a new outlet, and potentially directly piping water to customers. This would have marginal benefits to spring Chinook.
- **Dam removal / off-channel storage:** This option would completely remove the existing dam and the reservoir above it. Removal of the dam would allow for free fish passage, restore natural sediment transport, and allow for natural river processes, offering the greatest benefit to fish species, including spring Chinook. This option is mostly not compatible with maintaining the existing water rights established as part of TransAlta's mitigation water bank, unless an off-channel reservoir is constructed to maintain the existing water rights.

Cost

Total estimated 30-year cost range: \$35,000,000 - \$50,000,000

If implemented over 30 years, this averages to an annual cost of \$1,167,000 - \$1,667,000.

Estimates are based on analogous past projects, escalation of historical costs, and cost estimates from suppliers however should be considered as "concept screening" cost estimates based on less than a 2% design. These estimates are appropriate to use in planning-level discussions and would be refined as additional information on the alternative is obtained and designs developed.¹

Funding would cover the cost of engineering, construction, and contingency for implementing either option. The "low" end of this range reflects the dam removal option and is the median

¹ [Skookumchuck Dam Phase 2 Analysis Summary Report](#) prepared by Anchor QEA, 2022, pp. 97-100.

opinion of probable cost; it does not include the cost to design and construct an off-channel storage component since those specific estimates are currently being analyzed. The “high” end of the 30-year cost range reflects the combined fish/flood option. Note that additional feasibility studies and ongoing operational costs after implementation are not included in these estimates.

More Information

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Refer to [Skookumchuck Dam Study](#) page of the Chehalis Basin Strategy website for more details.