BC Hydro
Power smart

Strathcona Dam Water Discharge Upgrade Project – Community Construction Report #1

November – December 2025

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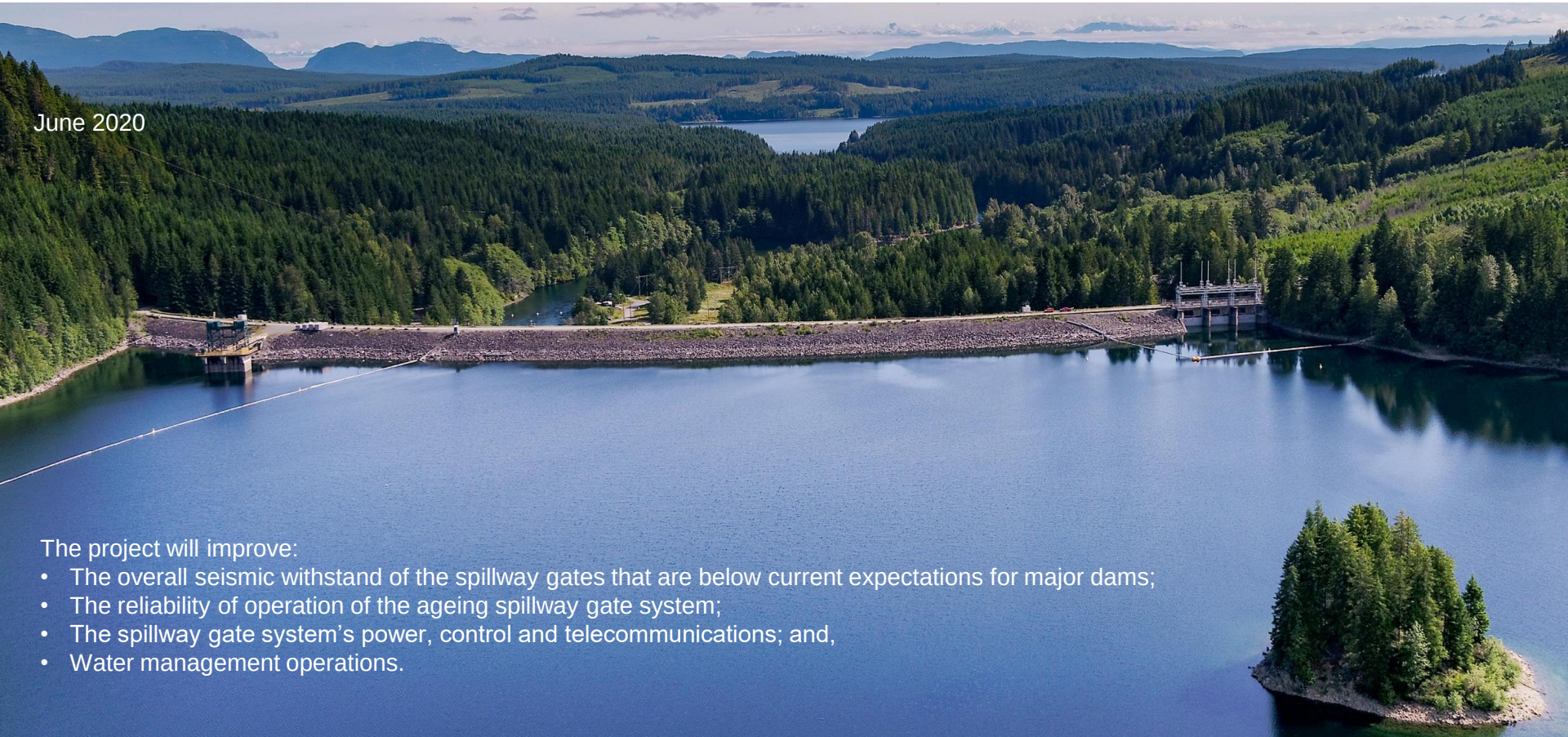
Project introduction

Since 2015, we have been meeting with First Nations, government agencies and stakeholders on the Strathcona project. The project is required is to address dam safety risks at the facility and enable the lowering of the reservoir water level after a major earthquake.

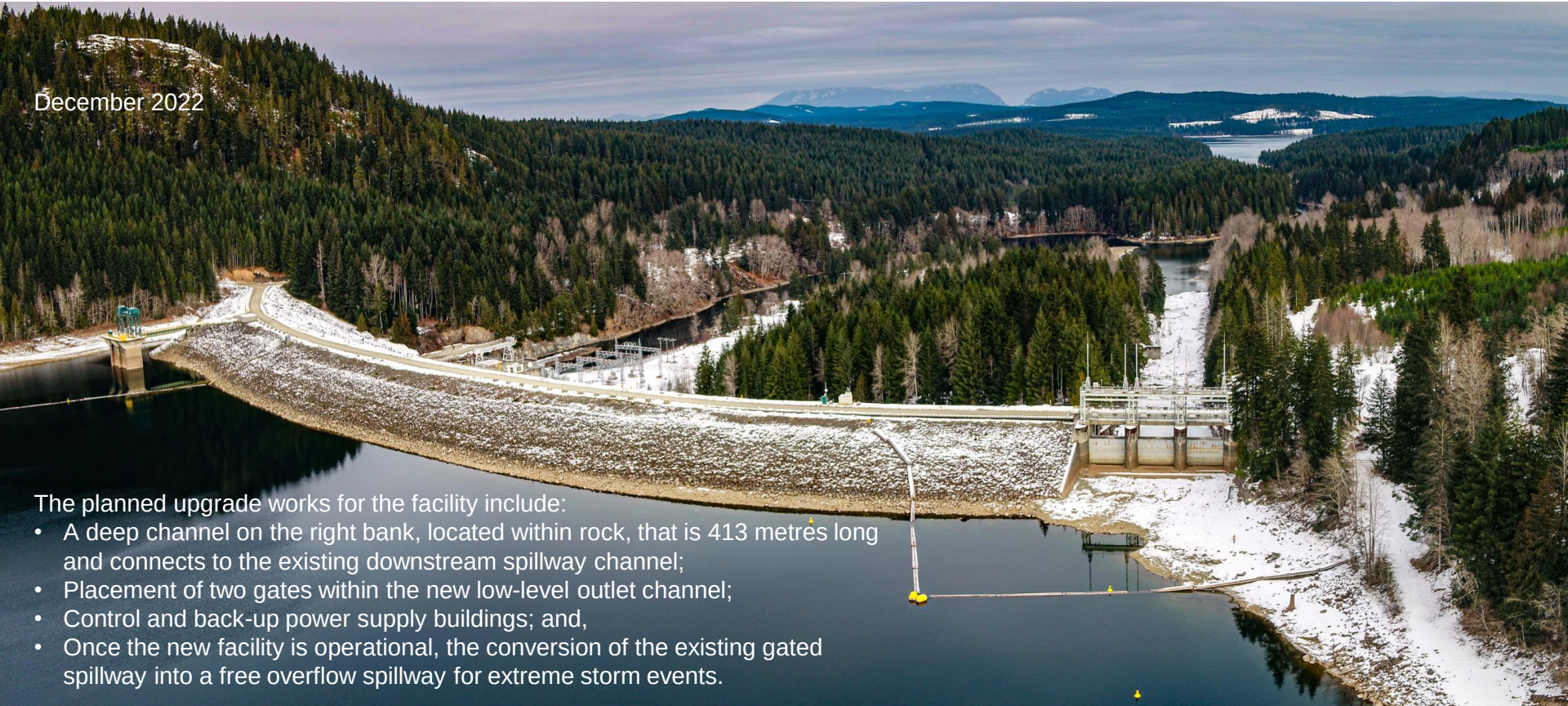


The project will improve:

- The overall seismic withstand of the spillway gates that are below current expectations for major dams;
- The reliability of operation of the ageing spillway gate system;
- The spillway gate system's power, control and telecommunications; and,
- Water management operations.

Project introduction

Project water management benefits include managing drought conditions and maintaining the ability to pass water downstream. When water levels go below the sill of the existing spillway gates (as shown below) it can put downstream water management at risk should the powerhouse units go offline for an extended period. The new gates will be able to pass water flows regardless of the reservoir water level.



The planned upgrade works for the facility include:

- A deep channel on the right bank, located within rock, that is 413 metres long and connects to the existing downstream spillway channel;
- Placement of two gates within the new low-level outlet channel;
- Control and back-up power supply buildings; and,
- Once the new facility is operational, the conversion of the existing gated spillway into a free overflow spillway for extreme storm events.

Strathcona facility lands

- The Strathcona Dam and powerhouse facilities were completed in 1958.
- The dam is 53 metres tall and 500 metres long. The facility has three spillway gates. Water from the Upper Campbell Reservoir/Buttle lake enters an intake upstream of the earthfill dam and passes through the dam to a 64 MW powerhouse on the downstream side of the dam.
- The Strathcona facility is the upper hydroelectric facility on the Campbell River system, with about 80% of the systems water storage behind the dam, with the downstream Ladore and John Hart facilities downstream.

June 2020 photo of the Strathcona facilities.

Upper Campbell Reservoir Campground

July 2022 photo: The Upper Campbell Reservoir Campground with the 21 campground sites, washroom facilities, and informal boat launch opened in 2021. The campground replaced the Strathcona Dam Campground that was permanently closed in fall 2020 to provide for a construction laydown area for this project, as well as for dam safety considerations given its proximity to the dam. More information on the campground at: www.bchydro.com/community/recreation_areas/strathcona_dam.html

Project status and schedule

- 2024-2025: completion of tree removals and site drilling investigations.
- 2024-2025: completion of temporary control building for the spillway gates during the construction period.
- November 2025: BC Hydro staff and the general contractor, Flatiron Constructors Canada Ltd, mobilization to the site.
- January 2026: begin drilling and blasting for the new low-level outlet channel.
- The goal is to have the new channel and two spillway gates, and related works, in-service in 2028.
- The plan is to then convert the three existing spillway gates into a free overflow spillway in place by 2029.
- The project will generate about 70 jobs per year from 2026 to 2028.

This construction report will be issued bi-monthly to provide the community with updates on the project work activities and schedule, photos of the work, construction and environmental points of interest, people profiles, and other project related information.

November 7 photo of the Strathcona spillway gates, spillway channel, and work area.

Strathcona Dam and area road closures

Media notice issue date: November 3, 2025

Strathcona Dam access road to close November 17 for seismic upgrade work

CAMPBELL RIVER: BC Hydro is notifying the public that the road across the Strathcona Dam will be closed for approximately four years beginning November 17, 2025. The closure is necessary to carry out critical seismic upgrade work aimed at enhancing the dam's safety and resilience. Road closure signs will soon be posted on either side of the dam, including off Highway 28.

For more information on the project, visit www.majorprojects.ca or visit the Campbell River Hydroelectric Facilities Discovery Centre (re-opens February 3 three days a week: Tuesday, Thursday and Saturday).

November 7: Strathcona Dam.

Strathcona Dam Spillway Gates

The existing spillway gates will continue to operate until the new low-level outlet channel and two gates are in-service. The existing gates will then be removed and replaced with a concrete structure.

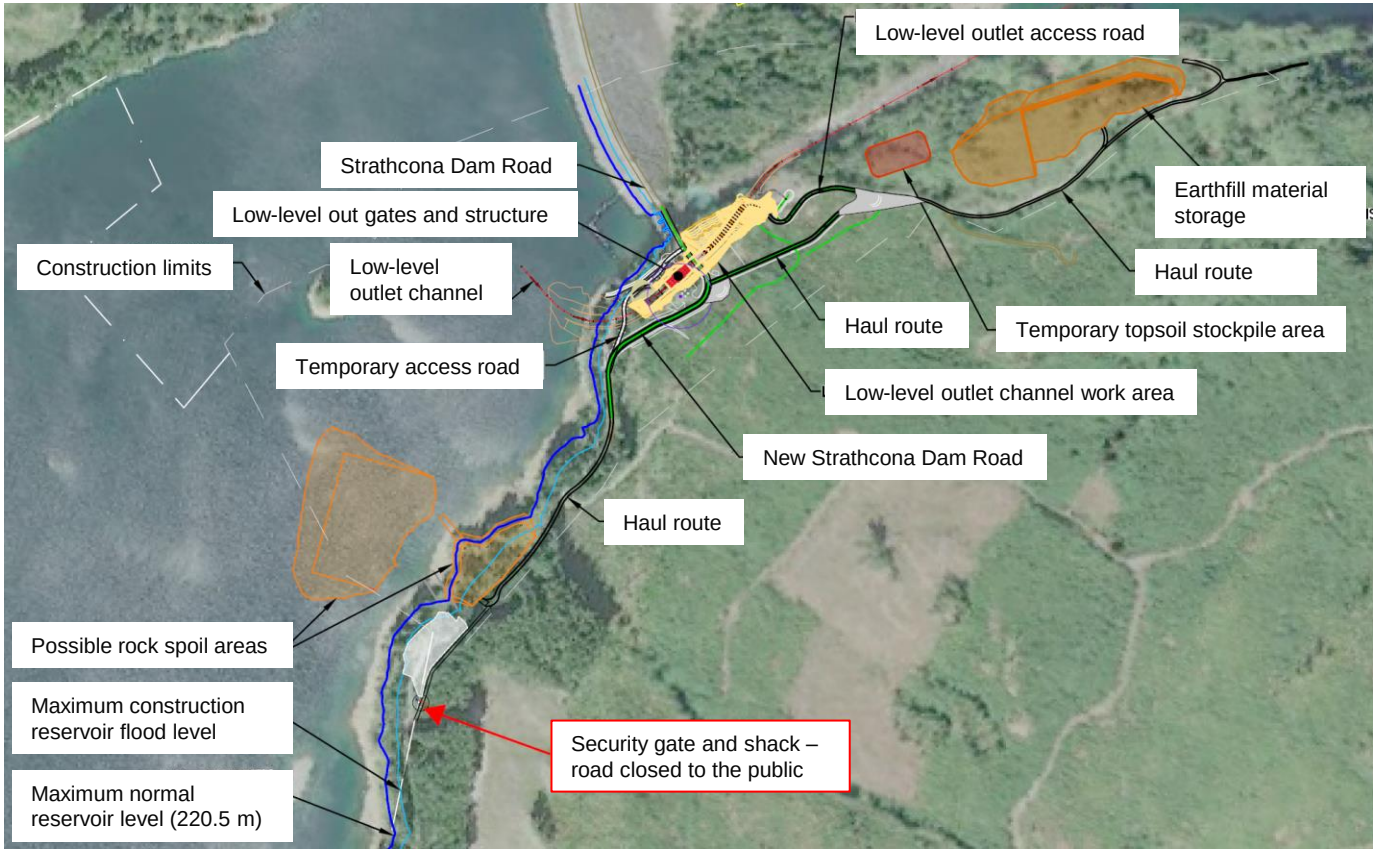
Construction: Strathcona Dam site area

This site map shows the project site, with the orange areas showing some of the laydown areas for materials, soils and rock.

Earthfill material to be handled to excavate the low-level outlet channel:

- About 100,000 cubic metres of overburden soils will be retained within the work site.

- About 100,000 cubic metres of rock material will be moved into the reservoir, be placed within the site area, or moved to an approved facility, or a combination of the three.



Construction photos: site laydown areas

November 7: upstream laydown areas beside the access road the leads to the dam, to the left, with Highway 28 to the right.

Construction photos: Strathcona Dam

November 7: drone view looking downstream at the project work area on the right and the 500 metre-long Strathcona Dam.

Construction photos: Strathcona Dam

November 7: view of the project site area.

Construction photos: Strathcona Dam

November 7: view of the project site area prior to the earthworks to prepare for access roads and laydown and storage areas.

Construction photos: Strathcona Dam

November 7: drone view looking upstream at the project work area with the powerhouse shown on the right.

Construction photos: site work

December 2: Working on the new access road into the project site. The view is looking westward over the Upper Campbell Reservoir. The existing access road near the reservoir will eventually be removed to build the low-level outlet channel.

Construction photos: site work

December 2: Looking eastward, the new access road that leads to this laydown area for site office trailers.

Construction photos: site work

December 2: The newly created laydown area for the site office trailers. Spill containment pans are in the foreground and are used as needed for equipment. The Strathcona Dam is in the background.

Construction photos: site work

December 2: On the far eastern area of the site, by the spillway channel located on the left behind the trees, work is underway for a larger laydown area and placement of material removed for the low-level outlet excavation. A settling pond with lining is being constructed in the background for site water management. This same area was used as a laydown area during the Strathcona Dam construction in the late 1950s.

Construction photos: site work

December 9: Advancement of the eastern laydown area.

Construction photos: site work

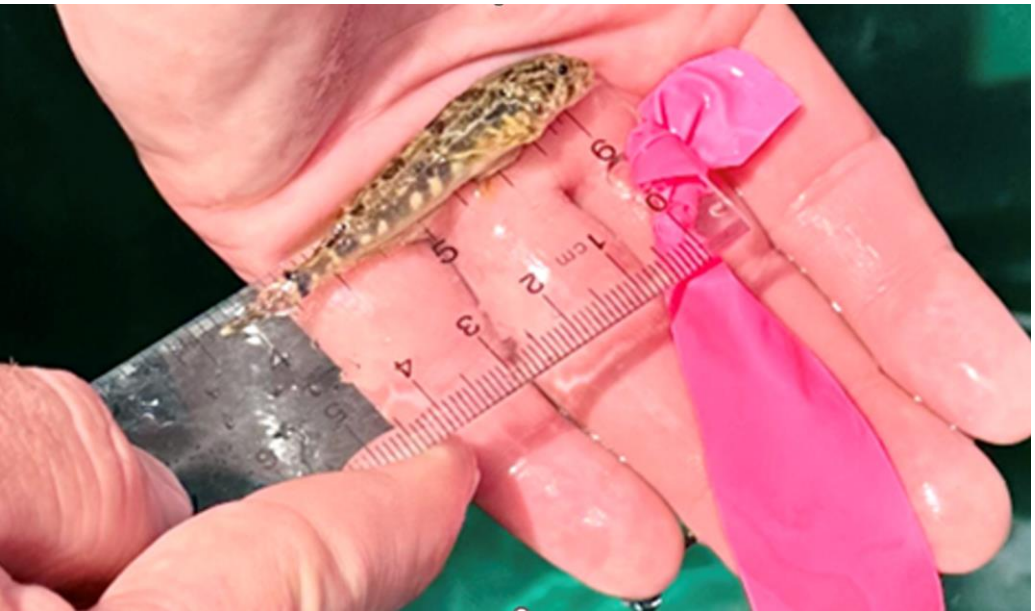
December 9: Earthfill work in the eastern laydown area. One of several settling ponds, lined with rock to help manager surface water, is shown in the middle of the photo.

Construction photos: site work

December 9: View of the construction activities and equipment at the far easter edge of laydown area.

Environmental point of interest: Construction Environmental Management Plan

We have a project Construction Environmental Management Plan (CEMP) to assist the project to adhere to applicable environmental legislation and commitments by providing environmental requirements, standard protocols, and mitigation measures to avoid and mitigate potential for adverse environmental effects during construction. This includes things like soil and water management, spill prevention and response, sediment and erosion control, mitigation measures to prevent harm to environmental resources, monitoring and environmental training. The CEMP provides requirements to be met in accordance with project commitments, regulatory approvals, applicable Environmental Best Management Practices, and engineering specifications. The CEMP is in place to ensure project activities meet or exceed environmental requirements.



People profile – Bill Wright

Background:
Bill grew up in Gold River and became a Registered Forest Technologist (RPT). He first job with BC Hydro was a Construction Officer working on the Heber River Diversion Dam Decommissioning Project in 2012. He then moved on to the John Hart Generating Station Replacement Project in 2013. He was the Senior Construction Manager for the Salmon River Diversion Dam Decommissioning Project in 2017. Bill then became the Senior Construction Manager for the John Hart Dam Seismic Upgrade Project and as of this summer, moved over to become the Strathcona project Senior Construction Manager.

Home:
Comox Valley.

Hobbies:
Hunting, fishing, hiking, golfing, and enjoying the outdoors with his family.

Project Responsibility:
Bill is BC Hydro's Senior Construction Manager that manages a highly skilled diverse team. He works closely with Flatiron and the BC Hydro project team to ensure the construction work is done as designed and to a high quality.
"I am looking forward to working with the Flatiron team and the BC Hydro team to build a successful project. There will no doubt be some construction challenges along the way, though it's always about what we do together with a solutions-based approach to overcome those challenges. That's how you continue to move a project like this forward and ultimately make this facility safer and more reliable."


John Hart – March 2017

2025


Salmon River – 2017