John Hart Dam Seismic Upgrade Project – Community Construction Report #17

July – August 2025

Prepared by Stephen Watson
Email: steve.watson@bchydro.com
Phone: 1-250-616-9888

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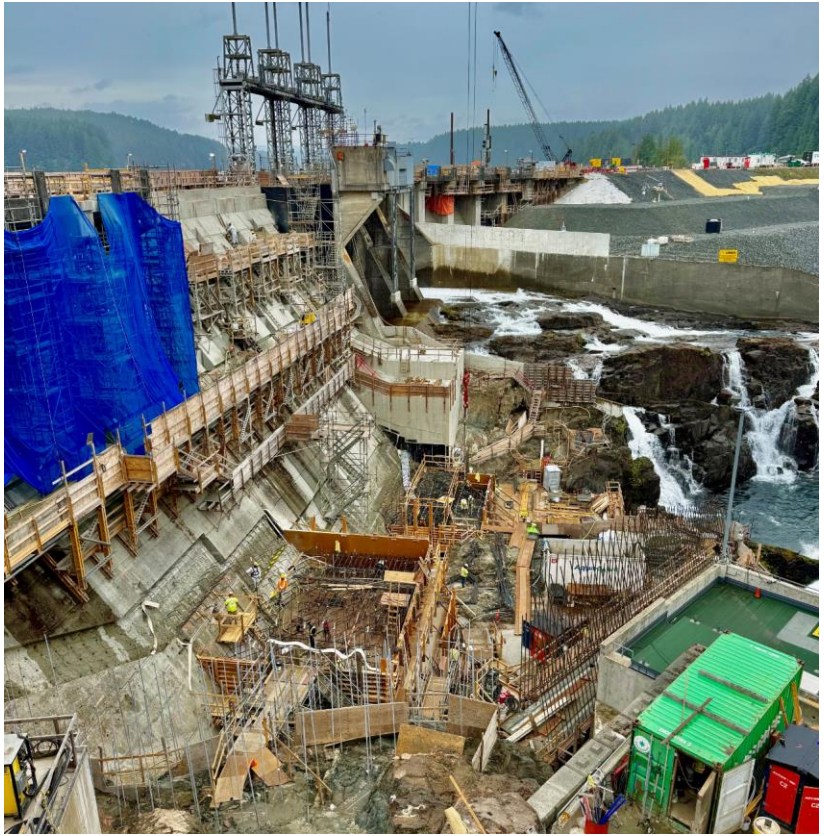
Project status and schedule

- As of July 31, our Aecon EBC General Partnership contractor has had 735,106 hours of work without a lost time accident.
- Work on a new elongated earthfill berm from and over the old water intake dam and down the old penstock corridor is about 80% complete.
- The placement of rock for the upstream berm at the Middle Earthfill Dam is about 30% complete.
- Work continues on the upstream and downstream side of the Concrete Main Dam to construct a new overflow spillway under the road deck.
- The densification of the berm on the downstream side on the North Earthfill Dam started in late August and may take about two months to complete.
- A Request For Proposal is planned to be issued in fall 2025 for the project's hydromechanical work that includes three new spillway gates and hoist systems, and back up power and control buildings.



August 5 photo of the Concrete Main Dam.

Construction photos: Old Penstock Corridor

August 13 photo of work to the left of the trail up the slope, for a new weir and related works to manage surface water draining off the old penstock corridor and new berm. The weir work started in late August and may take about two or three weeks and includes a new culvert under the trail. A row of vegetation will be left along the trail to screen the disturbed areas, and the work area will be a revegetated. This work was coordinated work with BC Parks. Insert photo was taken on August 21 from the penstock corridor.

Construction photos: Old Intake Dam

July 17 photo of the berm placement work downstream of the old water intake dam.

Construction photos: Old Intake Dam

August 21 photo looking upstream towards the berm within the old penstock corridor and below the Old Intake Dam. This section of completed elongated berm was another project seismic upgrade milestone in making the dam stronger.

Construction photos: Middle Earthfill Dam

July 4 view of the first few loads of rock for rock placement from land into the reservoir for the upstream berm.

Construction photos: Middle Earthfill Dam

July 31 view of the barge and crane on water and the excavator on land placing the rock into the reservoir for the upstream berm.

Construction photos: Middle Earthfill Dam

August 5 photo of the barge, rock and crane placing rock for the upstream berm.

Construction photos: Middle Earthfill Dam

August 13 photo of the completed wood fence placed at the base of the dam near the public trail to the Dolphin Pool area. The work was done in coordination with BC Parks.

Construction photos: Middle Earthfill Dam

August 21 view of the rock placement into the reservoir for the upstream berm.

Construction photos: Concrete Main Dam

July 4 view of the downstream area.

Construction photos: Concrete Main Dam

July 4 view of the removed road deck to prepare for the new overflow spillway works. A new road deck will be placed above the overflow spillway when it’s complete.

Construction photos: Concrete Main Dam

July 17 view of the anchor drilling work through the concrete dam and into the bedrock below.

Construction photos: Concrete Main Dam

July 31 view looking up at the dam and the 30 cubic metre per second water release from a spillway gate during planned maintenance work to the John Hart powerhouse.

Construction photos: Concrete Main Dam

July 31 photo of the work on the overflow spillway.

Construction photos: Concrete Main Dam

July 31 photo of the work on the overflow spillway, with the North Earthfill Dam in the background.

Construction photos: Concrete Main Dam

August 5 photo of the work on the overflow spillway.

Construction photos: Concrete Main Dam

August 21 photo of the work on the overflow spillway.

Construction photos: North Earthfill Dam

July 17 photo showing the removal of the last bit of silt curtain upstream of the dam. The curtains, boardwalk and piles were removed once the turbidity settled within the silt curtain containment area.

Construction photos: North Earthfill Dam

July 31 photo showing the removed silt curtain works, and the growth of plants on the restored island.

Construction photos: North Earthfill Dam

July 31 view across the downstream berm towards the Concrete Main Dam.

Construction photos: North Earthfill Dam

August 21 photo of the site preparation for the densification work that started in late August for the upper section of the downstream berm. The densification process, done by the yellow and blue machine in the background, will compact the earthfill material and enable further upper berm contouring.

Environmental point of interest: managing turbidity within the John Hart Reservoir

There are two silt curtain locations within the reservoir that contain the construction work area along the John Hart Dam and protects water quality within the John Hart Reservoir, including the City of Campbell River water intake:

- The silt curtains have performed well with no previous issues of concern for water quality for fish habitat and domestic water supply.
- The North Earthfill Dam silt curtain containment area was installed in fall 2023 and was successfully removed in July 2025.
- The Middle Earthfill Dam silt curtain containment area was installed in summer 2024.

Water turbidity is measured in NTU (Nephelometric Turbidity Unit), and prolonged readings over 1 NTU at the City of Campbell River Drinking Water Plant can trigger a boil water advisory.

- Island Health would make the decision on issuing a boil water advisory.

A turbidity event took place at the silt curtains, beside the City of Campbell River water supply intake, that led to higher-than-normal turbidity readings on July 19 and 20 at a depth of about 15 to 18 metres below the surface. This is a similar depth to the City's water intake that provides domestic water supply to about 45,000 people and numerous businesses.

- The daily average of the City's water withdrawal did not exceed 1 NTU, though there were short-duration spikes that exceeded 1 NTU.

July 21 photo of crews investigating the silt curtains and possible turbidity causes, as well as the placement of geobags to better seal the outside curtain to the bottom.

Environmental point of interest: managing turbidity within the John Hart Reservoir

Production work immediately stopped, and the project team used all available resources, including dive teams, environmental monitors and remotely operated vehicles (ROV) to investigate the potential cause for the turbidity. There was real time water quality monitoring throughout the area, and the placement of sandbags and geobags to improve the seal of the silt curtain at potential turbidity causing locations.

With measures put in place to better seal the curtains and having good water pressure on the different sides of the silt curtain to prevent billowing, the turbid cloud slowly dissipated. The turbid water plume was below the NTU threshold for protection of aquatic life in the reservoir.

There was close communication, often multiple times per day, with the City of Campbell River staff over about a three-week period as we tried to determine the turbidity cause, take action to stop it, and monitor its dissipation. By July 28 the water quality was back to normal readings and the site construction activities within the silt curtain containment area went back to normal.

The City of Campbell River communicated with Island Health on the turbidity issue and provided them with regular updates.

July 22 view of Rhodamine, a pink dye that is safe for the environment, placed between the two silt curtains to help find any potential turbidity leaks within the outside silt curtain. None were found.

Environmental point of interest: reservoir fish habitat restoration work

A July photo of a school of stickleback using the placed tree stumps, likely as a shelter. A nice immediate result from the fish habitat enhancement works involving 480 tree stumps placed within the John Hart Reservoir. Trout were also observed around the stumps. The fish habitat enhancement work was completed by August 15, a Fisheries and Oceans Canada requirement as part of the project's Fisheries Act Authorization approval.