

# Peace River System Dam Safety Projects Update – December 2019



A spill at the Peace Canyon Dam, located next to the Peace Canyon Generating Station.

The W.A.C. Bennett Dam, located west of Hudson's Hope, is our largest dam. The G.M. Shrum powerhouse and nearby Peace Canyon Generating Station (located next to Peace Canyon Dam), supply a large amount of power to all of British Columbia, playing an important role in our hydroelectric system.

To ensure continued reliable, affordable and clean power, a number of projects are underway at the dams, or will start soon. These projects are part of our investment of approximately \$3 billion a year to upgrade our aging assets and build new infrastructure. The electricity we generate and deliver to customers throughout the province powers our economy and quality of life.

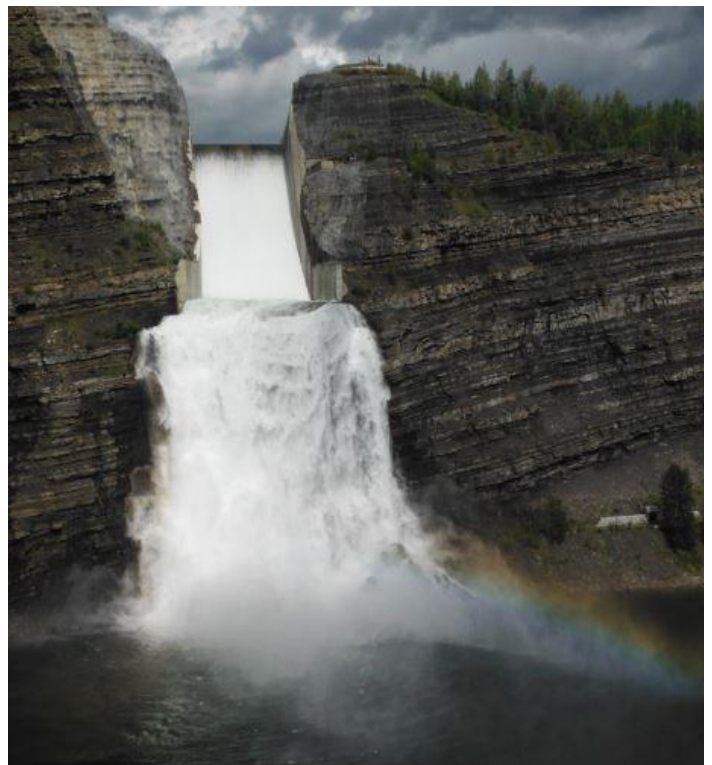
## W.A.C. Bennett Dam Spillway Reliability Upgrade

We're upgrading the electromechanical systems of the spillway gates at the W.A.C. Bennett Dam to increase the overall reliability of the dam safety water discharge system. The three spillway gates at this site are used to release water to lower the Williston Reservoir when required. Construction started in May 2019 and will continue until May 2020.

## W.A.C. Bennett Dam Embankment Instrumentation Upgrade

The project plan is to upgrade the long-term dam performance monitoring network by assessing the performance and adequacy of the existing instruments in monitoring the general performance of the embankment dam. This may include upgrades to existing instruments and/or the installation of additional instruments to improve continuous long-term performance monitoring of the W.A.C Bennett Dam.

The plan is to start construction work in summer 2022 and complete by spring 2024.



Water being released down the spillway during our testing of the spillway reliability upgrade work at W.A.C. Bennett Dam in summer 2019. Photo courtesy of John Verney, BC Hydro.

## W.A.C. Bennett Dam Spillway Concrete Upgrades

Significant deterioration of the spillway's concrete has continued in areas outside of the previous repairs and upgrades. If unattended, these areas will continue to degrade and could affect water discharge capability. The project will address the highest priority areas in the inclined section of the chute by placing new sections of reinforced concrete.

It is estimated that the work will take a full May to October construction season. In the event that a spill were to be required during the 2020 construction period—and that construction were to be interrupted as a consequence—a return to complete the work in 2021 would then likely be required.



Seen from above, three sluiceways at W.A.C. Bennett Dam.

## W.A.C. Bennett Dam Spillway Sluiceways and Slide Gates Decommissioning

There are nine sluiceways and slide gates at the W.A.C. Bennett Dam spillway located below the three spillway operating gates. They are about 50 years old and haven't been used since the late 1980s.

The sluiceways and slide gates are not required for flood discharge or other operations and we've determined that the leading alternative is to decommission all nine sluiceways and slide gates. Decommissioning will involve sealing each sluiceway with reinforced concrete while leaving the slide gates in place to isolate the construction area from the reservoir.

Site investigations were carried out in summer 2019. Further design and planning is underway in preparation for construction, which is tentatively proposed for 2021.

### What is a spillway? a sluiceway? a slide gate?

A spillway is a structure built into a dam to enable the release of water from the reservoir into the water course below the dam.

A spillway gate is a moveable structure that retains water in the reservoir when desired but can be moved to release water from the reservoir when required.

A sluiceway is a water passage, and a slide gate is a barrier which can be opened and closed to control the flow of water.

### Looking for Site C Project Information?

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Please contact BC Hydro Community Relations at 250 561 4858 or [bob.gammer@bchydro.com](mailto:bob.gammer@bchydro.com), or BC Hydro Indigenous Relations at 604 528 3290 or [anne.pigott@bchydro.com](mailto:anne.pigott@bchydro.com) for more information on the above projects.

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