

# Peace River System Dam Safety Projects Update



The intake tower – that passes water through the dam to the generating station - at Gordon M. Shrum (GMS) Generating Station.

The W.A.C. Bennett Dam, located west of Hudson's Hope, is our largest dam, holding back Williston Reservoir, the seventh largest reservoir in the world by volume. 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 over \$2 billion per 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 Visitor Centre Water Supply Project

Water supply for the visitor centre historically comes from a pond retained by the small Durack Brook Dam. The dam is aging and needs to be removed.

Various water supply options were considered and a water well appeared to be the most economical solution. A test water well was drilled near the visitor centre in 2017. Tests in 2018 showed that this well will meet the water needs of the centre and adjacent facilities. Design work for a pump house and distribution piping is in progress and we envision building new infrastructure in the summer of 2020. A separate project will then be initiated to remove the Durack Brook Dam.

## Peace Canyon Dam Instrumentation and Drains Upgrade

The objective of this project is to reduce uplift pressures and improve the uplift monitoring capability, in and under the spillway blocks and the concrete dam at Peace Canyon. The plan is to clean the existing uplift drains and also to install additional drains. As well, additional piezometers and other instrumentation are proposed to be installed. Currently, the plan is to begin construction in late 2020.

### What is a piezometer?

It's an instrument used to measure the magnitude or direction of the water pressure in the dams.

We collect data from approximately 3,000 piezometers to measure water levels in slopes, dams and foundations owned by BC Hydro, as part of our dam safety program.

## 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 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.

Further design and planning is underway in preparation for construction, which is tentatively proposed for 2021.



W.A.C. Bennett Dam spillway chute showing the three spillway gates, and the nine sluiceways containing slide gates, from the downstream side.

### 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.

## VISITOR CENTRE

W.A.C. Bennett Dam – open until  
September 2

The visitor centre offers fun and educational exhibits that showcase dam construction, wildlife in the area, how we turn water into electricity, and a First Nations Gallery.

[bchydro.com/visitorcentres](http://bchydro.com/visitorcentres)

### Looking for Site C Project Information?

Please visit: [sitecproject.com](http://sitecproject.com)

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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