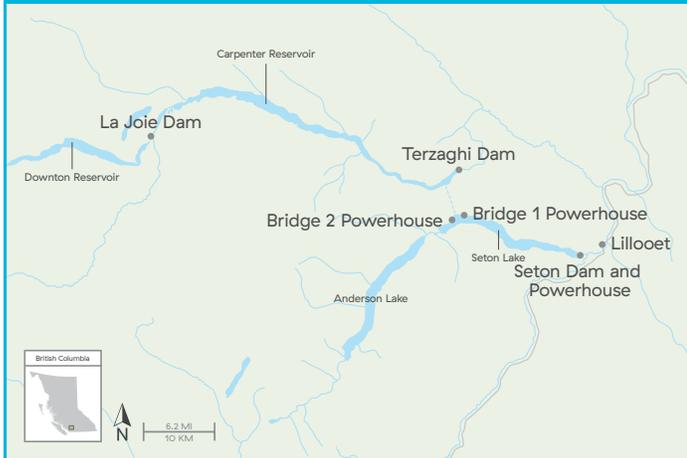


# Bridge River Hydroelectric System Projects Update – Winter 2018/2019

## Bridge River System



We're working to renew the Bridge River electricity system which is about 300 kilometres north of Vancouver and in the Traditional Territory of the St'át'imc Nation. The system consists of the Lajoie Dam and Powerhouse (Downton Reservoir), Bridge 1 and 2 Powerhouses (Terzaghi Dam and Carpenter Reservoir) and Seton Dam and Powerhouse (Seton Lake).



The penstock – an enclosed pipe that delivers water to the generating turbine – at Bridge in 1959.

We're spending almost \$700 million on these 55 to 70 year old facilities, whose proximity to the Lower Mainland helps us operate more efficiently. This includes a number of projects on the region. This update will provide you with highlights of that work.



Inspecting the Bridge penstock in 1959.

## Upgrading Bridge 1 Generating Station – Units 1 to 4

Bridge 1 Powerhouse is a four generating-unit, 200 megawatt, generating station built in 1948 that requires upgrading. The station produces enough electricity to power 92,000 homes. We're in the planning stage to replace the aging equipment.

This will allow us to:

- adjust water flow capability through the powerhouse to reduce the risk of seasonal spills from Terzaghi Dam into the Lower Bridge River, and,
- improve reliability of the generators and restore historical operating capacity.

We'll replace generators, exciters and governors and other related generating equipment and continue to operate within water licence conditions.

### What are exciters?

These control the current through the generator to regulate the output voltage.

### What are governors?

These control the water flow through the turbine to regulate the speed of the generator.



Crews preparing for Unit 5 upper bracket removal on the Bridge 2 Units 5 and 6 upgrade project. Similar work will take place as part of the Bridge 1 upgrade.

## Transportation and Seton Lake Dock Upgrades

Within Seton Portage and Tsal'ah, transportation is needed to move workers from hotels and residences to Bridge River facilities. In the spring, boat transportation and shuttles to and from the docks were put in place to support workers travelling between Lillooet and Bridge River.

We're in the process of refurbishing the Seton Lake dock and have received letters of support from the District of Lillooet and T'it'q'et First Nation for dock use and improvements.

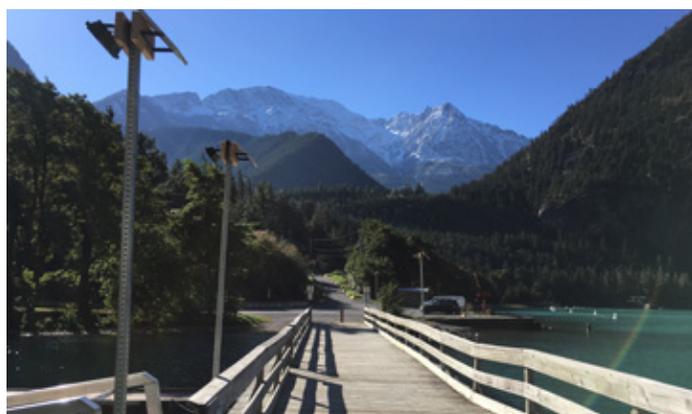
So far, we've:

- moved the underwater navigation hazards (boulders) to deeper water,
- repaired and serviced the float at the end of the dock (Float 1),
- repaired and improved Float 1 anchoring, and,
- added industrial solar lighting to the dock and Float 1.

Top-side repairs and additional improvements to the dock started in November and were completed in December.



Dive crews prepare for underwater repair work on Seton Lake dock in Lillooet. New dock anchors and chains are visible underwater.



New lighting was added to the dock.

## Seton Beach Erosion Protection Project

The Seton Beach erosion protection project was completed in December. We replaced an existing log barrier with new logs that are slightly higher in order to protect the grassy picnic area from winter waves. We also added sandy gravel to the beach to help absorb wave energy and rebuilt rip rap areas to further stabilize the shore. New topsoil has been added and grass seed applied. The grass area will fill in as it grows through the spring and early summer.



Working on erosion protection at Seton Beach.

## Scholarships and Employment

We want to support education and training for local students while creating a better connection with communities in the area. Scholarships will aid in training the future workforce.

### POST-SECONDARY SCHOLARSHIPS

We've established two \$500 scholarships which are offered to students pursuing post-secondary studies in STEM (Science, Technology, Engineering and Math) or trades training. These are open to all students graduating from Lillooet Secondary School. For more information, please contact the school.

### CO-OP AND YOUTH HIRE POSITION(S)

Currently being planned, these positions will offer professional development opportunities to post-secondary students through BC Hydro project work. For more information, please see [bchydro.com/careers](http://bchydro.com/careers).

For more information, visit [bchydro.com/bridgeriver](http://bchydro.com/bridgeriver).

If you have questions, please contact us at [projects@bchydro.com](mailto:projects@bchydro.com) or 604 623 4472

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