

# Bridge River Hydroelectric System Projects update—Fall 2020

We're working to renew the Bridge River electricity system which is about 300 kilometres north of Vancouver in the Traditional Territory of the St'át'imc Nation.

The system consists of the La Joie Dam and Powerhouse (Downton Reservoir), Bridge 1 and 2 Powerhouses (Terzaghi Dam and Carpenter Reservoir) and Seton Dam and Powerhouse (Seton Lake).

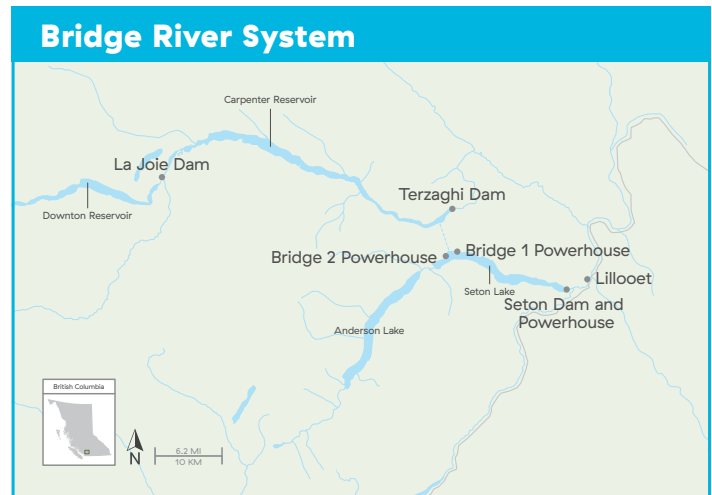
We're making significant investment in these 55 to 70 year-old facilities, whose proximity to the Lower Mainland helps us operate the electrical system more efficiently. This includes a number of projects in the region.

## Update: Bridge River 2 Generating Station Upgrade – Units 7 and 8

We've begun upgrades on units 7 and 8 at the Bridge River 2 (BR2) generating station. Our main contractor, Voith, is on site and focussed on the pre-assembly work for both units, with unit 7 completed in July and unit 8 expected to be completed in September. Most major components have now arrived on site and the project is on track to meet its 2021 targeted completion date.

As we prepare to enter the next phase of the project, we'll ramp up site activity, which will result in an increased number of workers from major contractors and BC Hydro Construction Services. Employees and contractors will continue to follow all Provincial and Federal requirements around social distancing and self-isolation.

BR2 is a four-unit, 278-megawatt powerhouse built in the late 1950s. The station produces enough electricity to power 126,500 homes.



A crew member touches up paint on a rotor at BR2.



Crews have been busy with the pre-assembly work for units 7 and 8 at BR2.



## COVID-19 response

Site-specific measures have been put in place to reduce the risk of exposure to our workers and the public in the Bridge River area:

- Establishing “pods” – personnel are now working exclusively with the same colleagues in small groups
- More frequent cleaning
- Ongoing monitoring of symptoms
- Enforcing social distancing
- Scaling back Station Operation crews, as well as Transmission and Distribution line-related work
- Only proceeding with essential work (capital projects, maintenance) at La Joie Dam and Bridge River Generating Station that’s important to the safety and reliability of our system

## La Joie Dam Improvement Project

In 2018, we began early planning for the La Joie Dam improvement project. Built in 1951, parts of the dam are now considered to be at or near the end of their useful life, including the concrete face installed in the 1970s. Taking advantage of the low annual water at the Downton Reservoir, our team undertook some early studies on site in May and June. These included:

- A light detection and ranging (LiDAR) survey of the Bridge River Valley
  - LiDAR measures distances using laser light from an aircraft and measuring the reflection with a sensor. The results provide us with updated mapping and 3D renderings of the area.
- A bathymetric survey in the Downton Reservoir to map the underwater features upstream of the La Joie Dam
  - Bathymetry uses an echo sounder attached to a boat, which sends out a wide array of beams across an area of the reservoir floor.
- A preliminary visual investigation of the rock at the dam to identify its composition
  - This information will be used to support the seismic load design, and determine possible locations for seismic recording equipment.
- Over the summer, we’ll process the data from these activities and will use it to inform our design process.



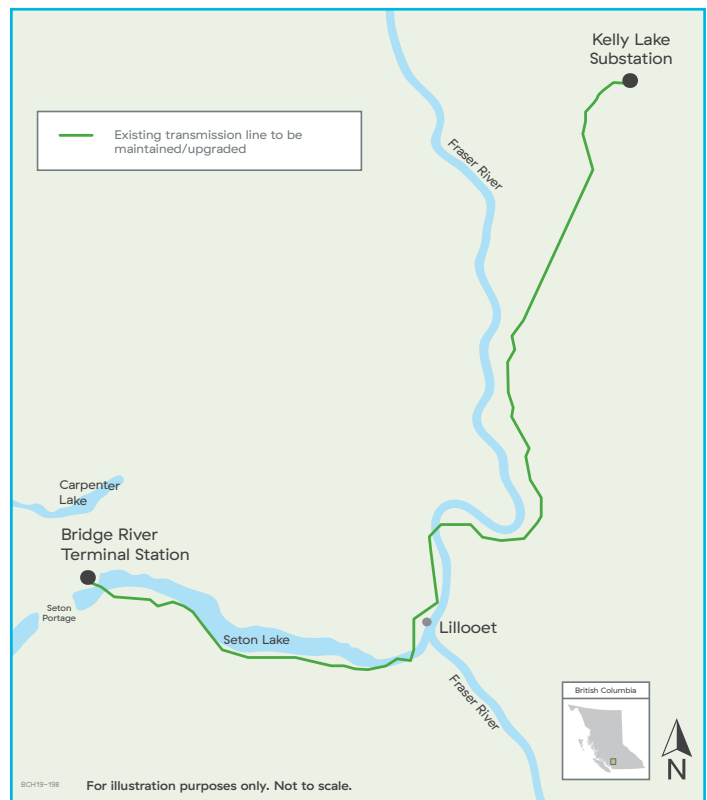
A boat (far left) was used to conduct a bathymetric survey in the Downton Reservoir in the spring.

## Update: Bridge River Transmission Project

The Bridge River Transmission Project will ensure that the regional transmission system continues to reliably move electricity to our customers during peak periods. We've completed our evaluation process of the three project alternatives and have identified a leading alternative for further study:

- Alternative 1 – Upgrading an Existing Power Line in the Lillooet Area
  - We would upgrade approximately 135 structures and raise the height of an existing line in several sections between Kelly Lake Substation and Bridge River Terminal Station. Work would include upgrades to existing access roads and the creation of some new roads to access the structures. Most of the work would be within existing BC Hydro right-of-way.

Over the next few months, we'll complete detailed studies to confirm the preferred alternative. We're still in the early planning stages of this project, with construction expected to take place between 2023 and 2025. A more detailed schedule will be developed as the project progresses. For more information, visit: [bchydro.com/brt](https://bchydro.com/brt)



## Update: Helping fish on the Bridge River

BC Hydro and the St'át'imc Nation are continuing to work together on developing two priority environmental mitigation projects for fish in the Lower Bridge River.

This summer, the Salmon Stock Enhancement project aimed to enhance chinook salmon stocks on the Lower Bridge River by working with a St'át'imc hatchery – N'Quatqua Fish Hatchery – and the Department of Fisheries and Oceans. Last year, the project was heavily impacted by the number of Fraser River Chinook salmon that strayed into the Bridge River following the Big Bar slide. We anticipate there will be continued impacts from the slide this year. In response, we'll work with the DFO on conservation efforts for Upper Fraser Chinook salmon stocks.

We've also made progress on the planned design for Horseshoe Bend Project, with Xwísten having hosted two open houses in Lillooet last spring. We're collaborating with restoration experts at the DFO, biologists and engineers to design the habitat for the site. It features channels and pools that will benefit multiple salmon species, as well as maintain or enhance riparian, other vegetation and habitats for the benefit of other wildlife.

### Bridge River Recreation Areas

After closing our recreation areas in March due to COVID-19 restrictions, we're now taking a staged approach to safely reopen them. Seton Beach has reopened with reduced hours of operation and Gun Creek campground is also open until October 31st. For the latest information on our recreation areas, visit [bchydro.com/recreation](https://bchydro.com/recreation).

For more information on Bridge River projects, visit [bchydro.com/bridgeriver](https://bchydro.com/bridgeriver).

If you have questions, please contact us at [projects@bchydro.com](mailto:projects@bchydro.com) or 604 623 4472 or toll free at 1 866 647 3334.