

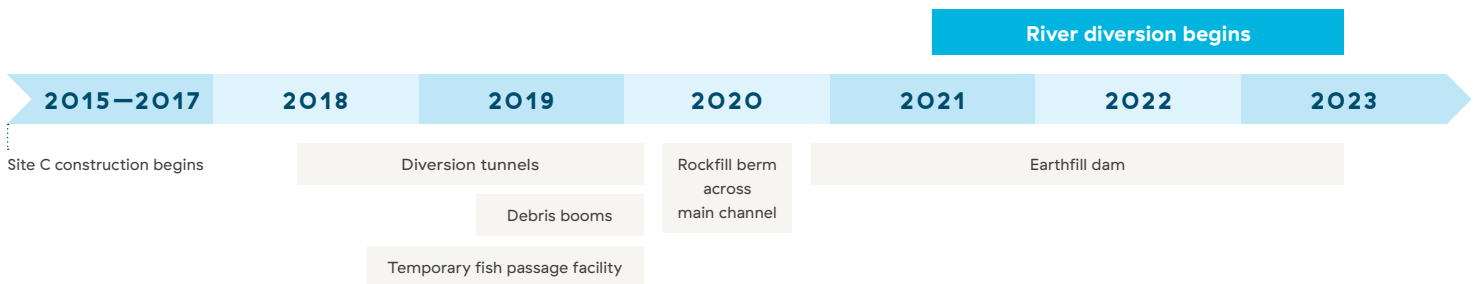
# Site C Project River diversion

November 2019

One of the most important steps in building Site C is to reroute a short section of the Peace River during construction. Diverting the river allows us to build the earthfill dam on dry land across the main river channel, while keeping the river flowing.

## Construction timeline

Due to fluctuating river flows and the changing needs of our upstream generating facilities throughout the year, diverting the Peace River must occur in late summer or early fall. Diversion is scheduled to take place in September 2020 over a period of several weeks.



### Building the diversion tunnels

Preparations began in 2018 when we started excavating two diversion tunnels on the north bank of the Peace River. Measuring approximately 750 m long and 11 m wide, the tunnels will eventually be able to pass 3,000 m<sup>3</sup> of water a second. We expect to complete the diversion tunnels in early 2020.



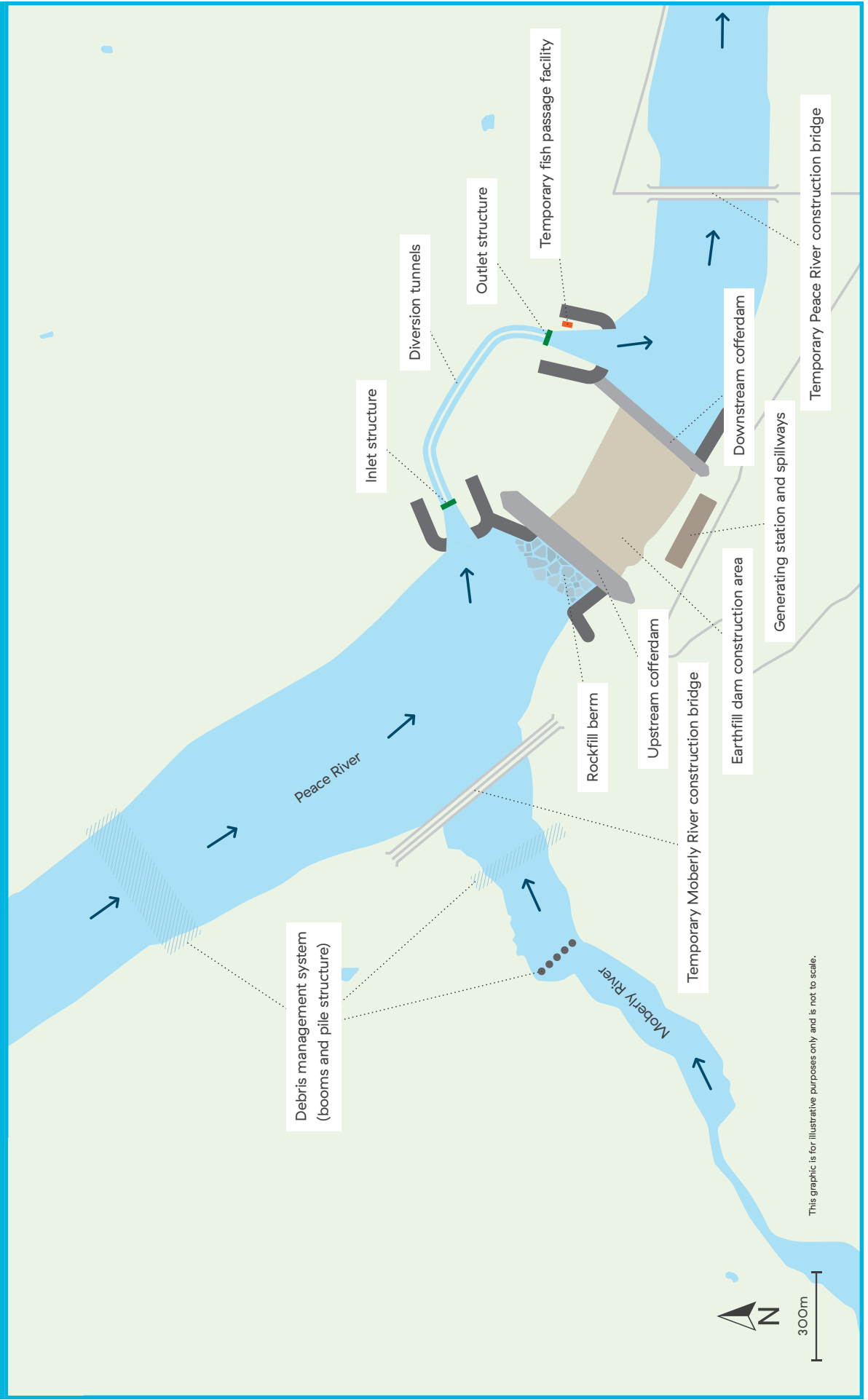
### Managing debris

To protect the safety of boaters and dam operations, we're clearing about three-quarters of the reservoir area before it's inundated. However, we'll leave behind some trees in the lower areas and any trees that are unsafe to remove.

Merchantable trees will be hauled to local mills when practical. The remaining trees will be cut and burned, bucked into short logs, chipped or mulched. This will reduce the potential for large floating debris to end up in the water.

In addition, we're building debris management systems upstream of the diversion tunnels to collect and remove any large debris remaining in the water, such as logs, vegetation or ice. We will monitor and clear the systems regularly.

# Site C river diversion—Upstream and downstream cofferdam construction



## Protecting fish and wildlife during river diversion

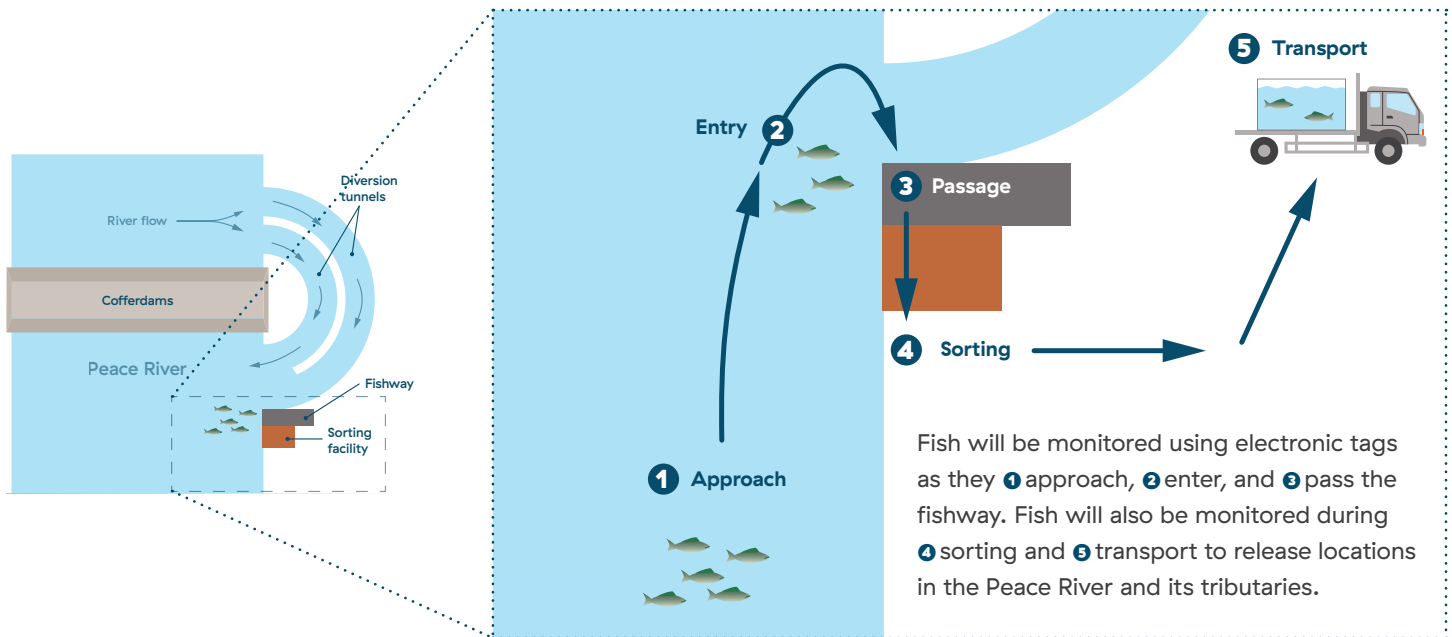
Protecting the environment and mitigating the potential impacts of Site C is a key priority for BC Hydro. That's why we've developed a number of programs to help fish and wildlife throughout river diversion.

**Temporary upstream fish passage facility:** We're building a temporary upstream fish passage facility that will operate throughout river diversion. This is being put in place so that fish can continue to migrate upstream and fulfill portions of their lifecycles in the Peace River and its tributaries. A permanent facility will then be built once the dam is completed.

Migratory fish are naturally attracted to fast-flowing water. With this in mind, the facility is being constructed at the outlet of the diversion tunnels, where fish will be attracted to the high flows exiting the tunnels.



Bull trout



Fish will be monitored using electronic tags as they ① approach, ② enter, and ③ pass the fishway. Fish will also be monitored during ④ sorting and ⑤ transport to release locations in the Peace River and its tributaries.

**Fish and fish habitat:** Downstream of the dam, we are enhancing fish habitat in the side channels of the Peace River. These habitat enhancements will offer protected areas that support many fish species, such as mountain whitefish, bull trout, Arctic grayling and rainbow trout.

We are evaluating the risk of fish being stranded as water levels decline, and will relocate fish as necessary.



Rainbow trout



Newly-built channels provide fish habitat enhancements



**Wildlife:** Because river diversion will occur in the fall when water levels are low, the resulting rise in water levels will be similar to those that naturally take place—such as during snow melt, freshet, and storms. This, combined with our mitigation programs, will result in minimal impacts to wildlife, as they will be able to gradually move to higher ground.

We are mitigating the impacts of river diversion on wildlife by:

- Building new wildlife habitat above the water levels, such as eagle platforms, snake and fisher dens, bat boxes and wetland enhancements
- Clearing trees to reduce the potential for nesting and denning
- Conducting wildlife sweeps and monitoring for wildlife before and during river diversion
- Removing uninhabited dens and nests from future reservoir areas
- Using wildlife deterrents, such as bird bangers
- Working with provincial and federal agencies to provide information on known wildlife impacts

We'll evaluate our mitigations throughout diversion and may adjust the program over time.



Newly-installed bat habitat



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## Keeping boaters safe: River closures

For safety reasons, the area around Site C on the Peace River will be closed to boaters as early as spring 2020, when we start to install the debris booms across the main river channel.

We will be notifying neighbouring communities and users of the Peace River of safety hazards, including navigational restrictions and changes in boat access in advance of construction activities. Restricted areas will be marked with signage, beacons, and buoys.

Once navigation through the dam site is no longer possible, we will set up a portage system to transport non-motorized vessels by road past the dam, between the Halfway River boat launch and the Peace Island Park boat launch. The portage will operate during boating season, from May to September.

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