

SITE C CLEAN ENERGY PROJECT

INFORMATION SHEET: DAM SAFETY

Safety is a key consideration in the Site C project design.

Site C is built and maintained in accordance with the highest international and Canadian safety practices. Site C meets the Canadian Dam Association's most stringent design guidelines and is designed to withstand very rare, extreme floods and earthquakes. It's being built to withstand a one in 10,000 year seismic event.

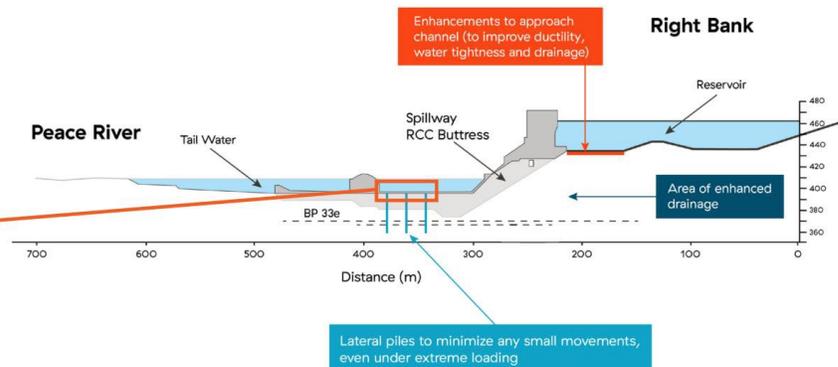
When Site C comes into service there will be a dam safety engineer and two dam safety technologists based locally in Fort St. John, monitoring instrumentation, and surveillance conducted in alignment with international best practice.



Site C's design has important safety features

The engineering process followed throughout the entire project is consistent with international best practices and the highest safety standards. Important safety features in the dam include:

- A long concrete buttress under the spillway and generating station to improve stability and meet current seismic and safety standards.
- A large-capacity gated spillway and overflow auxiliary spillway to ensure upstream flows can safely pass, even if the plant were to lose power.
- Enhancements to the right bank foundation, including the installation of 96 piles (large pipes filled with concrete), which extend the foundation of the spillway and powerhouse further into the underlying bedrock. We're also enhancing the approach liner and improving drainage.



BC Hydro's dam safety program is globally recognized

BC Hydro is recognized worldwide as a leader in the safe operation and management of dams. Since we were founded in 1962, we've been safely operating and maintaining dams across B.C. We currently manage 85 dams at 42 locations throughout the province.

Our rigorous dam safety program meets or exceeds the requirements of the B.C. Dam Safety Regulation. A 2018 audit concluded that our dam safety program is well-established and in line with international practices.

We manage the safety of our facilities through a comprehensive program that includes a 24/7 automated monitoring system. Thousands of instruments collect and report dam performance data.

The dams are visually checked weekly and are more extensively inspected by qualified dam safety engineers twice a year.

BC Hydro submits annual reports to the Province of B.C. and commissions independent reviews of each dam every five to 10 years.

BC Hydro's dam safety program is based on provincial regulations, guidelines published by the Canadian Dam Association, and international best practices. Our program goes through extensive external and internal reviews every five years, and we receive requests for advice and benchmarking from dam owners from across North America and around the world.



BC Hydro is well-prepared for a large earthquake

Our comprehensive emergency management program ensures we can respond to major events such as earthquakes, including the response coordination with all levels of government.

We use the B.C. Emergency Management System to manage our response to emergencies. We conduct drills to validate and reinforce procedures internally, as well as conduct table-top and role-play sessions with emergency management agencies.

BC Hydro's dams are built to withstand high-magnitude earthquakes. In addition, we work closely with the BC Energy Regulator to monitor fracking and any associated seismic activity.

BC Hydro's seismic experts closely follow national and international developments in fracking research to ensure we protect our infrastructure and manage any potential risk from fracking.