



## Revelstoke Dam Safety Review

### FEATURES OF THE REVELSTOKE HYDROPOWER PROJECT

Revelstoke dam is a 1,980MW power station, owned by BC Hydro, on the Columbia River in Canada, with internationally recognized reservoir landslide hazards. It is the second in a cascade of dams on the Columbia River and is located below the 240m high Mica Dam. The Revelstoke power station consists of a 175m high Concrete Dam incorporating the outlet facilities and the power station, and an adjoining 125m high Earth Dam.

There are a number of large landslide areas along the reservoir and one of these, the Downie Slide was stabilized as part of the dam project. The Checkerboard Creek Rock Slope is another active feature, which has been extensively investigated and is subject to ongoing monitoring.

The concrete dam is founded in the original river gorge and has a crest length of 472m. It consists of 23 gravity blocks founded on a complex schist rock foundation with extensive treatment of foundation shears. The earth dam extends 1158m across the right bank alluvial river terrace. The earth dam axis extends upstream of the concrete dam following high terrace levels to terminate against a rock outcrop.



### DAMWATCH SERVICES

This Dam Safety Review was carried out to meet British Columbia's dam safety regulations. This DSR included review of the dam and reservoir's physical condition, operation, maintenance, surveillance, performance and dam safety management processes as these relate to the safety of the dam and the reservoir landslides. The Dam Safety Review was based on a review of available documentation, discussions with BC Hydro dam safety staff and a site visit to Revelstoke Dam.

Damwatch was able to bring its expert knowledge of concrete and earth dams, and reservoir landslide and dam foundations in schist rock terrain.

