

Appendix C – Application of the Dam Safety Regulation



Ministry of
Forests, Lands and
Natural Resource Operations

INFORMATION SHEET

APPLICATION OF THE DAM SAFETY REGULATION

The **British Columbia Dam Safety Regulation (B.C. Reg. 44/2000)** was repealed and replaced with the **Dam Safety Regulation (B.C. Reg. 40/2016)** on February 29, 2016. This Information Sheet provides general information about the new regulation however dam owners are responsible for familiarizing themselves and complying with the regulation in its entirety. The new regulation is available at the link provided at the end of this document. In case of discrepancy between information contained herein and the regulation, the regulation takes precedence.

INTRODUCTION

The BC Dam Safety Regulation was first passed into law under the *Water Act* as Regulation 44/2000, effective February 11, 2000. This regulation was repealed and replaced with the Dam Safety Regulation (O.I.C. 114, B.C. Reg. 40/2016) under the *Water Sustainability Act*, effective February 29, 2016.

The objective of the regulation is to mitigate loss of life and damage to property and the environment from a dam breach by requiring dam owners to inspect their own dams, undertake proper maintenance on them, and ensure that these dams meet ongoing engineering standards.

WATER SUSTAINABILITY ACT

The *Water Act* was replaced with the *Water Sustainability Act* (Act) on February 29, 2016. The new Act has authority over dams (considered works) and holds owners of dams liable for any damage caused by the construction, operation or failure of their dam. Under the Act, owners of dams are responsible for obtaining a water licence and complying with its terms and conditions.

TO WHOM THE REGULATION APPLIES

The regulation applies to owners of dams that store or divert water from a stream or aquifer or both (see Part 1, Section 1 of the regulation for a full definition of “owner” and “dam”). The height, storage capacity and dam failure consequence classification of the dam determines which parts of the regulation, if any, apply (Figure A):

1. Owners of **Minor Dams**, that meet the following criteria are **exempt** from the entire regulation unless the Comptroller of Water Rights (comptroller) or water manager determines otherwise:
 - less than 7.5 metres in height, and
 - able to impound no more than 10,000 m³ of water.

2. With the exception of the exempt minor dams above and regardless of consequence classification, dam height, or storage volume **all** dam owners must comply with all parts of the regulation except Part 3.
3. The entire regulation applies to owners of dams that meet the criteria specified in Part 3, Section 7:
 - 1 metre or more in height and capable of impounding a volume of water greater than 1,000,000 m³,
 - 2.5 metres or more in height and capable of impounding a volume of water greater than 30,000 m³,
 - 7.5 metres or more in height, or
 - Classified as significant, high, very high or extreme failure consequence.

CLASSIFICATION SYSTEM

All dams are classified according to their potential consequence of failure. Owners of dams have varying levels of obligations under the regulation which are directly related to the dam’s failure consequence classification (see Schedule 1 of the regulation).

REGULATION REQUIREMENTS

All owners of dams, other than owners of *minor dams*, must satisfy the requirements specified in Part 2, and may also need to meet requirements in Part 4 and Part 5.

1. The ongoing regulatory requirements for all dams, except the exempt *minor dams* include:
 - determine the dam failure consequence classification, and annually review and if necessary revise and submit to the Dam Safety Officer for acceptance,
 - comply with the provisions of the regulation that apply to a dam having that consequence classification,
 - properly inspect, maintain and repair their dam in a manner that keeps the dam in good operating condition, and

- prevent unauthorized operation of their dam.
2. Owners of dams meeting the criteria set out in Part 3, Section 7 of the regulation must undertake the following:
- prepare, review and update the operation, maintenance and surveillance plan and dam emergency plan (except for low consequence dams) and submit to the Dam Safety Officer for acceptance,
 - as part of the Dam Emergency Plan, prepare a record containing information to be submitted to the local emergency authorities for the purpose of their preparing local emergency plans,
 - prepare and erect signage at all dams located on Crown Land (except for low consequence dams) notifying passersby to report any problems to the owner of the dam and/or the emergency response authorities,
 - obtain authorization under the Act when alternations or improvements to, or replacement of their dam is considered,
 - operate their dam in a manner, and initiate remedial actions, that will safeguard the public and dam in response to hazardous conditions at their dam,
 - prepare a plan in response to any potential safety hazard,
 - notify and get authorization from the Dam Safety Officer prior to removing, decommissioning, deactivating or stopping normal operation of their dam,
 - report all significant findings resulting from inspections and/or dam safety reviews to the Dam Safety Officer,
 - install any instrumentation necessary to adequately monitor the performance of a dam,
 - carry out dam safety reviews (except for low and significant consequence dams), and
 - submit to the Dam Safety Officer, upon request, records relating to the inspection, test or review carried out in relation to their dam including recorded data on the dam, reservoir, downstream area, or watershed upstream of the dam.
3. Additional requirements for all dam owners may include:
- where there are two or more owners of a dam, these owners must designate one of the owners for the purpose of receiving, providing and retaining information and records in relation to the dam,
 - where there are two or more owners of a dam, an owner may be exempt from the requirements of

this regulation if the comptroller is satisfied that proper arrangements have been made for one or more of the other owners to take on responsibility for their dam and the owner holds no more than 5% of the total storage rights in respect of the dam, and

- an owner of a dam may be required to obtain independent expert advice in relation to an issue respecting their dam, with qualifications and experience in dam design, construction and analysis or in dam operation and maintenance or in hydraulic, hydrological, geological, geotechnical, mechanical or structural analysis.

TRANSITION

To allow owners sufficient time to meet new requirements in the regulation, transitional provisions are included. These are found in Part 5 of the regulation.

ROLE OF THE RESPONSIBLE MINISTRY

The comptroller instituted the Provincial Dam Safety Program in 1967. The program's goal is to set design, construction, maintenance, and surveillance standards, and assist dam owners in meeting these standards.

Dam Safety Officers, located in each region and in Victoria, protect public safety by monitoring and auditing the activities of dam owners, providing education and awareness training and taking compliance and enforcement action when necessary.

The Dam Safety Regulation is an important component of the Provincial Dam Safety Program's objective to minimize the impact of dam failures.

MORE INFORMATION

The regulation and more information on dam safety can be obtained from the Dam Safety Program website: <http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/drought-flooding-dikes-dams/dam-safety>

Or by contacting:
 Dam Safety Section
 Water Management Branch
 PO Box 9340 Stn Prov Govt
 Victoria BC V8W 9M1

Email: dam.safety@gov.bc.ca

Visit the Canadian Dam Associations' Dam Safety Guidelines and website at <http://www.cda.ca/>

Figure A. Graph of dam height vs. dam storage capacity which, along with dam failure consequence classification, determines what parts of the Dam Safety Regulation applies.

