

# INFORMATION SHEET

## *LOW & SIGNIFICANT CONSEQUENCE DAMS RESPONSIBILITIES UNDER THE DAM SAFETY REGULATION*

The **Dam Safety Regulation (B.C. Reg. 40/2016)** came into effect on February 29, 2016. This Information Sheet provides general information however dam owners are responsible for familiarizing themselves and complying with the regulation in its entirety. The regulation is available at [www.gov.bc.ca/damsafety](http://www.gov.bc.ca/damsafety). In case of discrepancy between information contained herein and the regulation, the regulation takes precedence.

### INTRODUCTION

The objective of the Dam Safety Regulation (O.I.C. 114, B.C. Reg. 40/2016) under the *Water Sustainability Act*, 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 their dams meet ongoing engineering standards.

### WATER SUSTAINABILITY ACT

The *Water Sustainability Act* (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.

### 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).

### TO WHOM THE REGULATION APPLIES

The Dam Safety Regulation (regulation) applies to owners of dams that store or divert water from a stream or aquifer or both (see Section 1 - of the regulation for definition of "owner", in relation to a dam).

### RESPONSIBILITIES UNDER THE REGULATION

#### All Owners of Dams

The regulation requires all owners of dams do the following:

- annually review the dam's failure consequence classification (please see the attached information sheet **How to Re-determine Dam Classification in British Columbia** for assistance) and if the dam's failure consequence classification has changed must:
  - inform the Dam Safety Officer (DSO) for acceptance, and
  - comply with the provisions of the regulation that apply to a dam having that classification or changed classification.
- properly inspect, maintain and repair the dam in a manner that keeps the dam in good operating condition, and
- prevent unauthorized operation of the dam.

#### CERTAIN DAMS

Owners of **certain** dams have additional responsibilities under Part 3 of the regulation. **Certain** dams are dams that meet one of the following criteria (see Section 7, Part 3 of the regulation):

- 1 metre or more in height and capable of impounding a volume of water greater than 1,000,000 m<sup>3</sup> live storage
- 2.5 metres or more in height and capable of impounding a volume of water greater than 30,000 m<sup>3</sup> live storage,
- 7.5 metres or more in height, or
- Classified as significant, high, very high or extreme failure consequence.

See [Figure A – Application of the Regulation to Dams in B.C.](#) on page 3.

### Owners of Certain *Low* Consequence Dams

Owners of certain *low* consequence dams must:

- identifying and submit their emergency contact to a Dam Safety Officer (DSO), and deliver copy to the Local Emergency Authority

### Owners of Certain *Significant* Consequence Dams

Owners of certain *significant* consequence dams must:

- prepare, review and update the operation, maintenance and surveillance (OMS) plan and dam emergency plan (DEP) and submit to the Dam Safety Officer for acceptance,
- as part of the DEP, prepare a record containing information to be submitted to the local emergency authorities.
- prepare and erect signage at all dams located on Crown Land notifying passersby to report any problems to authorities,
- obtain authorization under the Water Sustainability 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 the dam.
- prepare a plan in response to any potential safety hazard,
- notify and obtain 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 to the Dam Safety Officer,
- install any instrumentation necessary to adequately monitor the performance of a dam,

### Additional Requirements for All Owners of Dams

Additional requirements for all owners of dams 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 safety analysis.

### MINIMUM FREQUENCY OF SAFETY ACTIVITIES

All owners of dams must carry out safety activities corresponding with the dam's failure consequence classification at a minimum frequency (see Schedule 2 of the regulation). An excerpt of Schedule 2 – Frequency of Activities for Owners of *Low* & *Significant* Consequence Dams, is on page 4.

### ROLE OF THE RESPONSIBLE MINISTRY

The Comptroller of Water Rights 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: [www.gov.bc.ca/damsafety](http://www.gov.bc.ca/damsafety)

Or by contacting:

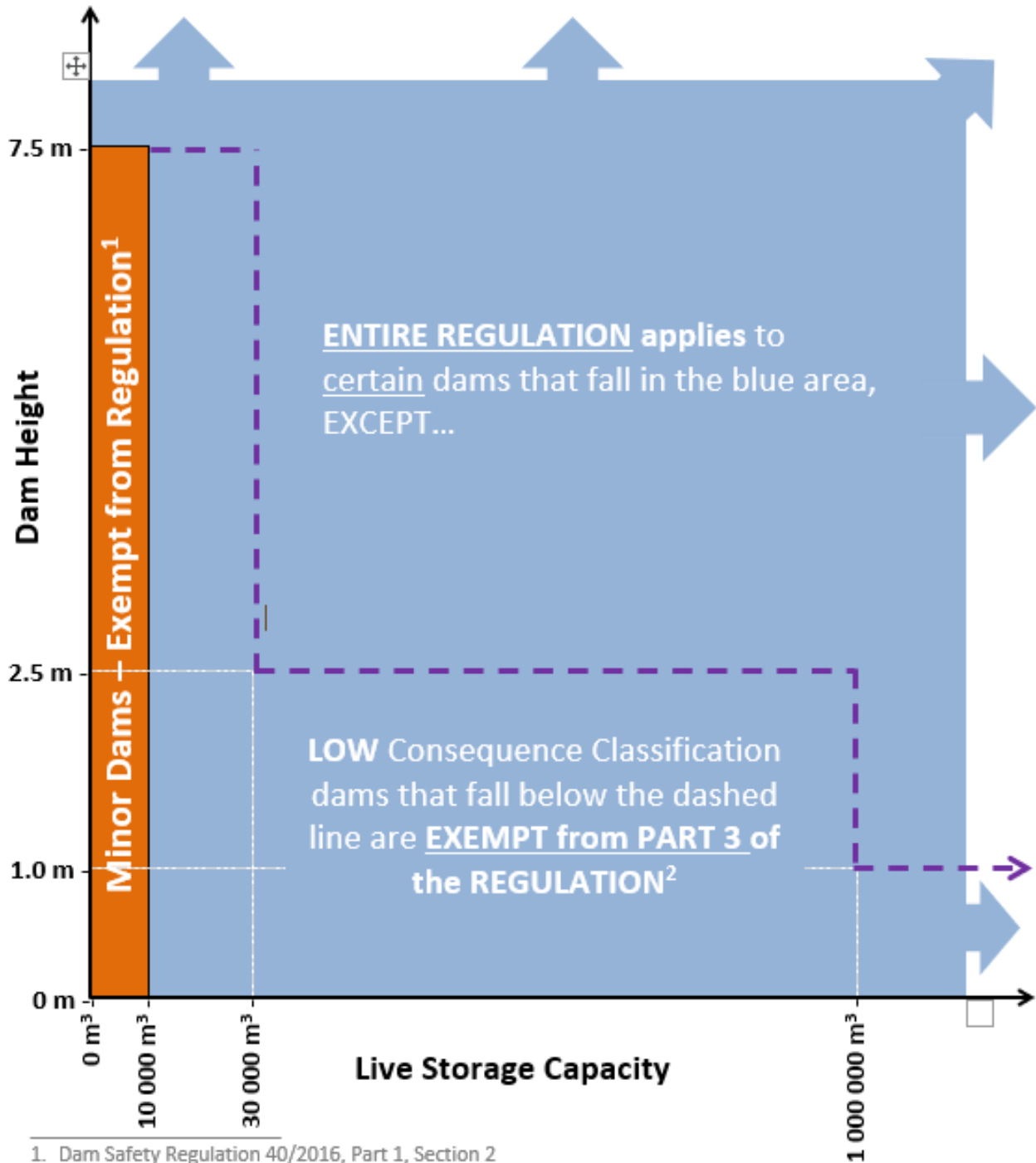
Dam Safety Section  
Water Management Branch  
PO Box 9340 Stn Prov Govt  
Victoria B.C. V8W 9M1

Email: [dam.safety@gov.bc.ca](mailto:dam.safety@gov.bc.ca)

Visit the Canadian Dam Associations' Dam Safety Guidelines and website at [www.cda.ca](http://www.cda.ca)

## Figure A - Application of the Regulation to Dams in British Columbia

Graph of dam height vs. dam live storage capacity which, along with dam failure consequence classification, determines what parts of the regulation applies. Height of dam is defined in S.1(4) of the regulation. Storage volume in the regulation refers to live storage capacity where “live” for the purpose of the regulation refers to the volume of water that would be released if the dam were removed and the ground returned to the natural grade. The storage volume upper elevation is at full supply level which is the spillway crest elevation. Note that for water licencing purposes the definition of live storage is different and specific to the licence.



1. Dam Safety Regulation 40/2016, Part 1, Section 2

2. Dam Safety Regulation 40/2016, Part 3, Section 7

## Schedule 2 – Frequency of Activities for Owners of *Low & Significant* Consequence Dams

ACTIVITY	FREQUENCY OF ACTIVITY	
	<i>Significant</i> Consequence Dams	<i>Low</i> Consequence Dams
redetermine classification of dam and, if necessary, submit to DSO written notice of proposed new classification	annually	annually
conduct site surveillance	monthly unless otherwise specified in the OMS manual	quarterly
conduct formal inspection	annually	annually
test operation of (a) mechanical components of dam, and (b) electrical and communication equipment	annually unless otherwise specified in the OMS manual	annually
collect readings from instrumentation and analyze and interpret the readings	annually unless otherwise specified in the OMS manual	if and when required by a dam safety officer
review contact information in DEP, revise if necessary and report to DSO	annually	not applicable
review emergency contact information and, if necessary, revise and submit revision to DSO	not applicable	annually
review OMS manual and DEP, revise if necessary and report to DSO	every 10 years	not applicable