

How to Re-determine Dam Classification in British Columbia

For Low, Significant, and High consequence dams <7.5 m

Disclaimer: This document is a revised version of an existing brochure. To receive the brochure version, please contact the Dam Safety Section of British Columbia.



Purpose

This brochure provides a simple guide to redetermine your dam classification per the Dam Safety Regulation (the regulation).

Background

A dam is regulated by its size (height and live storage) and consequences of the dam failing.

Regardless of the consequences of a dam failing, all dams that impound 10,000 m³ or have a height of greater than 7.5m are subject to the entire regulation and are automatically categorized as Low or higher (refer to Figure 1).

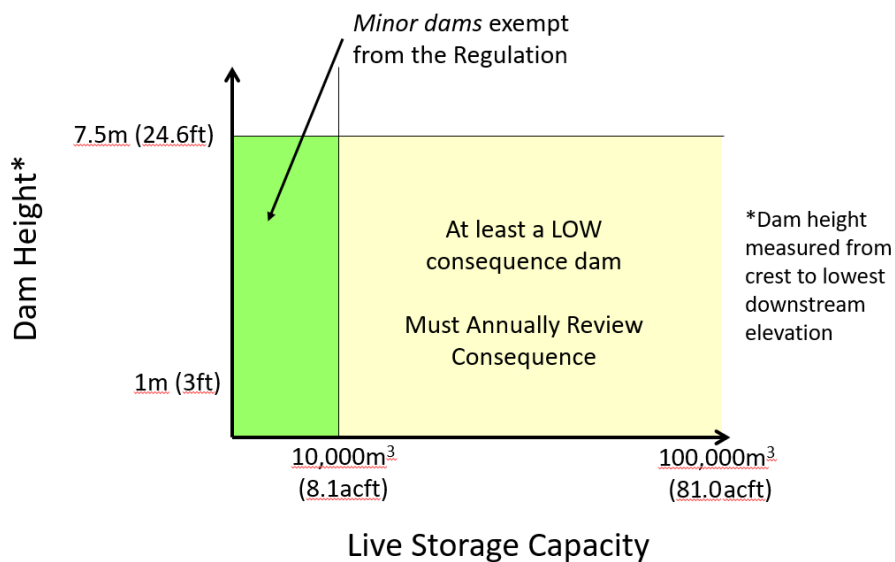
All dams, except *minor dams*, must annually review the consequence classification.

Consequence classification (refer to Table 1) is based on the consequences of failure in the categories of:

- Loss of Life
- Environmental and Cultural Losses
- Economic Losses

Consequences for each category are determined by the estimated potential loss that might occur in the event of a dam failure.

Figure 1 – Illustration of regulated dams and minimum consequence by height and impounded live volume



Procedure to Redetermine Classification

The steps to complete a redetermination of your dam consequence classification are as follows:

1. Review the previous determination of classification and understand the flooded area.
2. Understand if there are any downstream changes, i.e., new infrastructure, residential development, discovered cultural site, etc.
3. If significant changes have occurred, determine “the most severe potential consequence” for each category.
4. Using Table 1, determine the classification of each category. The highest consequence of all categories in the dam classification. For additional guidance or description of the consequences of failure for each category, refer to the Downstream Consequence of Failure Classification Interpretation Guideline posted on the DSS website.
5. If a classification change is warranted, notify your DSO.
6. Make a record of your determination.

Table 1 — BC Dam Safety Regulation Consequence Classification Table (2016)

Classification	Population at risk	Consequences of failure		
		Loss of life	Environmental and cultural values	Infrastructure and economics
low	none	no possibility of loss of life other than through unforeseeable misadventure	minimal short-term loss or deterioration and no long-term loss or deterioration of (a) fisheries habitat or wildlife habitat, (b) rare or endangered species, (c) unique landscapes, or (d) sites having significant cultural value	minimal economic losses mostly limited to the dam owner's property, with virtually no pre-existing potential for development within the dam inundation zone
significant	temporary only	low potential for multiple loss of life	no significant loss or deterioration of (a) important fisheries habitat or important wildlife habitat, (b) rare or endangered species, (c) unique landscapes, or (d) sites having significant cultural value, and restoration or compensation in kind is highly possible	low economic losses affecting limited infrastructure and residential buildings, public transportation or services or commercial facilities, or some destruction of or damage to locations used occasionally and irregularly for temporary purposes
high	permanent	10 or fewer	significant loss or deterioration of (a) important fisheries habitat or important wildlife habitat, (b) rare or endangered species, (c) unique landscapes, or (d) sites having significant cultural value, and restoration or compensation in kind is highly possible	high economic losses affecting infrastructure, public transportation or services or commercial facilities, or some destruction of or some severe damage to scattered residential buildings

Frequently Asked Questions

Is my dam regulated?

All dams that impound 10,000 m³ or have a height of greater than 7.5 m are subject to the entire regulation and are automatically categorized as having at least a LOW consequence classification.

What is a consequence classification?

All regulated dams are classified based on their potential consequences of failure. Proportional to these consequences, the dams are classified as LOW, SIGNIFICANT, HIGH, VERY HIGH, and EXTREME. Minimum dam safety management activities are defined for each classification under the regulation.

Why does the classification need to be redetermined?

The consequence classification system of the dam safety regulation is intended to categorize all dams proportional to their potential impact of failure. As the potential impact of failure of a dam increases, the minimum requirements to keep that dam safe also increases. For this reason, it is important that the dam classification be regularly updated to ensure that appropriate safety measures are in place

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