

INFORMATION SHEET

ENGINEERS AND GEOSCIENTISTS BC (EGBC) PROFESSIONAL PRACTICE GUIDELINES - LEGISLATED DAM SAFETY REVIEWS

INTRODUCTION

As per the Dam Safety Regulation 40/2016 (the *Regulation*), owners of high, very high or extreme failure consequence classification dams are required to complete a Dam Safety Review (DSR) every 7 or 10 years. The DSR, forwarded by the Dam Owner to the Regulatory Authority*, is initially assessed to determine if the document meets the intentions of the most recent Engineers & Geoscientists BC (formerly APEGBC) [Professional Practice Guidelines – Legislated Dam Safety Reviews in BC \(Version 3 – October 2016\)](#) (the EGBC Guideline). The Regulatory Authority* also uses the Canadian Dam Association (CDA) Guidelines and Technical Bulletin (*Dam Safety Reviews*), as guidance when assessing the suitability of a DSR.

The objective of the DSR, prepared by a Qualified Professional Engineer with qualifications and experience in dam safety analysis as described in the EGBC Guideline, is to determine if the dam under review is *safe* as per Section 20 of the *Regulation* and to identify any deficiencies or non-conformances.

Dam safety reviews require a systematic review and evaluation of all aspects of the design, construction, maintenance, operation, processes and systems affecting a dam’s safety, including the dam safety management system.

The EGBC Guidelines assist in project organization and determination of responsibilities, and provide general principles governing dam safety analysis, quality assurance/quality control, and report presentation.

WHY IT WAS DEVELOPED

The EGBC Guidelines are meant to ensure that dam owners receive a valuable product; assist practitioners in self assessing whether they are qualified by training or experience to undertake and accept responsibility for legislated DSRs, and ultimately provide greater protection to the public by raising the overall quality and consistency in the reporting of dam safety reviews.

HIGHLIGHTS

The EGBC Guidelines aim to clearly identify the roles and responsibilities of the dam owner, the Qualified Professional Engineer and the Regulatory Authority. They introduce the *Dam Safety Review Assurance Statement* that must be completed by the Qualified Professional Engineer attesting that the dam is “*reasonably safe*”, is “*reasonably safe*” revealing deficiencies and/or non-conformances, or “*not safe*” revealing deficiencies and/or non-conformances which **require urgent action**.

The term “*reasonably safe*” is intended to mean that the dam owner has implemented all dam safety management measures which conform to those norms that are considered by the Regulatory Authority and the engineering profession to reasonably reflect established engineering and dam safety management practices. This term is considered by the Regulatory Authority to be equivalent to the Dam Safety Regulation term of “safe”.

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REGULATORY REQUIREMENTS

The EGBC Guideline provides descriptions of the different types of DSR that can be completed for a dam.

The Regulatory Authority expects that the **default** type of dam safety review that must be carried out by a dam owner under the provision of the Dam Safety Regulation is a **comprehensive review**. An audit style review will not be accepted unless prior written approval has been provided by the Regulatory Authority.

The EGBC Guideline indicates “*A peer review of the dam safety review report, prior to its submission to the client, is strongly encouraged as part of the quality assurance/quality control program...*”

The EGBC Guideline contains additional discussion regarding documented checks and with additional guidance provided in the separate EGBC documents titled “*Documented Checks of Engineering and Geoscience*” and “*Guide to the Standard for Documented Independent Review of High-Risk Professional Activities or Work*”.

It is the Regulatory Authority’s requirement that all final DSRs must be submitted to the dam owner after being peer reviewed by a different Qualified Professional Engineer. The lead Review Engineer may not also act as the Quality Assurance Engineer. The Regulatory Authority will not accept a DSR that has not been peer reviewed.

Dam Safety Review reports will only be accepted if they are considered complete, which includes a completed and sealed/signed *Dam Safety Review Assurance Statement*.

Based on the CDA guidance, the Regulatory Authority will not accept two consecutive DSRs carry out by the same lead review engineer.

Should the result of the DSR determine that the dam is “not safe” then it is the obligation of the dam owner to promptly follow the direction provided in Section 14 or 15 of the *Regulation*.

MORE INFORMATION

More information on dam safety can be obtained from the Responsible Ministry by contacting:

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

Or the BC Dam Safety Program’s Website:
www.gov.bc.ca/damsafety

* The Regulatory Authority refers to the Responsible Ministry and includes a Dam Safety Officer, or the Comptroller or Regional Water Manager.