



DAM AUDIT PROGRAM

DAM AUDIT CHECK SHEET

Dam: Sliammon Dam

Date: Oct 28, 2021

Consequence Classification: E VH H **S** L
 Failure Probability Rating: Lrg **Mod** Sm VSm

Risk Level: (see over)
 1 2a 2b **3** 4 5

This Audit is **not** an inspection of the dam. The dam owner is responsible for dam inspections.

DAM SAFETY REGULATION REQUIREMENTS

Confirmed by Owner

- Consequence Redetermined & Appropriate? (sec. 3)
- Alterations or Hazards occurred recently? (sec. 12,14,15,16)
- Owner Reported recent alterations or hazards? (sec. 13,14,15)
- Dam Emergency Plan (DEP) Prepared? (sec. 9)
- DEP Submitted? (sec. 9(1)(b))
- DEP Forwarded to LEA? (sec. 9(6))
- OMS Manual Prepared? (sec. 8(1))
- OMS Manual Submitted? (sec. 8(1)(b))
- Reservoir Operation as per OMS Manual? (sec. 8(6))

Yes	No	N/A	Follow-Up?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Confirmed by Dam Safety Officer

- Maintenance Suitable? (sec. 8(6))
- Site Surveillance Suitable? (sch. 2)
- Formal Inspection Suitable? (sch. 2)
- Mechanical, Electrical & Communications Equip Tested? (sch. 2)
- Signs posted on dam? (sec. 11)
- Dam Safety Review Status Acceptable? (sec. 20)

Yes	No	N/A	Follow-Up?
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Comments & Site Observations: Approximately 12 logs collected on upstream side of dam. There are several piles of logs that have been previously removed from dam. Currently there is no log boom. Large trees and vegetation in close proximity to right bank of dam structure. Structure is in disrepair, and has no mechanism to regulate flow. Future replacement of structure is being considered.

Dam Owner / agent present for audit? Y N Copy given to Dam Owner / agent? Y N

Printed Name of Dam Safety Officer <u>BINOD ACHARYA</u>	Signature <u>[Signature]</u>	Date <u>Oct 28, 2021</u>
Printed Name of Dam Owner / agent <u>Callum Galligos</u>	Signature <u>[Signature]</u>	Date <u>Oct 28, 2021</u>

FAILURE PROBABILITY RATING GUIDELINES

Failure Probability Rating	General Guidelines for Allocating Failure Probability Ratings (NOTE: Apply highest rating, only one bullet required)
Large	<ul style="list-style-type: none"> Uncorrected design, construction, structural and/or operational deficiencies that could <i>clearly</i> lead to uncontrolled reservoir release. NOTE: If the dam owner is actively working on an <i>approved</i> project to correct the deficiency the rating can be reduced to MODERATE, or Owner exhibits reluctance to operate in a safe and timely manner, or is incapable of doing so or the dam is unlicensed.
Moderate	<ul style="list-style-type: none"> Uncorrected design, construction, structural and/or operational deficiencies that could <i>potentially</i> lead to uncontrolled reservoir release, or Owner exhibits reluctance to undertake and report on annual inspection, or is incapable of doing so, or Design and operation lacks redundancy, e.g., no back-up power for electrical gates.
Small	<ul style="list-style-type: none"> Design and/or performance deficiencies may exist, but are actively monitored and are not expected to significantly increase failure potential over the near term, or Design and operation exhibits redundancy
Very Small	<ul style="list-style-type: none"> Dams that are decommissioned, deactivated, significantly removed, reservoir drained or otherwise safeguarded, or Failure modes analysis indicates very low probability of failure (e.g., small robust concrete gravity dam).

RISK LEVEL CHART¹

Failure Probability Rating	Consequence of Failure Classification ²				
	Extreme	Very High	High	Significant	Low ³
Large	1	1	1	2*	3
Moderate	2*	2*	2*	3	4
Small	3	3	4	4	5
Very Small	3	4	4	5	5

Risk Level Definitions:

- ALERT (immediate attention required):**
Enhanced monitoring / consultants involved / repairs ASAP / may restrict reservoir operation / DEP reviewed / CWR or RWM notified, possible Order
- CAUTION (considerable work to do):**
Increased monitoring / planning for rehab / may modify reservoir operation / DEP reviewed / may request submission of Inspection Report (perhaps weekly), OMS, or early DSR / CWR or WM made aware of situation. ***NOTE:** Risk Level 2 further defined by the following:
 - owner is not actively working on correcting the deficiency, OR
 - owner is actively working on an approved project to correct the deficiency
- STABLE:**
Regular owner inspections plus monitoring operation under peak loading / rehab hazardous conditions / may request submission of Annual Inspection Report, OMS, DEP or early DSR / may audit on an increased frequency
- NO CONCERNS:**
Included in regular audit program to identify any changes / normal operation
- EFFECTUAL (significant and low consequence dams ONLY):**
Significant consequence dams included in regular audit program to monitor failure consequence only / normal operation

¹Risk Level Chart is only a guide, if the Dam Safety Officer deem the risk level of the dam to be different than that prescribed by the Risk Level Chart, the rationale for the variation should be provided by the Dam Safety Officer in the Comments & Site Observations field on the first page.

²Schedule 1 - *Dam Classification*, Dam Safety Regulation, B.C. Reg. 40/2016

³Low consequence dams are not included in the audit program at this time.

SCHEDULE 2

(sections 3 (2), 8 (4), 9 (7) and (8), 10 (4), 18, 19 (1) and 20 (1))

MINIMUM FREQUENCY OF SAFETY ACTIVITIES

Interpretation of Schedule

1 In this Schedule:

“**annually**” means once in each calendar year;

“**dam safety review**” means a review carried out by an engineering professional under section 20 [*dam safety review and report*];

“**DEP**” means the emergency plan for a dam;

“**DSO**” means a dam safety officer;

“**monthly**” means once in each calendar month;

“**OMS manual**” means the operation, maintenance and surveillance manual for a dam;

“**quarterly**” means once in each calendar quarter;

“**semi-annually**” means once in the period between January 1 and June 30 and once in the period between July 1 and December 31 of each calendar year.

Frequency of activities

2 (1) Column 1 of the table sets out an activity that must be carried out by an owner of a dam under Part 2 [*Requirements Applicable to All Dams*] or 3 [*Requirements Applicable to Certain Dams*], as indicated in the table, and column 2, 3, 4, 5 or 6 of the table sets out the minimum frequency with which the activity must be carried out for each classification.

(2) If the minimum frequency with which an activity referred to in column 1 of the table must be carried out under subsection (1) is every 7 years or every 10 years, the minimum frequency is once in the period between the date on which the activity was previously carried out and December 31 of the calendar year that is 7 years or 10 years, as the case may be, after the calendar year that includes the date on which the activity was previously carried out.

Table (Schedule 2)

Item	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
	Activity	Frequency of Activity				
		Extreme classification	Very high classification	High classification	Significant classification	Low classification
Requirements under Part 2						
1	redetermine classification of dam and, if necessary submit to DSO written notice of proposed new classification	annually	annually	annually	annually	annually
Requirements under Part 3						
2	conduct site surveillance	weekly unless otherwise specified in the OMS manual	weekly unless otherwise specified in the OMS manual	weekly unless otherwise specified in the OMS manual	monthly unless otherwise specified in the OMS manual	quarterly
3	conduct formal inspection	semi-annually	annually	annually	annually	annually
4	test operation of mechanical components of dam, and electrical and communication equipment	annually unless otherwise specified in the OMS manual	annually unless otherwise specified in the OMS manual	annually unless otherwise specified in the OMS manual	annually unless otherwise specified in the OMS manual	annually
5	collect readings from instrumentation and analyze and interpret the readings	annually unless otherwise specified in the OMS manual	annually unless otherwise specified in the OMS manual	annually unless otherwise specified in the OMS manual	annually unless otherwise specified in the OMS manual	if and when required by a dam safety officer
6	review contact information in DEP, revise if necessary and report to DSO	annually	annually	annually	annually	not applicable
7	review emergency contact information and, if necessary, revise and submit revision to DSO	not applicable	not applicable	not applicable	not applicable	annually
8	review OMS manual and DEP, revise if necessary and report to DSO	every 7 years	every 7 years	every 10 years	every 10 years	not applicable
9	ensure dam safety review carried out and submit report to DSO	every 7 years	every 10 years	every 10 years	not applicable	not applicable