



DAM AUDIT PROGRAM

DAM AUDIT CHECK SHEET

Dam : _____

Date : _____

| | | | | | |
|-----------------------------|-----|-----|----|-----|---|
| 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

| | Yes | No | N/A | Follow Up? |
|----------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Consequence Classification Appropriate? (sec. 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alterations or Hazards occurred recently? (sec. 12,14,15,16) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Owner Reported recent alterations or hazards? (sec. 13,14,15) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Dam Emergency Plan (DEP) Prepared? (sec. 9) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| DEP Submitted? (sec. 9(1)(b)) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| DEP Forwarded to LEA? (sec. 9(6)) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| OMS Manual Prepared? (sec. 8(1)) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| OMS Manual Submitted? (sec. 8(1)(b)) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Reservoir Operation as per OMS Manual? (sec. 8(6)) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Maintenance Suitable? (sec. 8(6)) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Site Surveillance Suitable? (sch. 2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Formal Inspection Suitable? (sch. 2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Mechanical, Electrical & Communications Equip Tested? (sch. 2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Signs posted on dam? (sec. 11) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Dam Safety Review Status Acceptable? (sec. 20) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments & Site Observations: _____

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

| | | |
|------------------------------------|-----------|------|
| Printed Name of Dam Safety Officer | Signature | Date |
| Printed Name of Dam Owner / agent | Signature | Date |

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:

- 1 - **ALERT (immediate attention required):**
Enhanced monitoring / consultants involved / repairs ASAP / may restrict reservoir operation / DEP reviewed / CWR or RWM notified, possible Order
- 2 - **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:
 - (a) owner is not actively working on correcting the deficiency, OR
 - (b) owner is actively working on an approved project to correct the deficiency
- 3 - **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
- 4 - **NO CONCERNS:**
Included in regular audit program to identify any changes / normal operation
- 5 - **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.