

**PROVINCE OF BRITISH COLUMBIA**  
**ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL**

Order in Council No. 114 , Approved and Ordered February 29, 2016

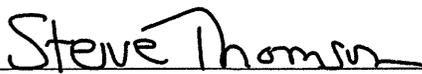
  
Lieutenant Governor  
Administrator

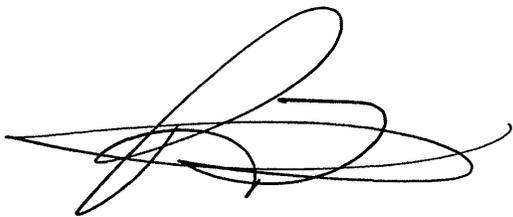
**Executive Council Chambers, Victoria**

*Administrator*

On the recommendation of the undersigned, the ~~Lieutenant Governor~~, by and with the advice and consent of the Executive Council, orders that, effective February 29, 2016,

- (a) the British Columbia Dam Safety Regulation, B.C. Reg. 44/2000, is repealed, and
- (b) the attached Dam Safety Regulation is made.

  
Steve Thomson  
Minister of Forests, Lands and Natural  
Resource Operations

  
Presiding Member of the Executive Council

*(This part is for administrative purposes only and is not part of the Order.)*

**Authority under which Order is made:**

Act and section: *Water Sustainability Act*, S.B.C. 2014, c. 15, ss. 124, 126, 127, 129, 130 and 131.

Other: OIC 131/2000

February 2, 2016

RESUB R/103/2015/25

# DAM SAFETY REGULATION

## *Contents*

### **PART 1 – DEFINITIONS, INTERPRETATION AND APPLICATION**

- 1 Definitions and interpretation
- 2 Application of regulation to minor dam

### **PART 2 – REQUIREMENTS APPLICABLE TO ALL DAMS**

- 3 Dam failure consequences classification
- 4 Owner must comply on determination or change of classification
- 5 Responsibility of owner for dam condition and safety
- 6 Prevention of unauthorized operation

### **PART 3 – REQUIREMENTS APPLICABLE TO CERTAIN DAMS**

#### **Division 1 – Application of Part 3**

- 7 Application of Part 3

#### **Division 2 – General Safety Requirements**

- 8 Operation, maintenance and surveillance manual
- 9 Dam emergency plan
- 10 Record identifying emergency contact
- 11 Signs must be posted

#### **Division 3 – Activities at or near Dam**

- 12 Authorization, change approval or order for alteration or improvement to or replacement of dam
- 13 Requirements if alteration or improvement to or replacement of dam
- 14 Hazardous conditions
- 15 Potential safety hazard
- 16 Invasive investigations
- 17 Removing, decommissioning, deactivating or stopping operation of dam

#### **Division 4 – Monitoring and Review of Dam Safety**

- 18 Site surveillance, formal inspections and tests
- 19 Instrumentation
- 20 Dam safety review and report

#### **Division 5 – Information and Records to Be Submitted**

- 21 Information and records to be submitted to dam safety officer

### **PART 4 – GENERAL**

#### **Division 1 – Dams with Multiple Owners**

- 22 Owners' designate
- 23 Compliance by any owner satisfies requirement
- 24 Exemption for owner of dam with multiple owners

#### **Division 2 – Records**

- 25 Submission of records to and acceptance of records by dam safety officer
- 26 Retention of records

#### **Division 3 – Advice of Independent Expert**

- 27 Advice of independent expert may be required

#### **Division 4 – Offences**

- 28 General offences
- 29 High penalty offences

## PART 5 – TRANSITION

- 30 Definition of previously unregulated dam
- 31 Transition – dam failure consequences classification
- 32 Transition – operation, maintenance and surveillance manual
- 33 Transition – dam emergency plan
- 34 Transition – record identifying emergency contact
- 35 Transition – signs
- 36 Transition – monitoring and review of dam safety
- 37 Transition – general offences

## SCHEDULE 1 – DAM CLASSIFICATION

## SCHEDULE 2 – MINIMUM FREQUENCY OF SAFETY ACTIVITIES

# PART 1 – DEFINITIONS, INTERPRETATION AND APPLICATION

### Definitions and interpretation

#### 1 (1) In this regulation:

“**Act**” means the *Water Sustainability Act*;

“**classification**” means the classification of a dam determined in accordance with section 3 [*dam failure consequences classification*] or 31 [*transition – dam failure consequences classification*];

“**dam**” means

- (a) a barrier constructed for the purpose of enabling the storage or diversion of water diverted from a stream or an aquifer, or both, and
- (b) other works that are incidental to or necessary for the barrier described in paragraph (a);

“**dam safety officer**” means an engineer or an officer who is designated in writing by the comptroller as a dam safety officer;

“**emergency plan**”, in relation to a dam, means

- (a) a plan
  - (i) that, immediately before February 29, 2016, was the emergency preparedness plan for the dam under the former regulation, or
  - (ii) that is prepared under section 9 [*dam emergency plan*] by an owner of the dam and accepted by a dam safety officer, and
- (b) the revisions, if any, to the plan referred to in paragraph (a) (i) or (ii), as applicable, set out in a record prepared by an owner of the dam and accepted by a dam safety officer;

“**engineering professional**” means a person who is

- (a) a professional engineer as defined in the *Engineers and Geoscientists Act*, or
- (b) a holder of a limited licence under the *Engineers and Geoscientists Act* that permits the person to practise professional engineering and who is acting within the scope of the limited licence;

**“formal inspection”**, in relation to a dam, means a thorough on-site inspection of the dam and dam site conducted by a person who is an owner of the dam or an agent of an owner of the dam and who is responsible for the safety of the dam;

**“former regulation”** means the British Columbia Dam Safety Regulation, B.C. Reg. 44/2000;

**“hazardous conditions”**, in relation to a dam, means conditions, including, without limitation, defects or insufficiencies of the dam, that

- (a) are or are likely to be hazardous to the dam, or
- (b) may reasonably be anticipated to cause all or part of the dam, or any operation or action at or in connection with the dam, to be or become potentially hazardous to
  - (i) public safety,
  - (ii) the environment, or
  - (iii) land or other property;

**“instrumentation”**, in relation to a dam, means instruments and equipment used to measure the following:

- (a) hydrological and hydraulic characteristics in relation to the dam, including, without limitation,
  - (i) water levels in the dam and reservoir and at the weirs, and
  - (ii) water flow throughout the dam;
- (b) water clarity in the reservoir and below the dam;
- (c) seismic, geological and geotechnical characteristics in relation to the dam, including, without limitation, movement of the dam, seismic activity, pore pressures and stresses applied to the dam;
- (d) temperature variations of the dam;
- (e) weather conditions that may affect the operation of the dam;
- (f) other parameters in relation to the dam;

**“jurisdictional area”**, in relation to a local emergency authority, means the jurisdictional area, as defined in the *Emergency Program Act*, for which the local authority has responsibility under that Act;

**“local authority”** has the same meaning as in the *Emergency Program Act*;

**“local emergency authority”**, in relation to a dam, means a local authority that is, under subsection (2), a local emergency authority for the dam;

**“operation, maintenance and surveillance manual”**, in relation to a dam, means

- (a) a manual
  - (i) that, immediately before February 29, 2016, was the operation, maintenance and surveillance manual for the dam under the former regulation, or
  - (ii) that is prepared under section 8 [*operation, maintenance and surveillance manual*] by an owner of the dam and accepted by a dam safety officer, and

- (b) the revisions, if any, to the manual referred to in paragraph (a) (i) or (ii), as applicable, set out in a record prepared by an owner of the dam and accepted by a dam safety officer;

**“owner”**, in relation to a dam, means

- (a) the following persons:
  - (i) a person who is a licensee in relation to a licence for the dam;
  - (ii) a person who must under the Act, but does not, hold a licence for the dam;
  - (iii) a person who was a licensee in relation to a licence for the dam immediately before the suspension, cancellation, termination or abandonment of the licence, and
- (b) if there is no person to whom paragraph (a) applies, the following persons:
  - (i) an owner, as defined in the Act, of the land on which the dam is located;
  - (ii) a person who had the dam constructed;

**“potential safety hazard”**, in relation to a dam, means conditions that are not yet, but have the potential to become, hazardous conditions in relation to the dam;

**“Provincial Emergency Program”** means the Provincial Emergency Program continued under section 2 (1) [*Provincial Emergency Program*] of the *Emergency Program Act*;

**“site surveillance”** means the monitoring of a dam and the area surrounding or adjacent to the dam

- (a) through visual observation, and
- (b) if there is instrumentation relating to the dam, through the systematic collection of instrumentation readings and analysis and interpretation of the readings;

**“submit”**, in relation to a record that, under this regulation, must or may be submitted to a dam safety officer, means submit the record in the manner required under section 25 (1) [*submission of records to and acceptance of records by dam safety officer*].

- (2) For the purposes of the definition of “local emergency authority” in subsection (1), a local authority is a local emergency authority for a dam if any land in the jurisdictional area of the local authority
  - (a) is in the immediate vicinity of the dam or the reservoir of the dam, or
  - (b) is downstream or downslope of the dam and may be adversely affected by
    - (i) a complete or partial collapse of the dam, or
    - (ii) an uncontrolled release of all or part of the water impounded by the dam.
- (3) For the purposes of this regulation, the construction of a newly constructed dam is conclusively deemed to be completed on the date on which the dam first becomes capable of storing or diverting water.

- (4) For the purposes of sections 2 (1) [*application of regulation to minor dam*] and 7 [*application of Part 3*], the height of a dam is the vertical distance to the top of the dam measured,
- (a) in the case of a dam across a stream, from the natural bed of the stream at the downstream outside limit of the dam, and
  - (b) in the case of a dam that is not across a stream, from the lowest elevation at the outside limit of the dam.

**Application of regulation to minor dam**

- 2 (1) Unless otherwise ordered under subsection (2), this regulation does not apply to a dam that meets both of the following criteria:
- (a) the dam is less than 7.5 m in height;
  - (b) the dam is capable of impounding at full supply level a maximum total storage volume of water in the reservoir of the dam of 10 000 m<sup>3</sup> or less.
- (2) Subject to section 7 [*application of Part 3*], the comptroller or a water manager may order that this regulation applies to a dam described in subsection (1) of this section if the comptroller or water manager is satisfied that the dam is or may become potentially hazardous to
- (a) public safety,
  - (b) the environment, or
  - (c) land or other property.

**PART 2 – REQUIREMENTS APPLICABLE TO ALL DAMS**

**Dam failure consequences classification**

- 3 (1) An owner of a newly constructed dam must, as soon as practicable and, in any event, no later than 60 days, after completion of the construction of the dam,
- (a) determine the classification of the dam in accordance with section 2 [*determination of classification*] of Schedule 1, and
  - (b) submit to a dam safety officer, immediately after the determination is completed, a record setting out a proposed classification for the dam.
- (2) An owner of a dam for which the classification has been determined under the former regulation or this regulation must,
- (a) no less frequently than is specified in item 1 of the table in Schedule 2 for the classification of the dam, redetermine the classification of the dam in accordance with section 2 of Schedule 1 to assess whether the classification of the dam has changed, and
  - (b) if the classification of the dam has changed, submit to a dam safety officer, immediately after the redetermination is completed, a record setting out a proposed new classification for the dam.
- (3) Despite subsections (1) and (2), the comptroller or a water manager may order an owner of a dam to comply with subsection (1) or (2), as applicable, on or before a specified date.

- (4) On receipt of a record under subsection (1) (b) or (2) (b) or paragraph (b) (ii) of this subsection from an owner of a dam proposing a classification, or a new classification for the dam, or on receipt of information or records from an owner of a dam under paragraph (b) (i) of this subsection, a dam safety officer must give written notice to the owner of the dam who submitted the record or the information or records, as the case may be, advising that
  - (a) the dam safety officer has accepted the classification, or new classification, proposed by the owner, or
  - (b) the dam safety officer has not accepted the classification, or new classification, proposed by the owner and requiring the owner to submit to the dam safety officer, on or before the date specified by the dam safety officer, either of the following:
    - (i) information or records, or further information or records, as the case may be, that demonstrate that the classification, or new classification, proposed by the owner is correct;
    - (ii) a record setting out a different proposed classification, or new classification, as the case may be, for the dam.
- (5) In the case of a dam described in subsection (1),
  - (a) until a record setting out a proposed classification for the dam is submitted under subsection (1) (b), the classification of the dam is deemed, for the purposes of this regulation, to be significant, and
  - (b) between the date on which the record referred to in paragraph (a) of this subsection is submitted to a dam safety officer and the date on which a dam safety officer gives notice under subsection (4) (a) in relation to the dam,
    - (i) if the proposed classification for the dam is high, very high or extreme, the classification of the dam is deemed, for the purposes of this regulation, to be the proposed classification, and
    - (ii) if the proposed classification for the dam is low or significant, the classification of the dam is deemed, for the purposes of this regulation, to be significant.
- (6) In the case of a dam described in subsection (2) in respect of which an owner of the dam submits under subsection (2) (b) a record setting out a proposed new classification for the dam, between the date on which the record is submitted and the date on which a dam safety officer gives notice under subsection (4) (a) in relation to the dam, the classification of the dam is deemed, for the purposes of this regulation, to be the more severe in consequence of the existing classification and the proposed new classification.
- (7) Despite subsections (5) and (6), if the comptroller or a water manager makes an order under subsection (3),
  - (a) the comptroller or water manager may, in the order, specify a classification for the dam that applies between the date on which the order is made and the date on which a dam safety officer gives notice under subsection (4) (a) in relation to the dam, and

- (b) the classification of the dam is, during the period described in paragraph (a) of this subsection, deemed for the purposes of this regulation to be the classification specified in the order.
- (8) For certainty, the requirements of this regulation that apply in relation to a classification of a dam also apply in relation to a deemed classification of the dam under subsection (5), (6) or (7).
- (9) When a dam safety officer gives notice under subsection (4) (a) in relation to a dam, the classification of the dam for the purposes of this regulation is the classification accepted by the dam safety officer as set out in the notice.

**Owner must comply on determination or change of classification**

- 4 Subject to this regulation, if the classification of a dam is determined for the first time or changes, an owner of the dam must, as soon as practicable after the owner becomes aware of the classification, or changed classification, as the case may be, comply with the provisions of this regulation that apply to a dam having that classification or changed classification.

**Responsibility of owner for dam condition and safety**

- 5 (1) An owner of a dam must properly inspect, maintain and repair the dam and related works in a manner that keeps the dam and works in good operating condition.
- (2) An owner of a dam must exercise reasonable care to avoid the risk of significant harm resulting from a defect, insufficiency or failure of the dam or other conditions at the dam or operations or actions at or in connection with the dam to any of the following:
  - (a) public safety;
  - (b) the environment;
  - (c) land or other property.

**Prevention of unauthorized operation**

- 6 An owner of a dam must exercise reasonable care to safeguard the dam from unauthorized operation.

**PART 3 – REQUIREMENTS APPLICABLE TO CERTAIN DAMS**

**Division 1 – Application of Part 3**

**Application of Part 3**

- 7 This Part applies in relation to a dam if the dam meets the criteria set out in one or more of the following paragraphs:
  - (a) the dam is
    - (i) 1 m or more in height, and
    - (ii) capable of impounding at full supply level a total storage volume of water in the reservoir of the dam greater than 1 000 000 m<sup>3</sup>;

- (b) the dam is
  - (i) 2.5 m or more in height, and
  - (ii) capable of impounding at full supply level a total storage volume of water in the reservoir of the dam greater than 30 000 m<sup>3</sup>;
- (c) the dam is 7.5 m or more in height;
- (d) the dam has a classification of significant, high, very high or extreme.

## **Division 2 – General Safety Requirements**

### **Operation, maintenance and surveillance manual**

- 8** (1) An owner of a dam for which there is not already an operation, maintenance and surveillance manual and that has a classification of significant, high, very high or extreme must
- (a) prepare a manual, in the form and with the content specified by the comptroller or a water manager, that describes the operation, maintenance and surveillance procedures for the dam, and
  - (b) submit the manual to a dam safety officer for acceptance by the dam safety officer.
- (2) Subject to subsection (3), an owner of a newly constructed dam must comply with subsection (1) as soon as practicable and, in any event, no later than 60 days, after completion of the construction of the dam.
- (3) The comptroller or a water manager may order an owner of a dam to comply with subsection (1) on or before a specified date.
- (4) An owner of a dam for which there is an operation, maintenance and surveillance manual must, no less frequently than is specified in item 8 of the table in Schedule 2 for the classification of the dam,
- (a) review and, if necessary, revise the operation, maintenance and surveillance manual, and
  - (b) submit to a dam safety officer, for acceptance by the dam safety officer,
    - (i) a record setting out the revisions, if any, or
    - (ii) a written report advising that no revisions are necessary.
- (5) Despite subsection (4), if the classification of a dam for which there is an operation, maintenance and surveillance manual changes to a classification that is more severe in consequence, an owner of the dam must comply with subsection (4) (a) and (b) as soon as practicable after the owner becomes aware of the change of classification or on or before a later date specified by a dam safety officer.
- (6) An owner of a dam must follow the operation, maintenance and surveillance manual, if any, for the dam.

### **Dam emergency plan**

- 9** (1) An owner of a dam for which there is not already an emergency plan and that has a classification of significant, high, very high or extreme must

- (a) prepare a plan, in the form and with the content specified by the comptroller or a water manager, that includes
    - (i) a record describing the actions to be taken by the owner if there is an emergency at the dam, and
    - (ii) a record containing information for the use of the local emergency authorities for the dam for the purpose of preparing local emergency plans under the *Emergency Program Act*, and
  - (b) submit the plan to a dam safety officer for acceptance by the dam safety officer.
- (2) Subject to subsection (3), an owner of a newly constructed dam must comply with subsection (1) as soon as practicable and, in any event, no later than 60 days, after completion of the construction of the dam.
  - (3) The comptroller or a water manager may order an owner of a dam to comply with subsection (1) on or before a specified date.
  - (4) A record described in subsection (1) (a) (i) must include contact information for the persons and the government agencies and other organizations that are to be contacted by the owner of the dam if there is an emergency at the dam.
  - (5) A record described in subsection (1) (a) (ii) must include the name and contact information of the person who is the emergency contact for the dam.
  - (6) An owner of a dam must, promptly after a plan prepared for the dam under subsection (1) is accepted by a dam safety officer, deliver a copy of the record described in subsection (1) (a) (ii) to each local emergency authority for the dam.
  - (7) An owner of a dam for which there is an emergency plan must, no less frequently than is specified in item 6 of the table in Schedule 2 for the classification of the dam,
    - (a) review and, if necessary, revise the names and contact information in the records described in subsections (4) and (5) of this section, and
    - (b) submit to a dam safety officer, for acceptance by the dam safety officer,
      - (i) a record setting out the revisions, if any, or
      - (ii) a written report advising that no revisions are necessary.
  - (8) Subject to subsection (7), an owner of a dam for which there is an emergency plan must, no less frequently than is specified in item 8 of the table in Schedule 2 for the classification of the dam,
    - (a) review and, if necessary, revise the emergency plan, and
    - (b) if the record is revised, submit the revised record to a dam safety officer for acceptance by the dam safety officer.
  - (9) Despite subsection (8), if the classification of a dam for which there is an emergency plan changes to a classification that is more severe in consequence, an owner of the dam must comply with subsection (8) (a) and (b) as soon as practicable after the owner becomes aware of the change of classification or on or before a later date specified by a dam safety officer.

- (10) If a record described in subsection (1) (a) (ii) for a dam is revised under this regulation, an owner of the dam must, promptly after the revision is accepted by a dam safety officer, deliver a copy of the revised record to each local emergency authority for the dam.

#### **Record identifying emergency contact**

- 10** (1) An owner of a dam that has a classification of low must
- (a) prepare a record, in the form and with the content specified by the comptroller or a water manager, that sets out the name and contact information of the person who is the emergency contact for the dam,
  - (b) submit the record to a dam safety officer, and
  - (c) deliver a copy of the record to each local emergency authority for the dam.
- (2) Subject to subsection (3), an owner of a newly constructed dam must comply with subsection (1) as soon as practicable and, in any event, no later than 60 days, after completion of the construction of the dam.
- (3) A dam safety officer may specify a date on or before which an owner of a dam must comply with subsection (1) and, if the dam safety officer specifies a date, the owner must comply with subsection (1) on or before the specified date.
- (4) An owner of a dam for which a record referred to in subsection (1) has been prepared must, no less frequently than is specified in item 7 of the table in Schedule 2 for the classification of the dam,
- (a) review and, if necessary, revise the record, and
  - (b) if the record is revised,
    - (i) submit the revised record to a dam safety officer, and
    - (ii) deliver a copy of the revised record to each local emergency authority for the dam.
- (5) If none of the owners of a dam have complied with subsection (1) within the required time, a dam safety officer may designate one of the owners of the dam to be the emergency contact for the dam.
- (6) An owner of a dam who becomes the emergency contact for the dam under this section must, as soon as practicable, give to each other owner whose address is known to the owner written notice that the owner is the emergency contact.

#### **Signs must be posted**

- 11** (1) In this section:
- “**emergency contact**”, in relation to a dam, means the person identified as the emergency contact for the dam in the record referred to in section 9 (5) [*dam emergency plan*];
- “**sign**” means a sign that meets the requirements of subsection (4).
- (2) Subject to subsection (3), an owner of a dam that has a classification of significant, high, very high or extreme and that is located partly or entirely on Crown land, or on land that is surrounded by or adjacent to Crown land, must ensure that 2 signs are at all times posted,

- (a) at each end of the top of the dam, or
  - (b) if a sign posted at an end of the top of the dam would not be clearly visible under all seasonal conditions to persons approaching the dam, at another location on Crown land at which the sign would be so visible.
- (3) An owner of a dam is required to post only one sign under subsection (2) if a dam safety officer considers it would be impractical or unnecessary to post the other sign.
- (4) Each sign that must be posted under subsection (2) must meet all of the following requirements:
- (a) the sign must contain, in lettering that is clearly legible from a distance of 15 m, the following information:
    - (i) the name of the dam;
    - (ii) if the dam impounds water from a stream, the name of the stream;
    - (iii) the following words: “If you see any dam safety concerns, please contact:”, followed by
      - (A) the name and emergency telephone numbers for day and for night of the emergency contact for the dam, and
      - (B) the emergency telephone number for the Provincial Emergency Program;
  - (b) the sign must be at least 75 cm high and 60 cm wide;
  - (c) the sign must be clearly visible under all seasonal conditions to persons approaching the dam;
  - (d) the sign and the post, if any, must be constructed from metal or other durable materials having strength suited to the location of the sign and the local environmental conditions;
  - (e) the sign must meet the other requirements, if any, specified by the comptroller or a water manager.
- (5) An owner of a dam may, under this section, post a sign on Crown land whether or not the owner has any other authority to occupy the Crown land.
- (6) This section is subject to the requirements of any other enactment that relate to the location, appearance or construction of a sign referred to in this section.

### **Division 3 – Activities at or near Dam**

#### **Authorization, change approval or order for alteration or improvement to or replacement of dam**

- 12** An alteration or improvement to or replacement of all or part of a dam must be authorized under the Act by an authorization, change approval or order unless the alteration, improvement or replacement is for the purpose of
- (a) routine maintenance of the dam or related works,
  - (b) addressing hazardous conditions in relation to the dam in accordance with section 14 (1) [*hazardous conditions*], or

- (c) conducting an investigation described in section 16 [*invasive investigations*] in accordance with that section.

#### **Requirements if alteration or improvement to or replacement of dam**

- 13**
- (1) An owner of a dam must, within 30 days after completion of an alteration or improvement to or replacement of all or part of the dam, submit to a dam safety officer
    - (a) a written report on the work and the manner in which the alteration, improvement or replacement was performed, and
    - (b) a copy of the as-built drawings.
  - (2) A report under subsection (1) (a) may be combined with a report under section 14 (2) (a) [*hazardous conditions*], 15 (2) (a) [*potential safety hazard*] or 17 (5) [*removing, decommissioning, deactivating or stopping operation of dam*].
  - (3) An owner of a dam must, promptly after an alteration or improvement to or replacement of all or part of the dam is completed,
    - (a) review and, if necessary, revise the operation, maintenance and surveillance manual and the emergency plan, if any, for the dam, and
    - (b) submit to a dam safety officer for acceptance by the dam safety officer,
      - (i) a record setting out the revisions, if any, or
      - (ii) a written report advising that no revisions are necessary.

#### **Hazardous conditions**

- 14**
- (1) An owner of a dam who becomes aware of hazardous conditions in relation to the dam must promptly do all of the following:
    - (a) follow the emergency plan, if any, for the dam;
    - (b) operate the dam in a manner, and initiate any remedial actions, including modifying the operations at the dam, that will
      - (i) safeguard the public, and
      - (ii) minimize damage to the environment or land or other property;
    - (c) inform the following persons and other entities of the nature of the hazardous conditions:
      - (i) the Provincial Emergency Program;
      - (ii) persons who are in the immediate vicinity of the dam;
      - (iii) the local emergency authorities for the dam whose jurisdictional areas may be adversely affected by the hazardous conditions;
    - (d) if the nature of the hazardous conditions places persons in imminent danger,
      - (i) advise persons who are in the immediate vicinity of the dam to vacate the endangered area, and
      - (ii) inform the local emergency authorities for the dam whose jurisdictional areas may be adversely affected by the hazardous conditions of the imminent danger;
    - (e) inform the comptroller, a water manager or a dam safety officer of

- (i) the nature of the hazardous conditions,
    - (ii) the actions being taken by the owner to rectify the hazardous conditions, and
    - (iii) the time and exact nature of the information given under this section to any person in relation to the hazardous conditions;
  - (f) perform such further hazard response activities as the comptroller or a water manager orders.
- (2) An owner of a dam must, as soon as practicable and, in any event, no later than 30 days, after hazardous conditions at the dam have been rectified, submit to a dam safety officer
- (a) a written report on the actions taken by the owner to rectify the hazardous conditions and the effectiveness of those actions, and
  - (b) on request of the dam safety officer, copies of records in the custody or under the control of the owner in relation to those actions.

#### **Potential safety hazard**

- 15** (1) An owner of a dam who becomes aware of a potential safety hazard in relation to the dam must do all of the following:
- (a) promptly notify a dam safety officer of the potential safety hazard;
  - (b) on or before the date specified by a dam safety officer
    - (i) prepare a plan, in the form and with the content specified by the dam safety officer, that sets out, in order of priority, any actions required to rectify the potential safety hazard, and
    - (ii) submit the plan to a dam safety officer for acceptance by the dam safety officer;
  - (c) if the plan referred to in paragraph (b) is accepted by a dam safety officer, implement the plan, on or before the date specified by a dam safety officer, in the order of priority identified in the plan and in accordance with any requirements or conditions specified in an authorization, change approval or order.
- (2) An owner of a dam must, as soon as practicable and, in any event, no later than 30 days, after a potential safety hazard at a dam has been rectified, submit to a dam safety officer
- (a) a written report on the actions taken by the owner to rectify the potential safety hazard and the effectiveness of those actions, and
  - (b) on request of the dam safety officer, copies of records in the custody or under the control of the owner in relation to those actions.

#### **Invasive investigations**

- 16** (1) In this section, “**invasive investigation**” means an investigation that involves drilling, trenching, excavating a test pit or performing another invasive activity within or in close proximity to a dam.
- (2) An owner of a dam who intends to conduct an invasive investigation must,

- (a) at least 60 days before the date on which the owner expects the invasive investigation to begin, give to a dam safety officer written notice of the proposed investigation, and
- (b) at least 30 days before the date on which the owner expects the invasive investigation to begin
  - (i) prepare a plan, in the form and with the content specified by a dam safety officer, in relation to the invasive investigation, and
  - (ii) submit the plan to a dam safety officer for acceptance by the dam safety officer.
- (3) An owner of a dam must not begin an invasive investigation until a plan referred to in subsection (2) (b) has been accepted by a dam safety officer.
- (4) An owner of a dam must ensure that all drilling, trenching, test pit excavations and other invasive activities involved in an invasive investigation are directly supervised by an engineering professional who has qualifications and experience in dam design, construction and analysis.

**Removing, decommissioning, deactivating or stopping operation of dam**

- 17** (1) In this section, “**restricted activity**” means any of the following:
- (a) removing all or a significant part of a dam;
  - (b) decommissioning a dam;
  - (c) deactivating a dam, or stopping the normal operation of a dam, for a period longer than one year.
- (2) An owner of a dam who intends to perform a restricted activity must,
- (a) at least 120 days before the date on which the owner expects to begin work on the restricted activity, give to a dam safety officer written notice of the proposed restricted activity, and
  - (b) at least 90 days before the date on which the owner expects to begin work on the restricted activity,
    - (i) prepare a plan, in the form and with the content specified by a dam safety officer, in relation to the activity, and
    - (ii) submit the plan to a dam safety officer for acceptance by the dam safety officer.
- (3) An owner of a dam must not begin work on a restricted activity until a plan referred to in subsection (2) (b) has been accepted by a dam safety officer.
- (4) Without limiting subsection (3), an owner of a dam must notify a dam safety officer of the owner’s intention to begin work on a restricted activity at least 30 days before the date on which the owner expects to begin the work.
- (5) An owner of a dam who has performed a restricted activity must submit to a dam safety officer, for acceptance by the dam safety officer, a written report on the work performed and the manner in which it was performed, no later than 60 days after completion of the restricted activity or on or before a later date specified by a dam safety officer.

- (6) An owner of a dam who is performing or has performed work in relation to a restricted activity must take such further actions as the comptroller or a water manager orders to mitigate any adverse impact on
  - (a) a person,
  - (b) the environment, or
  - (c) land or other property.

#### **Division 4 – Monitoring and Review of Dam Safety**

##### **Site surveillance, formal inspections and tests**

- 18** An owner of a dam must do all of the following:
- (a) in order to assess the condition of the dam during the operation of the dam or the alteration or improvement to or replacement of the dam, conduct
    - (i) a site surveillance of the dam no less frequently than is specified in item 2 of the table in Schedule 2 for the classification of the dam, and
    - (ii) a formal inspection of the dam no less frequently than is specified in item 3 of the table in Schedule 2 for the classification of the dam;
  - (b) test, no less frequently than is specified in item 4 of the table in Schedule 2 for the classification of the dam, the operation of
    - (i) the outlet facilities, spillway gates and other mechanical components of the dam, and
    - (ii) the electrical and communication equipment relating to the dam;
  - (c) promptly after an activity described in this section has been performed, record the results of the activity.

##### **Instrumentation**

- 19** (1) An owner of a dam must do all of the following:
- (a) install the instrumentation necessary to adequately monitor the dam and the area surrounding or adjacent to the dam;
  - (b) maintain or replace the instrumentation referred to in paragraph (a) to ensure continuity of readings;
  - (c) collect readings from the instrumentation referred to in paragraph (a) and analyze and interpret the readings no less frequently than is specified in item 5 of the table in Schedule 2 for the classification of the dam.
- (2) An owner of a dam who intends to install, modify, replace or remove instrumentation relating to the dam must submit to a dam safety officer, for acceptance by the dam safety officer,
- (a) a record describing the proposed installation, modification, replacement or removal at least 60 days before the date on which the owner expects the installation, modification, replacement or removal to occur, or
  - (b) an annual plan outlining all installations, modifications, replacements and removals of instrumentation proposed for the following year.

- (3) An owner of a dam must not install, modify, replace or remove instrumentation relating to the dam until the record or plan referred to in subsection (2) (a) or (b), as applicable, has been accepted by a dam safety officer.

#### **Dam safety review and report**

- 20** (1) An owner of a dam that has a classification of high, very high or extreme must, no less frequently than is specified in item 9 of the table in Schedule 2 for the classification of the dam,
  - (a) ensure that an engineering professional who has qualifications and experience in dam safety analysis
    - (i) carries out a review, in accordance with the requirements of the comptroller or a water manager,
      - (A) to determine if the dam is safe, and
      - (B) if it is determined that the dam is not safe, to determine what actions are required to make the dam safe, and
    - (ii) prepares, in the form and with the content specified by the comptroller or a water manager, a report on the safety of the dam, and
  - (b) submit to a dam safety officer, for acceptance by the dam safety officer, a copy of the report referred to in paragraph (a) (ii).
- (2) Despite subsection (1), if the classification of a dam changes to a classification that is more severe in consequence, other than a change from a low classification to a significant classification, an owner of the dam must comply with subsection (1) (a) and (b) on or before December 31 of the calendar year that is 2 years after the calendar year in which the classification changes, unless the comptroller or a water manager specifies another date.

### **Division 5 – Information and Records to Be Submitted**

#### **Information and records to be submitted to dam safety officer**

- 21** (1) In this section, “**inspection**”, in relation to a dam, includes, without limitation, site surveillance of the dam and a formal inspection of the dam.
- (2) An owner of a dam must, on request of a dam safety officer, submit to the dam safety officer, in the form, with the content and on or before the date specified by the dam safety officer, the following records relating to an inspection, test or review carried out in relation to a dam:
  - (a) a record setting out the results of the inspection, test or review;
  - (b) records setting out the data obtained from any test or measurement taken, and analysis and interpretation of the data, including but not limited to,
    - (i) a record setting out instrumentation readings, and analysis and interpretation of the readings,
    - (ii) visual records or observations,
    - (iii) drawings,
    - (iv) soil, aggregate and concrete test results, and

- (v) any other test results.
- (3) Despite subsection (2), an owner of a dam must promptly submit to a dam safety officer the records referred to in that subsection if an inspection, test or review carried out in relation to the dam reveals hazardous conditions or a potential safety hazard.
- (4) A dam safety officer may request an owner of a dam to submit to the dam safety officer any of the following information and records that the dam safety officer considers necessary to evaluate the condition or the hazard potential of the dam and operations and actions at or in connection with the dam:
  - (a) information and records relating to the dam and those operations and actions, including, but not limited to,
    - (i) information and records respecting hydraulic, hydrological, seismic, geological and geotechnical characteristics, conditions and concerns,
    - (ii) foundation investigation results,
    - (iii) design details and as-built drawings,
    - (iv) structural analyses,
    - (v) construction records,
    - (vi) operation manuals,
    - (vii) records relating to instrumentation,
    - (viii) safety reports,
    - (ix) inundation studies, and
    - (x) plans, that have not been previously submitted to a dam safety officer, to be implemented if there is an emergency at the dam;
  - (b) the following records relating to the design or construction of the dam or an alteration to or improvement or replacement of the dam:
    - (i) drawings, including, without limitation, plans and as-built drawings;
    - (ii) design notes and specifications;
    - (iii) hydraulic, hydrological, geological and geotechnical data;
    - (iv) reports and other similar records;
  - (c) information and records, including, without limitation, information and records respecting hydraulic, hydrological, seismic, geological and geotechnical characteristics, conditions and concerns, relating to the following:
    - (i) the nature and use of the land that is in the immediate vicinity of the dam or the reservoir of the dam, downstream of the dam or downslope of the dam;
    - (ii) the nature and use of the stream or aquifer from which the water is being stored or diverted;
  - (d) information relating to the watershed upstream of the dam.
- (5) An owner of a dam, must, on receiving a request of a dam safety officer under subsection (4), submit the requested information or record in the form, with the content and on or before the date specified by the dam safety officer.

- (6) If information or a record in relation to a dam that is required to be submitted to a dam safety officer under this section does not exist or is otherwise not available for submission, the comptroller or a water manager may order an owner of the dam to conduct an inspection, investigation, survey or test, or prepare a record in relation to an inspection, investigation, survey or test, that is necessary to provide the information or record.

## **PART 4 – GENERAL**

### **Division 1 – Dams with Multiple Owners**

#### **Owners' designate**

- 22** (1) The owners of a dam in respect of which there are 2 or more owners must, on request of a dam safety officer and on or before the date specified by the dam safety officer,
- (a) designate one of the owners for the purposes of receiving, providing and retaining information and records in relation to the dam as required or authorized by this regulation, and
  - (b) submit to the dam safety officer the designated owner's name, address and other contact information as required by the dam safety officer.
- (2) If the owners of a dam to which subsection (1) applies have not complied with that subsection within the specified time, a dam safety officer may designate one of the owners for the purposes of this section.
- (3) An owner of a dam who is designated under this section must, as soon as practicable after the designation, give to each other owner whose address is known to the owner written notice of the designation.

#### **Compliance by any owner satisfies requirement**

- 23** For certainty, if a dam has 2 or more owners, a requirement imposed by this regulation on an owner of the dam is satisfied if any of the owners of the dam complies with the requirement.

#### **Exemption for owner of dam with multiple owners**

- 24** An owner of a dam in respect of which there are 2 or more owners is exempt from the requirements of this regulation in relation to the dam if
- (a) the comptroller is satisfied that proper arrangements have been made for one or more of the other owners to take responsibility for meeting the requirements of this regulation in relation to the dam, and
  - (b) either of the following applies in relation to the owner:
    - (i) all the owners have agreed that one or more of the other owners acceptable to the comptroller are to be responsible for the dam;
    - (ii) the owner holds rights to store not greater than 5% of the quantity of water the storage rights to which are granted under the Act in respect of the dam.

## Division 2 – Records

### Submission of records to and acceptance of records by dam safety officer

- 25
- (1) A record that under this regulation must or may be submitted to a dam safety officer must be submitted in the manner specified by the dam safety officer.
  - (2) If a record submitted under this regulation by an owner of a dam to a dam safety officer for acceptance by the dam safety officer
    - (a) is not in the form or does not contain the content required under this regulation, or
    - (b) if there are no requirements under this regulation as to the form or content of the record, is not acceptable in form or content to the dam safety officer, the dam safety officer may give to the owner written notice advising that the record has not been accepted, specifying the deficiencies in the record and requiring that they be rectified.
  - (3) If a dam safety officer gives notice to an owner of a dam under subsection (2) in relation to a record,
    - (a) the owner must promptly rectify the deficiencies specified in the notice, and
    - (b) the dam safety officer is not required to accept the record until the owner has rectified the deficiencies specified in the notice.
  - (4) If a dam safety officer accepts a record that was submitted under this regulation to the dam safety officer for acceptance, the dam safety officer must give written notice of the acceptance to the owner of the dam who submitted the record.
  - (5) For the purposes of this regulation, a record relating to a dam is accepted by a dam safety officer when the dam safety officer gives notice under subsection (4) in relation to the record.

### Retention of records

- 26
- (1) For the purposes of section 116 (1) [*records and reporting*] of the Act, each person who is or was an owner of a dam must keep information or a record described in section 116 (1) (a), (b) or (c) of the Act that relates to the dam for the period between
    - (a) the date on which the information or record is obtained or prepared by the person, and
    - (b) the date that is 10 years after the date on which written notice is given to a dam safety officer, by a person who is an owner of the dam when the dam is decommissioned, stating that the decommissioning of the dam is complete and the dam has been completely removed.
  - (2) Subsection (1) does not apply to a person in relation to information or a record if another person has been designated under section 22 [*owners' designate*] for the purpose of retaining the information or record.
  - (3) For the purposes of section 116 (1) (b) of the Act, an owner of a dam must, in addition to the records referred to in section 116 (1) (a) or (c) of the Act, keep all other information and records in relation to the dam that, under this regulation,

the owner is, or may be, required to submit to the comptroller, a water manager, an engineer or a dam safety officer.

### **Division 3 – Advice of Independent Expert**

#### **Advice of independent expert may be required**

- 27**
- (1) If the comptroller or a water manager considers it advisable to obtain independent expert advice in relation to an issue respecting a dam or works relating to a dam, the comptroller or water manager may order an owner of the dam to retain an independent expert, satisfactory to the comptroller or water manager, who has qualifications and experience described in subsection (2), to prepare a written report on resolving the issue.
  - (2) An independent expert retained under subsection (1) must have the following qualifications and experience:
    - (a) in the case of an issue respecting a dam, qualifications and experience in dam design, construction and analysis or in dam operation and maintenance, as appropriate;
    - (b) in the case of an issue respecting works relating to a dam, qualifications and experience in hydraulic, hydrological, geological, geotechnical, mechanical or structural engineering or other discipline, as appropriate.
  - (3) An owner of a dam who is ordered by the comptroller or a water manager to retain an independent expert under subsection (1) must submit to the comptroller or water manager a copy of the written report referred to in that subsection promptly after the owner receives the report.

### **Division 4 – Offences**

#### **General offences**

- 28**
- (1) An owner of a dam who does any of the following commits an offence:
    - (a) fails to determine under section 3 (1) (a) [*dam failure consequences classification*], or redetermine under section 3 (2) (a), the classification of the dam as and when required to do so;
    - (b) fails to submit to a dam safety officer a record under section 3 (1) (b) setting out a proposed classification for the dam, or a record under section 3 (2) (b) setting out a proposed new classification for the dam, as and when required to do so;
    - (c) fails to properly inspect, maintain or repair the dam or related works contrary to section 5 (1) [*responsibility of owner for dam condition and safety*];
    - (d) fails to exercise reasonable care to avoid the risk of significant harm as required under section 5 (2);
    - (e) fails to exercise reasonable care to safeguard the dam from unauthorized operation contrary to section 6 [*prevention of unauthorized operation*].

- (2) An owner of a dam who does any of the following commits an offence:
- (a) fails to review or revise the operation, maintenance and surveillance manual for the dam as and when required to do so under section 8 (4) (a) or (5) [*operation, maintenance and surveillance manual*] or 13 (3) (a) [*requirements if alteration or improvement to or replacement of dam*];
  - (b) fails to submit to a dam safety officer the applicable record in relation to a review of the operation, maintenance and surveillance manual for the dam as and when required to do so under section 8 (4) (b) or (5) or 13 (3) (b);
  - (c) fails to follow the operation, maintenance and surveillance manual for the dam contrary to section 8 (6);
  - (d) fails to deliver a record to a local emergency authority for the dam as and when required to do so under section 9 (6) or (10) [*dam emergency plan*] or section 10 (4) (b) (ii) [*record identifying emergency contact*];
  - (e) fails to review or revise the emergency plan for the dam as and when required to do so under section 9 (7) (a), (8) (a) or (9) or 13 (3) (a);
  - (f) fails to submit to a dam safety officer the applicable record in relation to a review of the emergency plan for the dam as and when required to do so under section 9 (7) (b), (8) (b) or (9) or 13 (3) (b);
  - (g) fails to comply with section 10 (1) (a), (b) or (c) on or before the date specified by a dam safety officer contrary to section 10 (3);
  - (h) fails to review or revise the record setting out the name and contact information for the emergency contact for the dam as and when required to do so under section 10 (4) (a);
  - (i) fails to submit to a dam safety officer the applicable record in relation to a review of the record referred to in paragraph (h) as and when required to do so under section 10 (4) (b) (i);
  - (j) contravenes section 11 [*signs must be posted*].
- (3) An owner of a dam who does any of the following commits an offence:
- (a) fails to submit to a dam safety officer a written report or other record as and when required to do so under section 13 (1), 14 (2) [*hazardous conditions*], 15 (2) [*potential safety hazard*] or 17 (5) [*removing, decommissioning, deactivating or stopping operation of dam*];
  - (b) fails to notify a dam safety officer of a potential safety hazard in relation to the dam as and when required to do so under section 15 (1) (a);
  - (c) fails to give notice of a proposed activity in relation to the dam as and when required to do so under section 16 (2) (a) [*invasive investigations*] or 17 (2) (a) or (4);
  - (d) fails to prepare or submit to a dam safety officer a plan for an activity in relation to the dam as and when required to do so under section 15 (1) (b) (i) or (ii), 16 (2) (b) (i) or (ii) or 17 (2) (b) (i) or (ii);
  - (e) fails to implement a plan in relation to a potential safety hazard at the dam as and when required to do so under section 15 (1) (c);

- (f) begins an activity referred to in section 16 or 17 in relation to the dam before a plan respecting the activity has been accepted by a dam safety officer contrary to section 16 (3) or 17 (3), as applicable;
  - (g) fails to ensure that an invasive activity is directly supervised by an engineering professional who has qualifications and experience as required under section 16 (4).
- (4) An owner of a dam who does any of the following commits an offence:
- (a) fails to conduct a site surveillance of the dam as and when required to do so under section 18 (a) (i) [*site surveillance, formal inspections and tests*];
  - (b) fails to conduct a formal inspection of the dam as and when required to do so under section 18 (a) (ii);
  - (c) fails to test the operation of mechanical components of the dam as and when required to do so under section 18 (b) (i);
  - (d) fails to test the operation of electrical or communication equipment relating to the dam as and when required to do so under section 18 (b) (ii);
  - (e) fails to record the results of an activity referred to in paragraph (a), (b), (c) or (d) when required to do so under section 18 (c);
  - (f) fails to install, maintain or replace instrumentation relating to the dam as required under section 19 (1) (a) or (b) [*instrumentation*];
  - (g) fails to collect, analyze or interpret readings from instrumentation relating to the dam as and when required to do so under section 19 (1) (c);
  - (h) fails to submit to a dam safety officer a record or a plan for a proposed installation, modification, replacement or removal of instrumentation relating to the dam as and when required to do so under section 19 (2);
  - (i) installs, modifies, replaces or removes instrumentation relating to the dam before the notice or plan referred to in paragraph (h) has been accepted by a dam safety officer contrary to section 19 (3);
  - (j) fails to ensure that an engineering professional who has qualifications and experience as required under section 20 (1) [*dam safety review and report*] carries out a review of, and prepares a report on, the safety of the dam as and when required to do so under section 20 (1) (a) or (2);
  - (k) fails to submit to a dam safety officer the report referred to in paragraph (j) as and when required to do so under section 20 (1) (b) or (2);
  - (l) fails to submit to a dam safety officer information or a record in relation to the dam as and when required to do so under section 21 (2), (3) or (5) [*information and records to be submitted to dam safety officer*];
  - (m) fails to submit to the comptroller or a water manager a copy of a report of an independent expert in relation to the dam as and when required to do so under section 27 (3) [*advice of independent expert may be required*].
- (5) An owner of a dam who commits an offence under this section is liable on conviction to the following:
- (a) in the case of an offence that is not a continuing offence, a fine of not more than \$200 000 or imprisonment for not longer than 6 months, or both;

- (b) in the case of a continuing offence, a fine of not more than \$200 000 for each day the offence is continued or imprisonment for not longer than 6 months, or both.

#### **High penalty offences**

- 29** (1) An owner of a dam who does any of the following commits an offence:
- (a) fails to follow the emergency plan for the dam contrary to section 14 (1) (a) [*hazardous conditions*];
  - (b) fails to operate the dam or initiate a remedial action at the dam contrary to section 14 (1) (b);
  - (c) fails to inform or advise a person or other entity respecting hazardous conditions in relation to the dam contrary to section 14 (1) (c) or (d);
  - (d) fails to inform the comptroller, a water manager or a dam safety officer respecting hazardous conditions in relation to the dam as and when required to do so under section 14 (1) (e).
- (2) An owner of a dam who commits an offence under this section is liable on conviction to the following:
- (a) in the case of an offence that is not a continuing offence, a fine of not more than \$1 000 000 or imprisonment for not longer than one year, or both;
  - (b) in the case of a continuing offence, a fine of not more than \$1 000 000 for each day the offence is continued or imprisonment for not longer than one year, or both.

### **PART 5 – TRANSITION**

#### **Definition of previously unregulated dam**

- 30** In this Part, “**previously unregulated dam**” means a dam
- (a) to which, immediately before February 29, 2016, the former regulation did not apply, and
  - (b) to which Part 3 [*Requirements Applicable to Certain Dams*] of this regulation applies.

#### **Transition – dam failure consequences classification**

- 31** (1) If, immediately before February 29, 2016, the former regulation did not apply in relation to a dam, an owner of the dam must, on or before December 31, 2016,
- (a) determine the classification of the dam in accordance with section 2 [*determination of classification*] of Schedule 1, and
  - (b) submit to a dam safety officer, immediately after the determination is completed, a record setting out a proposed classification for the dam.
- (2) Section 3 (4), (5), (8) and (9) [*dam failure consequences classification*] applies in relation to a dam described in subsection (1) of this section as if it were a dam described in section 3 (1).

- (3) An owner of a dam who, in 2015, conducted a review of conditions downstream of the dam under section 6.1 of the former regulation must begin complying with section 3 (2) of this regulation in 2016.
- (4) An owner of a dam who, between January 1, 2016 and February 28, 2016, conducted a review of conditions downstream of the dam under section 6.1 of the former regulation must begin complying with section 3 (2) of this regulation in 2017.
- (5) If, immediately before February 29, 2016, section 6.1 of the former regulation applied in relation to a dam and a review of conditions downstream of the dam was not conducted under that section between January 1, 2015 and February 28, 2016, an owner of the dam must comply with section 3 (2) of this regulation on or before March 31, 2016.
- (6) Section 3 (4), (6), (8) and (9) applies in relation to a dam described in subsection (3), (4) or (5) of this section as if it were a dam described in section 3 (2).
- (7) The classification of a dam to which the former regulation applied immediately before February 29, 2016 continues, for the purposes of this regulation, to be the classification of the dam under the former regulation until the date on which the classification is determined in accordance with this section.

**Transition – operation, maintenance and surveillance manual**

- 32**
- (1) An owner of a previously unregulated dam that has a classification of significant, high, very high or extreme must comply with section 8 (1) (a) and (b) [*operation, maintenance and surveillance manual*] within one year after the date on which a dam safety officer gives notice to an owner of the dam that the dam safety officer accepts a proposed classification for the dam under section 31.
  - (2) If, between January 1, 2006 and December 31, 2015, an operation, maintenance and surveillance manual was submitted to a dam safety officer under section 3 (2) (b) of the former regulation in relation to a dam that has a classification of very high, and subsection (3) of this section does not apply in relation to the dam, an owner of the dam need not comply with section 8 (4) (a) and (b) of this regulation in respect of the first review of the operation, maintenance and surveillance manual until the calendar year that is 10 years after the calendar year that includes the date on which the operation, maintenance and surveillance manual was submitted to the dam safety officer under section 3 (2) (b) of the former regulation.
  - (3) If the most recent review of the operation, maintenance and surveillance manual for a dam that has a classification of very high was completed under section 3 (3.1) of the former regulation between January 1, 2006 and December 31, 2015, an owner of the dam need not comply with section 8 (4) (a) and (b) of this regulation in respect of the immediately following review of the operation, maintenance and surveillance manual until the calendar year that is 10 years after the calendar year that includes the date on which the most recent review of the operation, maintenance and surveillance manual was completed under section 3 (3.1) of the former regulation.

### **Transition – dam emergency plan**

- 33** (1) An owner of a previously unregulated dam that has a classification of significant, high, very high or extreme must comply with section 9 (1) (a) and (b) [*dam emergency plan*] within one year after the date on which a dam safety officer gives notice to an owner of the dam that the dam safety officer accepts a proposed classification for the dam under section 31 [*transition – dam failure consequences classification*].
- (2) Despite section 9, if, immediately before February 29, 2016, there was, under the former regulation, an emergency preparedness plan for a dam, an owner of the dam must, on or before March 31, 2017,
- (a) review and, if necessary, revise the plan to ensure that it contains the record described in section 9 (1) (a) (ii),
  - (b) submit to a dam safety officer, for acceptance by the dam safety officer,
    - (i) a record setting out the revisions, if any, or
    - (ii) a written report advising that no revisions are necessary, and
  - (c) deliver a copy of the record described in section 9 (1) (a) (ii) to each local emergency authority for the dam.
- (3) If, between January 1, 2006 and December 31, 2015, an emergency preparedness plan was submitted to a dam safety officer under section 3.1 (1) (b) of the former regulation in relation to a dam that has a classification of very high, and subsection (4) of this section does not apply in relation to the dam, an owner of the dam need not comply with section 9 (8) (a) and (b) of this regulation in respect of the first review of the emergency plan for the dam until the calendar year that is 10 years after the calendar year that includes the date on which the emergency preparedness plan was submitted to the dam safety officer under section 3.1 (1) (b) of the former regulation.
- (4) If the most recent review of the emergency preparedness plan for a dam that has a classification of very high was completed under section 3.1 (3) of the former regulation between January 1, 2006 and December 31, 2015, an owner of the dam need not comply with section 9 (8) (a) and (b) of this regulation in respect of the immediately following review of the emergency plan for the dam until the calendar year that is 10 years after the calendar year that includes the date on which the most recent review of the emergency preparedness plan was completed under section 3.1 (3) of the former regulation.

### **Transition – record identifying emergency contact**

- 34** An owner of a dam, other than a newly constructed dam, need not comply with section 10 [*record identifying emergency contact*] until March 31, 2017.

### **Transition – signs**

- 35** An owner of a previously unregulated dam need not comply with section 11 [*signs must be posted*] until October 1, 2016.

#### **Transition – monitoring and review of dam safety**

- 36**
- (1) For the purposes of section 18 (a) [*site surveillance, formal inspections and tests*], an owner of a previously unregulated dam must, on or before November 1, 2016,
    - (a) begin site surveillance of the dam, and
    - (b) conduct the first formal inspection of the dam.
  - (2) For the purposes of section 18 (b), an owner of a previously unregulated dam must, on or before November 1, 2016, conduct the first tests of the operation of
    - (a) the outlet facilities, spillway gates and other mechanical components of the dam, and
    - (b) the electrical and communication equipment relating to the dam.
  - (3) For the purposes of section 19 (1) (c) [*instrumentation*], an owner of a previously unregulated dam must, on or before November 1, 2016, begin collecting, analyzing and interpreting readings from the instrumentation relating to the dam.
  - (4) An owner of a previously unregulated dam that has a classification of high, very high or extreme must comply with section 20 (1) (a) and (b) [*dam safety review and report*] within 5 years after the date on which a dam safety officer gives notice to an owner of the dam that the dam safety officer accepts a proposed classification for the dam under section 31 [*transition – dam failure consequences classification*].

#### **Transition – general offences**

- 37**
- (1) An owner of a dam who does any of the following commits an offence:
    - (a) fails to determine under section 31 (1) (a) [*transition – dam failure consequences classification*] or redetermine under section 31 (3), (4) or (5) the classification of the dam as and when required to do so;
    - (b) fails to submit to a dam safety officer a record under section 31 (1) (b) setting out a proposed classification for the dam, or a record under section 31 (3), (4) or (5) setting out a proposed new classification for the dam, as and when required to do so;
    - (c) fails to prepare an operation, maintenance and surveillance manual for the dam as and when required to do so under section 32 (1) [*transition – operation, maintenance and surveillance manual*];
    - (d) fails to submit to a dam safety officer the operation, maintenance and surveillance manual for the dam as and when required to do so under section 32 (1);
    - (e) fails to prepare an emergency plan for the dam as and when required to do so under section 33 (1) [*transition – dam emergency plan*];
    - (f) fails to submit to a dam safety officer the emergency plan for the dam as and when required to do so under section 33 (1);
    - (g) fails to review or revise the emergency plan for the dam as and when required to do so under section 33 (2) (a);

- (h) fails to submit to a dam safety officer the applicable record in relation to a review of the emergency plan for the dam as and when required to do so under section 33 (2) (b);
  - (i) fails to deliver a record to a local emergency authority for the dam as and when required to do so under section 33 (2) (c).
- (2) An owner of a dam who does any of the following commits an offence:
- (a) fails to conduct a site surveillance of the dam as and when required to do so under section 36 (1) (a);
  - (b) fails to conduct a formal inspection of the dam as and when required to do so under section 36 (1) (b);
  - (c) fails to test the operation of mechanical components of the dam as and when required to do so under section 36 (2) (a);
  - (d) fails to test the operation of electrical or communication equipment relating to the dam as and when required to do so under section 36 (2) (b);
  - (e) fails to collect, analyze or interpret readings from instrumentation relating to the dam as and when required to do so under section 36 (3);
  - (f) fails to ensure that an engineering professional who has qualifications and experience as required under section 20 (1) [*dam safety review and report*] carries out a review of, and prepares a report on, the safety of the dam as and when required to do so under section 36 (4);
  - (g) fails to submit to a dam safety officer the report referred to in paragraph (f) as and when required to do so under section 36 (4).
- (3) A person who commits an offence under this section is liable on conviction to the following:
- (a) in the case of an offence that is not a continuing offence, a fine of not more than \$200 000 or imprisonment for not longer than 6 months, or both;
  - (b) in the case of a continuing offence, a fine of not more than \$200 000 for each day the offence is continued or imprisonment for not longer than 6 months, or both.

## SCHEDULE 1

*(sections 3 (1) and (2) and 31 (1))*

### DAM CLASSIFICATION

#### Definitions

**1** In this Schedule:

“**category**”, in relation to consequences of failure, means one of the following:

- (a) loss of life;
- (b) environmental and cultural values;
- (c) infrastructure and economics;

“**consequences of failure**” means losses or damages that are caused by a failure of a dam;

“failure”, in relation to a dam, means an uncontrolled release of all or part of the water impounded by the dam, whether or not caused by a collapse of the dam.

**Determination of classification**

- 2 (1) For the purposes of this regulation, the classification of a dam is to be determined in accordance with the following steps:
  - (a) for each category of consequences of failure in columns 3, 4 and 5 of the table, identify the losses or damages specified in the applicable column that most closely describe the losses or damages that are the most severe potential consequences of a failure of the dam;
  - (b) identify the dam failure consequences classification that is specified in column 1 of the table for the losses or damages referred to in paragraph (a) for each category;
  - (c) the dam failure consequences classification identified under paragraph (b) with the most severe potential consequences is the classification of the dam.
- (2) For the purposes of identifying the consequences of failure in column 3 of the table, the descriptions in column 2 of the table of the population of individuals that may be at risk if there were a failure of the dam are to be considered.

**Table**

Item	Column 1	Column 2	Column 3	Column 4	Column 5
	Dam failure consequences classification	Population at Risk	Consequences of Failure		
			Loss of life	Environmental and cultural values	Infrastructure and economics
1	low	none <sup>1</sup>	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
2	significant	temporary only <sup>2</sup>	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	low economic losses affecting limited infrastructure and residential buildings, public transportation or services or

Item	Column 1	Column 2	Column 3	Column 4	Column 5
	Dam failure consequences classification	Population at Risk	Consequences of Failure		
			Loss of life	Environmental and cultural values	Infrastructure and economics
				(d) sites having significant cultural value, and restoration or compensation in kind is highly possible	commercial facilities, or some destruction of or damage to locations used occasionally and irregularly for temporary purposes
3	high	permanent <sup>3</sup>	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
4	very high	permanent <sup>3</sup>	100 or fewer	significant loss or deterioration of (a) critical fisheries habitat or critical wildlife habitat, (b) rare or endangered species, (c) unique landscapes, or (d) sites having significant cultural value, and restoration or compensation in kind is possible but impractical	very high economic losses affecting important infrastructure, public transportation or services or commercial facilities, or some destruction of or some severe damage to residential areas

Item	Column 1	Column 2	Column 3	Column 4	Column 5
	Dam failure consequences classification	Population at Risk	Consequences of Failure		
			Loss of life	Environmental and cultural values	Infrastructure and economics
5	extreme	permanent <sup>3</sup>	more than 100	major loss or deterioration of (a) critical fisheries habitat or critical wildlife habitat, (b) rare or endangered species, (c) unique landscapes, or (d) sites having significant cultural value, and restoration or compensation in kind is impossible.	extremely high economic losses affecting critical infrastructure, public transportation or services or commercial facilities, or some destruction of or some severe damage to residential areas

- 1 There is no identifiable population at risk.
- 2 People are only occasionally and irregularly in the dam-breach inundation zone, for example stopping temporarily, passing through on transportation routes or participating in recreational activities.
- 3 The population at risk is ordinarily or regularly located in the dam-breach inundation zone, whether to live, work or recreate.

## 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**

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
<b>Requirements under Part 2</b>						
1	redetermine classification of dam and, if necessary submit to DSO written notice of proposed new classification	annually	annually	annually	annually	annually
<b>Requirements under Part 3</b>						
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 (a) mechanical components of dam, and (b) electrical and	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

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
	communi- cation equipment					
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