

# Memo



**TO:** Stephen May, Senior Manager, Facilities Management & Engineering Services

**FROM:** Ben Martin, P.Eng  
Senior Project Engineer, Facilities Management & Engineering Services

**DATE:** February 20, 2019 **FILE:** 16-1856

**SUBJECT:** **2018 ANNUAL DAM INSPECTION REPORT – GARDOM POND**

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In accordance with Provincial Dam Safety, attached is the annual 2018 dam inspection report for Gardom Pond Dam. Dam inspection was performed by CRD Engineering personnel, under the jurisdiction of CRD Parks and Environmental Services.

Please note that the 2017 outstanding items and recommended actions were:

1. Fill wheel ruts on the dam crest
2. Install a permanent staff gauge to monitor reservoir water level
3. Install a permanent staff gauge in the valve chamber at the downstream toe of the dam
4. Remove trees and brush along the extent of the spillway to 2 m either side
5. Stabilize sidewalls
6. Routine brushing required in spillway channel leading up to road culvert
7. Replace the 510mm CSP culvert under Gardom Lane

The Water License Holder's (WLH's), have collectively agreed to decommission the dam in the summer of 2019 and the CRD, as WLH, 1/6 Owner and appointed agent, is currently in the process of submitting the decommissioning application. Considering the pending decommissioning activity, in 2018 the CRD has completed only items 2 & 6 above.

Please contact the undersigned if you have any questions.

Regards,




Ben Martin, P.Eng.  
Senior Project Engineer  
Facilities Management & Engineering Services

Attachment(s): 2

CC: Joshua Frederick, Manager, Facilities Management & Engineering Services  
Steve May, Senior Manager, Facilities Management & Engineering Services  
John Chapman, Pender Island Parks & Recreation Commission

Personal information withheld under s.22 of FOIPPA



**2018 ANNUAL DAM INSPECTION REPORT  
GARDOM POND DAM**

- S** Satisfactory - Will fulfill intended purpose. No significant change since last inspection  
**F** Fair - Will fulfill intended purpose but maintenance is required  
**P** Poor - May not fulfill intended purpose. Repair or modification required  
**U** Unsatisfactory - Will not fulfill intended purpose. Repair or modification required  
**NI** Not Inspected - Give reasons under 'Remarks/Recommendations'

**CONDITION**

	S	F	P	U	NI	Remarks/Recommendations:
<b>1. Structure</b>						
a) Upstream Face of Dam - check for:						Brushing required near waterline. Unable to fully inspect embankment due to snow. No concerns observed at areas free of snow.
Cracking and Differential Movement					x	
Excessive Vegetation		x				
Signs of Deterioration					x	
b) Dam Crest - check for:						Driveway crosses dam with distinct wheel depressions.
Cracking and Differential Movement	x					
Signs of Wheel Depressions			x			
Signs of Deterioration	x					
c) Downstream Face of Dam - check for:						No seepage observed from RPID water box. No seepage observed on slope.
Seepage	x					
Subsidence	x					
Excessive Vegetation	x					
d) Areas Downstream of Dam - check for:						There is a 200mm drain pipe under a parking area directly downstream of the low level outlet indicating presence of seasonal water flow. Moist area observed downstream of dam.
Evidence of any abnormal development caused by seepage	x					
<b>2. Mechanical</b>						
Valve Chamber		x				Fully submerged valve chamber. Ground was quite wet directly below the valve chamber. Outlet gate valves were not operated.
Outlet Gate Valves and Pipe					x	
<b>3. Spillway - check for:</b>						
Visible signs of earth deterioration (cracking, subsidence, etc.)		x				Vegetation debris has been removed from the spillway channel during annual spillway maintenance. Vegetation remains along and adjacent the spillway channel banks.
Excessive Vegetation			x			

Dam Consequence Classification: HIGH


Date of Review: February 20, 2019

Gardom Pond Water Level: 0.7 m (85.968 m)

Name of Reviewer: Ben Martin, P.Eng

Valve Chamber Water Level: 48" water in chamber - fully submerged

  
Name

  
Date



**2018 DAM STATUS REPORT FORM  
FOR OWNERS OF HIGH, VERY HIGH & EXTREME CONSEQUENCE DAMS**

**OFFICE USE ONLY:**

*File Number:* D

*Dam Safety Officer:*

*Region:* HQ, VI, SR, KM, PN, NL, WL, PG

*Consequence:* AG, DA

**COMPLETED FORM MUST BE SUBMITTED BY FEBRUARY 1, 2019**

**By Mail:** Dam Safety Section, Water Management Branch  
Ministry of Forests, Lands and Natural Resource Operations, and Rural Development  
Please mail to the address located on the bottom of this page.

**Or By Fax:** 250-356-0605

**Or By email:** [dam.safety@gov.bc.ca](mailto:dam.safety@gov.bc.ca)

*Please fill in Dam Name, Failure Consequence Class, and contact information: name, address, phone # & e-mail below:*

**Dam Name:** Gardom Pond **Failure Consequence Class:** High

**Your Name:** Ben Martin, P.Eng

**Your Address:** 625 Fisgard Street, Victoria, BC V8W 2S6

**Phone number:** 250-360-3242

**E-mail address:** [bmartin@crd.bc.ca](mailto:bmartin@crd.bc.ca)

**Please read the information overleaf (page 2) before completing this form. For more information, see the Compliance and Enforcement section of our website: [www.gov.bc.ca/damsafety](http://www.gov.bc.ca/damsafety).**

1. Has your Formal Inspection for 2018 been completed? Yes  No   
Inspected By: Owner  Other  Who? Ben Martin (CRD Engineering)  
Comments:
2. Did you undertake *regular* (see page 2) Site Surveillance? Yes  No   
Comments:
3. Have any new dam safety concerns been identified this year (2018)? Yes  No   
If yes, please elaborate:
4. **If yes to #3:** Has a plan been prepared to address the safety concern(s)? Yes  No  N/A   
Comments:
5. In what year was your *Dam Safety Review* last carried out by a qualified Professional Engineer?  
2011 (Ryzuk) OR check box if no Dam Safety Review has ever been carried on the dam – NO  
DSR
6. In what year was your *Operation, Maintenance & Surveillance Manual* last updated? 2014
7. In what year was your *Dam Emergency Plan (DEP)* last updated? 2017
8. Did you submit the required information from your DEP to the local emergency authority?  
Yes  No
9. Is the emergency contact information in your DEP up-to-date? Yes  No
10. Has there been any land use development downstream of your dam in the last year that might affect the failure consequence classification? Yes  No  If Yes, please elaborate:

Additional comments or suggestions: Currently scheduled to decommissioning the dam in Summer 2019 - Application in progress

**Submitted by:** Ben Martin, P.Eng

**Date:** 20-Feb-19

**Position:** Engineer, CRD Environmental Engineering

**Phone:** 250-360-3242

**Email address:** [bmartin@crd.bc.ca](mailto:bmartin@crd.bc.ca)

**Water Management Branch**

4<sup>th</sup> Floor, 2957 Jutland Road, Victoria BC Tel (778) 698 7344 Fax (250) 356 0605

Mailing Address: PO Box 9340 STN PROV GOVT Victoria BC V8W 9M1

Website: <http://www.gov.bc.ca/damsafety>



## 2018 DAM STATUS REPORT FORM FOR OWNERS OF HIGH, VERY HIGH & EXTREME CONSEQUENCE DAMS

**(1) Formal Inspection** is defined in the Dam Safety Regulation (Regulation) as “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”. The [Inspection & Maintenance of Dams](#) manual is available on the Dam Safety website and a Dam Inspection & Maintenance course is available through the BC Water & Waste Association ([www.bcwwa.org](http://www.bcwwa.org)). Many dam owners hire an engineering consultant to inspect their dams, but this is not a requirement. The minimum frequency for formal inspections is annually for high and very-high consequence dams and semi-annually for extreme consequence dams. A formal inspection report must be recorded and kept by the dam owner and must be available for review by the Dam Safety Officer (DSO) on request.

**(2) Site Surveillance** is defined in the Regulation as “the monitoring of a dam and the area surrounding or adjacent to the dam through visual observation, and if there is instrumentation relating to the dam, through the systematic collection of instrumentation readings and analysis and interpretation of the readings”. Site surveillance is usually performed on a weekly basis for all high, very high and extreme consequence dams; see Schedule 2 of the Regulation for the minimum frequency of safety activities. Site surveillance may be conducted at a reduced frequency to suit seasonal conditions (e.g. snow cover); however, these conditions and the reduced frequency must be described in the dam’s Operation, Maintenance & Surveillance Manual\*.

**(3 & 4) Dam Safety Concerns:** The DSO is available to discuss any concern you may have about the safety of the dam and can assist you to determine the severity of an issue. A dam owner must report any potential safety hazard to a DSO. Please see section 14, *Hazardous conditions*, and section 15, *Potential safety hazard*, of the Regulation for further actions required by the dam owner.

**(5) Dam Safety Reviews (DSRs)** are comprehensive formal evaluations by a qualified engineer conducted every 10 years for high and very high consequence dams and every 7 years for extreme consequence dams to determine whether an existing dam meets current engineering standards. DSRs shall be carried out in accordance with the Regulation, APEGBC’s DSR Guideline and the Canadian Dam Association (CDA) Guideline. A link to the APEGBC’s DSR Guideline is available at [www.apeg.bc.ca](http://www.apeg.bc.ca). The CDA Guidelines can be purchased at [www.cda.ca](http://www.cda.ca).

**(6 & 7) Operation, Maintenance and Surveillance (OMS) Manual & Dam Emergency Plan (DEP) Requirements:** Dam owners are required to have an OMS manual and a DEP (formerly Emergency Preparedness Plan (EPP)). The OMS and DEP must be reviewed and updated at least every 7 years for very high and extreme consequence dams, and at least every 10 years for high consequence dams. For guidance on the information to submit to the local emergency authority, refer to the [Guide & Template for Preparing a Dam Emergency Plan \(DEP\) in British Columbia](#) available on the Dam Safety website.

**(9) Emergency Contact Information:** Dam owners are required to annually review and, if necessary, revise the emergency contact information in their DEP, and submit revised information to the DSO and to the local emergency authority.

**(10) Downstream Conditions:** Dam owners must review conditions downstream of their dams annually and notify the DSO if there are changes (e.g. land development) that might result in a change in the failure consequence classification of the dam (See Schedule 1 of the Regulation).

Dam owners must operate and maintain their dams in accordance with the *Water Sustainability Act* (WSA), the Regulation, any applicable authorization, and any order that is made under the WSA.

*\*Note: simplified versions of DEP and OMS for less complex dams may be acceptable (see templates in the Guidebook entitled [Inspection & Maintenance of Dams](#), available on the Dam Safety Website at: [www.gov.bc.ca/damsafety](http://www.gov.bc.ca/damsafety)).*



# Dam Safety Report Submission

Tracking Number: 100280631

## Dam Information

Is this Dam Report being reported for an Individual or Company/Organization?

Company/Organization

What is your relationship to the company/organization?

Employee

## COMPANY/ORGANIZATION CONTACT INFORMATION

Name: CRD  
 Doing Business As: CRD  
 Phone: 250-208-6697  
 Fax:  
 Email: bmartin@crd.bc.ca  
 BC Incorporation Number:  
 Extra Provincial Inc. No: Victoria  
 Society Number:  
 GST Registration Number:  
 Contact Name: Ben Martin  
 Mailing Address: 625 Fisgard Street  
 Victoria  
 Victoria BC V8W 2S6

## TECHNICAL INFORMATION

Please enter your Dam File Number before proceeding.

Dam File Number: D730149

The following dams are associated with this Dam File Number. Please select the dams upon which you will be reporting.

Selected	Dam
<input checked="" type="checkbox"/>	D730149-00 GARDOM POND

Is this Report Submission due to an Information Request? No

## ATTACHED DOCUMENTS

Document Type	Description	Filename
Dam Inspection Report	2018 Annual Dam Inspection Report & supporting internal memo	2018_GardomPond_AnnualDamIn.

## PRIVACY DECLARATION

PRIVACY NOTE FOR THE COLLECTION, USE AND DISCLOSURE OF PERSONAL INFORMATION Personal information is collected by FrontCounter BC under the legal authority of section 26 (c) and 21(1)(a)(i) of the Freedom of Information and Protection of Privacy Act (the Act). The collection, use, and disclosure of personal information is subject to the provisions of the Act. The personal information collected by FrontCounter BC will be used to process your inquiry or application(s). It may also be shared when strictly necessary with partner agencies that are also subject to the provisions of the Act. The personal information supplied in the application package may be used for referrals or notifications as required. Personal information may be used by FrontCounter BC for survey purposes. For more information regarding the collection, use, and/or disclosure of your personal information by FrontCounter BC, please contact FrontCounter BC at 1-877-855-3222 or at: FrontCounter BC Program Director FrontCounter BC, Provincial Operation 441 Columbia Street Kamloops, BC V2C 2T3

Check here to indicate that you have read and agree to the privacy declaration stated above.

# Dam Safety Report Submission (100280631)

1 2 3 4 5 6 7 Complete

## Dam Report Confirmation

Tracking Number: 100280631  
Application Type: Dam Safety Report Submission  
Submitted By: CRD  
Date Submitted: Feb 26, 2019

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PRODUCTION (HOST - Co)

## Ben Martin

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**From:** noreply@gov.bc.ca  
**Sent:** Thursday, February 21, 2019 4:56 PM  
**To:** Ben Martin  
**Subject:** REMINDER: 2018 Dam Status Reports due March 1, 2019  
**Attachments:** letter.pdf

Dear Ben Martin:

Please find attached a letter from the Comptroller of Water Rights reminding you to complete and submit the 2018 dam status report(s) for the following dams by **March 1, 2019**:

<b>Dam File Number</b>	<b>Dam Name</b>	<b>Failure Consequence Rating</b>
D730149-00	GARDOM POND	High

If you have recently submitted your report(s), please disregard this notice.

To complete your dam status report(s) online, click on the following Response URL and enter the job number and other information when prompted:

Response URL: <https://j200.gov.bc.ca/pub/vfcbc/Default.aspx?PossePresentation=Default&PosseObjectId=108326264>  
Job Number: **109054**

For more information and instructions on completing dam status reports please refer to the Compliance and Enforcement page of the Dam Safety Program website at [www.gov.bc.ca/damsafety](http://www.gov.bc.ca/damsafety).

If you require further assistance, contact Kevin Lee, Dam Safety Resource Specialist, at (604) 586-4442 or email to [dam.safety@gov.bc.ca](mailto:dam.safety@gov.bc.ca). To help us answer your questions, please provide the Job Number, Dam File Number(s) and Dam Name(s) in your query.

**BC Dam Safety Program**