



November 28, 2018

JEA File No. 89126 CRD File 16-1856

Capital Regional District  
625 Fisgard Street  
Victoria, BC  
V8W 1R7

Attn: Ben Martin, P. Eng.

**Re: Comments on Discharging Gardom Pond Through Lot 6**

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We understand that obtaining a Statutory Right of Way through the originally preferred drainage route (Lots 7 and 8) is proving difficult. Construction costs, along with obtaining SRW's, are becoming prohibitive. The CRD is considering the option of directing drainage from Gardom Pond through the existing dam and through Lot 6.

This is expected to include the following subject to MFNLR approval:

- We will assume that a culvert will be acceptable through the dam;
- Culvert slope may not be very steep as the low point at the downhill side of the dam is between 83 and 84m;
- Approximately 20m of new 1,000mm to 1,200mm diameter culvert through the existing dam, culvert approximately 2.6m cover;
- Pond Water Level may drop to minimum water level 83.9 (0.1m lower than previous design), maximum approximately 84.3m due to backup behind the culvert at high flows (this is just a guess at this point). A 1200mm box culvert would reduce the backup behind the culvert, and the present design pond level range could be maintained. Two smaller culverts may also work;
- Controlled inlet if a round culvert is installed, filling the lowest 300mm at the entrance with concrete to create a weir at a wide point in the culvert;
- SRW through Lot 6 and coordination with Waterworks SRW and other SRW holders as well as the lot owner;

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- **Expected relocation of septic field that will involve a wastewater practitioner. This is the first thing that should be resolved;**
- Consider piping the drain past the septic field with a high level overflow over the pipe if approvable;
- Riprapped ditch;
- Ditch flows would be significantly lower than would occur along the present drainage route as there is less upstream drainage area; and
- We could also consider a piped route with a riprapped overflow channel, and possibly a grassed channel. From the contours, there may already be a natural route for drainage to follow.

The benefits of the Lot 6 route over the original Lot 7/8 route may be:

- Less material excavation / stockpiling;
- It may be easier to get a Statutory Right-of-Way;
- Less watermain relocation although we do not show the existing services in this area;
- Shorter length of run to the ocean; and
- The culvert may dig out the existing drain through the dam.

The downside of the Lot 6 route may be:

- The trees to be removed may be more mature although we have not visited the site;
- The existing drainage from the pond does not presently follow this route;
- At this point, there would be additional costs for engineering, planning etc.; and
- The project may be delayed.

Yours truly,  
**JE Anderson & Associates**



Jim Buchanan, P. Eng.

JB/dlk