



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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November 8, 2019

CERTIFIED MAIL  
9489009000276066657413

Gary Long  
Reflection Lake Community Association  
37708 North Sheets Road  
Elk, WA 99009

Re: 2018 Periodic Inspection of the Reflection Lake South and North Dam  
DSO File: SP55-0050 & -0362

Dear Gary Long:

This letter transmits the completed report of our findings from the May 8, 2019 inspection of the Reflection Lake South and North Dam by the Dam Safety Office (DSO). The report provides a summary of the inspection and engineering analyses, as well as conclusions and required remedial actions for the dam.

Based on observations made during the inspection, the condition assessment of the dam is considered to be *Fair*. This condition assessment is in line with the system used by the National Inventory of Dams to classify dams with no existing dam safety deficiencies recognized for normal loading conditions.

Our investigation turned up the following maintenance, which will need to be addressed:

1. Provide elevation survey. In order to adequately evaluate the hydraulic capacity of the Reflection Lake outlets, an elevation survey of the outlet structures, including invert elevations will need to be performed by a licensed surveyor. Additionally, an elevation survey will be needed for the dam crests. It is also recommended that a permanent survey benchmark be placed on each dam.
2. Armor slope face of South Dam. The downstream slope face on the South Dam needs to be armored before any erosion or depressions occur.
3. Monitor seepage near left abutment of South Dam. There is a seepage area near the left abutment on the South Dam that produced standing water on the embankment. It is



Reflection Lake South and North Dam

November 8, 2019

Page 2

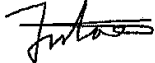
required to monitor this area periodically to determine if there are any significant changes on the amount of water and/or if signs of increased seepage such as bubbles or dirty water flow are present.

4. Monitor slumping area near left abutment of North Dam. We found a small slumping area near the left abutment on the North Dam. It is required to patch this area with fill materials and monitor periodically. The DSO should be notified with any signs of slump or depression.
5. Update the O&M manual. Please provide any necessary updates for the O&M document for this facility.
6. Update the EAP. Please provide an EAP document with current contacts and any other changes that have been applied.

Enclosed you will find our full report that describes the inspection and our conclusions in more detail.

I would like to thank you for your assistance and providing information about the dam during our inspection. If you have any questions regarding the inspection and/or these findings, please send me an e-mail at [jintae.lee@ecy.wa.gov](mailto:jintae.lee@ecy.wa.gov) or call me at (360) 407-7645.

Sincerely,



Jintae Lee, Ph.D., P.E.  
Dam Safety Office  
Water Resources Program

Enclosures: 2019 Periodic Inspection Report  
Dam Owner Annual Inspection Form