



Oregon

Theodore R. Kulongoski, Governor

Water Resources Department

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February 26, 2008

Rich Barstad, P.E.
Public Works Director
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RE: Dam Inspection February 20, 2008

Thank you again for hosting us for a dam inspection on February 20th. Mike McCord and Barry Norris were also at the inspection and I am integrating their comments made verbally in this document as well. In general the dam appeared sound and in good working order but there were several maintenance issues that I want to point out with this letter. These are listed as follows:

- On the upstream slope of the dam there was an outgrowth of Blackberrys (Figure 1). Woody shrubby vegetation can weaken the dams core by root action and their size and bulk can obscure problems. These should be removed in the near future. Notes about vegetation at other locations follow.
- On the crest of the dam one of the monitoring piezometers was exposed which may make it vulnerable to vandalism. The cover should be replaced for it.
- On the right abutment (facing downstream) there was far too much woody vegetation that should be removed.
- On the downstream face there were small trees growing on the dam that should be removed (Figure 2)
- At several locations around the dam the grass was allowed to grow so tall it obscured many features of the dam. The grass should remain mowed to a reasonable level.
- There was considerable floating debris and trash along the dams upstream face with a larger piece floating in the reservoir. Because the dam has no log boom, vigilance needs to be exercised in removing debris from the reservoir especially with longer/larger pieces of large woody debris. Larger pieces may interlock and partially clog the spillway. Because the spillway is wide small pieces less than half the width of the spillway are probably not a threat but the longer pieces may pose problems.
- The toe drains are monitored by the city two times per year. We would like to get a copy of the findings for the files.
- The valve sluice gate is normally cycled but it was unknown when it was last cycled. Please follow-up and let us know. It would be desirable to cycle twice a year and it was indicated that this was the plan but not verified at the time.
- On the left side of the spillway there was concrete spalling (Figure 3) there was also spalling on the right side of the spillway. There should be maintenance to fix these

problems. Especially the problems on the left side of the spillway. This is something observed in 2006 and not addressed.

- There was deflection of joints along the spillway (Figure 4) but in examining this picture in comparison to the others we took in the past we do not see any additional movement for a great deal of time based on examining past pictures. No action is necessary regarding this issue.
- We also saw seepage on the left abutment and through the normal drains near the toe area at the bottom of the dam Figure 5. In both cases flow was clear and these levels are similar to what has been observed during early spring inspections of the past. No action is necessary on this issue.
- We did not see much activity by burrowing animals. Since this dam has periodic infestations based on the inspection record, diligence in this area is needed but what ever is being done here is being effective at this time.
- Finally our form has a check off box regarding the status of the Emergency Action Plan (EAP). Silver Creek dam is a high hazard dam (in that if it ever failed rapidly it could create a great deal of downstream damage and loss of life). For high hazard dams, we require EAPs for new applications and aggressively try to get entities to create and maintain them for older dams. We have reviewed your recent draft EAP and want to provide any support and assistance possible to help you complete it. Also because of its close proximity to town we also continue to recommend an early warning system for this dam. Be aware that we are planning on sending out a letter offering EAP assistance grants for entities initiating or developing EAPs. Since this is a high priority dam, Silverton will have an excellent chance of getting one. Please be on the look out for this.

Because we have lapsed on inspections and there are a number of issues such as the spalling and vegetation issues on this dam, I would like to do a late summer inspection later this summer or in the early fall. We normally like to alternate the seasons but we have not done a late season inspection for several years. After this, hopefully we can get back to an annual schedule. Once again thanks for hosting the inspection and allowing us to comment and assist with your Emergency Action Plan development.

Sincerely;



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cc Barry Norris (OWRD)
Mike McCord (Watermaster, OWRD)

* Copy of field inspection form on file.



Figure 1. Vegetation on upstream face of dam.



Figure 2. Small trees growing on dam.



Figure 3. Spalling on dam spillway (left side facing downstream)



Figure 4. Joint movement in past but stable no movement when compared with other photos.



Figure 5. Seepage from toe drain (clear).