



July 11, 2011

Gerald Fisher, P.E., Public Works Director
City of Silverton
306 S Water Street
Silverton, OR 97381

Re: Silver Creek Dam S-66 – Inspection Summary

I inspected Silver Creek Dam with you on May 27, 2011. Ian Kintz-Stormo, an intern, assisted with this inspection. The Water Resources Department conducts these inspections to identify safety, maintenance or operational issues that may affect dam integrity. Dams are assigned a hazard rating based on downstream hazard to people and property, not on the condition of the dam. Silverton dam is classified as high hazard. We normally inspect high hazard dams on an annual basis.

Overall, the condition on the dam is similar to the found during the last inspection in February 2010. There are three few maintenance and operational issues that need some attention:

- 1) You observed the first issue with the plugged drain by the fish ladder, and you already directed maintenance action (shown below).



2) Another issue has been large woody debris collecting at the spillway. Although this was not an issue during this inspection (below), a plan to have an excavator remove debris during very high flows would be prudent. The photo does show that there is an area that can be easily improved for excavator access.



3) A third issue is maintenance and monitoring of peizometers and drains. I have reports on water levels until 2007, but have not seen an update since. It is very important to have working peizometers on the dam, with water level monitored on a periodic basis. The picture below shows the outlet works, where some of the drains are located.



Because of the still fairly high flow in Silver Creek, we were unable to inspect the base of the spillway and the scour of the plunge pool. I would like to have State Engineer Barry Norris re-inspect this area with me in the next couple of months. Barry has a lot more experience than me in spillway inspection and evaluation.



We use a standard inspection form for all dams, and a copy of the field inspection sheet for this dam is attached. Thanks again for meeting and inspecting the dam with me. Please let me know if you have any questions about this inspection, **and let me know when we can re-inspect the lower spillway area.**

Sincerely,

A handwritten signature in blue ink that reads "Keith Mills". The signature is written in a cursive, flowing style.

Keith Mills, Dam Safety Engineer
(503) 986-0840
Cell (541) 706-0849

C: Mike McCord, Watermaster District 16
Barry Norris, State Engineer
Dam Safety File



State of Oregon
 Water Resources Department
 725 Summer Street NE, Suite A
 Salem, Oregon 97301-1271
 (503) 986-0900

Dam Safety Inspection Form

Name of Dam or Reservoir: Silver Creek Dam Date: 5-27-11
 Permit/Certificate: R-5948 District: 16 NID #: OR-00622 File #: 5-66
 Height: 65 Storage: 2500 AF Photos: FILE Hazard (Check): Low Significant High
 Inspector(s): Mills Weather: partly cloudy, cool
 Prior Inspection Date: 2-19-10 Next Inspection Date 2012* Special Issues Req. Expedited Inspection: *Spillway only this summer plus drains

Rating Criteria: Observed Structural or Mechanical Condition or state of maintenance (see separate instructions on how to rate).
 5-Very Good/Praiseworthy; 4-Acceptable; 3-Unacceptable, should be addressed; 2-Serious issue; 1- Repair or replace, may cause dam failure

Component	Observation and Remarks	Rating
I. Primary Dam	Check Dam Type: <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> Rock Zoned <input type="checkbox"/> Concrete <input type="checkbox"/> Other Specify:	
Upstream Slope	Clean, low grass	4
Crest	clean, medium grass	4
Downstream Slope	clean, medium grass	4
Right Abutment	no sig seepage	4
Left Abutment	no sig seepage	4
Toe	OK	4
Auxiliary dam/dike?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, include on separate inspection form or use slashes	—
II. Reservoir	Pool Level/elevation: <u>3-6" over spillway</u> Point of Reference: <u>Spillway</u>	
Floating Debris/Trash	Need log boom or change to O/M plans for winter cleanup	3
Landslides/Erosion	No movement apparent	4
Log Boom	N/A	
III. Instrumentation	Flow Rate Water Level Description/Condition	
Toe Drains		drain on fishway plugged 3-*
Weirs/Flumes		No wier, flows similar to 2-19-10 in sp... 4
Monitoring wells		need new or repair existing 3
Other		

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IV. Primary Outlet		Check: <input checked="" type="checkbox"/> Manual	<input type="checkbox"/> Power Assist	<input checked="" type="checkbox"/> Other (Specify) <u>hand pump</u>	Rating
Trickle Tube	<u>NA</u>				<u>1</u>
Inlet Structure	<u>Submerged</u>				<u>1</u>
Outlet Structure	<u>good</u>				<u>4</u>
Control Works/Stem					<u>4</u>
Low Level Conduit	Diameter: <u>42" 18"</u>				<u>4</u>
Valve Sluice Gate	Date last fully cycled Month: <u>Nov</u> Year: <u>2010</u>				<u>4</u>
Trash Rack	<u>submerged</u>				<u>1</u>
Secondary outlet??	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If "Yes," include on separate inspection form.				<u>1</u>
V. Emergency Spillway		<input type="checkbox"/> Earthen/Sod	<input type="checkbox"/> Rock	<input checked="" type="checkbox"/> Concrete	Other (Specify)
Flashboards	<u>NA</u>				<u>1</u>
Control gate	<u>NA</u>				<u>1</u>
Approach Channel	<u>clean</u>				<u>4</u>
Discharge Channel	<u>submerged - re-inspect</u>				<u>*</u>
Stilling basin	<u>submerged - re-inspect</u>				<u>*</u>
Auxiliary Spillway??	Yes <input type="checkbox"/> No <input type="checkbox"/> If "Yes," include on separate inspection form or use slashes.				<u>1</u>
VI. Security					
Fencing, signage	<u>functional</u>				<u>4</u>
Vehicle access road	<u>cannot easily access most of dam without boat</u>				<u>3</u>
On Site Dam Tender/Contact	On site? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Name: _____				<u>1</u>
Emergency Plan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not required Updated <input type="checkbox"/> Yes <input type="checkbox"/> No Comments below:				<u>4</u>

Comments: