

SEAA 1323

**From:** Mike SILVA  
**To:** Rusty Aiken  
**Date:** 10/10/2012 1:50 PM  
**Subject:** Diversion inspection Oct 3 2012  
**Attachments:** EF Virgin 10 03 2012 028.jpg; EF Virgin 10 03 2012 023.jpg; EF Virgin 10 03 2012 024.jpg; EF Virgin 10 03 2012 025.jpg; EF Virgin 10 03 2012 026.jpg; EF Virgin 10 03 2012 027.jpg

Rusty, RE: SEAA 1323

On October 3, 2012, Jeff Medlin and I had a chance to inspect your diversion from the East Fork of the Virgin. We appreciate your willingness to comply with State Engineers Agency Action SEAA 1323.

As follow up, we are noting that you have installed concrete at the return to river diversion and armoring, along with installing a new culvert in concrete with a slide- pivot at the head of your ditch above your Parshall flume measuring device.

Although we accept work completed to date, the need for a substantial diversion at the point of diversion (POD) from the main stem of the river is still needed and required by state law. The current method involves the use of a tarp and wood boards to block the river flow entering a large culvert, enough to back the river enough to enter the canal. Previous inspections with this tarp in place concealed other problems that are now evident with the tarp removed. During the latest inspection, the diversion was not active, the tarp and board arrangement to block the culvert was removed. This revealed evidence of significant erosion and water piping around both sides of the culvert. This condition is advanced enough now that it to lead to eventual failure that will occur during high flows during future diversion practices employing the same means. Water is finding alternate paths around the culvert which is compromising the culvert function as evidenced by enlargement of erosional holes.

This condition does not constitute a substantial and reliable headgate control or suitable controlling works. If continued, the culvert will wash out and release a significant amount of soil into the running stream and render your diversion inoperable. The Division does not consider the current tarp method being used as a reliable or substantial headgate diversion or turnout that is easily managed by the Water Commissioner or other water users that you share turns with. This condition is not acceptable and requires repair and a suitable long term remedy.

As a follow up to the SEAA 1323, and to satisfy said requirements, the following conditions require repair prior to the start of next Irrigation season or the subject diversion will be restricted from diverting water during the 2012 irrigation season.

1) A suitable gate system must be installed in front of the culvert, whereby a gate can be raised or lowered as needed to divert water. This requires installation of a gate with a flow under or over check dam arrangement to be located in front of the culvert, as necessary to raise the water in the stream suitable to enter your ditch. This gate arrangement must be installed so that with little effort the gate can be raised or lowered by mechanical means.

2) Both sides of the large culvert must be protected from further erosion and the existing erosional channels must be completely filled in and repaired so that future soil washing will not occur. Recommendation is to install concrete wing walls in conjunction with the gate requirements, and completely backfill erosional channels. Also note that concrete may not be placed in a live stream and a Stream alteration permit may be required if work in the live stream is conducted. Suggest diverting stream water around the diversion or at upstream diversion point.

3) The spillway or outfall from the large culvert is eroding and head cutting upstream around same culvert. Spillway or culvert discharge requires armoring with large rock or Rip Rap. Water discharge from culvert must not be directed at bare soil or vegetative covered soil.

4) Entrance to Parshall flume has preferential flow conditions established and sediment collection that has settled in front of culvert must be removed to insure that uniform flow conditions are maintained into the

Parshall flume measuring device. Cleanings removed can be placed where more soil is needed on both sides of the Parshall flume, this prevents washing around sides.

Photos from the Inspection on 10/3/2012 are attached and may be sent in a separate email.

I suggest that this work be completed as soon as possible. The current low water and year reduced end of year flows makes it a preferable time to accomplish needed repairs. Please work with your neighboring water users to redirecting river flow while this work is being accomplished.

Please acknowledge receipt of this email, if needed I will also send written correspondence of the above by regular mail. If you have further questions, I can be reached at the contact information below.

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