



State of Idaho

DEPARTMENT OF WATER RESOURCES

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CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

April 21, 1995

Irvin Gilbert
Portneuf Marsh Valley Canal Co.
17535 So. Old Highway 91
Downey, ID 83234

Re: PMV Water Measurement Flume Staff Gage

Dear Mr. Gilbert:

Attached to this letter is a copy of correspondence to Arlin Olson dated April 21, 1995 concerning Portneuf Reservoir and water measurement accuracy of Portneuf-Marsh Valley's (PMV) ten foot Parshall flume located immediately below the reservoir.

I have asked Arlin to provide the McCammon Ditch Co. with bi-weekly readings of the reservoir levels and outflow during 1995. Arlin may be contacting you about reservoir contents as of April 15, 1995.

The McCammon Ditch Co. has raised some questions regarding Arlin's ability to accurately read the flume as well as his methodology of recording water levels and measurements for the flume. I believe Arlin has put forth his best effort to accurately measure and record water levels and flows at this site. However, I also believe that Arlin's ability to read the flume can be enhanced by replacing the existing staff gage with a new gage. I have not been to the flume in several years but I do recall that the numbers and lines on the gage had faded and were difficult to read. I also recall that there was no foot bridge or wooden boards across the flume that would allow for a closer view of the gage and the ability to clean the gage.

Due to the concerns which have been raised, IDWR requests that PMV complete one of the following options prior to the release of storage water in 1995:

- 1) replace the existing steel staff gage with a new steel gage and install a plank bridge across the flume so that the watermaster and IDWR staff can cross the flume in order to get a better reading of water level and provide for cleaning of the gage,
- 2) install a new gage on the west side of the flume (opposite of the present site) which may provide the watermaster with a better reading and ability to reach the gage, or
- 3) install a stilling well with a staff gage enclosed, on the west side of the flume, and replace the existing outside gage with a


new steel staff gage.

I have asked Arlin to contact you concerning his preferred gaging options and any necessary coordination for gage installation. I have informed Arlin that I will visit the flume site this season and check the accuracy of this device, as well as some others in the district. I will also review his measurement methodology and look for reported surging effects at this site. I will consider recommendations for flow reduction if PMV can not improve the staff gage problems at this site.

IDWR also recommends that PMV install a new staff gage at its' Parshall flume in the PMV canal if similar problems exist. I am advising the McCammon Ditch Company to inspect its' Parshall flume and consider installing new staff gages.

Thank you for your consideration of this matter and your cooperation.

Sincerely,


Tim Luke

cc: Arlin Olson
Harold Jones, IDWR