



State of Idaho  
DEPARTMENT OF WATER RESOURCES

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CECIL D. ANDRUS  
GOVERNOR

R. KEITH HIGGINSON  
DIRECTOR

April 21, 1995

Arlin Olson  
Watermaster, Water District 29  
PO Box 644  
Lava Hot Springs, ID 83246

Re: McCammon Ditch Company Request for Portneuf Reservoir  
Information and Measurement of Reservoir Outflow

Dear Arlin:

I received a call today from Howard Hall of the McCammon Ditch Company. Both he and Byron Allen have asked me to write you and ask if you can provide McCammon Ditch Co. with the following information for the Portneuf Reservoir (Portneuf-Marsh Valley Storage reservoir) in 1995 :

- 1) bi-weekly readings of reservoir levels (stilling well gage located inside of house at top of dam),
- 2) bi-weekly readings of reservoir outflow as measured through the ten foot Parshall flume immediately below the reservoir, and
- 3) reservoir level as of April 15, 1995.

I do not have any objection with this request and feel that you should provide the requested information. In regard to item 1 above, I would suggest that you provide both the inside stilling well water level reading and the outside steel staff gage reading.

For item 2, I believe McCammon just wanted a flow reading for each date you are reporting the reservoir readings. You may want to check with Mr. Hall and see if my understanding is correct.

As for item 3 above, I am not certain if you have a made reading for April 15 since you probably have not started your watermaster term of service or been appointed as watermaster by the Department. If you do have this information, please provide it to Mr. Hall or Mr. Allen. If you do not, please check with Portneuf-Marsh Valley Canal Co. (PMV) and try to obtain that data for McCammon.

In a related matter, Mr. Hall has also asked for some review of how the 10 foot Parshall flume below the reservoir is measured and recorded. Mr. Hall feels that the staff gage for this flume can not easily be read and is not accessible to you. He stated that the water level in the flume may often fluctuate and has

questioned whether your method of measuring the water level results in a measurement that is higher than the actual flow through the flume. He also suggested that PMV install a stilling well at this site.

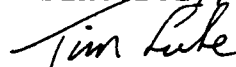
I agree with Mr. Hall that the staff gage on the reservoir outlet Parshall flume is difficult to read. Replacement of the gage and installation of a wooden plank foot bridge across the flume would assist you in reading the gage. I further agree that there would be a benefit by installing a stilling well at this flume. Given these concerns, I will send a letter to Irvin Gilbert of PMV asking that PMV install a new staff gage. In particular, I will ask that PMV do one of the following:

- 1) replace the existing staff gage with a new gage and install a plank bridge across the flume so that you can cross the flume in order to get a better reading of water level,
- 2) install a new gage on the west side of the flume (opposite of the present site) which may provide you with a better reading, or
- 3) install a stilling well on the west side of the flume with a staff gage and provide a new outside staff gage as outlined under either item 1 or item 2 above.

Since I have not been to the flume site with you in several years, it is difficult for me to comment on your method of measurement and/or the extent of water level fluctuation that occurs at this flume. Mr. Hall stated that the water level fluctuation is actually some sort of surging effect which may be gradual and cycle over several minutes or more. Although I do not want to discount this, I believe we would have detected a notable discrepancy in daily measurements if this is indeed a consistent occurrence. I believe that you have made the best possible effort to measure water accurately at this location.

Since a question has been raised about this flume, and because I still have concern as to why natural flow at McCammon increases after storage is shut off, I would like to visit the District this season and check the accuracy of both the PMV and McCammon flumes. I will contact you perhaps next month to arrange a time to make some field measurements.

Sincerely,



Tim Luke

cc: Irvin Gilbert  
Howard Hall  
Harold Jones, IDWR