

MEMORANDUM

TO: Karl Dreher, Director

THRU: Norm Young, Administrator

FROM: Tim Luke

DATE: 10/25/1996, Revised 7/2/1996 *TJL*

*? Should be  
-1997?*

RE: Little Canyon Creek Field Visit

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This memo summarizes my field visit to Little Canyon Creek on October 22. I have listed my observations and measurements in the table below. A more detailed narrative of my field investigation follows the table.

Diversion or Site	Flow
Morrow Reservoir Ditch at heading	0.94 cfs (47 inches)
Little Canyon Creek abv. Morrow Resrvr. Ditch	1.30 cfs (65 inches) (estimated)
Little Canyon Creek below Morrow Res. Ditch	1.30 - 0.94 = 0.36 cfs or approx. 18 inches
Little Canyon Ck. above Trail Res. Div Dam (immed. above and 2.2 miles above diversion dam)	0 cfs
Morrow Reservoir Ditch at road culvert near Trail Div. Dam.	0.94 cfs (47 inches)
Inflow to Morrow Reservoir	30 inches (estimated)
Outflow from Morrow Resrvr.	30 inches (estimated)
Little Canyon Ck. below Trail Res. Diversion Dam	0 cfs
Little Canyon Ck. at Smith-Blackwell Divs.	0 cfs

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On Tuesday, October 22, I traveled to Glenns Ferry and met for about 45 minutes with Dan Hall, watermaster of Little Canyon Creek. Following this meeting, I met with Carlene Smith as was arranged the prior day when the Smiths visited our office.

Dan Hall and I decided to meet before the 9 am meeting with Mrs. Smith because it was understood that Mrs. Smith and I would be looking at some diversions together in the field and that this would consume much of the day. Dan said his time would be limited that day and wanted to meet with me before my appointment with Mrs. Smith. I thought it was important to meet with Dan and inform him about my visit and activities.

Dan and I traveled together to look at the Morrow Reservoir, the Morrow Reservoir Ditch at the road culvert near the Trail Reservoir main diversion dam, the Trail Reservoir diversion dam and outlet gate structures, and the Trail Reservoir diversion ditch headgate. I also used my time with Dan to ask questions about the different diversions and water delivery on the creek.

After visiting with Dan, I met Mrs. Smith for our scheduled appointment. Mrs. Smith showed me the Smith's diversions on the creek and provided some explanation about her recent and past experiences with water delivery on the creek. Mrs. Smith identified four points of diversion from the creek, including three ditch diversions and one pump diversion. We discovered that the SRBA claim for Little Canyon Creek only identifies two points of diversions. I advised her that an amendment should be filed on her adjudication claim to include the other points of diversion.

I physically walked the diversion ditch which takes out of the creek at a point upstream of the Smith-Blackwell diversions. This ditch has no headgate structure. I also did not observe a measuring device but Mrs. Smith said she had recently removed a weir and showed me the weir location. It did appear that a weir had been installed at that particular location (about 100 yards below the ditch heading). From the upper ditch, I could see the other Smith-Blackwell ditches downstream, but I did not visit those ditch headings or walk any of those ditches and thus can not confirm the condition of any headgates or measuring devices etc.

From the lower diversions on the creek, Mrs. Smith and I went upstream to the heading of the Morrow Reservoir ditch. I current metered the ditch about 50 ft. below the headgate and measured a total diversion rate of 47 inches. I walked about the first 75 yards of the ditch and could not find a measuring device.

I observed that a small quantity of water was also going past the Morrow Ditch headgate and flowing downstream in the creek. I made two attempts at metering the creek above the headgate and had great difficulty finding a suitable location to measure. This part of the creek has many large boulders and pools which make measurement very difficult at low flows. The vegetation here and through much of the creek is also very dense, which further complicates measurement of the channel. I completed a measurement at one of the two sites but had problems with obtaining accurate velocity measurements, which would have made the total flow less than the ditch diversion. I therefore did not calculate my field notes and instead estimated the total creek flow to be about 65 inches.

Mrs. Smith and I then drove by the ditch downstream at the road culvert to observe the flow. We observed cattle in this area and Mrs. Smith confirmed that the cattle belonged to Blackwell, but she thought they had only been turned out in this area a few days prior to my visit. I then dropped Mrs. Smith off at her home as she needed to tend to other obligations. I went back to the Morrow ditch at the road culvert and current metered the ditch just downstream of the culvert. The flow measured at this point was also 47 inches, indicating no reach loss or gain between this point and the ditch heading. I also looked at Little Canyon Creek above the main Trail diversion dam and reservoir and found that there was no inflow into the diversion dam reservoir. I inspected the creek 2 miles upstream of the diversion dam and again found the creek bed to be dry.

The main Trail Reservoir diversion dam on Little Canyon Creek does contain storage water. The elevation of the pool however is below the elevation of the outlet gates which control flow to the creek downstream and the diversion to Trail Reservoir, and thus no flow was observed in the creek below the dam or the ditch to the reservoir. The headgate for this ditch was locked, but the gate was open about 1 foot. Dan Hall told me that both he and the owners of the Trail Reservoir have keys to this locked gate. Dan said that the Trail and Morrow Reservoir owners have keys to their ditch headgates so that they can regulate the water during the storage or non-irrigation season, which is after Dan's term of service as watermaster.

My final visit of the day was again to the Morrow Reservoir. I looked at both the inflow and outflow of the reservoir and estimated that the two flows were about the same. The flows appeared to be less than the ditch flow measured upstream at the road culvert (perhaps 20 to 30 inches). A very small and shallow pool of water was in the reservoir, which may have been water that could not be drained. I concluded that the small inflow was not being stored.

When I completed the metering of the Morrow Ditch heading with Mrs. Smith, but before calculating my field notes, I informed her that I thought the flow of the ditch was more than the 20 inch stock right authorized for delivery at this time, and that the flow of the creek was certainly more than 20 inches. I asked her what she wanted to do about any call for water given this information. She indicated that it was now too late in the season to do anything, that the weather had gotten cold and the ground had begun freezing. After my final visit to the Morrow Reservoir, I completed the calculation of my field notes and dropped by the Smith residence to tell Mr. and Mrs. Smith of the computed flows in the Morrow Ditch, plus my observations of the creek above the diversion dam. The Smiths again indicated at this time that they would not renew or pursue their call for water this late in the season. They did express concern about delivery for future seasons and the manner in which a futile call is determined.

Dan Hall called me by phone on October 23 and told me that there should have been a weir in the Morrow Ditch about 300 yards below the headgate. The headgate was locked at the time of my visit. Dan had told me that both he and Mr. Batreul have keys to the lock on this gate. Dan said he turned water down the ditch on September 27 in

response to a request for stockwater by Blackwell. He did not measure the flow using the ditch weir but believed the flow to be about 20 inches based on his past experience setting this headgate. When Dan called me on October 23, I asked him to explain again how he had last set the gate (i.e., length of gate stem/number of threads above the nut). Dan's description matched the setting which I had observed, thus indicating that the gate probably has not been adjusted since Dan's last adjustment. (Note: After my visit to the gate on 10/22, I thought that the gate may have been adjusted since Dan's first setting, but I apparently misunderstood Dan's description.)

Dan also told me that when he turned water down the Morrow Ditch on September 27, that he also opened or adjusted the outlet gate (the gate located on the west end of the reservoir) and turned down the creek whatever water he could from the main Trail diversion reservoir. He estimated this flow at about 150 inches. He believes that this water disappeared within a few days as the reservoir level fell below the elevation of the outlet gate.

#### Comments/Recommendations

- 1) Based on my field measurements of Morrow Ditch and observations of the creek at the Morrow Ditch heading and above the Trail diversion dam, ~~I believe that the estimated 65 inches of water in the creek~~ above the Morrow Ditch heading would have difficulty reaching the Trail diversion dam and below at this particular time. I can not conclude that water would not have reached the diversion dam during the latter half of September. However, the watermaster should limit diversions to authorized rates of flow to keep water in the stream to the extent possible.
- 2) I recommend that users not possess keys to storage reservoir ditch headgates prior to the date that storage water can be diverted. Only the watermaster should possess a key to these gates during the term of his service. The gates should remain locked and closed while the watermaster is on duty, unless there are natural flow rights which can be delivered at any time. After the watermaster completes his term of service, the users may have a key to control diversion of storage water during the storage season.
- 3) Some consideration should be given to fixing and/or using the Trail diversion dam gate located on the upstream side of the dam. This might help assure that small reservoir inflows would be by-passed through the dam, particularly at times when a futile call is being determined. My list of water rights shows a water right for this reservoir is a 1957 beneficial use claim for year round wildlife and recreational storage, and winter irrigation storage.
- 4) To assure proper delivery of natural flow rights below the Trail diversion dam, the water district and watermaster must rely on measuring devices or current meter measurements of reservoir inflow and outflow. Perhaps smaller temporary or portable measuring devices can be installed for the lower flows. If district members want to insist on properly delivery of low flows, then the district should budget for purchase of current metering equipment or other measuring

devices.

5) Futile Call Determination

The following should be considered when a holder of a junior water right seeks an out-of-priority delivery by asserting that it is futile to attempt delivery to a downstream senior right.

a) Water should not be turned out of the stream above the Trail diversion dam or to Trail Reservoir, if it would result in stopping an on-going delivery of water to a senior downstream right.

b) Using water stored at Trail diversion dam to maintain the flow to the downstream senior right in order to deliver water out-of-priority to an upstream junior right should not occur without the appropriate water right filings and an agreement with the downstream user.

c) The department and the watermaster should take flow measurements and assemble existing flow records needed to document the loss in the stream reach from the Morrow ditch diversion to the Trail diversion dam and in the stream reach from the Trail diversion dam to the Smith headgates under various climatic, seasonal, and other conditions to aid in determining whether the stream flow at the Morrow ditch heading is adequate to reach the Smith diversions in a useable amount. This data would then aid in determining whether it would be futile to turn off an upstream junior right to commence or re-establish delivery to the senior downstream rights.

cc: Carlene Smith  
Jim Allen, Watermaster  
Western Region