

REPORT ON
INVESTIGATION OF SEEPAGE LOSSES
LITTLE LOST RIVER

July 18, 19, and 20, 1922

By
F. A. Tolman

Copy

Boise, Idaho
July 26th, 1922.

Mr. W.G. Swendsen,
Commissioner of Reclamation,
Boise, Idaho

Dear Sir:

Acting upon orders from your office, I have made an investigation of the seepage and evaporation losses in the Little Lost River irrigated section, and find the following facts:

Dividing the system into three parts for convenience and accuracy of measurements, the investigation covers the Dry Creek Reservoir section belonging to the Blaine County Investment Company, which includes that section immediately above and below the reservoir; also the Wet Creek section which includes the section from the outlet of the Company's syphon, discharging into Corral Creek and Wet Creek above it's junction with Little Lost River.

And also the Little Lost River Section which includes the section from the junction of Wet Creek and Little Lost River to and including the bifurcation works at the head of the Blaine Canal, which conducts the Carey Act waters from the river to the Carey Act project.

Measurements were first taken upon the Wet Creek section disclosing the following quantities:

At the gaging station upon the Corral Creek section about 600 feet below the outlet of the wood pipe syphon the quantity was 61.64 second feet. The waters of Wet Creek were measured upon Squaw Creek and Wet Creek at the first available section above the junction the quantities being 3.33 second feet in Squaw Creek and 21.58 feet in Wet Creek, making the combined or total Wet Creek flow 24.91. Passing on down Wet Creek there was being diverted through the Mudd headgate, 3.25 second feet, through the Basinger headgate 2.61 and leakage through the Raymond structure of 1/10 second feet, making a total of 5.95 feet diversing. At the gaging station below these diversions, and situated a short distance above the junction with Little Lost River, the quantity remaining in Wet Creek was found to be 65.11 second feet. Summarizing this section, we have available at the syphon outlet 61.64. Adding the Wet Creek Waters of 24.91 gives a total at the head of the section of 86.55. The quantity of 65.11 found at the gaging station should be inc eased by the 5.95 which represents the diversions above. This gives a total of water available at the gaging station of 71.06 leaving a balance of 15.49 second feet, which represents the loss in this section. This represents a percentage 17.9.

In the river section, the head of said river section is considered as being the junction of Wet Creek with Little Lost River. At this point there was available 65.11 second feet at the Wet Creek gaging station, and 60.41 second feet at the

River gaging station, situated a short distance above Wet Creek. Additions to these quantities down the river were found to be as follows:

The contribution from Badger Creek was 1.44. The inflow from small springs upon Knollin ranch amounted to 3.7 second feet; that of Spring Creek taken a short distance above its confluence with Little Lost River was 29.48 and the Teeney Creek contribution was 2 second feet. Combining the 125.52 second feet at the head of the section with the total inflow of 36.62 gives a total in the river section of 162.14. From this amount, diversions were made as follows:

At the Williams Peck ditch, 6.47; at the Alous headgate, 2.32; Wynan's ditch .86; 2 Knollin headgates were diverting a total of 6.2 second feet, and the Holland ditch was receiving 13.42, a total diversion of 29.27. The quantity remaining in the river at the gaging station, a short distance above the headgate of the Blaine canal was 115.70 second feet. Deducting diversions from the total water available in the river, namely, 162.14, leaves a balance of 132.67 second feet. Deducting from this the amount available at the gaging station above the bifurcation works of 115.70, leaves a difference of 17.17 second feet, which represents the loss in the river section. This gives a percentage of 12.9.

Measurements in the reservoir section disclose as follows:

In the north fork of Dry Creek, a short distance above the reservoir, the quantity was found to be 33.70; the south fork of Dry Creek was measured a short distance above the reservoir and contributed 6.56 or a total inflow into the reservoir of 40.26 second feet. Passing below the reservoir down Dry Creek to supply the Taylor ranch, the quantity was measured near the bridge over the syphon and found to be 18.32 second feet. Deducting this from the quantity entering the reservoir, leaves a balance of 21.94 second feet of natural water available for the supply of other rights through the syphon.

Respectfully submitted,

FT-EP

/s/ Fred A. Tolman

CAREY ACT ENGINEER.

SUMMARY:

RESERVOIR SECTION

Inflow			
N. Fork Dry Creek	33.70 S.F.		
S. Fork Dry Creek	6.56 "		
Total	<u>40.26</u>	40.26	
· Passing below Reservoir to supply Taylor Ranch		<u>18.32</u>	
	Balance	<u>21.94</u>	

(available to supply other rights through syphon)

WET CREEK SECTION

At Syphon Outlet	61.65 S.F.	
Add Wet Creek	24.91	
Total	<u>86.55</u>	

At gaging station	65.11	
Diverted	5.95	
	<u>71.06</u>	

Deduct 71.06	71.06	
Less Wet Creek Section	<u>15.49 S.F.</u>	

Percentage Loss 17.9

RIVER SECTION

At mouth Wet Creek	125.52 S.F.	
Add inflow	36.62	
Total in river section	<u>162.14</u>	

Deduct Diversion	29.27	
net	<u>132.87</u>	

Available at Bifurcation		
Gaging Station	<u>115.70</u>	

Loss in River Section	17.17 S.F.	
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Percentage Loss 12.9 (10.6)