

July

Albuquerque, NM M., 1914.

Mr. W. M. Reed,  
Chief Engineer,  
Washington, D. C.

Dear Sir;

As a usual thing, as you know, there are very few rain storms in this section in June and the first week in July, but this year the summer storms began in May and have continued right through, and our work has suffered considerable damage in consequence.

The work in Moencopi Wash at Tuba has been overwhelmed and put out of sight and business several times. The first time was on the 1st of June, and the trenches were all cleaned out and concreting had just began. The work was protected by an earthen coffer dam, but the water passed over it all several feet deep and buried it all in mud. This was cleaned out, and the placing of concret just began again when there was another flood which went over everything, nine feet deep, and left the pits all filled with mud and debris again.

At Mesita Dam, on the 2d of July, when there had been no local rains, a wall of water several feet deep came down the stream and they did not have time to get all of the tools out before they were covered. The pile driver was tipped over and the leads broken off. About midnight on the third another flood much bigger, came down and finished the wrecking

- 2 -

of the driver. Work was commenced at once to put things in shape, but a flood of greater or less magnitude has come down practically once in each 24 hours since.

At the Hogback, a heavy local storm did considerable damage to the canal, by filling it with sand and gravel opposite each side arroya, and washed out the check that had been built in the arroya below flume No. 2, and cut the arroya back to within 100 feet of the flume.

On the 14th another heavy local rain occurred, but as there was no water in the canal and all the gates were open little damage was done other than putting in lots of sand and gravel at several points.

Great quantities of water came down the arroyas crossed by flumes No. 1 (the steel flume) and No. 2. The cutting of this latter arroya was carried back about 400 feet and as a result the highway bridge was undermined and collapsed, and one of the upstream piers of the center bent of the flume was undermined and tipped over. As these piers were 18 feet below the bed of the arroya it is plain that the cutting was deep.

I have just written Mr. Gersbach that the only way to repair this damage is to put the flume across this wash on a truss, unless he can suggest something better, and have directed him to send me details on which I can ask for bids on a light steel truss for this purpose, and at the same time for him to figure out what he can build and install a wooden deck truss for the same purpose.

Please advise me if you can see any other way out. By repairing the pier, the flume might last for years, and again,

the next shower might take it out.

The length of the flume is 80 feet, and I think the truss should be at least that long, for as the channel cuts deeper the banks are going to be so abrupt that they are liable to cave off at any time. Even with this length of truss, it may be necessary to put something in in the way of revetment to prevent the undermining of the bank. Possible put a paved or lined section in the arroyo to carry the water past the flume.

I should be glad of any suggestions from you.

Ritter reports rains every day from Zuni but there has been no damage there excepting that water has washed around several of the small structures there.

At Ganado no damage done, but the work delayed a little by the borrow pits filling with rain water.

By the way, at Tuba, where the annual rainfall is something less than 5 inches, the rainfall for the first 12 days of July amounted to 2.21 inches with 0.63 inches for June, the average for the past six years being respectively 1.19 and 0.29.

Very truly,

Superintendent of Irrigation.

Storms and  
Floods.

Albuquerque, N. M., July 25, 1914.

Mr. W. M. Reed,  
Chief Engineer,  
Washington, D. C.

Sir:

Supplemental to my letter of a few days ago relative to storms and high water in this District.

The reports of the Weather Bureau show that there has been the greatest rainfall over New Mexico ever recorded for the month of July, and the papers are full of washouts, storms and damage from the excessive rain fall.

It has been necessary to shut down the work in the Moencopi Wash at Tuba on account of the high water.

From Blackrock (Zuni) under the date of the 13th Mr. Ritter writes: "Yesterday nearly 2 inches of rain fell in a short time. Fortunately the shower was not wide spread but only in the vicinity of the camp at Blackrock. There was no breach made in the banks of the ditch at any point although the water was overtopping the banks of the same for at least one quarter of the distance from the first siphon to the second siphon. This overflowing water guttered the outside slopes of the down hill banks considerably and will necessitate considerable repair work and also to clean out the silt that has been washed in from the hillsides.

The roads near camp are in extremely bad shape and they will have to be repaired as soon as possible as they are almost impassible at present. The protective riprap at both siphons needs much more work as at both places a part has been swept away.

The spillway at the second siphon relieved the ditch of the excessive flood and but little damage was done below that point."

Under date of July 20, Mr. Gersbach writes from the Hogback Canal:

"On account of excessive rains up the valley which lasted from Friday evening to Sunday morning the San Juan River started to raise rapidly yesterday morning, so that by evening it had

reached a stage higher than it has been at any time this season. The force on the riprap repair work opposite Station 30 were at work this morning and two of the men were placing brush and rock when all of a sudden a series of extremely large sand waves hit the part of the work next to the road, heaved it up and then the next wave pulled it in the river and started it down stream. It was all done in about three seconds and the two men were fortunate in getting off of it. The loss represents about two weeks work. There is still some riprap left at this place and if the river goes down soon it may not eat into the bank. Will endeavor to stop it as much as possible with the material and present force available.

I am informed that at about 2 P. M. yesterday the river started across the high-water channel just west of the lake at Shiprock Indian School and today fully two-thirds of the water in the river is flowing through this new channel."

We are still having daily showers all over the State, and in most directions the roads are practically impassible for freight teams and heavy loads I am informed.

Very truly,

Superintendent of Irrigation.