

Glenwood Springs, Colorado

1946

November 30, 1946

Mr. M. C. Hinderlider

State Engineer

Denver, Colorado

Dear Sir:

In compliance with the provisions of law, I transmit herewith my annual report as Division Engineer for Irrigation Division No. 5 for the year ending November 30, 1946.

Crops on the whole, were average in this Division with the exception of Water District No. 70 and the west end of Water District No. 45 where crops were far below average, due to the extreme shortage of irrigation water. Precipitation during October and November was very heavy, delaying harvest for about 20 days; but the moisture was very beneficial to winter wheat, ranges, and water storage.

It was necessary to give considerable attention to the administration of the Colorado River during August, September and October. On August 10th the demand flow from the Colorado River in the Grand Junction-Palisade district was 1400 second feet, whereas the flow in the river at that time was 1200 second feet. On August 12th, the Twin Lakes Diversion Tunnel was shut down and 100 Second feet turned out of the City of Denver Reservoir on the Williams Fork River to compensate for trans-mountain diversions then being made by the City of Denver.

By August 16th rains on the upper Colorado had again brought the river up to a point where the Twin Lakes Tunnel could be turned on and the City of Denver Reservoir shut off.

On September 14th the River had dropped to 1295 Second feet and again 100 Second feet were turned from the Williams Fork Reservoir; Twin Lakes Tunnel was not turned off at this time.

CLIMATOLOGICAL DATA

On May 1, an unusually heavy frost caused severe damage to the fruit area between Grand Valley and Glenwood Springs,; losses to apples and peaches ranged up to 50 per cent; apricots and cherries, 75 per cent; and berries as much as 90 per cent.

On May 10th hailstones ranging in size from one-fourth to one-half inch in diameter caused a 25 per cent loss to the peach crop and considerable damage to other fruit and truck gardens in the Fruitvale, Clifton and Orchard Mesa sections. It was estimated that this one storm caused a million dollar loss.

Precipitation ^{for} ~~from~~ the month of June was somewhat below the average, with July, August, and September above the average.

The following table gives the temperatures and precipitations as recorded at Rifle, Elevation 5,300; and Glenwood Springs, Elevation 5,823.

RIFLE

	May	June	July	Aug.	Sept.		
Maximum Temp.	79	93	79	98	90		
Minimum Temp.	27	40	47	46	26		
Precipitation						Total	Total
1946	1.73	0.65	0.65	2.25	0.51	5.79	
1945	1.22	1.40	0.75	0.65	0.32	4.34	
1944	0.30	0.66	0.99	0.29	0.07	2.31	
1943	1.78	1.50	0.39	2.53	0.53	6.73	
1942	0.35	0.20	1.27	0.43	0.57	2.82	416.20 4.05

GLENWOOD SPRINGS

Maximum Temp.	80	94	97	99	93		
Minimum Temp	25	37	45	48	26		
Precipitation							
1946	2.03	0.74	1.16	1.91	0.46	6.30	
1945	2.57	1.03	0.44	3.28	0.61	7.93	
1944	2.29	1.61	1.14	0.56	0.07	5.67	
1943	3.02	2.86	2.09	4.36	1.74	14.07	
1942	0.74	0.38	2.20	0.79	0.52	4.63	4132.30 8.08

SNOW REPORT

By February 1, 1946, ~~the~~ snow cover over the headwaters of the Colorado River and its tributaries was much improved over that of February 1, 1945. The water content was 9.1 inches in comparison with last year's 5.7 inches and the 11-year average content for February 1, of 7.8 inches. By March 1, the water content stood at 10.1 inches as compared with 9.7 inches on March 1, 1945 and was slightly below the 11 year average. By April 1, the water content was 12.1 inches as compared with 11.8 inches on April 1, 1945. The irrigation water supply outlook for the Colorado River was fairly good at this time with ~~the~~ runoff of the Colorado River expected to be slightly under normal. Lack of April snowfall and the fact that the spring runoff started in April, two weeks earlier than usual made the May 1 snow readings low. The snow reports in the last ten years, on May 1 readings have never shown any snow. This year 7 of the 23 stations reported no snow. It was apparent by May 1, the prospect for runoff would be about two-thirds of the average with all tributaries ~~to be~~ very low in late summer.

The following table shows the average snow depth and water content of 23 snow courses in the Colorado River Drainage Basin within Irrigation Division No. 5 for the years 1941, 1942, 1943, 1944, 1945, and 1946 for the first of February, March, April, and May; also the average for the period of record.

AVERAGE SNOW DEPTH

	1941	1942	1943	1944	1945	1946	Average
Feb.	28.0	32.6	39.8	24.6	29.0	37.4	33.8
Mar.	35.1	41.9	44.9	28.3	38.1	38.2	39.8
Apr.	32.8	38.7	46.6	45.1	43.7	38.4	44.3
May	37.3	45.5	18.0	40.5	41.2	15.2	32.2

AVERAGE WATER CONTENT

	1941	1942	1943	1944	1945	1946	Average
Feb.	5.5	6.9	9.5	4.6	5.7	9.1	7.6
Mar.	8.3	10.0	12.0	6.8	9.7	10.1	10.3
Apr.	11.4	13.2	14.5	10.6	13.2	11.4	13.3
May	7.8	13.5	13.5	7.0	14.5	5.4	11.2

TRANS-MOUNTAIN DIVERSIONS

Following is a report of the Trans-Mountain Diversions from Division No.5 to Division No.1 and Division No.2 for the irrigation season:

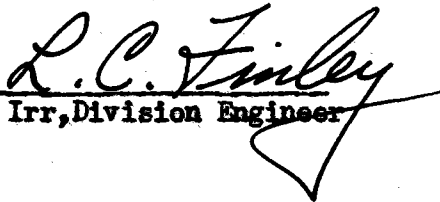
TO DIVISION No.1Y

Eureka	<u>154</u>	Acre Feet
Grand River	<u>18,937</u>	Acre Feet
Berthoud	<u>397</u>	Acre Feet
Jones Pass	<u>10,957</u>	Acre Feet
Moffat Tunnel	<u>51,984</u>	Acre Feet
East Hoosier	<u>0</u>	Acre Feet
West Hoosier	<u>0</u>	Acre Feet
Boreas Pass	<u>0</u>	Acre Feet
TOTAL	<u>62,429</u>	Acre Feet

TO DIVISION No. 2

Twin Lakes Tunnel	<u>38,996</u> Acre Feet
Busk Ivanhoe Tunnel	<u>4,651</u> Acre Feet
Ewing Ditch	<u>972</u> Acre Feet
Wurtz Ditch	<u>2,204</u> Acre Feet
Columbine Ditch	<u>1,265</u> Acre Feet
Fremont Pass Ditch	<u>0</u> Acre Feet
TOTAL	48,088 Acre Feet
Grand Total	110,517 Acre Feet

Yours very truly,


R. C. Finley
Irr, Division Engineer

TABULATED STATEMENT OF WATER COMMISSIONERS ANNUAL DITCH REPORTS FOR
IRRIGATION SEASON OF 1946 IRRIGATION DIVISION No.5

District No.	No of Ditches Reported	First Day Water was used	Last Day Water was used	Average No. of Days Water was used	Average Daily Amt. Diverted In Sec.Ft.	No. of Acre Ft. Used from Stream
36	...	.....	.....	...	.....	.....
37	218	May 15	Nov.1	169	950	241,925
38	117	Apr.15	Oct.15	183	835	196,826
39	128	Mar.1	Oct.31	245	364	149,820
45	85	Apr.1	Oct.1	183	271	42,504
50	...	.....	;;;...	...	.....	.....
51	...	.....	.....	...	.....	.....
52	65	Apr.20	Oct.1	163	89	9,089
53	30	May 1	Oct.31	184	135	44,354
70	<u>62</u>	<u>Mar.15</u>	<u>Oct.28</u>	<u>227</u>	<u>56</u>	<u>15,432</u>
TOTALS	705	Mar.1	Nov.1	245	2,700	699,950

District No.	No of Acres that can be Irrigated	Alfalfa	Natural Grasses	Cereals	Orchards	Market Gardens
36	11,500	.....	.....	.....	.....	...
37	25,514	11,468	9,229	3,664	.....	75
38	32,829	18,150	5,835	5,650	.....	30
39	26,296	10,749	3,040	3,954	488	248
45	10,600	14,805	4,588	4,242	616	17
50	21,400	.....	.....	.....	.....	...
51	41,100	.....	.....	.....	.....	...
52	6,110	984	2,409	61	.....	...
53	10,057	2,445	6,952	295	.....	...
70	<u>17,880</u>	<u>4,658</u>	<u>2,217</u>	<u>1,119</u>	<u>6</u>	<u>...</u>
TOTALS	203,286	63,259	34,270	18,985	1,110	370

DISTRICT NO	Potatoes	Sugar Beets	Beans	Peas	Other Crops	Total Irrigated
56	.....	.....	...	...	...	8,400
57	1,259	.....	...	276	...	25,971
58	3,164	.....	...	...	...	32,829
59	1,226	1,061	...	...	...	20,766
45	149	12	...	...	...	24,429
50	.....	.....	...	...	...	9,100
51	.....	.....	...	...	...	22,180
52	2	.....	...	...	...	3,456
53	10	.....	...	...	280	9,982
70	38	.....	...	...	4	8,042
TOTALS	5,848	1,073	...	276	284	165,155