

1747

Glenwood Springs, Colorado

November 30, 1947

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, 1947.

Numerous small irrigation construction projects have been built this season, consisting mainly of new headgates, diversion dams, measuring flumes and pipe lines. Many more small projects are planned for early spring if materials can be obtained. Two small earth dams will be completed in the spring: one the O.Z. Reservoir on Brush Creek in Water District No.37 and the other Crooked Creek Reservoir on Crooked Creek in Water District No.38. With the exception of the Colorado River Big Thompson project no other major construction is being carried on in the Division at this time.

Administration of the Colorado River was somewhat simpler this year due mostly to the continued high runoff of the Roaring Fork River which empties into the Colorado River below

Glenwood Springs thus maintaining an above normal runoff late in the season and therefore no irrigation shortage occurred in the Grand Junction-Palisade area. However, it was necessary to hold the Public Service Co. Plant at Shoshone at changing minimum discharges depending on the discharge of the Roaring Fork River and the irrigation demand in the Grand Junction-Palisade area.

Shadow Mountain Lake was filled for the first time this year. On October 18th at 8:00 A.M. the Bureau of Reclamation started the release of water from Shadow Mountain Lake at the rate of 500 Second Feet in order to lower the elevation of the water in the lake so that a study of the ground water elevations could be made. Releases were shut down to natural flow at 8:00 A.M., October 31.

Water was released from Williams Fork Reservoir into the Colorado River on November 1 at 9:00 A.M. and continued to flow until November 22 during which time 6,382 Acre Feet ~~was~~ released with 237 Acre Feet being retained in storage. The above run was to the benefit of the Public Service Co. as there was no need for this water for irrigation this season.

The Green Mountain Reservoir was again filled to capacity this season, but it was unnecessary to release any for irrigation as replacement for diversions by the Adams Tunnel; consequently this water will all be used for power purposes.

The Adams Diversion Tunnel, a part of the Colorado River Big Thompson project, was used this season for the first time, diverting a total of 4,610 acre feet for the season. A maximum flow of 191.2 second feet was diverted at one time.

Precipitation was well distributed throughout the growing season with more than normal rainfall in June. Low temperatures during the latter half of May and unseasonably cold weather during the middle of June retarded the growth and made the growing season about two weeks later than usual.

Native and Alfalfa hay was very good this year; much of the first cutting was damaged by rain, but the moisture did much more good than harm by making a good second cutting.

Cereals on both irrigated and dry land made big yields due mostly to good rains during June.

Sugar beet yield has been very high possibly, the biggest yield per acre this division has ever produced.

Potatoe yield has been below normal this year probably due to the late cold spring.

The peach crop was the third largest on record. The pear and cherry crop was much better than the 1946 season and possibly the largest crops ever harvested.

Due to the increased rain fall, ranges were in better condition this season than in the past several years. Cattle were in excellent condition this fall and more than the usual number were shipped to market. There has been considerable controversy between the Forest Service and the Stockmen over a proposed 30 per cent reduction in range permits as proposed by the Forest Service.

ADMINISTRATION COSTS

Cost of administration of Division No.5 for the year 1947 was \$8,392.00 This includes salaries of all commissioners and their deputies, 133,579 acres were irrigated at a cost of 0.06 cents per acre for services of water commissioners and deputies.

DISTRICT No.	ACRES IRRIGATED	COMMISSIONERS FEES	DEPUTIES FEES	TOTAL
37	25,966	\$1,195.00		\$1,195.00
38	32,784	945.00		945.00
39	20,761	1,887.00		1,887.00
45	25,420	968.00	\$1,431.00	2,399.00
50	9,100	290.00		290.00
53	11,570	264.00		264.00
70	7,978	1,412.00		1,412.00
Totals	<u>133,579</u>	<u>\$6961.00</u>	<u>\$1,431.00</u>	<u>\$8,392.00</u>

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

<u>RIFLE</u>						
	May	June	July	Aug.	Sept.	
Maximum Temp.	89	91	100	97	*	
Minimum Temp.	31	32	40	46	*	
Precipitation						Total
1947	0.66	1.60	1.25	.98	*	
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

<u>GLENWOOD SPRINGS</u>						
	May	June	July	Aug.	Sept.	
Maximum Temp.	92	92	98	98	97	
Minimum Temp.	32	32	39	45	33	
Precipitation						Total
1947	1.12	2.74	6.61	0.78	0.88	6.13
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

SNOW REPORT

The following table shows the average snow depth and water content of 21 snow courses in the Colorado River Drainage Basin within Irrigation Division No.5 for the years 1943,1944,1945,1946,and 1947 for the first of February, March, April, and May; also the average for the past twelve years.

AVERAGE SNOW DEPTH

	1943	1944	1945	1946	1947	12 year Average
Feb.	39.8	24.6	29.0	37.4	36.6	35.0
Mar.	44.9	28.3	38.1	38.2	52.2	44.0
Apr.	46.6	45.1	43.7	38.4	52.7	46.5
May	18.0	40.5	41.2	16.9	45.8	35.6

AVERAGE WATER CONTENT

Feb.	9.5	4.6	5.7	9.1	8.5	7.7
Mar.	12.0	6.8	9.7	10.3	12.0	10.9
Apr.	14.5	10.6	13.2	11.6	16.2	14.0
May	13.5	7.0	14.5	6.1	16.8	12.6

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.1

Adams Tunnel	4,610	Acre Feet
Grand River	25,000	Acre Feet
Berthoud	165	Acre Feet
Eureka	175	Acre Feet
Jones Pass	2,070	Acre Feet
Moffat Tunnel	25,272	Acre Feet
East Hoosier	0	Acre Feet
West Hoosier	0	Acre Feet
Boreas Pass	0	Acre Feet
TOTAL	<u>57,292</u>	Acre Feet



TO DIVISION No.2

Twin Lakes Tunnel	38,904	Acre Feet
Busk Ivanhoe Tunnel	1,910	Acre Feet
Ewing Ditch	1,374	Acre Feet
Wurtz Ditch	2,902	Acre Feet
Columbine Ditch	0	Acre Feet
Fremont Pass Ditch	0	Acre Feet
Total	45,090	Acre Feet
Grand Total	102,382	Acre Feet

Yours very truly,

*L. C. Finley*  
Irr. Division Engineer  
Division No. 5

TABULATION OF WATER COMMISSIONER'S ANNUAL DITCH REPORTS FOR  
IRRIGATION SEASON OF 1947 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	210	May 15	Nov. 1	169	809.6	252,355
38	116	Apr.15	Oct.1	168	881.1	208,784
39	127	Apr. 1	Nov.1	214	378.1	153,420
45	102	Apr.15	Nov.30	229	334.6	56,868
50	...	.....	.....	...	.....	.....
51	...	.....	.....	...	.....	.....
52	...	.....	.....	...	.....	.....
53	27	May. 1	Oct.31	184	138.3	44,492
70	62	Apr. 1	Oct.31	214	128.7	35,747
<b>TOTALS</b>	<u>644</u>	<u>Apr.1</u>	<u>Nov.30</u>	<u>234</u>	<u>2,670.5</u>	<u>751,666</u>

District No.	No of Acres that can be Irrigated	Alfalfa	Natural Grasses	Cereals	Orchards	Market Gardens
36	11,500	.....	.....	.....	.....	...
37	26,540	11,631	8,875	3,886	.....	25
38	32,784	19,640	5,089	5,765	.....	20
39	26,148	10,749	3,070	3,971	489	260
45	<del>10,600</del> 10,600	14,994	5,150	4,342	590	21
50	21,400	.....	.....	.....	...	...
51	41,100	.....	.....	.....	...	...
52	7,000	.....	.....	.....	...	...
53	11,565	2,525	4,435	385	...	...
70	18,425	4,191	2,416	1,271	12	...
<b>TOTALS</b>	<u>207,026</u>	<u>63,730</u>	<u>29,035</u>	<u>19,620</u>	<u>1,091</u>	<u>326</u>

District No.	Potatoes	Sugar Beets	Beans	Peas	Other Crops	Pasture	Total Irrigated
36	.....	.....	...	...	...		8,400
37	1,237	.....	...	312	...		25,966
38	2,270	.....	...	...	...		32,784
39	1,166	1,056	...	...	...		20,761
45	163	100	...	...	60		25,420
50	.....	.....	...	...	...		9,100
51	.....	.....	...	...	...		22,180
52	.....	.....	...	...	...		4,000
53	15	315	...	...	315	3,895	11,570
70	21		15		52		7,978
<b>TOTALS</b>	<u>4,872</u>	<u>1,156</u>	<u>15</u>	<u>312</u>	<u>427</u>	<u>3,895</u>	<u>168,159</u>