1957

STATE OF COLORADO

DIVISION OF WATER RESOURCES
Irrigation Division No. 5
Glenwood Springs, Colorado
January 6, 1958

L. L. FINLEY
Division Engineer

SUBJECT:

Mr. J. E. Whitten
State Engineer
State Capitol Building
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, 1957.

The past season is the first time I have seen, in my 20 years as Irrigation Division Engineer, adequate water supply for all irrigated areas in Irrigation Division No. 5. Water supply changed from fair to far above normal during April and May when snow pack increased up to 300 percent of normal; cool temperatures during May and June resulted in delayed melt which was extremely favorable for a long period of runoff which, if such had not been the case, would have resulted in much worse flood damage. The flow of the Roaring Fork River at Glenwood Springs reflects the general stream flow for most streams in Division No. 5 for the past season; it set a new record the first day of July; gauge height was 18.65 at peak and discharge was 19,350 second feet. Flow during the water year ending September 30 was 1,515,800 acre-feet, which is third highest of record. The 1914 water year total was high with 1,837,000 acre-feet, and 1912 was second with 1,598,000 acre-feet.

The City of Denver's Jones Pass Tunnel diversion was turned on July 6, 1957

and was turned off on August 1. This turn-off was due to lack of need and reservoir storage space available. There were 4,636 acre-feet diverted during this period of time.

It was impossible to store any water in the Williams Fork Reservoir this year because of construction work on the enlargement of the present dam.

The Moffat Tunnel diversion was turned on April 16 to June 10; off from June 10 to June 25; on from June 25 to October 1, when it was turned off for the season. There were 47,248 acre-feet diverted during this period of time.

On October 1, stream flow at Shoshone had dropped below 1,408 second-feet, although full replacement for the Big Thompson Project was being made at Green Mountain Reservoir. All transmountain diversions except Denver's Moffat Tunnel had been closed by this time.

As there was no replacement water available for release from the Williams Fork Reservoir, it was necessary to close the Moffat Tunnel Diversion. This was the first time the Moffat Tunnel had ever been closed in order to satisfy senior West Slope rights. Other years, Williams Fork Reservoir water had been released in compensation instead of closing the diversion.

Minimum storage of 27,354 acre-feet was reached in Green Mountain Reservoir on May 24. Maximum storage of 154,645 acre-feet was reached on July 7 and the Reservoir spilled and continued to spill until August 8. Storage allocations for 1957, based on July 7 figures, were as follows:

Storage - Acre-feet	Remarks
154,645	Total Storage - July 7
7,757	Dead Storage
146,888	Active Storage
52,000	Total Replacement Pool
94,888	Total Power Pool Storage

As noted before, stream flow did not drop to 1,408 second feet at Shoshone until October 1, whereas in 1956 it had dropped to 1,408 second feet on July 18.

It was unnecessary to make any releases from the Power Pool at Green Mountain Reservoir for irrigation use in Western Colorado this season, whereas last season 67,606 acre-feet were released.

Minimum storage of 99,643 acre-feet was reached in Granby Reservoir on April 30. Maximum storage of 470,855 acre-feet was reached on September 8. There was no water pumped from Granby Reservoir from May 2 to September 13.

Because the unusually wet year reduced the need for Big Thompson water for Irrigation in Eastern Colorado, Horsetooth Reservoir and Carter Lake still have considerable water left in storage, so the water that may be pumped from Granby Reservoir and stored in these two East Slope reservoirs is very limited. If it is possible to find as much as 150,000 acre-feet of storage space in Eastern Colorado for Granby Reservoir water, it would only reduce storage in Granby Reservoir to about 295,000 acre-feet.

If next season's runoff should equal this season's, it would mean that Granby would fill and some 100,000 acre-feet or more would go over the spillway. If this happens it will be the first time that Granby Reservoir has ever spilled,—something that many people thought never would happen. The above would make it appear that more East Slope storage for Colorado Big Thompson trans-mountain water is needed.

The hay crop this season is one of the largest ever produced. Prices for hay are low due to the large supply, but after the pasture season ends the prices for hay will increase.

In the past two years more sugar beets have been raised in the Rifle area than in previous years. Only about one-third of the crop was harvested due to wet conditions of the fields.

Dry-land wheat and irrigated cereals made excellent yields.

Potatoes made an average yield. The acreage has increased in the past few years.

A late, cold spring resulted in a fair production of fruit. Hail storms damaged fruit in some areas.

The outlook for the 1958 season is more favorable than in many years. With much above-normal carryover storage, mountain soils are relatively wet in direct contrast to recent years. Ground water levels have been brought back to about normal, snow pack in the mountains is above normal for this time of year, and with an average snow pack during the 1957-58 winter season, water supplies for next season should be very good. However, if the winter precipitation is above normal, flood conditions will be very bad next spring.

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	195,200	Acre Feet
Grand River	16,060	" "
Berthoud	568	" "
Eureka	124	" "
Williams Fork Tunnel	4,540	" "
Moffat Tunnel	48,180	" "
Colorado Springs, Hoosier Pass	7,110	" "
Boreas Pass	475	" "
Total	272,257	" "

TO DIVISION NO. 2

Twin Lakes Tunnel	33680	Acre Feet
Busk -Ivanhoe Tunnel	5500	" "
Ewing Ditch	1340	" "
Wurtz Ditch	2620	" "
Columbine Ditch	1120	" "
Fremount Pass Ditch	0	" "
Total	44,260	" "
Grand Total	316,517	" "

Yours very truly,

L. L. Finley

Division Engineer
Division No.5

District No.	No. of Ditches Reported	First Day Water Was Used	Last Day Water Was Used	Average Daily Amount Diverted in Sec.Ft.	No. of Acre Feet Used from Stream	No. of Acres that are Irrigated
36	...	.....	.....	.....	.....	.....
37	205	5-18-57	10- 9-57	650.1	176,114	23,252
38	72	4-11-57	10-26-57	405.0	105,234	18,485
39	133	11-.1-56	10-31-57	405.7	151,659	29,708
45	90	4-14-57	11- 1-57	384.8	73,252	23,940
50	12	4-20-57	8- 8-57	171.1	26,840	3,229
51	37	4-15-57	10-22-57	584.2	108,784	27,997
52	12	5-20-57	10-31-57	26.7	7,879	930
53	38	5-20-57	10-31-57	220.3	58,703	12,175
70	*-61	4- 1-57	10-31-57	193.2	54,548	8,707
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