

Glenwood Springs, Colorado
November 30, 1966

Mr. A. Ralph Owens
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, 1966.

About the first of the year my office was moved from the third floor, where it had been for 28 years, to much larger and more convenient space on the ground floor of the Garfield County Court House.

Through the cooperation of the Denver Water Board, Colorado Springs Utilities Department, Northern Colorado Water Conservancy District, South Platte River Project office, Public Service Company of Colorado and the State Engineer's office, telemetering equipment for the Dotsero Gauging Station was purchased and installed in my office at a total cost of \$4,083.80. The Dotsero Station, located on the Colorado River twenty miles west of Glenwood Springs, is the key point in the administration of the Colorado River.

Stream flows in the Division were below normal this season. The flow of the Roaring Fork River at Glenwood Springs was about two-thirds of that of a year ago. This stream is representative of flows of all streams in the Division.

Flows of the Roaring Fork River during the irrigation season of April through September were below predictions. The Weather Bureau made its forecast

on the basis of normal precipitation for May through September. Storms during the season were spotty and erratic, the over-all precipitation pattern was below normal, but no complete statistics are available.

The Weather Bureau 1966 April to September forecast was 475,000 acre-feet, 67 per cent of the 15-year average. The actual runoff as measured by the U. S. Geological Survey for the above period was 468,200 acre-feet, 65 per cent of the normal 717,000 acre-feet.

Following is a table showing the forecast flow and the actual flow at Glenwood Springs of the Colorado and Roaring Fork Rivers as predicted on May 1, 1966, by the U. S. Weather Service and as measured by the U. S. Geological Survey.

	Water Year Flow October 1965 through September 1966			
	<u>Forecast A.F.</u>	<u>15-year Average A.F.</u>	<u>Per Cent of 15-year Average</u>	<u>Actual Flow A.F.</u>
Colorado River	1,210,000	1,930,000	63	1,117,270
Roaring Fork River	720,000	925,000	78	677,790

Storage in the five larger reservoirs as of September 30 was as follows:

	<u>1966</u>	<u>1965</u>	<u>1964</u>	<u>Capacity of Each</u>
Granby Reservoir	293,632	383,503	258,580	539,758
Green Mountain Reservoir	109,502	148,650	123,582	154,645
Williams Fork Reservoir	0	78,909	22,001	93,000
Willow Creek Reservoir	8,186	7,971	9,288	10,553
Dillon Reservoir	<u>235,151</u>	<u>255,514</u>	<u>63,855</u>	<u>255,514</u>
TOTALS	646,471	874,547	477,306	1,053,470

On August 19 the Grand Valley Project and Orchard Mesa Irrigation District requested that water be released from Green Mountain Reservoir for their

use. They had been re-using water from the Power Plant tail race since August 2 but this was not now sufficient to take care of their needs. Releases from Green Mountain Reservoir were started on the 19th of August. Releases were increased or decreased from the reservoir as required to maintain approximately 1650 C.F.S. at the point of diversion of the Grand Valley Project. These releases continued in varying quantities from a minimum of 192 acre-feet to a maximum of 1019 acre-feet per day until October 14, during which time 40,249 acre-feet had been released.

Good progress was made on the cities of Colorado Springs and Aurora's Homestake Water Diversion Project this season and they were able to make limited use of the Homestake Reservoir. The reservoir and collection system is located northwest of Leadville between the Fryingpan River and the Continental Divide in Water District No. 37. Tributaries of the Eagle River provide the water for the Project.

Neither Colorado Springs nor Aurora were able to use water from the project directly as the various Eastern Slope facilities of the project were not completed. However, we were able to store some water in the partly completed reservoir and Colorado Springs made an exchange of stored water in the Homestake Reservoir for water in Green Mountain Reservoir, which permitted the City to divert water through their Blue River diversion under the City's 1948 decrees. Releases were made from Homestake Reservoir into the Colorado River basin which took the place of water that would have had to be released from Green Mountain Reservoir to maintain 1250 C.F.S. at Dotsero. Total released from Homestake Reservoir was 1464 acre-feet.

The City of Denver drained their Williams Fork Reservoir so that required maintenance work on the outlet works could be completed before winter conditions developed. In order to let the City continue diversions from their Fraser and Williams Fork Collection Systems after the draining of Williams Fork

Reservoir, the City of Denver released water from Dillon Reservoir in exchange for such diversion. It is expected that these releases will continue all winter.

Due to the early spring and continuously good construction weather all summer and fall, good progress has been made on the Fryingpan-Arkansas Project.

Construction of the Silt Project in Water District No. 39 has made very good progress. The Pumping Plant from the Colorado River is nearing completion and will be ready for use next season. The dam on Rifle Creek is also about completed. It is planned to plug the diversion tunnel on about November 16 and start filling the dead storage space in the reservoir; and due to the fact that this will cut off all water going down Rifle Creek for about 60 days, the Bureau of Reclamation plans to pump water over the dam in order to keep a live stream going down Rifle Creek to supply ranchers with stock water.

Wells in the Roan Creek basin have been giving considerable administrative trouble the past several years, and this year it was brought to a head by well owners employing attorneys and surface water users doing likewise. During a period of stalling on my part and meeting with users and attorneys on both sides, I was able to get them to postpone any action until we see what the legislature comes up with in the way of making any changes in the law this winter.

Yours very truly,



L. L. Finley
Irrigation Division Engineer

LLF/skm

District No.	No. of Ditches Reported	First Day Water Was Used	Last Day Water Was Used	Average Daily Amount Diersted Sec.Ft.	No. Of Acre Feet Used From Stream	No. Of Acres Irrigated
36	122	5-16-66	9-25-66	414.4	84,114	11,543
37	194	4-22-66	10-11-66	473.1	141,778	20,779
38	73	4-1-66	10-25-66	389.1	103,944	22,340
39	106	11-1-65	10-31-66	287.9	91,743	21,744
45	95	3-15-66	10-31-66	311.2	46,915	12,114
50	107	3-25-66	9-21-66	419.7	73,485	18,838
51	199	4-15-66	10-1-66	992.6	176,916	37,964
52	119	4-1-66	10-30-66	178.9	58,500	8,085
53	209	4-15-66	10-30-66	662.9	142,510	23,282
70	66	11-1-65	10-31-66	156.2	36,041	7,318
Totals	1,290			<u>4,286.1</u>	<u>955,946</u>	<u>184,007</u>

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.

<u>To Division No.1</u>	<u>Acre Feet</u>
Adams Tunnel	_____
Grand River	_____
Berthoud	_____
Eureka	_____
Williams Fork	_____
Moffat Tunnel	_____
Colorado Springs - Hoosier Pass	_____
Boreas Pass	_____
Harold Roberts Tunnel	_____
Total Acre-Feet	_____

<u>To Division No.2</u>	<u>Acre Feet</u>
Twin Lakes Tunnel	_____
Busk Ivanhoe Tunnel	_____
Ewing Ditch)	_____
Wurtz Ditch) City of Pueblo	_____
Columbine Ditch)	_____
Fremount Pass Ditch	_____
Total Acre-Feet	_____
Grand Total Acre-Feet	_____