

1942

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~~C. W. BEACH  
DIVISION ENGINEER OF IRRIGATION DIVISION  
NUMBER TWO  
404 CENTRAL BLOCK  
PUEBLO, COLORADO~~

ANNUAL REPORT OF DIVISION ENGINEER  
OF IRRIGATION DIVISION NO 2 FOR THE  
SEASON OF 1942.  
Pueblo, Colorado, Dec. 30, 1942.

Mr. M. C. Hinderlider  
State Engineer  
Denver  
Colorado

*Annual Report*

Dear Sir:

The irrigation season of 1941 closed with all reservoirs well filled and the ground thoroughly soaked.

The spring of 1942 opened favorably with the soil in good condition and most crops sprouted without irrigation which was of great advantage. During the spring months we were well supplied with rain and at no time during the season did the crops suffer for want of water.

On April 24th there were heavy rains over most of the Arkansas River drainage. They were especially heavy over the Purgatoire drainage and caused one of the largest floods known in the Purgatoire River since the flood of October, 1904. The peak of the flood has been ~~variously~~ estimated at ~~from~~ 50,000 ~~to 75,000~~ <sup>5</sup> ~~sec.~~ <sup>f</sup> ~~ft.~~ It caused much damage to irrigation canals in the Trinidad area and near the mouth of the Purgatoire River. The Caddoa Dam retained a large portion of this flood water and saved much of the lands below the reservoir from damage.

The snowfall in the mountains was up to average and coupled with the rainfall gave a good run of water in May and June.

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The following table shows the rainfall by months for the irrigation season of 1942 and a comparison with the average rainfall for the past 50 years, at the Pueblo Station:

Nov 1941	Dec 1941	Jan 1942	Feb 1942	Mar 1942	Apr 1942	May 1942	Jun 1942	Jul 1942	Aug 1942	Sep 1942	Oct 1942	Total
0.23	0.47	0.11	0.45	0.88	6.17	0.92	2.88	1.10	1.58	1.76	1.94	18.49
Average:												
0.36	0.50	0.31	0.47	0.59	1.31	1.60	1.36	1.94	1.82	0.75	0.66	11.67

The rainfall was 6.97 inches in excess of the average or 59.4 per cent above the average.

Insect pests were less numerous than in former years. There were several very destructive hail storms in different parts of the valley that covered considerable areas.

The transmountain diversions were not operated to full capacity on account of lack of storage space and demand for the water during the irrigation season. Four out of the seven transmountain ditches carried no water at any time during the season. The largest one, the Twin Lakes Tunnel did not operate for 37 days during the heaviest part of the runoff season on account of excess water on the eastern slope.

The discharge of the Arkansas River for 1942 was the largest we have had in the past 48 years since records have been kept. At the Pueblo station the discharge was approximately 935,000 acre feet which was 180 per cent of normal. The

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average at the Pueblo station is 518,000 acre feet. Contrasted with the flow for the year 1934 which was 31.6 per cent of the average, we have a range of 148.4 per cent. These figures give one an idea of the great variation of stream flow available for irrigation and emphasizes the necessity for storage on a large scale to equalize the irrigation water to cover the years of short supply.

On May 1st there was a total of 331,848 acre feet in storage for all purposes. The average in storage for the past 22 years is 176,874 acre feet. On November 1st there was a total of 268,387 acre feet in storage. The average for November 1st for the past 22 years is 130,918 acre feet. The largest percentage of this water is for irrigation purposes.

Water has been abundant during the fall months and much has been passed to Kansas. There has been but little irrigation practiced since October 15th and the owners of reservoirs have helped themselves.

The Caddoa Reservoir is almost completed and is in a position to store some water in 1943. The contractors are now awaiting the manufacture of steel gates which has been delayed by war demands.

Hereto attached is a tabulation of the Water Commissioner's annual crop reports and also a tabulation of

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the water in reservoirs on the first of each of the twelve months during the irrigation season of 1942.

Respectfully submitted,

*C. W. Beach*

CWB/H

Division Engineer of Irrigation Division #2