

DIVISION OF WATER RESOURCES

ANNUAL REPORT FOR YEAR 1966
NORTHERN COLORADO WATER CONSERVANCY AREA
IRRIGATION DIVISION No.1 LOVELAND OFFICE

Dean E. Thompson
Ass't Water Resources Engineer

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Water Districts 2,3,4,5,and 6 in Division No.1 started the irrigation season following a below normal snowfall and a summer runoff forecast that could be near the lowest of record. Carry-over storage being above normal was a great assistance. Water users dependent upon river run for water were extremely short. Moisture was lacking in most areas during the season, however, with the high humidity, reservoir storage and project water available, crops were average to above average.

A comparison of stream flows of the three major treams indicate the extent of deviation from normal during the season.

<u>Gaging Station & Location</u>	<u>Year</u>	<u>Runoff In 1000 A.F.</u>	<u>Approximate Long time Average In 1000 A.F.</u>	<u>Percent of Average</u>
St.Vrain Cr. at Lyons *	1965	113.	94.	120.
	1966	39.5	94.	42.
Big Thompson at Canyon	1965	160.1	118.	136.
	1966	72.0	118.	61.
Cache La Poudre At Canyon*	1965	314.9	300.	105.
	1966	140.3	300.	46.

* Not corrected for all upstream diversions.

On Apr.1,66, the Northern Colorado Water Conservancy District declared an initial quota of available Project water for delivery during the 1966 season at 70% or 217,000 A.F. On June 13,66, the quota was increased to 100% or 310,000 A.F. declared available, which was the earliest date on record of a second quota.

Western slope water available in Granby and Willow Creek Reservoirs on Nov.1,66 was approximately 200,870 A.F., which represents a decrease of 109,950 A.F. over the previous year. Available Project water in storage on the eastern slope on Nov.1,66 was 69,275 A.F., which represents a decrease of 163,920 A.F. over the previous year.

Water users in the following districts ordered a total of 303,775.7 A.F. of Project water.

Distribution of Project water into the various Water Districts.

<u>Water Dist.</u>	<u>Carrier</u>		<u>Total Acre Feet</u>
2	Hansen Feeder Canal via Big Thompson	500.	500.
3	Hansen Supply Canal via Cache La Poudre	133,275.9	140,075.3
	Direct delivery	6,797.4	
4	Hansen Feeder Canal via Big Thompson	67,284.5	85,621.2
	St. Vrain Supply Canal via Little Thompson	13,873.0	
	Direct delivery	4,463.7	
5	St.Vrain Supply Canal via St.Vrain Cr.	38,306.0	47,557.8
	Direct delivery	9,251.8	
6	Boulder Cr. Supply Canal via Boulder Cr.	21,447.2	30,023.4
	Direct delivery	<u>8,576.2</u>	
TOTAL TO ALL DISTRICTS (Including Replacement)			303,775.7

Comparative figures on amounts of Project water ordered and delivered, except for direct delivery from canals are as follows:

<u>Stream</u>	<u>Ordered Am't In Acre Feet</u>	<u>Delivered Am't In Acre Feet</u>	<u>Over Or Under Delivery</u>
Boulder	21,447.2	21,570.	+123.
St.Vrain	38,306.0	38,560.	+254.
Big Thompson *	86,174.5	87,224.	+1050.
Little Thompson	13,873.0	13,893.	+20.
Cache La Poudre	<u>133,275.9</u>	<u>136,331.</u>	<u>+3055.</u>
TOTALS	293,076.6	297,578.	+4052.

*Includes Big Thompson Skim and Dille Tunnel diversions which were returned.

Western slope diversions via Adams Tunnel during the period Nov.1,65 to Nov.1,66 were 252,440 A.F. Diversions for the 1966 water year amounted to 235,370 A.F. On June 23,66, Adams Tunnel had been in operation for 19 years.

A total of 274,910 A.F. was diverted from Lake Estes via the Bureau power system during the period Nov.1,65 to Nov.1,66, which includes 17,340 A.F. Big Thompson Skim water. Diversions for the water year were 258,530 A.F., which includes 18,400 A.F. Big Thompson Skim water.

Diversions on the Big Thompson River via Dille Tunnel of 1550 A.F. plus Big Thompson Skim at Estes Park and Project water orders were delivered to the Big Thompson River through the Bureau power plant. This year, 80,240 A.F. passed through the plant compared to 86,420 A.F. last year, based on Nov.1,65 to Nov.1,66 figures.

During the same period, 126,170 A.F. was measured in the Hansen Feeder Canal below the Big Thompson Siphon. Of this amount, 2,669.8 A.F. was delivered directly to the Buckhorn Water Users. The balance of 123,500 A.F. went to Horsetooth Reservoir.

Reservoir storage as of Nov.1,66 is below normal.

Final reports published on the disaster of the week of June 14,65 of known damage came to more than 543 million. Disaster costs reimbursed the Lower South Platte Water Conservancy District, exclusive of Bureau of Reclamation contracts, totalled \$562,625.

A total of 90 stream and 35 canal measurements were made out of the Loveland office during the 1966 water year.

I wish to thank the personnel of the Bureau of Reclamation, Flatiron and Estes Park Dispatchers, and Northern Colorado Water Conservancy District for their cooperation and assistance during the past year. The Water District continues to furnish a two-way radio for the State truck which is very helpful.

Respectfully submitted,

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