

1951

STATE OF COLORADO

IRRIGATION DIVISION NO. 4

MONTROSE

SUBJECT:

FREDERICK W. PADDOCK
IRRIGATION DIVISION ENGINEER
ROOM 7, COURT HOUSE
P. O. BOX 15

November 1, 1951.

Mr. M. C. Hinderlider,
State Engineer,
Capitol Building,
DENVER, Colorado.

Dear Sir:

I herewith submit my annual report for 1951;

At the end of the season for 1951, this office together with the *water* Commissioners of this Irrigation Division thought that a worse drouth season could not obtain in this area. However, we had no way of foreseeing that such was not and would not be the case. We cannot at this time predict what the records will show in comparison with 1934, but we feel that 1951 was a season quite comparable. Snow cover was nil on the higher ranges of mountains until after the first of the year of 1951. Snow surveys showed some to be short, and others did not appear bad until the first of May. It was then that the season could be definately predicted to be one in which an acute water shortage was taking place. Run-off was slow to take place due to a cold spring. What snow there was in the lower elevations evaporated, and maximum run-off occurred in June, and lasted for a very short time.

(Name of same)
Due to the extreme shortage of water, many reservoirs failed to fill or partially fill, and many ditches failed to receive any flow whatsoever. The largest reservoir in the Division had a carry-over storage of 35,200 acre feet, and filled on June 22, to 106,000. Withdrawals drew it down to 41,540 acre feet as of Nov. 1.

Old water records indicate that any time 50,000 to 60,000 acre feet are used from this reservoir, it possibly may not refill in the ensuing season. Hold-over storage this year is 41,540 acre feet at the present date.

The following letter from Jesse R. Thompson, Superintendent of the Uncompahgre Valley Water User's Association, gives us some very interesting data on conditions during the season of 1951 in the Uncompahgre Valley, and as the project has the Taylor Lake Reservoir in W.D. 59, the Gunnison Tunnel has as its source of supply from the Gunnison River in W.D. 62, and the Project lands lie in W.D. 41 and also draw some of the waters of the Uncompahgre River, that the report in his letter cover a great portion of Irrigation Division No. 4.

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Nov. 1, 1951.

Uncompahgre Project, Colorado

Season 1951

Under the terms of the Contract between the Bureau of Reclamation and the Uncompahgre Valley Water Users Association approved Aug. 4, 1931, the operation and maintenance of the Uncompahgre Project was taken over by the Association on Jan. 1, 1932.

The Project irrigation system includes 575 miles of canals and laterals and 204 miles of drainage ditches.

It requires 1,600 sec. ft. of water entering the Project to meet requirements during periods of peak demand.

The water content of the snowfall on the Uncompahgre water shed, measured at Ironton Park, on March 1, 1951 was 87% of the normal content for March. On April 1, the water was 62% of normal and on May 1, it was only 14% of normal.

The water content of the snow-fall on the Gunnison water shed on March 1, 1951 was 98% of normal for March. On April 1, it was 86% of normal and on May 1, it was 89% of normal.

The water content of the snow fall on the Gunnison water shed, measured at the Park Cone Station on the Taylor River, On March 1, 1951 was 36% above the normal content for March. On April 1, it was 8% above normal and on May 1, it was 53% above normal.

The above records show that the prospects for run-off in the Uncompahgre River was about 60% the fore-part of April, while the prospect for run-off in the Gunnison River was about 88% at the same time.

The run-off of the Uncompahgre River was 33% of normal in May, 53% of normal in June, 48% of normal in July, 42% of normal in August, and 28% of normal in September.

The run-off of the Gunnison River was 50% of normal in May, 80% of normal in June, 79% of normal in July, 81% of normal in August and 41% of normal in September.

Due to lack of capacity of the Gunnison Tunnel and low run-off of the Uncompahgre River, deliveries had to be made on a percentage basis from practically the beginning of the irrigation season. Deliveries ranged from 60% to 100% in April; 65% to 80% in May 1 to 28 and demand May 28 to 31; 90% to demand in June; 60% to 90% in July; 60% to 85% in August; 80% to 100% in September.

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Nov.1,1951.

The peak discharge of the Uncompahgre River during the season of 1951, was 1,082 sec. ft. at 2:00 A.M. on June 17.

Taylor Park Reservoir filled and water started over the spillway at 6:00 P.M. June 22, 1951.

The first water of the season turned out of Taylor Park Reservoir to supplement the flow of the Gunnison River was on April 9. This water was turned in gradually, due to ice in river channel, so as not to cause an ice jam and possibly cause damage to bridges down the river. This amount had been increased up to 450 sec. ft. on April 11. By this time, warm weather had increased the spring run-off by melting snow in the mountains and by April 17, the discharge was reduced to 20 sec. ft. and left at this amount till water went over the spill-way.

On August 10, 1951, water was again turned through the needle valves and increased or decreased as needed up to Oct. 10 at which time the discharge was reduced to the natural flow of the river. On Nov. 1 the discharge was cut to 18 sec. ft., this amount being left running to sustain fish life.

There was 76,379 acre feet of stored water used out of Taylor Park Reservoir during the year. The minimum amount of water stored in the reservoir at the end of the irrigation season was 41,540 acre feet and occurred on Oct. 11, 1951.

Water was turned through the Gunnison Tunnel, to supplement the flow in the Uncompahgre River on March 24, 1951. By April 7, the tunnel was running full and remained full till Sept. 24, with the exception of two days, June 17 and 18, when water was out to inspect the South Canal and tunnel lining. From Sept. 24, the discharge was gradually decreased till the end of the season.

Due to limited capacity of the Gunnison Tunnel, it was not possible to divert enough water to meet project demands during the peak of the irrigation season.

Water was delivered to project users on an acre foot basis. The lands generally on the west side of the Uncompahgre River were furnished 5 acre feet per acre for a minimum of \$3.00. Land generally on the east side of the Uncompahgre River, which consists of mostly adobe soils, were furnished 4 acre feet per acre for a minimum of \$2.40. The first acre foot of water used in excess of 4 acre feet was charged at the rate of 60¢ per acre foot. All water used in excess of 5 acre feet on both red and adobe soils was furnished at the rate of 16¢ per acre foot.

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Nov. 1, 1951.

Major Operating Difficulties

There were no major operating difficulties during the year.

No operating difficulties were experienced in connection with the operation of Taylor Park Reservoir. The usual repair, necessary to maintain the needle valves and penstocks in a first class operating condition, were made.

No operating difficulties were experienced in connection with the operation of the Gunnison Tunnel and the South Canal.

Crop production was about normal with prices fair on all crops. All crops harvested with exception of a few beets and most of the corn.

The Uncompahgre Valley Water Users Association

By: (sgd) Jesse R. Thompson
Jesse R. Thompson, Manager-Treasurer.

The Water Commissioner in W.D. 28 worked for several days each of the summer months. This district experienced an acute shortage of water as it is one in which the streams are badly over-decreed in an ordinary year. Few problems arose due to the fact that the water users in this district realized that it was a year of shortage and they therefore made the best and most efficient use of the water available to them.

In Water District 40 there was quite a bit of hardship due to water shortage and to the fact that late frosts killed nearly all of the fruits excepting apples and cherries. Two weeks of extremely cold weather in January no doubt contributed some winter kill. The Kiser Slough Reservoir enlargement and repair was completed late in the summer. Only those reservoirs having good locations or early priorities filled. The Overland Reservoir failed to fill, being now one of the larger reservoirs in the District.

Those reservoirs inspected by you personally have, it is our understanding, all been repaired to date with possibly one not quite complete. Two reservoirs under repair will be allowed no storage next year, and one reservoir on which repairs were ordered is denied storage until the same have been completed.

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Nov. 1, 1951.

In W.D. 41 during the summer of 1951, it was necessary for several weeks to use the Commissioner to run both 41 and 68, due to the Water Commissioner in W.D. 68 resigning, July 1 of 1951. Excepting for a severe water shortage which hit the water users heavily financially, there were no particular administration problems to arise in W.D. 41. In W.D. 68 there were many conflicts due to the change in administration. We are happy to report that most ranchers raised some feed, altho they will in most cases be short of hay.

Fair crops were raised in W.D. 42, altho there was a shortage of water in the Plateau Valley. In the Grand Valley the crop failures were due to weather conditions and not to water shortages.

Governor Thornton appointed Mr. Vernon Houser of Norwood, Colorado to fill the office of Water Commissioner in W.D. 60, and Mr. Wallace Worley of Ridgeway, Colorado, to fill the office of Water Commissioner in W.D. 68.

Due to the extreme difficulty with which the annual reports are prepared, a study has been conducted by this office to see if this condition can not be alleviated. When our conclusions have been checked by your office and if found correct, a new system will be adopted, which should also help make the keeping of the field books by the commissioners easier. The new statute on reports has met with the unqualified approval of all the commissioners in Irrigation Division No. 4.

A tabulation of the Water Commissioners reports will be enclosed at a later date.

Very truly yours,

Frederick W. Paddock
Frederick W. Paddock,
Irrigation Division Engineer,
Irrigation Division No. 4.

at.

IRRIGATION DIVISION NO. 4

Tabulated Statement of Water Commissioner's Annual Report for 1951

DISTRICT NUMBER	NO. DECREED WATER RIGHTS FOR DITCHES	NO. DITCHES REPORTED	AMOUNT REPORTED FLOW IN SECOND FEET	AMOUNT OF DECREED FLOW IN SECOND FEET	REPORTED CAPACITY OF DITCHES OR CANALS IN SECOND FEET	AVERAGE DAILY FLOW REPORTED IN CUBIC FEET SECOND	TOTAL NO. ACRES IRRIGATED
40	785	482	166,161	3742	4255	1285	152,617
41	161	89	298,321	2357	2328	1336	90,194
42	760	206	204,998	8662	1624	1179	71,995
61	59	8	2,693	876	88	115.0	2,459
68	296	143	39,081	1453	614	367	27,014
TOTALS	2061	926	711,254	16,301.6	8909	4182	344,279

Irrigation Division No. 4.

Tabulated Statement of Water Commissioner's Annual Report
for 1951.

DISTRICT NUMBER	FIRST DAY WATER USED	LAST DAY WATER USED	AVERAGE NO. OF DAYS WATER USED	AVERAGE DAILY AMOUNT IN SECOND FEET	NO. ACRE FEET USED
40	3-17-51	10-31-51	131*	1285	332,332
41	3-16-51	10-31-51	135*	1336	596,647
42	3-1-51	10-31-51	85*	1179	409,896
61	3-18-51	10-31-51	204	15.0	5,386
68	4-1-51	10-31-51	101*	367	78,162
TOTALS	<i>3/1/51</i>	<i>10/31/51</i>	<i>131</i>	4182	1,422,423

*Due to water shortage many ditches ~~only~~ ran water for only a few days which makes this figure much lower than it should be.

Irrigation Division No. 4.

Tabulated Statement of Water Commissioners' Annual Reservoir Reports
for 1951

DISTRICT NO.	No. of Reservoir Decreases	Area High Water Line in Acres reported	Decreased capacity in Acre feet.	Acre feet of water in Reservoir, May 1.	Acre feet of water in Reservoirs, Nov. 1	Reported No. acre feet stored during season.
40	271	3744	58,692	34,490	559	34,598
41	5	(no report)				
42	135	1433	33,833	11,671		14,727
61	none	(no report)				
68	14		1,004	545	420	125
TOTALS	425	5177	93,529	46,706	979	49,450

DISTRICT NO.	First day water used	Last day water used	Average number days water used	Average daily acre feet used	Total acre feet of storage used	Total acre feet held over storage for future used.
40	3-30-51	10-31-51	49	690	33,680	559
41	(no report)					
42	5-29-51	10-10-51	45	100	8,949	2722
61	(no report)					
68	6-1-51	8-4-51	16	4	125	420
TOTALS	3/30/51	10/31/51	37	794	42,754	3701