

1949

STATE OF COLORADO

IRRIGATION DIVISION NO. 4

MONTROSE

March 3, 1950

SUBJECT:

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

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

Dear Sir:

I herewith submit my annual report for the year of 1949.

Due to a wet, warm fall, and an unusually heavy winter snow fall, Division 4 entered the growing season of 1949 with unusually favorable soil moisture conditions. There was, also, the possibility of unusual high water peaks.

Fortunately no rain fell, and due to cold weather we had a slow melt, which in return retarded and stabalized the runoff until dangerous flood stages were by-passed. Major high water occurred in most streams during the latter part of June.

Some few reservoirs on Grand Mesa failed to fill due to slow runoff and on some streams administrative problems occurred for the water commissioners in the first two weeks of June. There were few difficulties later as flow held up well through the summer.

The following letter from Jesse R. Thompson, Superintendent of the Uncompahgre Water Users' Association, gives interesting data of the conditions during the 1949 irrigation season of Water District 41, as well as a small part of Water Districts 59 and 62.

UNCOMPAHGRE PROJECT COLORADO

Season 1949

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 canals.

It requires 1600 second feet of water entering the project to meet requirements during periods of peak demand.

The water content of the snowfall on the Uncompahgre water shed on March 1, 1949 was 3% above the normal content for March for the past 12 years. On April 1 the water content was 35% above normal and on May 1 the water content was 42% below normal.

The water content of the snowfall on the Gunnison water shed on March 1, 1949 was 20% above normal for March 1 for the past 13 years. On April 1 the water content was 20% above normal and on May 1 the water content was 6% below normal.

The water content of the snowfall on the Taylor river (Source of supply for the Taylor Park Reservoir) on March 1, 1949 was 21% above normal for March 1 for the past 12 years. On April 1, the water content was 35% above normal and on May 1 it was 11% above normal.

From the above records it will be seen that the prospects for run-off of all streams feeding the Uncompahgre Project was far above normal on April 1 while on May 1 the prospects for

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run-off from both the Uncompahgre and Gunnison Rivers was well below normal with the Taylor River prospects slightly above normal.

The run-off of the Uncompahgre and Gunnison Rivers were respectively 26% and 33% above normal in June and 80% and 60% above normal in July while in August the Uncompahgre run-off was 40% below normal and the Gunnison run-off 18% below normal. In September the run-off was still lower being 51% below normal on the Uncompahgre and 40% below normal on the Gunnison.

August and Sept. were both dry months with not enough rainfall in the mountains to increase the flow in the rivers.

Due to lack of capacity through the Gunnison tunnel and low run-off of the Uncompahgre river during August and Sept., there was not enough water to meet project demands and water deliveries had to be made on a percentage basis, percentage deliveries being as low as 80%.

The peak discharge of the Uncompahgre River, during the season of 1949 was 2750 Sec. Ft. and occurred at 3:00 o'clock A. M. June 24.

Taylor Park reservoir filled and water started over the spillway on June 18, 1949. The first water of the season, turned out of Taylor Park reservoir to supplement the flow of the Gunnison River was on Aug. 14, 1949. The discharge from the reservoir was cut to 100 Sec. Ft. on Oct. 7. This amount was left running to sustain fish life.

There was 43018 acre feet of stored water used out of Taylor Park reservoir during the year.

Water was turned through the Gunnison tunnel, to supplement the flow in the Uncompahgre River on April 20.

Due to the limited capacity of the Gunnison tunnel it was not possible to divert enough water to meet project demands throughout the irrigation season.

Water was delivered on demand up to June 3. June 4,5,6 water was delivered on a 100% basis due to shortage caused by cold weather.

On demand June 7 to 29.

On 100% basis June 30, to July 29.

On 90% basis July 30.

During August and September 9 deliveries ranged from 100% to 80% depending on supply and demand.

From Sept. 16 to 20 deliveries were from dry to 100% due to concrete failure on South Canal.

The balance of the season deliveries were on demand.

Water was delivered to project water users when requested, on an acre foot basis. The lands generally on the West side of the Uncompahgre River were furnished 5 acre foot per acre for a minimum of \$3.00. Lands generally on the east side of the Uncompahgre River, which consists mostly of adobe soils, were furnished 4 acre feet per acre for a minimum of \$2.40.

Excess water was furnished at the rate of 16¢ per acre foot for all water received in excess of 5 acre foot.

Major Operating Difficulties:

On Sept. 16, 1949, water got under the floor at the foot of the incline at M.P. 2.04 on the South Canal, and caused 550 linear feet of concrete lining to collapse. 280 Cu. Yds. of heavy rock riprap was loaded by dragline, hauled and placed to make temporary repairs in order to run water the balance of the irrigation season. Permanent repairs will be made during the coming winter.

During July flood waters in the Uncompahgre River washed banks away and changed the channel, at a point above the M&D headworks; to such an extent that heavy sandstone had to be hauled and placed to force the river to stay in the old channel. 306 Cu. Yds. of heavy sandstone, loaded by dragline, was placed. Additional sandstone will have to be hauled and placed the coming winter to make the job secure.

No operating difficulties were experienced at Taylor Dam. The usual repairs necessary to maintain the needle valves and penstocks in first class operating condition, were made.

No operating difficulties were experienced in connection with the Gunnison tunnel. The water was shut out of the Gunnison tunnel at 10:00 P.M. June 19 to 11:00 P. M. June 21 to inspect the tunnel and South Canal lining. Some minor miscellaneous repairs were made to the concrete lining on the South Canal at this time.

Crop production is about normal. Markets are poor in general with prices low. Harvesting is about over. Weather has been excellent for crop harvesting.

This organization is well pleased with the way Mr. Paddock has handled the distribution of stream flow in this part of the State.

THE UNCOMPAHGRE VALLEY WATER USERS' ASSN'.

BY Jesse P. Thompson
Manager-Treasurer

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SUBJECT:

IMPROVEMENT OF IRRIGATION SYSTEMS

DISTRICT #40:

The Overland Rec. Dam rehabilitation was started in July of 1949 and is progressing satisfactorily, being approximately 65% done when work had to stop due to inclement weather. The enlargement will run storage from it's present 2600 Ac. Ft. to 6600 Ac. Ft. The Little Gem Res. Dam was rehabilitated and raised on Grand Mesa and appears to be one of the best jobs done in Division 4 this year.

It is proposed to rehabilitate the Eggleston Res. Dam and sheep slough Res. Dam, both a part of the Surface Creek Ditch and Reservoir Systems, during the year of 1950.

The Fire Mts. Canal System is being enlarged under the Bureau of Reclamation, and appears to be progressing nicely.

DISTRICT #60:

The Gurley Reservoir was filled to it's new and enlarged capacity in June of 1949 for the first time. The extra capacity saved the Wrights Mesa water users' crops in many instances due to direct flow falling off in August.

The Lone Cone Ditch and Reservoir Company have initiated surveys, contemplating enlarging their Reservoir Dam.

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DISTRICT #61:

The Buckeye Reservoir Company has started plans through the U. S. Soil Conservation Service for enlargement and completion of their Reservoir Dam.

GENERAL - DIVISION #4:

Several adjudications are open in various districts and interest appears high in one or two districts.

This office is encouraging the installation of headgates, measuring devices and the keeping of better quality records.

I am enclosing with this report the Annual Reports of the Water Commissioners.

Very truly yours,

Frederick W. Paddock
Irr. Div. Engineer, No. 4

FWP:gb
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Irrigation Division No. 4

Tabulated Statement of Water Commissioners' Annual Ditch Reports

1949

District Number	Ditches Reported	Amount of Appropriations Second Feet	Capacity of Canals or Ditches, in Second Feet	No. of Acres can be Irrigated
28n	192	319	1000	29,253
40	485	3101	4262	228,070
41	98	1866	2738	113,299
42	224	3204	3620	151,019
59n	99	680	2109	24,031
60n	212	1219	1252	90,960
61	13	56	112	11,900
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Totals:-	1323	10,445	15,093	648,532

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Irrigation Division No. 4

Tabulated Statement of Water Commissioners' Annual Ditch Reports

1949

District Number	First Day Water Was Used	Last Day Water Was Used	Average No. of Days Water Was Used	Average Daily Amount In Second Feet	No. Acre Feet Used
28n	May 1	Aug. 31	123	674	165,804
40	April 1	Oct. 31	154	1581	434,653
41	March 15	Oct. 31	230	1712	620,026
42	March 15	Oct. 31	130	765	199,032
59n	May 1	Oct. 31	90	1540	277,200
60n	April 15	Oct. 31	130	1450	117,000
61	April 1	Oct. 31	146	19	6,548
68n	April 15	Nov. 30	145	450	130,300
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Totals:--				5479 7191	1,330,537 1,950,563

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Irrigation Division No. 4

Tabulated Statement of Water Commissioners' Annual Crop Reports

1949

Dist. No.	Alfalfa	Natural Grasses	Cereals	Orchards
28n	100	29,101	50	None
40	52,633	28,230	20,407	13,268
41	18,044 19,000	7,832 3,600	28,097 25,000	867 979
42	16,030	12,229	6,820	3,999
59n	120	21,058	5	none
60n	15,000	13,150	14,500	48
61	676	383	460	3
68n	5,800	14,000	1,450	11
Totals:--	108,403	121,983	71,789 68,692	18,296

Dist. No.	Market Gardens	Potatoes	Sugar Beets	Other Crops	Total Irrigated
28n	1	30	none	----	29,281
40	787	2300	4429	698	122,752
41	<i>572</i>	<i>1511</i>	<i>1289</i>	<i>8347</i>	<i>81,770</i>
42	703	384	95	1924	42,184
59n		70		118	1,371
60n	23	10	none	256	42,987
61				740	2,262
68	4	130			21,395
Totals:--	1518 2090	2924 4435	4524 1289	3736 12,083	262,232 344,002

Totals:--

Note: There was no Commissioner Report where number is followed by N. Report is an estimate.

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Tabulated Statement of Water Commissioners' Annual Reservoir

Dist. No.	No. in District	Area High Water Line, Acres	Reports		
			1949	Quantity of Water in Reservoirs, May 1	Quantity of Water In Reservoir, Nov. 1
			Capacity in Acre Ft.		
40	156	3503	51,866	45,085	None
42	73	1866	18,329	14,698	None
59	1	2033	106,200	60,785	67,000
60	2	536	11,000	1,500	1,500
Totals:-	232	7938	187,395	122,068	68,500

Dist. No.	First Day water was used	Last Day Water was used	Average No. Days Water Was Used	Average Daily Amount in Sec. Feet	No. Acre Ft. Carried
40	June 1	Oct. 31	104	398	41,449
42	May 27	Oct. 15	57	213	12,141
59	Aug. 14	Oct. 14	60	359	43,018
60	July 10	Oct. 31	100	43	9,500
Totals:--				1013	106,108