

ANNUAL REPORT  
IRRIGATION DIVISION NO. 1  
M. W. Mattern, Division Engineer  
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Mr. J. E. Whitten  
State Engineer  
232 State Services Building  
Denver, Colorado

Dear Mr. Whitten:

I hereby submit the Annual Report of the Office of Division Engineer, Irrigation Division No. 1, for the year ending October 31, 1964.

SNOW PACK

The snow reports of May 1, 1964, were somewhat misleading for they indicated moisture contents ranging from 93% to 112% of normal, but these percentages were the results of very late snows which were absorbed by very dry ground conditions, thereby resulting in much lower runoff than one might expect.

RESERVOIR STORAGE

The year was entered with reservoirs very low. Several reservoirs below Denver did manage to fill before the irrigation season started. However, the Upper South Platte Basin was very short and did not improve, as was witnessed at Cheesman Reservoir, which failed to fill the first decree for 30,700 acre feet. Water was transferred from 11-Mile Reservoir to Cheesman and also to Denver's intake, reducing storage at 11-Mile Reservoir to 50,000 acre feet. Antero Reservoir still remains dry after being drained in 1963.

PRECIPITATION

Precipitation in the South Platte River Basin was extremely low. During May and June, there occurred several storms which produced momentary peaks, but

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PRECIPITATION - (Continued)

was largely absorbed by dry soil conditions as was indicated by reports of 7.92 inches of rain on May 31 at Franktown, Colorado, on the Cherry Creek drainage, but run-off from this storm failed to reach Cherry Creek Reservoir. Crops were hailed out in several areas on the Lower South Platte River. The Upper South Platte River and South Park in particular, failed to receive little, if any precipitation.

WATER SUPPLY

The water supply for the South Platte River Basin below the St. Vrain was, to some extent, much better than the Upper South Platte, but far short of a normal amount. The South Park area was extremely dry and caused no end of controversy among the ranchers. The water demands, or calls, were changed a total of forty-nine (49) times during the year.

CROPS

Crops, as a whole, were below average. Sugar beets, being one of the better crops, also had problems as it was necessary to irrigate them in order that they could be dug. This brought about the cooperation of several ditch companies in some areas and was accomplished without difficulty. Meadow hay and dry land crops were far below normal.

TRANS-MOUNTAIN DIVERSIONS

Most trans-mountain diversions were operated without difficulty, but some on a much smaller quantity than has been available in past years. A new trans-mountain diversion was commenced officially as of July 17, 1964, when water was

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TRANS-MOUNTAIN DIVERSIONS (Continued)

diverted from Dillon Reservoir through the Harold D. Roberts Tunnel by the Denver Water Board. This diversion proved to be a definite asset to Denver as storage reservoirs were being drawn down at a rather rapid rate. Many days exceeded the thousand acre-foot mark by users of the Denver Water Board.

COMPACTS AND U. S. SUPREME COURT RULINGS

In compliance with the Laramie River and Sand Creek agreements, the administration of these agreements was accomplished without serious difficulty.

STOCK WATER DAMS

Stock water dams are still being built at an average rate. While these prove to be beneficial to some, they, undoubtedly, cause problems by changing the regiment of the streams. A definite revision of the Livestock Water Tank Act and also an understanding regarding water retention dams as constructed by the U. S. Soil Conservation Service and should be made so as to be in compliance with other statutory requirements, whereby sufficient and justifiable fees for processing could be collected. Also, definite regulations and controls could be administered by the State Engineer.

PUMPING FROM UNDERGROUND SUPPLIES

Development of sub-surface water for various purposes still progresses at a fair rate. A need for logs or records of the time and rate of flow of pumping facilities becomes more evident as time progresses. Use of sub-surface water has reached, ~~(or perhaps in some instances)~~ exceeded the definite need for statutory laws regulating and governing the use of this resource. These laws, however, should be

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PUMPING FROM UNDERGROUND SUPPLIES (Continued)

*agreed with*  
~~applicable~~ with the laws governing the doctrine of appropriation and use of surface water.

URBAN DEVELOPMENT

Urban Development still continues at a good rate. Some areas face the problem of adequate storage. In some areas, the quality of the water creates problems, while in others, it is the available quantity. The need for the definite requirement for the change of character of use when acquired by municipalities and urban areas would, in the opinion of this writer, alleviate some of the problems which arise.

MEASURING DEVICES

The policy established by the State Engineer to improve facilities for measuring water from the streams has continued. Colorado Springs complied with requests by this office and installed a new flume and recorder above Montgomery Reservoir. Several ditch owners have installed or improved their respective measuring devices and headgates. On occasion, failure to comply with this policy has brought about the need to invoke the statutes and deny the use of the water from the streams.

CHERRY CREEK RESERVOIR

The cooperation of the Corps of Army Engineers with this office, has been very good. Only one release was made from the Cherry Creek Reservoir and this was at such a time as to be of more benefit to the water users. The released amount was 1,240 acre feet.

SUMMARY

As pertains to Irrigation Division No. 1, this has been a year to remember, what with a shortage of snow last winter and very little precipitation making

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SUMMARY (Continued)

for difficulties, ~~this was apparently not enough.~~ On April 23, our very good friend and boss, J. Eugene Whitten, came out second best in his encounter with a tractor. Probably not too many know just how close we came to losing him, for his injuries were very extensive. We can be thankful that he is still with us and has made a remarkable recovery. During the time he was recuperating, I should like to point out that A. Ralph Owens, Deputy State Engineer, picked up the reins and did a most admirable job of keeping the office on an even keel. ~~As if Gene's mishap was not enough,~~ Another blow was dealt by the sudden death of C. Axel Carlson, Water Commissioner of South Park, who was killed in a needless head-on collision August 18, 1964. Finding a replacement for him has become a job in itself. These misfortunes which I have cited, together with other incidents which have taken place involving disgruntled water users, is the reason to say this has been a year to remember. I wish to thank all who have helped and assisted me in the administration of Irrigation Division No. 1, and to borrow a phrase of Ralph Owens, next year things will be different.

The administration of the Colorado-Big Thompson Project waters, the quantities of water delivered to the several systems, and the problems encountered, are contained in the report of Special Deputy State Engineer, Clark E. Schnurr.

Respectfully submitted,

Bill: Do you want your name typed in?..... M. W. Mattern, Irrigation Division Engineer  
Irrigation Division No. 1

Dist.	Use	June	July	Aug	Sept	Oct	Nov
1	Dist. Irrig.	103666	99482	53902	19046	2156	7024
	Big Thomp.						
	Municipal						
	<b>Total</b>	103666	99482	53902	19046	2156	7024
2	Dist. Irrig.	51959	51483	22448	6977	3210	3080
	Big Thomp.						
	Municipal						
	<b>Total</b>	51959	51483	22448	6977	3210	3080
3	Dist. Irrig.	107520	118971	83852	48846	36111	38478
	Big Thomp.	108523	112982	85842	52142	4805	43730
	Municipal	3543	3543	2913	1247	1257	2128
	<b>Total</b>	219586	235496	172607	102235	82173	83736
4	Dist. Irrig.	74535	75672	49885	49060	46858	48711
	Big Thomp.	91780	85986	63872	38621	24317	33882
	Municipal						
	<b>Total</b>	166315	161658	113857	87681	71175	82593
5	Dist. Irrig.	27808	30938	21600	14674	11194	11215
	Big Thomp.						
	Municipal						
	<b>Total</b>	27808	30938	21600	14674	11194	11215
6	Dist. Irrig.	23620	28927	24112	19774	18339	17472
	Big Thomp.	7484	9562	9236	6435	6260	6125
	Municipal	24792	40530	39781	36593	32887	31929
	<b>Total</b>	55896	79019	73129	62802	57486	55526
7	Dist. Irrig.	7264	11617	7114	289	0	0
	Municipal	11512	11026	11459	11295	11192	10821
	<b>Total</b>	18776	22643	18573	11584	11192	10821
8	RECREATION	11508	11380	11028	10693	10371	10150
	Municipal	17510	16894	16902	16605	16863	13371
9	<b>TOTAL</b>	29018	28274	27930	27298	27234	29521
	Dist. Irrig.	7218	7538	5245	3821	3171	2510
	Municipal						
	<b>Total</b>	7218	7538	5245	3821	3171	2510
23	Dist. Irrig.						
	Municipal	70546	65323	53251	49945	48412	48591
	<b>Total</b>	70546	65323	53251	49945	48412	48591
64	Dist. Irrig.	72674	73950	38417	11878	1340	1100
	<b>TOTAL RECREATION</b>	11508	11380	11028	10693	10371	10150
	Irrigation	416264	498578	306575	174365	122379	109590
	Big Thomp.	207787	208530	180950	97198	75382	63337
	Municipal	127903	137516	124306	114585	111868	104840
	<b>Grand Total</b>	823462	836004	600859	396841	320000	327917

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548 PER INC.

Dist.	Use	Dec	Jan	Febr	Mar	Apr.	May
1	Dist. Irrig.	51827	68071	87886	111607	127104	125502
	Big Thomp.						
	Municipal						
	Total	51827	68071	87886	111607	127104	125502
2	Dist. Irrig.	22691	35498	45794	47429	58040	69802
	Big Thomp.						
	Municipal						
	Total	22691	35498	45794	47429	58040	69802
3	Dist. Irrig.	94467	101379	104331	108147	113493	118738
	Big Thomp.	41117	59035	74176	91070	107737	118847
	Municipal	3543	3543	3543	3543	3543	3543
	Total	139127	163957	182050	202757	224773	241128
4	Dist. Irrig.	82492	83678	83755	82689	84525	86747
	Big Thomp.	42696	56193	70618	80532	94183	103783
	Municipal						
	Total	125188	139871	154373	163221	178708	190480
5	Dist. Irrig.	27619	27963	28721	29594	29890	30933
	Big Thomp.						
	Municipal						
	Total	27619	27963	28721	29594	29890	30933
6	Dist. Irrig.	23247	22159	22498	22293	22607	25748
	Big Thomp.	7783	7839	7850	7850	7928	7895
	Municipal	24586	23661	23390	24070	24715	21660
	Total	55536	53659	53738	54213	55250	55303
7	Dist. Irrig.	143	2165	5475	8421	9750	11014
	Municipal	11334	10841	10841	9452	8179	8638
	Total	11477	13006	16316	17873	17929	19652
	8 Recreation	11866	11844	11852	11908	13036	11708
9	Municipal	16968	14780	12297	9792	18877	15670
	Total	28834	26624	24149	21700	26913	27378
	Dist. Irrig.	2386	2776	3137	3476	4360	7706
23	Municipal						
	Total	2386	2776	3137	3476	4360	7706
	Dist. Irrig.						
64	Municipal	94199	84211	83378	83285	78027	81815
	Total	94199	84211	83378	83285	78027	81815
	Dist. Irrig.						
64	Dist. Irrig.	38016	45931	54911	62391	74319	88658
	Totals Recreation	11866	11844	11852	11908	13036	11708
	Irrigation	342888	389620	436208	476047	524088	564848
	Big Thomp.	91596	123067	152644	179452	209848	230475
	Municipal	150550	137037	133499	130142	128341	131326
	Grand Total	596900	661568	734503	797549	875313	938357

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# LARAMIE RIVER OPERATION CHART

WEEKLY DIVERSIONS — DAY SEC. FT. — DATES AS INDICATED 19 64

RANCH	April 16	May 23	May 30	June 6	June 13	June 20	June 27	July 4	July 11	July 18	July 25	July 31	RESERVE	TOTAL	BALANCE
BOSWELL															
HORNHOLZ, Robert															
Butler, L. M.		28.90	171.07	173.97	248.95	226.65	264.62	234.61	191.40	218.20	180.16	121.39	Fr: -141.94 To: +300.00	2059.92	-0.98
TATHAM		25.46	67.52	69.39	80.10	84.00	80.90	71.99	52.82	33.49	23.44	12.15		601.26	323.74
LEAKE		7.79	17.53	2.50	37.95	22.03	26.70	26.12	31.20	36.44	38.56	22.74		269.56	163.44
LEAKE & WANGNILD			99.77	128.12	142.29	106.90	70.03	84.38	97.24	86.46	34.23	9.06		858.48	121.52
PITNEY (Dixon, Howard)			7.15	42.24	47.96	47.39	47.39	47.39	49.29	52.71	15.06		To: +76.42	356.58	0.00
OWEN & WHITE		26.78	125.53	230.31	304.86	238.60	164.42	186.15	87.98	58.24	39.02	23.52	Fr: -21.88 To: +300.00	1485.41	273.59
SHOLINE				190.60	293.99	260.74	215.89	270.84	249.89	310.60	339.45	342.45	Fr: -187.48 To: +94.00	2474.44	0.00
WANGNILD		15.32	84.77	139.70	96.05	103.92	124.99	105.47	105.58	207.00	97.68		Fr: -56.84 To: +300.00	1080.48	0.00
JORDAN			0.86	67.61	108.91	133.37	141.65	151.06	116.62	147.41	139.33		Fr: -94.00 To: +167.00	1006.82	1.02
Lamb, Josephine					1.89	3.73	5.17	7.63	3.57	2.32	1.18	0.90	Fr: -39.21 To: +200.00	26.39	9.61
MOSIER			41.36	38.49	29.11	40.86	73.50	75.45	57.08	54.57	43.99	22.01	Fr: -39.21 To: +200.00	26.21	33.79
ELLIOTT, J.				3.50	32.42	38.07	34.45	33.13	38.00	36.50	33.97	19.29	Fr: -39.21 To: +200.00	476.42	76.58
ELLIOTT, O.			1.28	4.52	8.53	16.87	2.93	3.40	14.71	9.59	2.81	2.29	Fr: -39.21 To: +200.00	269.33	-0.12
GITHENS (Owen & White)		2.35	25.07	38.56	33.50	20.52	16.09	14.91	8.91	4.30	1.56		Fr: -39.21 To: +200.00	66.93	5.34
DIXON (Holcomb)		3.87	31.57	105.10	104.92	110.84	94.97	93.64	84.94	77.52	89.63	87.25	Fr: -39.21 To: +200.00	170.76	-0.32
RESERVE														944.05	94.95
TOTAL														690.07	
ACRE FEET														12173.04	1102.16
														1368.74	2186.10



WEEKLY DIVERSIONS - DAY SEC. FT. - DATES AS INDICATED

19 64

SHEET NO. 2

RANCH	Oct 31	Nov 7	Nov 11																RESERVE	TOTAL	BALANCE	
BOSWELL																						
HOHNHOLZ, Robert EMMA																						
Butler, L. M. <del>HOHNHOLZ, EMMA</del>	1.91	2.31	0.99																+79.05	45.95	0.00	
TATHAM																			-19.36	59.50	20.50	
LEAKE																			+64.00	47.36	0.00	
LEAKE & WANGNILD																				0.00	0.00	
PITNEY (Dixon, Howard)	1.66	1.32																		64.85	49.15	
OWEN & WHITE																			Pr:Githens 43.00	145.59	25.41	
SHOLINE																				0.35	57.65	
WANGNILD																				+50.97	11.03	0.00
JORDAN	0.09																		Fr: -1.90	10.85	0.05	
Lamb, Josephine <del>OWEN &amp; WHITE</del>																			+23.00	0.00	0.00	
MOSIER																				13.09	33.91	
ELLIOTT, J.	0.68	0.13																		7.55	7.45	
ELLIOTT, O.																				-13.17	18.17	0.00
GITHENS (Owen & White)																			Pr:Owen & White 43.00	0.00	0.00	
DIXON (Holcomb)	3.50	4.46	2.46																Fr: -125.47	206.47	0.00	
RESERVE																				57.12		
TOTAL																				630.76	194.12	
ACRE FEET																				113.30	1251.09	385.03