

1963
ANNUAL REPORT
Irrigation Division No. 1
M. W. Mattern, Division Engineer

Mr. J. E. Whitten
State Engineer
State of Colorado
232 State Services Building
Denver, Colorado 80203

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, 1963.

SNOW PACK

The snow reports of May 1, 1963 were very disappointing and, much to the grief of the water users, verified an estimate made in March by this office of a much needed additional seven (7) feet of snow on the snow courses to reach a normal snow pack. These reports to May 1, 1963, placed the snow courses in a range of 50 to 65% of normal. The shortage of snow, as well as the lack of precipitation, made this a year to be well remembered as being the worst drouth year on record.

RESERVOIR STORAGE

The year was entered with reservoirs somewhat short of winter-time capacities. Several reservoirs in the Lower South Platte managed to obtain sufficient water to enable them to enter the irrigation season in good shape. However, storage in the Upper South Platte Basin was

RESERVOIR STORAGE - Continued

short and did not improve. The Denver metropolitan area can be thankful for the storage facilities which Denver has, as there were many days which averaged 1,000 acre feet brought from storage in order to meet the demand, and also to supplement the direct flow rights of Denver. Antero Reservoir was drained in order to permit repairs to be made on the outlet gates. Dillon Dam was completed July 12, 1963.

PRECIPITATION

Precipitation in the South Platte Basin was extremely low. During a period of quite a few months, the precipitation reports show a shortage of as much as nine (9) inches below normal. Occasionally, there were brief storms which usually produced hail and would cause extreme damage to crops and property.

WATER SUPPLY

The water supply for the South Platte Basin below the St. Vrain was, to some extent, better than the Upper Basin area but far short of a normal amount. The Upper South Platte Basin was extremely short and this caused considerable trouble. At one period during the season, a demand was made to supply the most senior right in Water District No. 8 to the amount of 30 c.f.s., and this decree could not be supplied. The water demands, or calls, were changed a total of sixty (60) times during the year.

CROPS

Crops, as a whole, were below average. Sugar beets probably fared better than most crops. 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 previously available.

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. These dams still appear to be somewhat of a help to some, but they undoubtedly cause problems by changing the regimen of the streams. A definite revision of the Livestock Water Tank Act should be made so as to be in compliance with other statutory requirements, whereby justifiable fees, 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.

URBAN DEVELOPMENT

Urban Development still continues at a good rate. Some areas face the problem of adequate storage. In some cases, the available quantity and also quality of the water has become a problem.

MEASURING DEVICES

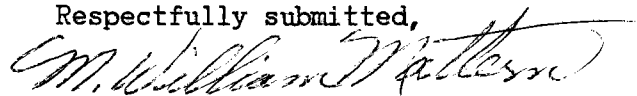
The policy established by the State Engineer to improve facilities for measuring water from the streams has continued. Several ditch owners have installed or improved their respective measuring devices and headgates.

CHERRY CREEK RESERVOIR

The cooperation of the Corps of Army Engineers with this office has been very good. Releases were made on two occasions from the reservoir and at such time as to be of more benefit to the water users. The two periods of release amounted to 1,950 acre feet.

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

Respectfully submitted,



Irrigation Division Engineer
Irrigation Division No. 1

LARAMIE RIVER OPERATION CHART

Weekly Diversions -- Day Sec. Ft. -- Dates as Indicated 1963

RANCH	May	May	May	May	June	June	June	June	June	June	July	July	July	July	July
	4	11	18	25	1	8	15	22	29	6	13	20	27	31	
Boswell) Hohnholz, Emma)			44.39	111.19	113.48	214.18	253.49	247.35	170.93	267.00	223.66	151.84	127.56/ 36.14		
Butler, L. M.		74.97	126.01	130.96	129.14	126.22	98.70	69.96	40.43	43.08	35.17	28.61	17.94/ 7.31		
Tatham (Guye, Wm.)		30.75	17.78	5.89	39.60	38.32	33.88	42.72	21.03	33.61	11.17	16.01	27.73/ 11.50		
Leake		46.85	56.01	102.94	163.46	171.61	120.79	110.18	125.43	64.11	28.39	4.05/ 0.00			
Leake & Wangnild			33.75	69.50	59.45	51.79	45.24	43.61	42.35	24.20					
Dixon Howard (includes Lamb Ditch)		8.02	70.57	219.13	267.98	212.68	188.20	120.39	86.90	62.03	36.60	32.32/ 11.38			
Owen & White			241.96	315.42	263.65	241.53	273.69	324.65	295.25	277.39	220.90/ 63.30				
Shoeline Ranch, Inc.		4.00	95.81	214.12	103.92	97.05	98.37	90.73	70.57	72.33	49.18	31.12/ 11.91			
Wangnild		12.61	10.22	40.33	126.77	132.83	185.74	112.88	162.73	156.25	109.03	41.97/ 0.00			
Jordan		2.23	3.16	2.90	3.20	5.06	2.21	1.40	1.38	0.90	0.82/ 0.36				
Lamb, Josephine		22.33	22.38	21.43	21.15	13.95	7.87	9.20	1.71	0.44	0.19				
Mostler			4.08	19.01	63.13	81.00	75.17	53.79	53.18	37.44	33.76/ 15.52				

Laramie River Operation Chart
 Weekly Diversions -- Continued

	May 4	May 11	May 18	May 25	June 1	June 8	June 15	June 22	June 29	July 6	July 13	July 20	July 27/31
RANCH	4	11	18	25	1	8	15	22	29	6	13	20	27/31
Elliott, J.					41.02	54.71	48.17	11.85	13.22	28.95	28.86	36.09	29.83/ 16.21
Elliott, O.				3.69	1.23	11.63	4.13	3.85	4.26	3.86	3.10	9.61	4.90/ 1.30
Githens (Owen & White)	1.00	2.58	10.38	11.90	11.93	9.38	4.94	11.45	3.41	2.59	3.67	1.20	
Holcomb	3.08	13.21	46.56	91.46	93.53	102.00	93.04	97.77	67.85	68.51	67.29	25.02	14.96/ 1.46
Totals:	4.08	143.84	338.98	611.36	1310.55	1639.35	1547.82	1466.63	1153.33	1317.12	1119.99	831.51	587.86/ 176.39
Acre Feet:	8.09	285.3	672.4	1212.6	2599.4	3251.6	3070.0	2909.0	2287.6	2612.5	2221.5	1649.3	1166.0/ 349.9

LARAMIE RIVER OPERATION CHART
Weekly Diversions

FROM:
May 4, 1963 thru
July 27-31, 1963

<u>RANCH</u>	<u>RESERVE</u>	<u>TOTAL</u>	<u>BALANCE</u>
Boswell) Hohnholz, Emma)	- 35.92	1,961.21	- 8.29
Butler, L. M.		928.50	296.50
Tatham (Guye, Wm.)		329.99	103.01
Leake	- 8.42	993.82	- 5.40
Leake & Wangnild	T + 63.11	369.89	0.00
Dixon Howard (includes Lamb Ditch)		1,316.20	442.80
Owen & White	553.74	2,517.74	- 4.00
Sholine Ranch, Inc.	- 46.27	939.11	0.16
Wangnild	- 141.58	1,091.36	1.22
Jordan	T+ 75.00	23.62	31.38
Lamb, Josephine	T+ 239.35	120.65	0.00
Mosier		436.08	283.92
Elliott, J.	- 77.91	308.91	0.00
Elliott, O.		51.56	20.44
Githens, (Owen & White)	T 553.74	74.43	34.83
Holcomb	+ 100.00	785.74	353.26
Reserve	167.36/ - 17.69		
Total:	149.67	12,248.81	- 17.69/ 1,567.52
Acre Feet:	296.9	24,295.1	3,109.1

LARAMIE RIVER OPERATION CHART

Weekly Diversions -- Day Sec. Ft. -- Dates as Indicated 1964

	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31	Sept. 7	Sept. 14	Sept. 21	Sept. 28	Oct. 5	Oct. 12	Oct. 19	Oct. 26
Boswell)	19.25	38.75	1.15	0.97	0.49	0.56	0.49	0.03					
Hohnholz, Emma)	6.41	17.57	16.06	10.92	11.22	14.13	5.09	5.52	12.15	11.00	8.68	8.43	8.68
Butler, L. M.	15.23	16.85											
Tatham													
Leake													
Leake & Wangnild													
Dixon, Howard (in- cludes Lamb Ditch)	19.26	21.54						12.61	8.19	7.72	6.99	8.94	18.92
Owen & White	14.70												
Sholine	5.10	0.86	0.47	0.15	0.14	0.14	0.14	0.04				8.21	16.62
Wangnild						2.88	1.92						
Jordan	0.31	0.65	1.53	1.20	1.29	1.12	1.04	1.21	1.12	0.94	0.92	1.11	1.06
Lamb, Josephine													
Moster	2.55	3.64	1.52	1.48	1.26	5.10	4.63	3.88	2.74	2.59	2.59	2.59	2.59
Elliott, J.								0.82					
Elliott, O.	1.59	4.14	3.64	2.45	2.24	1.84	2.44	1.86	1.98	1.75	1.75	2.01	2.24
Githens (Owen & White)													
Holcomb						45.10	8.55	41.30	12.25	3.88	3.44	5.24	3.63
Totals:	84.40	104.00	24.37	17.17	16.64	70.87	24.30	67.27	39.66	29.63	26.75	38.45	55.12
Acre Feet:	167.4	206.3	48.3	34.1	33.0	140.6	48.2	133.4	78.7	58.8	53.1	76.3	109.3

LARAMIE RIVER OPERATION CHART
Weekly Diversions

FROM:
Aug. 3 thru
Oct. 26, 1963

<u>RANCH</u>	<u>RESERVE</u>	<u>TOTAL</u>	<u>BALANCE</u>
Boswell) Hohnholz, Emma)	+ 63.31	61.69	0.00
Butler, L. M.		135.86	0.04
Tatham	- 4.08	32.08	0.00
Leake	+ 64.00		0.00
Leake & Wangnild			28.00
Dixon, Howard (includes Lamb Ditch)		104.17	9.83
Owen & White		14.70	113.30
Sholine		31.87	
Wangnild		4.80	57.20
Jordan	- 3.50	13.50	- 1.00
Lamb, Josephine	+ 23.00		0.00
Mosier		37.16	9.84
Elliott, J.	- 7.82	9.48	0.00
Elliott, O.		29.93	
Githens (Owen & White)			43.00
Holcomb	- 42.39	123.39	0.00
Reserve:			
Total:		598.63	
Acre Feet:		1,187.4	

LARAMIE RIVER OPERATION CHART

Weekly Diversion -- Day Sec. Ft. -- Dates As Indicated 1963

RANCH	Nov. 2	Nov. 9	Nov. 16	Nov. 20	RESERVE	TOTAL	BALANCE
Boswell) Hohnholz, Emma)					+ 63.31	61.69	0.00
Butler, L. M.	4.96				- 60.86	140.82	0.04
Tatham					- 4.08	32.08	0.00
Leake					+ 64.00		0.00
Leake & Wangnild							28.00
Dixon, Howard (includes Lamb Ditch)	15.96	19.25	16.49	5.76	- 47.63	161.63	0.00
Owen & White					+ 113.30	14.70	0.00
Sholine	15.17					47.04	10.96
Wangnild					+ 57.20	4.80	0.00
Jordan	0.78				- 4.28	14.28	- 1.00
Lamb, Josephine					+ 23.00		0.00
Mosier	3.25	1.48				41.89	5.11
Elliott, J.					- 7.82	9.48	0.00
Elliott, O.	2.49				- 14.08	32.42	0.00
Githens (Owen & White)							43.00
Holcomb	1.08				- 43.47	124.47	0.00
RESERVE					138.59		
TOTAL	43.69	20.73	16.49	5.76		685.30	86.11
ACRE FEET	86.7	41.1	32.7	11.4	274.9	1359.3	170.8

DIVERSIONS FROM LARAMIE RIVER AND TRIBUTARIES

Recapitulation - Totals for Season 1963

<u>Name of Ditch</u>	<u>Amount Diverted Day Second Feet Before July 31st</u>	<u>Amount Diverted Day Second Feet After July 31st</u>
Bliler-Boswell Stuck Warren Mansfield & Enlg. Mansfield No. 2 Hance	1,961.21	61.69
Forrester No. 1 Grace Cr. & Enlg.	928.50	140.82
Detros Nos. 1 & 2 Lower La Garde Ferguson	329.99	32.08
Schnitger French Woman Jimmy Crk.-Laramie River Jimmy Crk.-Jimmy Creek La Garde minus Lower La Garde La Garde No. 1	993.82	0.00
Yelton	369.89	0.00
Homestead No. 1 Homestead No. 2 Pache Nellie Lamb	1,316.20	161.63
Hills (Wangnild) Martin No. 1 Martin No. 2 Wright Lone Tree (Charge Dixon)	2,517.74	14.70
Brown-Nunn Creek Cabin (Forrester-Brown Cr. Davy) Parker Stubb	939.11	47.04

LARAMIE RIVER DIVERSIONS - Continued

Name of Ditch	Amount Diverted Day Second Feet Before July 31st	Amount Diverted Day Second Feet After July 31st
Smith's Brown		
Link No. 1		
Link No. 2		
Upper Hills		
Hills (See Owen White Acct.)	1,091.36	4.80
 Brown-Porter Cr.	 23.62	 14.28
 Lower Grant		
British Creek No. 1		
Comet		
Upper Grant		
Homestead (McIntyre)		
Stewart No. 1		
Stewart No. 2	436.08	41.89
 McIntyre		
Pine Crk. & Enlg.		
Comet (Charge Mosier)		
Martin No. 2 (Charge Owen & White)	308.91	9.48
 Brinker		
Charles E. Lanning		
Ben Warren & Enlg.	120.65	0.00
 Glendevey		
Talmadge No. 1	51.56	32.42
 Trollope		
Ward Nos. 1 & 2		
Jim (Charge Lower Jim)		
Jim No. 3 and No. 4	74.43	0.00
 Jim minus Lower Jim)		
Jim & Jim No. 2)		
Lone Tree (Charge Dixon)		
Ollie		
Timothy	<u>785.84</u>	<u>124.47</u>
 TOTAL MEADOW LAND DIVERSION	 12,248.91	 685.30

LARAMIE RIVER DIVERSIONS - Continued

Summary through July 31st - Allotment	27,700.00	Acre	Feet
Total Diverted	<u>24,295.10</u>	"	"
Total Unused Balance	3,404.90		
Summary after July 31st - Allotment	1,800.00	"	"
Total Diverted	<u>1,359.30</u>	"	"
Total Unused Balance	440.70	"	"

Note
Should be

Inv. 472,152 = Jan.
794,417 Total

ACRE FEET IN STORAGE FIRST OF MONTH
Division No. 1
1963

Dist.	Use	Nov. '62	Dec. '62	Jan. '63	Feb. '63	Mar. '63	Apr. '63
1	Dist. Irrig.	49,478	75,128	99,192	110,521	123,173	129,919
2	Dist. Irrig.	8,615	20,345	34,336	44,274	54,359	62,259
3	Dist. Irrig.	108,427	112,966	116,646	118,575	124,500	129,564
	Big Thompson	51,020	62,412	78,368	91,646	100,497	119,922
	Municipal	4,186	4,059	4,078	4,340	4,283	4,781
	Total	163,633	179,437	199,092	214,561	229,280	254,267
4	Dist. Irrig.	87,865	85,876	85,928	86,564	88,335	89,749
	Big Thompson	30,190	45,623	58,247	74,467	88,166	97,761
	Total	118,055	131,499	144,175	161,031	176,501	187,510
5	Dist. Irrig.	22,666	23,273	23,871	24,583	26,006	27,961
6	Dist. Irrig.	21,086	19,619	17,417	22,940	24,191	23,325
	Big Thompson	1,633	1,633	1,633	1,633	1,807	1,807
	Municipal	13,075	36,506	32,076	28,311	28,195	29,039
	Total	35,794	57,758	51,126	52,884	54,193	54,171
7	Dist. Irrig.	2,022	2,665	3,300	5,332	7,532	10,430
	Municipal	3,301	8,138	9,544	11,095	8,994	7,323
	Total	5,323	10,803	12,844	16,427	17,526	17,753
8	Recreation	13,740	13,620	13,572	13,628	13,676	13,660
	Municipal	16,632	16,813	16,213	16,154	15,972	14,971
	Total	30,372	30,433	29,785	29,782	29,648	28,631
9	Dist. Irrig.	3,106	3,465	3,778	4,222	4,668	5,433
23	Municipal	111,925	158,146	108,534	110,646	155,591	159,258
64	Dist. Irrig.	61,914	75,184	87,684	105,750	120,360	119,734
Totals: Irrigation		365,179	418,521	472,142	522,761	573,124	598,374
Recreation		13,740	13,620	13,572	13,628	13,676	13,660
Big Thompson		82,843	109,668	138,248	167,746	190,470	219,490
Municipal		149,119	223,662	170,445	170,546	214,035	215,372
Grand Total:		610,881	765,471	794,407	874,681	991,305	1,046,896

ACRE FEET IN STORAGE FIRST OF MONTH

Division No. 1

1963

Dist.	Use	May '63	June '63	July '63	Aug. '63	Sept. '63	Oct. '63
1	Dist. Irrig.	122,786	91,612	90,964	52,490	32,879	13,313
2	Dist. Irrig.	59,645	42,779	43,477	17,259	17,233	12,088
3	Dist. Irrig.	129,791	123,120	142,476	94,607	79,102	79,080
	Big Thompson	121,668	99,894	100,346	82,811	52,682	34,671
	Municipal	4,027	4,098	4,983	4,958	3,645	3,543
	Total	255,486	227,112	247,805	182,376	135,429	117,294
4	Dist. Irrig.	89,027	78,316	88,666	62,829	56,283	64,308
	Big Thompson	107,405	90,705	81,818	61,545	46,713	34,369
	Total	196,432	169,021	170,484	124,374	102,996	98,677
5	Dist. Irrig.	28,220	21,122	31,812	21,751	20,864	21,387
6	Dist. Irrig.	22,702	19,186	25,208	21,601	20,155	22,184
	Big Thompson	2,761	6,070	10,572	9,314	7,777	7,883
	Municipal	19,910	23,296	29,910	22,719	23,003	24,257
	Total	45,373	48,552	65,690	53,634	50,935	54,324
7	Dist. Irrig.	9,941	6,514	8,813	4,479	2,987	143
	Municipal	9,601	11,415	10,726	11,379	11,334	11,378
	Total	19,542	17,929	19,539	15,858	14,321	11,521
8	Recreation	13,356	13,036	12,796	12,308	12,368	11,451
	Municipal	16,814	16,803	15,730	12,622	16,708	17,180
	Total	30,170	29,839	28,526	24,930	29,076	28,631
9	Dist. Irrig.	5,638	3,604	2,873	1,980	1,872	1,912
23	Municipal	137,320	139,212	129,909	113,175	103,244	94,074
64	Dist. Irrig.	109,980	94,944	82,721	48,087	24,970	9,766
Totals:	Irrigation	577,730	481,197	517,010	325,083	256,345	224,181
	Recreation	13,356	13,036	12,796	12,308	12,368	11,451
	Big Thompson	231,834	196,669	192,736	153,670	107,172	76,923
	Municipal	187,672	194,824	191,258	164,853	157,934	150,432
Grand Total:		1,010,592	865,726	913,800	655,914	533,819	462,987

Bea:

On Bill's Annual Report under "Summary of Water Commissioners' Annual Reports," will you please change Dist. No. 2 under "Total" to 282,904 instead of 262,904. Thank you.

SUMMARY OF WATER COMMISSIONERS' ANNUAL REPORTS

(ACRE FEET - WATER USED)

1 9 6 3

Dist. No.	Direct Flow	Reservoir	Big Thompson Project	Other	Total	Acres Irrigated	First Day Used	Last Day Used	Number of Ditches & Reservoirs Served
1	138,740	73,036	1,200		212,976	194,938	4-3	10-31	29
2	211,161	58,224	8,100	5,419	262,904 282,904	218,025	4-13	10-31	70
3	183,942	263,225	135,862	23,094	606,123	295,555	11-1-62	10-31-63	70
4	126,637	164,721	89,677	13,504	394,539	273,322	11-1-62	10-31-63	65
5	72,124	31,454	31,954.5		135,532	111,980	4-1-63	10-11-63	101
6	86,082.8	25,553.2	18,057.2		129,693.2	165,360	4-5-63	10-31-63	91
7	84,853	10,329			95,182	99,060	3-8-63	11-10-63	150
8	256,282	115,383			371,665	24,676	11-1-62	10-31-63	148
9	10,761	4,109			14,870	13,573	4-5-63	10-31-63	41
23	14,510	726		57,822	73,058	7,820	4-1-63	10-31-63	61
47 Est.	340,000	Est. 8,000			Est. 348,000	Est. 123,700			
48	25,654				25,654	4,845	5-1	11-20	57
49(Div.2)	5,507				5,507	1,916	4-25-63	9-8-63	10
64	259,046	14,935			273,981	102,397	11-1-62	10-31-63	79
65	16,448				16,448	7,720	4-12-63	10-31-63	24