

1962  
ANNUAL REPORT  
Irrigation Division No. 1  
M. W. Mattern, Division Engineer  
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Mr. J. E. Whitten  
State Engineer  
State of Colorado  
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, 1962.

SNOW PACK

The Snow Reports of May 1 were somewhat disappointing, as they showed a drop from 120% of normal, as indicated in February and March, to only 90% of normal as of May 1. This decline was caused from the lack of snow and also rather warm weather during April. However, Cameron Pass had more snow than at any period since 1956. Snow courses at high elevations did run above normal as was observed around North Park, which had above-normal snow pack through the month of June.

RESERVOIR STORAGE

The year was entered with all reservoirs filled to winter-time capacities and all reservoirs reached maximum capacities in advance of the irrigation season. This proved to be a definite asset as there was very little, if any, precipitation in the Upper

South Platte area.

#### PRECIPITATION

Precipitation in the South Platte Basin was below normal, especially in the Upper South Platte area. The months of July, August, and September produced little, if any, rain. In areas which did receive moisture, a great share was in the form of hail, which caused heavy damage.

#### WATER SUPPLY

The water supply for the South Platte Basin below the St. Vrain was very adequate and sufficient, due to maximum reservoir storage and the exceptionally long run of Big Thompson project water which continued until September 2, this being permitted only because of the spilling of Granby Reservoir. The Upper South Platte region wasn't nearly as fortunate, which necessitated the need to call water to supply 1865 rights in District 2, and on several occasions, it was necessary to call for water to supply 1863 rights in District 8. These demands were made several times during August, September, and October. During October, the Platte River at the Denver gaging station was at a low flow of 12 c.f.s. for a short period.

#### CROPS

Crops were average to below. Sugar beets received very heavy damage from hard hail storms in July and August. Some areas from Greeley through the Ft. Morgan-Brush area were completely wiped out by hail. Meadow hay and dry land crops appeared to be about average.

### TRANS-MOUNTAIN DIVERSIONS

The Colorado-Big Thompson Project and Moffat Tunnel are year around operations; however, the latter only on a small scale.

### RESERVOIR OUTLOOK

There is no doubt as to the need for additional reservoir storage, especially in higher elevations. These projects should be expedited as soon as possible to be available when periods of excessive precipitation and runoff occur. A much more workable agreement with the National Wildlife Service pertaining to wilderness areas would undoubtedly be beneficial in promoting some projects.

### INSPECTION OF RESERVOIR DAMS

Several reservoir dams were inspected generally in the company of L. Rees Brooks, construction engineer.

### COMPACTS AND U. S. SUPREME COURT RULINGS

The administration and compliance of the Laramie River and Sand Creek Agreements were accomplished without difficulty.

### STOCK WATER DAMS

Stock Water Dams are still being built at an average rate. Normally built on dry water courses, they undoubtedly affect the flow of the numerous streams. There should be a definite revision of the Livestock Water Tank Act which would bring about more 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. Logs or records of the time and rate of flow of pumping facilities would be very beneficial in the study of return flows and recharge of water tables. Preliminary reports show underground storage to be a definite asset.

### URBAN DEVELOPMENT

Urban Development still continues at a remarkable rate. The problem of adequate storage facilities still faces some areas. The quality of water available has been and still is a problem in some cases, as is the quantity.

### MEASURING DEVICES

The policy established by the State Engineer to improve facilities for measuring water from the streams has continued. Several ditches have replaced 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. These were accomplished at such times so as to be of benefit to the water users. The two periods of release amounted to 2696 acre feet.

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

Tabulations of the Water Commissioners' Annual Reports,  
Amounts of Water in Storage, Diversions by Transmountain Projects,  
Amounts Diverted by Individual Users from the Laramie River, and  
other pertinent data, accompany and are a part of this report.

Respectfully submitted,

Division Engineer  
Irrigation Division No. 1

1962  
TRANS-MOUNTAIN DIVERSIONS

Diversion	From District	To District	Source of Supply	Ac. Ft. Diverted	First Day	Last Day
Boreas Pass	36	8	Blue River	133.3	6-2	8-5
Hoosier Pass	36	10	" "	11450	10-1	9-6
Berthoud Pass	51	7	Colo. River	930	6-5	8-5
Moffat Tunnel	51	6-7-8	" "	60320	10-1	9-30
Williams Fk. Tunnel	51	6-7-8	" "	(Included in Moffat Tunnel)		
Adams Tunnel	51	1-6	" "	205888	11-1	10-31
Eureka Ditch	51	4	" "	67.6		
Grand River Ditch	51	3	" "	24003	5-17	9-22
Cameron Pass Ditch	47	3	Michigan R.	0		
Michigan Ditch	47	3	" "	0		
Wilson Supply Ditch	48	3	Sand Creek	4927	5-3	7-17
Deadman Ditch	48	3	Laramie Riv.	1131	5-9	7-17
Laramie Poudre Tunnel	48	3	" "	13945	5-9	9-4
Skyline Ditch	48	3	" "	0		
Columbine Ditch	48	3	" "	0		
Bob Creek Ditch	48	3	" "	0		
Lost Lake Tunnel	48	3	" "	0		

Total Diverted from Colorado River		291,209
" " " Blue River		11,583
" " " Michigan River		0
" " " Sand Creek		4,927
" " " Laramie River		15,076
		322,795

DIVERSIONS FROM LARAMIE RIVER AND TRIBUTARIES

Recapitulation - Totals for Season 1962

Name of Ditch	Amount Diverted Day Second Feet Before July 31st	Amount Diverted Day Second Feet After July 31st
Bliler-Boswell Stuck Warren	813.38	0.00
Mansfield & Enlg. Mansfield No. 2 Hance	1,093.41	48.95
Forrester No. 1 Grace Cr. & Enlg.	716.59	56.29
Detro <del>id</del> Nos. 1 & 2 Lower La Garde Ferguson	444.13	1.40
Schnitger French Woman Jimmy Crk.-Laramie River Jimmy Crk.-Jimmy Creek La Garde minus Lower La Garde La Garde No. 1	979.11	0.50
Yelton	371.72	0.00
Homestead No. 1 Homestead No. 2 Pache Nellie	702.67	0.00
Hills (Wangnild) Martin No. 1 Martin No. 2 Wright Lone Tree (Charge Dixon)	2,210.47	187.38
Brown-Nunn Creek Cabin (Forrester-Brown Cr. Davy) Parker Stubb	893.34	0.08

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.)	991.36	15.89
Brown-Porter Cr.	37.79	9.39
Lamb	1,025.62	113.39
Lower Grant )		
British Creek No. 1 )		
Comet		
Upper Grant		
Homestead (McIntyre)		
Stewart No. 1		
Stewart No. 2	683.17	25.24
McIntyre		
Pine Crk. & Enlg.		
Comet (Charge Mosier)		
Martin No. 2 (Charge Owen & White)		
Brinker		
Charles E. Lanning		
Ben Warren & Enlg.	448.60	0.00
Glendevey		
Talmadge No. 1	85.58	25.60
Trollope		
Ward Nos. 1 & 2		
Jim (Charge Lower Jim)		
Jim No. 3 and No. 4	440.10	0.00
Jim minus Lower Jim )		
Jim & Jim No. 2 )		
Lone Tree (Charge Dixon)		
Ollie		
Timothy	1,065.47	92.99
TOTAL MEADOW LAND DIVERSION	25,790.10	1,113.14



LARAMIE RIVER DIVERSIONS - Continued

Summary through July 31st - Allotment .....	27,700.00
Total Diverted . . . . .	<u>25,790.10</u>
Total Unused Balance . . . . .	1,909.90

Summary after July 31st - Allotment .....	1,800.00
Total Diverted . . . . .	<u>1,113.14</u>
Total Unused Balance . . . . .	686.86

ACRE FEET IN STORAGE FIRST OF MONTH

Division No. 1

1962

Dist.	Use	June 62	July 62	August 62	September 62	Oct. 62	Nov. 62
1	Dist. Irrig.	125,524	130,908	111,596	55,716	19,382	49,478
2	Dist. Irrig.	60,258	59,252	37,217	14,903	6,629	8,615
3	Dist. Irrig.	147,696	172,651	156,918	105,795	86,850	108,427
	Big Thompson	141,895	149,202	114,921	81,723	57,553	51,020
	Municipal	5,068	6,092	6,264	5,864	5,250	4,186
	Total	294,659	327,945	278,103	193,382	149,653	163,633
4	Dist. Irrig.	89,091	101,935	101,970	83,910	81,913	87,865
	Big Thompson	99,897	112,126	77,228	41,120	36,814	30,190
	Total	188,988	214,061	179,198	125,030	118,727	118,055
5	Dist. Irrig.	32,175	32,163	34,941	23,628	18,448	22,666
6	Dist. Irrig.	23,993	33,087	31,489	22,411	19,823	21,086
	Big Thompson	10,421	9,941	3,666	2,658	2,682	1,633
	Municipal	37,330	48,634	46,561	42,203	41,392	43,075
	Total	71,744	91,662	81,716	67,272	63,897	65,794
7	Dist. Irrig.	16,943	15,501	14,244	5,902	2,172	2,022
	Municipal	11,679	11,795	11,795	11,914	9,444	3,301
	Total	28,622	27,296	26,039	17,816	11,616	5,323
8	Recreation	15,666	15,500	14,960	14,420	14,060	13,740
	Municipal	17,364	17,006	16,162	15,323	17,211	16,632
	Total	33,030	32,506	31,122	29,743	31,271	30,372
9	Dist. Irrig.	8,791	7,185	4,999	3,983	3,505	3,106
23	Municipal	190,151	191,568	124,697	113,618	77,650	15,220
64	Dist. Irrig.	117,508	117,508	110,472	59,473	39,476	61,914
<u>Totals:</u>							
	Recreation	15,666	15,500	14,960	14,420	14,060	13,740
	Irrigation	621,979	670,190	603,846	375,721	278,198	365,179
	Big Thompson	252,213	271,269	195,815	125,501	97,049	82,843
	Municipal	261,592	275,095	205,479	188,922	150,947	82,414
	Grand Total	1,151,450	1,232,054	1,020,100	704,564	540,254	544,176

ACRE FEET IN STORAGE FIRST OF MONTH  
Division No. 1  
1962

Dist.	Use	Dec. 61	Jan. 62	Feb. 62	Mar. 62	April 62	May 62
1	Dist. Irrig.	75,950	86,840	95,535	112,744	123,769	125,113
2	Dist. Irrig.	54,830	55,100	57,540	58,879	62,396	70,809
3	Dist. Irrig.	131,691	136,442	141,025	145,740	146,857	147,111
	Big Thompson	110,105	119,342	128,270	137,027	143,540	145,659
	Municipal	5,255	5,111	4,756	3,040	3,693	3,774
	Total	247,051	260,895	274,051	285,807	294,090	296,544
4	Dist. Irrig.	88,940	87,834	86,709	85,859	86,881	94,696
	Big Thompson	70,178	85,307	83,106	94,885	105,554	110,575
	Total	159,118	173,141	169,815	180,744	192,435	205,271
5	Dist. Irrig.	30,725	30,755	30,725	30,725	30,725	33,848
6	Dist. Irrig.	22,603	23,326	20,655	19,459	18,357	26,254
	Big Thompson	8,673	8,726	8,852	5,176	9,068	10,041
	Municipal	46,571	46,204	5,426	40,062	36,480	38,407
	Total	77,847	78,256	34,933	64,697	63,905	74,702
7	Dist. Irrig.	13,672	13,582	13,422	14,647	10,477	18,717
	Municipal	8,915	6,696	3,349	7,845	15,961	9,063
	Total	22,587	20,278	16,771	22,492	26,438	27,780
8	Recreation	15,223	15,296	15,467	15,338	15,347	15,937
	Municipal	17,710	16,560	17,683	15,924	16,955	17,235
	Total	32,933	31,856	33,150	31,262	32,302	33,172
9	Dist. Irrig.	7,916	7,916	7,916	7,266	7,876	9,109
23	Municipal	194,073	192,966	192,902	193,154	193,291	192,095
64	Dist. Irrig.	103,815	104,208	101,268	113,641	114,911	112,843
<u>Totals:</u>							
	Recreation	15,223	15,296	15,467	15,338	15,347	15,937
	Irrigation	530,142	546,003	554,795	588,960	602,249	638,500
	Big Thompson	188,956	213,375	220,228	237,088	258,162	266,275
	Municipal	272,524	267,537	224,116	260,025	381,291	260,574
	Grand Total	1,006,845	1,042,211	1,014,606	1,101,411	1,257,049	1,181,286

SUMMARY OF WATER COMMISSIONERS' ANNUAL REPORTS

ACRE FEET - WATER USED

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Dist. No.	Direct Flow	Reservoir	Big Thompson Project	Other	Total	Acres Irrigated	First Day Used	Last Day Used	Number of Ditches & Reservoirs Served
1	156,806	134,768	16,578		308,152	151,734	4-11	10-10	53
2	314,602	78,971	7,730	5,376	406,679	129,635	4-15	10-31	69
3	279,114	224,703	109,107	34,084	647,008	296,350	4-18	10-31	70
4	263,056	133,975	89,287		486,318	291,725	4-14	10-31	67
5	72,601	28,290	38,210		139,101	111,300	4-19	10-12	101
6	123,057	28,159	17,645		168,861	168,391	4-20	10-31	93
7	122,689				122,689	98,705	3-24	11-10	118
8 Est.	128,000	Est. 2,000			Est. 130,000	Est. 22,000	11- 1-61	11-31-62	71
9	17,184	5,957			23,141	13,823	4-14	10-31	41
23	91,843				91,843	36,756	4-20	8-31	129
47	Est. 342,000	Est. 8,000			Est. 350,000	123,701			
48	26,996				26,996	4,845	5-12	11-10	57
49 (Div. 2)	5,722				5,722	1,986	4-23	10-22	10
64	155,278	146,700			301,978	95,210	11- 1-61	10-31	36 (40 seep ditches; ( 3 reservoirs)
65	9,032				9,032	7,900	4-20	10-30	27