

December 29, 1944

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

Dear Sir:

Herewith is presented my annual report of activities of the office of Division Engineer of Division No. 1 for the year 1944.

During the early part of the irrigation season, there was more than sufficient water to supply all demands, the early part of the year being cold and growing temperatures coming very late, during which time excessive precipitation fell in the most of the South Platte Basin, planting of crops being delayed by this condition. The snowfall in most areas was above normal, however most of the snow came late in the season, which resulted in strong stream flow in the early part of the season and subnormal flow during the latter part of the summer, which in some instances caused a considerable shortage of water for both irrigation and domestic use, some difficulty having been experienced in obtaining an adequate supply for some of the smaller towns which depend upon stream flow for their domestic supply.

There were a few destructive hail storms in the Platte Valley, most of which were local in extent. The most severe of these fell in

Denver and Jefferson Counties on August 26, resulting in considerable damage to crops and other property, the green houses in the area being especially hard hit. There were no floods of consequence in the Division this year.

There were 46 orders issued to the Water Commissioners of the several Districts in the Platte Valley during the irrigation season, the most senior date of demand being May 1, 1865, which order was issued on August 17 and was in force most of the time until October 7, after which time direct irrigation gradually decreased until at the present time there is little water being so used, most of the available supply now being stored in the reservoirs.

An interesting question was brought before this office by the Consolidated Home Supply Ditch and Reservoir Company of Water District No. 4, who requested a ruling as to the position in the list of decretal orders of a certain water right granted to the Town of Berthoud in the adjudication of 1916 granting the Town of Berthoud a perpetual right for 5.0 second feet as domestic priority No. 1. Since this water right was granted in an adjudication subsequent to the 1885 and 1890 adjudication, it was ruled by the writer that this water right should follow the last priority granted in the adjudication of 1885 and 1890. Appeal from this ruling now rests with M. C. Hinderlider, State Engineer.

There were 954,659 acre feet of water in storage in Division No. 1 on June 1, which is about 95% of the existent reservoir capacity. This large supply of reservoir water was a saving factor during the latter part of the growing season, since very little rain fell after July 15 and stream flow diminished rapidly thereafter. At the present time, storage

is very low, there being only 350,000 acre feet impounded, of which 187,000 acre feet belongs to Denver Municipal Water Works.

Crop conditions on the whole are good in the irrigated sections. The dry land crops are only fair, having been injured by the protracted dry period after a very late start. The native hay yield in the mountain area is about 20% below normal due to deficient summer rainfall and stream flow.

Transmountain diversions in the Division were somewhat below normal this season, due to deficient snowfall in the higher altitudes and the late date on which diversion by the transmountain ditches was commenced. There were 80,854 acre feet diverted this season, as compared with 76,811 acre feet last year. The tabulation of the various transmountain diversions and the amount diverted by each accompanies this report.

The Colorado - Big Thompson transmountain diversion tunnel, some thirteen miles in length, was holed through this summer and lining of this tunnel is now in progress.

There were no dam failures in the Division this year and no major construction work along this line; however, some large reservoirs are contemplated in connection with the Big Thompson - Grand Lake project.

A tabulation of the Water Commissioners' crop reports and a report on the administration of the Laramie River in Colorado are herewith presented and made a part of this report.

Very respectfully submitted

J. E. Whittier
Irrigation Division Engineer
Division No. 1

HEW:FF

ADMINISTRATION OF LARAMIE RIVER IN COLORADO FOR SEASON OF 1944

Administration of decretal orders relative to the Laramie River in Colorado in accordance with U. S. Supreme Court decree was carried out during the irrigation season of 1944 in the same manner as employed during the past two years, the water users having elected to continue for another year the temporary agreement entered into in 1942, and which was also agreed to for the season of 1943.

This agreement seems to work very well and after three years' trial there does not appear to be any better plan in view. The operation of the method referred to provides for the division of Colorado's allocation (50,750 acre feet) into two equal parts, one part to be diverted from the Laramie River or tributaries by the Trans-Mountain interests and the other part by the Meadowland users, and providing that diversions may be made at such times and at such rates as elected by the water users, a record of all diversions to be kept by the State Engineer of Colorado or his authorized representative.

Parshall measuring flumes or weirs are used for the measurement of all water diverted and a daily record of same is kept by the water officials. The daily diversion record is not within the scope of this report, however, a tabulation of the several diversions with amounts in acre feet diverted by each for the season of 1944 accompanies this report.

Laramie River.

MEADOW LAND DIVERSIONS

<u>NAME OF DITCH</u>	<u>AMOUNT DIVERTED SECOND FEET</u>
Eller - Boswell	486.68
British Creek No. 1	27.98
Brown - Nunn Creek	523.59
Brown - Parter Creek	52.07
Ben Warren and Enlargement	0
Brinker	0
Comet	244.25
Cabin	58.89
Detro No. 1	75.77
Detro No. 2	0
Davy	195.14
Ferguson	0
Forrester - Brown	70.47
Forrester No. 1	180.55
Forrester No. 2	0
Glendevy	55.86
Grace Creek and Enlargement	554.15
Grant	57.52
Hills	0
Upper Hills	186.80
Homestead	175.88
Homestead No. 1	117.55
Homestead No. 2	63.46
Hence	42.18
Jin - Jimmy Creek	208.56
Jin No. 2 - Jimmy Creek	58.98
Jimmy and Enlargement - Jimmy Creek	113.54
Jimmy Creek - Laramie River	173.55
La Garde and Enlargement	289.15
La Garde No. 1	5.49
Lamb	475.00
Link No. 1	525.89
Link No. 2	0
Lone Tree	56.41
Mansfield and Enlargement	565.60
Mansfield No. 2	518.87
Martin No. 1	265.15
Martin No. 2 and Enlargement	522.20
McIntyre	185.96
Hellie	179.06

<u>NAME OF DITCH</u>	<u>AMOUNT DIVERTED SECOND FEET</u>
Ollie - - - - -	255.19
Pachie - - - - -	551.97
Parker - - - - -	0
Pine Creek and Enlargement - - - - -	14.89
Roaring Creek - - - - -	58.65
Stuck - - - - -	121.82
Smith - Brown - - - - -	249.08
Stuart No. 1 - - - - -	67.55
Stuart No. 2 - - - - -	6.12
Stubb - - - - -	51.04
Schmitger - - - - -	201.07
Trollope - - - - -	29.72
Talmadge No. 1 - - - - -	54.17
Talmadge No. 2 - - - - -	0
Timothy - - - - -	504.61
Warren - - - - -	61.55
Ward No. 1 - - - - -	71.08
Ward No. 2 - - - - -	47.95
Wright - - - - -	559.20
Yalton - - - - -	576.62
French Woman - - - - -	<u>11.52</u>
Total - - - - -	10,004.58 - 19,645 A.F.

HAY CROP - - - - - 5,159.28 Tons

TRANS-MOUNTAIN DIVERSIONS - LARAMIE RIVER

<u>NAME OF DITCH</u>	<u>AMOUNT DIVERTED ACRE FEET</u>
Bob Creek - - - - -	No Diversion
Columbine - - - - -	" "
Headman - - - - -	" "
Laramie - Poudre Tunnel 5/12 to 7/5 - - - - -	9,082.00
Lost Lake - - - - - 5/25 to 6/17 - - - - -	217.00
Skyline - - - - - 5/12 to 7/18 - - - - -	<u>10,575.00</u>
Total - - - - -	19,875.00

TRANS-MOUNTAIN DIVERSIONS

IRRIGATION DIVISION NO. 1

1944

<u>Name of Diversion</u>	<u>From Dist.</u>	<u>To Dist.</u>	<u>Source of Supply</u>	<u>First Day</u>	<u>Last Day</u>	<u>Acre Feet</u>
Deadman Ditch	48	8	Laramie River	-	-	0
Laramie - Poudre Tunnel	48	8	" "	5-21	7-8	9,082
Skyline Ditch	48	8	" "	5-21	7-18	10,576
Lost Lake Ditch	48	8	" "	5-25	6-17	217
Columbine Ditch	48	8	" "	-	-	0
Bob Creek Ditch	48	8	" "	-	-	0
Sand Creek Ditch	48	8	Sand Creek	5-28	6-10	1,705
Michigan Ditch	47	8	North Platte River	6-15	8-5	1,797
Cameron Pass Ditch	47	8	" " "	6-19	7-15	186
Grand River Ditch	51	8	Colorado River	5-30	9-2	16,629
Moffat Tunnel	51	6-7	" "	5-31	11-7	16,196
Williams Fork Tunnel	51	7	" "	7-4	9-17	3,941
Berthoud Pass Ditch	51	7	" "	6-20	8-5	480
Eureka Ditch	51	4	" "	6-25	9-10	95
TOTAL						60,854

MOTTAT TUNNEL SUMMARY

1944

East Portal at R. F. - - - - -	18,198 A. F.
Diverted at Eldorado Springs - - - - -	14,238 " "
Loss in transit charge - - - - -	405 " "
To Clear Creek for exchange - - - - -	2,600 " "
Exchange used - - - - -	2,112 " "
To South Boulder Creek - - - - -	1,558 " "

WILLIAMS FORK TUNNEL

East Portal of Tunnel - - - - -	5,941 A. F.
Diverted for agricultural use - - - - -	3,108 " "
Charge for loss in transit - - - - -	197 " "
Balance to Clear Creek for exchange - - - - -	636 " "

The following is a statement of water in storage in Irrigation Division No. 1, from January 1, to December 31, 1944 tabulated by Districts.
 Does not include North Park District No. 47, Laramie River Basin District No. 48, nor District No. 55, as there is very little storage in any of those Districts.

Volume in Acre Feet

Dist. No.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	61185	62172	102309	116866	141815	154111	112045	73523	19425	2590	2489	50305
2	21945	22072	41086	51575	61227	92425	67402	64915	20521	15226	12025	12944
3	65207	70678	74815	81142	102201	129104	122212	101024	42600	22155	22722	23200
4	27622	27795	29644	40125	65425	69722	65204	74022	48076	27717	24722	24722
5	9260	10000	10802	11227	22220	21220	21220	21022	11202	2222	2222	2222
6	17149	17915	17205	17118	22221	22220	24222	20122	22220	17224	15221	14520
7	2122	12102	12778	4202	2222	12222	12222	12222	2222	2222	2222	2222
8	15247	17565	12970	12451	17720	17222	12100	12222	14222	12100	14172	12222
9	2211	2122	4022	4272	7224	2222	7222	2222	2222	2222	2222	2222
25	122221	122242	122221	122221	122220	122222	122220	122222	122222	122222	122221	122222
64	22222	22221	22221	22224	22221	22221	22221	22222	22222	22222	22222	22222
TOTALS	467022	517225	622227	610220	720022	824222	722222	622222	412722	212222	212222	220722
City of Denver	127222	124222	122412	122225	122445	202122	222212	202722	122222	127022	122122	122222
Bal. for Irrig.	272700	222222	222222	422222	222222	222222	222222	422222	212722	122222	122222	122222

SUMMARY OF WATER COMMISSIONER'S CROP REPORT
FOR THE IRRIGATION SEASON OF 1944

IRRIGATION DIVISION NO. 1

Dist. No.	1st Day Water Used From Natural Stream	Last Day Water Used From Natural Stream	No. A. F. Used for Season	Total No. Acres that can be Irrigated	Alfalfa	Natural Grasses	Cereals	Orchards	Gardens	Market	Potatoes	Sugar Beets	Beans	Pears	Cabbage	Corn	Other	Total Irrigated
1	5-8-44	10-31-44	306,757	163,912	35,342	14,505	28,797	152	371	2,069	12,471	80,925			17	25,714	10,265	151,622
2	5-1-44	10-31-44	374,259	226,700	39,462	10,628	80,277	340	12,059	11,777	27,668	23,460	760	2,192	803		11,047	219,670
3	5-7-44	11-6-44	232,900	380,000	64,616	5,007	72,859	1,567	5,215	29,079	7,802	11,554	370				38,622	264,160
4	5-7-44	10-31-44	160,831	167,000	38,350	305	72,690	2,020	645	7,802	9,080	3,260	2,210	421		2,570	1,917	141,210
5	5-16-44	10-31-44	113,919	112,335	34,830	8,665	49,215	90	670	200	16,525			540			700	111,632
6	5-1-44	10-29-44	102,316	+195,335	28,492	61,125	45,805	655	2,562	335	4,320	1,090	465	139		18,438	9,188	+172,414
7	5-1-44	10-31-44	133,624	117,180	13,505	1,230	52,314	1,632	10,802	156	1,540	867	335	1,197		6,585	4,957	95,121
8	4-1-44	10-31-44	126,884	120,000	9,826	956	6,141	21	2,211	10	162	10					4,286	25,635
9	5-1-44	10-31-44	33,642	16,349	4,818	1,653	5,069	89	350			175	39		100	1,240	435	14,064
23	4-27-44	10-31-44	2,120,000	50,000		40,000												40,000
47	5-1-44	9-18-44	1130,000	70,000		43,614												43,614
48	5-1-44	11-29-44	19,842	5,000		4,600 (3139 Tons Native Hay)												4,600
64	4-9-44	11-31-44	232,216	195,184	27,665	29,926	41,789	125	983	3,602	16,699	5,259	0	20		29,885	5,921	171,884
65	5-1-44	11-15-44	18,045	* 8,400	875	262	0	15	371	19	12	15	9	0		1,633	558	** 3,447
TOTALS				2,855,236	1,827,295	207,781	222,678	454,756	6,716	54,626	55,049	124,901	66,475	4,240	5,439	86,165	88,156	1,457,082

+ Acreage reported too high since 1922. Land cruise of 1930 shows irrigated area to be 72,142 acres.

* 5,000 acres in Nebraska.

** 1,976 acres in Nebraska.

O R T

Dist. No.	1st Day	Last Day	No. Use Se	Peas	Cabbage	Corn	Other	Total Irrigate
	Water Used From Natural Stream	Water Used From Natural Stream						
1	5- 8-44	10-31-44	30		17	25,714	10,265	151,628
2	5- 1-44	10-31-44	37	760	2,192		11,047	219,670
3	5- 7-44	11- 6-44	33	570	803		38,882	264,160
4	5- 7-44	10-31-44	16	2,210	421	2,570	1,917	141,210
5	5-16-44	10-31-44	11		540		700	111,635
6	5- 1-44	10-29-44	10	465	139	18,438	9,188	172,414
7	5- 1-44	10-31-44	13	335	1,197	6,585	4,957	95,121
8	4- 1-44	10-31-44	12				4,286	23,635
9	3- 1-44	10-31-44	8					
23	4-27-44	10-31-44	120		100	1,340	435	14,064
47	5- 1-44	9-18-44	130					40,000
48	5- 1-44	11-29-44	19					43,614
64	4- 9-44	11-31-44	282					4,600
65	5- 1-44	11-15-44	18	0	30	29,885	5,921	171,884
				9	0	1,633	558	3,447
TOTALS				2,255	4,340	86,165	88,156	1,457,082

+ Acreage acres.

* 5,000 ac

** 1,976 ac