JOHN D. VANDERHOOF
Governor

C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

LEE R. ENEWOLD P. E.
IRRIGATION DIVISION ENGINEER
P. O. BOX 396
GLENWOOD SPRINGS, COLORADO 81601
PHONE: 945-5665

November 30, 1975

This annual report is hereby respectfully submitted to the State Engineer of Colorado for the water year 1974-75.

Lee R. Enewold
Division Engineer

Ray D. Walker
Asst. Division Engineer

INDEX

INTRODUCTORY STATEMENT

DIVISION OF WATER RESOURCES
WATER DIVISION NO. 5
P. O. Box 396
GLENWOOD SPRINGS, COLO. 81601

November 30, 1975

Mr. Clarence J. Kuiper
State Engineer
Division of Water Resources
300 Columbine Building
1845 Sherman Street
Denver, Colorado 80203

Re: Division Engineer's Annual Report

This Annual Report for Division No. 5 for the water year ending November 30, 1975, is as follows:

1. Introductory Statement.

A. Division 5 consists of all the Colorado River Basin, including all of its tributaries from the Continental Divide through its course within the State of Colorado to the Utah State line; excluding only the Gunnison River drainage basin, but including the White River drainage, which is located in Division 6, only and expressly provided by law as under judiciary, decretal rule by the Water Judge presiding in the Division 5 Water Court.

The major tributaries of the Colorado River from its headwaters to the state line are the North Fork of the Colorado, Willow Creek, Fraser River, Williams Fork, Troublesome Creek, Blue River, Muddy Creek, Eagle River, Roaring Fork, Divide Creek, Mamm Creek, Rifle Creek, Parachute Creek, Roan Creek, Plateau Creek and the Big Salt Wash.

The major population centers are:

Name	Stream	Approx. Pop.
Carbondale	Roaring Fork	2,400
Glenwood Springs	Roaring Fork	4,900
Area surrounding Glenwood Springs	Roaring Fork	2,850
New Castle	Colorado River	625
Silt	Colorado River	750
Rifle	Colorado River	2,750
Grand Valley	Colorado River	325
DeBeque	Colorado River	325
Collbran	Plateau Creek	265
Palisade	Colorado River	1,000
Grand Junction	Colorado River	27,000
Fruita	Colorado River	2,000
Grand Lake	Colorado River	229
Granby	Fraser-Colorado River	679
Fraser-Winter Park	Fraser River	269
Hot Sulphur Springs	Colorado River	275
Kremmling	Colo. Muddy, Blue River	955
Breckenridge	Blue River	685
Frisco	Blue River	571
Dillon	Blue River	232
Minturn	Eagle River	706
Vail	Eagle River	596
Eagle	Eagle River	525
Aspen	Roaring Fork	3,551
Basalt	Roaring Fork	524

POPULATION PROJECTIONS

End of Year

Counties	1975	1976	1977	1978	1979	1980
Eagle	11,473	11,587	11,761	11,903	12,082	12,273
Garfield	17,503	17,976	18,597	19,290	20,148	21,127
Grand	7,496	7,821	8,203	8,582	9,006	9,461
Mesa	61,305	62,434	64,052	65,889	68,256	70,988
Pitkin	10,336	10,636	11,004	11,357	11,761	12,193
Summit	5,810	6,248	6,743	7,248	7,805	8,403

The summation of the Water Quality Standards and Stream Classification now on the Colorado River, is as follows:

Adopted: March 19, 1974
Effective: June 19, 1974

COLORADO RIVER BASIN

CLASSIFICATION

AREA NO.	AREA	FROM	TO	QUALITY CLASS
1	Main Stem of Colorado River and tributaries and standing bodies of water on main stem and tributaries in this area	Sources	Confluence with Parachute Creek near Town of Grand Valley	B_1
2	Grand Lake, Shadow Mountain Reservoir and Granby Reservoir	Inlet	Outlet	A_1
3	Main Stem of Colorado River	Confluence with Parachute Creek near Town of Grand Valley	Colorado-Utah State Line	B_2
4	Plateau Creek and tributaries and standing bodies of water on main stem and tributaries	Sources	Confluence with Colorado River	B_1
5	Fraser River and Williams Forks of River (including Williams Fork Reservoir)	Sources	Confluence with Colorado River	B_1
6	Blue River including Dillon Reservoir	Source	Confluence with Colorado River	B_1
7	Eagle River including Homestake Creek	Source	Confluence with Colorado River	B_1
8	Gore Creek	Source	Confluence with Eagle River	B_1
9	Roaring Fork River and tributaries and standing bodies of water on main stem and tributaries	Sources	Confluence with Colorado River	B_1

Adopted: March 19, 1974
Effective: June 19, 1974

WATER QUALITY STANDARDS SUMMARY

STANDARD	CLASS			
	A_1	A_2	B_1	B_2
Settleable Solids	Free From	Free From	Free From	Free From
Floating Solids	Free From	Free From	Free From	Free From
Taste, Odor, Color	Free From	Free From	Free From	Free From
Toxic Materials	Free From	Free From	Free From	Free From
Oil and Grease	Cause a film or other discoloration	Cause a film or other discoloration	Cause a film or other discoloration	Cause a film or other discoloration
Radioactive Material	Drinking Water Standards	Drinking Water Standards	Drinking Water Standards	Drinking Water Standards
Fecal Coliform Bacteria	Geometric Mean of <200/100ml from five samples in 30-day per.	Geometric Mean of <200/100ml from five samples in 30-day per.	Geometric Mean of <1000/100ml from five samples in 30-day per.	Geometric Mean of <1000/100ml from five samples in 30-day per.
Turbidity	No increase of more than 10 J.T.U.	No increase of more than 10 J.T.U.	No increase of more than 10 J.T.U.	No increase of more than 10 J.T.U.
Dissolved Oxygen	6 mg/l minimum	5 mg/l minimum	6 mg/l minimum	5 mg/l minimum
pH	6.5 - 8.5	6.5 - 8.5	6.0 - 9.0	6.0 - 9.0
Temperature	Maximum 68°F. Maximum Change 2°F.	Maximum 90°F. Maximum Change: Streams - 5°F. Lakes - 3°F.	Maximum 68°F. Maximum Change 2°F.	Maximum 90°F. Maximum Change: Streams - 5°F. Lakes - 3°F.
Fecal Streptococcus	Monthly average of <20/100ml from five samples in 30-day per.	Monthly average of <20/100ml from five samples in 30-day per.	----	----

PERSONNEL

PERSONNEL

Name	Position	District	Months Worked/ Budgeted	Mileage
Enewold, Lee R.	Division Engineer		Annual	11,861
Walker, Ray	Asst. Div. Engineer		Annual	210
Jackson, Arlen	HB 1042		Annual	2,432
Krueger, Robert	SB 35		Annual	1,353
Dalton, Ruth	Admin. Clerk-Typist		Annual	-0-
Anderson, George	WC	70	8	7,955
Bieser, Robert	WD	72	6	2,504
Callicotte, Stephen	WC	38	10	4,899
Clem, John Colin*	WC	45	8	4,067
Coultas, Tim	WC	50 & 51	7	7,031
Forster, Charles	WC	52 & 53	Annual	5,614
Gerry, Woodrow	WD	72	6	4,572
Hill, Clifford	WD	72	6	4,063
Kenney, Donald	WD	72	6	4,043
Klocker, Marcus	WC	39	6	10,179
Nelson, Glen G.	WD	45	4	560
Rager, Cletus	WD	45	7	4,865
Raine, Jack	WD	72	3	1,146
Reed, Miles	WD	72	4	1,556
Saunders, Woodrow	WC	72	Annual	12,422
Wells, Wayne L.	WC	36 & 37	Annual	12,475
Yeoman, Richard	WD	45		2,120
				105,927

* Retired 11/17/1975

SNOW PACK

SNOW PACK -

The January and February snow readings for the Colorado River Basin indicated near normal snowpack. The exceptions with above normal were Green Mountain 111% of average and Lake Granby 102% of average. January - all watersheds contained less average snowpack water content than last year. In February Green Mountain watershed contained more average snowpack water content than 1974.

The March snowpack was above normal due to two large snow storms that struck toward the end of the month. Individual watersheds above the 1958-1973 normal were Green Mountain, Willow Creek and Lake Granby with 122%, 110% and 107% of average respectively. The seasonal water supply forecasts made on March 1st and each month thereafter through June 1 were in general excellent. The forecasts as of April 1st were within 8 percent of the actual April - July runoff recorded at most forecast points.

In April, the snow courses showed their usual snowpack water content loss. However, the snowpack remained above normal. Individual areas ranged from 131% of average on Willow Creek; 119% at Lake Granby and 110% at Green Mountain.

Snowpack water accumulation since May 1st had not been significantly diminished due to the below normal May temperatures. With a low runoff, the remaining snowpack at high elevations was above normal. Alternating warm and cool temperatures during May and the first half of June retarded to a large extent the usual snowmelt runoff. Streams would just begin to rise from melting snow when the temperature would drop for a few days. The cool temperatures did not significantly diminish the snowpack at the extreme higher elevations.

The snowpack in late June and early July at lower elevations was mostly depleted. Much of the water went directly into the ground. This was due to the hot and dry winds of last fall that took a lot of moisture out of the soil and the fluctuation of temperatures which allowed the frost to come out of the ground before the runoff started. This did cause the peak stream forecasts to be significantly reduced due to the extended duration of the melt.

The flow of water continued at above normal until September 4th at which time Dotsero placed the call on the river. On September 9 a second demand call on the river was made by the Grand Valley Water Users Association at Grand Junction. The only effect of this was to shut off the Transmountain diversion and release from Green Mountain to satisfy the call. What was an expected high runoff was effectively regulated by the cool temperatures and changed into a very welcome long and steady flow of water from the rivers and most of the side streams. There was an ample water supply for the season due to the weather and the above normal snowpack, although the river readings were not as impressive as some previous years.

PRECIPITATION

PRECIPITATION -

Precipitation in January on the upper reaches of the Colorado River watershed was 134% of average for Green Mountain and 155% of average for both Willow Creek and Lake Granby. October - January precipitation accumulation averaged 122% of normal for both Willow Creek and Lake Granby, while Green Mountain was 97% of normal. The temperature from October through the middle of January averaged near normal, while the last half of January was mild with temperatures much above normal.

February precipitation was 6% below normal for Willow Creek and Lake Granby. Only Green Mountain had normal precipitation. October - February precipitation continued near normal to 16% above. Temperatures averaged below normal during most of the month with some reports 20 degrees below the average weekly norm.

Two large snow storms struck Colorado near the end of March which left considerable moisture. Precipitation for the Green Mountain area averaged 147%, while both Willow Creek and Lake Granby were 121%. Temperatures averaged above normal during March.

October - April precipitation was 19% above normal at Lake Granby and Willow Creek and 4% above at Green Mountain. For April precipitation was 129% at Lake Granby and Willow Creek and only 89% of normal at Green Mountain.

May precipitation was very erratic with 99% of average at Willow Creek and Lake Granby, to 72% of normal at Green Mountain. Seasonal precipitation for October - May varied from normal to 116% of average. Temperatures averaged below normal with alternating warm and cool days.

Precipitation totals for June were all below normal averaging 61% of normal for all three areas. Temperatures averaged 5 to 10 degrees below normal for the month. October to June precipitation averaged 91% at Green Mountain and 112% at Grand Lake.

July precipitation at Green Mountain Dam was 70% of average, while Grand Lake **(6S SW) was 129% and*(1 NW) was 116% of average. Total precipitation for October - July was 122% of average for Grand Lake (1 NW) and 107% for (6S SW). Green Mountain Dam was 89% of average. Temperatures were generally 3 to 6 degrees above normal during the first week and slightly below normal the balance of the month.

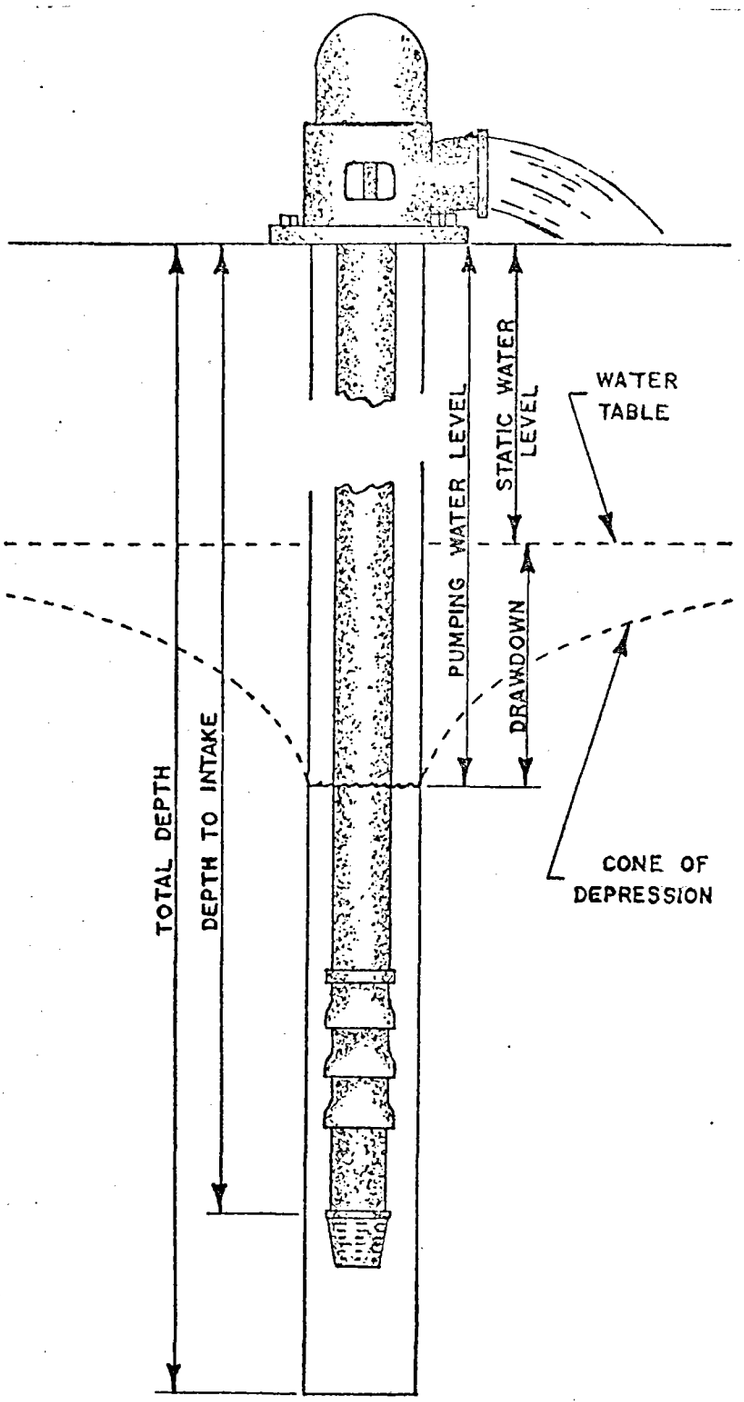
Precipitation recorded in August varied from 68% of normal at Green Mountain Dam to 52% of normal at Grand Lake (1 NW). Water year precipitation totals, October - August ranged from 105% of normal at Grand Lake (1 NW) to 87% of normal at Green Mountain Dam. Average temperatures varied from 3 degrees above normal the first week to 3 degrees below for the balance of August.

September averages for all areas were above normal. Grand Lake (6S SW) was the lowest with 20 percent of normal. Green Mountain Dam was only 43% while Grand Lake (1 NW) had 46% of normal. Water year 1975 precipitation varied from 100% of average at Grand Lake (1 NW) to 82% at Green Mountain Dam. Grand Lake (6S SW) had 94% of average. The temperature averaged above normal the first and third weeks and below normal the second and fourth weeks of the month.

* (1NW) Located NW 1/4 of Sec 1, T 3N, R. 76W

** (6SSW) Located SW 1/4 of Sec 6, T 3W, R. 75W

UNDERGROUND WATER


WATER TABLE
STATIC WATER LEVEL
PUMPING WATER LEVEL
DRAWDOWN
CONE OF DEPRESSION
TOTAL DEPTH
DEPTH TO INTAKE

Division 5

Wells Adjudicated In The
Water Court

District	No. of Applications	Domestic	Commercial	Irrigation	Municipal	Other Uses
36	4				4	
37	4	2		1	1	
38	35	25	6		3	1
39	22	15	3	1	1	2
45	8	6	1	1		
50						
51	12	9	1	1		1
52						
53						
70	3	1	1	1		
72	3	2		1		
TOTAL	91	60	12	6	9	4

In the Colorado River valley, ground water is quite limited as to irrigation use. Most wells in this area are used for domestic purposes. They vary from relatively soft water wells and springs in the mountain areas to water which is quite high in soluble salts along the lower river valleys.

A study of the ground water resources of the Middle Park areas was made by the USGS and the State Water Conservation Board. According to this study in Middle Park, the best source of ground water is the alluvium including the terrace deposits of streams. The alluvium consists mainly of sand and gravel in a matrix of silt and other fine grained material. Their thickness ranges up to 100 feet. Ground water in Middle Park is used mostly for domestic and livestock purposes. The natural conditions for developing large capacity wells do not seem to exist in most of the park.

Further studies of ground water are currently being made, and further information will be available from time to time.

TRANSMOUNTAIN DIVERSIONS

JOHN D. VANDERHOOF
Governor

C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

LEE R. ENEWOLD P. E.
IRRIGATION DIVISION ENGINEER
P. O. BOX 396
GLENWOOD SPRINGS, COLORADO 81601
PHONE: 945-5665

October 16,1975

Mr. W. G. Wilkinson, Division Engineer
Room 208
8th & 8th Office Building
Greeley, Colorado 80631

Dear Dugan:

In preparation for our 1975 annual report, would it be too much trouble for you to furnish me with copies of your records for the Trans-Mountain Diversions from Water Division No 5 to Water Division No. 1?

The following structures are involved:

Adams Tunnel
Grand River Ditch
Berthoud Ditch
Eureka Ditch
Moffat Tunnel
Williams Fork Tunnel
Hoosier Pass
Boreas Pass
Roberts Tunnel
Vidler Tunnel

I would appreciate any help or suggestions regarding these records.

Sincerely,

Lee R. Enewold
Division Engineer

Richard D. Lamm
Governor

C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

DEPARTMENT OF NATURAL RESOURCES
W. G. WILKINSON P.E.
IRRIGATION DIVISION ENGINEER
ROOM 208 8th AND 8th OFFICE BLDG.
GREELEY, COLORADO 80631
OFFICE: 352-8712 HOME: 484-3917

October 31, 1975

Mr. Lee R. Enewold
P.O. Box 396
Glenwood Springs, Colorado 81601

Dear Lee:

As requested in your letter of October 16, 1975, the following amounts of water were diverted through Trans-Mountain Diversions from Division 5 to Division 1, during the period October 1, 1974 to September 30, 1975. Volumes are in acre-feet:

Adams Tunnel	237,300	
Berthoud Ditch	458	
Eureka Ditch	30	
Moffat Tunnel	58,400	
Williams Fork Tunnel	5,840	(Included in Moffat Tunnel)
Hoosier Pass Tunnel	8,350	
Boreas Pass Tunnel	40	
Roberts Tunnel	47,580	
Vidler Tunnel	12	
Grand River Ditch	21,230	

If any additional information is desired, please advise.

Sincerely,

W. G. Wilkinson
Division Engineer

WGW:HRC:dw

TRANSMOUNTAIN DIVERSIONS
TO DIVISION I
Tabulation 1972

Name	Source	Recipient	Amount A.F. Diverted 10-1-1970 to 9-30-1971	Amount A.F. Diverted 10-1-1971 to 9-30-1972
Adams Tunnel	Grand Lake Division 5	Big Thompson	190,770 AF	235,000 AF
Grand River Ditch	Colorado River Division 5	Water & Storage Ft. Collins	14,930 AF	18,930 AF
Berthoud Pass Ditch	Fraser River Division 5	Platte River	902 AF	473 AF
Eureka Ditch	Colorado River Division 5	Platte River	11.9 AF	55 AF
Moffat Tunnel	Fraser River Division 5	Platte River	39,930 AF	60,360 AF
Williams Fork T. (Jones Pass)	Williams Fork Division 5	Platte River	2,620 AF	6,480 AF
Hoosier Pass T.	Blue River Division 5	Platte River	13,050 AF	10,410 AF
Boreas Pass	Blue River Division 5	Platte River	84.5 AF	0 AF
Roberts Tunnel	Blue River Division 5	Platte River	18,700 AF	34,190 AF
Vidler Tunnel	Colorado River Division 5	Platte River	64.5 AF	47 AF
		TOTAL	282,511 AF	365,945 AF

TRANSMOUNTAIN DIVERSION
TO DIVISION I
TABULATION 1975

Amount A. F. Diverted 10-1-1972 to 9-30-1973	Amount A. F. Diverted 10-1-1973 to 9-30-1974	Amount A. F. Diverted 10-1-1974 to 9-30-1975
230,690 AF	231,100 AF	237,300 AF
14,388 AF	15,640	21,230
784 AF	809	458
0	15	30
33,170 AF	68,130	58,400
970 AF		5,840
5,710 AF		8,350
0	6.4	40
2,250 AF	34,730	47,580
55 AF	58	12
288,009 AF	350,488.4	379,240

JOHN D. VANDERHOOF
Governor

C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

LEE R. ENEWOLD P. E.
IRRIGATION DIVISION ENGINEER
P. O. BOX 396
GLENWOOD SPRINGS, COLORADO 81601
PHONE: 945-5665

October 16, 1975

Bob Jesse, Acting Div. Engineer
1906 West Northern Avenue
Pueblo, Colorado 81004

Dear Bob:

In preparation of our 1975 annual report, we would like some information on the Trans-Mountain Diversions from Water Division No. 5 to Water Division No. 2.

The following structures are involved:

Twin Lakes Tunnel
Busk Ivanhoe Tunnel
Ewing Ditch
Wurtz Ditch
Columbine Ditch
Homestake Tunnel
Fri-Ark Project

I would appreciate any help or suggestions regarding these records.

Sincerely,

Lee R. Enewold
Division Engineer

BUSK - IVANHOE TUNNEL Creek near _____

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19____

Drainage area _____ square miles. Water stage recorder _____

G. H. ____ ft. on ____ Sec. ft. at ____ Min. Daily Discharge ____ sec.-ft. on ____

Max. Discharge ____ ft. at ____ Max. G. H. ____

Day.	OCT.		NOV.		DEC. 1974		1975 JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.06	52 0.5										
2	.06	.5										
3	.07	.62										
4	.08	.79										
5	.08	.79										
6	.08	.79										
7	.09	.92										
8	.09	.92										
9	.09	.92										
10	.08	.79										
11	.08	.79										
12	.09	.92										
13	.10	1.1										
14	.11	1.2										
15	.10	1.1										
16	.10	1.1										
17	.10	1.1										
18	.10	1.1										
19	.10	1.1										
20	.10	1.1										
21	.09	.92										
22	.09	.92										
23	.08	.79										
24	.08	.79										
25	.08	.79										
26	.08	.79										
27	.08	.79										
28	.09	.92										
29	.09	.92										
30	.10	1.1							XX	XXX		
31	S	52 .5	XX	XXX					XX	XXX		
Total												
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

Calendar Year

STATE OF COLORADO

DIVISION OF WATER RESOURCES

OFFICE OF STATE ENGINEER

Station _____ 6-15-91

Rating Table Used _____

Day.	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1					0.28	+2 116	13 2.13	◇ 108	0.44	◇ 86	0.11	½ 1.5
2					.30	61	2.22	115	.44	86	.10	1.4
3					.36	68	a		.43	82	15 .10	½ 1.4
4					.49	11	2.16	110	.40	7.3	.10	1.4
5					.68	18	2.25	118	.38	6.8	.10	1.4
6					12 .85	+2 26	2.16	110	.35	5.9	.10	1.4
7					.97	31	2.12	107	14 .30	◇ 4.6	.09	1.2
8					.98	32	2.02	99	.28	4.1	.09	1.2
9					.82	24	1.93	92	.27	3.9	.10	1.4
10					.78	22	1.89	87	.26	3.7	.09	1.2
11					.71	+2 19	1.68	74	.25	3.4	.11	½ 1.5
12			S	½ 44	a	28	1.54	64	.27	3.9	.13	½ 1.7
13			S	25	a	37	1.45	58	.29	4.4	.14	½ 1.8
14			.42	8.6	1.22	+1 46	1.38	120	.33	5.4	.18	+2 2.4
15			.59	14	1.44	58	1.34	51	.32	5.1	.21	3.0
16			.59	14	1.57	67	1.28	48	.30	4.6	.19	2.6
17			.49	11	1.60	69	1.24	45	.28	4.1	.18	2.4
18			.45	7.5	1.56	66	1.10	37	.26	3.7	.17	+2 2.2
19			.40	7.9	1.52	63	.97	30	.23	3.0	.14	½ 1.8
20			.40	7.9	1.48	61	.92	28	.23	3.0	.12	1.5
21			.43	8.9	1.44	58	.99	32	.27	◇ 3.9	.12	1.5
22			.45	9.5	1.42	57	.92	28	.25	+1 3.7	.12	+3 1.5
23			.43	8.9	1.45	59	.84	24	.23	3.2	.11	+4 1.5
24			.38	7.3	1.54	+1 65	.75	20	.22	L1 3.0	.11	1.5
25			.34	6.2	1.83	◇ 94	.68	17	.20	½ 2.8	.10	1.4
26			.39	7.6	1.85	96	.65	16	.18	2.4	.10	1.4
27			.42	8.6	1.88	98	.57	14	.16	2.0	.10	1.4
28			.44	9.2	1.97	104	.54	13	.17	2.2	.09	1.2
29			.41	8.2	1.99	97	.49	10	.16	½ 2.0	.09	1.2
30			.35	6.5	2.06	◇ 102	.47	9.5	.15	+3 2.0	.09	+4 1.2
31	XX	XXX	.31	[illegible]	XX	XXX	.44	◇ 86	.13	½ 1.7	XX	XXX

Quarter: 4th, 3rd, 2nd, 1st — Computed, Checked, Date

Quarter: 4th, 3rd, 2nd, 1st — Dis.appld., Dis.check, Date — D. DeYoung

Quarter: 4th, 3rd, 2nd, 1st — G.H.copd., G.H.check, Date — D. DeYoung, G. Largent, 10/30/25

Water Year

STATE OF COLORADO

VISION OF WATER RESOURCES

OFFICE OF STATE ENGINEER

Ewing

Sta. No. _____

Rating Table Used _____

	APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.				
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		4th			
					0.42	38	0.70	85	0.35	26	0.22	12	1	3rd			
					.47	46	.67	79	.34	25	.22	12	2	2nd			
					.54	57	.66	77	.33	24	.22	12	3				
					.58	64	.64	73	.32	23	.22	12	4	1st			
					.64	75	.63	72	.30	20	a		5				
					.68	83	.63	72	.30	20			6	Quarter	Computed	Checked	Date
					.68	83	.63	72	.29	19			7				
					.72	91	.60	66	.29	19			8				
					.70	87	.59	64	.28	18			9	4th			
					.67	81	.58	62	.28	18			10				
					.63	73	.56	59	.29	19			11	3rd	D. P. D.		
			S		.61	70	.55	57	.28	18			12				
			.20	11	.62	72	.53	54	.33	24			13	2nd			
			.25	16	.67	81	.57	60	.30	20			14				
			.31	23	.73	93	.53	54	.29	20			15	1st			
			.32	24	.78	10	.53	54	.28	19			16				
			.33	25	.79	11	.52	52	.28	19	a		17	Quarter	Dis.appld.	Dis.check	Date
			.32	24	.79	11	.48	45	.27	18	.21	11	18				
			.35	22	.77	10	.46	42	.25	16	.20	.78	19				
			.42	38	.74	[illegible]	.47	41	.25	16	.20	[illegible]	20	4th			
			.46	44	.72	91	.45	41	.26	17	.20	[illegible]	21				
			.42	38	.72	91	.44	39	.25	16	.20	[illegible]	22	3rd	D. P. D.		
			.36	29	.72	91	.43	38	.24	15	a		23				
			.39	33	.73	93	.41	35	.24	15			24	2nd	G. E. L.		
			.44	41	.74	95	.40	33	.23	13			25				
			.50	50	.75	97	.39	32	.23	13	a		26	1st			11-7-75
			.50	50	.76	10	.38	31	.23	13	.20	[illegible]	27				
			.46	44	.75	94	.38	31	.23	13	.20	[illegible]	28	Quarter	G.H.copd.	G.H.check	Date
			.42	38	.74	95	.38	31	.22	12	.20	[illegible]	29				
			.41	36	.71	87	.38	31	.22	12	.20	[illegible]	30		Water Year		
XX	XXX		.40	36	XX	XXX	.37	29	.22	12	XX	XXX	31				

STATE OF UTAH

DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

HOMESTAKE

Sta. No. _____

Rating Table Used _____

Day.	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1			2.80	243	2.08	150	1.68	102	2.51	204	2.44	195
2			2.85	250	2.08	150	1.69	108	2.51	204	2.44	195
3			2.84	248	2.08	150	1.70	109	2.51	204	2.43	194
4			2.83	247	2.08	150	1.72	111	2.51	204	2.42	192
5			2.83	247	2.09	152	1.72	111	2.50	203	2.41	191
6			2.82	246	2.09	152	1.72	111	2.50	203	2.41	191
7			2.81	244	2.09	152	1.73	112	2.49	201	2.40	190
8			2.80	243	2.10	153	1.73	112	2.53	206	2.38	187
9			2.78	240	2.10	153	1.74	113	2.61	217	2.37	186
10			2.85	250	2.11	154	1.75	114	2.60	216	2.35	183
11			2.84	248	2.11	154	1.76	116	2.60	216	2.34	182
12			2.82	246	2.10	153	1.76	116	2.59	214	2.33	181
13			2.80	243	2.09	152	1.77	117	2.58	213	2.32	180
14	80		2.81	244	2.09	152	1.77	117	2.58	213	2.31	178
15	55	209	2.81	244	2.09	152	1.77	117	2.57	212	2.29	176
16	50	203	2.82	246	1.93	134	1.77	117	2.56	210	2.65	222
17	50	203	2.83	247	1.62	101	1.77	117	2.55	209	2.88	254
18	50	203	2.82	246	1.62	101	1.96	137	2.55	209	2.86	251
19	50	203	2.85	250	1.62	101	2.09	152	2.54	208	2.86	251
20	50	203	2.85	250	1.62	101	2.09	152	2.53	206	2.85	250
21	50	203	2.83	247	1.62	101	2.09	152	2.53	206	2.82	246
22	66	224	2.82	246	1.62	101	2.09	152	2.52	205	2.82	246
23	86	251	2.81	244	1.63	102	2.09	152	2.51	204	2.84	248
24	85	250	2.79	241	1.63	102	2.09	152	2.50	203	S	201
25	85	250	2.78	240	1.64	103	2.09	152	2.50	203	S	64
26	35	250	2.77	239	1.65	104	2.09	152	2.49	201	.08	82
27	84	248	2.50	209	1.65	104	2.09	152	2.48	200	.02	09
28	83	247	2.10	153	1.66	105	2.09	152	2.48	200	0	
29	82	246	2.10	153	1.66	105	2.09	152	2.47	199	0	
30	81	244	2.10	153	1.67	106	2.09	152	2.46	197	0	
31	X	XXX	2.09	152	XX	XXX	2.24	170	2.45	196	XX	XXX

Quarter: 1st, 2nd, 3rd, 4th

Computed _____ Checked _____ Date _____

D. De Young

Dis.appld. _____ Dis.check _____ Date _____

D. DeYoung G. Largent 10/30/75

G.H.copd. _____ G.H.check _____ Date _____

Water Year

STATE OF COLORADO

VISION OF WATER RESOURCES

OFFICE OF STATE ENGINEER

Plumb

Sta. No. _____

Rating Table Used _____

APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.	Quarter
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		
				0.27	½ 33	1.06	½ 27	0.27	½ 33	0.08	½ 61	1	4th
				.23	26	1.07	28	.25	30	.10	72	2	3rd
				.29	37	1.01	25	.23	26	.10	82	3	2nd
				.47	117	1.04	26	.21	23	.09	71	4	1st
				.57	10	1.02	25	.21	23	.12	1.0	5	Quarter
				.77	16	1.01	25	.20	21	.10	82	6	Computed
				.83	18	.97	24	.19	20	.06	43	7	Checked
				.78	17	.94	22	.18	1.8	.03	20	8	Date
				.55	9.8	.94	22	.18	1.8	5	½ 15	9	4th
				.44	7.0	.88	20	.18	1.8			10	
				.37	5.4	.78	17	.18	1.8			11	3rd
				.39	6.8	.70	14	.20	2.1			12	
				.55	9.8	.66	13	.26	3.2			13	2nd
				.80	18	.68	14	.24	2.8			14	
				1.00	25	.63	12	.22	2.5			15	1st
				.98	24	[8].69	½ 14	.18	1.8			16	Quarter
				.81	18	.62	12	.17	1.7			17	Dis.appld.
				.81	18	.53	9.2	.17	1.7			18	Dis.check
				.68	14	.48	7.9	.14	1.3			19	Date
		5	½ 16	.59	11	.47	7.0	.12	1.2			20	
		.26	32	.67	13	.45	7.0	[1].16	½ 16			21	4th
		.28	35	.73	15	.42	6.5	.14	1.3			22	3rd
		.28	35	.93	22	.41	6.2	.13	1.2			23	
		.27	33	1.21	33	.38	5.6	.12	1.0			24	2nd
		.28	35	1.17	32	.36	5.1	.12	1.0			25	
		.32	42	1.05	29	.33	4.5	.11	.93			26	1st
		.39	5.2	1.11	31	.32	4.3	.11	.93			27	Quarter
		.37	4.9	1.12	32	.31	4.1	.11	.93			28	G.H.copd.
		.33	4.5	1.12	32	.31	4.1	.09	.71			29	G.H.check
		.32	4.3	1.11	½ 29	.31	4.1	.09	.71			30	Date
XX	XXX	.31	½ 41	XX	XXX	.28	½ 36	.09	½ 71	XX	XXX	31	

D. DeYoung

G. LARGENT

10/31/75

Water Year

TWIN LAKES TUNN[redacted] Creek near Above Twin Lakes[redacted] Independence Pass

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19____

Drainage area _____ square miles. Water stage recorder _____

G. H. _____ ft. on _____ Sec. ft. at _____ on _____ Min. Daily Discharge _____ sec.-ft. on _____

Max. Discharge _____ ft. at _____ on _____ Max. G. H. _____

Day.	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.54	+02 18	0.14	+02 2.5	0.17	+02 3.3	0.13	+02 2.2	0.15	+02 2.0	0.12	+02 2.0
2	S	1.3	.13	2.2	.17	3.3	.13	2.2	.15	2.7	.13	2.2
3	.08	1.2	.13	2.2	.16	3.0	.13	2.2	.15	2.7	.13	2.2
4	.08	1.2	.13	2.2	.15	2.7	.12	2.0	.15	2.7	.13	2.2
5	.08	1.2	.13	2.2	.15	2.7	.12	2.0	.15	2.7	.13	2.2
6	.08	1.2	.13	2.2	.15	2.7	.13	2.2	.15	2.7	.13	2.2
7	.08	1.2	.14	2.5	.15	2.7	.13	2.2	.15	2.7	.13	2.2
8	.09	1.4	S	10	.16	3.0	.13	2.2	.14	2.5	.13	2.2
9	.10	1.6	.50	16	.16	3.0	.14	2.5	.14	2.5	.14	2.5
10	.11	1.8	.67	26	.15	2.7	.14	2.5	.14	2.5	.15	2.7
11	.11	1.8	S	14	.15	2.7	.13	2.2	.15	2.7	.15	2.7
12	.11	1.8	S	21	.14	2.5	.13	2.2	.15	2.7	.15	2.7
13	.11	1.8	.09	1.4	.14	2.5	.14	2.5	.14	2.5	.15	2.7
14	.11	1.8	.09	1.4	.15	2.7	.14	2.5	.13	2.2	.14	2.5
15	.11	1.8	.09	1.4	.15	2.7	.14	2.5	.13	2.2	.15	2.7
16	.11	1.8	.08	1.2	.15	2.7	.14	2.5	.13	2.2	.15	2.7
17	.11	1.8	.09	1.4	.15	2.7	.13	2.2	.12	2.0	.15	2.7
18	.12	2.0	.09	1.4	.15	2.7	.13	2.2	.12	2.0	.15	2.7
19	.11	1.8	.10	1.6	.15	2.7	.13	2.2	.12	2.0	.14	2.5
20	.11	1.8	.12	2.0	.15	2.7	.14	2.5	.12	2.0	.14	2.5
21	.12	2.0	.16	3.0	.15	2.7	.13	2.2	.12	2.0	.16	3.0
22	.12	2.0	.18	3.6	.16	3.0	.13	2.2	.12	2.0	.16	3.0
23	.12	2.0	.19	3.8	.16	3.0	.13	2.2	.12	2.0	.16	3.0
24	.13	2.2	.20	4.2	.16	3.0	.13	2.2	.12	2.0	.16	3.0
25	.13	2.2	.19	3.8	.16	3.0	.13	2.2	.12	2.0	.16	3.0
26	.13	2.2	.19	3.8	.16	3.0	.13	2.2	.12	2.0	.16	3.0
27	.13	2.2	.19	3.8	.16	3.0	.12	2.0	.12	2.0	.16	3.0
28	.13	2.2	.19	3.8	.16	3.0	.13	2.2	.12	+02 2.0	.16	3.0
29	.13	2.2	.18	3.6	.14	2.5	.14	2.5	XX	XXX	.16	3.0
30	.13	2.2	.18	+02 3.6	.14	2.5	.14	2.5	XX	XXX	.15	2.7
31	.13	+02 2.2	XX	XXX	.13	+02 2.2	.14	+02 2.5	XX	XXX	.15	+02 2.7

Calendar Year

Total	
Mean	
Run-off in acre-feet	
Maximum	
Minimum	

ON OF WATER RESOURCES
CE OF STATE ENGINEER

Rating Table Used _____

PR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge	Day.
	0.16	02 3.0	1.30	01 [illegible]	4.65	0 [illegible]	2.08	01 152	0.42	02 13	1
	.16	3.0	1.59	[illegible]	4.70	[illegible]	1.70	01 110	.43	13	2
	.16	3.0	2.50	204	4.67	[illegible]	1.43	01 86	.43	13	3
	.16	3.0	3.07	01 283	4.66	[illegible]	1.42	84	a	14	4
	.16	3.0	3.93	01 418	4.46	[illegible]	1.38	80	a	14	5
	.16	3.0	3.84	[illegible]	4.31	[illegible]	1.13	58	.46	14	6
	.16	3.0	4.63	[illegible]	4.52	[illegible]	1.03	51	.46	14	7
	.16	3.0	4.23	470	4.42	[illegible]	1.08	54	.52	17	8
	S	7.6	3.31	317	4.31	[illegible]	1.08	54	S	34	9
	.41	12	2.82	[illegible]	4.27	[illegible]	1.09	[illegible]	S	63	10
	.41	12	2.26	[illegible]	4.06	440	1.09	[illegible]	S	[illegible]	11
	.S	23	2.25	171	3.62	366	1.12	[illegible]	.05	.66	12
	.23	5.1	2.34	[illegible]	3.43	[illegible]	a	59	.07	.99	13
	.24	5.4	3.54	[illegible]	3.43	[illegible]		63	.08	1.2	14
	S	12	4.70	[illegible]	3.59	[illegible]		63	.09	1.4	15
	.83	36	4.69	[illegible]	3.61	[illegible]		89	.11	1.8	16
	S	24	4.38	[illegible]	3.51	0 [illegible]		[illegible]	.11	1.8	17
	S	01 31	3.60	0 [illegible]	2.92	01 [illegible]		[illegible]	.10	1.6	18
	S	[illegible] 63	2.94	[illegible]	2.71	[illegible]		51	.09	1.4	19
	2.04	01 147	2.68	[illegible]	2.78	[illegible]		34	.09	1.4	20
	1.95	137	2.55	[illegible]	2.76	[illegible]	a	[illegible]	.09	1.4	21
	2.17	01 153	2.80	[illegible]	2.61	218	.83	36	.09	1.4	22
	1.94	136	3.21	[illegible]	2.36	[illegible]	.83	36	.09	1.4	23
	1.50	90	4.39	[illegible]	2.01	[illegible]	.82	35	.09	1.4	24
	1.47	83	4.68	[illegible]	1.95	137	.81	[illegible]	.09	1.4	25
	1.67	[illegible]	4.34	[illegible]	1.77	118	.80	34	.10	1.6	26
	2.13	[illegible]	4.28	[illegible]	1.82	123	.78	33	.11	1.8	27
	2.29	177	4.50	[illegible]	1.81	[illegible]	.77	32	.11	1.8	28
	2.02	[illegible]	4.51	[illegible]	1.78	[illegible]	.75	31	.12	2.0	29
02 3.0	1.44	85	4.51	0 [illegible]	1.80	[illegible]	.61	[illegible]	.12	02 2.0	30
XXX	1.26	01 68	XX	XXX	1.86	01 [illegible]	.41	02 12	XX	XXX	31

4th Quarter — Computed: _____ Checked: _____ Date: _____

3rd Quarter — D. DeYoung

2nd Quarter — Dis.appld. _____ Dis.check _____ Date _____

1st Quarter — D. DeYoung

Quarter — G.H.copd. _____ G.H.check _____ Date _____

Water Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

WURT

Station No. _____

Rating Table Used _____

APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.	
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		
				0.48	7.9	1.14	30	0.37	6.4	0.11	9.3	1	
				.66	13	1.18	32	.33	4.6	.10	.82	2	
				.91	21	1.14	30	.32	4.3	.09	.71	3	
				1.08	26	1.21	33	.28	3.5	.08	.61	4	
				1.25	[illegible]	1.33	[illegible]	.25	3.0	.08	.61	5	
				1.37	41	1.13	30	.24	2.8	.09	.71	6	
				1.40	42	1.09	28	.24	2.8	.08	.61	7	
				1.41	42	1.02	25	.24	2.8	.08	.61	8	
				1.18	32	1.02	25	.23	2.6	.11	.93	9	
				.97	24	.99	24	.23	2.6	.18	1.8	10	
				.85	19	.84	18	.23	2.6	.12	1.0	11	
				.88	20	.78	16	.25	3.0	.12	1.0	12	
				1.11	29	.73	15	.34	4.4	.16	1.6	13	
		5	24	1.52	47	.78	16	.32	4.3	.22	2.5	14	
		.28	3.5	1.63	53	.87	20	.28	3.5	.17	1.7	15	
		.34	4.7	1.53	48	.72	14	.26	3.2	.14	1.3	16	
		.37	5.4	1.33	43	.71	14	.27	3.3	.15	1.4	17	
		.34	4.7	1.30	42	.64	12	.20	2.1	.12	1.0	18	
		.32	4.3	1.21	33	.56	7.8	.18	1.8	.10	.82	19	
		.41	6.2	1.15	30	.59	11	.18	1.8	.08	.61	20	
		.55	9.8	1.16	31	.60	11	.20	2.1	.07	.52	21	
		.59	11	1.21	33	.52	9.0	.22	2.5	.06	.43	22	
		.47	7.7	1.27	36	.48	7.9	.18	1.8	.06	.43	23	
		.44	7.0	1.33	38	.46	7.4	.17	1.7	.05	.35	24	
		.56	10	1.36	40	.43	6.7	.16	1.6	.04	.27	25	
		.64	12	1.20	[illegible]	.42	[illegible]	.15	1.4	.04	.27	26	
		.73	[illegible]	1.18	[illegible]	.41	6.3	.15	1.4	.03	.20	27	
		.66	13	1.17	31	.39	5.8	.16	1.6	.02	.14	28	
		.54	7.5	1.14	30	.37	5.4	.13	1.2	.01	.07	29	
		.48	6.4	1.15	30	.31	4.1	.13	1.2	0		30	
XX	XXX	.46	6.1	XX	XXX	.29	3.7	.12	1.0	XX	XXX	31	
		141.5		882.9		611.5		82.1		23.97		1641.97	

Quarter: 4th | 3rd | 2nd | 1st — Computed | Checked | Date

Quarter: 4th | 3rd | 2nd | 1st — Dis.appld. | Dis.check | Date

D. DeYoung

Quarter: 4th | 3rd | 2nd | 1st — G.H.copd. | G.H.check | Date

D. DeYoung
G. Largent
10/31/85

Water Year

STATE OF COLORADO

DIVISION OF WATER RESOURCES

OFFICE OF STATE ENGINEER Bonstead

Sta. No. _____

Rating Table Used _____

Day.	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1					1.04	*04 65	3.67	*06 475	1.11	*04 72		
2					1.27	89	3.76	494	1.12	73		
3					1.73	144	3.73	487	1.01	*04 62		
4					2.17	*04 206	3.73	487	.85	*04 46		
5					2.59	*05 273	3.65	471	.64	38		
6					2.96	335	3.32	406	.48	18		
7					3.08	359	3.43	427	.42	14		
8					3.05	353	3.28	398	.56	23		
9					2.40	242	3.16	375	.62	27		
10					1.99	181	3.09	363	.43	15		
11					1.77	151	2.96	*06 339	S	12		
12					1.77	151	2.76	*07 305	S	16		
13					2.17	202	2.59	277	.62	27		
14					2.90	326	2.55	270	.58	24		
15			S	*04 42	3.35	410	2.58	275	.52	20		
16			S	25	3.38	415	2.81	*07 314	.46	17		
17			.88	51	2.95	335	2.67	290	S	D 62		
18			1.07	68	2.71	*05 293	2.27	225				
19			1.14	75	2.52	262	2.14	206				
20			1.39	102	2.41	246	2.25	223	[illegible]			
21			1.77	147	2.44	249	2.12	203				
22			1.66	135	2.50	259	1.92	*07 174				
23			1.24	*04 86	2.74	*05 297	1.78	*06 153				
24			1.12	73	3.30	*06 402	1.68	*06 140				
25			1.33	96	3.53	447	1.58	*06 126				
26			1.56	122	3.22	387	1.54	121				
27			1.69	[illegible]	3.36	413	1.44	109				
28			1.49	114	3.45	431	1.36	*06 100				
29			1.21	83	3.43	427	1.22	*06 84				
30			1.10	71	3.54	*06 447	1.17	78				
31	XX	XXX	1.04	*04 65	XX	XXX	1.03	*04 64			XX	XXX
			1459.2		8804		8458		800.2			19221.4

4th / 3rd / 2nd / 1st — Quarter — Computed / Checked / Date

D. DeYoung

4th / 3rd / 2nd / 1st — Quarter — Dis.appld. / Dis.check / Date

D. DeYoung
G. Lambert
11/10/75

4th / 3rd / 2nd / 1st — Quarter — G.H.copd. / G.H.check / Date

Water Year

TRANSMOUNTAIN DIVERSIONS
TO DIVISION NO 2
TABULATION 1975

Name	Source	RECIPIENT	Amount Diverted 10-1-1974 to 9-30-1975	Amount Diverted 10-1-1973 to 9-30-1974
Homestake Tunnel	Middle Fork Homestake Creek Division #5	Cities of Colorado Springs and Aurora		25,253.98 AF
Wurtz Ditch	Eagle River Division #5	City Pueblo		2,876.22 AF
Ewing Ditch	Piney Creek Division #5	City of Pueblo		1,052.62 AF
Columbine Ditch	Eagle River Division #5	City of Pueblo		1,928.06 AF
Twin Lakes Tunnel	Roaring Fork River Division #5	Twin Lakes Reservoir and Canal Company		44,031.48 AF
Busk Ivanhoe Tunnel	Ivanhoe Creek Division #5	Highline Canal Co.		5,603.46 AF
Larkspur Ditch	Tomici Creek Division #4	Catlin Canal Co.		432.56 AF
Boustead	Frying Pan River Division #5	City of Pueblo		34,130.08 AF

RESERVOIRS

E 8

DIVISION SUMMARY - DIVISION NO. 5
Storage Report - Acre Feet
1975

ter strict	Amount in Storage Acre Feet 11-1-74	5-1-75	10-31-75	Actual Am't Diverted to Storage During Season	Delivered from Storage to Irrigation	Storage to Industrial Use	Storage to Municipal Use	Storage to Recreation Use	Storage to Projects
36	332,293.0	365,138.7	396,063.7	86,477.0	27,746.2	70,788.7	48,214.7	415,510.6	104,557.0
37	38,613.0	29,452.8	4,190.5	39,064.0	665.0	3,340.0	34,629.5	35,373.3	34,629.5
38	96,539.0	72,164.0	98,277.0	1,738.0	6,236.0	0	0		214.0
39	5,540.0	17,023.0	6,819.0	1,279.0	15,804.0	0	595.1	10,204.0	15,804.0
45	0	0	0	0	0	0	0	0	0
50	4,173.0	7,866.1	6,743.0	3,117.0	4,749.1	0	0	0	0
51	496,626.0	382,352.5	508,686.6	185,528.8	2,467.9	27,220.0	0	168,672.0	6,150.0
52	15.0	109.0	51.0	13.0	81.0	0	0	0	0
53	322.0	7,566.0	3,657.0	7,244.0	3,587.0	0	640.0	7,244.0	0
70	0	0	0	0	0	0	0	0	0
72	6,224.0	48,757.0	13,058.0	6,834.0	40,944.0	467.0	112.0	46,108.0	32,700.0 + 9,003.0 Exchange
TALS	980,345.0	1,910,774.1	1,037,545.8	378,974.8	102,280.2	101,815.7	84,191.3		203,057.5

AGRICULTURE

Agriculture is one of the largest industries in Division 5. The number of farms showed a decrease from 1970 to 1974, while at the same time farm income increased. The approximate acres of farm land total 1,593,893, which is divided into three main areas of agriculture. The high mountain area is classed as livestock and grazing. The major crop is hay, with 3/4 to 1 ton per acre. The grazing land in the area ranges in elevation from 4,500 to 12,000 feet. With this difference in elevation there is a great difference in ability to produce forage for cattle and browse for wild game and sheep. Some sites can produce no more that 100 pounds of plant material per acre. Other sites in favorable years produce 4000 pounds per acre.

The Middle Park area crops are mostly barley, potatoes, corn and hay. Over the last twenty years the cropping patterns have changed in this area. Carbondale and Aspen used to be known for potatoes and crops like strawberries were common around Glenwood Springs. Today this area is devoted to pasture and hayland, with minor acreages of cash crops.

The Lower Grand Valley area produces fruits and row crops. About 8,141 acres of fruit orchards - peaches, pears and apples.

In all three areas combined, the approximate yield of wheat and hay is 105,700 bushels and 310,258 tons. There are approximately 152,548 sheep and lambs, and 143,276 cattle and calves. Livestock is an important part of the agriculture industry. However, the total number has decreased. Cattle and sheep are often summered on land administered by the U. S. Forest Service and Bureau of Land Management.

Irrigation water is available for many farms in the 3 areas and new planned developments are underway to promote more irrigation water and more uniform distribution of water. West Divide Project has been studied by the Bureau of Reclamation.

There are many organizations designed to assist farmers and ranchers. Such organizations as the Agricultural Stabilization and Conservation Service,

Farmers Home Administration, Bureau of Land Management, U. S. Forest Service, Soil Conservation Service, and State Forester and Extension Service.

DAMS

The following is a tabulation of all Livestock Water Tank applications which were approved during the 1975 irrigation year:

DISTRICT	NO. OF STOCK TANKS
36	0
37	0
38	0
39	0
45	4
50	0
51	3
52	0
53	0
70	0
72	5

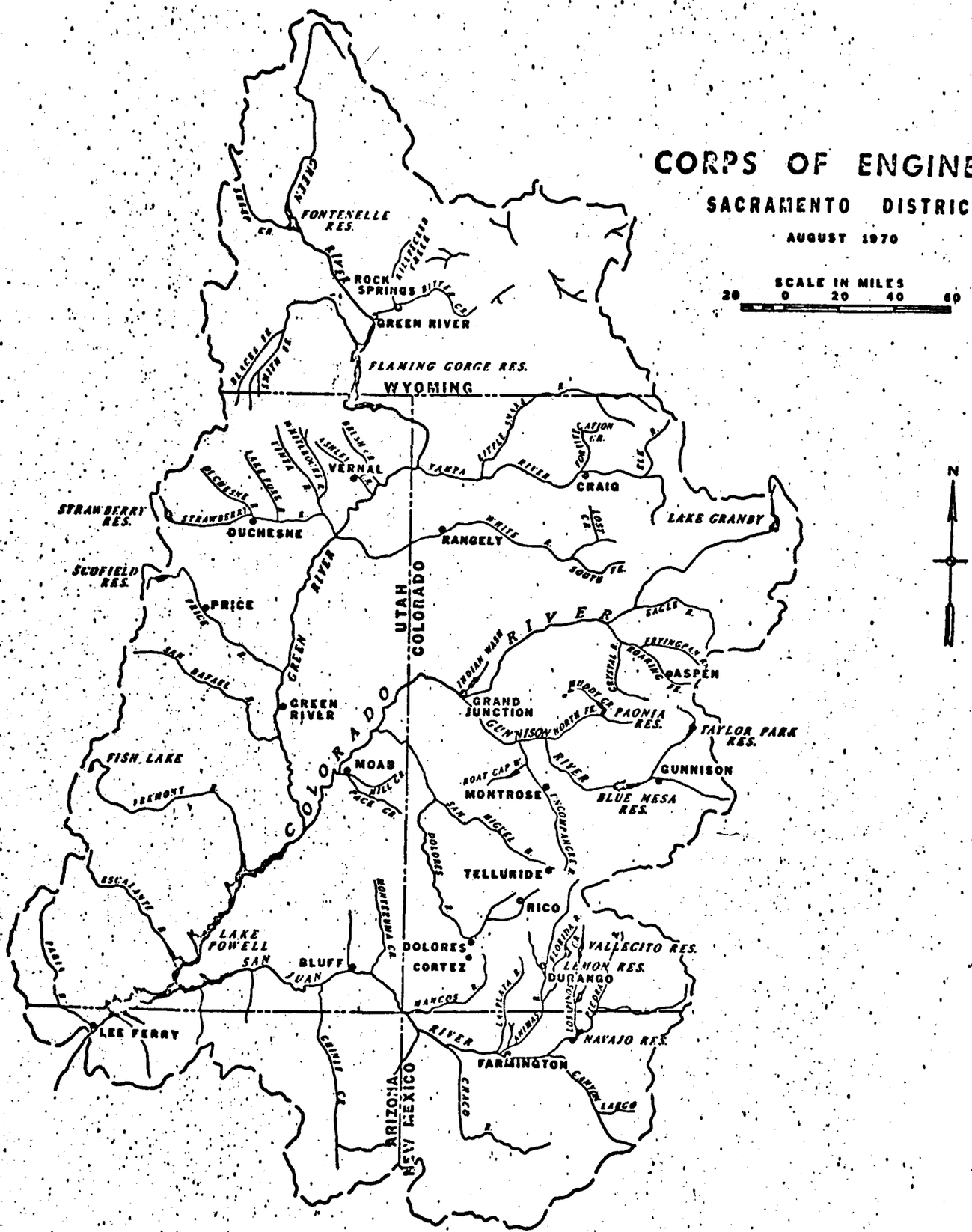
WATER RIGHTS TABULATIONS

WATER RIGHTS TABULATION

1.	Underground water rights	62
2.	Changes in water rights	37
3.	Water rights (absolute)	163
4.	Diligence (conditional)	43
5.	Water storage rights	15
6.	Applications received in water court	385
7.	Referee consultations	385

Division 5 has had many objections to the October 1974 tabulation. Arlen Jackson, our 1042 man, has been helping out on research of correct locations, water sources, etc. Ruth Dalton and Bob Krueger aided in the research.
Many of the Statements of Opposition have been directed to the Water Court where the Water Judge will make the final disposition.

ORGANIZATIONS



UPPER COLORADO RIVER BASIN

WATER USER ORGANIZATION ROSTER

Project and Unit
BASALT - Basalt Water Cons. District

Chairman: Austin Hueschkel, Carbondale
V-Chairman: George Locksinger, Basalt
Sec.: Steve Callicotte, Carbondale
Treas.: Willis Kenney, Carbondale
Atty: Edward Mulhall, Glen. Springs
Dir: Bernard Hopkins
Willis Kenny
Austin Hueschkel
Harold Fender
Thomas Turnbull
George Lucksinger
Floyd Crawford

BATTLEMENT MESA - Battlement Mesa Wtr. Cons. Dist.

Pres: Carleton Currier, Gr. Junction
V-Pres: Clyde Bruton, Collbran
Sec. Treas: Arthur Linn, Collbran
Atty: Albin Anderson, Gr. Junction
Dir: Carleton Currier
Arthur Linn
Ray Hittle
Rex Clifton
Paul Height
George Gipp
Clyde Bruton

BLUESTONE - Bluestone Wtr. Cons. Dist.

Pres: Orville Mahaffey, Grand Valley
V-Pres: Robert Latham, Gr. Valley
Sec-Treas: Geo. Anderson, DeBeque
Atty: Kenneth Balcomb, Gl. Springs
Dir: LeRoy Latham
George Anderson
Orville Mahaffey
Robert Latham
Carlos Carpenter
Harry Blue
Richard Looney

COLLBRAN - Collbran Conservancy District

Pres: Herbert Milholland, Molina
V-Pres: Francis Chapman, Collbran
Sec: H. R. Lloyd, Mesa
Atty: Nelson, Hoskin & Groves, Gr. Jct.
Sec.Treas: Everett Collins, Collbran
Dir: Ben Nichols
Bill Tupper
Francis Chapman
Herbert Milholland
W. D. Meador
H. R. Lloyd

GRAND VALLEY-Gr. Valley Wtr Users Assoc.

Pres: W. J. Baker, Loma
V-Pres: Taylor Roberts, Mack
Sec: Ray Gobbo, Gr. Junction
Treas: G. W. Klapwyk, Gr. Junction
Atty: Williams & Turner, Gr. Junction
Mgr: G. W. Klapwyk, Gr. Junction
Asst. Mgr: Bob Byers
Dir: Amos Alstatt
W. J. Baker
Avery Kohls
Bruce Currier
Ray Gobbo
Cecil Harper

GRAND VALLEY - Mesa County Irrigation District

Pres: Harry W. Brown, Grand Junction
Sec-Treas: O. F. Christensen, Gr. Junction
Supt: Jeff Bell
Dir: Harry Brown
O. F. Christensen
Harold Gardinier

GRAND VALLEY - Orchard Mesa Irrigation District

Pres: Edward T. Bryant, Gr. Junction
V-Pres: H. E. Porterfield, Palisade, Colo.
Sec: Florence K. Pauly, Gr. Junction
Treas: Mesa County Treasurer, Gr. Junction
Atty: Williams & Turner
Supt: W. F. Green, Palisade
Mgr: G. W. Klapwyk, Gr. Junction
Dir: H. E. Porterfield
E. T. Bryant
Clyde Rooks

GRAND VALLEY - Palisade Irrigation District

Pres: Everett Corlett, Gr. Junction
V-Pres: John Vesakis, Clifton
Sec: W. E. Funk, Palisade
Treas: Mesa County Treasurer, Gr. Junction
Atty: William H. Nelson
Ditchrider: Delbert Kitson
Dir: W. E. Funk
John Vesakis
Everett Corlett

MIDDLE PARK - Middle Park Water Conservancy District

Pres: Redwood Fisher, Granby
V-Pres: Karl H. Knorr, Dillon
Sec-Treas: Carl Breeze, Kremmling
Atty: Bob Delaney, Glenwood Springs
Dir: Red Fisher
Jack Horn
Carl Breeze
Karl H. Knorr
Kenneth Wheatley
Frank F. Brown

SILT - Silt Water Conservancy District

Pres: Marvin Ryden, Rifle
V-Pres: Jake Haas, Rifle
Sec. Treas: Mike Dmitrich, Price
Atty: Therald N. Jensen
Dir: Chris Jouflas
George Waterman
Paul Moynier
William Welsh
Gordon Newbold

UTE WATER - Ute Water Conservancy District

Pres: Fred J. Simpson, Grand Junction
V-Pres: W. J. Baker, Loma
Sec: L. P. Morse, Gr. Junction
Treas: Bobby J. White, Gr. Junction
Atty: Albin Anderson, Gr. Junction
Mgr: Riney F. Wilbert, Gr. Junction
Dir: John Brophy
W. J. Baker, Loma
Frank Beeds
Harold Mogensen
Merle Motz
Fred Wilbert

WEST DIVIDE - West Divide Water Conservancy District

Pres: William B. Jackson, Glenwood Springs
V-Pres: Harold C. Carmack
Sec-Treas: Frieda H. Jackson, Glenwood Springs
Atty: Frank Delaney, Glenwood Springs
Dir: William B. Jackson
Harold C. Carmack
Carl Bernklau
Paul Pitman
L. Christensen
Ralph L. Antonides

MISCELLANEOUS - Colorado River Water Users Association

Pres: L. Y. Siddoway, Vernal, Utah
V-Pres: Clifford Tabor, Wellton, Ariz.
Sec-Treas: Lynn S. Ludlow, Orem, Utah
Dir: Floyd M. Smith, Arizona
Victor I. Corbell, Arizona
Norris Soma, Arizona
Carl Vevine, California
Warren Butler, California
Leon Kennedy, California
Roland Fischer, Colorado
Don D. Noble, Colorado
Robert Delaney, Colorado
Ivan P. Head, Nevada

COLORADO DEPARTMENT OF NATURAL RESOURCES

T. W. Ten Eyck
Division of Game Fish & Parks
Division of Mines
Division of Water Resources
Geological Survey
Board of Land Commissioner
Oil and Gas Conservation Commission
Soil Conservation Board
Water Conservation Board

COLORADO RIVER WATER CONSERVATION DISTRICT

Ken Balcomb
R. C. Fischer

COLORADO WATER CONSERVATION BOARD

Felix L. Sparks

WATER COMMISSIONER'S SUMMARY

Exh A

DIVISION SUMMARY - DIVISION NO. 5

Direct Flow Diversions

1975

Dist	Total Ditches Reported Active	Inactive NA	Inactive NU	Direct Diversions Ac.Ft.	No. of Acres Irrigated	Ac.Ft. Per Acre	Industrial Use Diversions Ac.Ft.	Municipal Use Diversions Ac.Ft.	Recreation Use Diversions Ac.Ft.	Trans Mtn. Diversions Ac.Ft.	Total Diversions Ac.Ft.	No. of Daily Ditch Rots.	Res. Diversions Acre FT
36	377	0	201	483,404.2	13,610.6	9.1	70,682.0*	0	72,844.0	From 63,592.2	955,461.4	578	337,783.6
37	372	0	191	197,651.8	17,814	11.2	0	0	665.0	From 65,896.2	264,210.0	563	117,327.5
8	436	3	149	544,817.0	59,453	9.11	0	17,520.0	77,901.0	0	645,426.0	436	8188.0
9	169	5	76	114,016.0	15,747.0	8.24	0	595.0	10,204.0	0	129,820.0	273	15,804.0
5	126	0	170	79,440.64	24,890.0	3.70	0	346.51	0	0	79,787.15	296	0
0	84	0	85	55,222.4	11,455	4.8	0	0	0	0	63,089.0	169	7,866.1
1	263	0	195	139,532.0	31,408	4.44	0	0	0	From 315,234.6	676,133.3	458	221,366.7
2	131	0	28	47,394.0	10,230	4.63	0	95.0	0	0	47,583.0	159	94.0
53	277	0	105	141,773.0	35,465	3.99	798,047.0*	5122.0	3,182.0	0	954,238.0	382	10,831
70	63	12	30	89,122.53	10,982	* 8.12	0	0	0	0	89,122.53	133	0
72	418	0	46	1,195,133.0	150,834	7.90	0	11,294.0	46,108.0	0	1,322,873.0	464	137,740
otals	2716	20	1276	3,084,497.5	381,888.6	8.07	868,729	34,992	210,904	From 444,722.4	5,237,743.3	3911	857,000.9

* Power Plant Use

A= No Water Available NU = Non Use *Includes Bluestone & Larkin Transmountain Diversions: Designate either to or from Division.

DIVISION ENGINEER'S SUMMARY

1 Wtr. Yr. Oct.1 to Sept. 30	2 Div. of Wtr. Res. DIST.	3 Stream Gage Sta. No.	4 Stream Basin	5 Drainage Area Sq. Mi.	6 Total AF Gage Sta.	7 Total AF Trans-Basin	8 Total AF Trans-Mt.	9 Total AF Direct Flow Diversion	10 Percent Ret. Flow-Incl. Underground	11 Total AF Ret. Flow	12 Total AF Used	13 Yield AF Per Sq. Mile *	14 Decree Cap. Total AF Res. Storage
	36	09057500	BLUE R.	599	425,700		33,598	143,970	72%	103,656	40,312	834	420,250
	37	09071000	EAGLE R.	944	477,000	2,520	74,754	243,650	70%	170,555	73,095	665	221,000
	38	09650	ROARING FORK	1451	1,041,000		70,418	367,626	60%	220,576	147,050	667	336,466
	39 45 70	09095500 09085100	COLO. R.	2037	346,000	555		299,474	25%	74,866	224,606	280	156,657
	50 51	9-0550	COLO. R.	1763	558,600		254,220	270,000	70%	189,000	81,000	507	868,135
	52 53		COLO. R.	1068	474,700			144,617	50%	72,309	72,309	502	195,119
	72	09055000 09152500 09163500	COLO, GUNSON COLO.	1922	-55,000			1,345,000	90%	1,210,500	134,500	41	88,463
DIV.5	DISTRICTS TOTALS			9804	3,268,000	3,075	432,990	2,814,337		2,041,466	772,672	3696 AK 528	2,290,090

* DOES NOT INCLUDE TRANS MOUNTAIN DIVERSIONS

RECOMMENDATIONS AND SUGGESTIONS

RECOMMENDATIONS

The Water Rights Tabulation and the "Data Bank" of historic water use are together requiring more and more time of the division personnel. As a general rule, in the division office, it is the Assistant Division Engineer who assumes the bulk of this workload. The Division Engineer, and in particular the Assistant Division Engineer, should definitely be directly involved with both of these enterprises. However, their obligation should be from an administrative and coordinative standpoint. Presently, such is generally not the case. It is our concern that if the "computer" workload continues to increase, the Assistant Division Engineer will begin to further jeopardize his other administrative duties. Therefore, it is our recommendation that the division offices need a full time employee specifically for the "computer" workload at the division level.

We have encountered some problems with the coordination between the Computer Services Branch and the division concerning the Structure I.D. lists. It is recommended that anytime new I.D. numbers are added to the "data bank", both parties be made fully aware of all changes.

The Water Rights Tabulation has not had a number one priority during the last year. However, it has had several hundred hours devoted to it by division personnel. It is our long range goal to have it in "good shape" for public publication in 1978. This goal can only be accomplished if we are periodically able to update the tabulation, that is to make corrections, additions and deletions. We recommend that we be able to do this at least on a twice a year basis.

On the Summary of Diversions form for the May 1 reading, the heading should be changed to "maximum in storage" for the year for each reservoir involved. This change will then reflect some coordination with the Water Commissioners' report for total storage used, etc.

XI RECOMMENDATIONS AND SUGGESTIONS

There is inserted in this report a sample form for the water commissioners' field books. This consists of a regular 8 1/2"X11" standard sheet showing the printed-out adjudication card as a heading; the month and day tabulation of cfs used; the amount at arrival on the ditch; the amount when the commissioner left or set the ditch; pertinent information required for all forms that were to be copied on summary sheets; index and ditch sheets, along with the required reservoir sheets. This set-up, when xeroxed in the division office, would provide the entire report of the water commissioner without hand-written duplication.

Along with the above, this office has set up a division and district duplicate adjudication file from slips provided by the Denver office last year. This has proved to be the "finger tip" fast and correct answer for all the inquiries pertaining to all civil actions by the district courts. It is requested that this system be adopted as a standard, making it a uniform system statewide.

It has come to our attention that there are a few decrees that were never sent to the division office by the clerks of some district courts. We request from the State Engineer's Office to have the Attorney General's Office require a complete check of the various decrees issued to the present time. Also, the Attorney General should have issued an order, by a special mandate, to furnish these missing decrees.