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, 1977

This annual report is hereby respectfully submitted to the State Engineer of Colorado for the water year 1976-77.

Lee R. Enewold
Division Engineer

Ray D. Walker P.E.
Ray D. Walker
Asst Div. Engineer

INDEX

INTRODUCTORY STATEMENT

November 30, 1977

Mr. Clarence J. Kuiper
State Engineer
Division of Water Resources
1313 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, 1977, 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	4,600
Glenwood Springs	Roaring Fork	9,800
Area surrounding Glenwood Springs	Roaring Fork	Includes sur. areas
New Castle	Colorado River	1,000
Silt	Colorado River	1.300
Rifle	Colorado River	8,600
Grand Valley	Colorado River	2,000
DeBeque	Colorado River	1,000
Collbran	Plateau Creek	600
Palisade	Colorado River	1,600
Grand Junction	Colorado River	35,700
Fruita	Colorado River	5,000
Grand Lake	Colorado River	250
Granby	Fraser-Colorado River	
Fraser-Winter Park	Fraser River	
Hot Sulphur Springs	Colorado River	
Kremmling	Colo. Muddy, Blue River	
Breckenridge	Blue River	
Frisco	Blue River	
Dillon	Blue River	
Minturn	Eagle River	
Vail	Eagle River	
Eagle	Eagle River	
Aspen	Roaring Fork	
Basalt	Roaring Fork	

*1980

POPULATION PROJECTIONS

Counties	1977	1978	1979	1980
Eagle	11,761	11,903	12,082	12,273
Garfield	18,597	19,290	20,148	21,127
Grand	8,203	8,582	9,006	9,461
Mesa	64,052	65,889	68,256	70,988
Pitkin	11,004	11,357	11,761	12,193
Summit	6,743	7,248	7,895	8,403

PERSONNEL

PERSONNEL

Name	Position	District	Months Worked/ Budgeted	Mileage
Enewold, Lee R.	Division Engineer		Annual	12,190
Walker, Ray D.	Asst. Div. Engineer		Annual	844
Jackson, Arlen	H.B. 1042		Annual	10,174
Krueger, Robert	SB 35		8	3,871
Walcher, Douglas	Hydrographer		Annual	28,468
Dalton, Ruth	Admin. Clerk-Typist		Annual	-0-
Anderson, George M.	Commissioner	70	7	6,709
Ball, John	Commissioner	50	4	2,550
Bieser, Robert W.	Deputy	72	6	2,935
Callicotte, Stephen	Commissioner	38	9	6,201
Gerry, Woodrow	Deputy	72	7	6,078
Hart, Daniel	Commissioner	51	4	4,455
Hill, Clifford	Deputy	72	7	4,493
Jackson, Arlen	Commissioner	HB 1042	Annual	10,174
Kenney, Donald	Deputy	72	7	4,842
Klocker, Marcus	Commissioner	39	Annual	12,449
Nelson, Glen Gordon	Deputy	45	6	628
Rager, Cletus	Commissioner	45	7	5,085
Raine, Jack	Deputy	72	3	
Reed, Miles	Deputy	72	7	1,989
Saunders, Woodrow	Commissioner	72	Annual	16,901
Shelden, Jim	Commissioner	52,53	Annual	11,979
Wells, Wayne	Commissioner	36,37	Annual	11,828
Yeoman, Richard	Deputy	45	3	1,384

SNOW PACK

SNOWPACK

Snowpacks were below normal in all areas. Individual watersheds ranged from only 28 percent of average for Green Mountain to 37 percent at Lake Granby.

With good March precipitation at high elevations, snowpack gains were above normal in nearly all watersheds. However, even with above-normal gains, average snow-water contents remain much below normal for the season. May 1 snowpack water contents were below average for all watersheds within the Western Division System.

In nearly all areas, the snowpacks were depleted by amounts in excess of normal. Thus, snow-water contents expressed as a percent of average declined during April. Water supply forecasts at all key forecast points were below normal.

PRECIPITATION

UNDERGROUND WATER

Division 5

Wells Adjudicated In The
Water Court

District	No. of Applications	Domestic	Commercial	Irrigation	Municipal	Other Uses
36	7	1	4		2	
37	1		1			
38	39	27		5	1	6
39	11	10				1
45	3	2	1			
50						
51	20	10	3	1	4	2
52						
53						
70						
72	9	3			1	5
TOTAL	90	53	9	6	8	14

TRANSMOUNTAIN DIVERSIONS

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BOUSTEAD TUNNEL

TO SUGARLOAF RESERVOIR 15'

Report No. 1 Report Period April 1, 1977 to April 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.24		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28	S	5.32		10.64		.03	10.61
29	.38	12.00		24.00		.06	23.94
30	S	17.20	34.52	34.40		.08	34.32
~~31~~							
				69.04		.17	68.87

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BOUSTEAD TUNNEL

TO SUGARLOAF RESERVOIR 15'

Report No. 2 Report Period May 1, 1977 to May 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.24		
1	S	12.20		24.40		.06	24.34
2							0
3							0
4	S	19.64		39.28		.09	39.19
5	.80	40.46	72.30	80.92		.19	80.73
6	1.05	62.50		125.00		.30	124.70
7	1.38	96.77		193.54		.46	193.08
8	1.78	145.45		290.90		.70	290.20
9	2.08	186.60		373.20		.94	372.26
10	2.01	176.65		353.30		.85	352.45
11	1.70	135.10		270.20		.65	269.55
12	1.57	118.92	994.34	237.94		.57	237.37
13	1.66	130.07		260.14		.62	259.52
14	1.67	131.34		262.68		.63	262.05
15	1.08	65.38		130.76		.31	130.45
16	.92	50.49		100.98		.24	100.74
17	S	26.27		52.54		.13	52.41
18	.76	6.70		13.40		.03	13.37
19	S	10.24	1414.83	20.48		.05	20.43
20	0						0
21	0						0
22	0						0
23	0						0
24	S	55.90		111.80		.22	111.53
25	1.52	112.96		225.92		.54	225.38
26	1.42	101.34	1685.03	202.68		.49	202.19
27	1.13	70.30		140.60		.34	140.26
28	S	31.38		62.76		.15	62.61
29	S	39.71		79.42		.19	79.23
30	S	153.26		306.52		.74	305.78
31	2.57	261.76	2241.44	523.52		1.26	522.26
				4492.88		10.80	4472.08

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BOUSTEAD TUNNEL

TO SUGARLOAF RESERVOIR 15'

Report No. 3 Report Period June 1, 1977 to June 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.24		
1	2.73	288.30		576.60		1.38	575.22
2	2.67	278.12	566.42	556.24		1.33	554.91
3	2.58	263.39		526.78		1.26	525.52
4	2.62	269.97		539.94		1.30	538.64
5	2.68	279.92		559.84		1.34	558.50
6	2.78	296.80		593.60		1.42	592.18
7	2.72	286.62		573.24		1.38	571.86
8	3.28	386.69		773.38		1.86	771.52
9	2.87	312.35	2662.16	624.70		1.50	623.20
10	2.44	240.89		481.78		1.16	480.62
11	2.07	185.16		370.32		.89	369.43
12	1.61	123.89		247.78		.59	247.19
13	1.17	74.34		148.68		.36	148.32
14	.85	44.57		89.14		.21	88.93
15	.73	34.94		69.88		.17	69.71
16	5	17.50	3383.45	35.00		.08	34.92
17	0						
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
				6766.90		16.23	6750.67

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BOUSTEAD TUNNEL

TO SUGARLOAF RESERVOIR 15'

Report No. 4 Report Period July 1, 1977 to July 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percent-age Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.24		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25	S	20.48		40.96			0
26	S	27.37	47.85	54.74		.10	40.86
27		0				.13	54.61
28							0
29							
30							
31							
				95.70		.23	95.47

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE HOMESTAKE TUNNEL

TO SUGAR LOAF RESERVOIR 12'

Report No. 1 Report Period March 1, 1977 to March 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.27		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25	S	82.10		164.20		.44	163.76
26	2.50	202.52		405.04		1.09	403.95
27	2.50	202.52		405.04		1.09	403.95
28	2.50	202.52		405.04		1.09	403.95
29	2.50	202.52		405.04		1.09	403.95
30	2.50	202.52		405.04		1.09	403.95
31	2.49	201.24	1295.94	402.48		1.09	401.39
				2591.88		6.98	2584.90

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE HOMESTAKE TUNNEL

TO SUGAR LOAF RESERVOIR 12'

Report No. 2 Report Period April 1, 1977 to April 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.27		
1	2.47	198.68		397.36		1.07	396.29
2	2.42	192.27		384.54		1.04	383.50
3	2.42	192.27		384.54		1.04	383.50
4	2.46	197.40		394.80		1.07	393.73
5	2.48	199.96		399.92		1.08	398.84
6	a	201.24		402.48		1.09	401.39
7	a	199.96	1381.28	399.92		1.08	398.84
8	a	199.96		399.92		1.08	398.84
9	2.48	199.96		399.92		1.08	398.84
10	2.48	199.96		399.92		1.08	398.84
11	2.48	199.96		399.92		1.08	398.84
12	2.47	198.68		397.36		1.07	396.29
13	2.50	202.52		405.04		1.09	403.95
14	2.51	203.83	2786.65	407.66		1.10	406.56
15	2.50	202.52		405.04		1.09	403.95
16	a	201.24		402.48		1.09	401.39
17	2.48	199.96		399.92		1.08	398.84
18	2.49	201.24		402.48		1.09	401.39
19	2.51	203.83		407.66		1.10	406.56
20	2.50	202.52		405.04		1.09	403.95
21	2.49	201.24	4199.20	402.48		1.09	401.39
22	2.51	203.83		407.66		1.10	406.56
23	2.51	203.83		407.66		1.10	406.56
24	2.50	202.52		405.04		1.09	403.95
25	1.94	134.97		269.94		.73	269.21
26	1.61	100.19		200.38		.54	199.84
27	1.61	100.19		200.38		.54	199.84
28	1.61	100.19	5244.92	200.38		.54	199.84
29	1.61	100.19		200.38		.54	199.84
30	1.61	100.19	5445.30	200.38		.54	199.84
~~31~~							
				10890.60		29.40	10861.20

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE HOMESTAKE TUNNEL

TO SUGARLOAF RESERVOIR 12'

Report No. 3 Report Period May 1, 1977 to May 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.27		
1	1.60	99.16		198.32		.54	197.78
2	1.61	100.19		200.38		.54	199.84
3	1.61	100.19		200.38		.54	199.84
4	1.61	100.19		200.38		.54	199.84
5	1.61	100.19	499.92	200.38		.54	199.84
6	1.61	100.19		200.38		.54	199.84
7	1.61	100.19		200.38		.54	199.84
8	1.61	100.19		200.38		.54	199.84
9	1.61	100.19		200.38		.54	199.84
10	1.61	100.19		200.38		.54	199.84
11	1.61	100.19		200.38		.54	199.84
12	1.60	99.16	1200.22	198.32		.54	197.78
13	1.59	98.18		196.36		.53	195.83
14	1.59	98.18		196.36		.53	195.83
15	1.59	98.18		196.36		.53	195.83
16	1.60	99.16		198.32		.54	197.78
17	1.60	99.16		198.32		.54	197.78
18	1.61	100.19		200.38		.54	199.84
19	1.62	101.17	1894.44	202.34		.55	201.79
20	1.62	101.17		202.34		.55	201.79
21	1.62	101.17		202.34		.55	201.79
22	1.62	101.17		202.34		.55	201.79
23	1.61	100.19		200.38		.54	199.84
24	1.61	100.19		200.38		.54	199.84
25	1.61	100.19		200.38		.54	199.84
26	1.61	100.19	2598.71	200.38		.54	199.84
27	1.61	100.19		200.38		.54	199.84
28	1.61	100.19		200.38		.54	199.84
29	1.61	100.19		200.38		.54	199.84
30	1.61	100.19		200.38		.54	199.84
31	1.61	100.19	3099.66	200.38		.54	199.84
				6199.32		16.75	6182.57

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE HOMESTAKE TUNNEL

TO SUGARLOAF RESERVOIR 12'

Report No. 4 Report Period June 1, 1977 to June 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.27		
1	1.62	101.17		202.34		.55	201.79
2	1.62	101.17	202.34	202.34		.55	201.79
3	1.62	101.17		202.34		.55	201.79
4	1.63	102.15		204.30		.55	203.25
5	1.63	102.15		204.30		.55	203.25
6	1.64	103.18		206.36		.56	205.80
7	1.65	104.16		208.32		.56	207.76
8	1.63	102.15		204.30		.55	203.75
9	1.60	99.16	916.76	198.32		.54	197.78
10	1.60	99.16		198.32		.54	197.78
11	1.60	99.16		198.32		.54	197.78
12	1.60	99.16		198.32		.54	197.78
13	1.60	99.16		198.32		.54	197.78
14	1.60	99.16		198.32		.54	197.78
15	1.60	99.16		198.32		.54	197.78
16	1.61	100.19	1611.61	200.38		.54	199.84
17	1.61	100.19		200.38		.54	199.84
18	1.61	100.19		200.38		.54	199.84
19	1.61	100.19		200.38		.54	199.84
20	1.61	100.19		200.38		.54	199.84
21	1.62	101.17		202.34		.55	201.79
22	1.63	102.15		204.30		.55	203.75
23	1.63	102.15	2317.84	204.30		.55	203.75
24	1.62	101.17		202.34		.55	201.79
25	1.62	101.17		202.34		.55	201.79
26	1.62	101.17		202.34		.55	201.79
27	1.61	100.19		200.38		.54	199.84
28	1.61	100.19		200.38		.54	199.84
29	1.60	99.16		198.32		.54	197.78
30	1.60	99.16	3020.05	198.32		.54	197.78
31							
				6040.10		16.36	6023.74

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE HOMESTAKE TUNNEL

TO SUGARLOAF RESERVOIR 12'

Report No. 5 Report Period July 1, 1977 to July 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.27		
1	1.60	99.16		[illegible]		.54	197.75
2	1.62	101.17		[illegible]		[illegible]	201.77
3	1.62	101.17		[illegible]		[illegible]	201.77
4	1.61	100.19		[illegible]		[illegible]	199.84
5	1.71	110.38		[illegible]		.60	219.96
6	1.85	12[illegible].10		[illegible]		.62	247.52
7	1.24	12[illegible].03	761.10	[illegible]		.62	247.41
8	1.84	124.03		248.06		.62	247.39
9	1.83	122.95		245.90		.66	245.24
10	1.82	121.88		243.76		.66	243.10
11	1.81	120.80		241.60		.65	240.95
12	1.80	119.73		239.46		.65	238.81
13	1.79	118.65		237.30		.64	236.66
14	1.81	120.80	1609.94	241.60		.65	240.95
15	1.82	121.88		243.76		.66	243.10
16	1.80	119.73		239.46		.65	238.81
17	1.79	118.65		237.30		.64	236.66
18	1.78	117.62		235.24		.64	234.60
19	1.78	117.62		235.24		.64	234.60
20	1.79	118.65		237.30		.64	236.66
21	1.77	116.55	2440.64	233.10		.63	232.47
22	2.27	173.58		347.16		.94	346.22
23	S	153.60		307.20		.83	306.37
24	S	10.03		20.06		.05	20.01
25	.41	11.22		22.44		.06	22.38
26	.25	5.09		10.18		.03	10.15
27	.17	2.74		5.48		.01	5.47
28	S	0.27	2797.17	.54		0	.54
29		0					
30							
31							

5594.34 15.13 5579.21

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE COLUMBINE DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 1 Report Period Oct. 1, 1976 to Oct. 31, 1976

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			2.09		
1	0.16	1.29		2.58		.05	2.53
2	.14	1.04		2.08		.04	2.04
3	.13	.93		1.86		.04	1.82
4	.13	.93		1.86		.04	1.82
5	.13	.93		1.86		.04	1.82
6	.12	.82	5.94	1.64		.03	1.61
7	.15	1.15		2.30		.05	2.25
8	.15	1.15		2.30		.05	2.25
9	.18	1.56		3.12		.07	3.05
10	.19	1.70		3.40		.07	3.33
11	.16	1.29		2.58		.05	2.53
12	.16	1.29		2.58		.05	2.53
13	.14	1.04	15.12	2.08		.04	2.04
14	.13	.93		1.86		.04	1.82
15	.13	.93		1.86		.04	1.82
16	.13	.93		1.86		.04	1.82
17	.13	.93		1.86		.04	1.82
18	.13	.93		1.86		.04	1.82
19	.14	1.04		2.08		.04	2.04
20	.13	.93		1.86		.04	1.82
21	S	.31	22.05	.62		.01	.61
22							
23	End of season						
24							
25							
26							
27							
28							
29							
30							
31							
				44.10		.91	43.19

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE COLUMBINE DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 2

Report Period May 1, 1977 to May 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			2.09		
1							
2							
3							
4							
5							
6							
7	S	3.01		6.02		.13	5.89
8	0.20	13.59		27.18		.57	26.61
9	S	20.95		41.90		.88	41.02
10	.22	14.22		28.44		.59	27.85
11	S	17.90		35.80		.25	35.05
12	S	13.06		26.12		.55	25.57
13	.63	11.49		22.98		.48	22.50
14	S	11.56		23.12		.48	22.64
15	.42	6.02		12.04		.25	11.79
16	S	5.32		10.64		.22	10.42
17	.21	1.99		3.98		.08	3.90
18	.22	2.14	121.25	4.28		.09	4.19
19	S	3.36		6.72		.14	6.58
20	.30	3.52		7.04		.15	6.89
21	.22	2.14		4.28		.09	4.19
22	.24	2.46		4.92		.10	4.82
23	S	5.96		11.92		.25	11.67
24	.58	10.07		20.14		.42	19.72
25	.52	8.46	157.22	16.92		.35	16.57
26	.60	10.63		21.26		.44	20.82
27	.46	6.96		13.92		.29	13.63
28	.34	4.30		8.60		.18	8.42
29	S	8.16		16.32		.34	15.98
30	S	19.83		39.66		.83	38.83
31	1.13	29.17	236.27	58.34		1.22	57.12
				472.54		9.87	462.67

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE COLUMBINE DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 3 Report Period June 1, 1977 to June 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			2.09		
1	1.11	28.35	28.35	56.70		1.19	55.51
2	1.12	28.76		57.52		1.20	56.32
3	1.02	24.72		49.54		1.04	48.50
4	1.06	26.34		52.68		1.10	51.58
5	1.06	26.34		52.68		1.10	51.58
6	S	22.22		44.44		.93	43.51
7	S	24.62		49.24		1.03	48.21
8	S	20.67	202.07	41.34		.86	40.48
9	S	20.92		41.84		.87	40.97
10	S	14.86		29.72		.62	29.10
11	.58	10.07		20.14		.42	19.72
12	.54	8.72		17.44		.36	17.08
13	.48	7.44		14.88		.31	14.57
14	.47	7.20		14.40		.30	14.10
15	.41	5.80	277.08	11.60		.24	11.36
16	.38	5.13		10.26		.21	10.05
17	.34	4.30		8.60		.18	8.42
18	.32	3.90		7.80		.16	7.64
19	.29	3.33		6.66		.14	6.52
20	.28	3.15		6.30		.13	6.17
21	.27	2.97		5.94		.12	5.82
22	.25	2.63	302.47	5.26		.11	5.15
23	.23	2.30		4.60		.10	4.50
24	.23	2.30		4.60		.10	4.50
25	.22	2.14		4.28		.09	4.19
26	.22	2.14		4.28		.09	4.19
27	.21	1.99		3.98		.08	3.90
28	.20	1.84		3.68		.08	3.60
29	.18	1.56	316.76	3.12		.07	3.05
30	.17	1.42	318.18	2.84		.06	2.78
31							
				636.36		13.27	623.09

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE COLUMBINE DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 4 Report Period July 1, 1977 to July 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.					
1	0.17	1.42					
2	.17	1.42					
3	.17	1.42					
4	.17	1.42					
5	.17	1.42					
6	.16	1.29					
7	.15	1.15		2.30		.05	2.25
8	.14	1.04		2.08		.04	2.04
9	.14	1.04		2.08		.04	2.04
10	.13	.93		1.86		.04	1.82
11	.12	.82		1.64		.03	1.61
12	.11	.71		1.42		.03	1.39
13	.12	.82	14.90	1.64		.03	1.61
14	.12	.82		1.64		.03	1.61
15	.12	.82		1.64		.03	1.61
16	.10	.61		1.22		.03	1.19
17	.11	.71		1.42		.03	1.39
18	.11	.71		1.42		.03	1.39
19	.13	.93		1.86		.04	1.82
20	.13	.93	20.43	1.86		.04	1.82
21	.13	.93		1.86		.04	1.82
22	.13	.93		1.86		.04	1.82
23	.16	1.29		2.58		.05	2.53
24	.20	1.84		3.68		.08	3.60
25	.18	1.56		3.12		.07	3.05
26	.15	1.15		2.30		.05	2.25
27	.13	.93	29.06	1.86		.04	1.82
28	.12	.82		1.64		.03	1.61
29	.11	.71		1.42		.03	1.39
30	.10	.61		1.22		.03	1.19
31	.10	.61		1.22		.03	1.19
			31.81	63.62		1.33	62.29

Total Allowable Storage From JULY 1 To JULY 31

62.29 AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE COLUMBINE DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 5 Report Period August 1, 1977 to

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.					
1	.10	.61	.61	1.22	2.09	.03	1.19
2	.09	.52	1.13	1.04		.02	1.02
3	.08	.43	1.56	.86		.02	.84
4	.08	.43	1.99	.86		.02	.84
5	.10	.61	2.60	1.22		.03	1.19
6	.08	.43	3.03	.86		.02	.84
7	.05	.20	3.23	.40		.01	.39
8	.04	.14	3.37	.28		.01	.27
9	.05	.20	3.57	.40		.01	.39
10	.05	.20	3.77	.40		.01	.39
11	.04	.14		.28		.01	.27
12	.03	.09		.18		0	.18
13	.03	.09		.18		0	.18
14	.02	.05		.10		0	.10
15	.03	.09		.18		0	.18
16	.5	1.30		2.60		.05	2.55
17	.06	.27	5.80	.54		.01	.53
18	.07	.35		.70		.01	.69
19	.10	.61		1.22		.03	1.19
20	.09	.52		1.04		.02	1.02
21	.5	.57		1.14		.02	1.12
22	.15	1.15		2.30		.05	2.25
23	.08	.43		.86		.02	.84
24	.02	.05	9.48	.10		0	.10
25	0						
26							
27							
28							
29							
30							
31							
				18.96		.40	18.56

Total Allowable Storage From To

AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE WURTZ DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 1 Report Period Oct. 1, 1976 to Oct. 31, 1976

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			1.64		
1	0.11	.71		1.42		.02	1.40
2	.11	.71		1.42		.02	1.40
3	.12	.82		1.64		.03	1.61
4	.12	.82		1.64		.03	1.61
5	.12	.82		1.64		.03	1.61
6	.12	.82		1.64		.03	1.61
7	.11	.71	5.41	1.42		.02	1.40
8	.13	.93		1.86		.03	1.83
9	.13	.93		1.86		.03	1.83
10	.12	.82		1.64		.03	1.61
11	.12	.82		1.64		.03	1.61
12	.11	.71		1.42		.02	1.40
13	.11	.71		1.42		.02	1.40
14	.08	.43	10.76	.86		.01	.85
15	.06	.27		.54		.01	.53
16	.06	.27		.54		.01	.53
17	.06	.27		.54		.01	.53
18	.06	.27		.54		.01	.53
19	.06	.27		.54		.01	.53
20	.06	.27		.54		.01	.53
21	.06	.27		.54		.01	.53
22	.06	.27		.54		.01	.53
23	.06	.27		.54		.01	.53
24	.06	.27		.54		.01	.53
25	.06	.27		.54		.01	.53
26	.05	.20		.40		.01	.39
27	.05	.20		.40		.01	.39
28	S	.10	14.23	.20		0	.20
29							
30	Gml Off Season						
31							
				28.46		.48	27.98

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE WURTZ DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 2 Report Period April 1, 1977 to April 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			1.64		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29	5	0.25		.50		.01	.49
30	.14	1.04	1.29	2.08		.03	2.05
~~31~~							
				2.58		.04	2.54

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE WURTZ DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 3 Report Period May 1, 1977 to May 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			1.64		
1	0.24	2.46		4.92		.08	4.84
2	.28	3.15		6.30		.10	6.20
3	.26	2.80		5.60		.09	5.51
4	.23	2.30		4.60		.08	4.52
5	.27	2.97		5.94		.10	5.84
6	.36	4.71		9.42		.15	9.27
7	.60	10.63		21.26		.35	20.91
8	.71	13.90		27.80		.46	27.34
9	.77	15.82		31.64		.52	31.12
10	.76	15.49		30.98		.51	30.47
11	.67	12.68		25.36		.42	24.94
12	.58	10.07		20.14		.33	19.81
13	.66	12.38		24.76		.41	24.35
14	.53	8.72		17.44		.29	17.15
15	.36	4.71		9.42		.15	9.27
16	.41	5.80		11.60		.19	11.41
17	.39	5.35		10.70		.18	10.52
18	.37	4.92		9.84		.16	9.68
19	.36	4.71	143.57	9.42		.15	9.27
20	.33	4.10		8.20		.13	8.07
21	.26	2.80		5.60		.09	5.51
22	.28	3.15		6.30		.10	6.20
23	S	7.15		14.30		.23	14.07
24	.59	10.35		20.20		.34	20.36
25	.55	9.25		18.50		.30	18.20
26	.52	8.46	188.83	16.92		.28	16.64
27	.45	6.72		13.44		.22	13.22
28	.41	5.80		11.60		.19	11.41
29	S	6.98		13.96		.23	13.73
30	.62	11.20		22.40		.37	22.03
31	.69	13.28	232.81	26.56		.44	26.12
				465.62		7.64	457.98

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE WURTZ DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 4 Report Period June 1, 1977 to June 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			1.64		
1	0.72	14.22		28.44		.47	27.97
2	.67	12.68	26.90	25.36		.42	24.94
3	.62	11.20		22.40		.37	22.03
4	.59	10.35		20.70		.34	20.36
5	.56	9.52		19.04		.31	18.73
6	.54	8.98		17.96		.29	17.67
7	.50	7.94		15.88		.26	15.62
8	.46	6.96		13.92		.23	13.69
9	.52	8.46	70.31	16.92		.28	16.64
10	.44	6.48		12.96		.21	12.75
11	.36	4.71		9.42		.15	9.27
12	.31	3.71		7.42		.12	7.30
13	.28	3.15		6.30		.10	6.20
14	.26	2.80		5.60		.09	5.51
15	.24	2.46		4.92		.08	4.84
16	.21	1.99	115.61	3.98		.07	3.91
17	.18	1.56		3.12		.05	3.07
18	.16	1.29		2.58		.04	2.54
19	.15	1.15		2.30		.04	2.26
20	.13	.93		1.86		.03	1.83
21	.12	.82		1.64		.03	1.61
22	.10	.61		1.22		.02	1.20
23	.10	.61	122.58	1.22		.02	1.20
24	.12	.82		1.64		.03	1.61
25	.09	.52		1.04		.02	1.02
26	.08	.43		.86		.01	.85
27	.07	.35		.70		.01	.69
28	.07	.35		.70		.01	.69
29	.05	.20		.40		.01	.39
30	.04	.14	125.39	.28		0	.28
31							
				250.78		4.11	246.67

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE WURTZ DITCH

TO CLEAR CREEK RESERVOIR 6'

Report No. 5 Report Period July 1, 1977 to July 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.					
					1.64		
1	S	.01	.01	.02		0	.02
2							0
3							0
4							0
5	S	.06		.12		0	.12
6	0.08	.43		.86		.01	.85
7	.10	.61		1.22		.02	1.20
8	.11	.71		1.42		.02	1.40
9	.13	.93		1.86		.03	1.83
10	.16	1.29		2.58		.04	2.54
11	.12	.82		1.64		.03	1.61
12	S	.10	4.96	.20		0	.20
13	0						0
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
				9.92		0.15	9.77

Total Allowable Storage From _____ To _____ _____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE EWING DITCH

TO CLEAR CREEK RESERVOIRS 4'

Report No. 1 Report Period Oct. 1, 1976 to Oct. 31, 1976

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			1.92		
1	0.18	1.07		2.14		.04	2.10
2	.18	1.07		2.14		.04	2.10
3	.18	1.07		2.14		.04	2.10
4	.18	1.07		2.14		.04	2.10
5	.17	.98		1.96		.04	1.92
6	.18	1.07		2.14		.04	2.10
7	.17	.98	7.31	1.96		.04	1.92
8	a	.98		1.96		.04	1.92
9	.18	1.07		2.14		.04	2.10
10	.18	1.07		2.14		.04	2.10
11	.18	1.07		2.14		.04	2.10
12	.18	1.07		2.14		.04	2.10
13	.17	.98		1.96		.04	1.92
14	.17	.98	14.53	1.96		.04	1.92
15	.17	.98		1.96		.04	1.92
16	.16	.89		1.78		.03	1.75
17	.17	.98		1.96		.04	1.92
18	.17	.98		1.96		.04	1.92
19	.16	.89		1.78		.03	1.75
20	.17	.98		1.96		.04	1.92
21	.16	.89		1.78		.03	1.75
22	.16	.89		1.78		.03	1.75
23	.17	.98		1.96		.04	1.92
24	.17	.98		1.96		.04	1.92
25	.16	.89		1.78		.03	1.75
26	.17	.98		1.96		.04	1.92
27	.17	.98		1.96		.04	1.92
28	5	.50	27.32	1.00		.02	.98
29							
30	Gate	Closed					
31							
				54.64		1.05	53.59

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE EWING DITCH

TO CLEAR CREEK RESERVOIRS 4'

Report No. 2 Report Period May 1, 1977 to May 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			1.92		
1	5	.61		1.22		.02	1.20
2	0.35	3.06		6.12		.12	6.00
3	.33	2.78		5.56		.11	5.45
4	.31	2.52		5.04		.10	4.94
5	.42	4.07		8.14		.16	7.98
6	.48	5.03		10.06		.19	9.37
7	.50	5.36		10.72		.21	10.51
8	5	5.64		11.28		.22	11.06
9	.51	5.53		11.06		.21	10.85
10	.49	5.20		10.40		.20	10.20
11	.53	5.88		11.76		.23	11.53
12	.49	5.20		10.40		.20	10.20
13	.43	4.22		8.44		.16	8.28
14	.40	3.77		7.54		.14	7.40
15	.36	3.19		6.38		.12	6.26
16	.37	3.34		6.68		.13	6.55
17	.40	3.77		7.54		.14	7.40
18	.37	3.34		6.68		.13	6.55
19	.36	3.19	75.70	6.38		.12	6.26
20	.31	2.52		5.04		.10	4.94
21	.30	2.39		4.78		.09	4.69
22	.36	3.19		6.38		.12	6.26
23	.40	3.77		7.54		.14	7.40
24	.40	3.77		7.54		.14	7.40
25	.39	3.62		7.24		.14	7.10
26	.38	3.48	98.44	6.96		.13	6.83
27	.37	3.34		6.68		.13	6.55
28	.36	3.19		6.38		.12	6.26
29	.36	3.19		6.38		.12	6.26
30	.38	3.48		6.96		.13	6.83
31	.42	4.07	115.71	8.14		.16	7.98
				231.42		4.43	226.99

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE EWING DITCH

TO CLEAR CREEK RESERVOIRS 4'

Report No. 3 Report Period June 1, 1977 to June 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			1.92		
1	0.42	4.07		8.14		.16	7.98
2	.42	4.07	8.14	8.14		.16	7.98
3	.42	4.07		8.14		.16	7.98
4	.42	4.07		8.14		.16	7.98
5	.42	4.07		8.14		.16	7.98
6	.42	4.07		8.14		.16	7.98
7	.42	4.07		8.14		.16	7.98
8	.43	4.22		8.44		.16	8.28
9	.43	4.22	36.93	8.44		.16	8.28
10	.42	4.07		8.14		.16	7.98
11	.41	3.92		7.84		.15	7.69
12	.40	3.77		7.54		.14	7.40
13	.39	3.62		7.24		.14	7.10
14	.38	3.48		6.96		.13	6.83
15	.37	3.34		6.68		.13	6.55
16	.36	3.19	62.32	6.38		.12	6.26
17	.35	3.06		6.12		.12	6.00
18	.34	2.92		5.84		.11	5.73
19	.33	2.78		5.56		.11	5.45
20	.33	2.78		5.56		.11	5.45
21	.32	2.65		5.30		.10	5.20
22	.32	2.65		5.30		.10	5.20
23	.31	2.52	81.68	5.04		.10	4.94
24	.31	2.52		5.04		.10	4.94
25	.30	2.39		4.78		.09	4.69
26	.29	2.27		4.54		.09	4.45
27	.29	2.27		4.54		.09	4.45
28	.28	2.15		4.30		.08	4.22
29	.27	2.03		4.06		.08	3.98
30	.27	2.03	97.34	4.06		.08	3.98
31							
				194.68		3.77	190.91

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE EWING DITCH

TO CLEAR CREEK RESERVOIR 4'

Report No. 4 Report Period July 1, 1977 to July 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			1.92		
1	0.26	1.81		3.72		.07	3.75
2	.25	1.69		3.49		.07	3.53
3	.25	1.69		3.49		.07	3.53
4	.26	1.81		3.82		.07	3.75
5	.26	1.81		3.82		.07	3.75
6	.26	1.81		3.82		.07	3.75
7	.24	1.69	12.93	3.38		.06	3.32
8	.23	1.58		3.16		.06	3.10
9	.23	1.58		3.16		.06	3.10
10	.22	1.47		2.94		.06	2.88
11	.22	1.47		2.94		.06	2.88
12	.21	1.36		2.72		.05	2.67
13	.22	1.47		2.94		.06	2.88
14	.21	1.36	23.22	2.72		.05	2.67
15	.20	1.26		2.52		.05	2.47
16	.19	1.16		2.32		.04	2.28
17	.19	1.16		2.32		.04	2.28
18	.19	1.16		2.32		.04	2.28
19	.20	1.26		2.52		.05	2.47
20	.20	1.26		2.52		.05	2.47
21	.20	1.26	31.74	2.52		.05	2.47
22	.20	1.26		2.52		.05	2.47
23	.21	1.36		2.72		.05	2.67
24	.23	1.58		3.16		.06	3.10
25	.22	1.47		2.94		.06	2.88
26	.20	1.26		2.52		.05	2.47
27	.19	1.16		2.32		.04	2.28
28	.18	1.07	40.90	2.14		.04	2.10
29	.18	1.07		2.14		.04	2.10
30	.18	1.07		2.14		.04	2.10
31	.17	.98		1.96		.04	1.92
			44.02	88.04		1.67	86.37

Total Allowable Storage From JULY 1 To JULY 31

86.37 AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE EWING DITCH

TO CLEAR CREEK RESERVOIR 4'

Report No. 5 Report Period August 1, 1977 to _____

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.					
1	.17	.98	.98	1.96	1.92 %	.04	1.92
2	.17	.98	1.96	1.96		.04	1.92
3	.17	.98	2.94	1.96		.04	1.92
4	.17	.98	3.92	1.96		.04	1.92
5	.18	1.07	4.99	2.14		.04	2.10
6	.18	1.07	6.06	2.14		.04	2.10
7	.17	.98	7.04	1.96		.04	1.92
8	.17	.98	8.02	1.96		.04	1.92
9	.16	.89	8.91	1.78		.03	1.75
10	.15	.80	9.71	1.60		.03	1.57
11	.15	.80	10.51	1.60		.03	1.57
12	.16	.89		1.78		.03	1.75
13	.16	.89		1.78		.03	1.75
14	.16	.89		1.78		.03	1.75
15	.17	.98		1.96		.04	1.92
16	.18	1.07		2.14		.04	2.10
17	.18	1.07		2.14		.04	2.10
18	.18	1.07	17.37	2.14		.04	2.10
19	.18	1.07		2.14		.04	2.10
20	.18	1.07		2.14		.04	2.10
21	.18	1.07		2.14		.04	2.10
22	.18	1.07		2.14		.04	2.10
23	.17	.98		1.96		.04	1.92
24	.17	.98		1.96		.04	1.92
25	.16	.89	24.50	1.78		.03	1.75
26	.16	.89		1.78		.03	1.75
27	.15	.80		1.60		.03	1.57
28	.15	.80		1.60		.03	1.57
29	.15	.80		1.60		.03	1.57
30	.15	.80		1.60		.03	1.57
31	.15	.80	29.39	1.60		.03	1.57

58.78 1.11 52.67

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE EWING DITCH

TO CLEAR CREEK RESERVOIR 4'

Report No. 6 Report Period September 1, 1977 to September 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			1.92		
1	0.14	0.72	.72	1.44		.03	1.41
2	.13	.64		1.28		.02	1.26
3	.14	.72		1.44		.03	1.41
4	.15	.80		1.60		.03	1.57
5	.15	.80		1.60		.03	1.57
6	.14	.72		1.44		.03	1.41
7	.13	.64		1.28		.02	1.26
8	.13	.64	5.68	1.28		.02	1.26
9	.14	.72		1.44		.03	1.41
10	.14	.72		1.44		.03	1.41
11	.15	.80		1.60		.03	1.57
12	.15	.80		1.60		.03	1.57
13	.15	.80		1.60		.03	1.57
14	.14	.72		1.44		.03	1.41
15	.14	.72	10.96	1.44		.03	1.41
16	.14	.72		1.44		.03	1.41
17	.14	.72		1.44		.03	1.41
18	.13	.64		1.28		.02	1.26
19	.13	.64		1.28		.02	1.26
20	.13	.64		1.28		.02	1.26
21	.13	.64		1.28		.02	1.26
22	.13	.64	15.60	1.28		.02	1.26
23	.14	.72		1.44		.03	1.41
24	.14	.72		1.44		.03	1.41
25	.13	.64		1.28		.02	1.26
26	.13	.64		1.28		.02	1.26
27	.13	.64		1.28		.02	1.26
28	.13	.64		1.28		.02	1.26
29	.13	.64	20.24	1.28		.02	1.26
30	.13	.64	20.88	1.28		.02	1.26
31							
				41.76		.80	40.96

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BUSK IVANHOE TUNNEL

TO SUGARLOAF RESERVOIR 8'

Report No. 1 Report Period Oct. 1, 1976 to Oct. 31, 1976

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			0.63		
1	a	2.03		4.06		.03	4.03
2	0.18	2.03		4.06		.03	4.03
3	.18	2.03		4.06		.03	4.03
4	.18	2.03		4.06		.03	4.03
5	.19	2.22		4.44		.03	4.41
6	.20	2.41	12.75	4.82		.03	4.79
7	a	2.41		4.82		.03	4.79
8	a	2.61		5.22		.03	5.19
9	.22	2.81		5.62		.04	5.58
10	.21	2.61		5.22		.03	5.19
11	.19	2.22		4.44		.03	4.41
12	.18	2.03		4.06		.03	4.03
13	.18	2.03		4.06		.03	4.03
14	.18	2.03		4.06		.03	4.03
15	.17	1.85		3.70		.02	3.68
16	a	1.68		3.36		.02	3.34
17	a	1.52		3.04		.02	3.02
18	a	1.36		2.72		.02	2.70
19	.14	1.36		2.72		.02	2.70
20	.13	1.21		2.42		.02	2.40
21	.13	1.21		2.42		.02	2.40
22	.13	1.21		2.42		.02	2.40
23	.13	1.21		2.42		.02	2.40
24	.12	1.06		2.12		.01	2.11
25	.11	.92		1.84		.01	1.83
26	.12	1.06		2.12		.01	2.11
27	.12	1.06		2.12		.01	2.11
28	.11	.92		1.84		.01	1.83
29	.11	.92		1.84		.01	1.83
30	a	.92		1.84		.01	1.83
31	a	.46	51.43	.92		.01	.91
end of season				102.86		.69	102.17

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BUSK IVANHOE TUNNEL

TO SUGARLOAF RESERVOIR 8'

Report No. 2 Report Period May 1, 1977 to May 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			0.63		
1	0						0
2	5	1.02		2.04		.01	2.03
3	0.21	2.61		5.22		.03	5.19
4	.26	3.67		7.34		.05	7.29
5	.42	7.94		15.88		.10	15.78
6	.66	16.41		32.82		.21	32.61
7	.70	18.04		36.08		.23	35.85
8	.72	18.87		37.74		.24	37.50
9	.76	20.51		41.02		.26	40.76
10	.82	23.26		46.52		.29	46.23
11	1.11	32.84		75.68		.48	25.20
12	1.05	34.61		69.22		.44	68.78
13	a	29.97		59.94		.38	59.56
14	a	25.58		51.16		.32	50.84
15	a	21.46	261.29	42.92		.27	42.65
16	a	18.45		36.90		.23	36.67
17	.67	16.81		33.62		.21	33.41
18	.62	14.84		29.68		.19	29.49
19	a	14.84		29.68		.19	29.49
20	a	14.08		28.16		.18	27.98
21	a	13.33		26.66		.17	26.49
22	a	12.96	362.10	25.92		.16	25.76
23	a (est)	13.70		27.40		.17	27.23
24	.74	19.71		39.42		.25	39.17
25	.80	22.36		44.72		.28	44.44
26	.81	22.81		45.62		.29	45.33
27	.77	21.01		42.02		.26	41.76
28	.71	18.45		36.90		.23	36.67
29	.73	19.29		38.58		.24	38.34
30	.93	28.48		56.96		.36	56.60
31	1.16	40.62	573.53	81.24		.51	80.73
				114706		7.23	1139.83

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BUSK IVANHOE TUNNEL

TO SUGARLOAF RESERVOIR 8'

Report No. 3 Report Period June 1, 1977 to June 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			0.63		
1	1.33	50.60		101.20		.64	100.56
2	1.39	54.33	104.93	108.66		.68	107.98
3	1.39	54.33		108.66		.68	107.98
4	1.41	55.58		111.16		.70	110.46
5	1.41	55.58		111.16		.70	110.46
6	1.43	56.86		113.72		.72	113.00
7	1.45	58.14		116.28		.73	115.55
8	1.46	58.78		117.56		.74	116.82
9	1.44	57.50	501.70	115.00		.72	114.28
10	1.42	56.22		112.44		.71	111.73
11	1.35	51.84		103.68		.65	103.03
12	1.15	40.06		80.12		.50	79.62
13	1.01	32.52		65.04		.41	64.63
14	.90	27.02		54.04		.34	53.70
15	.81	22.81		45.62		.29	45.33
16	.81 (72)	18.87	751.04	37.74		.24	37.50
17	.61	14.46		28.92		.18	28.74
18	.55	12.24		24.48		.15	24.33
19	.50	10.51		21.02		.13	20.89
20	.45	8.87		17.74		.11	17.63
21	.42	7.94		15.88		.10	15.78
22	.39	7.05		14.10		.09	14.01
23	.35	5.93	818.04	11.86		.07	11.79
24	.34	5.66		11.32		.07	11.25
25	.35	5.93		11.86		.07	11.79
26	.33	5.39		10.78		.07	10.71
27	.32	5.13		10.26		.06	10.20
28	.31	4.88		9.76		.06	9.70
29	.28	4.14		8.28		.05	8.23
30	.26	3.67	852.84	7.34		.05	7.29
31							
				1705.68		10.71	1694.97

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BUSK IVANHOE TUNNEL

TO SUGARLOAF RESERVOIR 8'

Report No. 4 Report Period July 1, 1977 to July 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.43		
1	0.23	3.02		6.04		.04	6.00
2	.21	2.61		5.22		.03	5.19
3	.20	2.41		4.82		.03	4.79
4	.20	2.41		4.82		.03	4.79
5	.22	2.81		5.62		.04	5.58
6	.22	2.81		5.62		.04	5.58
7	.20	2.41	15.42	4.82		.03	4.79
8	a (.18)	2.03		4.06		.03	4.03
9	a	2.03		4.06		.03	4.03
10	a	2.03		4.06		.03	4.03
11	.18	2.03		4.06		.03	4.03
12	.16	1.68		3.36		.02	3.34
13	.14	1.36		2.72		.02	2.70
14	.11	.92	30.56	1.84		.01	1.83
15	.09	.67		1.34		.01	1.33
16	.08	.55		1.10		.01	1.09
17	.07	.45		.90		.01	.89
18	.08	.55		1.10		.01	1.09
19	.09	.67		1.34		.01	1.33
20	.10	.79		1.58		.01	1.57
21	.11	.92	35.16	1.84		.01	1.83
22	.14	1.36		2.72		.02	2.70
23	.22	2.81		5.62		.04	5.58
24	.23	3.02		6.04		.04	6.00
25	.30	4.62		9.24		.06	9.18
26	.28	4.14		8.28		.05	8.23
27	.24	3.23		6.46		.04	6.42
28	.21	2.61	56.95	5.22		.03	5.19
29	.17	1.85		3.70		.02	3.68
30	.15	1.52		3.04		.02	3.02
31	.13	1.21		2.42		.02	2.40
			61.53	123.06		.82	122.24

Total Allowable Storage From JULY 1 To JULY 31

122.24 AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BUSK IVANHOE TUNNEL

TO SUGARLOAF RESERVOIR 8'

Report No. 5 Report Period August 1, 1977 to

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.					
1	.11	.92	.92	1.84	.63	.01	1.83
2	.10	.79	1.71	1.58		.01	1.57
3	.10	.79	2.50	1.58		.01	1.57
4	.09	.67	3.17	1.34		.01	1.33
5	.10	.79	3.96	1.58		.01	1.57
6	.10	.79	4.75	1.58		.01	1.57
7	.09	.67	5.42	1.34		.01	1.33
8	.08	.55	5.97	1.10		.01	1.09
9	.08	.55	6.52	1.10		.01	1.09
10	.06	.35	6.97	.70		0	.70
11	.06	.35	7.22	.70		0	.70
12	.06	.35		.70		0	.70
13	.06	.35		.70		0	.70
14	.07	.45		.90		.01	.89
15	.07	.45		.90		.01	.89
16	.08	.55		1.10		.01	1.09
17	.09	.67		1.34		.01	1.33
18	.12	1.06	11.10	2.12		.02	2.11
19	.14	1.36		2.72		.02	2.70
20	.17	1.85		3.70		.02	3.68
21	.17	1.85		3.70		.02	3.68
22	.17	1.85		3.70		.02	3.68
23	.15	1.52		3.04		.02	3.02
24	.13	1.21		2.42		.02	2.40
25	.12	1.06	21.80	2.12		.01	2.11
26	.11	.92		1.84		.01	1.83
27	.10	.79		1.58		.01	1.57
28	.10	.79		1.58		.01	1.57
29	.09	.67		1.34		.01	1.33
30	.08	.55		1.10		.01	1.09
31	.08	.55	26.07	1.10		.01	1.09

52.14 .33 5/81

Total Allowable Storage From To

AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE BUSK IVANHOE TUNNEL

TO SUGARLOAF RESERVOIR 8'

Report No. 6 Report Period Sept. 1, 1977 to Sept. 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.63		
1	0.08	0.55	0.55	1.10		.01	1.09
2	.08	.55		1.10		.01	1.09
3	.08	.55		1.10		.01	1.09
4	.08	.55		1.10		.01	1.09
5	.08	.55		1.10		.01	1.09
6	.08	.55		1.10		.01	1.09
7	.08	.55		1.10		.01	1.09
8	.08	.55	4.40	1.10		.01	1.09
9	.08	.55		1.10		.01	1.09
10	.08	.55		1.10		.01	1.09
11	.08	.55		1.10		.01	1.09
12	.11	.92		1.84		.01	1.83
13	.11	.92		1.84		.01	1.83
14	.11	.92		1.84		.01	1.83
15	.10	.79	9.60	1.58		.01	1.57
16	.10	.79		1.58		.01	1.57
17	.09	.67		1.34		.01	1.33
18	.08	.55		1.10		.01	1.09
19	.08	.55		1.10		.01	1.09
20	.08	.55		1.10		.01	1.09
21	.08	.55		1.10		.01	1.09
22	.08	.55		1.10		.01	1.09
23	.11	.92		1.84		.01	1.83
24	a .10	.79		1.58		.01	1.57
25	a .09	.67		1.34		.01	1.33
26	.09	.67		1.34		.01	1.33
27	.08	.55		1.10		.01	1.09
28	.08	.55		1.10		.01	1.09
29	.08	.55	18.51	1.10		.01	1.09
30	.09	.67	19.18	1.34		.01	1.33
31							
				38.36		-27	38.09

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 1 Report Period Oct. 1, 1976 to Oct. 31, 1976

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.87		
1	2	.39		.78		.01	.77
2		0					
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30			0.39				
31				.78		.01	.77

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 2 Report Period Nov. 1, 1976 to Nov. 30, 1976

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.87		
1		0		0			
2							
3							
4							
5							
6							
7							
8		0		0			
9	0.10	1.17		2.34		.02	2.32
10	.10	1.17		2.34		.02	2.32
11	.10	1.17		2.34		.02	2.32
12	.10	1.17		2.34		.02	2.32
13	.10	1.17		2.34		.02	2.32
14	.12	1.57		3.14		.03	3.11
15	.11	1.37		2.74		.02	2.72
16	.12	1.57		3.14		.03	3.11
17	.17	2.74		5.48		.05	5.43
18	a m	3.28		6.56		.06	6.50
19	a m	3.85		7.70		.07	7.63
20	.23	4.45		8.90		.08	8.82
21	.22	4.15		8.30		.07	8.23
22	.21	3.85		7.70		.07	7.63
23	.20	3.56		7.12		.06	7.06
24	.21	3.85		7.70		.07	7.63
25	.22	4.15		8.30		.07	8.23
26	.22	4.15		8.30		.07	8.23
27	.22	4.15		8.30		.07	8.23
28	.21	3.85		7.70		.07	7.63
29	.20	3.56		7.12		.06	7.06
30	.19	3.28	63.23	6.56		.06	6.50
31							
				126.46		1.11	125.35

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 3 Report Period Dec. 1, 1976 to Dec. 31, 1976

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.87		
1	0.18	3.01		6.02		.05	5.97
2	a	3.01					
3	.18	3.01					
4	.18	3.01					
5	.18	3.01					
6	.18	3.01		6.02			5.97
7	.17	2.74		5.48			5.43
8	.17	2.74					
9	.17	2.74					
10	.17	2.74					
11	.17	2.74					
12	.17	2.74					
13	.17	2.74					
14	.17	2.74					
15	.17	2.74		5.48		.05	5.43
16	.16	2.49	45.21	4.98		.04	4.94
17	.16	2.49		4.98		.04	4.94
18	.17	2.74		5.48		.05	5.43
19	.17	2.74		5.48		.05	5.43
20	a	2.49		4.98		.04	4.94
21	a	2.49		4.98		.04	4.94
22	a .16	2.25		4.50		.04	4.46
23	a .16	2.25	62.66	4.50		.04	4.46
24	a .15	2.25		4.50		.04	4.46
25	.17	2.74		5.48		.05	5.43
26	.17	2.74		5.48		.05	5.43
27	.17	2.74		5.48		.05	5.43
28	.17	2.74		5.48		.05	5.43
29	.17	2.74		5.48		.05	5.43
30	.17	2.74		5.48		.05	5.43
31	.17	2.74	84.09	5.48		.05	5.43
				168.18		1.48	166.70

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 4 Report Period Jan. 1, 1977 to Jan. 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.87		
1	0.17	2.24		5.48		.05	5.43
2	.17	2.24		5.48		.05	5.43
3	.15	2.25		4.50		.04	4.46
4	.16	2.49		4.98		.04	4.94
5	a .15	2.25		4.50		.04	4.46
6	a .15	2.25	14.72	4.50		.04	4.46
7	.15	2.25		4.50		.04	4.46
8	.15	2.25		4.50		.04	4.46
9	.15	2.25		4.50		.04	4.46
10	.15	2.25		4.50		.04	4.46
11	.15	2.25		4.50		.04	4.46
12	.15	2.25		4.50		.04	4.46
13	.15	2.25	30.49	4.50		.04	4.46
14	.15	2.25		4.50		.04	4.46
15	.15	2.25		4.50		.04	4.46
16	.15	2.25		4.50		.04	4.46
17	.15	2.25		4.50		.04	4.46
18	.15	2.25		4.50		.04	4.46
19	.14	2.01		4.02		.03	3.99
20	.14	2.01	45.74	4.02		.03	3.99
21	.13	1.79		3.58		.03	3.55
22	.13	1.79		3.58		.03	3.55
23	.14	2.01		4.02		.03	3.99
24	.15	2.25		4.50		.04	4.46
25	.15	2.25		4.50		.04	4.46
26	a	2.01		4.02		.03	3.99
27	a	1.79	59.63	3.58		.03	3.55
28	a	1.52		3.14		.03	3.11
29	.12	1.52		3.14		.03	3.11
30	.12	1.52		3.14		.03	3.11
31	.12	1.57	65.91	3.14		.03	3.11
				131.82		1.15	130.67

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 5 Report Period Feb. 1, 1977 to Feb. 28, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.87		
1	0.12	1.57		3.14		.03	3.11
2	.12	1.57		3.14		.03	3.11
3	.12	1.57		3.14		.03	3.11
4	.12	1.57	6-28	3.14		.03	3.11
5	.12	1.57		3.14		.03	3.11
6	.12	1.57		3.14		.03	3.11
7	.12	1.57		3.14		.03	3.11
8	.12	1.57		3.14		.03	3.11
9	.12	1.57		3.14		.03	3.11
10	.12	1.57	15.70	3.14		.03	3.11
11	.12	1.57		3.14		.03	3.11
12	.12	1.57		3.14		.03	3.11
13	.12	1.57		3.14		.03	3.11
14	.12	1.57		3.14		.03	3.11
15	.12	1.57		3.14		.03	3.11
16	.12	1.57		3.14		.03	3.11
17	.12	1.57		3.14		.03	3.11
18	.12	1.57	28.26	3.14		.03	3.11
19	.12	1.57		3.14		.03	3.11
20	.12	1.57		3.14		.03	3.11
21	.12	1.57		3.14		.03	3.11
22	.13	1.79		3.58		.03	3.54
23	.14	2.01		4.02		.03	3.99
24	.14	2.01		4.02		.03	3.99
25	.14	2.01		4.02		.03	3.99
26	.14	2.01		4.02		.03	3.99
27	.14	2.01		4.02		.03	3.99
28	.14	2.01	46.82	4.02		.03	3.99
~~29~~							
~~30~~							
~~31~~							
				93.64		0.84	92.80

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 6 Report Period March 1, 1977 to March 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.87		
1	0.14	2.01		4.02		.03	3.99
2	.14	2.01		4.02		.03	3.99
3	a	2.01		4.02		.03	3.99
4	a	2.25	8.28	4.50		.04	4.46
5	.16	2.99		4.00		.04	4.00
6	.15	2.25		4.50		.04	4.46
7	.15	2.25		4.50		.04	4.46
8	.14	2.01		4.02		.03	3.99
9	.14	2.01		4.02		.03	3.99
10	.14	2.01		4.02		.03	3.99
11	.14	2.01		4.02		.03	3.99
12	.14	2.01		4.02		.03	3.99
13	.13	1.79		3.58		.03	3.55
14	.13	1.79		3.58		.03	3.55
15	.13	1.79		3.58		.03	3.55
16	a	1.79		3.58		.03	3.55
17	a	1.57	34.05	3.14		.03	3.11
18	.13	1.79		3.58		.03	3.55
19	.14	2.01		4.02		.03	3.99
20	.14	2.01		4.02		.03	3.99
21	.14	2.01		4.02		.03	3.99
22	.14	2.01		4.02		.03	3.99
23	.13	1.79		3.58		.03	3.55
24	.14	2.01	47.68	4.02		.03	3.99
25	.14	2.01		4.02		.03	3.99
26	.14	2.01		4.02		.03	3.99
27	.14	2.01		4.02		.03	3.99
28	.14	2.01		4.02		.03	3.99
29	.14	2.01		4.02		.03	3.99
30	.14	2.01		4.02		.03	3.99
31	.14	2.01	61.75	4.02		.03	3.99
				123.50		0.97	122.53

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 7 Report Period April 1, 1977 to April 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.87		
1	0.14	2.01		4.02		.03	3.99
2	.14	2.01		4.02		.03	3.99
3	.14	2.01		4.02		.03	3.99
4	.15	2.25		4.50		.04	4.46
5	.15	2.25		4.50		.04	4.46
6	.15	2.25		4.50		.04	4.46
7	.15	2.25	15.03	4.50		.04	4.46
8	.16	2.49		4.98		.04	4.94
9	.17	2.74		5.48		.05	5.43
10	.18	3.01		6.02		.05	5.97
11	.20	3.56		7.12		.06	7.06
12	.20	3.56		7.12		.06	7.06
13	.20	3.56		7.12		.06	7.06
14	.19	3.28	32.23	6.56		.06	6.50
15	.19	3.28		6.56		.06	6.50
16	.19	3.28		6.56		.06	6.50
17	.18	3.01		6.02		.05	5.97
18	.21	3.85		7.70		.07	7.63
19	.22	4.15		8.30		.07	8.23
20	.22	4.15		8.30		.07	8.23
21	.21	3.85	62.80	7.70		.07	7.63
22	.21	3.85		7.70		.07	7.63
23	.24	4.77		9.54		.08	9.46
24	S	4.42		8.84		.08	8.76
25	S	4.27		8.54		.07	8.47
26	S	5.05		10.10		.09	10.01
27	S	4.47		8.94		.08	8.86
28	S	36.35	125.98	72.70		.63	72.07
29	S	40.36		80.72		.70	80.02
30	S	16.44	182.78	32.88		.29	32.59
31							
				365.56		3.17	362.39
				251.96		2.18	249.78

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 8 Report Period May 1, 1977 to May 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.87		
1	S	40.64		81.28		.71	80.57
2	S	45.28		90.56		.79	89.77
3	S	61.99		123.98		1.08	122.90
4	S	74.04		148.08		1.29	146.79
5	S	57.90	279.85	115.80		1.01	114.79
6	1.62	101.17		202.34		1.76	200.58
7	S	77.04		154.08		1.34	152.74
8	S	147.22		294.44		2.56	291.88
9	S	113.74		227.48		1.98	225.50
10	S	223.03		446.06		3.88	442.18
11	S	267.31		534.62		4.65	529.97
12	1.98	139.46	1348.82	278.92		2.43	276.49
13	1.98	139.46		278.92		2.43	276.49
14	2.20	165.07		330.14		2.87	327.27
15	1.64	103.18		206.36		1.80	204.56
16	1.22	64.28		128.56		1.12	127.44
17	1.23	65.12		130.24		1.13	129.11
18	1.38	78.26		156.52		1.36	155.16
19	1.32	72.76	2037.07	145.76		1.27	144.49
20	1.03	49.01		98.02		.05	97.97
21	1.03	49.01		98.02		.05	97.97
22	1.03	49.01		98.02		.05	97.97
23	1.28	69.38		138.76		1.21	137.55
24	1.96	137.21		274.42		2.39	272.03
25	2.03	145.16		290.32		2.53	287.79
26	1.55	94.25	2630.10	188.50		1.64	186.86
27	1.56	95.23		190.46		1.66	188.80
28	1.46	85.65		171.30		1.49	169.81
29	1.42	81.95		163.90		1.43	162.47
30	2.35	183.47		366.94		3.19	363.75
31	3.14	291.68	3368.08	583.36		5.08	578.28
				6736.16		56.23	6679.93

Total Allowable Storage From _____ To _____

_____ AF

6736.16

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 9 Report Period June 1, 1977 to June 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.87		
1	3.64	367.48		738.96		6.43	732.53
2	3.63	367.85	737.33	735.70		6.40	729.30
3	3.23	305.16		610.32		5.31	605.01
4	3.24	306.68		613.36		5.34	608.02
5	3.50	346.98		693.96		6.04	687.92
6	3.64	369.48		738.96		6.43	732.53
7	3.48	343.84		687.68		5.98	681.70
8	4.34	489.54		979.08		8.52	970.56
9	4.31	484.12	3383.13	968.24		8.42	959.82
10	3.32	318.89		637.78		5.55	632.23
11	2.95	263.98		527.96		4.59	523.37
12	2.45	196.12		392.24		3.41	388.83
13	2.80	242.82		485.64		4.23	481.41
14	2.72	238.70		477.40		4.15	473.25
15	2.51	203.83		407.66		3.55	404.11
16	2.10	153.25	5000.72	306.50		2.67	303.83
17	2.22	167.50		335.00		2.91	332.09
18	2.22	167.50		335.00		2.91	332.09
19	1.98	137.46		278.92		2.43	276.49
20	1.80	119.73		239.46		2.08	237.38
21	1.66	105.19		210.38		1.83	208.55
22	1.16	59.28		118.56		1.03	117.53
23	1.12	56.05	815.43	112.10		.98	111.12
24	1.16	59.28		118.56		1.03	117.53
25	1.21	63.44		126.88		1.10	125.78
26	1.23	65.12		130.24		1.13	129.11
27	1.25	66.81		133.62		1.16	132.46
28	1.26	62.65		135.30		1.18	134.12
29	1.22	68.54		137.08		1.19	135.89
30	1.24	65.96	6272.23	131.92		1.15	130.77
31							
				12544.46		109.13	12435.33

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 10 Report Period July 1, 1977 to July 31, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.					
1	S	41.50		82.28		.24	82.28
2	0.47	15.97		31.66		.09	31.56
3	.51	16.40		32.49		.09	32.40
4	.47	14.09		27.93		.28	31.65
5	.46	18.41		36.48		.33	32.71
6	.45	13.03		25.82		.32	32.16
7	.58	19.56		26.06		.23	25.83
8	.52	16.42		39.12		.34	38.28
9	.53	16.93		32.84		.29	32.55
10	S	14.46		33.86		.29	33.57
11	.29	6.45		28.92		.25	28.67
12	.38	9.94		12.90		.11	12.29
13	.33	7.93		19.88		.17	19.71
14	.31	7.18	222.25	15.86		.14	15.72
15	.35	8.72		14.36		.12	14.24
16	.37	9.53		17.44		.15	17.29
17	.36	9.12		19.06		.17	18.89
18	.35	8.72		18.24		.16	18.08
19	S	10.13		17.44		.15	17.29
20	.66	24.05		20.26		.18	20.08
21	.67	24.63	317.65	48.10		.42	47.68
22	1.09	53.66		49.26		.43	48.83
23	S	24.42		107.32		.93	106.39
24	.14	2.01		48.84		.42	48.42
25	S	8.54		4.02		.03	3.99
26	.60	20.64		17.08		.15	16.93
27	.60	20.64		41.28		.36	40.92
28	.60	20.64	468.20	41.28		.36	40.92
29	.60	20.64		41.28		.36	40.92
30	.60	20.64		41.28		.36	40.92
31	.59	20.10		40.20		.35	39.85
			529.58	1059.16		9.21	1049.95

Total Allowable Storage From JULY 1 To JULY 31

1049.95 AF

Checked 7/6 #.7

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 11 Report Period August 1, 1977 to _____

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G. H.	Sec. Ft.			.37		
1	.57	19.02	19.02	38.04		.33	37.71
2	.56	18.49	37.51	36.98		.32	36.66
3	.55	17.96	55.47	35.92		.31	35.61
4	.55	17.96	73.43	35.92		.31	35.61
5	.55	17.96	91.39	35.92		.31	35.61
6	.55	17.96	109.35	35.92		.31	35.61
7	.54	17.44	126.79	34.89		.30	34.58
8	.53	16.93	143.72	33.86		.29	33.57
9	.52	16.42	160.14	32.84		.29	32.55
10	.30	6.81	166.95	13.62		.12	13.50
11	.12	1.57	168.52	3.14		.03	3.11
12	.12	1.57		3.14		.03	3.11
13	.12	1.57		3.14		.03	3.11
14	.13	1.79		3.58		.03	3.55
15	.13	1.79		3.58		.03	3.55
16	.12	1.57		3.14		.03	3.11
17	.12	1.57		3.14		.03	3.11
18	.14	2.01	180.39	4.02		.03	3.99
19	S	4.34		8.68		.08	8.60
20	.62	21.76		43.52		.38	43.14
21	.61	21.20		42.40		.37	42.03
22	.60	20.64		41.28		.36	40.92
23	.60	20.64		41.28		.36	40.92
24	.59	20.10		40.20		.35	39.85
25	.59	20.10	309.17	40.20		.35	39.85
26	.58	19.56		39.12		.34	38.78
27	.58	19.56		39.12		.34	38.78
28	.57	19.02		38.04		.33	37.71
29	.56	18.49		36.98		.32	36.66
30	S	14.12		28.24		.25	27.99
31	.12	1.57	401.49	3.14		.03	3.11
				802.98	6.99		795.99

Total Allowable Storage From _____ To _____

_____ AF

DIVISION OF WATER RESOURCES - OFFICE OF THE STATE ENGINEER

IRRIGATION DIVISION NO. 2

ALLOWABLE STORAGE OF TRANSMOUNTAIN DITCH AND/OR TUNNEL FLOW

SOURCE TWIN LAKES TUNNEL

TO TWIN LAKES RESERVOIR 12'

Report No. 12 Report Period Sept. 1, 1977 to Sept. 30, 1977

(1) Daily Average Gage Height (FT)		(2) Daily Average Flow (CFS)	(3) Total Flow for Period (CFS)	(4) Total Flow for Period (AF)	(5) Percentage Loss (%)	(6) Total Loss (AF)	(7) Allowable Storage (AF)
Date	G.H.	Sec. Ft.			.87		
1	S	5.35	5.35	10.20		.09	10.61
2	.39	10.40		20.80		.18	20.62
3	.38	9.94		19.88		.17	19.71
4	.39	10.40		20.80		.18	20.62
5	.38	9.94		19.88		.17	19.71
6	.38	9.94		19.88		.17	19.71
7	.36	9.12		18.24		.16	18.08
8	.37	9.53	74.62	19.06		.17	18.89
9	.36	9.12		18.24		.16	18.08
10	.35	8.72		17.44		.15	17.29
11	a	8.72		17.44		.15	17.29
12	a	9.12		18.24		.16	18.08
13	.37	9.53		19.06		.17	18.89
14	.36	9.12		18.24		.16	18.08
15	.36	9.12		18.24		.16	18.08
16	.37	9.53		19.06		.17	18.89
17	.37	9.53		19.06		.17	18.89
18	.37	9.53		19.06		.17	18.89
19	.37	9.53		19.06		.17	18.89
20	.37	9.53		19.06		.17	18.89
21	.37	9.53		19.06		.17	18.89
22	.37	9.53	204.78	19.06		.17	18.89
23	.35	8.72		17.44		.15	17.29
24	a	8.72		17.44		.15	17.29
25	.36	9.12		18.24		.16	18.08
26	.35	8.72		17.44		.15	17.29
27	.34	8.32		16.64		.14	16.50
28	.33	7.93		15.86		.14	15.72
29	.33	7.93	264.24	15.86		.14	15.72
30	.33	7.93	272.17	15.86		.14	15.72
31							
				544.34		4.76	539.58

Total Allowable Storage From _____ To _____

_____ AF

+ error on 12-15
days of +8.69

EUREKA DITCH Creek near SNOWMASS PEAK NEAR FLATOP MOUNTAIN

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 77

Drainage area _____ square miles. Water stage recorder _____

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

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

No flow during 1977 Water Year

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												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30									XX	XXX		
31			XX	XXX					XX	XXX		
Calendar Year 1976												
3.26 Total												
0.009 Mean												
6.5 Run-off in acre-feet												
0.70 Maximum												
0 Minimum												

STATE OF COLORADO
VISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 09012000

Rating Table Used

	APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.					
	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		4th				
												1	3rd				
												2	2nd				
												3	1st				
												4					
												5	Quarter	Computed	Checked	Date	
												6					
												7					
												8					
												9	4th				
												10					
												11	3rd				
												12					
												13	2nd				
												14					
												15	1st				
												16					
												17	Quarter	Dis.appld.	Dis.check	Date	
												18					
												19					
												20	4th				
												21					
												22	3rd				
												23					
												24	2nd				
												25					
												26	1st				
												27					
												28	Quarter	G.H.copd.	G.H.check	Date	
												29					
												30					
X	XXX			XX	XXX					XX	XXX	31					

Water Year 1977

0
0
0
0
0

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

December 27, 1977

Mr. Lee R. Enewold, Division Engineer
Division of Water Resources
P.O. Box 396
Glenwood Springs, Colorado 81601

Dear Lee:

Further to our letter of November 16, 1977, the following information is furnished for the 1977 Water Year:

	ACRE FEET DIVERTED
HOOSIER PASS DITCH	2380
BOREAS PASS DITCH	15

Please let us know if additional information is desired.

Very truly yours,

W.G. Wilkinson
Division Engineer

WGW/HRC/dn

GRAND RIVER DITCH ~~Creek near~~ LA POUDRE PASS, COLO.

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1977

Drainage area TRANS-MT. DIV. square miles. Water stage recorder STEVENS F WEEKLY

Max. Discharge 350 Sec. ft. at 1800 on June 8, 1977 G. H. 4.03 ft.
Max. G. H. 4.03 ft. at 1800 on June 8, 1977 Min. Daily Discharge 0 sec.-ft. on May days
S-discharge subdivided "d" no gage height
Discharge estimated for
record from Water Commissioner's record

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												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30									XX	XXX		
31			XX	XXX					XX	XXX		
Calendar Year 1976												
1,251.3 Total		0		0		0		0		0		0
25.3 Mean		0		0		0		0		0		0
3,350 Run-off in acre-feet		0		0		0		0		0		0
200 Maximum		0		0		0		0		0		0
0 Minimum		0		0		0		0		0		0

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 09010000
Rating Table Used 10-FT. P[illegible]HALL DATED 6-15-71. OCT. 1, 1976 TO SEPT. 30, 1977

APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.
ht	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	
	0	a	15	2.29	Tr 137	1.21	To 46	0.55	To 11	0.47	To 8.0	1
	0		17	2.32	140	1.19	45	.51	9.4	.43	6.7	2
	0		21	2.28	136	1.12	41	.48	8.4	.48	8.4	3
	0		25	2.70	181	1.09	39	.47	8.0	.56	11	4
	0		29	3.02	218	1.18	44	S	23	.48	8.4	5
	0		33	3.14	232	1.23	48	.77	21	.46	7.7	6
	0		37	[13] 3.00	Tr 215	1.03	35	.63	14	.45	7.3	7
	0		40	3.21	241	0.93	29	.59	13	.43	6.7	8
	0	a	45	3.11	228	.88	26	.56	11	.41	6.0	9
	0	1.34	b 56	3.03	219	.83	24	.50	9.1	.40	5.7	10
	0	1.32	b 74	2.72	183	.74	19	.46	7.7	.40	5.7	11
	0	1.34	b 60	2.55	164	.69	17	.43	6.7	.48	8.4	12
	0	S	Tr 63	2.54	163	.66	16	.40	5.7	.48	8.4	13
	0	S	54	2.56	Tr 165	.63	14	.38	5.1	.44	7.0	14
	0	S	22	2.39	To 148	.61	13	.38	5.1	.44	7.0	15
-	3.0	0.91	28	2.25	134	.58	12	.38	5.1	.43	6.7	16
	5.0	.87	25	2.16	125	.57	12	.42	6.4	.40	5.7	17
	5.0	.83	23	2.18	127	.60	13	.44	7.0	.38	5.1	18
	5.0	.78	21	1.99	109	.76	20	S	19	.36	4.6	19
	6.0	.66	15	1.90	101	.72	18	.70	17	.35	4.3	20
	6.0	.65	15	1.72	85	.89	27	.58	12	.35	4.3	21
	7.0	.60	13	[14] 1.60	To 75	.87	26	.57	12	.34	4.0	22
	7.0	.68	16	1.54	71	.86	25	.50	9.1	.37	4.8	23
	8.0	.89	26	1.52	69	S	37	.46	7.7	.43	6.7	24
	8.0	.99	32	1.54	71	S	52	.52	9.8	.37	4.8	25
	9.0	1.08	38	1.57	73	1.00	33	.48	8.4	.36	4.6	26
	9.0	0.98	32	1.53	70	0.87	26	.53	10	.34	4.0	27
	10	.86	25	1.48	66	0.79	22	.56	11	.33	3.8	28
	10	.84	24	1.38	58	.72	18	.54	11	.31	3.2	29
-	10	1.11	39	1.28	To 51	.67	16	.53	10	.30	To 3.0	30
X	XXX	1.67	Tr 80	XX	XXX	.60	To 13	.51	To 9.4	XX	XXX	31
	108		1043		4055		826		323.1		182.0	6537.1
	3.60		33.6		135		26.6		10.4		6.07	17.9
	214		2070		8040		1640		641		361	12,970
	10		80		241		52		23		11	241
	0		13		51		12		5.1		3.0	0

4th Qtr: T. S. Be // — HRC — 12-21-77
3rd Qtr: T. S. Be // — HRC — 12-21-77
2nd Qtr: T. S. Be // — HRC — 12-21-77
1st Qtr: T. S. Be // — HRC — 12-21-77

Quarter: Computed / Checked / Date
Quarter: Dis.appld. / Dis.check / Date
Quarter: G.H.copd. / G.H.check / Date

Water Year 1977

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 4, 1977

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

Dear Dugan:

In preparation for our 1977 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

LRE/rd

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

November 16, 1977

Mr. Lee R. Enewold, Division Engineer
Division of Water Resources
P.O. Box 396
Glenwood Springs, Colorado 81601

Dear Lee:

The following information on trans-mountain diversions is furnished in response to your request of November 4, 1977:

	ACRE FEET
Adams Tunnel	294,600
Grand River Ditch	12,970
Berthoud Ditch	295
Eureka Ditch	0
Moffat Tunnel	50,620
Williams Fork Tunnel	9,000
Roberts Tunnel	92,750
Vidler Tunnel	321

Some charts are still missing for Hoosier Pass and Boreas Pass Ditches. We will forward this information to you as soon as it is available.

32,000 ± ?
497,506

Very truly yours,

Wilkinson

W. G. Wilkinson
Division Engineer

WGW/HRC/rh

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

November 16, 1977

Mr. Dan Hart
Box 213
Hideway Park, Colorado 80450

Dear Mr. Hart:

As you requested in your letter of October 31, 1977, the following flows were recorded on the requested trans-mountain diversions:

	ACRE FEET
Alva B. Adams Tunnel	294,600
Berthoud Canal Tunnel	295
Grand River Ditch	12,970

Very truly yours,

W. G. Wilkinson

W. G. Wilkinson
Division Engineer

WGW/HRC/rh

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 4, 1977

Bob Jesse, Division Engineer
1906 West Northern Avenue
Pueblo, Colorado 81004

Dear Bob:

In preparation of our 1977 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
FryyArk Project

I would appreciate any help or suggestions regarding these records.

Sincerely,

Lee R. Enewold
Division Engineer

LRE/rd

RESERVOIRS

WATER SUPPLY OUTLOOK FOR UPPER COLORADO BASIN
as of January 1, 1978

COLORADO RIVER ABOVE CISCO, UTAH: Heavy precipitation amounts should help alleviate last year's drought conditions in the upper reaches of the Colorado River. Streamflow forecasts are 110 to 125% in the upper reaches dropping to 109% at Cisco. The Gunnison River and tributaries are expected to be near 110 to 120%, the Dolores River flow should be near 100%, and Lake Powell inflow near 108% of normal.

Seasonal precipitation and snowfall amounts vary from above 150% of normal in the upper Colorado Basin along the continental divide to amounts near 50% in the lower Gunnison Basin. Generally, amounts are heavy in the high elevations and less than normal in the lower areas.

Streamflow (October through December) has been near or above normal in the upper reaches of the Colorado River with inflow to Lake Granby Reservoir 110% of normal. Other inflow has been less, with 97% for the inflow to Green Mountain Reservoir, 64% on the Roaring Fork River at Glenwood Springs, and 64% inflow to Lake Powell.

Some April-July reservoir inflow forecasts are: Blue Mesa - 870,000 acre feet, 128% of average; Green Mountain - 320,000 acre feet, 129%; Lake Granby - 243,000 acre feet, 126%; and Lake Powell - 7.5 million acre feet, 109% of average.

January 1 storage in Blue Mesa Reservoir was 235,000 acre feet, 25% of capacity, less than the 416,000 acre feet at this time last year; Dillon Reservoir - 129,000 acre feet, 50% of capacity, 214,212 acre feet last year; Green Mountain Reservoir - 64,000 acre feet, 41% of capacity, 83,800 acre feet last year; Lake Powell - 15,374,900 acre feet, 57% of capacity, 18,018,000 last year.

GREEN RIVER BASIN: The water supply outlook shows a marked improvement from last years record low flows. Residual forecasts, January through September, range from; above normal in the headwaters of the Green River in Wyoming, near normal on the Duchesne, White and Yampa Rivers, to much below normal on small tributaries in southeastern Utah.

Mild December weather occurred with below normal precipitation at lower elevations but near normal or above throughout the mountainous areas.

The seasonal pattern is quite similar. The head waters of the Green River have received 115 to 150% of normal precipitation; the upper reaches of the Duchesne, Yampa and White river drainages have received 80 to 120% of normal while the lower elevation tributaries in southern Utah have only had about 50% of the normal precipitation.

Only a few snow courses were measured on January 1 but these seem to indicate that the high elevation snow is above normal while courses at lower elevations are near normal or below.

Runoff during the October-December period has been below normal reflecting the continued low runoff during 1977. The flow on the Green River at Green River, Utah was 246,000 acre-feet, 62% of the 15-year (1958-72) average. This low streamflow is typical throughout most of the basin this fall. Storage in Flaming Gorge Reservoir is 1.99 million acre-feet, 53% of capacity and 1.2 million acre-feet lower than last year at this time.

NOAA - NATIONAL WEATHER SERVICE
River Forecast Center, Salt Lake City, Utah
Gerald Williams, Hydrologist in Charge

The April-July inflow forecast to Fontenelle Reservoir is 1.0 million acre-feet, 122% and the inflow to Flaming Gorge is expected to be 1.45 million acre-feet, 124% of the 15-year (1958-72) average.

SAN JUAN RIVER BASIN: Below normal precipitation in the San Juan Basin indicates that residual streamflow forecasts will be less than normal, although not nearly as low as last year. Forecasts are 75 to 95% of normal in the upper catchment basins with a flow forecast of 1,067,000 acre-feet, 87% of normal on the San Juan at Bluff, Utah.

Seasonal precipitation amounts range from 120% of normal in the upper elevations of the San Juan mountains dropping to near 50% in the lower area between Navajo Reservoir and the four corners area. December precipitation was 120% of average in the mountains, but only 10 to 20% was recorded in the area around Navajo Reservoir.

Streamflow (October through December) has been low with 64% on the Animas River at Durango, and 42% inflow to Navajo Reservoir.

Navajo Reservoir contains 977,000 acre-feet, 57% of capacity, and less than the 1,145,000 acre-feet at this time last year. The April-July inflow forecast for Navajo Reservoir is 475,000 acre-feet, 79% of normal.

COLORADO BASIN

as of January 1, 1978

STREAM and STATION	APR-JUL STREAMFLOW Forecast acre-feet	APR-JUL STREAMFLOW % 15-yr average	JAN-SEPT STREAMFLOW Forecast acre-feet	JAN-SEPT STREAMFLOW % 15-yr average
COLORADO RIVER				
Lake Granby Inflow, CO	243,000	126	271,000	122
Hot Sulphur Springs, CO			505,000	116
Dotsero nr, CO			1,810,000	115
Glenwood Springs blo, CO			2,683,000	111
Cameo nr, CO			2,875,000	109
Cameo nr, CO (Unadjusted)			2,430,000	110
Cisco nr, UT			4,127,000	109
Lake Powell Inflow	7,500,000	109		
FRASER RIVER				
Winter Park nr, CO			29,000	126
WILLIAMS FORK RIVER				
Parshall nr, CO			98,000	142
BLUE RIVER				
Dillon Reservoir Inflow	173,000	121	214,000	118
Green Mountain Reservoir Inflow	320,000	129	401,000	126
EAGLE RIVER				
Gypsum blo, CO			390,000	114
ROARING FORK RIVER				
Glenwood Springs, CO			841,000	108
PLATEAU CREEK				
Cameo nr, CO			70,000	70
TAYLOR RIVER				
Taylor Park Reservoir Inflow			144,000	113
Almont, CO			227,000	111
GUNNISON RIVER				
Blue Mesa Inflow, CO	870,000	128	1,050,000	122
Grand Junction nr, CO			1,519,000	110
EAST RIVER				
Almont, CO			231,000	113
UNCOMPAHGRE RIVER				
Colona, CO			139,000	93
Delta, CO			149,000	99
DOLORES RIVER				
Dolores, CO			241,000	98
SAN MIGUEL RIVER				
Naturita, CO			174,000	99

COLORADO BASIN

as of January 1, 1978

STREAM and STATION	APR-JULY STREAMFLOW Forecast acre-feet	APR-JULY STREAMFLOW % 15-yr average	JAN-SEPT STREAMFLOW Forecast acre-feet	JAN-SEPT STREAMFLOW % 15-yr average
GREEN RIVER				
Warren Bridge, WY			405,000	116
Fontenelle Reservoir Inflow	1,000,000	122	1,280,000	122
Flaming Gorge Reservoir Inflow	1,450,000	124	1,810,000	121
Green River, UT			4,100,000	113
NEW FORK RIVER				
Big Piney, WY			479,000	102
PINE CREEK				
Fremont Lake abv, WY			150,000	122
HENRYS FORK RIVER				
Manila, UT			41,000	73
YAMPA RIVER				
Steamboat Springs, CO			309,000	105
Hayden nr, CO			766,000	
Maybell nr, CO			1,045,000	107
ELK RIVER				
Clark, CO			220,000	106
LITTLE SNAKE RIVER				
Lily nr, CO			408,000	112
ASHLEY CREEK				
Vernal nr, UT			53,000	87
ROCK CREEK				
Mountain Home nr, UT			120,000	104
WEST FORK DUCHESNE RIVER				
Hanna, UT			35,000	113
DUCHESNE RIVER				
Tabiona nr, UT			143,000	104
Duchesne abv Knights Div, UT			238,000	100
Myton, Utah			275,000	99
STRAWBERRY RIVER				
Strawberry Reservoir Inflow	53,000	110	60,000	103
Starvation Reservoir Inflow	72,000	127	88,000	110
LAKE FORK				
Moon Lake Reservoir Inflow	73,000	106	87,000	100
WHITE RIVER				
Meeker nr, CO			355,000	101
Watson nr, CO			376,000	97

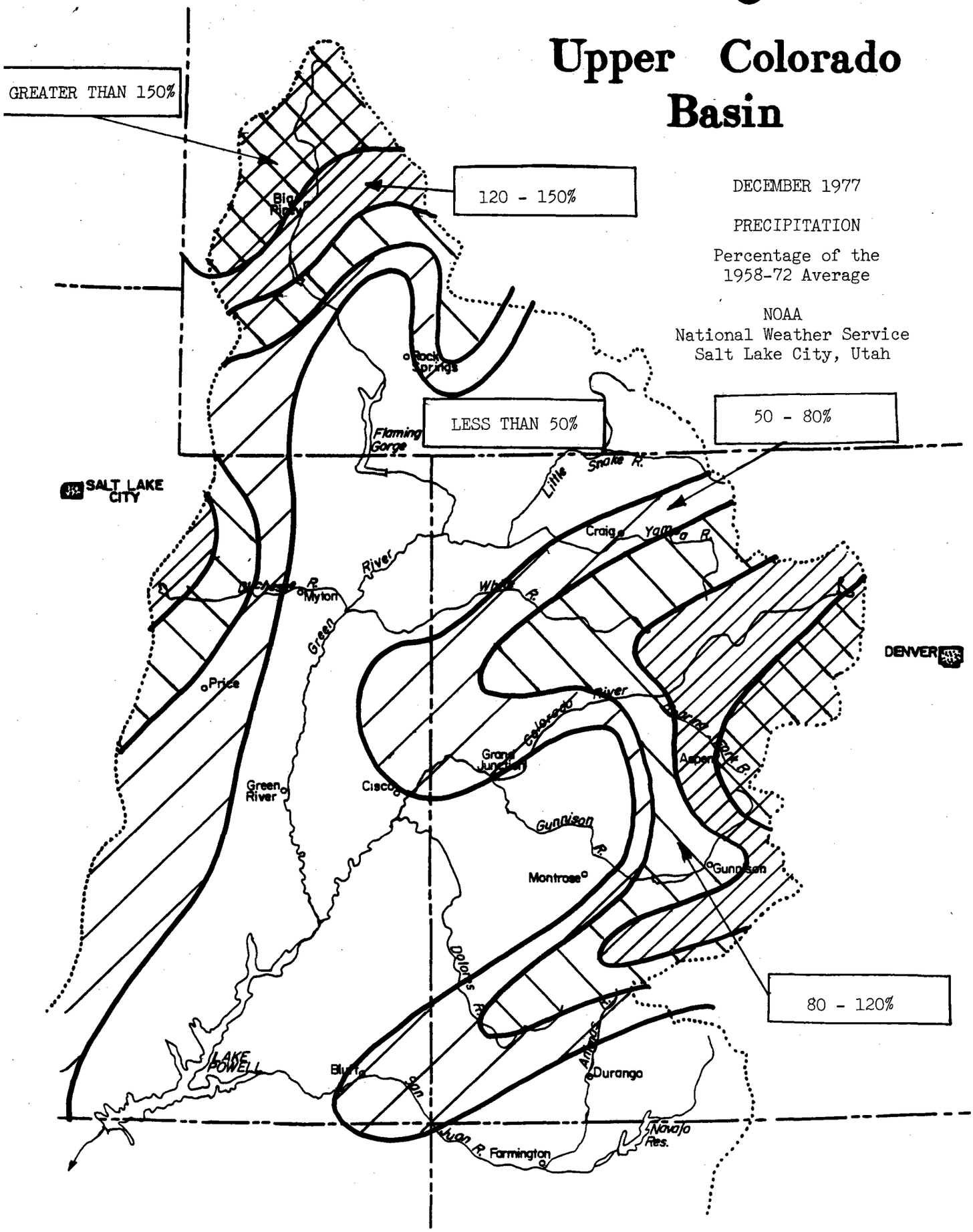
COLORADO BASIN

as of January 1, 1978

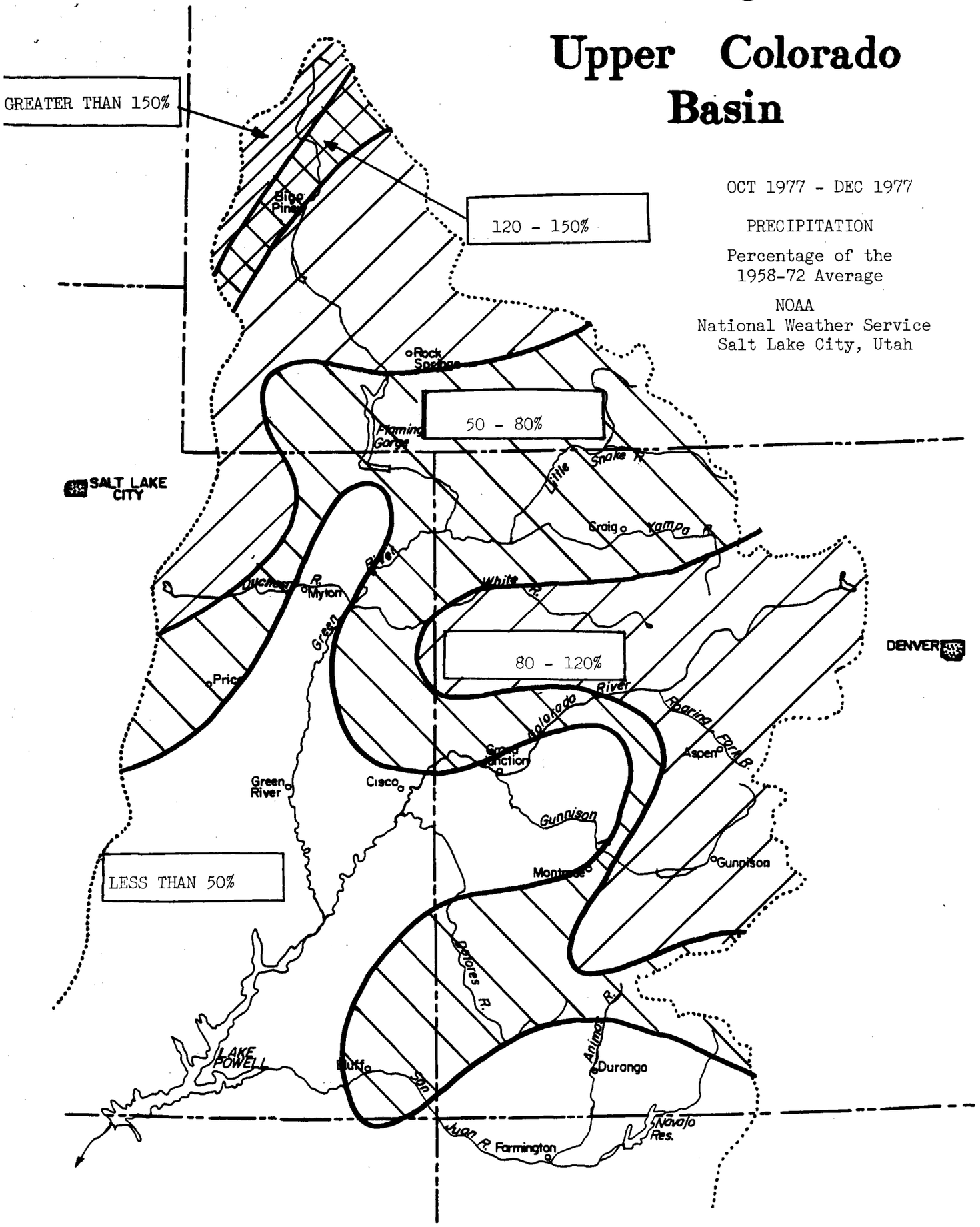
STREAM and STATION	APR-JULY STREAMFLOW Forecast acre-feet	APR-JULY STREAMFLOW % 15-yr average	JAN-SEPT STREAMFLOW Forecast acre-feet	JAN-SEPT STREAMFLOW % 15-yr average
PRICE RIVER				
Scofield Reservoir Inflow	40,000	118	42,000	105
HUNTINGTON CREEK				
Huntington nr, UT			58,000	97
SAN JUAN RIVER				
Pagosa Springs, CO			158,000	76
Navajo Reservoir Inflow	475,000	79	590,000	77
Farmington, N M			1,074,000	91
Bluff nr, UT			1,067,000	87
PIEDRA RIVER				
Arboles nr, CO			104,000	
NAVAJO RIVER				
Edith, CO			56,000	73
LOS PINOS RIVER				
Vallecito Reservoir Inflow			173,000	82
ANIMAS RIVER				
Durango, CO			440,000	94
FLORIDA RIVER				
Bondad nr, CO			26,000	
LA PLATA RIVER				
Hesperus, CO			23,000	88

All forecasts are based on the assumption that weather conditions the remainder of the season will be near normal. Precipitation normals and streamflow averages are based on the 15-year period 1958-72.

Upper Colorado Basin



Upper Colorado Basin



STATUS OF RESERVOIR STORAGE IN THE COLORADO RIVER BASIN

RESERVOIR	USABLE CAPACITY	End-of-Month Usable Contents	Average Usable Contents 1958-72	% of Average
Blue Mesa	a 829,500	234,500	478,280	49
Flaming Gorge	a 3,749,000	1,991,200	3,129,330	64
Fontenelle	a 344,800	286,100	--	
Lake Powell	a 25,002,000	15,374,400	18,477,000	83
Navajo	a 1,696,000	976,800	1,205,000	81
Lake Granby	465,600	174,610	--	
Dillon [b]	a 254,000	128,600	--	
Green Mountain	146,900	64,050	--	
Taylor Park	106,200		54,120	
Strawberry	270,000	137,880	110,900	124
Starvation	a 152,310	131,690	--	
Moon Lake	35,760	8,640	14,530	59
Scofield	65,780	17,262	27,770	62
Vallecito	126,300		--	

(Figures in acre-feet unless otherwise specified.)

a Constructed after 1958
b Data provided by Denver Water Board

MONTHLY STREAMFLOW AT INDEX STATIONS IN THE COLORADO BASIN

December 31, 1977

Station	Current data (provisional)				Median for 30-year period (1941-1970)[a]		Same month in previous years					
	Current month		Cumulative (since Oct. 1)				1951		1960		1977	
	Mean discharge (cfs)	% of 30-yr. median	Runoff (ac-ft)	% of 30-yr. median	Monthly median (cfs)	Cumulative since Oct 1 (acre-feet)	Mean (cfs)	% of 30-yr. mean	Mean (cfs)	% of 30-yr. mean	Mean (cfs)	% of 30-yr mean
Whiterocks River nr Whiterocks, Utah	28.7	84	6,530	80	34.2	8,200	34.2	100	27.0	79	22	63.8
Green River nr Green River, Utah[b]	1,336.	65	245,680	57	2,054	429,100	2,144	104	1,307	64	1,670.	81.3
Colorado River nr Cisco, Utah[c]	2,304.	79	422,720	73	2,931	577,000	2,797	95	2,677	91	2,516	85.8
San Juan River nr Bluff, Utah[d]	388.	55	73,760	49	704	149,400	581	83	644	91	334.	47.4
Yampa River at Steamboat Sprgs, Co.	78.0	79	14,230	73	98.7[f]	19,493	82.7	84	98.5	100	61.7	62.
Animas River at Durango, Co.	160	81	34,790	75	197.5[f]	46,386	187	90	203	103	172	92.
Roaring Fork at Glenwood Sprgs, Co.	313	75	65,450	73	417[f]	89,657	430	103	400	96	381	92.

a Median of mean discharges for 30-year period 1941-70.
b Adjusted for change in storage in Flaming Gorge Reservoir; storage began Nov. 1, 1962.
c Adjusted for change in Blue Mesa Reservoir; storage began Oct. 27, 1965.
d Adjusted for change in storage in Navajo Reservoir; storage began June 28, 1962.
e Estimated.
f Median of mean discharges for 30-year period 1931-60.

ALL DATA PROVIDED BY THE USGS

Storage Report - Acre Feet

1977

ter District	Amount in Storage Acre Feet 11-1-76	Maximum	10-31-77	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 Transmountain Diversion
36	352,267	351,562	230,589	31,034	851	220,677	91,574	129,481	90,556
37	27,040	26,915	3,994	35,368	172	3,340	31,311	542	
38	91,065	93,675	91,065	93,675	1,878	2,000	732	91,065	
39	5,470	18,391	4,787	13,016	13,593				
45	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
50	3,259	-0-	501	3,450	2,939				
51	461,699	July 1 346,351	269,199	-192,500	-0-	-0-	-0-	-0-	192,500
52	15	86	-0-	86	86				
53	562	1,471	-0-	665	1,471	988		67	
70	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
72	4,116	15,352	2,534	11,236	12,577	2,592			
TALS	945,493	853,803	602,669	381,030	33,567	229,597	123,617	221,155	283,056

Storage Report - Acre Feet
1976

ter strict	Amount in Storage Acre Feet 11-1-75	5-1-76	10-31-76	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 *	396 064	296 696	364219	- 31845	6750	70,107	39724	7367	2140
37 *	4191	4609	27063	22 872	460	3340		23792	
38	98277	14249	84881 6983	- 6413	8227		40	7119	
39	6819	22 336	6454	- 365	10, 062		384	21, 973	5720
45	0	0	19	19	—				
50 *	6743	7689	3259	- 3484	4480			5000	
51 *	508686	49868	66338	15470	3835			50, 000	
52 *	51	110	15	- 46	105	0	0	0	
53 *	3657	5748	3017	- 640	2091		640		
70	0	0	0		—				
72 *	13058	38610	—	(54840)	31289	12224	406	46223	32700
ALS	579728 ~~1,037,546~~	439915	562248	- 4432	67799.	85671	41194	161474	40560

* Estimates - based on correlated with 1975 Records

* Incomplete. Data due to ~~MS~~ insufficient 1976 Reports

AGRICULTURE

AGRICULTURE

Agriculture is one of the largest industries in Division 5. The number of farms showed a decrease from 1970 to 1976, while at the same time farm income also decreased. 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 than 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.

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, and State Forester and Extension Service.

DAMS

The following is a tabulation of all livestock water tank applications which were approved during the 1976-77 irrigation year:

District	No. of Stock Tanks
36	0
37	0
38	0
39	0
45	0
50	1
51	0
52	0
53	0
70	0
72	2

WATER RIGHTS TABULATIONS

WATER RIGHTS TABULATION

1.	Underground water rights	62
2.	Changes in water rights	16
3.	Water rights (absolute)	218
4.	Diligence (conditional)	67
5.	Water storage rights	69
6.	Applications received in water court	495
7.	Referee consultations	495

We are, and have been for the past several years, making corrections to the water rights tabulation. It is our hope that a tabulation can be printed soon that will be dependable and usable by this office and the general public.

REFEREE'S FINDINGS AND DECREES

HYDROGRAPHER'S REPORT

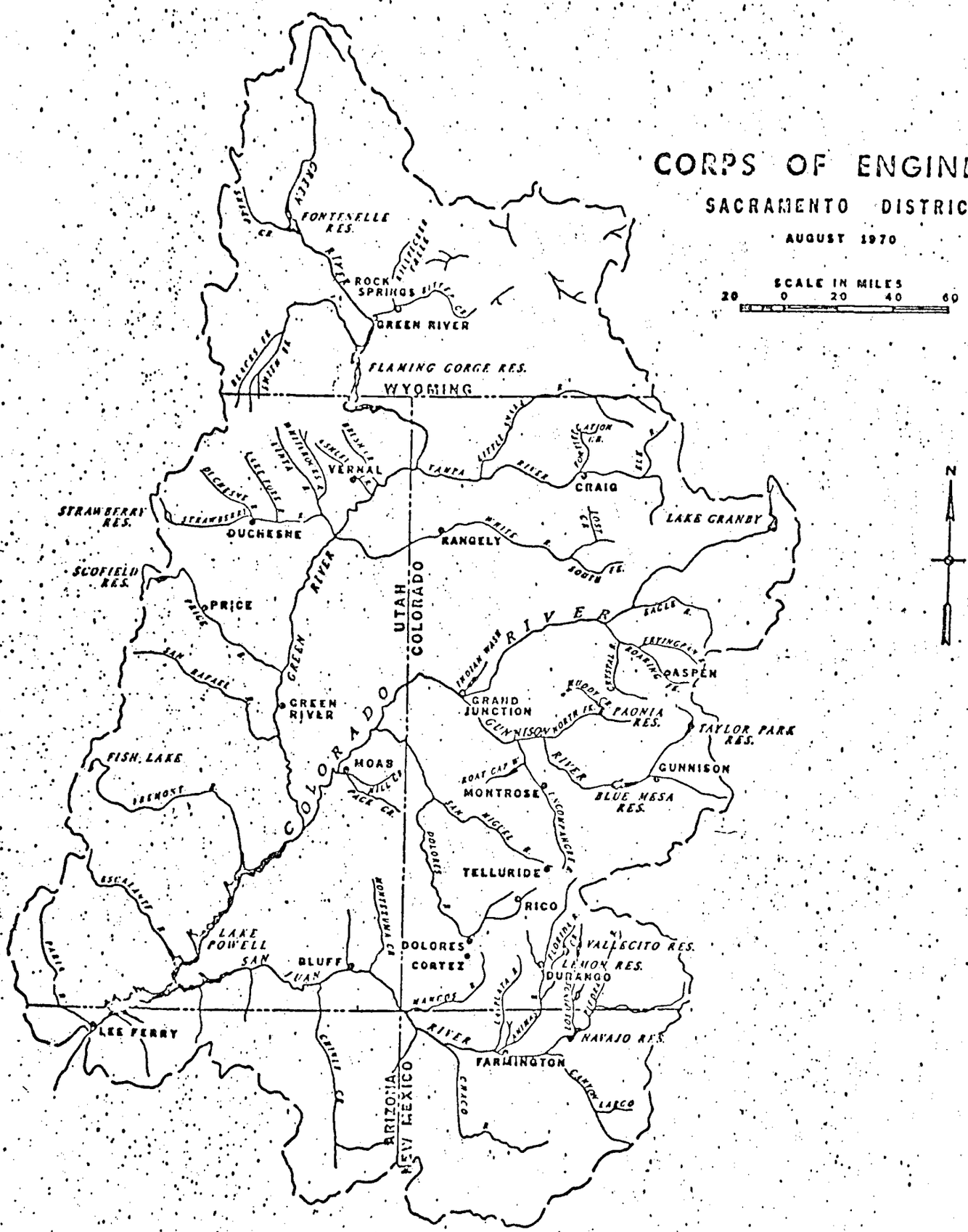
HYDROGRAPHIC REPORT

In accordance with the MEMORANDUM OF AGREEMENT BETWEEN THE COLORADO STATE ENGINEER AND THE LOWER MISSOURI REGION, BUREAU OF RECLAMATION, the Division 5 hydrographer began operating five stream gaging stations below diversion points on the Fryingpan-Arkansas Project on July 1, 1976. The responsibility for preparing records began on October 1, 1976. The 1977 Water Year records were recently submitted to the Chief Hydrographer for reviewing.

Pursuant to the above mentioned memorandum of agreement, specifically regarding the transfer of additional required stream gages, two additional stream gages were transferred to the Division 5 hydrographer, effective October 1, 1977.

During the 1977 Water Year the Division 5 hydrographer made 127 stream gaging measurements at the five stations for which annual records were computed for publication in Water Resources Data for Colorado. Twenty four administrative measurements were made in addition to those above.

ORGANIZATIONS



UPPER COLORADO RIVER BASIN

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

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 Hoods
Harold Mogensen
Merle Metz

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 Kohln
Bruce Currier
Ray Gobbo

WATER COMMISSIONER'S SUMMARY

DIVISION ENGINEER'S SUMMARY

TABLE A

DIVISION SUMMARY - DIVISION NO. 5

Direct Flow Diversions

1976

PISCATO

ct	Total Ditches Reported Active	Inactive* NA	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 Rdrs.	~~Deliv. to Cons. Ct.~~
36	132	0	292	210,500 *	13,600	18.13	Power 425,000	1,000	100,000	63,000 F	698,000		
	136	10	263	190,000 *	17,000	11.18		1,000	100,000	5,000 F	190,000		
	440	0	257	796,000	87,000	9.15		2,000	202,000	27,000 F	796,000		
39	111	0	178	124,000	16,000	7.75		3,000	25,000	0	124,000		
45	125	62	200	78,800	27,200	2.90		1,000	4,000	0	78,800		
50	73	0	135	63,000	14,000	4.5		1,000	40,000	0	63,000		
51	184	35	399	140,000	28,000	5.0	25,000	1,000	100,000	25,000 F	140,000		
52	93	8	79	18,000	7,500	2.4		1,000	5,000	0	18,000		
53	258	52	139	92,000	30,000	3.07	Power 450,000	1,000	1,000		92,000		
70	51	13	64	(62,000) 87,000	10,500	5.90		1,000	10,000	0	87,000		
72	165		485	791,000 (1,287,000)	151,000	5.24	Power 39,000	2,000	46,000	0	1,287,000		
ALS	1768	180	2491	3,939,300	401,800	6.45	866,000	15,000	633,000	Records not complete	3,573,800		

*Incomplete record

= No Water Available NU = Non Use

Transmountain Diversions: Designate either to or from Division.

Direct Flow Diversions
1977

er rict	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 Rpts.	Delivered to Compact Cmtmt Ac.F
36	211	99	71	92,136	13,737	6.2	220,677	5,000	100,000	99,665	517,000		
37	211	41	124	152,901	16,410	9.3	-0-	6,539	106,758	Homestake 38,069	305.000		
38	362	82	190	402,832	54,107	7.4	1,464	10,681	153,304	37,000	605,000		
39	156	33	56	105,613	14,325	7.4	-0-	441	Fishery 20,468	1,268 out	127,000		
45	96	70	184	28,464	25,217	1.1	-0-	391	4,000	1,368	34,000		
50	38	9	122	35,164	11,058	3.2	-0-	1,000	35,000	-0-	71,000		
1	193		298	107,466	24,668	4.4	1,106	1,577	100,000	307,865	518,000		
2	139	10	13	31,769	6,044	5.3	-0-	500	5,000	-0-	38,000		
3	293	70	34	70,920	23,417	3.9	703,828	6,294	1,366	3	783,000		
0	35	53	37	45,852*	7,075	6.5	-0-	500	1,000	-0-	48,000		
2	190	99	169	799,490	156,880	5.2	300,631	Domestic 23,670	46,000	500	1,172,000		
ALS	1,924	566	1,298	1,873,000	352,938	5.3	1,228,000	58,000	572,000	486,000	4,218,000		

*Includes Bluestone and Larkin in District 45 out of Colorado River

= No Water Available NU = Non Use

Transmountain Diversions: Designate either to or from Division.

RECOMMENDATIONS AND SUGGESTIONS

Water Year 1977

Recomendations and suggestions

1). The Water Data Bank has increased the Water Commissioner's workload about 25%. However, we are now getting better records, therefore much of this additional time has gone to good use. In many cases their records now reflect more user supplied information. Considering our mileage allowance problems, I have encouraged more user supplied information if the water commissioner feels it is reliable.

As the Assistant Division Engineer, it takes up too much of my time and continues to take even more. So far I have been reluctant to pass the increasing amount of paperwork on to the Water Commissioners. In most cases I can normally do what needs to be done quicker and more efficiently by doing it myself and with office personnel. This procedure has added a 25% workload to the office's workload. I feel that the responsiblity for the WDB on the Division level should be eventually placed in the hands of a full time WDB coordinator on the Division level or the water commissioner's credentials will need to be upgraded in the very near future. For instance in the larger, more complex districts, it is already necessary to look to the college graduate as probable replacements. A new man coming into a position as commissioner by himself has such a tremendous amount of initial information he must quickly digest concerning water law, WDB, well information, ect., that he can no longer have just the credentials of the past and get by. One added benefit to upgrading water commissioner credentials would be an expected accompaning increase in pay which would help to keep our highly capable commissioners from seeking higher paying jobs elsewhere.

2). Possibly the computer could be used to produce the initial blank water commissioner reports at the beginning of the water year. This would save us a great deal of time in hand copying information, and expense in xeroxing master copies for each district. Prepared "computer sheets" would be easier to compare against for verification purposes later because the sheets would all have the same format.

Once a given water year's records are checked, approved, and signed that year's records need to be "sealed" so that additional data can't be added or subtracted without special handling.

Our part time water commissioners and deputies should be given some of the historic WDB work during the non irrigation season. They need the work so they can remain employed and not be on unemployment. Such a procedure would really help our Division.

3). Within the next two to three years the number of water commissioners in Division 5 will need to be at least double our present force. This is due to increased pressure from water users for adequate records of their diversions. The number of adjudicated water rights in this division has doubled since 1969 and better than 90% of these rights are used and are in priority during a normal irrigation year. With our present work force we can't protect the water user's valuable property right because we can't produce a good record on each and every decreed water right.

Ray D. Walker
Asst. Div. Engr.

1977

RUEDI DAM RESERVOIR

Readings as of previous 12:00 midnight.
Flows for preceding day - 0 to 24 hours.

L - Left Bay of Outlet Works
A - Auxiliary Outlet Works
O - Outlet Works
R - Right Bay of Outlet Works
J - Jet Flow Valve
S - Spillway

Date	Reservoir Elevation (12:00 m) m	ft	Volume $10^3 m^3$	af	Change in Volume $10^3 m^3$	af	Ruedi Gage on Fryingpan m^3/s	ft^3/s	Rocky Fork Gage m^3/s	ft^3/s	Outflow m^3/s	ft^3/s	Computed Inflow m^3/s	ft^3/s
12/10	2361.39	7747.35	104,667	84,854	-11	-9	1.36	48	0.06	2	1.30	46	1.17	41
12/11	2361.38	7747.32	104,635	84,828	-32	-26	1.36	48	0.06	2	1.30	46	0.93	33
12/12	2361.37	7747.29	104,602	84,801	-33	-27	1.36	48	0.06	2	1.30	46	0.92	33
12/13	2361.36	7747.27	104,581	84,784	-21	-17	1.36	48	0.06	2	1.30	46	1.06	38
12/14	2361.36	7747.25	104,559	84,766	-25	-18	1.36	48	0.06	2	1.30	46	1.02	37
12/15	2361.36	7747.25	104,559	84,766	0	0	1.36	48	0.06	2	1.30	46	1.30	46
12/16	2361.36	7747.24	104,548	84,757	-11	- 9	1.36	48	0.06	2	1.30	46	1.18	42
12/17	2361.35	7747.21	104,516	84,731	-32	-26	1.36	48	0.06	2	1.30	46	0.93	30
12/18	2361.34	7747.19	104,493	84,713	-23	-18	1.36	48	0.06	2	1.30	46	1.03	37
12/19	2361.35	7747.20	104,504	84,722	+11	+ 8	1.36	48	0.06	2	1.30	46	1.43	46
12/20	2361.34	7747.18	104,482	84,704	-22	-18	1.36	48	0.06	2	1.30	46	1.05	37
12/21	2361.33	7747.15	104,450	84,678	-32	-26	1.36	48	0.06	2	1.30	46	0.93	46
12/22	2361.32	7747.11	104,406	84,642	-44	-36	1.36	48	0.06	2	1.30	46	0.79	28
12/23	2361.31	7747.09	104,385	84,625	-21	-17	1.36	48	0.06	2	1.30	46	1.06	38
12/24	2361.31	7747.08	104,374	84,616	-11	- 9	1.36	48	0.06	2	1.30	46	1.17	41
12/25	2361.31	7747.07	104,363	84,607	-11	- 9	1.36	48	0.06	2	1.30	46	1.17	41
12/26	2361.30	7747.06	104,352	84,508	-11	- 9	1.36	48	0.06	2	1.30	46	1.17	42
12/27	2361.29	7747.03	104,320	84,572	-32	-26	1.36	48	0.06	2	1.30	46	0.93	30
12/28	2361.29	7747.01	104,297	84,554	-23	+18	1.36	48	0.06	2	1.30	46	1.04	37
12/29	2361.28	7746.99	104,275	84,536	-22	-18	1.36	48	0.06	2	1.30	46	1.05	37
12/30	2361.28	7746.98	104,265	84,528	-10	- 8	1.36	48	0.06	2	1.30	46	1.19	42
12/31	2361.27	7746.96	104,243	84,510	-22	-18	1.36	48	0.06	2	1.30	46	1.05	37
1/1	2361.26	7746.93	104,211	84,484	-32	-26	1.36	48	0.06	2	1.30	46	0.93	33
1/2	2361.26	7746.91	104,189	84,466	-22	-18	1.36	48	0.06	2	1.30	46	1.05	37
1/3	2361.25	7746.88	104,157	84,440	-32	-26	1.36	48	0.06	2	1.30	46	0.93	33
1/4	2361.24	7746.85	104,123	84,413	-34	-27	1.36	48	0.06	2	1.30	46	0.91	33
1/5	2361.23	7746.81	104,080	84,378	-43	-35	1.75	62	0.05	2	1.70	60	1.20	43
1/6	2361.24	7746.85	104,123	84,413	0	0	1.36	48	0.06	2	1.30	46	1.30	46