1978
Division Engineer's Report
Division 2

Division 2 enjoyed a near normal drought, good high snowpack with very little to no low snow. Run-off was fairly timely on the main stem to light on tributaries; almost non-existant carry-over storage, with some transmountain imports to take up slack. Summer precipitation was spotty but in most cases, again, timely. All in all we had a generally fair to good year. There were quite a few problems with insects, but no division-wide disaster. The problem was in most cases grasshoppers. Some damaging hail, but again spotty and no real great damage, though in the storm centers the destruction was virtually complete. The drought cycle has not been broken but has bent some.

Out biggest problems again last year were in the area of ground water with a final Supreme Court decision coming down and policy being decided about September 20. We do have Rules and Regs and we were, and are, and will continue enforcing them. We sought and obtained an order from the court on enforcement, and we believe the way was paved for the next series. We had our problems in surface administration with 2 cases of almost mass civil disobedience. We did get court orders in one case and the other is pending.

I have 2 more areas I would like to touch; I'm sure Kupe and Jeri will touch both later. In one case a couple of in-house wells were denied in a subdivision exempted by the County Commissioners from S.B. 35 Regulations for a water plan. The applicants took the denials to court and got a favorable referees ruling. They overcame our protest to the Court. The rationale used by the applicants was that the injury of one in-house well was so small that it was unmeasureable; therefore not material injury. I was personally disappointed to say the least as I thought Duane and I had a good case and were ably represented.

The last one concerns the 3227 wells just filed for deep aquifers and unless someone has been living under a rock for the last few days, probably knows more than I do from the papers. Maybe I could get Kupe or Jeri to comment on this further.

INTRODUCTORY STATEMENT

ANNUAL DIVISION ENGINEERS REPORT
IRRIGATION DIVISION NO. 2
1978

IRRIGATION DIVISION NUMBER 2 CONSISTS OF ALL LANDS IRRIGATED FROM DITCHES AND CANALS DIVERTING WATER FROM THE ARKANSAS RIVER AND ITS TRIBUTARIES. THE DIVISION IS COMPOSED OF ELEVEN WATER DISTRICTS (10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 66, AND 67) COMPRISING THE COUNTIES OF EL PASO, CHAFFEE, LAKE, FREMONT, CUSTER, PUEBLO, PARK, LAS ANIMAS, TELLER, CROWLEY, OTERO, BENT, PROWERS, BACA AND KIOWA.

THE AREA THAT IS ENCOMPASSED BY IRRIGATION DIVISION NUMBER 2 MAY BE BEST DESCRIBED BY THE FOLLOWING SUMMARIZED TABLES.

TABLE OF CONTENTS

DIVISION ENGINEER'S COMMENTS

Snow pack was, on the main stem of the Arkansas, near normal. The tributaries were generally short and the run-off was minimal on a number of tributaries. Most ditches that divert on the main stem were able to divert during run-off. The run-off was well timed except for a very late start due to the lack of low snow. Generally precipitation was well timed and no extreme events occurred except for a few hail storms which were very limited in size. In their path, crop damage was total, the fruit area near Canon City was devastated and no appreciable crop was harvested. The lack of a Winter storage program was acutely felt in the early Spring and some crops were as much as three weeks late in germination due to a late start of snowmelt and no carry over storage. Generally crop yields were near average.

There were about the usual number of high water or thunderstorm events. None caused significant damage, although the gauge station at Catlin Dam was lost in a storm from the Huerfano and Apishapa. The machinery was recovered, and the station reestablished with a minimal loss of record.

One instance of out-of-priority storage occurred in Black Hills Reservoir but was released on order of the Division Engineer.

The Supreme Court affirmed the Water Court's ruling in the 1973 Pumping Rules and Regulations case. The Attorney General has advised us that the three-day rule is in effect and that the selective call and eighteen-year rule do not apply. The Rules and Regulations will be administered accordingly. We have a stipulated injunction against a former violator which should make future enforcement easier.

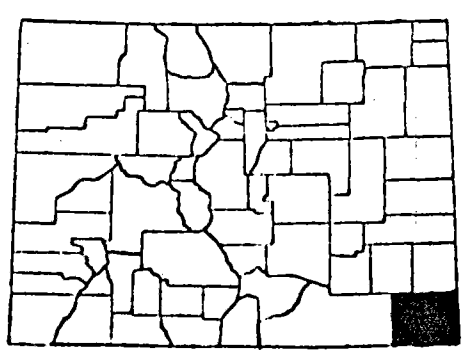
Again, as in years past, the Water Court consumes an enormous amount of staff time as cases become more complex and as the Water Judge becomes more hostile to the State's involvement without an injured water right owner on our side. Much preparation is lost to our being over-ruled. It is a very long process from issuing an order to a final judgement. I am very pessimistic about the future of the Division Engineer in Water Court. Our views are neither sought nor generally considered, but are tolerated because of the statute that requires them. In most cases the referee's consultation with the Division Engineer is a charade.

The 1978 Tabulation was duly compiled and distributed on schedule, with a minimum of problems, thanks in part to Walt Knudsen and his crew. The response with objections has not been as great as we had expected with most objections being of a typographical nature.

IRRIGATION DIVISION II

BACA COUNTY

MAJOR CITY	Springfield
1970 POPULATION	5,516
URBAN POPULATION	No city over 2,500
RURAL POPULATION	5,516
COUNTY AREA	2,565 Sq. Miles
TERRAIN	Plains
ELEVATION (MAJOR CITY)	4,356
MAJOR STREAM	Carrizo
MAJOR TRIBUTARY	None
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	56,910
AVERAGE GROWING SEASON	169 days
ANNUAL MEAN TEMPERATURE	52.20
AVERAGE ANNUAL RAINFALL	14.73 inches
AVERAGE ANNUAL SNOWFALL	27.7 inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	750
WATER RESOURCE PROJECTS	Underground water
LAND OWNERSHIP	
PRIVATE	1,736,612 acres
FEDERAL	205,500 acres
STATE	42,928 acres
COUNTY AND MUNICIPAL	86 acres

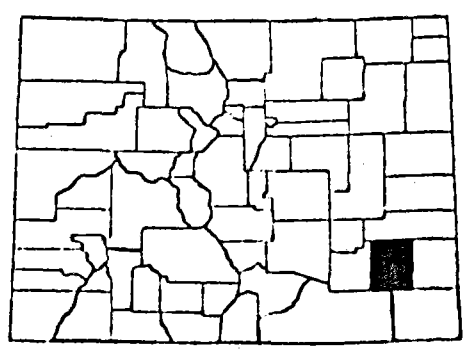


IRRIGATION DIVISION II

BENT COUNTY

MAJOR CITY	Las Animas
1970 POPULATION	6,343
URBAN POPULATION	2,955
RURAL POPULATION	3,388
COUNTY AREA	1,517 Sq. Miles
TERRAIN	Plains
ELEVATION (MAJOR CITY)	3,901
MAJOR STREAM	Arkansas
MAJOR TRIBUTARY	Purgatoire
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	61,713*
AVERAGE GROWING SEASON	158 Days
ANNUAL MEAN TEMPERATURE	51.3
AVERAGE ANNUAL RAINFALL	12.25 Inches
AVERAGE ANNUAL SNOWFALL	21.0 Inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	450
WATER RESOURCE PROJECTS	Fryingpan
LAND OWNERSHIP	
PRIVATE	939,722 acres
FEDERAL	10,233 acres
STATE	142,673 acres
COUNTY AND MUNICIPAL	147 acres

*1978 Assessor

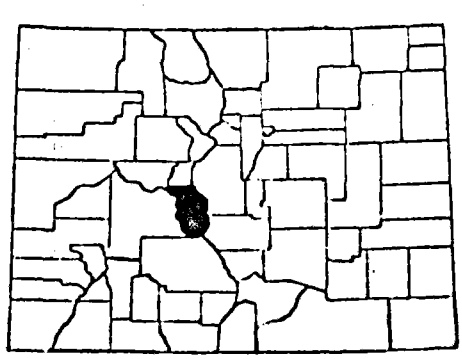


IRRIGATION DIVISION II

CHAFFEE COUNTY

MAJOR CITY	Salida
1970 POPULATION	9,663
URBAN POPULATION	4,322
RURAL POPULATION	5,341
COUNTY AREA	1,039 Sq. Miles
TERRAIN	Mountainous
ELEVATION (MAJOR CITY)	7,036
MAJOR STREAM	Arkansas
MAJOR TRIBUTARY	South Arkansas
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	16,216*
AVERAGE GROWING SEASON	112 Days
ANNUAL MEAN TEMPERATURE	46.3
AVERAGE ANNUAL RAINFALL	10.87 inches
AVERAGE ANNUAL SNOWFALL	46.2 inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	170
WATER RESOURCE PROJECTS	Fryingpan
LAND OWNERSHIP	
PRIVATE	128,736 acres
FEDERAL	502,651 acres
STATE	20,103 acres
COUNTY AND MUNICIPAL	3,511 acres

*1978 Assessor

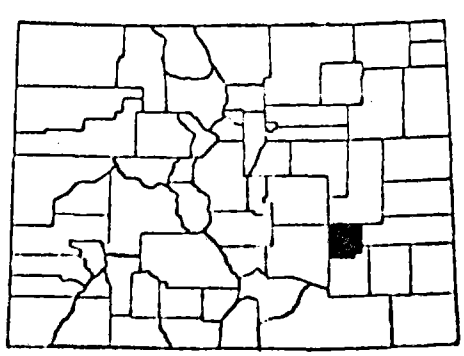


IRRIGATION DIVISION II

CROWLEY COUNTY

MAJOR CITY	Ordway
1970 POPULATION	2,947
URBAN POPULATION	No city over 2,500
RURAL POPULATION	2,947
COUNTY AREA	803 Sq. Miles
TERRAIN	Plains
ELEVATION (MAJOR CITY)	4,312
MAJOR STREAM	Horse Creek
MAJOR TRIBUTARY	None
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	25,010*
AVERAGE GROWING SEASON	162 days
ANNUAL MEAN TEMPERATURE	51.4
AVERAGE ANNUAL RAINFALL	12.31 inches
AVERAGE ANNUAL SNOWFALL	21.2 inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	400
WATER RESOURCE PROJECTS	Fryingpan
LAND OWNERSHIP	
PRIVATE	531,034 acres
FEDERAL	5,054 acres
STATE	52,711 acres
COUNTY AND MUNICIPAL	897 acres

*1978 Assessor

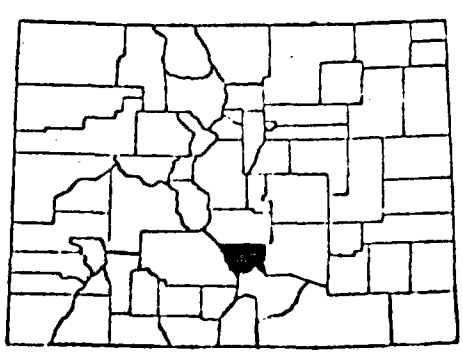


IRRIGATION DIVISION II

CUSTER COUNTY

MAJOR CITY	Westcliffe
1970 POPULATION	1,028
URBAN POPULATION	No city over 2,500
RURAL POPULATION	1,028
COUNTY AREA	737 Sq. Miles
TERRAIN	Mountain Valley
ELEVATION (MAJOR CITY)	7,888
MAJOR STREAM	Grape
MAJOR TRIBUTARY	Texas
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	15,930*
AVERAGE GROWING SEASON	86 Days
ANNUAL MEAN TEMPERATURE	43.7
AVERAGE ANNUAL RAINFALL	16.47 inches
AVERAGE ANNUAL SNOWFALL	88.1 inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	180
WATER RESOURCE PROJECTS	U.S.G.S. Underground Study
LAND OWNERSHIP	
PRIVATE	298,001 acres
FEDERAL	186,695 acres
STATE	11,989 acres
COUNTY AND MUNICIPAL	452 acres

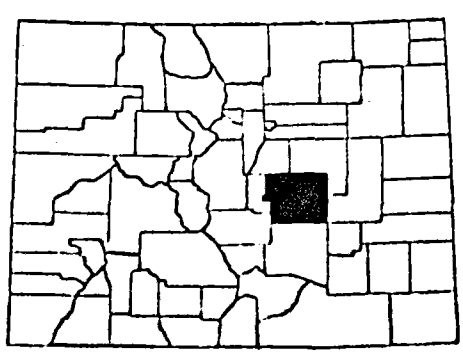
*1978 Assessor



IRRIGATION DIVISION II

EL PASO COUNTY

MAJOR CITY	Colorado Springs
1970 POPULATION	229,113
URBAN POPULATION	200,145
RURAL POPULATION	27,968
COUNTY AREA	2,158 Sq. Miles
TERRAIN	Foothills
ELEVATION (MAJOR CITY)	6,012
MAJOR STREAM	Fountain
MAJOR TRIBUTARY	Monument
MAJOR WATER USE	Commercial & Irrigation
IRRIGATED ACRES	13,630
AVERAGE GROWING SEASON	148 days
ANNUAL MEAN TEMPERATURE	48.0
AVERAGE ANNUAL RAINFALL	14.49 inches
AVERAGE ANNUAL SNOWFALL	35.0 inches
MAJOR SOURCE INCOME	Military, manufacturing
NUMBER OF FARMS	750
WATER RESOURCE PROJECTS	Blue River, Fryingpan, Homestake
LAND OWNERSHIP	
PRIVATE	981,504 acres
FEDERAL	187,866 acres
STATE	192,482 acres
COUNTY AND MUNICIPAL	14,839 acres

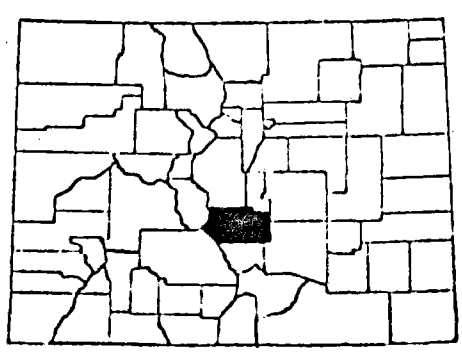


IRRIGATION DIVISION II

FREMONT COUNTY

MAJOR CITY	Canon City
1970 POPULATION	20,220
URBAN POPULATION	11,917
RURAL POPULATION	8,303
COUNTY AREA	1,562 Sq. Miles
TERRAIN	Foothills
ELEVATION (MAJOR CITY)	5,332
MAJOR STREAM	Arkansas
MAJOR TRIBUTARY	Grape
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	14,930*
AVERAGE GROWING SEASON	164 Days
ANNUAL MEAN TEMPERATURE	54.1
AVERAGE ANNUAL RAINFALL	12.66
AVERAGE ANNUAL SNOWFALL	35.6
MAJOR SOURCE INCOME	Agriculture, Industry
NUMBER OF FARMS	421
WATER RESOURCE PROJECTS	Fryingpan
LAND OWNERSHIP	
PRIVATE	523,202 acres
FEDERAL	441,445 acres
STATE	65,326 acres
COUNTY AND MUNICIPAL	7,785 acres

*1978 Assessor

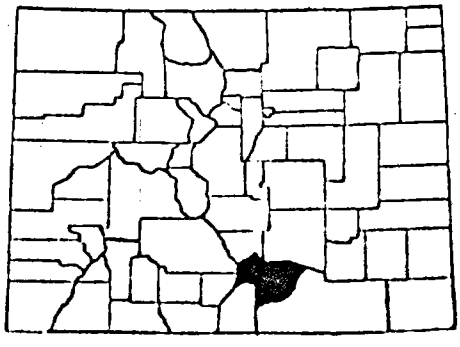


IRRIGATION DIVISION II

HUERFANO COUNTY

MAJOR CITY	Walsenburg
1970 POPULATION	6,410
URBAN POPULATION	4,227
RURAL POPULATION	2,133
COUNTY AREA	1,578 Sq. Miles
TERRAIN	Mesa, tableland
ELEVATION (MAJOR CITY)	6,185
MAJOR STREAM	Huerfano
MAJOR TRIBUTARY	Cucharas
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	11,453*
AVERAGE GROWING SEASON	151 days
ANNUAL MEAN TEMPERATURE	50.2
AVERAGE ANNUAL RAINFALL	14.13 inches
AVERAGE ANNUAL SNOWFALL	69.0 inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	280
WATER RESOURCE PROJECTS	None
LAND OWNERSHIP	
PRIVATE	747,000 acres
FEDERAL	211,670 acres
STATE	43,525 acres
COUNTY AND MUNICIPAL	320 acres

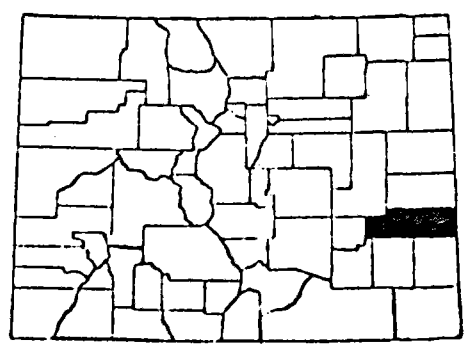
1978 Assessor



IRRIGATION DIVISION II

KIOWA COUNTY

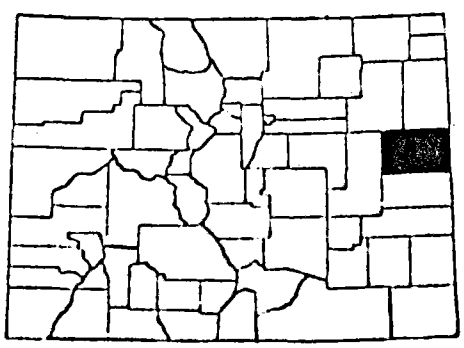
MAJOR CITY	Eads
1970 POPULATION	2,006
URBAN POPULATION	No city over 2,500
RURAL POPULATION	2,006
COUNTY AREA	1,792 Sq. Miles
TERRAIN	Plains
ELEVATION (MAJOR CITY)	4,213
MAJOR STREAM	Big Sandy
MAJOR TRIBUTARY	None
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	5,127
AVERAGE GROWING SEASON	156 days
ANNUAL MEAN TEMPERATURE	51.0
AVERAGE ANNUAL RAINFALL	13.78 inches
AVERAGE ANNUAL SNOWFALL	22.3 inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	350
WATER RESOURCE PROJECTS	None
LAND OWNERSHIP	
PRIVATE	1,413,911 acres
FEDERAL	3,975 acres
STATE	70,893 acres
COUNTY AND MUNICIPAL	365 acres



IRRIGATION DIVISION II

KIT CARSON COUNTY

MAJOR CITY	Burlington
1970 POPULATION	7,379
URBAN POPULATION	2,784
RURAL POPULATION	4,595
COUNTY AREA	1,171 Sq. Miles
TERRAIN	Plains
ELEVATION (MAJOR CITY)	4,163
MAJOR STREAM	Republican
MAJOR TRIBUTARY	None
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	56,576
AVERAGE GROWING SEASON	154 days
ANNUAL MEAN TEMPERATURE	50.3
AVERAGE ANNUAL RAINFALL	16.35 inches
AVERAGE ANNUAL SNOWFALL	22.7 inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	840
WATER RESOURCE PROJECTS	None
LAND OWNERSHIP	
PRIVATE	1,324,600 acres
FEDERAL	292 acres
STATE	56,486 acres
COUNTY AND MUNICIPAL	985 acres

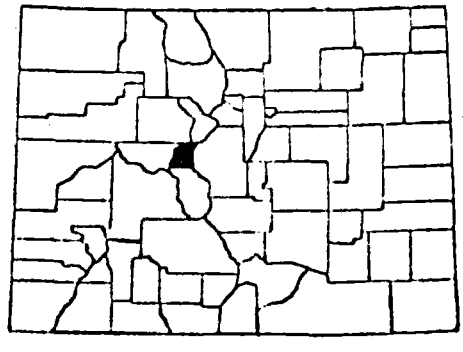


IRRIGATION DIVISION II

LAKE COUNTY

MAJOR CITY	Leadville
1970 POPULATION	8,138
URBAN POPULATION	4,265
RURAL POPULATION	3,873
COUNTY AREA	380 Sq. Miles
TERRAIN	Mountainous
ELEVATION (MAJOR CITY)	10,152
MAJOR STREAM	Arkansas
MAJOR TRIBUTARY	Lake Fork
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	6,036*
AVERAGE GROWING SEASON	82 days
ANNUAL MEAN TEMPERATURE	37.3
AVERAGE ANNUAL RAINFALL	18.45 inches
AVERAGE ANNUAL SNOWFALL	124.7 inches
MAJOR SOURCE INCOME	Mining
NUMBER OF FARMS	17
WATER RESOURCE PROJECTS	Fryingpan
LAND OWNERSHIP	
PRIVATE	71,342 acres
FEDERAL	198,844 acres
STATE	1,795 acres
COUNTY AND MUNICIPAL	1,620 acres

*1978 Assessor

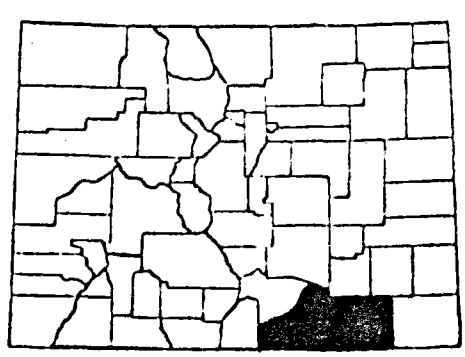


IRRIGATION DIVISION II

LAS ANIMAS COUNTY

MAJOR CITY	Trinidad
1970 POPULATION	15,291
URBAN POPULATION	9,721
RURAL POPULATION	5,570
COUNTY AREA	4,793 Sq. Miles
TERRAIN	Foothills
ELEVATION (MAJOR CITY)	6,025
MAJOR STREAM	Purgatoire
MAJOR TRIBUTARY	None
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	19,463*
AVERAGE GROWING SEASON	156 days
ANNUAL MEAN TEMPERATURE	50.4
AVERAGE ANNUAL RAINFALL	15.03 inches
AVERAGE ANNUAL SNOWFALL	47.7 inches
MAJOR SOURCE INCOME	Agriculture, Coal Mining
NUMBER OF FARMS	200
WATER RESOURCE PROJECTS	Trinidad Dam
LAND OWNERSHIP	
PRIVATE	3,179,204 acres
FEDERAL	151,214 acres
STATE	163,997 acres
COUNTY AND MUNICIPAL	3,482 acres

***1978 Assessor**

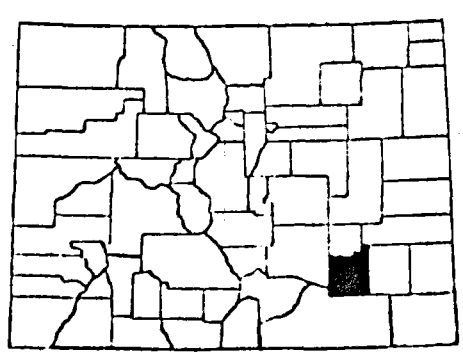


IRRIGATION DIVISION II

OTERO COUNTY

MAJOR CITY	La Junta
1970 POPULATION	22,824
URBAN POPULATION	12,514
RURAL POPULATION	10,310
COUNTY AREA	1,267 Sq. Miles
TERRAIN	Plains
ELEVATION (MAJOR CITY)	La Junta
MAJOR STREAM	Arkansas
MAJOR TRIBUTARY	Horse Creek
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	81,016*
AVERAGE GROWING SEASON	162 days
ANNUAL MEAN TEMPERATURE	52.0
AVERAGE ANNUAL RAINFALL	12.31 inches
AVERAGE ANNUAL SNOWFALL	26.7 inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	690
WATER RESOURCE PROJECTS	Fryingpan
LAND OWNERSHIP	
PRIVATE	506,310 acres
FEDERAL	169,004 acres
STATE	120,572 acres
COUNTY AND MUNICIPAL	2,050 acres

*1978 Assessor

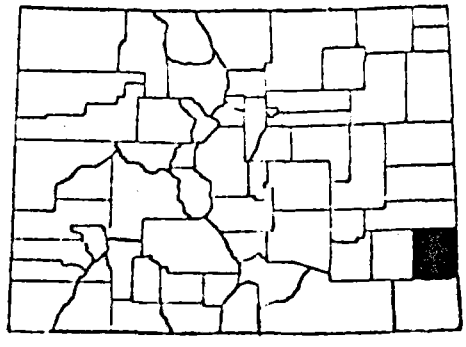


IRRIGATION DIVISION II

PROWERS COUNTY

MAJOR CITY	Lamar
1970 POPULATION	12,877
URBAN POPULATION	7,510
RURAL POPULATION	5,367
COUNTY AREA	1,626 Sq. Miles
TERRAIN	Plains
ELEVATION (MAJOR CITY)	3,622
MAJOR STREAM	Arkansas
MAJOR TRIBUTARY	None
MAJOR WATER USE	Irrigation
IRRIGATED ACRES	136,778*
AVERAGE GROWING SEASON	163 days
ANNUAL MEAN TEMPERATURE	52.0
AVERAGE ANNUAL RAINFALL	15.20 inches
AVERAGE ANNUAL SNOWFALL	26.0 inches
MAJOR SOURCE INCOME	Agriculture
NUMBER OF FARMS	469
WATER RESOURCE PROJECTS	None
LAND OWNERSHIP	
PRIVATE	996,952 acres
FEDERAL	1,064 acres
STATE	44,667 acres
COUNTY AND MUNICIPAL	1,794 acres

*1978 Assessor

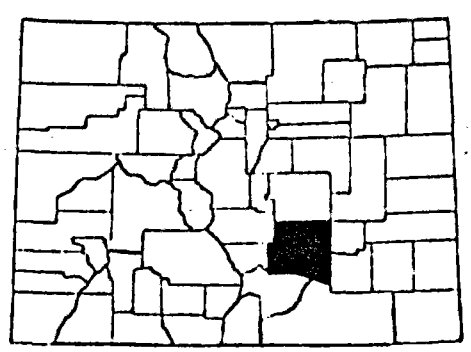


IRRIGATION DIVISION II

PUEBLO COUNTY

MAJOR CITY	Pueblo
1970 POPULATION	117,212
URBAN POPULATION	106,565
RURAL POPULATION	10,556
COUNTY AREA	2,401 Sq. Miles
TERRAIN	Plains
ELEVATION (MAJOR CITY)	4,696
MAJOR STREAM	Arkansas
MAJOR TRIBUTARY	Fountain
MAJOR WATER USE	Irrigation, Industry
IRRIGATED ACRES	35,749*
AVERAGE GROWING SEASON	169 days
ANNUAL MEAN TEMPERATURE	51.2
AVERAGE ANNUAL RAINFALL	12.14 inches
AVERAGE ANNUAL SNOWFALL	31.3 inches
MAJOR SOURCE INCOME	Industry
NUMBER OF FARMS	469
WATER RESOURCE PROJECTS	Fryingpan
LAND OWNERSHIP	
PRIVATE	1,173,389 acres
FEDERAL	76,712 acres
STATE	232,519 acres
COUNTY AND MUNICIPAL	3,045 acres

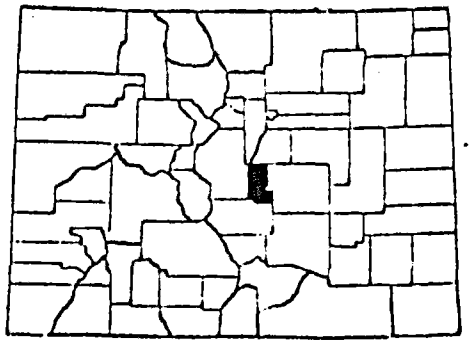
*1978 Assessor



IRRIGATION DIVISION II

TELLER COUNTY

MAJOR CITY	Cripple Creek
1970 POPULATION	3,033
URBAN POPULATION	No city over 2,500
RURAL POPULATION	3,033
COUNTY AREA	554 Sq. Miles
TERRAIN	Mountainous
ELEVATION (MAJOR CITY)	9,949
MAJOR STREAM	Four Mile
MAJOR TRIBUTARY	None
MAJOR WATER USE	Irrigation, Commercial
IRRIGATED ACRES	865
AVERAGE GROWING SEASON	68 Days
ANNUAL MEAN TEMPERATURE	NA
AVERAGE ANNUAL RAINFALL	NA
AVERAGE ANNUAL SNOWFALL	NA
MAJOR SOURCE INCOME	Tourism, Agriculture
NUMBER OF FARMS	10
WATER RESOURCE PROJECTS	None
LAND OWNERSHIP	
PRIVATE	195,257 acres
FEDERAL	156,671 acres
STATE	8,755 acres
COUNTY AND MUNICIPAL	5,598 acres



COUNTY	LAND AREA (1000 A.)	NO. OF FARMS	LAND IN FARMS (1000 A.) TOTAL	CROP LAND	LAND IRRIGATED FARMS	ACRES	WHEAT WINTER	SPRING	OATS
Baca	1642	750	1430	847	171	56,910	42,000	250	---
Bent	971	450	917	145	301	61,713	9,000	50	230
Chaffee	665	170	160	24	121	16,126	---	--	200
Crowley	514	400	490	105	287	25,010	1,150	80	90
Custer	472	180	280	28	85	15,930	160	50	650
El Paso	1381	750	1050	200	121	13,630	17,000	450	1800
Fremont	1000	550	493	30	421	14,930	550	30	80
Huerfano	1010	280	800	48	138	11,453	3,300	10	220
Kiowa	1147	350	1080	600	15	5,127	38,000	300	---
Kit Carson	1389	840	1340	776	213	56,576	165,000	300	900
Lake	243	17	28	6	10	6,036	---	--	---
Las Animas	3068	600	2781	130	227	19,463	3,940	70	290
Otero	811	690	630	87	539	81,016	3,400	100	460
Prowers	1041	729	1030	530	430	136,778	30,500	--	130
Pueblo	1537	800	1362	151	469	35,749	11,000	160	350
Teller	355	70	155	8	10	865	---	--	---

CORN		SORGUHMS		SUGAR	DRY		BROOM		WILD	ALL	
GRAIN	SILAGE	GRAIN	SILAGE	BEETS	BEANS	POTATOES	CORN	ALFALFA	HAY	HAY	BARLEY
10,500	200	90,000	49,500	1,640	100	100	35,700	2,100	100	7,900	600
1,100	1,000	17,500	7,300	460	---	40	---	23,500	250	25,150	370
---	---	---	---	---	---	---	---	5,800	480	9,280	100
1,700	2,900	9,600	740	550	750	20	---	12,500	650	13,750	80
---	50	---	130	---	---	---	---	2,300	---	28,300	210
3,300	4,000	3,400	2,100	---	---	---	---	12,500	3,500	22,900	600
280	280	100	170	---	---	---	---	5,000	850	8,350	270
50	100	---	280	---	---	10	10	5,100	800	7,400	250
190	110	38,000	15,600	50	---	---	---	800	500	10,000	---
27,300	9,000	15,000	22,300	2,200	1,900	---	---	5,200	1,300	20,500	1,400
---	---	---	---	---	---	---	---	---	1,300	1,900	---
700	660	---	4,720	---	---	---	200	12,000	950	12,850	140
4,600	5,700	---	1,660	1,100	660	---	---	14,500	50	15,150	720
1,100	1,500	95,600	41,010	2,430	50	20	100	35,500	---	37,200	---
4,900	1,800	---	4,790	1,390	12,600	100	---	13,500	---	17,950	1,250
---	---	---	---	---	---	---	---	50	550	2,000	---

ADMINISTRATIVE WATER YEAR 1978

Pertinent Basin Yield Statistics for Arkansas Drainage in Colorado Division 2

Recorded Flow at Arkansas - Las Animas	68,030 A.F.
*Estimated Depletion by Irrigation above Gage 1.5 A.F./Acre x 240,320 Acres - 360,048 A.F.	360,048 A.F.
Recorded Flow at Purgatoire River - Las Animas	30,640 A.F.
*Estimated Depletion by Irrigation above Gage 1.5 A.F./Acre x 20,000 Acres - 30,000 A.F.	30,000 A.F.
Basin Yield including 117,700 A.F. Transmountain Import	488,718 A.F.
Less ...	117,700 A.F.
Native Basin Yield above Confluence of Arkansas and Purgatoire River	371,018 A.F.
Total Diversion in Division 2	1,054,933 A.F.

*Revised estimate of irrigated acreage based on County Assessors records.

Commentary on Basin Yield and Water Budget Data

In Water Administrative Year 1978, the native basin yield for the Arkansas above the confluence of the Purgatoire including the Purgatoire was 371,018 acre feet. The Arkansas flow at Las Animas for 1978 was 68,030 acre feet compared to 52,166 acre feet for 1977. The Purgatoire flow at Las Animas for 1978 was 30,640 acre feet compared to 35,670 acre feet for 1977. The precipitation was less in 1978 than 1977 but the transmountain import was 47,255 acre feet more in 1978 than 1977.

The average precipitation over the area (17,920 square miles) was 11.22 inches. This gives a total volume of water of 10,723,328 acre feet for the basin; of this 10,723,328 acre feet, only 371,018 acre feet, 3.46%, is accounted for. The remaining 96.54% either evaporated, transpired or was retained in the soil.

The diverted water of 1,054,933 acre feet when compared with native yield plus transmountain water indicates the water was used 2.16 times.

COMPARATIVE WATER 1977, 1978 DATA

(Note the substantial revision in estimated irrigated acreage.)

	1977	1978
Basin Yield including Transmountain	759,844 A.F.	488,718 A.F.
Total Diverted (excluding W.D. 66 & 67)	958,625 A.F.	1,054,933 A.F.
Average Precipitation	11.95 in.	11.22 in.
Estimated Irrigated Acreage	432,000 acres	240,320 acres

DIVERSION DATA

Recorded Diversion by Municipalities	Water Year 1978
Municipal Diversion, Colorado Springs	17,450 A.F.
Municipal Diversion, Canon City	24,080 A.F.
Municipal Diversion, Pueblo	27,200 A.F.
Other	24,750 A.F.
Total Recorded Municipal Diversion	93,480 A.F.
Estimated Return Flow	61,697 A.F.
Estimated Depletion by Municipalities	31,783 A.F.

Recorded Diversion by Industrial Use	
Diversion by Minnequa Canal	89,330 A.F.
C.F. & I. Diversion from St. Charles	4,454 A.F.
Other	31,550 A.F.
Total Industrial Diversion	125,334 A.F.
Estimated Return Flow	75,199 A.F.
Estimated Depletion by Industry	49,810 A.F.

Recorded Diversion by Irrigation	
Water District 10	55,200 A.F.
Water District 11	121,220 A.F.
Water District 12	169,160 A.F.
Water District 13	22,740 A.F.
Water District 14	221,130 A.F.
Water District 15	12,260 A.F.
Water District 16	34,775 A.F.
Water District 17	280,950 A.F.
Water District 18	3,618 A.F.
Water District 19	57,830 A.F.
Water District 66	507 A.F.
Water District 67	127,160 A.F.
Total Irrigation Diversion	1,182,600 A.F.

DIVERSION SUMMARY-DIVISION NO. 2
Direct Flow Diversions, 1978

Water Dist.	Active	Inactive		Number Ditches Administered		Irrigation Direct Diversion A.F.	Number Acres Irrigated *	A.F. Per Acre	Recreational and Industrial Use Diversion	Municipal Diversion A.F.	Transmountain Diversion A.F.	Total Diversion A.F.
		N.A.	N.U.	Close	Freq.							
10	45		206	56	4	55,200	13,630	4.04	19,781	33,304		108,285
11	167		138	108	0	121,220	22,162	5.46				121,220
12	239		93	172	52	169,160	14,000	12.08	89,330	24,080		282,570
13	500		53	196	45	22,740	15,930	1.43	0	0		22,740
14	40		25	28	3	193,930	35,000	5.54	11,119	27,200		232,249
15	82		42	60	18	12,260	4,654	2.63	4,978	740		17,978
16	244		169	109	37	34,775	11,590	3.00		3,813		38,588
17	44		62	44	7	280,950	140,000	2.01	67			281,017
18	27		24	32	0	3,618	7,550	0.48	59			3,677
19	105		137	82	13	57,830	30,000	1.92		4,343		62,173
66	7		8	16		507	489	1.04				507
67	38		108	28	6	127,160	76,348	1.67				127,160
TOTAL	1,538		1064	931	185	1,079,350	371,343	2.91	125,334	93,480	117,700**	1,298,164

*Revised 1978 based on County Assessors Offices

**Total imported

TRANSMOUNTAIN DIVERSION

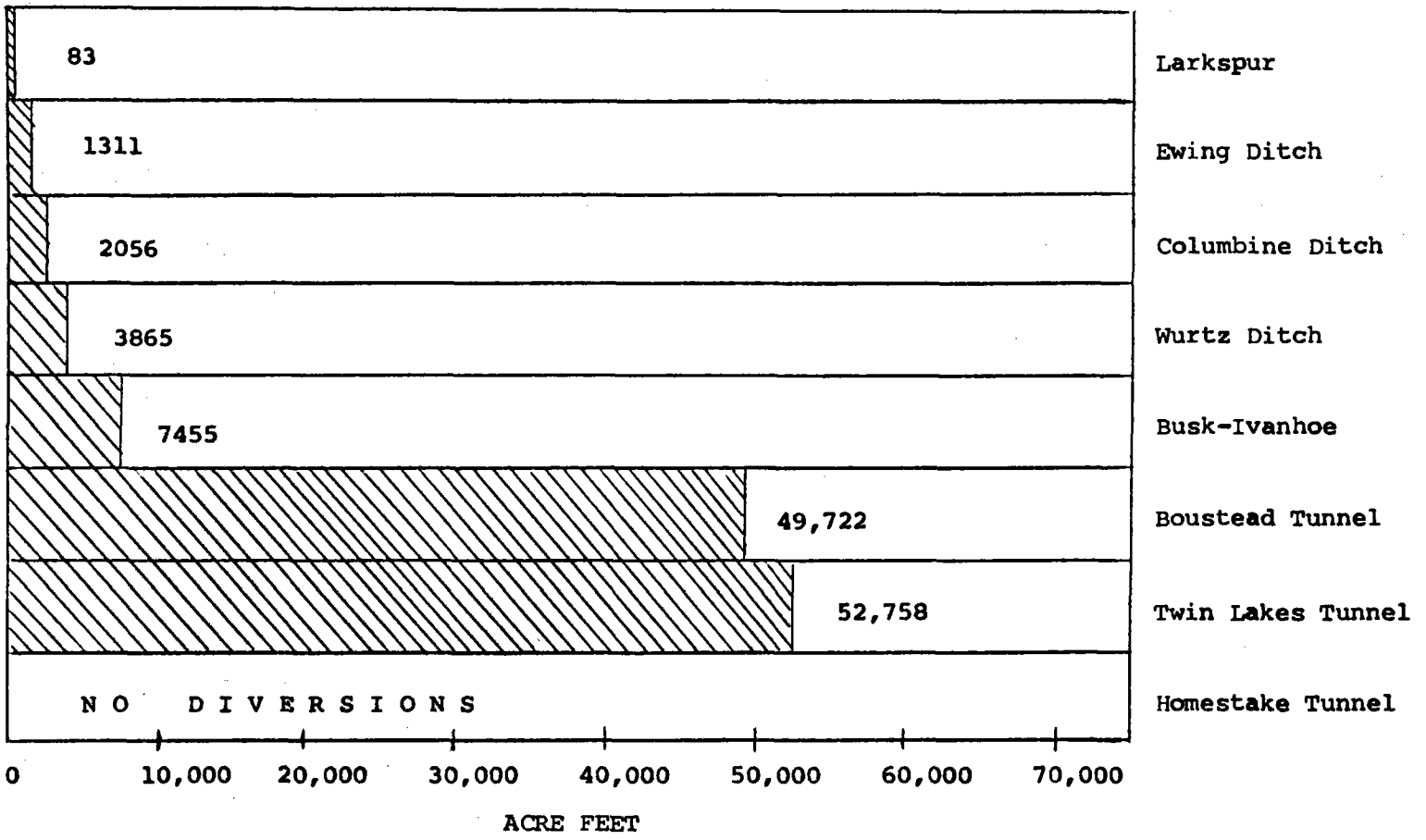
DIVISION NO. 2

Tabulation 1978

NAME	SOURCE	RECIPIENT	AMOUNT DIVERTED 10/1/77 to 9/30/78
Homestake Tunnel	Middle Fork Homestake Creek Division No. 5	Cities of Colorado Springs and Aurora	0
Wurtz Ditch	Eagle River Division No. 5	City of Pueblo	3,865
Ewing Ditch	Piney Creek	City of Pueblo	1,311
Columbine Ditch	Eagle River Division No. 5	City of Pueblo	2,056
Twin Lakes Tunnel	Roaring Fork River Division No. 5	Twin Lakes Reservoir and Canal Company	52,758
Busk Ivanhoe Tunnel	Ivanhoe Creek Division No. 5	Highline Canal Co. and City of Pueblo	7,455
Larkspur Ditch	Tomichi Creek Division No. 5	Catlin Canal Company	83
Boustead Tunnel	Fryingpan River Division No. 5	U.S. Bureau of Reclamation	49,722

TRANSMOUNTAIN DIVERSION
DIVISION NO. 2

SUMMARY OF DIVERSION FOR
WATER YEAR 1978



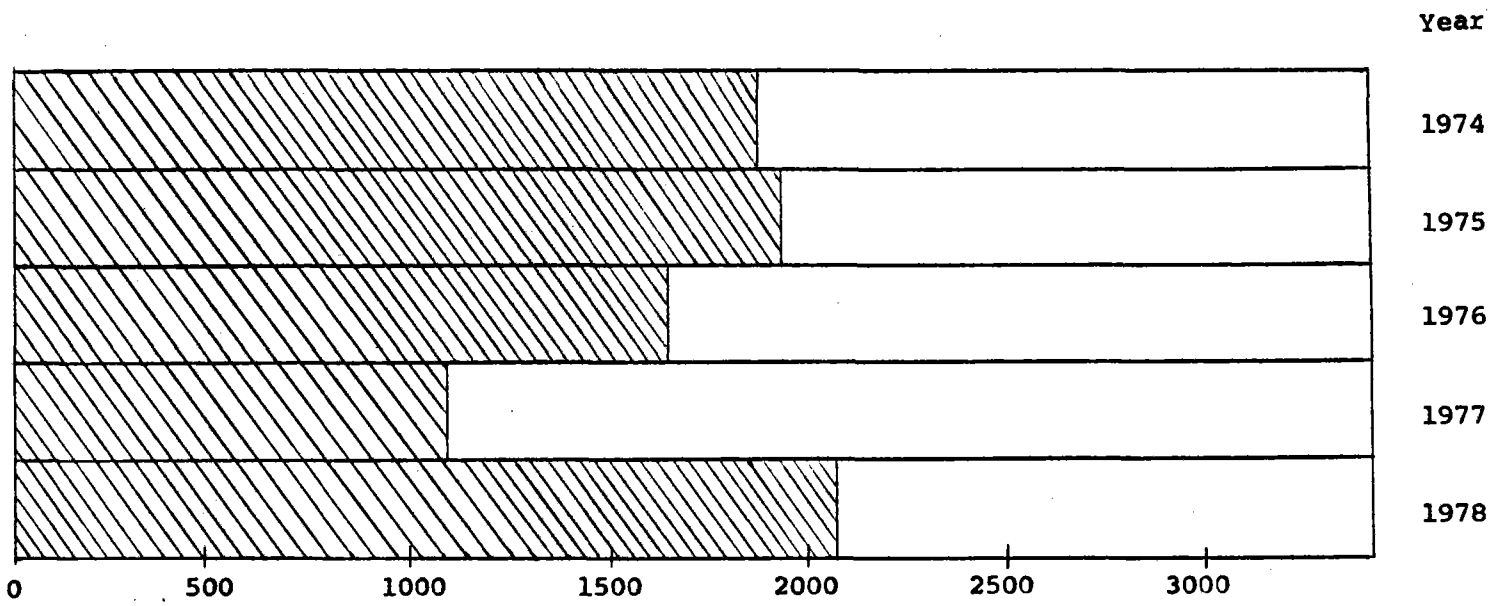
TRANSMOUNTAIN DIVERSION

Division No. 2

COLUMBINE DITCH 1978

Source: Eagle River, Division No. 5

Recipient: City of Pueblo



ACRE FEET

5 YEAR COMPARISON

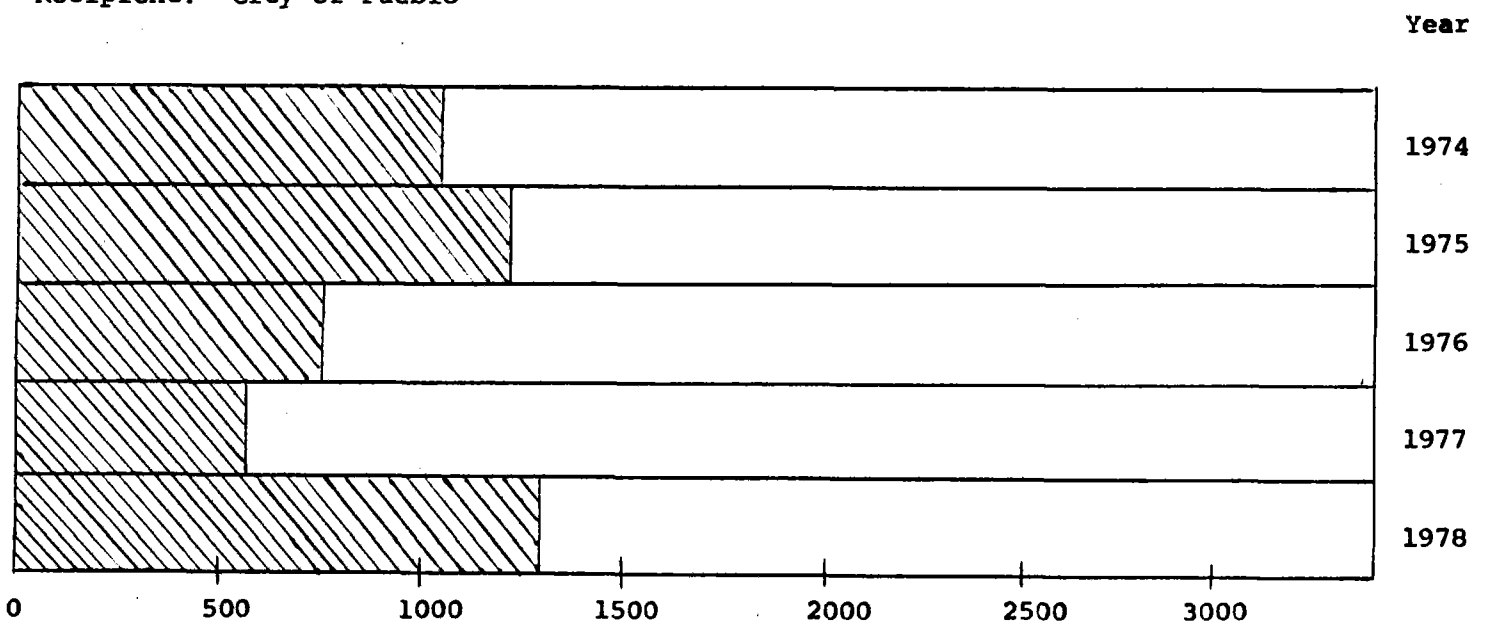
TRANSMOUNTAIN DIVERSION

Division No. 2

EWING DITCH 1978

Source: Piney Creek, Division No. 5

Recipient: City of Pueblo



ACRE FEET

5 YEAR COMPARISON

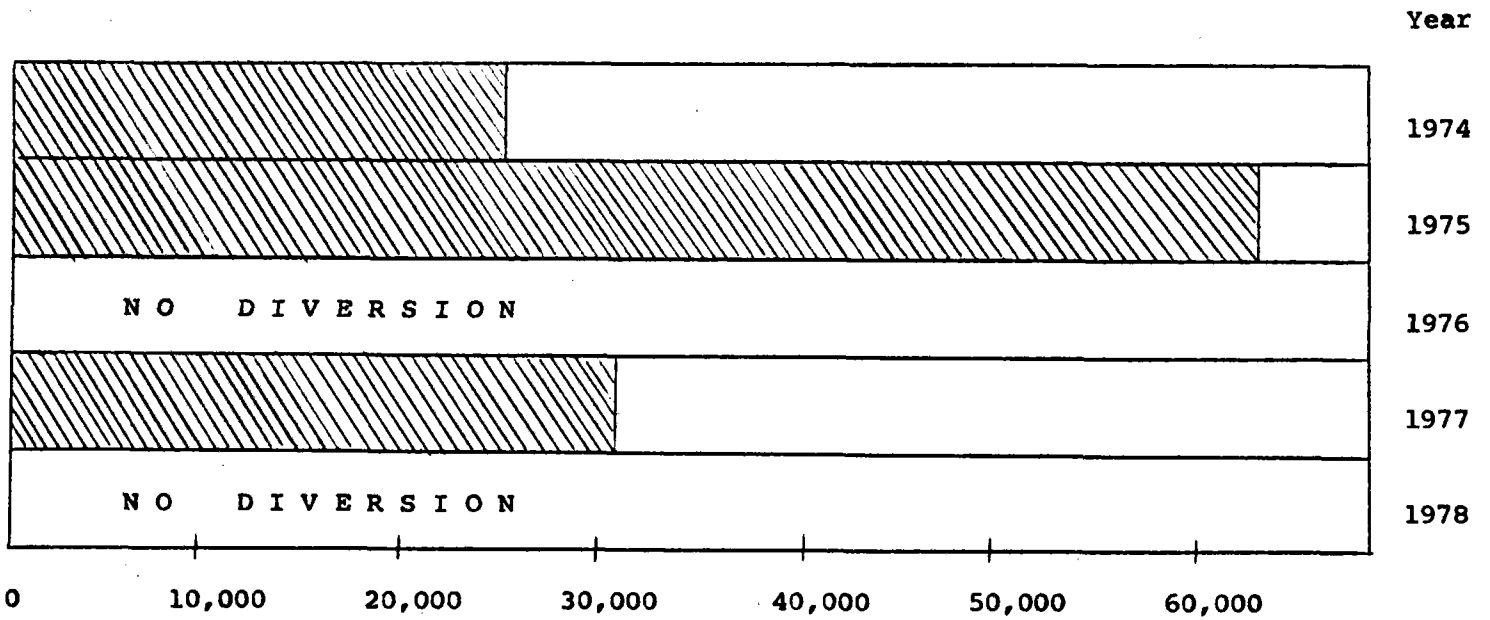
TRANSMOUNTAIN DIVERSION

Division No. 2

HOMESTAKE TUNNEL 1978

Source: Middle Fork Homestake Creek, Division No. 5

Recipient: Cities of Colorado Springs and Aurora



5 YEAR COMPARISON

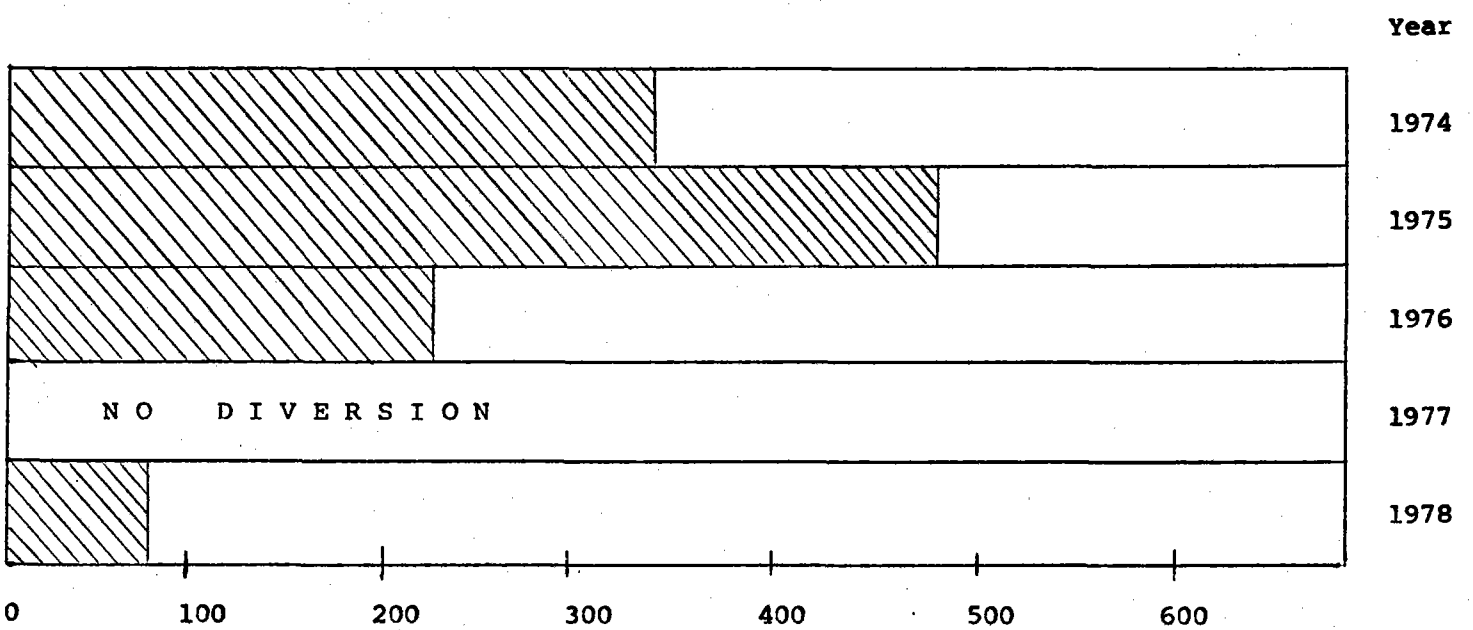
TRANSMOUNTAIN DIVERSION

Division No. 2

LARKSPUR DITCH 1978

Source: Tomichi Creek, Division No. 4

Recipient: Catlin Canal Company



5 YEAR COMPARISON

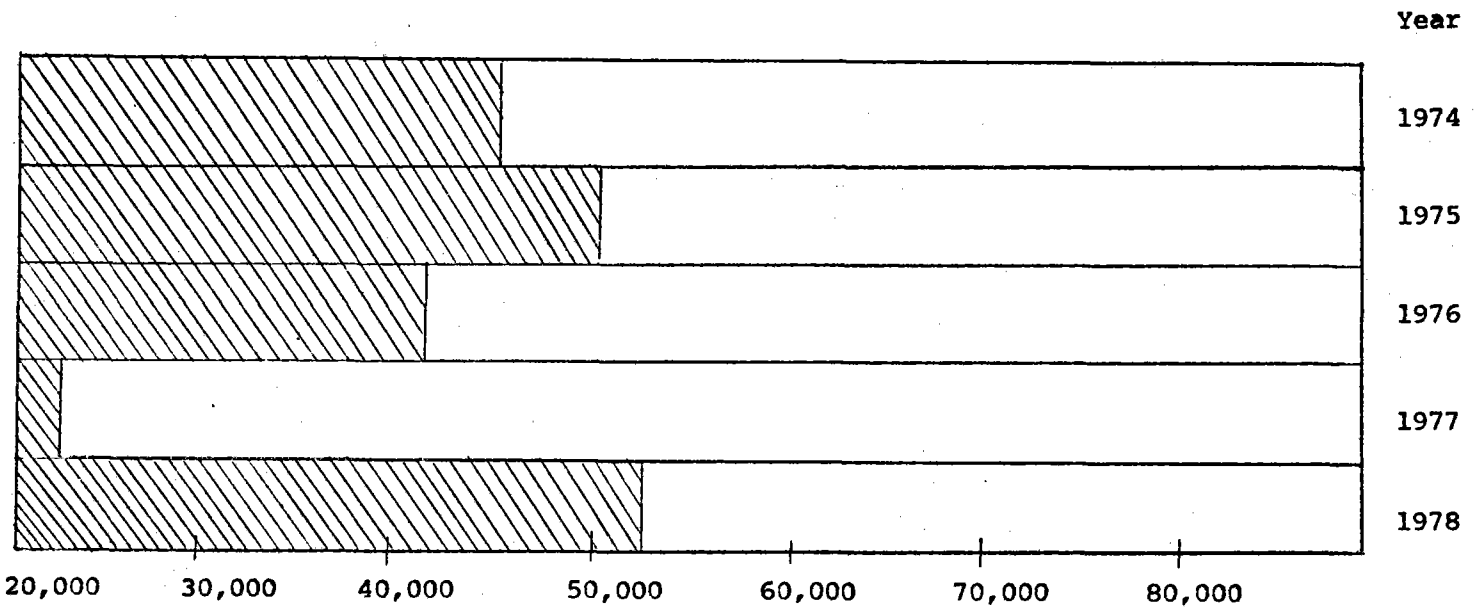
TRANSMOUNTAIN DIVERSION

Division No. 2

TWIN LAKES TUNNEL 1978

Source: Roaring Fork River, Division No. 5

Recipient: Twin Lakes Reservoir and Canal Company



5 YEAR COMPARISON

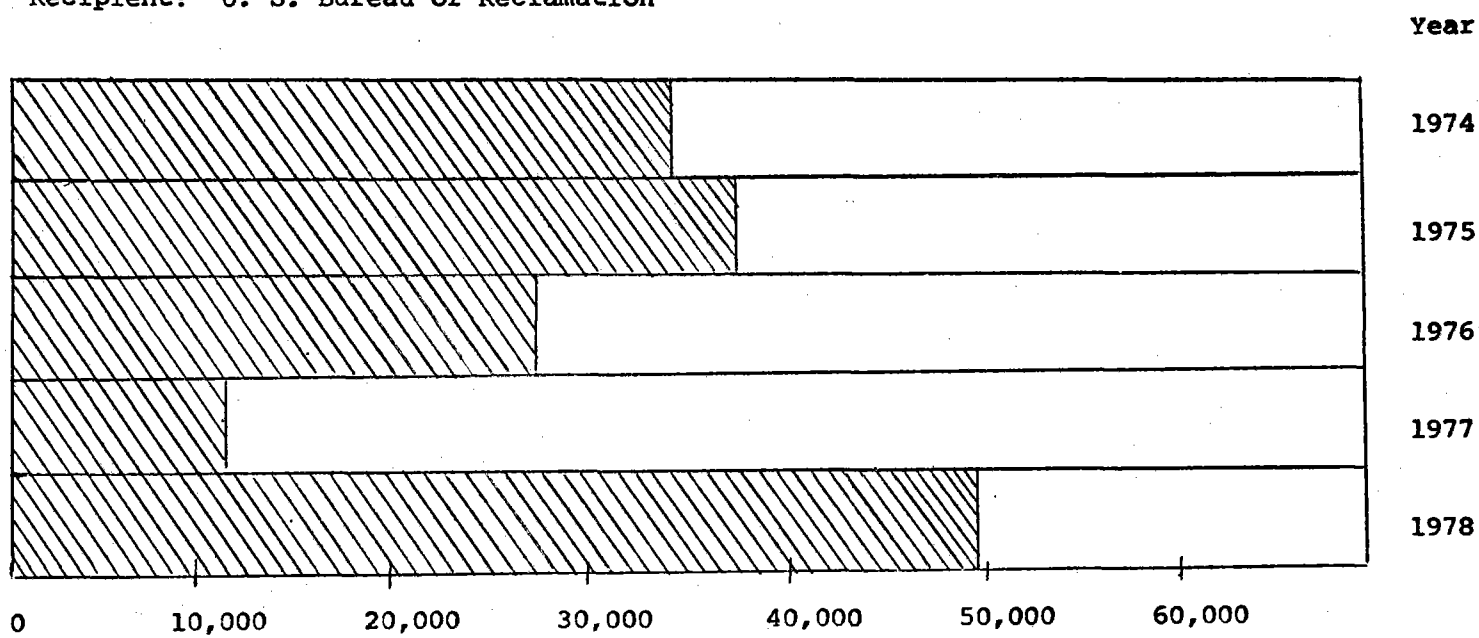
TRANSMOUNTAIN DIVERSION

Division No. 2

BOUSTEAD TUNNEL 1978

Source: Fryingpan River

Recipient: U. S. Bureau of Reclamation



5 YEAR COMPARISON

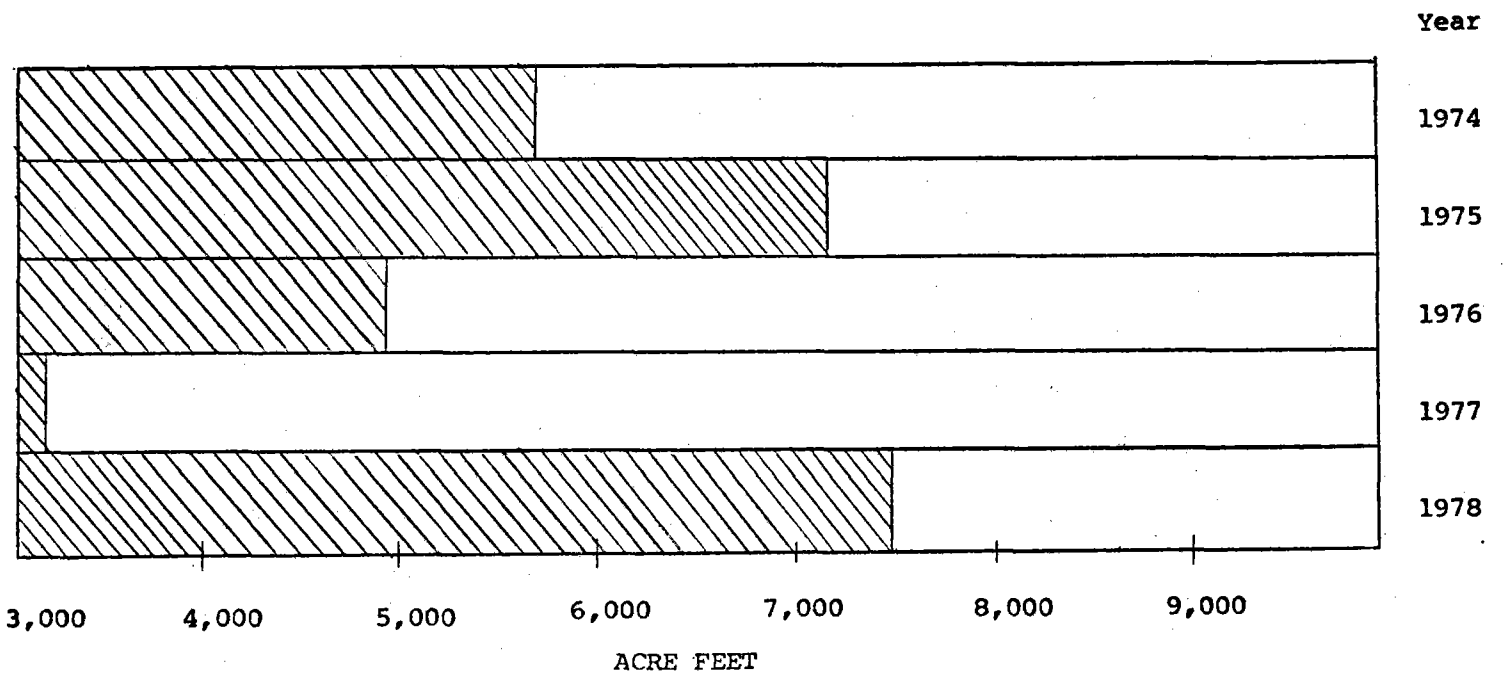
TRANSMOUNTAIN DIVERSION

Division No. 2

BUSK IVANHOE 1978

Source: Ivanhoe Creek, Division No. 5

Recipient: Highline Canal Company and City of Pueblo



5 YEAR COMPARISON

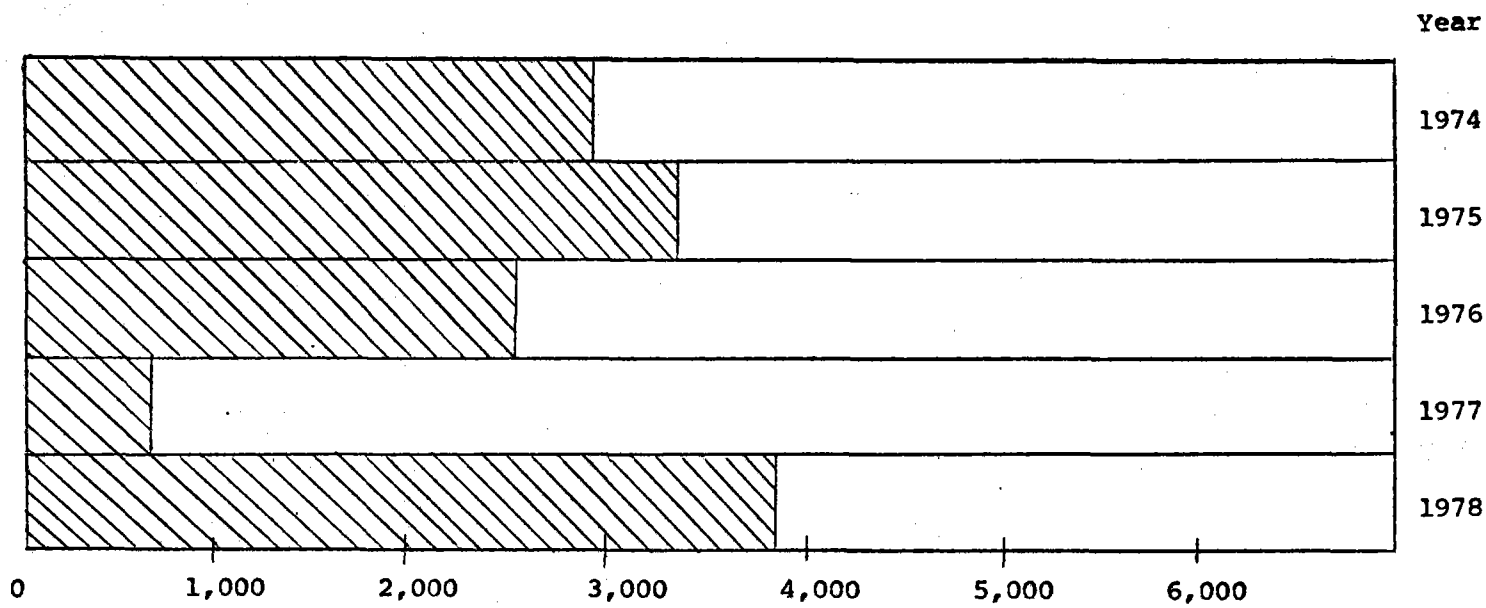
TRANSMOUNTAIN DIVERSION

Division No. 2

WURTZ DITCH 1978

Source: Eagle River, Division No. 5

Recipient: City of Pueblo



5 YEAR COMPARISON

PRECIPITATION

Rainfall was 92% of normal on the main stem of the Arkansas and normal on the Purgatoire. This was mainly due to flash rain storms within a couple of months. In general, the lower Arkansas Valley between Pueblo and Lamar had above normal rainfall with the Upper Arkansas Valley between Leadville and Pueblo below normal. The crop yields were up from the last years due to timely rains in the spring, longer than average natural run-off, and good management of the reservoir waters owned by the ditch companies.

DAMS

Dam inspections in Division 2 were as follows. Total number of inspections number 166. Of this total number inspected, 130 were inspected by the Water Commissioners, 18 were inspected by the Dam Inspection Personnel from Denver, and 18 were inspected by the corps of engineers of private consulting firms under the direction of Denver Personnel.

FLOODS

There were a few flash floods which came out of the Fountain Creek during July and August. The Purgatoire River had flash floods during May, June, and July which produced enough water to close the gates on John Martin.

Recorder-breaking flow occurred July 10, 1978, from a rain storm which was centered between Pueblo and La Junta and to the south of this area. The flows which were short in duration, came from the St. Charles, Apishapa, and Huerfano drainage area with the peaks combined to get an estimated 15,000 c.f.s. at La Junta.

IRRIGATION DIVISION NO. 2

STATION	WATER CONTENT PERCENT NORMAL AS OF APR 1, 1978	SNOW DEPTH	WATER CONTENT AS OF APR 1, 1978	AVERAGE INCHES
BIGELOW DIVIDE	63	17	4.1	6.5
COOPER HILL	-	-	-	11.3
EAST FORK	133	38	13.0	9.8
FOUR MILE PARK	110	21	5.6	5.1
FREMONT PASS	144	64	33.4	16.2
GARFIELD	105	37	13.6	13.0
HERMIT LAKE	-	22	7.5	-
MONARCH PASS	115	50	19.7	17.1
TENNESSEE PASS	125	45	13.2	10.6
TWIN LAKES TUNNEL	107	36	11.4	10.7
WESTCLIFFE	79	15	5.0	6.3
APISHAPA	-	21	8.0	-
CUCHARAS CREEK	-	26	8.3	-
LA VETA PASS	104	23	7.7	7.4
BOURBON	131	28	6.8	5.2

Streamflow should be in the near normal range. The upper tributary stream should be in the above normal. The Wet Mountain Valley and the Salida area should be below normal. The main stem of the Arkansas was forecast to flow at 115% of normal. Carry-over storage is poor and will be of limited value.

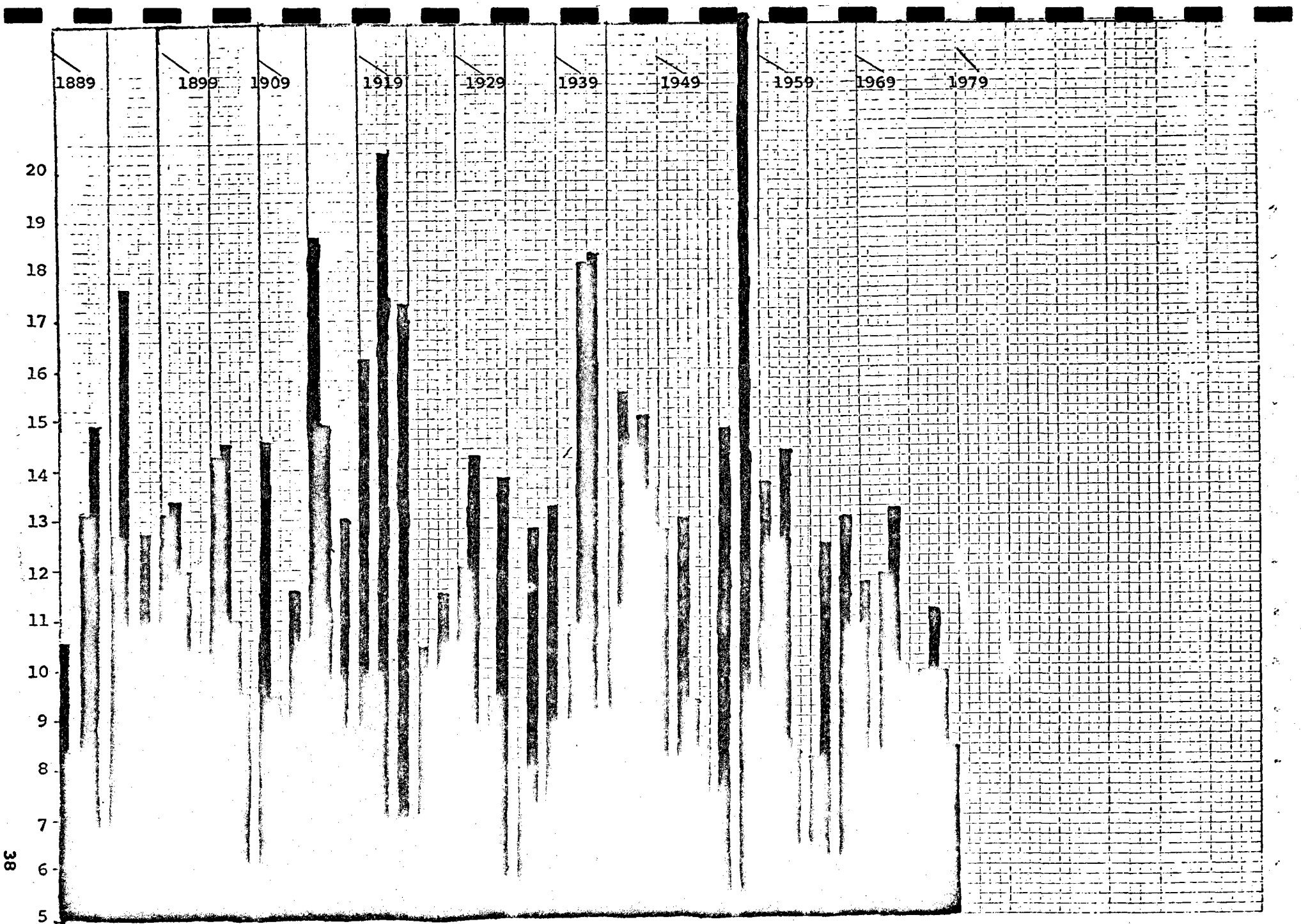
IRRIGATION DIVISION NO. 2

STATION	WATER CONTENT PERCENT NORMAL AS OF MAY 1, 1978	SNOW DEPTH	WATER CONTENT AS OF MAY 1, 1978	AVERAGE INCHES
BIGELOW DIVIDE	0	0	0.0	3.6
COOPER HILL	133	49	16.1	12.1
EAST FORK	116	22	8.7	7.5
FOUR MILE PARK	0	0	0.0	1.4
FREMONT PASS	131	59	23.8	18.1
GARFIELD	77	14	6.6	8.6
HERMIT LAKE	0	0	0.0	-
MONARCH PASS	102	36	16.7	16.3
TENNESSEE PASS	140	29	11.9	8.5
TWIN LAKES TUNNEL	167	40	15.7	9.4
WESTCLIFFE	0	0	0.0	1.6
APISHAPA	0	0	0.0	3.3
CUCHARAS CREEK	0	0	0.0	-
LA VETA PASS	0	0	0.0	2.1
BOURBON	20	2	0.5	2.5

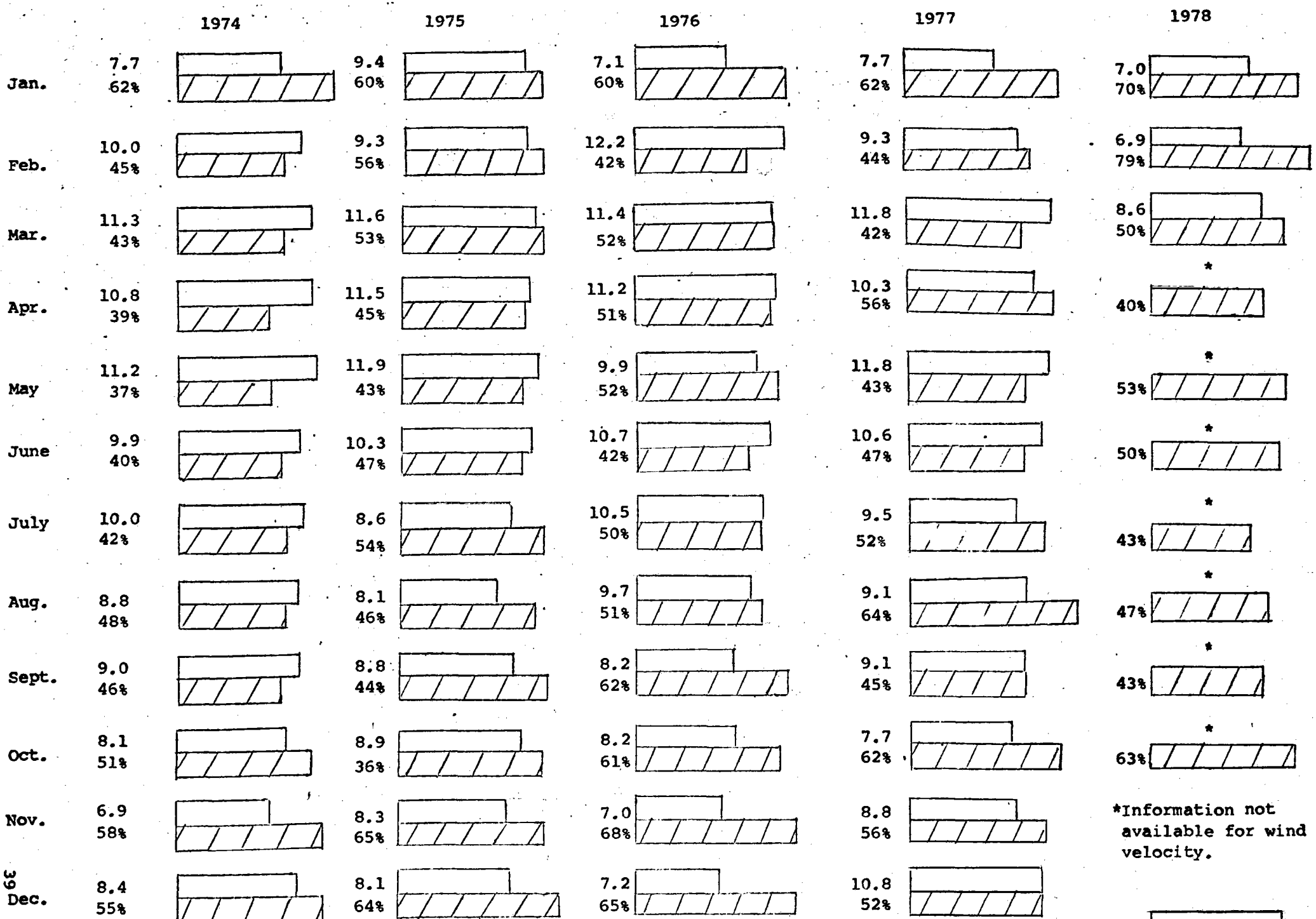
Streamflow should be in the near normal range. The upper tributary stream should be in the above normal with the Wet Mountain Valley and the Salida area in the below normal range. The main stem of the Arkansas was forecast to flow at 115% of normal. Carry-over storage is poor and will be of limited value.

PRECIPITATION
IRRIGATION DIVISION NO. 2

STATION	April 1978	DEPART FROM NORMAL	May 1978	DEPART FROM NORMAL	June 1978	DEPART FROM NORMAL	July 1978	DEPART FROM NORMAL	August 1978	DEPART FROM NORMAL	September 1978	DEPART FROM NORMAL
Lamar	1.54	.19	3.58	1.05	5.23	2.97	1.91	.42	2.94	.60	.43	.66
Leadville	-	-	-	-	.47	-	.81	-	.77	-	.32	-
Pueblo	.44	.85	1.95	.30	1.19	.17	.99	.88	1.23	.73	.08	.71
Trinidad	.22	-	3.50	-	3.02	-	2.05	-	1.30	-	-	-
Westcliffe	.31	1.61	1.24	.40	.64	.45	1.93	.53	1.34	.62	.38	.58
Colorado Spgs.	1.15	.30	3.58	1.46	.54	1.77	2.14	.96	2.51	.07	.05	1.06



Precipitation in Inches
Pueblo, Colorado 1889 to Present


1974
1975
1976
1977
1978
Jan.
7.7
62%
9.4
60%
7.1
60%
7.7
62%
7.0
70%
Feb.
10.0
45%
9.3
56%
12.2
42%
9.3
44%
6.9
79%
Mar.
11.3
43%
11.6
53%
11.4
52%
11.8
42%
8.6
50%
Apr.
10.8
39%
11.5
45%
11.2
51%
10.3
56%
*
40%
May
11.2
37%
11.9
43%
9.9
52%
11.8
43%
*
53%
June
9.9
40%
10.3
47%
10.7
42%
10.6
47%
*
50%
July
10.0
42%
8.6
54%
10.5
50%
9.5
52%
*
43%
Aug.
8.8
48%
8.1
46%
9.7
51%
9.1
64%
*
47%
Sept.
9.0
46%
8.8
44%
8.2
62%
9.1
45%
*
43%
Oct.
8.1
51%
8.9
36%
8.2
61%
7.7
62%
*
63%
Nov.
6.9
58%
8.3
65%
7.0
68%
8.8
56%
Dec.
8.4
55%
8.1
64%
7.2
65%
10.8
52%
*Information not available for wind velocity.
Ave. wind velocity for month (mph)
Ave. Relative humidity for month (%)
1 in=10 mph
1 in=50%

DAMS
IRRIGATION DIVISION #2

WATER DIST.	NAME OF RESERVOIR	STREAM	DAM HEIGHT	INSPECTION
10	Air Force Academy Dam			No
	City of Colorado Springs (Prospect, Northfield, #4, No. Catamont, So. Catamont, Crystal Cr., Lake Moraine)			No
	Fountain Valley	Fountain		No
	Keeton Dam	Lit. Fountain	45'-50'	No
	Manitou	French Cr.	Over 35'	No
	Mesa No. 1 & 2	Camp Cr.		No
	Spring Run #2	Spring Run		Yes
	Townsend Dam & Reservoir	Rock Cr.		No
	Woodmoor Country Club #4			No
11	Diamond			No
	Fooses Creek Dam			No
	Sugar Loaf	Lake Fork	Over 35'	No
	Twin Lakes	Lake Cr.	Over 35'	No
	Clear Creek	Clear Cr.	Over 35'	Yes
12	Brush Hollow	Brush Hollow	Over 35'	No
	Canon City Sed. Pond			No
	City of Colorado Springs (C.S. #1,2,4,5,7, Penrose)			No
	Mt. Pisgah	Four Mile	Over 35'	No
	Park Center #8-10	Four Mile		No
13	DeWeese Dye	Grape Cr.	Over 35'	No
14	Comanche Reservoir			No
	St. Charles Mesa Dam	St. Charles		No
	Teller Dam	Turkey Cr.		Yes
	Pueblo Reservoir	Arkansas	190'	No
15	Heyden Beckwith	Greenhorn	Over 35'	Yes
	Clennin	Lit. Granerous	Over 20'	No
	Royce, Gene	Spring	Over 15'	No
	St. Charles (aka Lake Isabel)			Yes
	St. Charles #2-3	St. Charles		Yes
16	Andreietta	Bear Cr.	Over 20'	No
	Bressan #1	Bear Cr.	Over 30'	No
	Brunelli	Bear Cr.	Over 30'	No
	Clark #2	Hill Arroya	Over 30'	No
	Craeger Dam	Huerfano R.	Over 30'	No

WATER DIST.	NAME OF RESERVOIR	STREAM	DAM HEIGHT	INSPECTION
16	Cucharas #5	Cucharas R.		No
	Diagre	Cucharas R.		No
	Holita	Cucharas R.		No
	Horseshoe			No
	Houchin South	Spring	Over 20'	No
	Houchin North	Spring	Over 20'	No
	Huerfano Valley	Huerfano R.		No
	Maria Stevens	Cucharas R.		Yes
	Martin Lakes			No
	Orlando	Huerfano		No
	Sharps Orchard	Ditch	Over 20'	No
	Valdez			No
	Vertrees	Simpson Arr.	Over 10'	No
	Walsenburg Water System	Cucharas R.	Over 20'	No
	Wahatoya	Cucharas		No
17	Henry	Arkansas	Over 10'	Yes
	Holbrook	Arkansas		No
	Karval	Adobe		No
	Meredith	Arkansas	Over 35'	No
	Horse Creek	Arkansas	Over 35'	No
	Adobe	Arkansas	Over 20'	No
	Dye	Arkansas	Over 20'	No
18	Seven Lakes	Las Animas	Over 20'	No
19	Model	Las Animas	Over 20'	No
	North	North Fork	Over 20'	No
	Trinidad Dam			No
67	Antelope	Big Sandy	Over 35'	No
	Dingwell Ditch Reg.	E. Prowers Ar.	Over 20'	No
	Fort Lyon	Ditch	Over 10'	No
	Nee Noshe		Over 20'	No
	Queens (aka Nee Skah)	Kiowa Cr.	Over 20'	No
	Ramah	Big Sandy	Over 40'	No
	S-16	Big Sandy	Over 20'	No
	Thurston Dam		Over 8'	No
	Two Buttes	Two Buttes Cr.	Over 100'	No
	Verhoeff	E. Prowers Ar.	Over 10'	No
	Wootten Dam			No

All Reservoirs were looked at by the Division Office.

The above information refers to inspections made by the Denver Office only.

NAME OF RESERVOIR	SOURCE	AMOUNT OF ACRE FEET NOVEMBER 1, 1977	AMOUNT OF ACRE FEET APRIL 1, 1978	AMOUNT OF ACRE FEET OCTOBER 31, 1978
Ambler Res. No. 2	Unnamed Springs	-	-	-
Callhan Reservoir	Fountain	300	300	300
Crystal Creek Res.	Crystal Creek	704	663	486
Fountain Valley #2	Fountain	0	2,615	189
Fountain Valley #3	Fountain	0	0	0
Manitou Reservoir	No. Branch French Creek	853	853	853
Monument State	Monument Creek	est. 324	est. 324	est. 324
North Catamount	No. Fork Catamount	10,744	4,968	4,844
North Field No. 1		240	246	250
South Catamount	So. Catamount	698	790	78
Spring Run	Spring Run	219	256	191
South Suburban Res.	So. Fork Cheyenne	181	222	125
Clear Creek Res.	Clear Creek	4,859	4,049	0
O'Haver	Gray's Creek	-	-	-
Sugar Loaf Res.	Lake Fork Creek	61,160	55,690	81,663
Twin Lakes Res.	Lake Creek	24,442	20,142	18,400
Brush Hollow	Beaver Creek	1,067	2,552	735
Colo. Springs #2	Beaver Creek	541	541	482
Colo. Springs #4	Beaver Creek	1,582	1,582	586
Colo. Springs #5	Beaver Creek	1,339	1,339	1,056
Colo. Springs #7	Beaver Creek	0	145	36
Colo. Springs #8	Beaver Creek	0	461	289
Lake Moraine	Beaver Creek	661	661	270
Mt. Pisgah	Four Mile Creek	738	738	435
Rosemont Penrose	Beaver Creek	2,412	2,355	1,687
Skaguay	Beaver Creek	1,593	1,593	1,593
DeWeese Dye	Grape Creek	1,650	4,322	2,534
Curiton	Springs	-	-	-
Greenview	Fountain	0	0	0
H.O.P. Reservoir	Springs	-	-	-
Pueblo Reservoir	Arkansas	33,970.15	32,065.09	31,061.09

NAME OF RESERVOIR	SOURCE	AMOUNT OF ACRE FEET NOVEMBER 1, 1978	AMOUNT OF ACRE FEET APRIL 1, 1978	AMOUNT OF ACRE FEET OCTOBER 31, 1978
Hayden Beckwith	Greenhorn	492	630	347
Lake Minnequa	St. Charles	713	1,132	716
Reservoir No. 2	St. Charles	2,400	2,403	2,377
Reservoir No. 3	St. Charles	7,670	7,815	6,975
Arnold Flood Water	Santa Clara	0	0	0
Bressan #1	Unnamed Arroya	-	-	-
Bressan #2	Unnamed Arroya	-	-	-
Brunelli #1&2	Bear Creek	-	-	-
Butte	Cucharas	0	0	0
Chicosa #4&5	Huerfano	-	-	-
Coler (Martin Lake)	Cucharas	0	0	0
Cucharas Valley	Cucharas	0	0	0
Dotson	Chicosa Creek	-	-	-
Holita	Cucharas	0	0	0
Huerfano Valley	Huerfano	0	-	-
La Joya	Cucharas	0	0	0
Maria Stevens	Cucharas	0	0	0
Martin Reservoir	Cucharas	2,039	1,925	1,605
Mosco	Poison Canon	-	-	-
Orlando	Huerfano	-	-	-
Sharps Orchid	Cucharas	0	0	0
Sierra Blanca	Decker Creek	-	-	-
Sunnyside	Santa Clara	-	-	-
Valdez	Santa Clara	-	-	-
Vories	Cucharas	-	-	-
Wilson	Sheer Creek	-	-	-
Zan	Apache Creek	-	-	-
Adobe	Arkansas	0	0	0
Dye	Arkansas	0	0	0
Henry	Arkansas	114	1,769	1,024
Holbrook #1	Arkansas	0	0	0
Horse Creek	Arkansas	0	0	0

NAME OF RESERVOIR	SOURCE	AMOUNT OF ACRE FEET NOVEMBER 1, 1978	AMOUNT OF ACRE FEET APRIL 1, 1978	AMOUNT OF ACRE FEET OCTOBER 31, 1978
Hermosa	San Francisco Creek	0	0	0
Monument	Middle Fork Purgatoire	1,375	-	-
Model	Purgatoire	1,000	0	-
North	Trinchera	3,789	0	-
Russel	Chanley Arroya	40	40	-
John Martin	Arkansas	0	6,914	0
Nee NoShee	Arkansas	0	0	0
Nee Skah	Arkansas	0	0	0
Thurston	Arkansas	663	1,287	1,139
Two Buttes	Two Buttes Creek	4,835	4,765	3,905

LIVESTOCK WATER TANKS

Applications Filed and Approved:

Water District 10	0
Water District 11	0
Water District 12	1
Water District 13	1
Water District 14	8
Water District 15	0
Water District 16	54
Water District 17	4
Water District 18	20
Water District 19	29
Water District 66	0
Water District 67	13
TOTAL	130

All stock pond permits or applications are forwarded to our district Water Commissioners for site investigation and then for approval.

Last year (1977) the division had 83 applications.

WATER RIGHTS TABULATION

The July 1, 1978 tabulation was completed and mailed on schedule. We had a fairly low return rate on the certified copies sent to proposed abandoned rights. This office has a very liberal policy of removal of a right from the abandoned list, and so far have had very few complaints considering the size of the tabulation.

There were a few typographical errors on the printouts, but as far as we can tell it is generally in pretty good shape. The demand for copies has not been quite as great as anticipated, although several hundred dollars have been collected. Division 2 did not experience any problems handling the money or the mailing, although any future undertaking should have some provision for postage.

The problems of water rights being adjudicated in a subsequent adjudication but administered as though they were in the original adjudication is still unresolved. This problem came up in a transfer case and the court ordered the right, which was adjudicated in an other than original proceeding but administered as though it were original, tabulated and administered as though it were in the original adjudication. Perhaps the solution to the question is to wait until there is a proceeding and then raise the issue, and in the meantime continue the historical administration practice.

Cases Filed in the Water Court

The following shows the number of cases filed from November 1969 through June 1978, and also the number of claims.

NOTE: The number of cases is an accurate figure; however, the number of claims is an estimated figure as it is impossible to determine from some applications just how many claims are made, but I state that the figures are reasonably close.

1969

MONTH	CASE NUMBERS	CASES	CLAIMS
November	W-1 through W-18	18	22
December	W-19 through W-22	4	4
	Sub-total..	22	26

1970

January	None	0	0
February	W-23	1	4
March	W-24 through W-28	5	25
April	W-29 through W-31	3	7
May	W-32 through W-41	10	14
June	W-42 through W-60	19	105
July	W-61 through W-66	6	22
August	W-67 through W-74	8	15
September	W-75 through W-76	2	5
October	W-77 through W-78	2	2
November	W-79 through W-87	9	11
December	W-88 through W-114	27	62
	Sub-total..	92	272

1971

January	W-115 through W-123	9	40
February	W-124 through W-146	23	51
March	W-147 through W-195	49	90
April	W-196 through W-241	46	80
May	W-242 through W-266	25	36
June	W-267 through W-317	51	117
July	W-318 through W-348	31	77
August	W-349 through W-375	27	76
September	W-376 through W-395	20	38
October	W-396 through W-421	26	66
November	W-422 through W-460	39	90
December	W-461 through W-507	47	83
	Sub-total..	160	1922

MONTH	CASE NUMBERS		CASES	CLAIMS
		1972		
January	W-508 through W-543		36	110
February	W-544 through W-609		66	167
March	W-610 through W-701		92	252
April	W-702 through W-811		110	307
May	W-812 through W-1144		333	680
June	W-1145 through W-3440		2298	5385
July	W-3441 through W-3679		239	467
August	W-3680 through W-3780		101	202
September	W-3781 through W-3815		35	86
October	W-3816 through W-3852		37	97
November	W-3853 through W-3875		25	49
December	W-3876 through W-3893		23	53
		Sub-total..	3395	7855
		1973		
January	W-3894 through W-3911		19	47
February	W-3912 through W-3922		11	35
March	W-3923 through W-3940		26	87
April	W-3941 through W-3954		18	72
May	W-3955 through W-3968		19	670
June	W-3969 through W-3983		20	119
July	W-3984 through W-3999		19	70
August	W-4000 through W-4015		21	64
September	W-4016 through W-4029		14	28
October	W-4030 through W-4039		12	460
November	W-4040 through W-4052		16	42
December	W-4053 through W-4062		12	234
		Sub-total..	207	1928
		1974		
January	W-4063 through W-4069		8	68
February	W-4070 through W-4086		20	633
March	W-4087 through W-4096		10	66
April	W-4097 through W-4107		11	95
May	W-4108 through W-4113		6	7
June	W-4114 through W-4126		13	821
July	W-4127 through W-4144		18	36
August	W-4145 through W-4156		14	15
September	W-4157 through W-4169		13	16
October	W-4170 through W-4185		17	44
November	W-4186 through W-4198		14	61
December	W-4199 through W-4214		16	60
		Sub-total..	160	1922

MONTH	CASE NUMBERS		CASES	CLAIMS
		1975		
January	W-4215 through W-4222		8	25
February	W-4223 through W-4238		17	34
March	W-4239 through W-4245		9	9
April	W-4246 through W-4252		9	20
May	W-4253 through W-4263		11	31
June	W-4264 through W-4275		13	15
July	W-4276 through W-4280		6	10
August	W-4281 through W-4285		7	71
September	W-4286 through W-4324		40	70
October	W-4325 through W-4330		7	17
November	W-4331 through W-4359		29	33
December	W-4360 through W-4374		15	21
		Sub-total..	171	356
		1976		
January	W-4375 through W-4386		13	29
February	W-4387 through W-4396		15	46
March	W-4397 through W-4412		22	125
April	W-4413 through W-4427		21	36
May	W-4428 through W-4482		68	323
June	W-4483 through W-4490		15	127
July	W-4491 through W-4500		11	15
August	W-4501 through W-4510		12	21
September	W-4511 through W-4519		27	38
October	W-4520 through W-4529		15	159
November	W-4530 through W-4534		13	17
December	W-4535 through W-4545		17	50
		Sub-total..	249	986
		1977		
January	W-4546 through W-4552		13	33
February	W-4553 through W-4559		15	20
March	W-4560 through W-4565		28	55
April	W-4566 through W-4575		17	383
May	W-4576 through W-4579		9	12
June	W-4580 through W-4588		14	22
July	W-4589 through W-4595		16	29
August	W-4596 through W-4607		24	75
September	W-4608 through W-4609		15	56
October	W-4610 through W-4612		15	16
November	W-4613 through W-4624		18	60
December	W-4625 through W-4704		87	1089
		Sub-total..	271	1850

MONTH	CASE NUMBERS	CASES	CLAIMS
	1978		
January	W-4705 through W-4709	18	31
February	W-4710 through W-4715	10	14
March	W-4716 through W-4724	13	13
April	W-4725 through W-4737	13	19
May	W-4738 through W-4740	22	42
June	W-4741 through W-4753	20	39
	Sub-total...	96	158

Total cases filed from 1969 through June 30, 1978. 4823

Approximate number of claims for same period 17275

Cases Terminated by the Water Court

MONTH	NUMBER OF CASES TERMINATED
1970	
May	2
June	1
July	4
August	17
September	5
October	5
November	1
December	15
TOTAL....	50
1971	
January	0
February	4
March	16
April	9
May	15
June	13
July	47
August	46
September	26
October	43
November	25
December	30
TOTAL...	274
1972	
January	2
February	31
March	25
April	39
May	38
June	1
July	5
August	76
September	47
October	40
November	167
December	110
TOTAL...	581

MONTH	NUMBER OF CASES TERMINATED
1973	
January	95
February	110
March	151
April	81
May	104
June	174
July	83
August	139
September	121
October	216
November	178
December	78
TOTAL...	1530
1974	
January	137
February	77
March	157
April	99
May	112
June	152
July	59
August	100
September	64
October	68
November	75
December	99
TOTAL...	1199
1975	
January	84
February	54
March	58
April	65
May	92
June	54
July	41
August	39
September	23
October	28
November	13
December	18
TOTAL...	569

MONTH	NUMBER OF CASES TERMINATED
1976	
January	9
February	10
March	37
April	40
May	9
June	21
July	12
August	10
September	6
October	31
November	30
December	40
TOTAL...	255
1977	
January	27
February	19
March	29
April	30
May	11
June	25
July	28
August	16
September	18
October	8
November	13
December	22
TOTAL...	246
1978	
January	17
February	33
March	23
April	6
May	17
June	24
TOTAL...	120

Cases Terminated 1970	50
Cases Terminated 1971	274
Cases Terminated 1972	581
Cases Terminated 1973	1530
Cases Terminated 1974	1199
Cases Terminated 1975	569
Cases Terminated 1976	255
Cases Terminated 1977	246
Cases Terminated 1978	120
Total cases terminated through June 30, 1978	4824

WINTER WATER STORAGE

There was NO winter water storage for the year 1977-78. A third-year program of storage of waters back of Pueblo Dam was to begin on December 1, 1977, and was to have stored ½ of the river flow at Pueblo. This never came to pass for it was stopped when the Catlin Canal Company board including Frank Milenski, Earl Showalter and other members of the board called the Division Engineer and placed a river call on the river. Therefore, no water was impounded behind Pueblo Dam and no other efforts were made to formulate a 1977-1978 program. There were letters from trustees of various ditch companies asking for a review of what we felt would have happened had the program been started, to compare the first two years of actual operation.

Although no water was held in Pueblo Reservoir this winter, daily measurements on the Arkansas River upstream from Pueblo Reservoir have made it possible for the Division Engineer's Office to determine that an estimated 22,508 acre feet of water would have been stored had the third annual winter water program been continued.

The most impressive change, however, was at Pueblo Reservoir where overall storage at the beginning of March 1977 reached a record 93,115 acre feet compared to 32,268 acre feet at the beginning of March 1978.

GROUND WATER ADMINISTRATION

In December 1976, Judge Gobin ruled on the amendment to the 1973 Pumping Rules and Regulations, rejecting the proposed amendment.

The decree reads:

> WHEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the proposed Amendment to Rule 3 of the Rules and Regulations Governing the Use, Control and Protection of Surface and Groundwater Rights in the Arkansas River and Tributaries be disapproved and be of no force and effect and that the existing 1973 Rules and Regulations be no more stringent than necessary to prevent injury to surface diverters, promote maximazation of beneficial use and recognize the contribution of the system of conjunctive use thereto; that wells that have been operating for more than eighteen years without curtailment be exempted from regulation to the extent of their unrestrained historic usage pursuant to C.R.S. 1973, 37-92-401(b) (VI); and that senior appropriators be confirmed in their right to make calls selectively, for protection of their priorities, to waters available in the river without making a concurrent call upon wells a condition precedent to the recognition of the surface call.

This decision was appealed to the Supreme Court and a ruling affirming the Water Court was issued on June 19, 1978. The Attorney General was asked for an opinion of the effect of this ruling. It is his conclusion that the Colorado Supreme Court affirmed only the Judgement, not the opinion or legal conclusions of the Water Court. The Court expressly reserved all issues but the "core" issue of the validity of the proposed amendment. The opinion of the Supreme Court overrides the opinion of the Water Court. Therefore, the Water Court's determination on the 18-year statute, and the selective call and other matters are not concluded and are subject to litigation. The 1973 Pumping Rules and Regulations will be enforced without regard to either age of well or nature of written call. The Attorney General's memo is in the Appendix of this report.

The Supreme Court also ruled on the Booth Orchard case. The case was remanded to the Trial Court; sixty acres are to be deleted from the "blue area", and a tentative stipulation has been agreed upon by both sides and will be concluded before next season.

The Rules and Regulations' injunction against Charles Pullara (W-4524) was resolved on 20 September 1978 when the Court ordered Mr. Pullara to comply with Rule 3 of the Pumping Rules and Regulations by not pumping more than 72 hours per week. This case had been pending

since July 1976, has involved hundreds of division man-hours, at least seven attorneys and four Court hearings. It is hoped that the result of this case will make future enforcement easier.

Wendell Little and Robert Kurtz were denied "In House Use Only" well permits in a post-S.B. 35 subdivision exempted by the Chaffee County Commissioners which had no plan of augmentation to replace the depletion of individual on-lot wells. Mr. Kurtz (W-4736) and Mr. Little (W-4727) applied to the Water Court for conditional decrees on the denied applications. The Referee awarded them conditional rights for the wells; the State Engineer protested the Rulings of the Referee. The cases were consolidated and trial was held 18 December 1978. The Court upheld the Rulings of the Referee and appears to have ruled the depletions of an in-house-use only well are "de minimis". This will be appealed.

SUMMARY OF WELLS
IRRIGATION DIVISION NO. 2

TYPE OF USE

WATER DISTRICT NO.	0	1	2	3	4	5	6	7	8	TOTAL
10	24	2,618	101	73	57	11	227	10	107	3,228
11	7	867	7	9	49	6	25	5	16	1,061
12	66	561	70	57	13	13	48	3	8	839
13	27	161	41	32	0	0	29	10	4	304
14	19	1,502	376	132	54	36	855	28	57	3,059
15	38	523	47	36	3	1	113	13	21	795
16	3	172	200	77	5	21	64	3	3	548
17	2	454	625	161	35	24	969	37	57	2,364
18	2	22	54	5	0	0	10	2	7	102
19	10	86	168	26	0	12	16	7	4	329
66	0	80	267	35	3	14	572	7	12	990
67	5	652	1,442	201	37	9	1,423	10	102	3,882
TOTAL	273	7,699	3,403	843	256	147	4,361	135	399	17,516

Type of Use

(0) In House Use Only
(1) Domestic
(2) Stock
(3) Domestic & Stock
(4) Commercial
(5) Industrial
(6) Industrial
(7) Irrigation & Stock
(8) Municipal

Registered wells as of January 11, 1977.

NEW PERMITS ISSUED IN DIVISION 2
1 NOV 77 to 31 OCT 78

New In-House-Use-Only (0)	404
Domestic (1), Stock (2), Domestic and Stock (3)	572
New non-tributary, non-exempt wells	6
Replacements for existing adjudicated wells	27
Denied applications	60

UNDERGROUND WATER
IRRIGATION DIVISION NO. 2

Irrigation Division 2, composed of Water Districts 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 66, and 67, has of this date 17,516 wells of all types in operation. Types of use are domestic, stock, domestic and stock, commercial, industrial, irrigation, irrigation and stock, and municipal. Tabulation showing the number of each type of well in each district is illustrated by the following table.

The principal aquifer area extends through a 150-mile reach of the Arkansas River Valley extending from Pueblo to the Kansas State line. This is a valley-fill aquifer which is adjacent to, underlies, and is in hydraulic connection with, the Arkansas River. The aquifer consists of unconsolidated deposits of gravel, sand, silt and clay. It ranges from one to fourteen miles in width and covers an area of about 500 square miles in parts of Pueblo, Otero, Crowley, Bent, and Prowers counties. The aquifer fills a "u-shaped" trough cut into the bedrock, which consists of shale, limestone, and sandstone of Cretaceous age. About two million acre feet of water is stored in the valley-fill deposits. Summary of the hydrologic character is shown below.

UNIT	THICKNESS	PHYSICAL CHARACTER	HYDROLOGIC CHARACTER
Dune Sand	0 - 100'	Very fine to coarse. Poorly sorted sand.	Commonly not saturated but transmits water readily from the surface to underlying aquifers. Source of water for a few domestic and stock wells.
Valley-fill deposits	0 - 300'	Boulders, cobbles, gravel, sand, silt, and clay. Generally grades from fine sand near the surface to coarse sand and gravel at the base.	Principal source of water for irrigation, public supply, and industrial wells. Irrigation well yields are as much as 3,150 gpm and average 650 gpm. Aquifer furnishes water to 1,348 irrigation wells.
Pierre Shale	0 -2,200'	Shale and sandy shale.	Low-permeability confining bed; acts as a barrier to vertical movement of ground water. Now known to yield water to wells.

UNIT	THICKNESS	PHYSICAL CHARACTER	HYDROLOGIC CHARACTER
Niobrara Formation	0 - 700'	Chalky and marly limestone and calcareous shale.	Low permeability to confining bed; acts as a barrier to vertical movement of ground water. A few stock wells tapping fractured limestone yield less than 5 gpm.
Carlile Shale	0 - 200'	Calcareous shale, limestone, and sandstone.	Low permeability confining bed; acts as a barrier to vertical movement of ground water. Now known to yield water to wells.
Greenhorn Limestone	0 - 150'	Limestone and chalky shale.	Low permeability confining bed; acts as a barrier to vertical movement of ground water. A few stock wells tapping fractured limestone yield less than 5 gpm.
Granerous Shale	0 - 200'	Gypsiferous shale and sandstone.	Low permeability confining bed; acts as a barrier to vertical movement of ground water. Now known to yield water to wells.
Dakota Sandstone	75 - 235'	Sandstone, sandy shale, siltstone, and shale.	Important source of water for domestic, stock and public water. Restricts vertical movement of water to and from the valley-fill deposits. Wells yield as much as 100 gpm and average 20 gpm.

GROUND-WATER WITHDRAWAL FROM THE
VALLEY-FILL AQUIFER BY IRRIGATION WELLS

(acre feet per year)

COUNTY	1964	1965	1966	1967	1968
Pueblo	25,000	16,000	23,000	19,000	21,000
Otero-Crowley	53,000	36,000	50,000	48,000	50,000
Bent	33,000	15,000	23,000	23,000	26,000
Prowers	74,000	45,000	34,000	42,000	55,000
TOTAL	185,000	112,000	130,000	132,000	152,000

The above statistics are from a study made prior to the inception of the Rules and Regulations, and may have been based on a pumping season of a full 110 days. If the 1968 total withdrawal figure of 152,000 acre feet was based on full yield pumping for 110 days at 24 hours per day

ARKANSAS RIVER COMPACT

IRRIGATION DIVISION NO. 2

Storage began on December 8, 1977 and continued until April 9, 1978; the gates were not opened until April 10, 1978 by mutual agreement with Colorado and Kansas. At this time, there had been accumulated 6970 acre feet of Compact water.

This amount was run out starting April 10, 1978 at 0800 hours and continued through April 13, 1978 at 1830 hours.

Storage started June 5, 1978 at 0830 hours and ended June 13 at 0800 hours. On June 13, 1978, a release started and this release ended on June 19, 1978 at 1700 hours with a total accumulation of 11,052 acre feet.

Storage started on June 28, 1978 at 0700 hours and ended July 2, 1978 at 0930 hours. Releases were started and stopped at the same time.

Storage started July 11, 1978 at 0300 hours, with a release starting immediately and ending on July 15, 1978 at 0830 hours.

Storage started November 1, 1978 and continued through the end of 1978 with a continuous release of 7 c.f.s. going through John Martin Dam.

The regular meeting of the Compact was held on 12 December in Lamar. Mr. Frank G. Cooley is Chairman; however, due to his illness the meeting was chaired by Mr. Carl Bentrup. Below are listed the Compact Commissioners. The Catlin water transfer to the Permanent Pool is still pending. The proposed Muddy Creek gages have been installed,

Kansas	Colorado
Guy E. Gibson	Felix L. Sparks
Carl E. Bentrup	Leo Idler
W.F. Stoeckly	Kent A. Reyher

and we now have an Engineering Technician to operate them.

We are still faced with the problem concerning the Compact Secretary and the Water Commissioner being the same person. The failure of the Secretary of the Compact to implement provisions of the Compact are still troublesome, as well as the alleged mishandling of some summer rain peaks. This situation still needs to be resolved.

PERSONNEL

Division No. 2

DIVISION OF WATER RESOURCES

NAME	POSITION	DISTRICT	MONTHS WORKED	MILEAGE	ALLOCATED
Robert W. Jesse	Division Engineer	Division 2	Full Time	16,991	12 months
James F. Kasic	Assistant Division Engineer	Division 2	Full Time	6,597	12 months
Kenneth J. Cooper	Assistant Division Engineer	Division 2	Full Time	4,388	12 months
Robert Ermel	Water Commissioner	District 10	Full Time	14,431	12 months
James Everett	Water Commissioner	District 11	Full Time	15,263	12 months
George Coffee	Deputy Water Commissioner	District 11	111 days	5,032	6 months
Larry Brown	Deputy Water Commissioner	District 11	149 days	4,182	7 months
George Wichmann	Water Commissioner	District 12	Full Time	18,366	12 months
Juanita Tafoya	Deputy Water Commissioner	District 12	154 days	6,432	6 months
Richard Sierka	Deputy Water Commissioner	District 12	100 days	5,712	6 months
Don Stuart	Water Commissioner	District 13	Full Time	13,936	12 months
Richard Squire	Deputy Water Commissioner	District 13	133 days	3,078	4 months
Larry Young	Water Commissioner	District 15	Full Time	16,929	12 months
Robert Brgoch	Water Commissioner	District 16	Full Time	15,592	12 months

NAME	POSITION	DISTRICT	MONTHS WORKED	MILEAGE	ALLOCATED
Augustine Garcia	Water Commissioner	District 16	204 days	6,469	8 months
Arlyn Davison	Water Commissioner	District 17	Full Time	17,231	12 months
George Watson	Deputy Water Commissioner	District 17	8 days	28	2 months
Leonard Trujillo	Water Commissioner	District 18	136 days	5,606	6 months
Henry Marques	Water Commissioner	District 19	Full Time	18,941	12 months
Tony Pantano	Deputy Water Commissioner (began 4-1-78)	District 19	44 days	3,897	
John Cusimano	Deputy Water Commissioner	District 19	39 days	2,101	2 months
Lane Hackett	Water Commissioner	Dists. 66&67	Full Time	16,987	12 months
Robert Clodfelter	Deputy Water Commissioner	Dists. 66&67	16 days	576	--
George Ridenour	1042 Water Commissioner	Division 2	Full Time	9,617	12 months
David DeYoung	Hydrographer	Division 2	Full Time	13,213	12 months
Gary Largent	Hydrographer (transferred 8/77)	Division 2	Full Time	2,970	12 months
Lou Schultz	Hydrographer (began 8/77)	Division 2	Full Time	13,743	12 months
Jim Sullivan	Hydrographer (began 11/77)	Division 2	Full Time	12,355	12 months
Lynna Muse	Administrative Clerk Typist	Division 2	Full Time	0	12 months

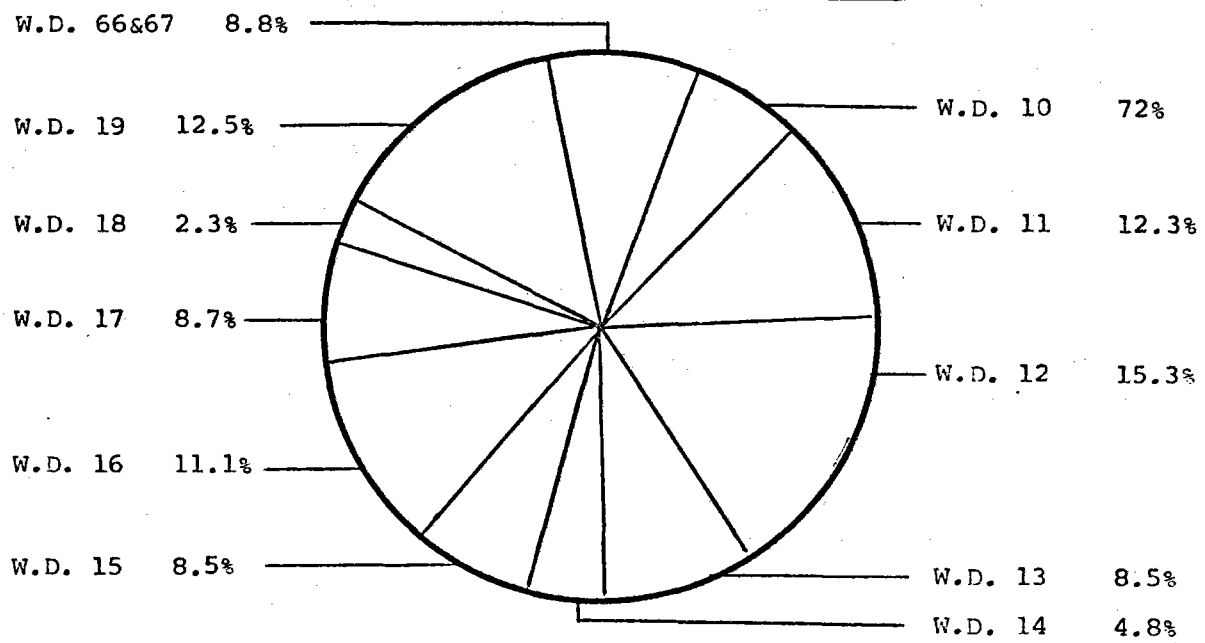
NAME	POSITION	DISTRICT	MONTHS WORKED	MILEAGE	ALLOCATED
Helen Bever	Key Punch Operator	Division 2	28 days-1/2 days	0	--

Paid Mileage 199,406

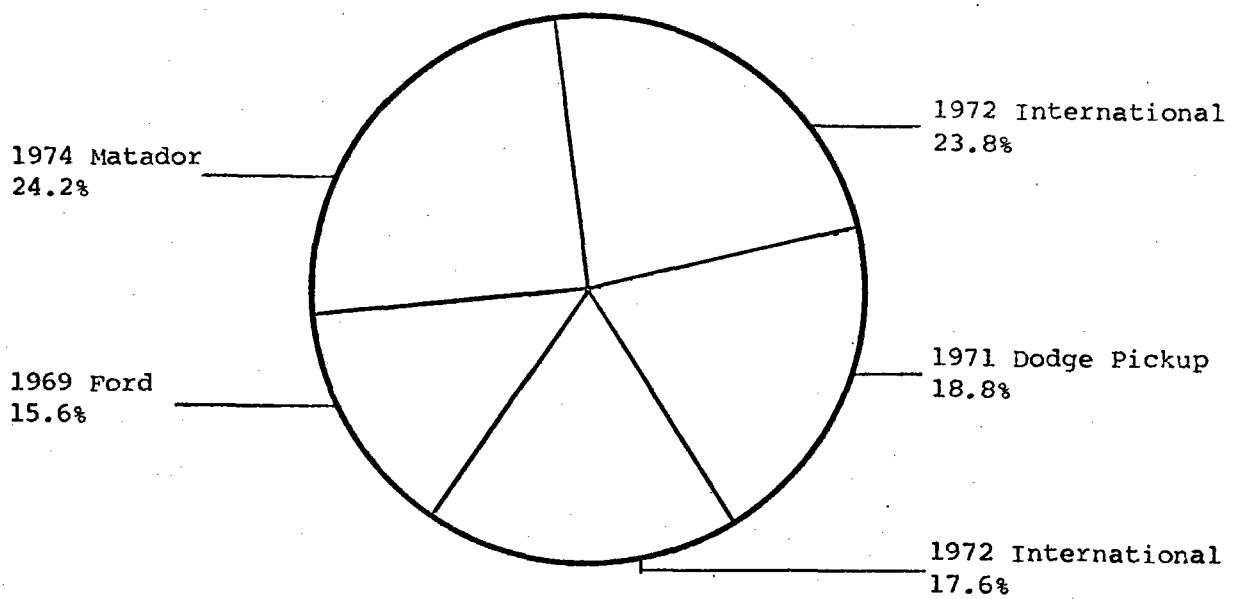
Mileage for State Vehicles 70,267

IRRIGATION DIVISION NO. 2
Water Division Mileage
July 1, 1977 thru June 30, 1978

Water Commissioner's Mileage Reimbursed



State-Owned Vehicles



199,406 = Mileage in Personal Automobiles
70,267 = Mileage in State-Owned Vehicles

269,673 = Total Mileage for Division

SOUTHEASTERN COLORADO
WATER CONSERVANCY DISTRICT
905 HIGHWAY 50 WEST
P. O. Box 440
PUEBLO, COLORADO 81002

OFFICERS

Keith I. Webb, President, P. O. Box 992, La Junta, Colorado 81050

Raymond D. Nixon, Vice President, 2519 Prairie, Colorado Springs, Colorado 80909

Leon C. Hook, Treasurer, 804 Rudd, Canon City, Colorado 81212

Charles L. Thomson, General Manager, P. O. Box 440, Pueblo, Colorado 81002

Charles J. Beise, Attorney for the District, 1636 First National Bank Building, Denver, Colorado 80201

Dr. Wendell Hutchinson, Secretary, 9104 U. S. Highway 50, Salida, Colorado 81201

DIRECTORS

Keith I. Webb, P. O. Box 992, La Junta, Colorado 81050

Dr. Wendell Hutchinson, 9104 U. S. Highway 50, Salida, Colorado 81201

Robert Northrup, 501 Steward, Lamar, Colorado 81052

John Javernick, 3205 Hale, Canon City, Colorado 81212

Kenneth Carter, Route 1, Ordway, Colorado 81063

Raymond Nixon, 2519 Prairie, Colorado Springs, Colorado 80909

John Huebsch, 27 Oak Avenue, Colorado Springs, Colorado 80906

Glenn Everett, 10615 County Road 150, Salida, Colorado 81201

Frank Milenski, R.R. 1, La Junta, Colorado 81050

Alferd Putnam, 305 St. Vrain Avenue, Las Animas, Colorado 81054

Leon C. Hook, 804 Rudd, Canon City, Colorado 81212

Ralph Adkins, P. O. Box 316, Pueblo, Colorado 81003

David Ciruli, Route 4, Box 793, Pueblo, Colorado 81004

Alvin Spady, Route 2, Las Animas, Colorado 81054

Pete Peters, Route 1, Box 22, Manzanola, Colorado 81058

WATER RELATED ORGANIZATIONS

IRRIGATION DIVISION NO. 2
Pueblo, Colorado

Avondale Water and Sanitation District, Roger Ruybal, Manager, P. O. Box 188, Avondale, Colorado 81022
Beaver Park Water Company, Penrose, Colorado 81240
Beehive Water Association, John F. Watters, Cheraw, Colorado 81030
Bent's Fort Water Association, 210 Main, La Junta, Colorado 81050
Boone, Colorado, Barbara Martin, Town Clerk, Boone, Colorado 81025
Town of Buena Vista, Mayor B.D. Case, East Main, P. O. Box B, Buena Vista, Colorado 81211
City of Canon City, Wayne R. Clark, City Engineer, Box 711, Canon City, Colorado 81212
Town of Cheraw, Mayor, Cheraw, Colorado 81030
City of Colorado Springs, James Phillips, Director of Utilities, P. O. Box 1103; City of Colorado Springs, J. A. McCullough, P. O. Box 1103, Colorado Springs, Colorado 80947
Town of Crowley, Mayor Howard Gilmore, Crowley, Colorado 81033
Crowley County Water Association, Harley Ruscher, President, P.O. Box 487, Ordway, Colorado 81063
Town of Eads, Mayor, 1201 Hickman, Eads, Colorado 81036
East End Water Company, Harry Froese, Secretary, Route 2, La Junta, Colorado 81050
Eureka Water Company, Ralph Read, P. O. Box 5, Rocky Ford, Colorado 81067
Fayette Water Association, John Schweizer, Jr., Secretary, Route 1, Box 311, Rocky Ford, Colorado 81067
City of Florence, R. Herdon, City Manager, City Hall, Florence, Colorado 81039
City of Fountain, Richard Brown, Jr., City Administrator, Fountain, Colorado 80817
Town of Fowler, Mayor Murrell Scherrer, 302 Seventh, Fowler, Colorado 81039
Hasty Water Company, Earl Eckerett, Hasty, Colorado 81044
Highland Water and Supply Company, Frank Vance, President, Blende, Colorado 81004
Holbrook Center Soft Water, J. B. Shenk, Secretary, Cheraw, Colorado 81030
Town of La Junta, Mayor Vincent Grace, 1 East 14, La Junta, Colorado 81050
City of Lamar, Francis Hiigle, City Administrator, Box 270, Lamar, Colorado 81052
City of Las Animas, Lloyde Gardner, Secretary, Route 1, Box 134, Las Animas, Colorado 81054
Town of Manzanola, Patricia Zwick, Town Clerk, Manzanola, Colorado 81058
Lombard Village Water Association, Levi Martinez, Attorney at Law, Thatcher Building, Pueblo, Colorado 81003
May Valley and Pleasant Valley Water Association, Leonard Courkamp, Wiley, Colorado 81092
McClave Water Association, Harold Falconburg, McClave, Colorado 81057

Newdale-Grand Valley Company, Ernest P. Campbell, President, Route 2, Box 292, Rocky Ford, Colorado 81067
Town of Olney Springs, Geoa Peterie, Olney Springs, Colorado 81062
Town of Ordway, Clair Biddison, Mayor, Ordway, Colorado 81063
Park Center Water District, George Smith, Clerk, P.O. Box 860, Canon City, Colorado 81212
Patterson Valley Water Company, David E. Smith, Treasurer, Route 1, Rocky Ford, Colorado 81067
Penrose Water District, P. O. Box 297, Penrose, Colorado 81240
96 Pipeline Company, Warren B. Arbuthnot, President, Ordway, Colorado 81242
Pueblo Board of Water Works, Larry Fontaine, Executive Director, P. O. Box 400, Pueblo, Colorado 81002
Riverside Water Company, Edward T. Jung, Secretary, Route 1, Box 100, Rocky Ford, Colorado 81067
City of Rocky Ford, Kenneth Bruch, City Administrator, 203 South Main Street, Rocky Ford, Colorado 81067
City of Salida, Mayor Edward Touber, P. O. Box 417, Salida, Colorado 81201
Salt Creek Water and Sanitary District, Endalesio Garcia, 1022 Palo Alto Street, Pueblo, Colorado 81004
Security Water District, Thomas K. Remple, 231 Security Boulevard, Security, Colorado 80911
Southside Water Association, John Evers, President, R.R. 2, La Junta, Colorado 81050
South Swink Water Company, Gladys Jensen, Secretary, P. O. Box 442, Swink, Colorado 81077
St. Charles Mesa Water Association, Lee Simpson, Treasurer, 1397 South Aspen, Pueblo, Colorado 81006
Stratmoor Hills, Fred Erickson, 1811 B Street, Stratmoor Hills, Colorado 80906
Town of Sugar City, Mayor Chris Giese, Sugar City, Colorado 81076
Sugar City Pipeline Company, Henry Herman, Jr., Secretary, Sugar City, Colorado 81076
Town of Swink, Mayor Art O'Neal, Swink, Colorado 81077
Valley and Vroman Water Companies, Albert Stover, Secretary, Box 8, Manzanola, Colorado 81058
West Grand Valley Water, Inc., Blaine Malott, Box 182, Rocky Ford, Colorado 81067
West Holbrook Pipeline Company, Roy Wadleigh, Secretary, Route 2, Box 302, La Junta, Colorado 81050
Widefield Homes Water and Sanitation, James C. Perry, Sr., 3 Widefield, Widefield, Colorado 80911
Town of Wiley, Mayor R. W. Esgar, 405 Gordon, Wiley, Colorado 81092

1978

ANNUAL SUMMARY-DIVISION 2

ACRE FEET(11-1-77 thru 10-31-78)

Districts	Registered Non-Exempt Wells #	Ditch[1] Structures Reported #	IRRIGATION Direct Diversions To Irrigation	IRRIGATION Diversions To Storage	IRRIGATION Storage To Irrigation	CURRENT YEAR Acres Irrigated*	TRANS-MOUNTAIN Div. to Div. Export	TRANS-MOUNTAIN Div. to Div. Import
10	412	56	55,200			13,630		
11	101	108	121,220			22,162	415	117,700
12	85	172	169,160			14,000		
13	43	196	22,740	2,500 A.F.	2,500 A.F.	15,930		
14	1,030	28	193,930			35,000		
15	151	60	12,260			4,654		
16	96	109	34,775			11,590	(3)	(2)
17	1,122	44	280,950			140,000		
18	19	32	3,618			7,550		
19	39	82	57,830			30,000		
66	608	16	507			489		
67	1,581	23	127,160			76,348		
TOTAL	5,287		1,079,350			371,343		

[1] Ditch structures which reported diverting water. There were many more ditches that were observed by the Water Commissioners that did not divert any water.

Dists.	MUNICIPAL Direct Divers.	MUNICIPAL Divers. To Storage	MUNICIPAL Storage Releases	INDUSTRIAL Direct Divers.	INDUSTRIAL Divers. To Storage	INDUSTRIAL Hydro-Power	RECREATION Storage-Wildlife Parks	ACTUAL STORAGE For Year All Reservoirs	1 NOV 77 - 31 OCT 78 # Degrees Con-cluded	1 NOV 77 - 31 OCT 78 # Water Court Appli-cations
10	33,304			19,781						
11										
12	24,080			89,330						
13										
14	27,200			11,119						
15	740			4,978						
16	3,813									
17				67						
18				59						
19	4,343									
66										
67										
TOTAL	93,480			125,334					199	173

*Revised 1978 based on County Assessors Offices.

DEPARTMENT OF LAW
Natural Resources Section
1525 Sherman, 3rd Floor
Denver, CO 80203

M E M O R A N D U M

TO: C. J. Kuiper, State Engineer
FROM: Donald H. Hamburg, Assistant Solicitor General
DATE: September 18, 1978
RE: In the Matter of the Amendment to the Rules and Regulations, Arkansas River: Effect of Supreme Courts Affirmance of the Judgment of the Lower Court.

INTRODUCTION:

On June 19, 1978 the Colorado Supreme Court issued its opinion In the Matter of the Amendment to the Rules and Regulations Governing the Use, Control and Protection of Surface and Ground Water Rights Located in the Arkansas River and its Tributaries, C. J. Kuiper, State Engineer of Colorado and Robert W. Jesse, Division Engineer, Water Division No. 2 v. Atchinson, Topeka and Santa Fe Railway Company, et al., No. 27738, _____ Colo. _____, 581 P. 2d 293 (1978) (a copy of which is attached). The opinion of the Court, delivered by Mr. Justice Groves, stated that the water court properly decreed that the proposed Amendment to the 1973 Rules be disapproved and that the existing 1973 Rules continue in effect without amendment. The proposed Amendment was invalid because it conflicted with the legislative policy that ground water diversions not be curtailed unless it was first determined that curtailment would make additional water available for senior priorities. C. R. S. 1973, 37-92-501(1). No such determination was made before the Amendment was proposed. Additionally,

there was no compliance with C.R.S. 1973, 37-92-501(2)(f), which requires consideration of existing conditions and operating experience before amending rules.

After upholding the result below for the two reasons just mentioned, Justice Groves then stated:

> We neither approve or disapprove the several other findings and conclusions of the water court which it believed supported its ruling that the Amendment was invalid. Our holding above is the basis for our affirmance of that court's decree. We do feel that it is incumbent upon us, however, to comment on two further matters.

The comments offered by the Court concerned the nature of the burden of proof on the State Engineer and the application of the 18 year provision, C.R.S. 1973, 37-92-401-(1). As to the burden of proof, the Court noted non-prejudicial error by the trial court. In regard to the 18 year provision, the Court declared:

> We have not yet made a determination of the meaning of, and the legislative intent behind, subsection (b)(VI). The General Assembly may wish to consider the arguments concerning the meaning and effect of this subsection contained in the briefs on file with this court, and may wish to consider official elucidation of the meaning and legislative intent. This, of course, is entirely within the discretion of the General Assembly. Absent legislative clarification, in a proper case we will make our determination of legislative intent and effect; and, obviously, prior

> thereto the water courts have the same privilege.

The Court then affirmed the judgment of the lower court.

Following the filing of a Petition for Rehearing which sought modification of the Court's opinion, the Court added this paragraph:

> Except as already approved in this opinion, we neither approve nor disapprove of the findings of fact, conclusions of law and decree entered by the water court. Our affirmance here is predicated solely on the reasons which we have previously expressed.

and then stated "Judgment affirmed."

The question has been raised as to the effect of the Supreme Court's affirmance - do the legal conclusions of the lower court which were not "approved nor disapproved "remain the law of the case and control in Water Division #2?

CONCLUSION:

The Colorado Supreme Court affirmed only the judgment, not the opinion or legal conclusions, of the water court. The Court expressly reserved all issues but the "core" issue of the validity of the proposed Amendment. The opinion of the Supreme Court overrides the opinion of the water court. Therefore, the water court's determination on the 18 year

statute, the selective call and other matters are not conclusive and are subject to relitigation.

ANALYSIS:

In analyzing the question raised, it is necessary to review the procedure by which a case is determined and an appeal thereof is concluded. A legal action is concluded by a judgment (also sometimes called a decree). A judgment is the judicial act which settles the question before the Court and determines the relief, if any, to be awarded. Black's Law Dictionary, "Judgment". A judgment is to be distinquished from the opinion or writing of the Court:

> As a general rule the decisions, opinions, or findings, or verdicts do not constitute a judgment or decree but merely form the basis on which the judgment is subsquently to be rendered. 49 C.J.S. Judgments § 4. See also, Kahnt v. Caldwell, 84 Colo. 374, 270 P. 552 (1958); 46 Am Jur 2d Judgments § 6.

An appellate court acts upon the judgment, not the opinion of the lower court. See, Rules 1 and 10, Colorado Appellate Rules. The appellate court may affirm the judgment below yet reject some or even all of the reasons given by the lower court, so long as some ground exists to sustain the judgment.

> An affirmance of the judgment or decree of the lower court is not

> necessarily an adoption of the reasoning or language of the lower court, unless the appellate court impliedly or expressly affirms "on the opinion below." 5B C.J.S. Appeal and Error § 1857.

Here, the Supreme Court destroyed any inference that the opinion of the water court was adopted. In the second paragraph of the opinion, the Court stated: "We affirm the result." (emphasis added). A few pages later, the Court said:

> We have been obliged to conclude that the posture of the case and nature of the evidence are such that several of the issues presented should not be determined in this case. These determinations must await evidence of more complete hydrological research in the basin and further presentations.

The Court then discussed the findings and conclusions of the water court that the Amendment was not promulgated on the basis of investigations and experience under the 1973 Rules, as required by the 1969 Water Right Determination and Administration Act. The opinion declared: "We approve of these rulings." (emphasis added) and later remarked:

> We neither approve or disapprove the several other findings and conclusions of the water court which it believed supported its ruling that the Amendment was invalid. Our holding above is the basis for our affirmance of that court.

Finally the last paragraph of the opinion reads:

> Except as already approved in this opinion, we neither approve nor disapprove of the findings of fact, conclusions of law and decree entered by the water court. Our affirmance here is predicated solely on the reasons which we have previously expressed.

The Court recognized two grounds for voiding the proposed Amendment and, therefore, affirmed "the result" of the water court. However, the conclusions of the lower court not specifically affirmed by the Supreme Court were neither affirmed or rejected. Those additional conclusions of the water court may be addressed in a proper case at some future time. The affirmance of the "judgment" does not bar re-litigation of such issues. In fact, in regard to its reservation of the issue of the effect of the 18 year statute, the Court invited both the legislature and the water courts to address the matter. Additionally, the Court specifically remarked that several issues in the lower court could not be determined without additional "hydrological research" and "further presentations." This language negates any inference that the issues left undetermined by the Supreme Court are controlled by the lower court's conclusions.

The comments of the Colorado Supreme Court in Shore v. Building Council, 128 Colo. 424, 263 P. 2d 315 (1953) (a copy of which is attached), are helpful. There, the Court

considered the effect of its previous decision in Building Council v. Shore, 124 Colo. 57, 234 P. 2d 620 (1951), where it refused to decide a number of issues related to the propriety of the issuance of an injunction. The lower court in the second Shore case held that the Supreme Court action in the first Shore case was res judicata of the entire matter and the plaintiff was estopped from asserting matters not decided by the Supreme Court in the first case.

In the second case, the Supreme Court rejected the reasoning of the lower court:

> Our former opinion is clear and definitely eliminates all questions pertaining to damages. It is limited solely to the matter of injunction which then had outlived its usefullness and had become abstract. So far as this court is concerned, in that opinion we determined nothing relative to the question of damages in any respect. It is not res judicata except as to our announcement that all matters pertaining to the issue of damages were reserved for future consideration. Powell Brothers Truck Lines v. State ex rel. Green, 177 Okla. 568, 61 P. (2d) 231; State ex rel. v. Casarez, 52 N. M. 406, 200 P. (2d) 369. It does not constitute an estoppel against or waiver on the part of plaintiff because such does not operate upon issues not in the case. 128 Colo. at 431

In Taylor v. Betts, 59 Ariz. 172, 124 P. 2d 764 (1942) (a copy of the opinion is attached), the Arizona Supreme

Court expressly recognized that the affirmance of a lower court judgment does not adopt all of the lower court's rulings when the appellate court reserves judgment on certain issues. In the earlier related case, the Court had concluded:

> Since the demurrer was properly sustained on the ground of misjoinder and judgment rendered thereafter, it is unnecessary for us to consider the effect of the statutes of limitation and the other questions raised by the briefs not discussed herein. We expressly reserve them.
>
> The judgment of the lower court is affirmed. 124 P.2d at 765.

In Betts, the defendant contended "that the affirmance of the judgment affirms every ruling of the trial court, notwithstanding the express reservation by the Supreme Court", 124 P. 2d at 766. The Court rejected this conclusion:

> We hold, therefore, that with an appellate court, as with a trial court, when certain points of law arising in the case before it are expressly reserved, the judgment finally rendered is not res adjudicata on the questions reserved, and that those questions may be raised and determined in a subsequent action without the defense of res adjudicata being applicable thereto.

This holding is set forth as the general rule in 50 C.J.S. Judgments § 642.

In the Arkansas Rules case, the Colorado Supreme Court affirmed the judgment of the water court that the proposed Amendment was invalid. The Court carefully confined the reasons for its affirmances to two grounds: (1) failure to provide a prior determination that the curtailment of wells would make water available to senior surface right priorities, C.R.S. 1973, 37-92-501(1); and (2) failure to consider existing conditions and operating experience under the 1973 Rules, C.R.S. 1973, 37-92-501(2)(f). Furthermore, the Court repeatedly remarked that all other findings and conclusions of the water court were reserved for future determination. That reservation of issues is part of the Supreme Court's opinion and is itself subject to the doctrine of res judicata (a matter decided is conclusive on that matter in later suits). In other words, the only application of res judicata to the issues decided by the water court but reserved by the Supreme Court is to leave those issues for future resolution. See, Shore v. Building Council, supra. Simply put, the Colorado Supreme Court said that all conclusions of the water court, except the two set forth above, were not necessary to decide here and are subject to further litigation. The Court can hardly be expected to hold that all of its careful statements about reserving the determination of all other matters are rendered

meaningless by its affirmance of the water court's judgment. Therefore, it is my opinion that the affirmance of the judgment does not modify the Supreme Court's opinion reserving the "non-essential" issues for future litigation.

APPENDIX II

HYDROGRAPHERS REPORTS

BOWSTEAD TUNNEL — River at / Creek near _____

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

Drainage area _____ square miles. Water stage recorder _____

Max. Discharge _____ sec.-ft. on _____ Min. Daily Discharge _____ sec.-ft. on _____

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

Calendar 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		
Total												
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No.

Rating Table Used 15 FT. PARSHALL FLUME

APR.		MAY		JUNE		JULY		AUG.		SEPT.		
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day.
	0	S	4.2	2.60	267	3.58	445	1.06	63			1
	0		0	2.78	297	3.45	419	1.15	22			2
	0		0	2.93	323	3.34	398	1.06	63			3
	0		0	2.91	319	3.14	361	.98	56			4
			0	2.55	259 286	2.93	323	.78	39			5
			0	2.63	272	2.29	299	.62	27			6
			0	2.83	305	2.70	283	.56	23			7
			0	2.76	293	2.68	280	.51	20			8
			0	3.28	382	2.72	287	.45	16			9
			0	4.05	542	2.83	305	.42	14			10
			0	4.21	577	2.74	290	.43	15			11
			0	4.14	561	2.66	277	.43	15			12
			0	4.37	612	2.49	249	.45	16			13
			0	4.56	655	2.38	232	.46	17			14
		S	24	4.74	697	2.34	225	.53	21			15
		1.11	68	4.61	662	2.29	218	23 .45	16			16
		1.42	101	4.26	588	2.66	222	S	7.0			17
		1.33	91	4.04	542	2.28	216		0			18
	0	1.22	79	4.14	561	22 2.10	190		0			19
	0	1.38	97	4.17	565	1.98	177		0			20
	0	1.58	120	21 4.23	581	1.90	161		0			21
	0	1.47	107	4.41	621	1.75	142		0			22
	0	1.22	138	4.49	639	1.63	126		0			23
	0	20 2.17	200	4.66	678	1.47	102		0			24
	0	2.31	221	4.20	558	1.34	92		0			25
S		2.29	218	4.24	583	1.25	83		0			26
.27	21	2.28	216	3.98	522	[illegible]	78		0			27
.27	21	1.88	159	3.90	510	1.18	75					28
.27	21	1.75	142	3.89	505	1.08	65		0			29
.27	21	2.13	194	3.87	504	1.01	59		0			30
XX	XXX	2.42	238	XX	XXX	.92	52		0	XX	XXX	31
	99.9		2442.2		15129		6985		~~499.6~~			

Grand total: 24861.1

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

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

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

Water Year

TWIN LAKES TUNNEL River at Creek near

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

Drainage area square miles. Water stage recorder

Max. Discharge ft. Max. G. H. ft. at Sec.-ft. on Min. Discharge sec.-ft. on G. H. ft. on

Calendar Year

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	0.32	26	0.10	82	0.10	1.2	0.17	2.2	0.15	2.2	0.20	
2	.32	2.6	.22	4.2	.10	1.2	.17	2.2	.15	2.2	.21	
3	.32	2.6	.31	2.2	.10	1.2	.16	2.5	.15	2.2	.21	
4	S	6.2	.30	6.8	.10		.19	3.3	.14	2.0	.21	
5	.11	1.4	.28	6.1	.10				.14		.21	
6	.13	1.8	.27		.10				.15		.21	
7	.16	2.6	S	8.5	.10		.20		.15		.21	
8	.18	3.0	S	14	.10		.19	3.3	.15	2.2	.21	
9	.18	3.0	.11	1.4	.10		.18	3.0	.15		.20	
10	.18	3.0	S	5.0	.10		.17	2.2	.15	2.2	.20	
11	.18	3.0	.52	16	.10		.18	3.0	.15	2.2	.20	
12	.18	3.0	.52	16	.10	1.2	a	3.0	.15	2.2	.20	
13	.18	3.0	S	8.0	.10	1.2		3.0	.15	2.2	.20	
14	.19	3.3	.11	1.4	.10	1.2		3.0	.15	2.2	.20	
15	.19	3.3	.26	5.0	.10			3.0	.15		.20	
16	.19	3.3	.30	6.8	.10			3.0	.15		.20	
17	.19	3.3	.14	2.0	.10			2.2	.15		.20	
18	.19	3.3	.15	2.2	.10	1.2		2.2	.15		.21	
19	.19	3.3	.17	2.2	.10			2.2	.15		.21	
20	.23	4.4	.17	2.2	.10	1.2		2.2	.17	2.2	.21	
21	.30	6.8	.16	2.5	.10			2.2	.18	3.0	.21	
22	.30	6.8	.16	2.5	a	1.2	a	2.2	.18	3.0	.22	
23	.30	6.8	.15	2.2		1.2	.17	2.2	.17		.22	
24	S	4.3	.15	2.2			.17	2.2	.17		.22	
25	S		.15				.17		.17		.22	
26	.35	8.2	.15	2.2			.16	2.5	.18	3.0	.23	
27	S	4.0	.15	2.2			.17	2.2	.18	3.0	.23	
28	.10	82	.12	1.6			.17	2.2	.19	3.3	.23	
29	.10	.82	.10	1.2	a	1.2	.16	2.5	XX	XXX	.23	
30	.10	.82	.10	1.2	.16	2.5	.15	2.2	XX	XXX	.24	
31	.10	82	XX	XXX	.17	2.2	.15	2.2	XX	XXX	.25	
Total												
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. [illegible]
Rating Table Used [illegible]

APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge	Day.
0.26	5.4	0.32	54 5.1	2.93	261	4.37	495	1.36	26	0.50	15	1
.27	5.8	.32	6.1	3.52	350	3.91	448?	1.34	25	.50	15	2
.26	5.4	.32	6.1?	3.44	338	3.85	454?	1.24	66	.50	15	3
.25	5.1	.32	6.1	3.47	342?	3.83	451?	1.20	63	.49	15	4
.25	5.1	.32	[illegible]	3.31	317	3.58	[illegible]	1.17	60	S	6.4	5
.26	5.4	.32	6.1	2.96	265	28 a	° 275?	1.04	50	.12	1.6	6
.25	5.1	.32	6.1	3.22	304	2.98	268	.96	44	.13	1.9	7
.25	5.1	.32 54	[illegible]	3.29	314	3.09	284	.95	43	.30	6.9?	8
.26	5.6?	.31 56	5.1	3.74	386	3.08	283	.93	42	.37	[illegible]	9
.26	5.4	.31	5.1	4.64	545?	3.03	[illegible]	.86	37?	.38	[illegible]	10
.26	5.4	26 .31	56 5.1	4.82	577?	2.97	267	S	12	.45	13	11
.25	5.1	.31	5.1	4.86	582?	2.93	261	.12	1.6	.42	12	12
.25	5.1	.32	5.4	4.91	595?	2.88	254	.12	1.6	.39	10	13
.25	5.1	.33	56 5.8	4.98	610	2.75	236	.14	2.0	.39	10	14
.26	5.4	S	20	4.99	612	2.41	191	.15	2.2	.40	11	15
.25	5.1	1.26	° 68	4.99	612	2.44	195	.17	2.7?	a	11	16
.26	5.4	1.34	75	4.98	610	2.98	268	S	9.3	a	12	17
.26	5.4?	1.49	88	4.93	600?	2.86	251	.80	33	.43	12	18
.26	[illegible]	a	82	4.89	592	2.38	187?	.80	33	S	7.5?	19
.26	[illegible]	|	87?	4.88	[illegible]	2.20	165?	.79	[illegible]	S	15?	20
.26	[illegible]	a	104	4.87	589	2.17	162	a	31	a	25	21
.27	5.8	1.67	106	4.86	587	2.08	151	|	30	.66	[illegible]	22
.25	5.1	1.60	99	4.90	594	S	96	|	29	.56	13?	23
.28	° 6.1	1.69	108	4.95	604	1.23	65	|	28	.32	7.6	24
.33	60 [illegible]	27 2.20	° 155?	4.98	610	1.58	92	|	25	.32	7.6	25
.33	22	2.39	188	4.99	612	1.59	90?	|	22	.32	7.6	26
.33	[illegible]	2.44	199?	4.86	[illegible]	[illegible]	[illegible]	a	20	.32	[illegible]	27
.33	[illegible]	2.15	159?	4.73	[illegible]	1.53	[illegible]	.53	[illegible]	.32	[illegible]	28
.33	[illegible]	1.81	121?	4.37	[illegible]	1.54	83?	.51	16	a	7.6	29
.32	54 [illegible]	1.91	132	4.40	500	1.51	80?	.50	15	a	7.6	30
XX	XXX	2.40	190	XX	XXX	1.43	[illegible]	29 .50	° 15	XX	XXX	31
[illegible]		[illegible]		15,151?		~~[illegible]~~ 6878		[illegible]		[illegible]		~~[illegible]~~ 26111

Quarter	Computed	Checked	Date
4th / 3rd / 2nd / 1st	D. DeYoung		

Quarter	Dis. appld.	Dis. check	Date
4th / 3rd / 2nd / 1st	D. DeYoung	JMS	Oct. 7, 1978

Quarter	G.H. appd.	G.H. check	Date

Water Year

Wurtz — River at / Creek near _____

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

Drainage area _____ square miles. Water stage recorder _____

Max. Discharge _____ sec.-ft. on _____ Min. Daily Discharge _____ sec.-ft. on _____

Max. G. H. 2.30 ft. at _____ on _____

Calendar 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		
Total												
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ______

Rating Table Used 6 FT. PARSHALL FLUME

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1				0	1.13	29	1.02	° 25	0.29	3.3		
2				0	1.18	31	.95	22	.25	2.6		
3				0	1.39	41	.88	20	.22	2.1		
4				0	1.32	40	.81	17	.21	2.0		
5				0	1.14	30	.76	15	.19	1.7		
6				0	1.18	31	.72	14	.18	1.6		
7				0	1.22	33	.66	12	.18	1.6		
8				0	1.21	33	.64	12	.17	1.4		
9				0	1.47	44	.64	12	.17	1.4		
10				0	1.81	62	.67	13	.17	1.4		
11				0	1.82	65	.63	11	.16	1.3		
12			S	.33	1.83	63	.61	11	.17	1.4		
13			.14	1.0	1.93	68	.56	9.5	.20	1.8		
14			S	2.2	1.94	69	.51	8.2	.19	1.7		
15			.33	4.1	1.97	71	.50	7.7	.20	1.8		
16			S	6.2	1.90	67	.58	10	.14	1.0		
17			S	7.2	1.22	57	.66	° 12	25 .12	° .82		
18			.36	4.7	1.59	50	.51	7.7	.12	.82		
19			.38	5.1	1.59	50	24 .46	6.7	.12	.82		
20			.52	8.5	23 1.54	° 48	.45	6.5	.11	.71		
21			.61	11	1.46	44	.42	5.8	.10	.61		
22			.60	11	1.49	45	.38	° 5.1	.10	.61		
23			.73	15	1.46	44	.36	4.7	.11	.71		
24			22 .88	° 20	1.44	43	.32	3.9	.09	.52		
25			.93	21	1.42	42	.31	3.7	S	.30		
26			.92	21	1.27	35	.29	3.3		0		
27			.96	22	1.16	30	[illegible]	[illegible]		0		
28			.87	17	1.14	30	.29	3.3		0		
29			.82	17	1.11	[illegible]	.33	4.1		0		
30			1.02	25	1.10	28	.31	3.7		0		
31	XX	XXX	1.09	28	XX	XXX	.27	3.0		0	XX	XXX
				251.83		1351		296.1		34.02		

Quarter		Computed	Checked	Date
Quarter	4th		TMS	
	3rd			
	2nd			
	1st		TMS	
Quarter		Dis.appld.	Dis.check	Date
	4th		TMS	
	3rd		TMS	
	2nd		TMS	
	1st		TMS	
Quarter		G.H.comp.	G.H.check	Date
	4th		TMS	
	3rd			
	2nd			
	1st		TMS	

Water Year 1978

1932.95

Larkspur

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ____

Rating Table Used 4 FT. PARSHALL FLUME

APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge	Day
					0	0.18	1.1	5	.28			1
					0	.15	.60	.15	.80			2
					0	.13	.36	.11	.49			3
					0	.12	.24	.12	[illegible]			4
					[illegible]	.11	.19	.12	[illegible]			5
					0	.12	.24	.11	.49			6
					0	.11	.19	.14	[illegible]			7
					0	17 .11	.19	.08	.30			8
					0	.13	.30	.08	.30			9
					0	.12	[illegible]	.08	.30			10
					0	.12	.24	.07	.24			11
					0	.11	.19	.08	.30			12
					0	.10	.19	.17	[illegible]			13
					0	.08	.19	.14	[illegible]			14
				5	1.2	.07	.14	.09	.36			15
				.31	2.5	.08	.19	.08	.30			16
				.28	2.2	.09	.24	.07	[illegible]			17
				.27	2.0	.09	.24	.06	[illegible]			18
				.26	1.9	.09	[illegible]	.05	.14			19
				.25	1.8	.08	[illegible]	.04	[illegible]			20
				.24	1.7	.08	.19	.03	[illegible]			21
				.21	1.4	.08	.19	.02	.03			22
				.20	1.3	.09	.24	.01	0			23
				.19	1.2	.09	.24	0	0			24
				.18	1.1	.08	.19		0			25
				.17	.98	.08	.19		0			26
				.17	[illegible]	.08	.19		0			27
				.17	[illegible]	.08	[illegible]		0			28
				.25	[illegible]	.08	[illegible]		0			29
				.21	1.4	.08	.19		0			30
XX	XXX			XX	XXX	.08	.19		0	XX	XXX	31
					29.44		7.73		6.91			44.33

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

Quarter	Dis. appl'd.	Dis. check	Date
4th		JMS	
3rd			
2nd			
1st		JMS	

Quarter	G.H. comp.	G.H. check	Date
4th		JMS	
3rd			
2nd			
1st		JMS	

Water Year 1978

Wurtz Ext

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No.

Rating Table Used 6 FT. PARSHALL FLUME

APR.		MAY		JUNE		JULY		AUG.		SEPT.		
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day.
				0.43	6.2	0.43	6.2	0.12	.82			1
				.46	7.0	.38	5.1	.12	.82			2
				.52	9.5	.36	4.7	.11	.71			3
				.53	8.7	.33	4.1	.11	.71			4
				.50	7.9	.31	3.7	.10	.61			5
				.53	8.7	a	3.5	.09	.52			6
				.53	8.7		3.3	.09	.52			7
				.53	8.7		3.2	.10	.61			8
				.57	9.8		3.0	.11	.71			9
				.73	14		2.8	.10	.61			10
				.77	16		2.6	.10	.61			11
				.80	17		2.5	.10	.61			12
				.87	19		2.3	.11	.71			13
				.87	19	a	2.0	.11	.71			14
				.91	21	.20	1.8	.11	[illegible]			15
				.88	20	.25	2.6	.09	.52			16
			0	.82	18	.27	3.0	.06	.27			17
			0	.76	15	.21	2.0	.08	.43			18
			0	.75	15	a	1.8	.08	.43			19
			0	.71	14		1.7	.07	.35			20
		S	.94	.68	13		1.6	.07	.35			21
		.22	2.1	.67	13		1.4	.07	.35			22
		.26	2.8	.65	12		1.3	S	.18			23
		.30	3.5	.65	12	a	1.2		0			24
		.29	3.3	.62	11	.14	1.0		0			25
		.33	4.1	.57	9.8	.13	.93		0			26
		.36	4.7	.52	8.5	.12	.82		0			27
		.34	4.3	.50	7.9	.13	.93		0			28
		.37	4.9	.48	[illegible]	.14	1.0		0			29
		.40	5.6	.48	7.4	.12	.82		0			30
XX	XXX	.42	6.0	XX	XXX	.12	.82		0	XX	XXX	31
		42.24		364.2		73[illegible]		12.87				1193.03

Quarter (Computed / Checked / Date): 4th JMS; 1st JMS

Quarter (Dis. appld. / Dis. check / Date): 4th JMS; 1st JMS

Quarter (G.H. copd. / G.H. check / Date): 4th JMS; 1st JMS

Water Year 1998

Busk Ivanhoe — River at / Creek near

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

Drainage area _____ square miles. Water stage recorder _____

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

Calendar 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	0.10	3 .92										
2	.10	.92										
3	.10	92										
4	.10	92										
5	.11	1.1										
6	.13	3 1.4										
7	.18	2.0										
8	.20	2.1										
9	.19	2.2										
10	.18	2.0										
11	.17	1.8										
12	.16	1.7										
13	.15	1.5										
14	.15	1.5										
15	.16	1.7										
16	.16	1.7										
17	.15	1.5										
18	.15	1.5										
19	.14	1.4										
20	.14	1.4										
21	.13	1.3										
22	.12	1.1										
23	.12	1.1										
24	.12	1.1										
25	.11	.92										
26	.11	.92										
27	.10	.92										
28	.10	.92										
29	.10	.92										
30	.10	.92							XX	XXX		
31	5	0 .46	XX	XXX					XX	XXX		
Total		10.111										
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ____________

Rating Table Used 8 FT. PARSHALL FLUME

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1				0	0.73	19	1.77	80	0.33	5.4	0.09	.67
2				0	.86	25	1.76	77	.36	6.2	.08	.55
3				0	1.01	33	1.74	[illegible]	.33	5.0	.08	.55
4				0	1.09	37	1.68	71	.30	4.6	.08	[illegible]
5				0	.98	31	1.62	[illegible]	.28	4.1	.07	.45
6				0	.96	30	1.53	63	.27	3.9	.07	.45
7				0	1.16	41	1.40	55	.25	3.4	.07	.45
8				0	1.19	42	1.28	[illegible]	.23	3.0	.07	[illegible]
9			S	1.1	1.25	[illegible]	1.18	42	.23	3.0	.07	[illegible]
10			.22	2.8	1.45	58	1.21	[illegible]	.22	2.8	.07	[illegible]
11			.22	2.8	1.54	64	1.18	40	.21	2.6	.07	[illegible]
12			.23	3.0	1.64	71	1.19	40	.21	2.6	.07	[illegible]
13			.23	3.0	1.75	79	1.16	41	.23	[illegible]	.06	[illegible]
14			.23	3.0	2.00	[illegible]	a	34	.25	3.4	.06	[illegible]
15			.26	3.7	2.26	110		31	.27	3.9	.06	[illegible]
16			.32	5.1	2.38	120	a	25	25 .25	3.4	.06	[illegible]
17			.37	6.5	2.18	112	.89	22	.22	2.8	.06	[illegible]
18			.36	6.2	2.09	105	.85	[illegible]	.19	2.2	.07	.45
19			.36	6.2	2.02	99	24 .84	20	.17	1.8	.07	.45
20			.38	6.8	2.09	[illegible]	.77	[illegible]	.16	1.7	.08	.50
21			.42	7.7	23 2.24	117	.68	17	.15	1.5	.09	.57
22			.43	8.2	2.30	122	.62	15	.14	1.4	.10	[illegible]
23			.44	8.6	2.32	124	.56	13	.14	1.4	.09	.57
24			.48	7.8	2.22	115	.51	11	.12	1.1	.09	.52
25			.53	12	2.13	108	.47	[illegible]	.12	1.1	.08	[illegible]
26			.57	13	2.00	97	.43	8.2	.13	1.2	.07	[illegible]
27			.59	14	1.92	[illegible]	.42	7.9	.13	1.2	.07	[illegible]
28			.58	[illegible]	1.83	[illegible]	.42	7.9	.11	[illegible]	.07	[illegible]
29			.54	12	1.77	[illegible]	.42	[illegible]	.10	.90	.07	.45
30			.55	12	1.74	[illegible]	.38	6.8	.10	.90	.07	.45
31	XX	XXX	.65	11	XX	XXX	.33	[illegible]	.09	.92	XX	XXX
Total				151.7		2359		1082		81.92		14.72

Grand total: 3222.23

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

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

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

Water Year 1998

EWING — River at / Creek near

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

Drainage area _____ square miles. Water stage recorder _____

Max. Discharge ____ Sec. ft. at ____ on ____ Max. G. H. ____ ft. at ____ on ____ Min. Daily Discharge ____ sec.-ft. on ____ G. H. ____ ft. on ____ Calendar 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	0.13	.40										
2	.13	.40										
3	.13	.40										
4	.13	.40										
5	.14	.42										
6	.14	.42										
7	.16	.64										
8	.15	.56										
9	.14	.49										
10	.15	.54										
11	.12	.36										
12	.12	.36										
13	.13	.40										
14	.14	.42										
15	.13	.40										
16	.14	.42										
17	.13	.40										
18	.13	.40										
19	.13	.40										
20	.13	.40										
21	5	.10										
22		0										
23		0										
24		0										
25		0										
26		0										
27		0										
28		0										
29		0										
30		0							XX	XXX		
31		0	XX	XXX					XX	XXX		
Total		1.23										
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used 4 FT PARSHALL FLUME

Day.	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1					0.69	8.1	0.67	7.7	0.32			
2					.75		.63	7.0	.30			
3					.76		.62	6.8	.29			
4					.78		.60		.28			
5					.78		.59		.28			
6					.79		.57		.27			
7					.79		.53		.27			
8					.79		.53		.27			
9					.83		.52		.27			
10					.92		.51		.26			
11					1.00		.50		.26			
12			S		1.06		.47		.27			
13			.17	.64	1.10		.45		.28			
14			.23		1.14		.41		.26			
15			.32		1.17		.41		.26			
16			.41		1.20		.42		.24			
17			.46		1.19		.43		22 .24			
18			a		1.15		.40		.23			
19			a		1.12		26 .38		.23			
20			.43		25 1.07		.38		.23			
21			.47		1.02		.38		.23			
22			.48		.97		.37		.23			
23			.55		.93		.36		.22			
24			24 .61		.91		.34		.22			
25			.62		.87		.33		S			
26			.62		.83		.32			0		
27			.60		.79					0		
28			.58		.26		.32					
29			.62		.73		.32					
30			.66		.71		.31			0		
31	XX	XXX	.67		XX	XXX	.30				XX	XXX

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

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

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

Water Year 1988

655.55

— COLUMBINE River at Creek near —

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

Drainage area _____ square miles. Water stage recorder _____

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

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

Calendar 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		
Total												
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ______

Rating Table Used 6 FT. PARSHALL FLUME

APR.		MAY		JUNE		JULY		AUG.		SEPT.		
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day
			0	S	10	0.84	16	0.24	2.3			1
			0	.66	11	.79	15	.22	2.0			2
			0	.71	12	.75	14	.21	1.8			3
			0	.65	11	.68	11	.20	1.8			4
			0	.50	[illegible]	.63	10	.18	1.6			5
			0	.51	7.0	.58	7.7	.18	1.6			6
			0	.63	10	.56	8.0	.17	1.4			7
			0	.62	9.8	.53	7.4	.17	1.4			8
			0	.87	17	.53	7.0	.16	1.3			9
			0	1.18	29	.54	7.2	.16	1.3			10
			0	1.25	32	.52	7.2	.17	1.4			11
			0	1.32	35	.51	7.0	.17	1.4			12
			0	1.38	38	.48	[illegible]	.19	1.7			13
			0	1.45	41	.45	[illegible]	.18	1.6			14
			[illegible]	1.51	44	.46	[illegible]	.19	1.7			15
			0	1.44	41	.50	6.9	.16	1.3			16
			0	1.28	33	.52	7.2	.14	1.0			17
			0	1.25	32	.44	[illegible]	.14	1.0			18
			0	1.34	36	16 .41	4.9	.13	.92			19
			0	15 1.32	35	.41	[illegible]	.13	.92			20
		S	.53	1.31	35	.36	[illegible]	.12	.82			21
		.19	1.7	S	39	.33	[illegible]	.12	.82			22
		.23	2.1	1.28	33	.31	[illegible]	S	.27			23
		.28	2.8	1.23	31	.28	2.8		0			24
		.40	[illegible]	1.16	28	.27	2.6		0			25
		.43	5.1	1.03	23	.26	2.5		0			26
		.41	[illegible]	.95	20	[illegible]	[illegible]		[illegible]			27
		.32		.93	[illegible]	.27	[illegible]		[illegible]			28
		.36	3.7 [illegible]	.95		.26	[illegible]		[illegible]			29
		.41	[illegible]	.99	[illegible]	.24	2.3		0			30
XX	XXX	.48	[illegible]	XX	XXX	.23	[illegible]		0	XX	XXX	31
			39.03		[illegible]		[illegible]		[illegible]			

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

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

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

Water Year [illegible]

1028.1

BOUSTEAD TUNNEL

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used 15 FT. PARSHALL FLUME

Day.	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1		0	S	4.2	2.60	262	3.58	445	1.06	63		
2		0		0	2.78	292	3.45	419	1.15	22		
3		0		0	2.93	323	3.34	398	1.06	63		
4		0		0	2.91	319	3.14	361	.98	56		
5				0	2.55	259 286	2.93	373	.78	39		
6				0	2.63	272	2.79	299	.62	27		
7				0	2.83	305	2.70	283	.56	23		
8				0	2.76	293	2.68	280	.51	20		
9				0	3.28	382	2.72	287	.45	16		
10				0	4.05	542	2.83	305	.42	14		
11				0	4.21	577	2.74	290	.43	15		
12				0	4.14	561	2.66	277	.43	15		
13				0	4.37	612	2.49	249	.45	16		
14				0	4.56	655	2.38	232	.46	17		
15			S	24	4.74	697	2.34	225	.53	21		
16			1.11	68	4.61	662	2.29	218	23 .45	16		
17			1.42	101	4.26	588	2.66	277	S	70		
18			1.33	91	4.04	542	2.28	216		0		
19		0	1.22	79	4.14	561	22 2.10	190		0		
20		0	1.38	97	4.17	565	1.98	177		0		
21		0	1.58	120	4.23	581	1.90	161		0		
22		0	1.47	107	4.41	621	1.75	142		0		
23		0	1.72	138	4.49	639	1.63	126		0		
24		0	20 2.17	200	4.66	678	1.47	107		0		
25		0	2.31	221	4.70	688	1.34	97		0		
26			2.29	218	4.24	583	1.15	83		0		
27		27	2.28	216	3.98	[illegible]	[illegible]	[illegible]		[illegible]		
28		27	1.88	169	3.90	[illegible]	1.18	85				
29		27	1.75	142	3.89	[illegible]	1.08	65		0		
30		27	2.13	194	3.87	504	1.01	59		0		
31		XXX	2.42	238	XX	XXX	92	[illegible]		0	XX	XXX
		29.9		2417.2		15129		6785		~~[illegible]~~ 500.0		24861.1

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

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

Quarter: 4th, 3rd, 2nd, 1st — G.H.appld. — G.H.check JMS — Date

Water Year [illegible]

WINTERS TUNNEL Creek near [illegible]

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

Drainage area _____ square miles. Water stage recorder _____

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

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

Day.	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.32	0 2.6	25 0.10	Ice .82	0.10	1.2	0.17	2.2	0.15	2.2	0.20	[illegible]
2	.32	2.6	.22	0 1.2	.10	1.2	.17	2.2	.15	2.2	.21	[illegible]
3	.32	2.6	.31	2.2	.10	1.2	.16	2.5	.15	2.2	.21	[illegible]
4	S	6.2	.30	6.8	.10	[illegible]	.19	3.3	.14	2.0	.21	[illegible]
5	.11	1.4	.28	6.1	.10	[illegible]	[illegible]	[illegible]	.14	[illegible]	.21	[illegible]
6	.13	[illegible]	.27	[illegible]	.10	[illegible]	[illegible]	[illegible]	.15	[illegible]	.21	[illegible]
7	.16	[illegible]	S	[illegible]	.10	[illegible]	[illegible]	[illegible]	.15	[illegible]	.21	[illegible]
8	.18	3.0	S	14	.10	1.2	.19	3.3	.15	2.2	.21	[illegible]
9	.18	3.0	.11	1.4	.10	1.2	.18	3.0	.15	[illegible]	.20	[illegible]
10	.18	3.0	S	[illegible]	.10	[illegible]	.17	2.2	.15	2.2	.20	[illegible]
11	.18	3.0	.52	16	.10	[illegible]	.18	3.0	.15	2.2	.20	[illegible]
12	.18	3.0	.52	16	.10	1.2	a	3.0	.15	[illegible]	.20	[illegible]
13	.18	3.0	S	8.0	.10	1.2		3.0	.15	[illegible]	.20	[illegible]
14	.19	3.3	.11	1.4	.10	1.2		3.0	.15	[illegible]	.20	[illegible]
15	.19	3.3	.26	[illegible]	.10	[illegible]		3.0	.15	[illegible]	.20	[illegible]
16	.19	3.3	.30	6.8	.10	[illegible]		3.0	.15	[illegible]	.20	[illegible]
17	.19	3.3	.14	2.0	.10	[illegible]		2.2	.15	[illegible]	.20	[illegible]
18	.19	[illegible]	.15	2.2	.10	1.2		2.2	.15	[illegible]	.21	[illegible]
19	.19	[illegible]	.17	[illegible]	.10	[illegible]		[illegible]	.15	[illegible]	.21	[illegible]
20	.23	4.4	.17	[illegible]	.10	[illegible]		[illegible]	.17	[illegible]	.21	[illegible]
21	.30	6.8	.16	[illegible]	.10	[illegible]	[illegible]	2.2	.18	3.0	.21	[illegible]
22	.30	6.8	.16	[illegible]	a	1.2	a	[illegible]	.18	[illegible]	.22	[illegible]
23	.30	6.8	.15	[illegible]		1.2	.17	2.2	.17	[illegible]	.22	[illegible]
24	S	[illegible]	.15	[illegible]		[illegible]	.17	[illegible]	.17	[illegible]	.22	[illegible]
25	S	[illegible]	.15	[illegible]		[illegible]	.17	[illegible]	.17	[illegible]	.22	[illegible]
26	.35	0 2.2	.15	2.2		[illegible]	.16	[illegible]	.18	[illegible]	.23	[illegible]
27	S	0 4.0	.15	[illegible]		[illegible]	.17	[illegible]	.18	[illegible]	.23	[illegible]
28	.10	Ice .82	.12	[illegible]		[illegible]	.17	[illegible]	.19	[illegible]	.23	[illegible]
29	.10	.82	.10	[illegible]	a	1.2	.16	[illegible]	XX	XXX	.23	[illegible]
30	.10	.82	.10	0 1.2	.16	[illegible]	.15	[illegible]	XX	XXX	.24	[illegible]
31	.10	Ice .82	XX	XXX	.17	[illegible]	.15	[illegible]	XX	XXX	.25	[illegible]
Total		120.48		143.02		40.0		87.8		67.5		122.1
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

alendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. [illegible]
Rating Table Used [illegible]

APR.		MAY		JUNE		JULY		AUG.		SEPT.		
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day
0.26	5.4	0.32	54 6.1	2.93	261	4.37	495	1.36	76	0.50	15	1
.27	5.8	.32	6.1	3.52	350	3.91	410	1.34	75	.50	15	2
.26	5.4	.32	6.1	3.44	338	3.85	400	1.24	66	.50	15	3
.25	5.1	.32	6.1	3.47	342	3.83	401	1.20	63	.49	15	4
.25	5.1	.32	6.1	3.31	317	3.58	[illegible]	1.17	60	S	6.6	5
.26	5.4	.32	6.1	2.96	265	28 a	° 298	1.04	50	.12	1.6	6
.25	5.1	.32	6.1	3.22	304	2.98	268	.96	44	.13	1.9	7
.25	5.1	.32 54	6.1	3.29	314	3.09	284	.95	43	.30	6.9	8
.26	5.4	.31 56	5.1	3.74	386	3.08	283	.93	42	.32	7.4	9
.26	5.4	.31	5.1	4.64	546	3.03	[illegible]	.86	37	.38	9.9	10
.26	5.4	26 .31	56 5.1	4.82	577	2.97	267	S	12	.45	13	11
.25	5.1	.31	5.1	4.86	587	2.93	261	.12	1.6	.42	12	12
.25	5.1	.32	5.4	4.91	596	2.88	251	.12	1.6	.39	10	13
.25	5.1	.33	56 5.8	4.98	610	2.75	236	.14	2.0	.39	10	14
.26	5.4	S	v 20	4.99	612	2.41	191	.15	2.2	.40	11	15
.25	5.1	1.26	° 68	4.99	612	2.44	195	.17	2.7	a	11	16
.26	5.4	1.34	75	4.98	610	2.98	258	S	9.3	a	12	17
.26	5.4	1.49	88	4.93	600	2.86	251	.80	33	.43	12	18
.26	5.4	a	82	4.89	592	2.38	182	.80	33	S	9.5	19
.26	[illegible]	|	87	4.88	590	2.20	165	.79	32	S	13	20
.26	[illegible]	a	104	4.87	589	2.17	162	a	31	a	25	21
.27	5.8	1.67	106	4.86	587	2.08	151	|	30	.66	24	22
.25	5.1	1.60	99	4.90	594	S	96	|	29	.56	18	23
.28	° 6.1	1.69	108	4.95	604	1.23	65	|	28	.32	7.6	24
.33	60 9.9	27 2.20	° 165	4.98	610	1.58	92	|	25	.32	7.6	25
.33	9.9	2.39	188	4.99	612	1.59	[illegible]	|	22	.32	7.6	26
.33	[illegible]	2.44	199	4.86	[illegible]	1.5[illegible]	[illegible]	a	20	.32	[illegible]	27
.33	[illegible]	2.15	159	4.73	[illegible]	1.53	[illegible]	.53	[illegible]	.32	[illegible]	28
.33	[illegible]	1.81	131	4.37	[illegible]	1.54	93	.51	16	a	7.6	29
.32	54 [illegible]	1.91	132	4.40	500	1.51	90	.50	15	a	7.6	30
X	XXX	2.40	190	XX	XXX	1.43	83	29 .50	° 15	XX	XXX	31
170.5		2067.4		15,151		═		933.4		329.8		~~[illegible]~~
						6878						26,111

Quarter: 4th, 3rd, 2nd, 1st — Computed / Checked / Date: D. DeYoung

Quarter: 4th, 3rd, 2nd, 1st — Drs. appld. / Drs. check / Date

Quarter: 4th, 3rd, 2nd, 1st — G.H. copd. / G.H. check / Date: D. DeYoung, JMS, JMS, Dec. 7, 1978

Water Year

WURTZ

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No.

Rating Table Used 6 FT. PARSHALL FLUME

APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge	Day.
			0	1.13	29	1.02	° 25	0.29	3.3			1
			0	1.18	31	.95	22	.25	2.6			2
			0	1.39	41	.88	20	.22	2.1			3
			0	1.37	40	.81	17	.21	2.0			4
			0	1.14	30	.76	15	.19	1.7			5
			0	1.18	31	.72	14	.18	1.6			6
			0	1.22	33	.66	12	.18	1.6			7
			0	1.21	33	.64	12	.17	1.4			8
			0	1.47	44	.64	12	.17	1.4			9
			0	1.81	62	.67	13	.17	1.4			10
			0	1.87	65	.63	11	.16	1.3			11
		S	.33	1.83	63	.61	11	.17	1.4			12
		.14	1.0	1.93	68	.56	7.5	.20	1.8			13
		S	2.2	1.94	69	.51	8.2	.19	1.7			14
		.33	4.1	1.97	71	.50	7.9	.20	1.8			15
		S	6.2	1.90	67	.58	10	.14	1.0			16
		S	7.2	1.72	57	.66	° 12	25 .12	° .82			17
		.36	4.7	1.59	50	.51	01 7.9	.12	.82			18
		.38	5.1	1.59	50	24 .46	01 6.7	.12	.82			19
		.52	8.5	23 1.54	° 48	.45	6.5	.11	.71			20
		.61	11	1.46	44	.42	51 5.8	.10	.61			21
		.60	11	1.49	45	.38	° 5.1	.10	.61			22
		.23	15	1.46	44	.36	4.7	.11	.71			23
		22 .88	° 20	1.44	43	.32	3.9	.09	.52			24
		.93	21	1.42	42	.31	3.7	S	.30			25
		.92	21	1.27	35	.29	3.3		0			26
		.96	22	1.16	[illegible]	[illegible]	[illegible]		0			27
		.87	[illegible]	1.14	30	.29	[illegible]		0			28
		.87	[illegible]	1.11	[illegible]	.33	4.1		0			29
XX	XXX	1.02	25	1.10	28	.31	3.7		0			30
		1.09	28	XX	XXX	.27	3.0		0	XX	XXX	31
			251.33		1351		296.1		34.02			

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

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

Quarter		G.H.comp.	G.H.check	Date
4th			TMS	
3rd				
2nd				
1st			TMS	

Water Year 1978

1932.45

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Larkspur

Sta. No. _____

Rating Table Used 4 FT. PARSHALL FLUME

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1						0	0.18	0 1.1	5	V .78		
2						0	.15	.60	.15	0 .80		
3						0	.13	.36	.11	.49		
4							.12	.24	.12			
5							.11	.19	.12			
6						0	.12	.24	.11	.49		
7						0	.11	.19	.14			
8						0	[19] .11	.19	.08	.30		
9						0	.13	.30	.08	.30		
10						0	.12		.08			
11						0	.12	.24	.07	.24		
12						0	.11	.19	.08	.30		
13						0	.10	.19	.17			
14						0	.08	.19	.14			
15					5	0 1.2	.07	.19	.09			
16					.31	2.5	.08	.19	.08			
17					.28	2.2	.09	.24	.07			
18					.27	2.0	.09	.24	.06			
19					.26	1.9	.09	.24	.05	.14		
20					.25	1.8	.08	.19	.04			
21					.24	1.7	.08	.19	.03			
22					.21	1.4	.08	.19	.02	.03		
23					.20	1.3	.09	.24	.01	0		
24					.19	1.2	.09	.24	0	0		
25					.18	1.1	.08	.19		0		
26					.17	.98	.08	.19		0		
27					.17			.19		0		
28					.17		.08			0		
29					.25		.08			0		
30					.21	0 1.4	.08	.19		0		
31	XX	XXX			XX	XXX	.08	.19		0	XX	XXX
						24.44		7.93		8.96		

Day. | 4th | 3rd | 2nd | 1st | Quarter | Computed | Checked | Date

JMS

Dis.appld. | Dis.check | Date

G.H.used | G.H.check | Date

Water Year 1923

41.33

DUSK LUANNOE Creek near

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

Drainage area square miles. Water stage recorder

Day	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.10	.92										
2	.10	.92										
3	.10	.92										
4	.10	.92										
5	.11	1.1										
6	.13	1.4										
7	.18	2.0										
8	.20	2.4										
9	.19	2.2										
10	.18	2.0										
11	.17	1.8										
12	.16	1.7										
13	.15	1.5										
14	.15	1.5										
15	.16	1.7										
16	.16	1.7										
17	.15	1.5										
18	.15	1.5										
19	.14	1.4										
20	.14	1.4										
21	.13	1.2										
22	.12	1.1										
23	.12	1.1										
24	.12	1.1										
25	.11	.92										
26	.11	.92										
27	.10	.79										
28	.10	.79										
29	.10	.79										
30	.10	.79							XX	XXX		
31	S	.46	XX	XXX					XX	XXX		
Total		40.44										
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

G. H. ft. on sec.-ft. on Min. Daily Discharge

Max. G. H. ft. at on

dar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used 8 FT. PARSHALL FLUME

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1				0	0.73	19	1.77	30	0.33	5.4	0.09	.62
2				0	.86	25	1.76	29	.36	6.2	.08	.56
3				0	1.01	33	1.74	28	.33	5.0	.08	.56
4				0	1.09	37	1.68	24	.30	4.6	.08	.56
5				0	.98	31	1.62	69	.28	4.1	.07	.45
6				0	.96	30	1.53	63	.27	3.9	.07	.45
7				0	1.16	41	1.40	55	.25	3.4	.07	.45
8				0	1.19	42	1.28	48	.23	3.0	.07	.45
9			S	1.1	1.25	46	1.18	42	.23	3.0	.07	.45
10			.22	2.2	1.45	58	1.21	43	.22	2.8	.07	.45
11			.22	2.8	1.54	64	1.18	42	.21	2.6	.07	.45
12			.23	3.0	1.64	71	1.19	42	.21	2.6	.07	.45
13			.23	3.0	1.75	79	1.16	41	.23	3.0	.06	.39
14			.23	3.0	2.00	97	a	34	.25	3.4	.06	.39
15			.26	3.5	2.26	119		31	.27	3.9	.06	.39
16			.32	5.1	2.38	129	a	28	25 .25	0 3.4	.06	.39
17			.37	6.5	2.18	112	.89	22	.22	2.8	.06	.39
18			.36	6.2	2.09	105	.85	20	.19	2.3	.07	.45
19			.36	6.2	2.02	99	24 .84	0 20	.17	1.9	.07	.45
20			.38	6.8	2.09	106	.77	17	.16	1.7	.08	.50
21			.42	7.9	23 2.24	0 117	.68	13	.15	1.5	.09	.56
22			.43	8.2	2.30	122	.62	15	.14	1.4	.10	.62
23			.44	8.6	2.32	124	.56	13	.14	1.4	.09	.56
24			.48	7.8	2.22	115	.51	11	.12	1.1	.09	.56
25			.53	12	2.13	108	.47	9.4	.12	1.1	.08	.50
26			.57	13	2.00	97	.43	8.2	.13	1.2	.07	.45
27			.59	14	1.92	[illegible]	.42	7.9	.13	1.2	.07	[illegible]
28			.58	13	1.83	[illegible]	.42	7.9	.11	[illegible]	.07	[illegible]
29			.54	12	1.77	[illegible]	.42	7.9	.10	[illegible]	.07	.45
30			.55	12	1.74	[illegible]	.38	6.8	.10	.79	.07	.45
31	X	XXX	.65	17	XX	XXX	.33	4.1	.09	1.2	XX	XXX
			176.7		2359		1055.6		81.27		14.72	

Day. 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 31

Quarter: 4th 3rd 2nd 1st

Computed _____ Checked JMS Date _____

Quarter: 4th 3rd 2nd 1st

Dis.appld. _____ Dis.check JMS Date _____

Quarter: 4th 3rd 2nd 1st

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

Water Year 1993

3727.73

EWING

River at
Creek near

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

Drainage area _____ square miles. Water stage recorder _____

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

Day.	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.13	.40										
2	.13	.40										
3	.13	.40										
4	.13	.40										
5	.14	.42										
6	.14	.42										
7	.16	.54										
8	.15	.56										
9	.14	.49										
10	.15	.51										
11	.12	.38										
12	.12	.38										
13	.13	.40										
14	.14	.42										
15	.13	.40										
16	.14	.42										
17	.13	.40										
18	.13	.40										
19	.13	.40										
20	.13	.40										
21	5	.10										
22		0										
23		0										
24		0										
25		0										
26		0										
27		0										
28		0										
29		0										
30		0							XX	XXX		
31		0	XX	XXX					XX	XXX		
Total		9.23										
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used 4 FT PARSHALL FLUME

Day.	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1					0.69	8.1	0.67	7.7	0.32	2.0		
2					.75		.63	7.0	.30	1.9		
3					.76		.62	6.8	.29	1.8		
4					.78	10	.60	6.4	.28	1.7		
5					.78	10	.59		.28			
6					.79	10	.57					
7					.79	10	.53		.27			
8					.79	10	.53		.27			
9					.83	11	.52		.27			
10					.92	13	.51		.26			
11					1.00	15	.50		.26			
12			S		1.06		.47		.27			
13			.17	.64	1.10		.45		.28			
14			.23	1.2	1.14		.41		.26			
15			.32		1.17		.41		.26			
16			.41		1.20		.42		.24			
17			.46		1.19		.43		[22] .24			
18			a		1.15		.40		.23			
19			a		1.12		[24] .38		.23			
20			.43		[25] 1.07		.38		.23			
21			.47		1.02		.38		.23			
22			.48		.97		.37		.23			
23			.55		.93		.36		.22			
24			[24] .61		.91		.34		.22			
25			.62		.87		.33		S			
26			.62		.83		.32					
27			.60		.79							
28			.58		.76		.32					
29			.62		.73		.32					
30			.66		.71		.31					
31	XX	XXX	.67		XX	XXX	.30				XX	XXX
			89.64		398.8		121.5		36.38			

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

Quarter: 4th / 3rd / 2nd / 1st — Dis.suppld. — Dis.check JMS — Date

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

Water Year 1988

655.55

COLUMBINE

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Rating Table Used 6 FT. PARSHALL FLUME

APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge	Day
			0	S	10	0.84	16	0.24	2.3			1
			0	.66	11	.79	15	.22	2.0			2
			0	.71	12	.75	14	.21	1.8			3
			0	.65	11	.68	11	.20	1.8			4
			0	.50	[illegible]	.63	10	.18	1.1			5
			0	.51	7.0	.58	9.7	.18	1.1			6
			0	.63	10	.56	8.2	.17	1.0			7
			0	.62	9.8	.53	7.4	.17	1.0			8
			0	.87	17	.53	7.0	.16	1.3			9
			0	1.18	29	.54	7.2	.16	1.3			10
			0	1.25	32	.52	7.2	.17	1.4			11
			0	1.32	35	.51	7.0	.17	1.4			12
			0	1.38	38	.48	6.2	.19	1.7			13
			0	1.45	41	.45	5.6	.18	1.6			14
			0	1.51	44	.46	5.9	.19	1.7			15
			0	1.44	41	.50	6.7	.16	1.3			16
			0	1.28	33	.52	7.2	.14	1.0			17
			0	1.25	32	.44	[illegible]	.14	1.0			18
			0	1.34	36	16 .41	4.9	.13	.92			19
			0	15 1.32	35	.41	4.9	.13	.92			20
		S	.53	1.31	35	.36	[illegible]	.12	.82			21
		.19	1.7	S	39	.33	3.5	.12	.82			22
		.23	2.1	1.28	33	.31	3.2	S	.27			23
		.28	2.8	1.23	31	.28	2.8		0			24
		.40	4.6	1.16	28	.27	2.6		0			25
		.43	5.1	1.03	23	.26	2.5		0			26
		.41	4.9	.95	20	[illegible]	[illegible]		0			27
		.32	[illegible]	.93	20	.27	[illegible]		0			28
		.36	3.7	.95	[illegible]	.26	[illegible]		0			29
		.41	4.9	.99	22	.24	2.3		0			30
XX	XXX	.48	6.0	XX	XXX	.23	2.1		0	XX	XXX	31
			39.03		761.5		196.2		31.37			1028.1

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

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

Quarter	G.H. appld.	G.H. check	Date
4th		JMS	
3rd			
2nd			
1st		JMS	

Water Year [illegible]

Chalk River (or Creek) near Nathrop

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

Max. G. H. _____ ft. at _____ on _____ Max. Discharge _____ Sec. ft. at _____ on _____ Min. Daily Discharge _____ on _____ Max. G. H. _____ ft. at _____ on _____ Min. G. H. 2.24 ft. on _____ sec.-ft. on _____

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	2.44	To 15	[160] 2.17	To 6.9	2.38	To 13	2.46	To 16	[167] a			
2	2.42	16	2.17	6.9	2.37	12	a					
3	2.42	16	2.17	6.9	2.43	16					2.39	To 14
4	2.39	To 14	2.14	6.6	2.44	16					2.39	
5	2.31	To 10	2.12	5.9	2.42						2.39	
6	[159] 2.31	To 10	2.14	6.3	2.47	16					2.40	
7	2.42	16	2.18	6.9	2.47	16					2.37	
8	2.31	To 10	2.16	6.3	2.47	To 15					2.29	To 13
9	2.24	To 7.9	2.17	6.6	a	15					2.05	To 3.9
10	2.27	9.0	2.21	7.9		15					1.95	To 3.6
11	2.27	To 9.0	2.17	6.6		15					1.96	
12	2.19	To 6.6	2.15	5.9		15					1.96	
13	2.18	6.3	2.17	6.6		15					1.96	
14	2.19	6.6	2.18	6.9		17					1.95	
15	2.26	9.0	2.19	To 7.9		17					1.95	
16	2.24	8.3	2.25	To 8.6		17			[164] a	15	1.97	9.0
17	2.23	8.0	2.27	To 9.0		17					[165] 1.98	To 3.9
18	2.22	To 7.6	2.27	To 9.0		17					1.99	
19	2.13	To 5.0	2.33	To 11		16					2.00	
20	2.13	5.0	2.35	To 12		16					2.00	
21	2.14	6.3	2.34	11							2.00	
22	2.15	6.6	2.35	12							2.01	
23	2.14	To 6.3	2.36	12		16					2.01	
24	2.20	To 7.6	2.36	To 12	a	15					2.01	
25	2.21	7.9	a	12	2.44	To 15		16			2.00	
26	2.20	7.6		12	2.44	15		15			2.00	
27	2.18	6.8		13	2.45	16					2.01	
28	2.19	7.2		13	2.44	15				15	2.01	
29	2.20	7.6		13	2.44	15			XX	XXX	2.01	
30	2.20	7.6	[161] a	To 13	[163] 2.44	To 15			XX	XXX	2.01	
31	2.19	To 7.2	XX	XXX	2.44	To 15	a	15	XX	XXX	2.01	To 3.6
Total		227.6		248.6		502		490		420		11.1
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used _____

APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.	
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		
2.01		2.11		3.04		3.20		2.63		2.30		1	4th
2.01	2.8	2.06	38	3.09		3.12		2.68		2.27		2	3rd
2.01		2.03		3.16		3.06		2.50		2.25		3	2nd
2.01		2.01		3.27		2.99		2.42		2.25		4	1st
2.01		2.00		3.20		2.98		2.32		2.27		5	
2.01	2.8	2.02		5		3.03		2.27		2.28		6	Quarter
2.01	2.8	2.03		2.96		3.01		2.24		2.36		7	
2.00	2.6	2.05		3.03		2.98		2.26		2.40		8	
2.04		2.02		3.17		2.98		2.40		2.36		9	4th
2.03		1.98		3.56		3.04		2.44		2.40		10	
2.01		1.98		3.72		3.07		2.45		2.36		11	3rd
2.01		1.98		3.72		2.95		2.49		2.39		12	
2.00	2.6	1.98		3.73		2.80		2.52		2.38		13	2nd
2.00		1.98		3.84		2.84		2.54		2.34		14	
2.00		2.01		3.92		2.80		2.50		2.35		15	1st
1.99	2.4	5		3.99		2.75		2.45		2.37		16	
2.00	2.6	2.60		3.98		2.78		2.42		2.38		17	Quarter
1.98		2.57		3.66		2.82		2.40		2.39		18	
1.98		2.53		3.54		2.78		2.41		2.41		19	
1.98		2.65		3.54		2.74		2.39		2.36		20	4th
1.98	2.3	2.65		3.48		2.73		2.30		2.31		21	
1.98	2.3	2.60		3.49		2.68		2.26		2.28		22	3rd
1.98	2.3	2.73		3.45		2.62		2.29		2.28		23	
1.98	2.3	2.82		3.43		2.63		2.29		2.27		24	2nd
1.99		2.90		3.50		2.63		2.30		2.28		25	
1.99		2.84		3.41		2.61		2.38		2.27		26	1st
2.05		2.85		3.28		2.62		2.50		2.13		27	
2.07	4.1	2.82		3.26		2.64		2.43		2.16		28	Quarter
2.08	4.4	2.78		3.24		2.69		2.27		2.17		29	
2.13		2.88		3.27		2.68		2.25		2.18		30	
XX	XXX	2.93		XX	XXX	2.66		2.23		XX	XXX	31	

Computed _____ Checked _____ Date _____

Dis.appld. _____ Dis.check _____ Date _____

G.H.accpt. _____ G.H.check _____ Date _____

Water Year 1978

COTTON WOOD River or Creek near Buena Vista

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

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

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	1.07		[164] 1.10		S		S		[163] 1.11		0.88	
2	1.07		S	3.2	S		S		S		.89	
3	1.07		1.07		1.32		S	16	S		.87	
4	1.07		1.07		1.32		1.46		1.09		S	
5	1.08		S	2.3	S				S		.85	
6	[159] S		S		S		1.44		1.10		.77	
7	S		S	9.7	S		S		1.08		.76	
8	S		1.27		1.24		S		1.01		.77	
9	1.03		S		S		1.44		S		.76	
10	1.03		1.71		1.27		1.44		.99		.76	
11	1.03		1.77		1.26		1.39		.93		.76	
12	1.03		1.78		1.27		1.24		.90		.76	
13	S		1.77		S		S		S		.71	
14	S		1.73		S		[164] S		S		.65	
15	S		1.73		1.41		1.22		S		.51	
16	S		d		[162] S		1.20		[166] S		S	
17	S				S		1.17		S		[167] .59	
18	1.04				1.46		S		S		.57	
19	1.03				S		S		S		.59	
20	S				S		1.17		S		S	
21	S				S		1.13		S		.58	
22	S		d		S		S		S		.58	
23	1.06		1.35		1.43		S		S		.60	
24	1.06		1.04	8.5	1.45		S		1.17		.59	
25	1.07		1.23		S		S		1.15		.55	
26	1.07		1.33		S		1.18		1.15		.51	
27	1.07		S		S		1.08		1.02		.47	
28	1.08		1.23		1.43		S		.87		.46	
29	S		1.20		[163] 1.44		S		XX	XXX	.48	
30	S		[161] 1.20		1.43		1.12		XX	XXX	.45	
31	1.07		XX	XXX	1.42		1.12		XX	XXX	.43	
Total												
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used _____

APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.	
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		
0.20		0.19		S		2.39		0.52		0.30		1	4th
.20		.18	.42	S	18	2.27	90	.58	1.3	.28	.77	2	3rd
.15		.18		S		2.29		[175] .58		.28		3	2nd
.15		.18		1.66		2.24		.58		.29		4	1st
.12		.18		1.65		2.15		.52		.28		5	Quarter
S	1.1	.18		S		2.07		.47		.28		6	
.58		.18		1.66		[173] 1.75		.47		.29		7	
S		.18		[171] 1.89		1.77		S	.94	S		8	
S		.17		2.07		1.75		S	5.5	.29		9	4th
.48		.17		S		1.82		1.08		.43		10	
.47		.17		S		1.84		S		.47		11	3rd
.50		[169] .19		2.13		1.72		1.52	17	.38		12	
.47		.18		2.42		1.63		1.66		.34		13	2nd
.40		.18		2.69		1.57		S		[178] .39		14	
.37		.20		S		1.48		S		.36		15	1st
.89		.33		S		1.51		.67	3.9	.36		16	
.25		S	5.3	2.80		S		S	3.0	.36		17	Quarter
.16		.18		2.61		S		[176] .52		.36		18	Dis.appld.
.13		.17		2.57		S		.48		.41		19	Dis.check
.14		.15		2.59		[174] 1.14		.42		.57		20	Date
.14		.16		2.55		.96		.41	1.7	.53		21	4th
.14		.16		[172] 2.68		.74		.45	2.0	.54		22	
.14		S		2.63		.62		.47	2.1	.50		23	3rd
.15		S		2.64		.57		.42		.48		24	
.15		[170] S		2.72		.57		.42		.49		25	2nd
.16		S	1.4	2.58		.26		.43		.38		26	
.17		S		2.47		.60		.41		.34		27	1st
.18		S		2.40		.69		.37		.34		28	Quarter
.18		S		2.42		.87		.37		.33		29	G.H.copd.
.19		S		2.45		.72		[177] .36		.33		30	G.H.check
XX	XXX	S	1.3	XX	XXX	.53		.35		XX	XXX	31	Date

Water Year 1978

LAKE FORK River at ~~Creek~~ near below Sugarloaf Dam

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

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

Calendar Year

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	0.43	9.5	[248] 0.25	26	0.44	12	0.55	16	0.92	53	a	
2	.43	9.5	.25	26	.47	12	.55	16	a		[255] a	
3	S	5.2	.25	26	.47	12	.72	31			.36	
4	.26	3.4	.25	26	.47	12	.88				.38	
5	.27		.25	26	.52		.88				.39	
6	[247] .27		.26	28	.58	20	.88				a	
7	S	5.3	.27		.58	20	.88					
8	.50	14	.27		.58	20	.88					
9	.53	16	.27	31	.52	16	.88					
10	.53	16	.27	31	.49	14	.88					
11	.53	16	.27	31	.49	14	.92					
12	.38	7.0	.27	31	.49	14	[252] .95	56	a			
13	.32	4.6	.27	31	.49	14	.95		.34			
14	.38	7.0	.27	31	.49	14	.95		.34			
15	.48	13	S	19	[250] .49		.95		[254] .34		a	
16	.48	13	.70	30	.45	11	.95		.34		[252] .39	
17	.48	13	[249] .70	30	.43	9.8	.95		.34		.39	
18	.48	13	.70	30	.43	9.8	.95		a		.39	
19	.48	13	.70	30	.48	12	.93				.39	
20	.48	13	.69	29	.55	16	.92				.39	
21	.48	13	.69	29	a	16	.92	56			.39	
22	.48	13	.69	29		16	.92	56	a		.32	
23	.48	13	.69	29		16	.92	56	.28	43	.28	
24	.48	13	.69	29		16	.92	56	.28		.28	
25	.48	13	.68	28		16	.92		.28		.28	
26	.48	13	.61	22		16	.92	56	.28		.28	
27	S	6.5	.61	22		16	.92		.28		.28	
28	.25	2.1	.69	29		16	.92		a	43	.28	
29	.25		.74	35	[251] a	16	.92		XX	XXX	S	
30	.25	2.6	S	21	.55	16	.92		XX	XXX	[252] .90	
31	.25		XX	XXX	.55	16	[253] .92		XX	XXX	.92	
Total		294.3		491.6		456		1694		49.6		32.1
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used _____

Day.	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1	0.95		1.33		1.59		1.93		S	164	S	7.9
2	.95		1.36		1.61		1.95		.64		.28	
3	.95		1.31		1.60		1.88		[262] .64		.28	
4	.95		1.30		1.72	301	1.79		.64		.28	
5	.95		1.21		1.75		a		.64		.28	
6	.95		1.17		1.61		[265]		.64		S	
7	.95		1.17		[262] 1.47				.64		.63	
8	.95		1.14		1.54	229			.64		a	
9	.95		1.13	97	1.59				.65			
10	.95		1.08		1.68		a		.66			
11	.95		[269] .99	66	1.86		1.73		.66			
12	.95		1.01		2.02	410	1.85		.66		a	
13	.95		1.03	72	[263] 1.97		1.94		.66		.58	
14	.97		1.03		1.95		1.94		.66		[274] .60	
15	.98		S	154	1.86		1.94		.66		.63	
16	.98		1.68		1.71		1.94		[268] .65		.63	
17	.98		1.75	293	1.67		1.94		.65	26	.63	
18	.98		1.58	236	1.57	233	1.94		.66		.63	
19	.98		1.47		1.68		1.94		.66		.63	
20	.98		1.42	197	1.74		[266] 1.97		.66		a	
21	.98		1.52		[264] 1.69		1.97		.66	26		
22	.98		1.52		1.79		1.97		.57	20		
23	.98		1.47		1.85	350	1.97		.48			
24	1.20		[261] 1.47		1.93		1.94		.48			
25	1.38		1.57		1.95		1.92		.48			
26	[259] 1.38		1.61	251	1.93		1.92		.48			
27	1.38		1.52		1.78		1.15		.48			
28	1.38		1.46		1.68		1.94		.48		a	
29	1.25		1.37		1.69		1.93		.48		.63	
30	1.22		1.38	175	1.80		1.93		[268] .48		.63	
31	XX	XXX	1.49		XX	XXX	1.93		.48		XX	XXX

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

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

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

Water Year 1978

Clear Creek near Below Clear Cr. Res

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1978

Drainage area ______ square miles. Water stage recorder ______

Max. Discharge ______ sec.-ft. at ______ ft. at ______ on ______

Max. G. H. ______ ft. on ______

Min. Daily Discharge ______ sec.-ft. on ______

Calendar Year

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1		30		3.0		5.0		[illegible]		12		
2		30		3.0		5.0		12		7.0	65	[illegible]
3		20		3.0		5.0		12		7.0		[illegible]
4		20		3.0		[illegible]		[illegible]		[illegible]		
5		20		3.0		[illegible]		[illegible]		[illegible]		
6		30		3.0		[illegible]		[illegible]		[illegible]		
7		30		3.0		10		10		[illegible]		
8		20		2.0		10		14		2.0		
9		20		2.0		10		[illegible]		[illegible]		[illegible]
10		15		2.0		10		10		[illegible]		
11		10		2.0		10		[illegible]		[illegible]		
12		10		2.0		[illegible]	63	[illegible]		[illegible]		
13		10		2.0		[illegible]		12		[illegible]		
14		10		2.0		[illegible]		12		[illegible]		[illegible]
15		10		1.9	62	[illegible]		12	64	5.0		
16		8.8		1.9		15		12		5.0		
17		8.8	61	1.9		15		12		5.0		[illegible]
18		8.8		1.9		15		12		5.0		
19		8.8		1.9		[illegible]		12		5.0		[illegible]
20	60	8.8		1.9		[illegible]		12		[illegible]		
21		5.0		1.9		15		[illegible]		[illegible]		
22		5.0		1.9		[illegible]		12		2.4		
23		5.0		2.0		15		12		10		[illegible]
24		5.0		2.0		15		[illegible]		[illegible]		
25		4.0		2.0		15		[illegible]		[illegible]		
26		4.0		2.0		[illegible]		12		[illegible]		[illegible]
27		4.0		5.0		12		12		[illegible]		[illegible]
28		3.0		5.0		12		12		[illegible]		
29		3.0		5.0		12		12	[illegible]	[illegible]		
30		3.0		5.0		12		12	XX	XXX	66	10
31		3.0	XX	XXX		[illegible]		12	XX	XXX		[illegible]
Total		383		73.2		[illegible]		384		200.4		[illegible]
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ______
Rating Table Used ______

APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge	Day
	19		20	1.96	83	2.05	96	a	14	a	20	1
	19		20	2.02	92	2.06	98		16		26	2
	19		30	2.04	[illegible]	2.17	[illegible]	a	39		26	3
	19		30	2.21	121	2.33	[illegible]	2.26	128		26	4
	40		32	2.29	134	2.34	143	a	147		26	5
	40		32	2.31	138	2.06	98		147		[illegible]	6
	[illegible]		32	2.33	141	1.86	70		147		[illegible]	7
	21		[illegible]	2.37	148	1.57	32		[illegible]		[illegible]	8
	20		[illegible]	2.52	175	1.28	[illegible]		147		[illegible]	9
	[illegible]		[illegible]	2.66	201	1.20	[illegible]		177		[illegible]	10
	[illegible]	1.53	31	3.09	283	1.23	12		[illegible]		[illegible]	11
	21	1.53	31	3.16	[illegible]	1.24	12		303		[illegible]	12
	43	1.46	25	3.17	299	1.28	14		233		[illegible]	13
	43	1.38	19	3.17	[illegible]	1.28	14		[illegible]		[illegible]	14
	[illegible]	1.48	27	3.18	301	1.28	[illegible]		264		[illegible]	15
	[illegible]	1.77	57	3.20	305	1.28	[illegible]		260		[illegible]	16
	21	1.88	71	3.22	309	1.28	14		263		[illegible]	17
	[illegible]	2.01	89	3.23	311	1.28	[illegible]		263		20	18
	21	2.19	116	3.23	[illegible]	1.42	[illegible]		263		21	19
	[illegible]	2.18	115	3.24	[illegible]	a	68		[illegible]		23	20
	21	2.07	98	3.25	[illegible]	S	115		266		[illegible]	21
	21	1.79	61	3.25	[illegible]	3.04	[illegible]		264		23	22
	[illegible]	1.79	61	3.31	[illegible]	2.92	212		[illegible]	a	19	23
	[illegible]	1.80	62	3.32	[illegible]	a	[illegible]		[illegible]	1.41	[illegible]	24
	[illegible]	1.84	67	3.32	[illegible]		216		[illegible]	1.44	[illegible]	25
	46	1.92	77	3.32	[illegible]		[illegible]		102	1.43	22	26
	[illegible]	1.97	[illegible]	3.25	[illegible]	a	[illegible]		[illegible]	1.42	[illegible]	27
	[illegible]	1.97	[illegible]	3.24	[illegible]	2.98	[illegible]		[illegible]	1.42	[illegible]	28
	[illegible]	1.97	[illegible]	S	[illegible]	S	[illegible]		34	1.42	[illegible]	29
	[illegible]	1.84	67	2.14	110	1.50	[illegible]		30	1.42	[illegible]	30
X	XXX	1.81	[illegible]	XX	XXX	1.48	[illegible]	a	[illegible]	XX	XXX	31
	[illegible]		1581		[illegible]		[illegible]		[illegible]		[illegible]	

Quarter			
4th			
3rd			
2nd			
1st			
Quarter	Computed	Checked	Date
4th			
3rd			
2nd			
1st			
Quarter	Dis.appld.	Dis.check	Date
4th			
3rd			
2nd			
1st			
Quarter	G.H.copd.	G.H.check	Date

Water Year 1978

Lake — River at / Creek near Below Twin Lakes

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

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

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	5	99	0.62	42	0.22	6.1	a	6.1	a	18	a	
2	1.14	117	.62	42	.23	6.1		6.1		31	[30]	
3	1.13	115	.62	42	.32	6.1		6.1		29		
4	1.13	115	.62	42	.22	6.1		6.1		30		
5	1.13	115	.62	42	.22	6.1						
6	1.04	101	.63	43	.22	6.1		6.1				
7	1.04	101	.76		.22	6.1		6.1				
8	1.04	101	.76	57	.32	6.1		6.1				
9	1.03	99	.76	57	.23	6.1		6.1				
10	1.03	99	.76	57	.22	6.1		6.1				
11	1.03	99	.76	57	.23	6.1		6.1				
12	1.03	99	.77	58	.21	6.1		6.1				
13	1.03	99	.77	58	.21	6.1		6.1				
14	1.03	99	.77		.21							
15	1.03	99	5		[28] .21			6.1				
16	1.03	99	.26		.23	6.1		6.1		40		
17	1.03	99	[17] .30		.28	6.1		6.1		42		
18	1.03	99	.30	10	.22	6.6		6.1				
19	1.03	99	.30	10	.22	6.6		6.1				
20	[26] 1.03	0	.30	10	.22	6.6		6.1				
21	.75		.28	9.0	.21	6.1		6.1				
22	.58		.28	9.0	.21	6.1		6.1				
23	.58	37	.27	8.4	.20	5.6		6.1				
24	.62	40	.23	6.6	.20	5.6		6.1				
25	.62		.23	6.6	.21	6.1		6.1				
26	.62		.22	6.1	.21	6.1		6.1				
27	.62		.22	6.1	a	6.1		6.1				
28	.62		.22	6.1		6.1		6.1	a			
29	.62		.22	6.1		6.1		6.1	XX	XXX		
30	.62		.22	6.1		6.1		6.1	XX	XXX	[31] a	
31	.62		XX	XXX	a	6.1	[29] a	6.1	XX	XXX	.99	
Total				863.9		190.1		189.1		990		1896
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ____________________

Rating Table Used ____________________

APR.		MAY		JUNE		JULY		AUG.		SEPT.		
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day.
0.98	[illegible]	2.12	322	2.59	[illegible]	3.71	[illegible]	1.63	207	1.47	133	1
98	[illegible]	2.08	313	2.62	450	3.22	[illegible]	S	[illegible]	1.68	222	2
.98	[illegible]	2.07	[illegible]	2.81	503	3.73	778	3.09	570	1.65	217	3
89	[illegible]	2.14	[illegible]	2.93	537	3.55	719	3.07	564	1.64	215	4
.80	41	2.12	[illegible]	2.97	[illegible]	3.41	674	3.05	560	1.63	[illegible]	5
80	[illegible]	2.08	313	2.98	553	3.22	624	3.02	[illegible]	1.62	[illegible]	6
84	[illegible]	S	33	2.82	[illegible]	3.17	609	3.00	[illegible]	1.62	[illegible]	7
.85	73	.43	24	2.78	495	S	316	2.98	[illegible]	1.72	[illegible]	8
86	[illegible]	.43	[illegible]	2.82	[illegible]	1.81	247	2.96	[illegible]	1.56	[illegible]	9
.86	[illegible]	.43	[illegible]	2.88	523	1.60	[illegible]	3.38	[illegible]	1.48	[illegible]	10
86	[illegible]	.43	24	2.99	[illegible]	1.47	177	3.52	700	1.56	[illegible]	11
86	[illegible]	.42	24	3.43	680	1.66	[illegible]	3.26	[illegible]	1.55	[illegible]	12
.86	[illegible]	.42	24	3.62	742	1.78	[illegible]	2.31	[illegible]	1.53	[illegible]	13
86	[illegible]	.42	[illegible]	4.18	[illegible]	1.79	[illegible]	S	[illegible]	1.17	[illegible]	14
.85	[illegible]	.42	[illegible]	4.33	[illegible]	1.80	[illegible]	3.46	[illegible]	1.17	[illegible]	15
85	[illegible]	.42	24	4.52	[illegible]	1.80	[illegible]	3.34	633	1.18	125	16
85	73	.42	24	4.67	1110	1.81	[illegible]	3.43	661	1.27	[illegible]	17
.85	73	.42	24	4.69	1120	1.82	[illegible]	3.44	[illegible]	1.26	139	18
85	[illegible]	.42	[illegible]	4.70	1120	1.82	[illegible]	S	[illegible]	1.26	139	19
S	[illegible]	.42	[illegible]	4.46	[illegible]	2.35	[illegible]	1.91	[illegible]	1.25	[illegible]	20
75	[illegible]	.42	[illegible]	4.41	[illegible]	2.58	[illegible]	2.01	[illegible]	1.41	[illegible]	21
73	[illegible]	.42	24	4.17	930	2.19	[illegible]	2.15	[illegible]	1.30	[illegible]	22
1.72	[illegible]	.67	50	4.14	919	2.18	329	2.18	330	1.26	139	23
58	[illegible]	1.08	112	3.72	[illegible]	2.18	329	2.17	[illegible]	1.26	[illegible]	24
1.44	[illegible]	1.50	191	3.77	[illegible]	2.18	[illegible]	2.11	[illegible]	1.25	[illegible]	25
44	[illegible]	1.76	[illegible]	3.80	[illegible]	2.17	[illegible]	1.28	149	1.25	[illegible]	26
[illegible]	73	1.99	[illegible]	3.70	[illegible]	2.18	[illegible]	1.28	[illegible]	1.24	[illegible]	27
S	[illegible]	2.07	[illegible]	3.62	[illegible]	2.14	[illegible]	1.28	[illegible]	1.23	[illegible]	28
08	[illegible]	2.08	[illegible]	4.28	[illegible]	1.71	[illegible]	1.28	140	1.22	[illegible]	29
2.03	[illegible]	2.41	[illegible]	4.16	[illegible]	1.50	[illegible]	1.28	[illegible]	1.22	[illegible]	30
X	XXX	2.59	[illegible]	XX	XXX	1.52	[illegible]	1.27	143	XX	XXX	31
3440		4650		23 067		11 [illegible]		13,301		4990		

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

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

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

Water Year 1978

CLEAR — River at Creek near Above Clear Cr. Res

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

Max. Discharge 605 ft. at ____ on ____ Max. G. H. ____ Sec. ft. at 0100 on ____ Min. Daily Discharge ____ sec.-ft. on ____ G. H. 2.83 ft on ____

Day.	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	0.91	22	0.83	15		12		9.0		8.0		7
2	.91	22	.83	15		12		9.0		8.0	502	
3	.90	21	.83	15		11		9.0		8.0		
4	.90	21	.83	15		11		9.0		8.0		
5	.89	20	.83	15		11		9.0				
6	496 .93	24	.84	16		10		9.0				
7	1.01	33	.86	18		10		9.0				
8	.96	27	.84	16		10		9.0				
9	.93	24	1.05	16		10		9.5				
10	.92	23	.99	15		10		9.5				
11	.90	21	.85	14		10		9.5				
12	.88	20	.82	14		10	497	7.5				
13	.88	20	.83	14		10		8.0		8.0		
14	.88	20	.82	14		10		9.0		10		
15	.88	20	.80	12	495	10		9.0	499	10		
16	.87	18	.80	12		10		9.0		9.0	501	
17	.85	16	493 .80	12		10		8.5		8.0		
18	.84	15	.81	13		10		8.5		8.0		
19	.84	15	.82	14		10		8.5		8.0		
20	491 .85	16	.87	14		9.0		8.0		7.5		
21	.85	16	1.03	14		9.5		8.0		7.5		
22	.85	16	.81	14				8.0		7.5		
23	.85	16	.81	14		10		8.0		7.5		
24	.85	16	.96	14		10		8.0		7.5		
25	.84	16	.81	14		10		8.0				
26	.84	16	.81	14		10		8.0				
27	.84	16	.88	14		10		8.0				
28	.84	16	.81	14		10		8.0				
29	.84	16	.97	14	496	10		8.0				
30	.84	16	494 a	13		10		8.0	XX	XXX	502	
31	492 .84	16	XX	XXX		9.0	498	8.0	XX	XXX		
Total		594		428		315		270		223.5		265
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ____________________

Rating Table Used ____________________

APR.		MAY		JUNE		JULY		AUG.		SEPT.		
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day.
	9.0	.86	23	a	121	1.98	276	1.18	68	0.88	25	1
[illegible]	9.5	a	21		137	1.87	242	1.16	65	.88	25	2
	10		21		150	1.85	237	511 1.13	60	.87	24	3
[illegible]	10		21		150	1.77	213	1.12	59	.86	23	4
.67	11		20		[illegible]	1.70	196	1.10	56	.86	23	5
.67	11		19		131	1.65	182	1.07	50	.85	23	6
.67	11		20	507	162	509 1.61	172	1.05	47	.84	22	7
.68	12		20		141	1.60	170	1.04	46	.84	22	8
.69	12		19		240	1.58	165	1.04	46	.83	22	9
.69	12	a	8		307	1.61	172	1.05	47	.83	22	10
.69	12	505 .83	17		340	1.63	177	1.03	45	.85	24	11
.71	14	.85	20		359	1.59	165	1.02	44	.83	22	12
503 .73	16	.86	21		390	1.58	162	1.02	50	.82	21	13
.72	15	.90	25	2.40	426	1.52	147	1.02	50	514 .82	21	14
.72	15	.99	36	2.50	469	1.53	150	1.02	50	.82	21	15
.72	15	a	37	2.50	469	1.55	150	1.01	42	.81	20	16
.72	15		37	2.31	397	1.63	170	512 .97	37	.83	22	17
.72	15		40	2.19	355	1.57	152	.96	36	.84	22	18
.72	15		39	2.21	362	1.50	133	.95	35	.85	2	19
.72	15		40	2.23	369	510 1.47	125	.93	32	.86	[illegible]	20
.72	15		40	508 2.24	372	1.45	121	.92	31	a	26	21
.73	16		55	2.31	397	1.39	110	.92	31		26	22
.72	15		58	2.30	399	1.34	98	.96	36	a	23	23
[illegible]	16		60	2.30	390	1.32	95	.95	35	.83	20	24
	17	506 a	60	2.31	397	1.28	87	.93	32	.82	18	25
[illegible]	18	1.31	26	2.11	320	1.27	85	.92	31	.82	18	26
.83	20	a	[illegible]	2.06	307	1.25	82	.90	27	.81	17	27
.82	19		[illegible]	2.01	287	1.25	82	.89	26	515 .80	16	28
.83	20		[illegible]	2.04	296	1.26	84	.89	26	.80	11	29
.85	22		[illegible]	2.05	299	1.22	75	.88	25	.79	16	30
XX	XXX	a	[illegible]	XX	XXX	1.18	75	513 .88	25	XX	XXX	31
432.5		1531		9202		4548		1790		643		

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

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

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

Water Year 1978

LAKE — River at (creek) near Above Twin Lakes

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

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

Day.	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	1.48	27	1.26	14		12		11		10	a	
2	1.47	27	1.43	24		12		10		10		
3	1.47	27	1.38	21		12		11		10		1
4	1.47	27	1.42	23		12		11				
5	1.40	24	1.38	21		12		11				
6	1.42	22	1.38			12						
7	1.58	34	1.39	21		12		11		10		
8	1.50	28	a	23		12		11		10		80
9	1.45	26		29		12		11		10		60
10	1.46	26		17		12		11		10		10
11	S	23		23		12		11		10		8.0
12	S	22		31		12	339	11		10		8.0
13	1.41	23		31		12		11		9.5		8.0
14	1.42	23		20		12		11		9.5		7.0
15	1.41	23		15	337	12		11	341	9.5		
16	1.40	22		18		12		11		9.0	343	6
17	1.39	21	335	13		11		11		8.5		8.0
18	1.38	21		13		11		11		8.0		7.0
19	1.38	21		13		11		11		7.0		7.0
20	1.38	21		13		11		11		6.0		7.0
21	1.43	24		13		11		11		6.0		7.0
22	1.43	24		13		11		11		6.0		7.0
23	1.42	23		13		11		11		6.0		9.0
24	1.40	22		13		11		11		6.0		9.0
25	1.32	18		13		11		11		6.0		9.0
26	1.41	25		13		11		11		6.0		9.5
27	1.41	25		13		12		11		6.0		9.5
28	1.31	17		13		12		11		6.0		10
29	1.28	16		13	338	12		11				10
30	1.31	17	336 a	13		12		11	XX	XXX	344 a	11
31	1.25	16	XX	XXX		12	340	10	XX	XXX	1.21	11
Total		704		534		363		327		234.5		265
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

Calendar Year 1977

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____
Rating Table Used _____

	APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		
													1	3rd
													2	
													3	2nd
													4	
													5	1st
													6	Quarter
													7	
													8	
													9	4th
													10	
													11	3rd
													12	
													13	2nd
													14	
													15	1st
													16	
													17	Quarter
													18	
													19	
													20	4th
													21	
													22	3rd
													23	
													24	2nd
													25	
													26	1st
													27	
													28	Quarter
													29	
													30	
	XXX		XXX		XXX		XXX		XXX		XXX		31	Water Year

Computed
Checked
Date
Dis.appld.
Dis.check
Date
G.H.copd.
G.H.check
Date

Arkansas River at Creek near Granite

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

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

Day.	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	2.32	e01	2.07	e03	2.11	b	a		3.48	b	2.04	e05
2	2.38	182	2.08	107	2.07				3.55		2.07	e05
3	2.38	182	2.07		2.03				3.62		2.07	
4	2.37		2.07	e03	2.01				3.65		2.07	
5	2.35	173	a		1.98				3.50		2.08	
6	2.34	170			2.09				3.63		2.09	
7	2.43	196		120	2.11				3.51		2.11	
8	2.38	182		120	2.15				3.42		2.08	
9	2.38	182		120	2.12	80	a		3.43		2.11	
10	2.38	182		120	2.10	80	3.17	b	3.40		2.13	e
11	2.38	182		120	2.13		3.12		2.77		2.01	e
12	2.38	e01 182		125	2.15		3.25		2.75		2.01	
13	2.34	e02 168		125	2.18		3.19		2.82		2.01	
14	2.34	168			2.15		3.12		2.82		2.00	
15	2.35	170			2.09	e1	3.26		3.05		2.01	
16	2.36	173		93	2.11		3.23	110	3.15		2.09	e
17	2.36	173	a	e07	2.12	75	3.16	110	3.27		2.09	
18	2.36	173	2.07	98	2.33	75	3.26		a		2.10	
19	2.35	170	2.07		2.32	75	3.21	105			2.12	
20	2.36	e0 173	2.07	e0	2.33	80	3.30				2.12	e
21	2.24	e02 143	2.11	b	2.45		3.16		a		2.18	e
22	2.16	e03 123	2.08	b 98	2.48	80	3.07		3.35	80	2.20	e
23	2.15	120	2.03	98	2.57		3.20		3.35		2.20	e
24	2.15	120	2.12		2.71		3.35		3.35		2.25	e
25	2.15	120	2.07		2.67		3.38		3.10		2.29	
26	2.14	118	2.01	10	2.65		3.42		2.50		2.30	e
27	2.13	116	2.02	85	2.85		3.34		2.14	b	2.31	e
28	2.11	112	2.04		2.80	80	3.19		2.03	e05	2.33	e
29	2.11	112	2.13	b	2.72		3.50		XX	XXX	2.38	e01
30	2.11	112	2.11	b 100	2.69	80	3.55		XX	XXX	2.53	e
31	2.09	e03 109	XX	XXX	2.61	b	3.38		XX	XXX	2.57	e
Total		4830				7945				2195		
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ______________________

Rating Table Used ______________________

APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge	Day.
[illegible]	[illegible]	3.26	[illegible]	3.88	[illegible]	4.20	[illegible]	3.45	687	2.68	[illegible]	1
[illegible]	[illegible]	3.26	[illegible]	3.94	1200	4.66	[illegible]	3.17	486	2.83	330	2
2.55	[illegible]	3.24	[illegible]	4.04	1300	4.61	[illegible]	3.39	653	2.80	315	3
[illegible]	[illegible]	3.25	[illegible]	4.17	[illegible]	4.47	[illegible]	3.58	731	2.78	[illegible]	4
2.48	[illegible]	3.22	[illegible]	4.20	[illegible]	4.35	[illegible]	3.57	[illegible]	2.77	[illegible]	5
[illegible]	[illegible]	3.15	[illegible]	4.09	[illegible]	4.34	[illegible]	3.54	795	2.77	[illegible]	6
[illegible]	[illegible]	S	278	4.04	1300	4.28	1440	3.53	[illegible]	2.80	315	7
2.54	[illegible]	2.51	220	4.01	1270	4.02	1180	3.52	777	2.82	325	8
[illegible]	[illegible]	2.49	214	4.08	1340	3.88	1050	3.52	777	2.83	[illegible]	9
a	[illegible]	2.50	217	4.29	[illegible]	3.90	[illegible]	3.55	[illegible]	2.79	310	10
[illegible]	[illegible]	2.46	206	4.51	[illegible]	3.76	930	3.68	921	2.75	290	11
[illegible]	[illegible]	2.44	199	4.73	1170	3.85	1020	3.69	930	2.78	305	12
2.63	[illegible]	2.47	208	4.89	[illegible]	3.91	1070	3.49	750	2.78	305	13
[illegible]	232	2.58	238	5.10	[illegible]	3.88	1050	3.27	[illegible]	2.73	287	14
2.56	241	S	382	5.23	[illegible]	3.87	[illegible]	3.70	939	2.58	[illegible]	15
[illegible]	238	3.22	[illegible]	5.27	2710	3.90	[illegible]	3.63	876	2.58	[illegible]	16
2.53	[illegible]	3.31	638	5.22	2630	3.94	1100	3.62	867	2.60	[illegible]	17
[illegible]	[illegible]	3.15	510	5.12	[illegible]	3.92	[illegible]	3.61	858	2.63	[illegible]	18
[illegible]	[illegible]	3.01	[illegible]	5.04	2270	3.86	[illegible]	3.51	758	2.63	[illegible]	19
2.69	[illegible]	3.02	[illegible]	5.07	[illegible]	3.90	[illegible]	3.05	[illegible]	2.66	[illegible]	20
[illegible]	[illegible]	3.16	[illegible]	4.96	2210	4.12	[illegible]	3.08	[illegible]	2.69	260	21
2.90	[illegible]	3.16	517	4.95	2200	3.88	1050	3.13	[illegible]	2.67	254	22
[illegible]	[illegible]	3.17	[illegible]	4.91	[illegible]	3.86	1030	3.13	[illegible]	2.63	[illegible]	23
[illegible]	[illegible]	3.32	[illegible]	4.88	2150	3.83	[illegible]	3.11	[illegible]	2.62	[illegible]	24
3.00	[illegible]	3.48	[illegible]	4.95	[illegible]	3.80	976	3.07	[illegible]	2.62	[illegible]	25
[illegible]	[illegible]	3.59	[illegible]	4.85	[illegible]	3.78	[illegible]	2.74	290	2.62	[illegible]	26
2.90	[illegible]	3.64	[illegible]	4.71	[illegible]	3.75	[illegible]	2.70	277	2.61	[illegible]	27
[illegible]	[illegible]	3.60	[illegible]	4.74	[illegible]	3.79	[illegible]	2.66	[illegible]	2.60	[illegible]	28
[illegible]	[illegible]	3.53	872	4.83	[illegible]	3.74	[illegible]	2.65	[illegible]	2.59	[illegible]	29
3.16	[illegible]	3.63	912	4.75	[illegible]	3.60	[illegible]	2.65	[illegible]	2.59	[illegible]	30
[illegible]	XXX	3.80	[illegible]	XX	XXX	3.58	[illegible]	2.64	250	XX	XXX	31
	[illegible]		[illegible]		[illegible]		[illegible]		19 [illegible]		[illegible]	

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

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

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

Water Year 1978

Arkansas River at Creek near Salida

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1928

Drainage area _____ square miles. Water stage recorder _____

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

Calendar Year

Day.	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	0.78	245	0.61	164	0.71	186	0.67	178	0.62	164	0.20	
2	.78	245	.60	164	.69	178	.63	160	.63	164	.59	
3	.78		.63		.72	191	.67	182	.61	160	.61	
4	.76	235	.65	186	.73	196	.68		.63		.61	
5	.73		.65		.73		.68	196	.63		.62	
6	.73		.67	191	.66		.68		.62		.59	
7	.76	230	.71	210	.72		.68	186	.63		.57	
8	.80	250	.72	215	.72	196	.67		.61		.57	
9	.76	225	.71	210	.69	182	.67		.60		a	
10	.75	220	.69	200	.71	191	.68		.62		a	
11	.74		.70	205	.68		.68	186	.64		.58	
12	.73	205	.72	215	.68		.66	178	.61		a	
13	.74		.70	205	.68		.68	186	.59	151		
14	.73		.69	200	.68		.65	173	.59			
15	.73		.69		.70		.67		.58			
16	.73		.66	182	.70		.67	186	.58			
17	.73		.62	160	.63		.64		.58		Boo	
18	.73		.62	164	.67		.66	180	.62			
19	.68	178	.63	168	.69		.67		.67			
20	.65		.63	168	.63		.64	173	.70			
21	.65	164	.63		.63		.65	178	.72		a	
22	.65	164	.67	178	.68		.62		.72		.57	
23	.64	164	.67	178	.71		.63	168	.72		.56	
24	.64	164	.66	173	.73		.62	164	.73		.56	
25	.64	164	.72	191	.72	196	.62	160	.74		.57	
26	.63		.72	191	.65		.63		.75		.58	
27	.63		.69	178	.64	160	.65	178	.75		.58	
28	.62	164	.68	178	.72	200	.63	168	.73		.62	
29	.61	164	.68		.73		.62		XX	XXX	.66	
30	.61	164	.70	182	.72	200	.64	173	XX	XXX	.70	
31	.61		XX	XXX	.71		.64	173	XX	XXX	.78	
Total		6121							4168			
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used _____

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1	0.62		1.33		2.07		2.92		1.52		0.77	
2	.79		1.32		2.19		2.85		1.20		.82	
3	.78		1.23		2.28		2.26		1.16		.83	311
4	.78		1.20		2.46		2.64		1.50		.82	
5	.77		1.22		2.57		2.46		1.52		.82	
6	.76		1.17		2.39	1530	2.46		1.50		.81	
7	.76		1.07		2.32		2.30		1.51		.87	
8	.75		.71		2.32		2.16		1.50		.90	
9	.79		.67	178	2.43		1.88		1.53		.89	
10	.78		.67	178	2.80	1930	1.93	1200	1.52		.93	
11	.73		.63		3.25		1.83		1.77		.85	
12	.77		.63		3.44		1.80		1.80	1150	.87	311
13	.80		.63		3.57		1.82		1.69		.87	311
14	.82		.62		3.84		1.83		1.40	767	.87	311
15	.83		.69		4.06		1.79		1.72		.81	
16	.83		S		4.12	3690	1.83	1090	1.73		.77	
17	.79		1.35		3.97		1.87		1.73		.77	
18	.76		1.36		3.77		1.88		1.73		.79	261
19	.77		1.24		3.60		1.80		1.72		.80	
20	.78		1.20		3.64		1.82		1.41		.82	
21	.78		1.24	500	3.55		2.04		1.28		.82	
22	1.03		1.32	560	3.51		2.04		1.33		.86	
23	1.02		1.26		3.51		1.97		1.36		.82	
24	1.02		1.37		3.44		1.91		1.32		.80	
25	1.07		1.53		3.53		1.94		1.32		.80	
26	1.13		1.69		3.44		1.89	1190	1.17		.80	
27	1.22		1.79		3.28		1.91		1.01		.77	
28	1.21		1.77		3.09		1.95		.97		.76	
29	1.32		1.70		3.27		1.92		.93		.72	
30	1.32		1.71		3.09		1.63		.83		.69	
31	XX	XXX	1.93		XX	XXX	1.53		.77		XX	XXX

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

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

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

Water Year 1978

Arkansas River at Wellsville

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 28

Drainage area ________ square miles. Water stage recorder ________

Day.	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	3.03	[illegible]	2.71	180	[299] 3.04	[illegible]	a	[illegible]	[303] a	[illegible]	2.88	
2	3.05	222	[297] 2.68	177	2.99	[illegible]		[illegible]	2.88	[illegible]	2.89	
3	3.05	222	2.73	198	3.09	[illegible]		[illegible]	2.87	[illegible]	[305] 2.89	
4	3.03	[illegible]	2.81	[illegible]	3.10	[illegible]		[illegible]	2.90	[illegible]	a	
5	2.99	[illegible]	2.80	[illegible]	3.10	[illegible]		[illegible]	2.92	[illegible]		
6	2.95	[illegible]	2.82	[illegible]	2.96			[illegible]	2.91	[illegible]		
7	[295] 2.99	[illegible]	2.89	[illegible]	3.08	[illegible]		[illegible]	2.93	[illegible]		
8	3.12	[illegible]	2.92	247	3.07	299		[illegible]	2.90	[illegible]		
9	3.01	[illegible]	2.91	244	3.02	279		[illegible]	2.86	[illegible]	a	
10	2.99	240	2.88	[illegible]	3.07	299		[illegible]	2.89	[illegible]	2.78	
11	2.99	[illegible]	2.93	[illegible]	3.03	[illegible]		[illegible]	2.94	[illegible]	2.85	
12	2.97	247	2.98	[illegible]	3.01	[illegible]		[illegible]	2.87	[illegible]	2.76	
13	2.97	247	2.96	[illegible]	3.01	[illegible]		[illegible]	2.81	[illegible]	2.73	
14	2.94	[illegible]	2.94	[illegible]	3.02	[illegible]	[302] a	[illegible]	2.83	[illegible]	a	
15	2.92	[illegible]	2.94	[illegible]	3.05	[illegible]	3.00	[illegible]	2.81	[illegible]		
16	2.92	[illegible]	2.91	[illegible]	[306] 3.05	[illegible]	3.02	[illegible]	[304] 2.83	[illegible]		
17	2.92	[illegible]	2.83	[illegible]	2.93	242	2.97	[illegible]	2.80	[illegible]	[306]	
18	2.92	[illegible]	[293] 2.83	[illegible]	3.01	[illegible]	2.96	[illegible]	2.74	[illegible]		
19	2.84	[illegible]	2.84	[illegible]	3.03	[illegible]	2.98	[illegible]	2.78	[illegible]		
20	2.79	198	2.87	230	2.94	[illegible]	2.96	[illegible]	2.79	[illegible]		
21	[296] 2.79	198	2.84	[illegible]	2.97	[illegible]	2.95	[illegible]	2.80	[illegible]		
22	2.79	[illegible]	3.00	[illegible]	3.02	[illegible]	2.92	[illegible]	2.84	[illegible]		
23	2.76	191	3.01	[illegible]	3.04	[illegible]	a	[illegible]	2.83	[illegible]		
24	2.76	191	2.98	[illegible]	3.07	[illegible]		[illegible]	2.86	[illegible]		
25	2.76	[illegible]	3.06	[illegible]	3.07	[illegible]		[illegible]	2.89	[illegible]		
26	2.76	191	3.08	[illegible]	2.94	[illegible]		[illegible]	2.90	[illegible]		
27	2.75	[illegible]	3.06	[illegible]	2.93	[illegible]		[illegible]	2.90	[illegible]		
28	2.75	[illegible]	2.97	[illegible]	3.00	[illegible]		[illegible]	2.87	[illegible]		
29	2.72	[illegible]	2.98	[illegible]	3.07	[illegible]		[illegible]	XX	XXX		
30	2.72	[illegible]	3.03	[illegible]	[301] a	[illegible]		[illegible]	XX	XXX		
31	2.72	[illegible]	XX	XXX	a	[illegible]	a	[illegible]	XX	XXX	[307] 3.08	
Total		[illegible]		[illegible]		8709		8237		[illegible]		[illegible]
Mean												
Run-off in acre-feet												
Maximum												
Minimum												

Max. Discharge ____ sec.-ft. on ____

Max. G. H. ____ ft. at ____ on ____

Sec. ft. at ____ G. H. ____

Min. Daily Discharge ____ sec.-ft. on ____

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used _____

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1	3.13	[illegible]	3.93	[illegible]	4.82	[illegible] 1250	5.93	08 2350	4.40	05 955	3.21	08 322
2	3.11	295	3.90	315	4.95	[illegible]	5.88	2280	4.03	728	3.28	355
3	3.07	279	3.80	[illegible]	5.07	[illegible]	5.80	09 2180	3.89	650	3.36	387
4	3.06	[illegible]	3.71	[illegible]	5.28	[illegible]	5.71	09 [illegible]	4.37	05 934	3.33	375
5	3.03	[illegible]	3.75	[illegible]	5.40	[illegible]	5.50	1830	4.42	961	3.30	363
6	3.02	[illegible]	3.69	[illegible]	5.23	[illegible]	5.49	09 1820	4.39	948	3.30	363
7	3.00	[illegible]	3.53	09 [illegible]	5.14	[illegible]	5.32	10 1640	4.41	962	3.38	395
8	3.00	[illegible]	2.96	[illegible]	5.13	04 1510	5.17	10 1500	4.39	948	3.46	43[illegible]
9	3.02	[illegible]	2.90	[illegible] 233	5.26	04 1640	4.83	09 1230	4.41	962	3.45	426
10	3.09	[illegible]	2.87	[illegible]	5.71	04 2110	4.89	09 1280	4.42	04 969	3.51	03 454
11	2.99	[illegible]	2.84	[illegible]	6.14	06 2670	4.77	03 1190	4.68	06 1140	3.36	07 391
12	3.02	261	2.83	[illegible]	6.28	2370	4.72	1160	4.75	1170	3.38	403
13	3.09	[illegible]	2.85	226	6.43	06 3110	4.81	08 1220	4.62	06 1105	3.40	408
14	3.12	06 299	2.81	[illegible]	6.63	07 3420	4.77	07 1200	4.26	07 854	3.39	404
15	3.15	311	2.93	[illegible]	6.80	3490	4.72	1160	4.59	03 [illegible]	3.28	[illegible] 359
16	3.17	319	5	[illegible]	6.89	3860	4.77	07 1200	4.66	1120	3.17	[illegible]
17	3.11	295	3.96	[illegible]	6.75	3610	4.80	06 1230	4.64	1100	3.16	[illegible]
18	3.03	[illegible]	3.99	[illegible]	6.58	3340	4.83	[illegible] 1260	4.65	08 1110	3.19	323
19	3.04	[illegible]	3.86	[illegible]	6.44	[illegible]	4.74	[illegible] 1190	4.64	1120	3.22	07 335
20	3.05	[illegible]	3.77	[illegible]	6.47	3160	4.75	05 1200	4.29	[illegible]	a	[illegible]
21	3.21	[illegible]	3.82	[illegible]	6.41	3560	4.98	04 1390	4.09	[illegible]		350
22	3.17	[illegible]	3.94	[illegible]	6.36	07 2980	5.01	1420	4.14	776		360
23	3.46	[illegible]	3.86	[illegible]	6.39	[illegible]	4.93	1350	4.21	818		350
24	3.25	[illegible]	3.98	[illegible]	6.33	2940	4.85	1290	4.14	776		335
25	3.49	[illegible]	4.20	[illegible]	6.41	3660	4.91	1240	4.14	776		324
26	[illegible]	[illegible]	4.39	[illegible]	6.33	2940	4.85	1290	3.96	670		385
27	[illegible]	[illegible]	4.49	[illegible]	6.18	07 [illegible]	4.81	1270	3.69	535		320
28	3.27	[illegible]	4.48	[illegible]	6.06	[illegible]	4.92	[illegible]	3.60	[illegible]		315
29	[illegible]	[illegible]	4.40	[illegible]	6.20	[illegible]	4.88	[illegible] 1310	3.56	476	a	285
30	3.21	[illegible]	4.39	[illegible]	6.09	08 2470	4.57	[illegible] 1070	3.36	382	2.97	03 [illegible]
31	XX	XXX	4.65	[illegible]	XX	XXX	4.43	[illegible] 976	3.23	08 735	XX	XXX
	[illegible]	[illegible]	[illegible]	[illegible]	77,390		4[illegible],756		71,464		10,711	

Day. 1st Quarter: 1 2 3 4 5 — 2nd Quarter: 6 7 8 9 10 — 3rd Quarter: 11 12 13 14 15 — 4th Quarter: 16 17 18 19 20 — 1st Quarter: 21 22 23 24 25 — 2nd Quarter: 26 27 28 29 30 — 3rd Quarter: 31

Quarter: Computed / Checked / Date

Dis.appld. / Dis.check / Date

G.H.copd. / G.H.check / Date

Water Year 1978

Arkansas — Gage near Catlin Station (combined ...)

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area 10,901 square miles. Water stage recorder Stevens A-35 cont.

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		75		115		254	a	340		402		194
2		49		115		236		350		396		194
3		54		115		213		380		391		405
4		65		113		207		620		322		393
5		78		122		237		560		306		308
6		93		128		266		500		298		212
7		109		135		306		450		298		203
8		85		145		345		400		294		201
9		90		155	a	360		330		290		207
10		95		162		370		290		322		219
11		100		220		360		270		326		223
12		104		195		360		250		340		209
13		111		219		330		270		290		170
14		115		232		340		250		245		189
15		119		241		320		280		180		187
16		126		253		300		300		133		159
17		133		263		310		330		133		159
18		138		262		330		370		124		158
19		142		295		340		390		126		155
20		147		269		350	a	360		131		139
21		152		279		330		350		119		126
22		152		279		310		447		126		124
23		150		261		290		435		119		122
24		145		238		310		447		229		122
25		135		248		360		424		238		122
26		135		257		340		424		258		122
27		128		257		340		370		239		122
28		124		269		330		340		226		111
29		124		259		320		340		XXX		106
30		119		255		320		340	XX	XXX		106
31		119	XX	XXX	a	330		330	XX	XXX		109
Total		3511		6361		9764		11,537		6901		5555
Mean		113		212		315		372		246		179
Run-off in acre-feet		6960		12,620		19,370		22,880		13,670		11,018
Maximum		152		295		360		620		396		405
Minimum		49		113		207		250		119		106

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

Soc. ft. at ____ on ____ Min. Daily Discharge ____ sec.-ft. on ____

Calendar Year 1977

70,770 — 303 — 219,70[illegible] — 340 — 45

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07119700

Rating Table Used

APR.		MAY		JUNE		JULY		AUG.		SEPT.			
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day.	
	111		64		531		1860		830		313	1	
	106		135		787		2067		782		254	2	
	106		236		1057		1925		854		143	3	
	106		274		1483		1865		690		148	4	
	111		269		1975		1744		1030		109	5	
	113		202		1214		1512		839		104	6	
	126		328		773		1290		700		111	7	
	126		375		1334		1135		590		115	8	
	102		305		1275		1100		394		119	9	
	102		259		1132		12,000		366		122	10	
	85		224		1207		2000		330		128	11	
	85		171		1378		1000		356		125	12	
	88		117		1674		540		380		124	13	
	84		102		1392		800		400		124	14	
	67		93		1456		900		410		124	15	
	68		92		1844		800		350		111	16	
	82		81		2735		700		300		102	17	
	75		69		2920		660		250		95	18	
	69		136		2344		680		210		93	19	
	74		517		2366		700		200		95	20	
	72		515		2614		688		210		96	21	
	69		218		2554		757		230		93	22	
	69		215		2504		797		170		104	23	
	68		242		2576		1015		100		115	24	
	68		218		2753		1006		119		145	25	
	64		222		2638		502		133		181	26	
	58		350		2532		377		145		143	27	
	52		522		2268		365		171		96	28	
	49		745		[illegible]		424		1127		76	29	
	49		791		1806		900		2467		61	30	Water Year
XX	XXX		643	XX	XXX		1400		504	XX	XXX	31	1978
2,504		8735		54,430		43,509		15,639		3,769		172,215	
83.5		282		1814		1404		504		126		472	
4,970		17,330		108,000		86,300		31,020		7,500		341,600	
126		791		2,920		12,000		2467		313		12,000	
49		64		531		365		100		61		49	

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

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

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

Arkansas River at Creek near Below Catlin Dam

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area 10,901 square miles. Water stage recorder Stevens A-35 cont.

Max. Discharge 28,000 Sec. ft. at 9 a.m. on July 10 Max. G. H. 14.9 ft. at 9 a.m. on July 10 Min. Daily Discharge ____ sec.-ft. on ____ G. H. 14.9 ft.

Calendar Year 1977

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	1.65	75	1.95	115	2.10	133	a	287	2.83	372	2.09	
2	1.50	49	1.95	115	2.11	135		298	a	366	2.09	
3	1.54	54	1.95	115	2.11	135		322	2.80	361	S	
4	1.62	65	1.94	113	2.11	135		543	2.61	292	S	
5	1.71	78	1.98	122	2.12	138		493	2.56	276	2.50	
6	1.81	93	2.02	128	2.13	140		438	2.54	268	2.22	
7	1.90	109	2.05	135	2.13	140		388	2.54	268	2.14	
8	1.73	85	2.09	145	2.19	155		340	2.53	264	2.13	
9	1.76	90	2.13	155	a	185		280	2.52	260	2.14	
10	1.79	95	2.17	162		230		255	2.58	272	2.20	
11	1.81	100	2.20	170		271		240	2.59	296	2.21	
12	1.83	104	2.23	178		244		205	2.62	310	2.20	
13	1.87	111	2.27	189		275		255	2.51	260	2.28	
14	1.89	115	2.31	202		226		210	2.39	215	2.34	
15	1.91	119	2.34	208		230		240	2.18	150	2.33	
16	1.93	126	2.37	213		220		260	2.12	133	2.22	
17	1.96	133	2.40	223		189		300	2.12	133	2.22	
18	1.98	138	2.38	222		221		340	2.08	124	2.22	
19	a	142	2.36	215		231		360	2.09	126	2.21	
20	a	147	2.33	202		242	a	336	2.11	131	2.14	
21	2.04	152	2.32	199		234	2.76	320	2.06	119	2.09	
22	2.04	152	2.29	187		250	2.94	417	2.09	126	2.08	
23	2.03	150	2.27	181		223	2.92	405	2.06	119	2.07	
24	2.02	145	2.26	178		248	2.94	417	S	189	2.07	
25	2.00	135	2.24	173		301	2.92	394	2.40	208	2.07	
26	2.00	135	2.22	168		271	2.92	394	2.40	208	2.07	
27	1.98	129	2.19	158		268	2.87	340	2.34	187	2.07	
28	1.97	124	2.17	152		285	2.77	310	2.29	176	2.04	
29	1.97	124	2.14	142		279	2.77	310	XX	XXX	2.02	
30	1.96	119	2.12	133		269	2.77	310	XX	XXX	2.02	
31	1.96	119	XX	XXX	a	270	2.75	300	XX	XXX	2.04	
Total		3,511		5,015		6,773		10,301		6,231		4,75
Mean		113		167		218		332		223		153
Run-off in acre-feet		6,960		9,950		13,430		20,430		12,360		9,41
Maximum		152		228		301		543		372		
Minimum		49		113		133		205		119		

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07119700
Rating Table Used No. 3, - Oct. 1st 1977
to Sept. 30th 1978

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1	2.05	111	1.84	64	2.55	1270	3.90	1560	a	550	1.81	65
2	2.02	106	2.20	135	3.02	537	4.04	1810	3.20	517	1.77	64
3	2.02	106	2.51	[illegible]	3.36	805	3.94	1670	3.28	[illegible]	S	143
4	2.02	106	2.55	253	S	1279	3.90	1610	a	452	2.20	149
5	2.05	111	S	169	4.41	1890	3.81	1490	3.49	778	2.03	109
6	2.06	113	2.03	102	S	[illegible]	3.63	1260	3.28	593	2.00	104
7	2.12	126	S	199	3.20	572	3.42	1040	a	577	2.05	111
8	2.12	126	2.45	195	3.87	1170	3.26	[illegible]	a	479	2.08	115
9	2.05	102	2.52	215	3.75	1050	3.22	850	2.98	394	2.11	119
10	2.05	102	2.55	228	3.57	877	S	11,720	2.90	366	2.13	122
11	1.99	85	2.51	205	3.65	950	a	1691	2.80	330	2.17	129
12	1.99	85	S	171	S	1123		703	2.82	356	2.18	125
13	2.01	88	2.20	117	4.10	1420		272	a	232	2.17	124
14	1.98	84	2.13	102	3.85	[illegible]		530		258	2.17	124
15	1.90	67	2.08	93	3.86	1140		605		267	2.17	124
16	1.91	68	2.08	92	S	1497		543		206	2.11	111
17	2.01	82	2.02	81	4.75	2380		450		155	2.06	102
18	1.96	75	1.94	69	4.82	2570		410		102	2.03	95
19	1.92	69	S	136	4.48	2010		426		62	2.02	93
20	1.95	74	S	516	4.50	2040	a	450		53	2.03	95
21	1.94	72	S	446	4.65	2330	2.80	441		63	2.04	96
22	1.92	69	2.44	212	4.62	2210	S	510		173	2.02	93
23	1.92	69	2.45	215	4.56	2160	S	550		170	2.07	104
24	1.91	68	2.51	242	4.57	2230	S	769	a	100	2.12	115
25	1.91	68	2.44	218	4.65	2410	S	759	2.08	119	2.23	145
26	1.88	64	2.45	222	4.55	2290	[illegible]	256	2.14	133	2.35	181
27	1.84	58	2.32	181	4.45	2180	2.15	246	2.19	145	S	137
28	1.89	58	S	273	4.25	[illegible]	2.06	199	S	171	1.99	96
29	1.87	59	2.96	491	3.41	960	2.09	202	S	1129	1.86	76
30	1.77	47	3.02	537	3.84	1460	a	652	S	2219	1.75	61
31	XX	XXX	2.78	288	XX	XXX	a	1065	S	256	XX	XXX
	2,504		6,796		45,820		35,631		12,005		3,731	
	83.5		219		1,527		1149		387		111	
	4,970		13,480		90,880		70,670		23,800		6,610	
	126		537		2510		11,720		2219		181	
	49		64		276		199		53		61	

4th Quarter — Computed / Checked / Date
1st Quarter — Dis.appld. / Dis.check / Date
2nd Quarter — G.H.copd. / G.H.check / Date

Water Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used _____

Day.	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1		0		0	2.53	255	2.80	300	2.68	280		248
2				0	2.50	250	2.54	257	2.59	265		190
3				0	2.51	252	2.53	255	2.52	254		0
4				21	S	204	2.53	255	2.42	238		
5				100	S	85	2.52	254	2.51	252		
6				100	2.10	190	2.51	252	2.47	246		
7				130	2.18	201	2.50	250	1.60	123		
8				180	1.92	164	2.49	249	1.50	111		
9				90	2.34	225	2.50	250		0		
10				37	2.53	255	2.68	280	NO FLOW			
11			0.50	19	2.54	257	2.85	309				
12				0	2.53	255	2.78	297				
13					2.52	254	2.61	268	1.45	105		
14					2.57	262	2.62	270	1.75	142		
15					2.89	316	2.77	295	1.76	143		
16					3.12	357	2.54	257	1.77	144		
17					3.11	355	2.50	250	1.78	145		
18					3.08	350	2.50	250	1.80	148		
19				0	2.99	334	2.52	254	1.80	148		
20			0.07	0.82	2.95	326	2.50	250	1.79	147		
21			1.12	69	2.99	334	2.48	247	1.79	147		
22			0.25	6.3	3.05	344	2.48	247	0.99	57		
23			NO FLOW	0	3.05	344	2.48	247		0		
24					3.06	346	2.47	246				
25					3.07	348	2.48	247				
26			NO FLOW	0	3.07	348	2.47	246				
27			S	169	3.09	352	1.67	131				
28			2.49	249	3.09	352	1.93	166				
29			2.52	254	3.09	352	2.28	216		0		
30		0	2.52	254	3.06	346	2.77	295		248		0
31	XX	XXX	2.53	255	XX	XXX	3.00	335		248	XX	XXX
	0.00			1939		8610		7720		3590		438
	0			62.5		287		255		116		14.6
	0			3,850		17,080		15,710		7,120		869
	0			255		357		335		280		248
	0			0		85		131		0		0

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

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

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

Water Year

Arkansas Creek near Catlin Canal

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder STEVENS A-35 cont.

Day.	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1		0		0	1.59	121	0.95	53				
2					1.42	101	0.94	52				
3					1.21	78	1.00	58		30		
4					1.16	72	1.20	77		30		
5					1.40	99				30		
6					1.63	126				30		
7					1.93	166				30		
8					2.10	190				30		
9					a					30		
10				0						30		
11				50				30		30		
12				17				45		30		
13				30	a			25		30		0
14				30	1.53	114		40				
15					1.32	90		40				
16				35	1.22	80		40		0		
17				40	1.59	121		30				
18				40	1.49	109		30				
19				80	1.49	109		30				
20					1.48	108						
21				80	1.37	96		30				
22				90	1.02	60						
23				80	1.29	87		30		0		
24				60	1.04	62		30		40		
25				75	1.01	59		30		30		
26				89	1.12	69		30		50		
27				93	1.15	72		30		50		
28					0.85	45						
29					0.81	41				XXX		
30				117	0.92	51		30	XX	XXX		
31		0	XX	XXX	1.02	60		30	XX	XXX		0
Total		0.00		1,350		3,311		1,190		670		790
Mean		0		45.0		97.1		38.4		23.9		25.8
Run-off in acre-feet		0		2,680		5,970		2,360		1,330		1,580
Maximum		0		117		190		77		50		73
Minimum		0		0		41		25		0		0

Max. Discharge ____ Sec.-ft. on ____ Min. Daily Discharge ____ sec.-ft. on ____

Max. G. H. ____ ft. at ____ on ____

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07096000
Rating Table Used No. 21 Oct. 1, 1977 to Sept. 30, 1978

APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge	Day
5.11	290	5.79	623	6.33	1100	7.46	2450	6.07	834	5.17	270	1
[illegible]22	345	5.77	608	6.47	1240	7.39	2350	5.95	735	5.12	250	2
5.14	296	5.72	570	6.58	1350	7.30	2220	5.66	512	5.18	285	3
[illegible]12	280	5.62	505	6.73	1520	7.22	2110	S	677	5.17	280	4
[illegible]09	260	5.62	505	6.94	1790	7.06	1890	6.10	860	5.14	270	5
5.07	245	5.69	563	6.86	1680	7.00	1810	6.06	826	5.11	260	6
[illegible]04	230	5.68	555	6.71	1510	6.89	1670	6.06	826	5.14	280	7
5.02	224	5.50	438	6.70	1500	6.83	1600	6.06	826	5.26	324	8
[illegible]08	240	5.02	204	6.72	1520	6.53	1260	6.06	826	a	320	9
[illegible]20	296	4.68	150	7.00	1850	6.47	1200	6.08	843		[illegible]	10
5.12	250	4.70	153	7.42	2420	6.47	1200	6.14	896		340	11
[illegible]08	234	4.53	128	7.64	2740	6.35	1080	6.36	1090		325	12
5.07	230	4.48	122	7.94	3210	6.42	1150	6.32	1060		330	13
[illegible]14	255	4.44	116	8.08	3450	6.40	1130	6.13	887	a	330	14
[illegible].16	260	S	101	8.32	3890	6.37	1100	5.98	759	5.27	340	15
5.17	265	S	169	8.50	4230	6.37	1100	6.32	1060	5.12	255	16
[illegible]18	260	5.57	477	8.44	4110	6.41	1140	6.28	1020	5.08	276	17
5.11	234	5.80	639	8.27	3790	6.46	1190	6.28	1020	a	[illegible]	18
[illegible]11	234	5.72	578	8.08	3450	6.43	1160	6.27	1010		[illegible]	19
5.10	230	5.58	477	8.02	3350	6.38	1110	6.22	968		265	20
5.12	234	5.56	464	7.95	3230	6.47	1200	5.85	663	a	275	21
[illegible]42	375	5.65	526	7.87	3090	6.63	1360	5.82	639		285	22
5.43	381	5.65	526	7.90	3140	6.60	1330	5.89	695		280	23
[illegible]38	345	5.65	526	7.83	3030	6.48	1210	5.85	663		255	24
a	351	5.82	655	7.88	3110	6.49	1220	5.83	647		270	25
[illegible]	381	5.99	792	7.88	3110	6.49	1220	5.84	655		265	26
[illegible]52	418	6.10	887	7.73	2870	[illegible]	1200	5.61	498		[illegible]	27
5.65	512	6.15	932	7.58	2640	6.48	1210	5.48	418		[illegible]	28
[illegible]1	484	6.11	896	7.68	[illegible]140	S	1370	5.38	363		[illegible]	29
5.77	608	6.04	834	7.65	2740	S	1470	5.32	334		[illegible]	30
XX	XXX	6.18	959	XX	XXX	6.15	905	5.19	275	XX	XXX	31
9,247		15,678		79,450		43,615		23,385		8228		218,665
308		506		2,648		1,407		754		274		600
18,300		31,100		157,600		86,500		46,400		16,300		433,700
608		959		4,230		2,450		1,090		340		4230
224		101		1,100		905		275		200		101

Water Year 1978

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

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

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

Arkansas Creek near Canon City

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area 3,117 square miles. Water stage recorder Stevens A-35 cont.

Max. G. H. 8.65 ft. at 1500 on 16 June Min. Daily Discharge 101 sec.-ft. on

S - discharge subdivided. V - variable shift. Discharge estimated for "a" - no gage height record.

Day.	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	5.00	° 190	4.53	° 119	5.20	ō3 230	5.25	ō2 255	a	250	5.14	±5 237
2	a	194	4.53	° 119	5.21	234	5.17	ō1 227	a	220	5.13	234
3	5.04	° 197	4.61	ō1 128	5.26	255	5.28	° 280	5.12	ō8 197	5.13	±5 234
4	5.04	197	4.71	142	5.28	265	5.34	±1 318	5.12	197	5.15	240
5	4.98	187	4.83	160	5.31	280	5.27	±2 280	5.13	ō8 199	5.16	245
6	4.97	185	4.87	167	5.27	260	5.27	±2 280	5.15	ō7 204	5.14	237
7	4.98	187	4.91	ō1 173	5.23	240	5.24	±2 270	5.15	ō7 204	5.12	230
8	5.00	190	5.00	ō2 187	5.30	275	5.24	270	5.17	ō6 211	5.08	218
9	5.11	211	5.03	194	5.28	ō3 265	5.23	265	5.15	ō5 208	5.07	214
10	5.11	211	5.04	ō2 194	a	270	5.25	275	5.12	ō4 204	5.07	214
11	5.06	201	5.03	192	5.25	ō4 245	5.24	270	5.14	ō3 211	5.10	224
12	5.03	195	5.07	199	5.23	237	5.24	270	5.17	ō2 224	5.11	227
13	5.01	192	5.11	206	5.23	237	5.20	250	5.13	° 218	5.07	214
14	4.99	188	5.10	204	5.23	237	5.22	260	5.10	±1 211	5.05	208
15	4.98	187	5.09	203	5.24	240	5.19	245	5.10	211	5.02	±5 207
16	4.97	187	5.08	201	5.25	ō4 245	5.21	255	5.10	211	4.98	±6 197
17	4.97	° 187	5.07	199	5.18	ō5 218	5.22	260	5.10	±1 211	4.94	±7 192
18	4.96	183	5.01	188	5.14	ō6 204	5.23	270	5.12	±2 221	4.94	±7 192
19	4.89	171	4.99	185	5.21	ō7 221	5.23	270	5.09	±3 214	a	197
20	4.77	153	4.99	185	5.24	ō8 227	5.23	270	5.09	±3 214	a	203
21	4.67	138	5.00	187	5.14	ō9 199	5.22	260	5.12	±4 227	4.73	±11 163
22	4.64	134	5.09	203	5.29	ō10 237	5.22	260	5.12	227	4.72	±11 162
23	4.62	131	5.23	245	5.32	ō9 255	5.14	±2 227	5.13	230	4.82	±13 182
24	4.61	129	5.21	237	5.35	ō8 275	5.16	±2 234	5.12	227	4.78	±11 176
25	4.58	125	5.19	ō2 230	5.39	ō7 301	a	220	5.13	230	4.77	±14 175
26	4.56	123	5.27	265	5.27	ō6 245		215	5.14	234	4.76	±11 173
27	4.55	122	5.27	265	5.20	ō5 224		240	5.15	237	4.82	±15 185
28	4.53	° 119	5.20	234	5.21	ō5 227		240	5.15	±9 237	4.80	±16 183
29	4.52	118	5.14	214	5.24	ō4 240		235	XX	XXX	4.82	±17 188
30	4.51	116	5.13	ō2 211	5.29	ō3 270		245	XX	XXX	4.93	±19 210
31	4.52	° 118	XX	XXX	5.25	ō2 255	a	255	XX	XXX	4.97	±10 230
93,580	Total	5,166		5,836		7,613		7,971		6,089		6387
256	Mean	167		195		246		257		217		206
185,600	Run-off in acre-feet	10,250		11,600		15,100		15,800		12,100		12,700
1,120	Maximum	211		265		301		318		250		245
104	Minimum	116		119		199		215		197		162

Calendar Year 1977

Grape River at Creek near Westcliffe

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder STEVENS A-35 CONT.

Max. G. H. _____ ft. at _____ on _____ Min. Daily Discharge _____ sec.-ft. on 12/13

Calendar Year 1977

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	0.40	8.9	0.44	8.9	0.50	12	a	8	0.73	26	0.63	20
2	.40	8.9	.45	9.3	.54	15		8	G23J	34	.62	19
3	.40	8.9	.44	8.9	.52	13		10	.78	26	G31J .59	15
4	.40	8.9	.44	8.9	.53	14		12	.70	24	.67	20
5	.40	8.9	.44	8.9	.50	12		12	.[illegible]	22	.66	[illegible]
6	.43	9.6	.44	8.9	S	13		11	.60	21	.65	25
7	.43	9.8	.47	11	S	26	G27J a	10	.58	19	.63	21
8	.44	11	.50	18	S	11	.85	10	.59	19	.63	[illegible]
9	.45	11	.50	19	G25J S	16	.87	12	.57	16	G33J .69	[illegible]
10	.44	9.8	G31J .53	13	S	17	.84	11	.57	16	.74	[illegible]
11	.45	11	.54	14	.53	15	.78	11	.59	18	.72	[illegible]
12	.45	11	.55	15	.51	13	.75	11	.58	17	.70	[illegible]
13	a	11	.56	16	.54	16	.73	11	.56	14	.70	[illegible]
14		10	.57	17	.58	20	.87	14	.58	16	G33J .70	[illegible]
15		10	.58	19	.53	15	1.17	18	G30 .57	15	.63	31
16		9.6	.56	17	.49	12	.90	20	.57	15	.61	30
17	G21J a	9.8	.54	15	.52	15	.83	18	.55	10	.67	36
18	.44	9.8	.53	14	.53	15	.78	17	.57	10	.71	40
19	.43	8.9	.52	13	.53	12	.75	17	.56	10	.68	[illegible]
20	.43	8.9	.51	12	.71	8.0	.76	17	.[illegible]	10	.67	[illegible]
21	.43	8.9	.53	14	.70	8.0	.[illegible]	17	.59	12	.66	[illegible]
22	.45	11	.57	18	G26J a	8.0	.[illegible]	18	S	14	.66	[illegible]
23	.44	8.9	.53	[illegible]		10	G28J .87	17	S	13	.65	[illegible]
24	.44	8.9	.53	[illegible]		10	.72	15	S	14	.66	[illegible]
25	.43	[illegible]	G22J .53	[illegible]		10	.77	10	S	16	.64	30
26	.44	[illegible]	.53	[illegible]		8.0	.82	11	.59	16	.59	[illegible]
27	.44	[illegible]	.50	[illegible]		8.0	.[illegible]	12	.61	18	.56	[illegible]
28	G22J .44	[illegible]	.51	12		[illegible]	.[illegible]	17	.61	18	.56	[illegible]
29	.44	[illegible]	[illegible]	[illegible]		[illegible]	.98	20	XX	XXX	.54	[illegible]
30	.44	[illegible]	.48	8.3		10	.98	21	XX	XXX	.53	[illegible]
31	.45	9.3	XX	XXX	a	10	.85	24	XX	XXX	G31J .52	[illegible]
5944	Total	296		388		389		440		479		876
16.3	Mean	10		13		13		14		17		28
1,800	Run-off in acre-feet	590		770		770		870		950		1,740
60	Maximum	11		19		26		24		34		41
1.8	Minimum	8.9		8.9		8.0		8.0		10		14

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07095000

Rating Table Used #7 Oct 1st 1977 to Sept. 30th 1978

	APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		
	0.52	12	0.55	16	0.38	3.6	0.41	7.4	0.45	4.2	0.46	6.9	1	4th
	.54	16	.59	20	.40	4.7	.39	5.2	.45	4.2	.44	5.8	2	
	.53	15	.63	25	.39	4.2	.40	5.8	S	7.8	.43	5.2	3	3rd
	.51	13	.59	20	.41	5.2	.40	5.9	S	14	.41	4.2	4	
	.50	12	.52	13	.43	6.4	.39	5.2	.50	6.9	.40	3.6	5	2nd
	.50	12	.58	19	.45	7.4	.38	4.9	.50	6.9	.40	3.6	6	
	.51	13	.67	29	.42	5.8	.38	4.2	.49	6.4	640 .40	3.6	7	1st
	.53	15	.56	16	.45	7.4	.37	3.0	.51	7.4	.40	3.6	8	
	.53	15	637 .49	9.8	634 .42	5.8	a	3.9	.49	6.4	.40	3.6	9	Quarter
	.53	15	.45	6.9	.39	5.2	1	2.5	641 .57	12	.41	4.2	10	Computed
	.52	14	.42	5.2	.38	4.7	641 a	2.3	.55	9.8	.41	4.2	11	Checked
	.50	12	.39	3.6	.38	4.7	.36	2.2	.54	9.8	.42	4.2	12	4th
	.49	12	.40	4.2	.39	5.2	.36	2.2	.51	8.0	.42	4.2	13	Date
	.51	13	.41	4.7	.41	6.4	.35	2.3	.50	7.4	.42	4.2	14	
	.50	12	.38	3.9	.42	6.4	.34	2.0	.49	6.9	.43	4.7	15	3rd
	.48	11	.37	3.5	.40	5.3	.31	2.3	.48	6.4	.42	4.2	16	
	.48	11	.38	3.9	.38	4.7	.29	2.3	.46	5.2	.42	4.2	17	
	.50	12	.42	5.3	.41	6.4	642 .29	2.5	.45	4.7	.43	4.7	18	2nd
	.50	12	.42	5.3	.40	5.3	.29	2.5	.45	4.7	.42	4.2	19	
	.50	12	.42	5.8	.38	4.7	.28	2.1	.46	5.2	.44	4.7	20	
	.49	12	.38	3.6	.37	4.7	.28	2.2	.45	4.7	647 .44	4.7	21	1st
	.49	12	.39	4.2	.36	4.2	.29	2.5	.45	4.7	.44	4.7	22	
	.48	11	.37	3.9	640 .35	4.2	S	22	.46	5.2	.45	5.2	23	Quarter
	.52	5.3	.36	3.5	.33	3.0	.42	11	.46	5.2	.45	5.2	24	G.H.appd.
	.52	5.3	.36	3.5	.33	3.0	.36	6.4	645 .47	5.8	.48	6.2	25	G.H.check
	.44	6.2	631 .37	3.9	.34	3.6	643 .48	5.2	.47	5.8	.47	6.4	26	Date
	.45	7.4	.41	5.1	.35	4.2	.49	5.8	.47	5.8	.46	5.2	27	
	.44	6.2	.40	4.7	.35	4.2	.48	5.2	.46	5.2	.46	5.3	28	
	.45	7.4	.39	4.4	.38	5.8	.47	5.8	S	10	.46	5.3	29	
	.46	6.2	.37	3.9	.38	5.3	.48	5.8	.47	7.4	.46	5.3	30	Water Year
	XX	XXX	.37	3.9	XX	XXX	.47	5.2	.46	6.9	XX	XXX	31	1978
	342.		257		154		148		211		144			4124
	11.4		8.3		5.1		4.8		6.8		4.8			11.30
	679		510		305		293		419		286			8,200
	46		29		7.4		22		14		6.9			41
	5.3		2.5		3.0		2.2		4.2		3.6			2.5

Arkansas River at Creek near Nepesta

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder STEVENS A-35 CONT.

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	3.67	± 86	3.82	± 10[illegible]	4.29 [500]	± 272	4.24	± 272	4.58	± 40	4.29	± [illegible]
2	3.64	± 79	3.89	153	4.26	256	4.32	± 317	4.58	40	4.27	[illegible]
3	3.62	± 72	3.92	144	4.26	256	S	V 607	a	330	4.19	[illegible]
4	3.62	± 72	3.94 [501]	± 151	4.26	256	4.73	± 545	a	280	4.16	[illegible]
5	3.63	± 72	3.92	144	4.27	261	4.52	± 391	a	250	4.18	[illegible]
6	3.75	± 100	3.94	151	4.28	± 266	4.43	± 329	a	260	4.16	[illegible]
7	3.81 [499]	± 115	3.95	± 155	4.30	± 283	4.40	± 305	4.35	[illegible]	4.18	[illegible]
8	3.76	[illegible]	4.01	± 173	4.32	± 305	4.38	± 288	4.36	278	4.19	[illegible]
9	3.74	[illegible]	4.22	± 250	4.33	± 317	4.36	278	4.37	278	4.24	[illegible]
10	3.73	± 91	4.35	± 305	4.32	311	4.34	± 266	4.38 [507]	289	4.24 [509]	± [illegible]
11	3.77	± 100	4.35	305	4.32	± 311	4.33	± 256	4.37	278	4.15	± [illegible]
12	3.85	125	4.35	305	4.33	± 323	4.35 [505]	± 266	4.35	266	4.14	[illegible]
13	3.86	129	4.33	294	4.32	317	4.34	261	4.18	158	4.11	[illegible]
14	3.86	129	4.27	261	4.27	288	4.33	256	4.14	104	a	17
15	3.90	± [illegible]	4.26	256	4.20	250	4.33	256	3.92	88	a	[illegible]
16	3.89	± 136	4.32	288	4.24	278	4.35	± 266	3.86	74	4.18	[illegible]
17	3.89	136	4.34 [502]	± 300	4.27	288	4.41	± 294	3.85	72	4.14	[illegible]
18	3.87	129	4.30	278	4.28	294	4.45	± 311	3.82	65	4.10	[illegible]
19	3.88	133	4.25	250	4.27	288	4.42	294	3.80	62	4.05	[illegible]
20	3.90	[illegible]	4.19	220	4.25	278	4.36	261	3.79	[illegible]	4.03	
21	3.94 [500]	± 151	4.22	235	4.23	266	4.43	307	3.85	± [illegible]	4.01	[illegible]
22	3.96	160	4.18	215	4.23	266	4.45	± 311	3.97	[illegible]	4.00	[illegible]
23	3.95	155	4.21	230	4.23 [504]	± 266	4.42	294	4.05	± 140	4.00	
24	3.87	125	4.22	235	4.22	261	4.45	± 311	4.20	± 210	4.02 [510]	[illegible]
25	3.83	± 112	4.25	250	4.28	294	4.47	± 317	4.25	± [illegible]	4.05	[illegible]
26	3.82	± 109	4.31	283	4.29	300	4.46	311	4.29	261	4.05	[illegible]
27	3.82	109	4.30	[illegible]	4.32	317	4.43 [506]	± [illegible]	4.30 [508]	± [illegible]	4.03	[illegible]
28	3.80	103	4.31	[illegible]	4.32	[illegible]	4.39	[illegible]	4.29	[illegible]	4.03	[illegible]
29	3.79	100	[illegible]	[illegible]	4.28	294	4.39	[illegible]	XX	XXX	4.04	[illegible]
30	3.78	[illegible]	4.30	± [illegible]	4.25	[illegible]	4.38	[illegible]	XX	XXX	4.07	± [illegible]
31	3.78	± [illegible]	XX	XXX	4.23	± [illegible]	4.45	± [illegible]	XX	XXX	4.07	± [illegible]
93,197	Total	[illegible] 540		7040		8820		9572		5399		[illegible]
296	Mean	114		275		284		309		211		170
214,603	Run-off in acre-feet	7090		[illegible] 060		17490		19,000		11,700		10,400
[illegible]	Maximum	[illegible]		[illegible]		[illegible]		607		[illegible]		[illegible]
[illegible]	Minimum	[illegible]		[illegible]		[illegible]		256		60		[illegible]

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

Calendar Year 1977

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

07117000

Rating Table Used Oct 1st 19
to Sept. 30th 1978

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1	4.04	144	4.08	132	4.93	638	5.80	1960	a	780	3.84	79
2	4.04	144	4.21	191	5.20	1090	5.71	1730	4.87	858	3.66	59
3	4.06	151	4.45	317	5.39	1240	5.73	1760	4.67	678	3.54	52
4	4.06	151	4.28	225	5.42	1270	5.66	1640	4.72	706	3.54	65
5	4.05	148	4.18	179	S	V 2471	5.52	1400	4.71	698	a	100
6	4.04	144	4.38	300	S	V 791	5.33	1150	4.61	631	a	84
7	4.05	148	4.63	500	S	V 1045	5.20	1010	4.48	545	3.32	76
8	4.03	136	4.50	410	5.61	1340	5.10	906	a	480	3.29	70
9	3.99	115	4.36	320	5.49	1150	5.02	830	a	400	3.44	91
10	3.94	94	4.39	341	5.40	1080	S	V 3209	4.18	327	3.55	110
11	3.93	91	4.16	215	5.43	1050	a	1000	4.18	327	3.73	160
12	3.95	97	4.00	141	5.92	1700		607	4.44	493	3.75	165
13	3.90	79	3.92	115	5.86	1620	a	660	4.51	545	3.65	129
14	3.86	70	3.86	97	5.83	1530	4.53	748	4.54	568	3.68	140
15	3.86	70	3.92	115	5.85	1580	4.52	660	4.32	410	3.58	106
16	3.93	94	3.90	109	6.30	2310	4.49	607	4.08	270	3.51	86
17	3.92	91	3.83	88	6.68	3350	4.49	569	4.04	266	3.59	112
18	3.88	81	S	165	6.48	2830	4.54	575	3.99	250	3.62	125
19	3.91	88	4.48	305	6.26	2370	4.55	599	4.11	329	a	180
20	3.88	81	S	332	6.37	2430	4.61	630	4.23	417		200
21	3.87	79	4.21	240	6.43	2520	4.69	900	4.23	430		220
22	3.88	81	4.31	295	6.40	2390	4.88	946	3.76	179	a	140
23	3.90	86	4.29	283	6.36	2350	4.74	758	3.51	83	3.66	175
24	3.89	83	4.28	278	6.41	2490	5.05	1080	3.55	100	3.78	151
25	3.90	86	4.30	288	6.42	2560	S	V 631	3.70	151	3.85	173
26	3.83	67	4.49	404	6.35	2410	4.19	379	3.70	151	a	150
27	3.80	60	4.82	647	6.26	2350	4.27	515	3.71	157		130
28	3.81	62	5.14	936	5.86	2310	4.60	620	S	V 639		120
29	3.82	63	5.05	818	5.45	1600	a	800	S	V 1540		110
30	XX	XXX	4.86	731	5.77	2010	a	900	S	V 1214	a	100
31					XX	XXX	a	1200	4.05	113	XX	XXX
	2972		10,179		55,836		31,138		14,415		3,603	
	99		328		1861		1,004		465		120	
	5,895		20,190		11,075		61,762		28,592		7,146	
	151		936		3,350		3200		1,540		220	
	60		82		689		372		88		52	

Water Year 1978

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

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

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

Arkansas River at La Junta

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1978

Drainage area 12,210 square miles. Water stage recorder STEVENS A-35 CONT.

Max. Discharge ___ sec.-ft. at ___ G.H. ___ on ___
Max. G. H. 11.3[illegible] ft. at ___ on ___ Min. Daily Discharge 3.0 sec.-ft. on 20 Feb

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	4.07	7.2	4.08	9.3	4.39	35	4.28	33	a	33	3.98	[illegible]
2	4.07	7.2	4.07	8.8	4.29	25	a	54		37	4.07	[illegible]
3	4.11	8.0	4.08	9.0	4.23	20		64		42	S	73
4	4.15	8.8	4.12	10.2	4.45	45		74		43	S	[illegible]
5	4.14	8.6	4.14	10.8	4.52	62		80		43	S	[illegible]
6	4.13	8.4	4.15	11.4	4.35	32		70		33	4.58	[illegible]
7	4.13	8.4	4.16	12	4.42	42		60		24	4.33	[illegible]
8	4.12	8.2	4.18	13.2	4.50	60		52		20	4.23	[illegible]
9	4.00	6.0	4.19	14	4.46	51		46		21	4.12	[illegible]
10	4.08	7.8	S	32	4.41	42		40		22	4.09	[illegible]
11	4.05	7.4	4.64	69	4.41	43		34		22	4.10	[illegible]
12	4.05	7.6	4.65	75	4.51	64	a	31		21	4.09	[illegible]
13	4.05	7.6	4.66	80	4.39	40	S B	30		18	4.09	[illegible]
14	4.05	8.0	4.63	75	4.33	33	4.23	30		12	4.07	[illegible]
15	4.05	8.0	4.58	64	4.25	25	[illegible]	30		9.0	4.05	[illegible]
16	4.05	8.4	4.55	60	4.19	20	4.23	30		6.0	4.02	[illegible]
17	4.05	9.6	4.55	60	4.32	33	4.31	34		4.5	4.02	[illegible]
18	4.05	8.8	4.64	83	4.27	27	[illegible]	40		4.0	4.02	[illegible]
19	4.06	7.8	4.59	69	4.36	39	[illegible]	44		3.5	4.02	[illegible]
20	4.08	10.2	4.49	47	4.38	43	[illegible]	40		3.0	4.02	[illegible]
21	4.10	10.8	4.59	69	4.38	43	S B	36		3.3	4.02	[illegible]
22	4.10	10.8	4.51	54	4.24	26	[illegible]	35		3.5	4.02	[illegible]
23	4.12	11.4	4.48	47	4.32	36	4.19	42		4.0	4.01	[illegible]
24	4.12	11.1	4.36	29	4.36	42	[illegible]	43		4.5	4.01	[illegible]
25	4.12	11.1	4.40	35	4.27	29	[illegible]	45		6.0	4.00	[illegible]
26	4.11	10.8	4.41	36	4.29	32	[illegible]	40		8.0	3.99	[illegible]
27	4.11	10.5	4.45	[illegible]	4.27	[illegible]	a	38	a	10	3.97	[illegible]
28	4.10	10.2	4.58	[illegible]	4.50	75		34	4.01	[illegible]	3.96	[illegible]
29	4.09	9.9	4.48	[illegible]	4.42	[illegible]		32	XX	XXX	3.95	[illegible]
30	4.10	9.9	4.47	47	4.33	[illegible]		30	XX	XXX	3.94	7.0
31	4.09	9.6	XX	XXX	4.30	35	a	30	XX	XXX	3.95	[illegible]

Calendar Year 1977

Calendar Year 1977		OCT.	NOV.	DEC.	JAN.	FEB.	MAR.
29,465	Total	279	1718	1223	1321	472	602
81	Mean	9.00	57.3	39.5	42.6	16.9	19.4
58,444	Run-off in acre-feet	553	3410	2430	2620	936	1190
[illegible]	Maximum	11.4	80	75	80	43	84
[illegible]	Minimum	6.0	8.8	20	30	3.0	7.0

[redacted]

DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

09113000

Rating Table Used No. 35, Oct. 1st 1975 to Sept. 30th, 1978

	APR.		MAY		JUNE		JULY		AUG.		SEPT.				
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day.		
	3.95	7.2	3.98	8.0	4.97	170	5.40	204	S	123	S	229	1	4th	
	3.94	6.8	3.98	8.0	4.91	147	5.72	344	5.34	415	4.31	64	2	3rd	
	3.93	6.6	3.96	7.6	5.42	190	5.29	265	4.71	174	4.10	28	3	2nd	
	3.92	6.4	4.07	14	S	1469	6.20	1040	4.61	136	4.01	21	4	1st	
	3.92	6.4	4.16	18	S	1272	5.99	804	S	151	S	291	5		
	3.93	6.6	4.22	22	S	302	5.88	562	4.83	245	3.88	15	6	Quarter	Computed
	3.94	6.8	a	25	4.50	78	5.95	670	4.48	106	3.79	12	7		Checked
	3.95	7.0		21	4.36	33	5.84	570	a	50	3.75	10	8		Date
	3.94	6.8		20	4.46	49	5.83	562	4.14	30	3.71	9.3	9	4th	
	3.90	6.0		19	4.56	72	S	6,000	4.19	37	3.67	8.6	10		
	3.91	6.2		16	4.46	49	S	1571	S	51	3.66	8.4	11	3rd	
	3.93	6.6		15	4.45	47	a	1000	4.16	26	3.66	8.4	12		
	3.95	7.0		14	S	36		0.400	4.13	21	3.64	8.2	13	2nd	
	3.97	7.4		9.0	S	53		150	4.16	23	3.65	8.4	14		
	3.97	7.4		10	4.38	28	a	120	4.02	13	3.65	8.4	15	1st	
	3.97	7.4		7.0	4.73	88	4.57	100	4.01	12	3.65	8.4	16		
	3.96	7.0	a	5.0	S	900	4.58	103	4.03	13	3.65	8.4	17	Quarter	Dis.applid.
	3.93	6.9	3.98	3.4	6.11	103	4.94	245	4.03	13	3.64	8.2	18		Dis.check
	3.93	6.9	4.02	4.0	5.92	788	4.39	54	3.96	10	3.62	7.8	19		Date
	3.92	6.8	S	1.6	6.05	988	a	80	3.92	8.2	S	12	20	4th	
	3.95	6.2	S	123	6.20	1100		150	3.91	8.4	3.97	20	21		
	3.95	6.2	4.18	7.8	6.19	1040		120	3.94	9.0	4.06	27	22	3rd	
	3.91	5.1	S	24	6.16	892		150	3.96	9.6	S	45	23		
	3.91	5.1	4.17	22	6.13	760	a	250	3.99	10	4.30	69	24	2nd	
	3.92	5.3	4.19	21	6.28	928	S	482	4.04	12	4.39	94	25		
	3.96	7.0	4.28	13	6.28	988	S	363	4.04	12	S	33	26	1st	
	3.99	8.0	4.30	11	S	995	4.60	1040	4.00	11	4.10	32	27		
	3.97		4.57		S	400	4.45		3.98	10	4.10		28	Quarter	G.H.coed.
	3.97	7.8	S	175	5.48		4.47		S	111	4.05	27	29		G.H.check
	3.98	8.0	5.22	831	5.41	908	S	297	S	2011	3.98	20	30		Date
	XX	XXX	5.20	815	XX	XXX	S	204	5.31	570	XX	XXX	31	Water Year	
	202		1,292		15,460		17,269		4,432		1174		45,444	1978	
	6.73		41.7		515		557		143		39.1		124		
	401		2,560		30,670		34,250		8,790		2,330		90,140		
	8.0		285		1469		6,000		2011		291		6,000		
	3.9		7.4		2.8		4.9		2.4		7.3		3.0		

ARKANSAS — Creek near PORTLAND

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1978

Drainage area 4,280 square miles. Water stage recorder STEVENS A 35

Max. G. H. 6.44 +11 ft. at 1900 hrs on JUNE 4 Min. Daily Discharge 93 sec.-ft. on MAY 15

"S" - SUBDIVIDED DAYS "V" - VARIABLE SHIFT

Day.	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	1.61	+01 149	1.43	-01 122	1.81	+01 213	1.85	-03 213	1.74	+07 210	1.60	+11 183
2	1.65	158	1.46	127	1.82	+01 216	1.69	-02 172	[143] 1.61	+01 180	[143] 1.54	+11 166
3	1.71	172	1.45	125	1.82	+01 216	1.71	-02 178	1.52	158	1.51	160
4	1.69	-04 168	1.48	-01 130	1.87	-01 225	1.88	-01 228	1.53	160	1.48	" 153
5	1.64	-03 158	1.56	-02 143	1.88	-01 228	1.85	219	1.56	168	1.62	-02 191
6	1.63	155	1.57	145	1.88	-01 228	1.86	222	1.59	175	1.60	165
7	1.64	158	1.61	-02 153	1.79	-03 196	[140] 1.83	-01 213	1.57	170	1.61	+12 188
8	1.63	-03 155	S	V 208	1.89	-05 219	1.80	204	1.60	178	1.50	160
9	1.74	-02 185	[135] 1.78	-04 191	[138] 1.88	-07 210	1.82	-01 210	1.54	162	1.48	-12 150
10	1.67	168	1.75	-03 183	1.87	207	1.87	228	1.48	-05 119	S	V 150
11	1.69	172	1.73	-02 175	1.89	213	[141] 1.91	+01 243	1.56	-02 165	1.58	+13 183
12	1.73	-02 183	1.78	-01 199	1.88	210	1.88	231	1.61	+08 178	1.57	180
13	1.79	-01 202	1.83	+01 219	1.87	207	1.81	-01 207	1.49	-07 147	1.44	149
14	1.68	175	1.82	-02 219	1.87	-07 207	1.81	207	1.45	139	1.40	141
15	1.67	172	1.77	-03 207	1.91	-06 220	1.81	-01 207	1.46	141	[146] 1.37	+13 135
16	1.65	168	1.79	+04 216	1.93	228	1.86	-02 219	1.47	143	1.32	127
17	[132] 1.61	158	[136] 1.78	+05 216	1.88	-06 213	1.84	213	1.42	133	1.30	124
18	1.58	151	1.68	-06 191	1.78	-05 183	1.83	210	1.43	135	1.31	125
19	1.57	149	1.70	196	1.89	219	1.80	202	1.42	133	1.34	130
20	1.48	-01 130	1.73	204	1.82	-02 199	1.82	207	1.47	143	1.33	129
21	1.40	-01 118	1.73	204	1.68	-04 185	1.83	210	[144] 1.47	-07 143	1.28	121
22	1.42	121	1.76	-06 213	[139] 1.77	-04 188	1.82	-02 207	1.51	+08 153	1.27	119
23	1.45	125	1.86	-07 247	1.87	216	[142] 1.73	-03 180	1.54	-01 162	[147] 1.33	+13 129
24	1.45	125	1.87	250	1.92	231	1.77	-02 194	1.55	165	1.31	126
25	1.38	115	[137] 1.85	-07 [illegible]	1.93	234	1.70	-01 178	1.58	172	1.32	127
26	1.38	115	1.87	+06 247	1.88	-01 219	1.69	-01 175	1.59	+09 175	1.31	125
27	1.37	114	1.87	+05 247	1.79	-03 [illegible]	1.75	+02 [illegible]	1.63	+10 189	[148] 1.35	+13 [illegible]
28	[133] 1.38	115	1.85	[illegible]	1.80	[illegible]	1.74	[illegible]	1.61	[illegible]	1.32	[illegible]
29	1.42	121	[illegible]		1.87	219	1.70	[illegible]	XX	XXX	1.35	[illegible]
30	1.43	122	1.76	-03 202	1.90	228	1.72	-05 202	XX	XXX	1.42	[illegible]
31	[134] 1.42	-01 121	XX	XXX	1.91	-05 231	1.75	-07 213	XX	XXX	[141] 1.44	1.12 [illegible]
Total	4598		5884		6590		6384		4508		4542	
Mean	148		196		213		206		161		147	
Run-off in acre-feet	9104		11650		13,018		12,640		8926		8973	
Maximum	202		250		231		243		210		[illegible]	
Minimum	114		122		165		172		133		119	

Calendar Year 1977 — [illegible] Total — [illegible] Mean — [illegible] Run-off in acre-feet

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

No. 07077200

Rating Table Used NO. 1 10-28-75

	APR.		MAY		JUNE		JULY		AUG.		SEPT.					
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day.			
1	1.63	194	154 2.72		3.56	1170	4.89	2280	3.15	847	1.79	222	1	4th	JMS	
2		222	2.67	592	3.78	1350	4.78	2180	3.05	783	1.73	204	2	3rd	JMS	
3	1.67	213	2.57	540	3.88	1430	4.70	2100	2.65	555	1.83	237	3	2nd	JMS	
4		202	2.42	470	S	1845	4.62	2040	2.77	680	1.83	237	4	1st	JMS	
5		213	2.52	520	157 4.32		4.43	1860	3.14		1.78		5	Quarter	Computed	Checked
6	1.60	194	2.67	598	4.22	1730	4.32	1770	3.09	808	1.77	219	6			
7		175	2.52	520	4.05	1550	165 4.23	1690	3.06	789	172 1.85	243	7			
8	1.42	151	2.29	416	4.04	1530	4.12	1580	168 3.01	759	1.91	266	8			
9		180	1.69	207	160 4.04	1570	S	1620	2.97	735	1.96	286	9	4th	JMS	
10	1.60		155 1.50	158	4.36	1820	3.72	1230	3.03	771	1.92	272	10			
11			1.29	116	4.91	2380	3.68	1200	3.09	814	2.00	303	11	3rd	JMS	
12		149	1.25	110	161 5.23	2740	166 3.49	1050	3.44	1050	1.91		12			
13	1.42		1.18	99	5.44	2990	3.57	1110	3.40	1020	1.92		13	2nd	JMS	
14		172	1.22	103	5.61	3200	3.57	1110	316	900	1.92	279	14			
15	1.56		154 1.14		162 5.94		3.47	1050	2.81	653	1.92	279	15	1st	JMS	
16		185	S	109	6.17	3900	3.48	1050	3.36	1000	1.79		16			
17		196	S	336	6.12	3840	3.54	1100	329	958	1.70	216	17	Quarter	Dis.appld.	Dis.chuck
18	1.56	165	2.66		5.88	3670	3.60	1110	169 3.29	958	1.67	207	18			
19			2.57	545	5.68	3540	3.57	1100	3.29	958	1.69	213	19			
20	1.50	147	2.34	438	5.62	3170	3.50	1070	3.27	944	1.79		20	4th	JMS	
21		147	2.32	429	5.62	3170	3.62	1140	2.72	614	173 1.82	256	21			
22	S	261	2.39	465	5.47	2980	3.87	1370	2.64	570	1.84	263	22	3rd	JMS	
23		314	2.41	475	163 5.47	2980	S	1410	170 2.72	614	1.83	257	23			
24			2.39	446	5.40	2870	3.69	1240	2.72	614	1.75	234	24	2nd	JMS	
25	2.00		2.61	582	5.44	2940	3.67	1230	2.71	609	1.79	247	25			
26		314	157 2.89	747	5.49	2940	167 3.67	1230	2.75	631	1.78	243	26	1st	JMS	
27			3.10	841	164 5.26				2.42	454	1.70		27			
28			3.33		5.07		3.62		2.24		1.62		28	Quarter	G.H.appld.	G.H.chuck
29			3.23		5.12		S		171 S	505	1.60	191	29			
30	2.61		150 3.08	826	5.13		S	1525	218	352	1.57		30	Water Year		
31		XXX	3.24	732	XX	XXX	325		1.87		XX	XXX	31	1978		
	6,975		14,920		75,395		43274		22,313		7,238			202,621		
	232		481		2513		1396		720		241			555		
			29,542		149,282		85,683		44,180		14,331			401,170		
									1090							
	7		93		1170		912		247		133			93		

PURGATOIRE ~~Creek near~~ TRINIDAD, COLORADO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area 795 square miles. Water stage recorder STEVENS A-35

Max. Discharge 2575 Sec. ft. at 1500hrs on JUNE 27; G. H. 5.35 ft.

Max. G. H. 5.35 ft. at 1500hrs on JUNE 27. Min. Daily Discharge ___ sec.-ft. on ___

DISCHARGE ESTIMATED FOR "a" DAYS

"S" SUBDIVIDED DAYS "V" VARIABLE SHIFT

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	a	30	S	17	S	17	a	15	a	10	a	5.5
2		25	.75	14	.81	15		13		10	a	[illegible]
3		20	S	20	.76	13		12		10	.88	20
4	a	20	.95	26	.81	14		11		9.0	a	7.0
5	.81	19	.86	20	.79	14		11	a	9.0		12
6	S	26	.77	16	S	15		11	.81	15	a	12
7	.95	28	.79	16	a	12		11	.85	17	.85	19
8	.90	24	S	25		12		11	a	7.0	a	14
9	.96	28	1.07	34		13		11		7.0	a	14
10	.87	22	.98	28		13		11		7.0	.78	16
11	.81	18	.86	19		13		11		7.5	.76	14
12	.82	19	.87	20		13	a	10		7.0	.87	20
13	.86	21	.87	20		13	S	19		6.5	.84	19
14	.86	21	.90	22		13	a	11		6.5	a	15
15	.83	[illegible]	.93	23		13		10		7.0		14
16	.82	19	.93	23		12		10		7.0		14
17	.82	19	.88	20		11		11		7.0		14
18	.83	19	.83	18		10		11		7.0		14
19	.88	[illegible]	.83	18		10		10		7.0	a	14
20	.93	25	.82	17		10		10		7.0	.75	14
21	.93	25	S	21		10		10		7.5	.75	14
22	.93	25	.90	22		10		10		7.5	.75	14
23	.93	25	.88	20		10	a	10	a	8.0	.75	14
24	.96	28	S	17		10	S	36	S	16	.76	14
25	1.02	32	.79	14		10	a	15	.83	16	a	13
26	1.03	33	.83	16		11		11	a	6.5		14
27	S	23	.87	19		12		11	a	[illegible]		15
28	S	34	.85	[illegible]		13		10	a	[illegible]		[illegible]
29	1.16	[illegible]	[illegible]	[illegible]		11		10	XX	XXX		15
30	1.14	41	.81	[illegible]	a	15		10	XX	XXX		16
31	1.13	[illegible]	XX	XXX	.80	18	a	10	XX	XXX	a	17
Total		793		595		[illegible]		373		246		[illegible]
Mean		25.6		19.8		12.5		12.0		8.8		14.1
Run-off in acre-feet		1,570		1,178		720		739		487		865
Maximum		43		34		18		36		17		20
Minimum		18		14		10		10		6.0		5.5

Calendar Year 1977	
Total	11484.2
Mean	[illegible].4
Run-off in acre-feet	22,6[illegible]0
Maximum	232
Minimum	[illegible]

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 0712450

Rating Table Used #17 11-6-78

	APR.		MAY		JUNE		JULY		AUG.		SEPT.			
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Day.	
		16	1.16	34	1.73	104	S	57	S	129	1.20	44	1	4th
		16	1.28	46	1.83	121	1.43	65	S	127	1.07	32	2	
		15	1.38	57	1.77	110	1.43	65	S	125	1.02	28	3	3rd
		15	1.38	57	1.88	131	S	116	S	32.1	1.02	28	4	
		13	1.37	54	1.97	150	1.96	150	S	18.1	1.04	30	5	2nd
		11	1.37	56	S	100	2.07	185	S	59	1.03	29	6	
		11	1.37	56	S	54	2.14	204	1.16	41	1.01	28	7	
		11	1.26	44	S	38	2.11	196	1.24	49	.99	26	8	1st
		12	1.23	42	1.53	77	1.98	183	1.38	66	.98	25	9	
.81		13	1.27	46	1.54	79	S	115	1.43	73	.97	25	10	
		19	S	34	1.54	79	S	80	1.42	72	.95	23	11	4th
		17	S	37	S	124	2.00	171	1.35	63	.92	22	12	
		16	1.35	50	2.02	161	1.99	167	1.46	77	.92	22	13	
		14	1.41	57	2.06	171	1.99	159	S	69	S	16	14	3rd
		12	1.53	70	S	220	1.97	171	S	1.07 40	.69	9.0	15	
		12	1.58	77	2.38	253	1.97	154	1.15	41	.72	10	16	
		12	1.46	61	2.38	258	1.98	157	1.13	39	.73	11	17	2nd
.78		12	S	77	2.33	242	1.97	154	1.07	34	.74	11	18	
		11	1.73	99	2.22	207	1.98	167	1.03	31	.75	11	19	1st
		11	S	88	2.18	196	S	177	1.03	31	.75	11	20	
		11	S	98	2.18	196	2.08	180	1.02	30	.76	12	21	4th
79		13	1.55	74	2.18	196	2.13	193	1.03	31	.76	12	22	
		13	1.32	47	2.17	193	1.98	157	1.03	31	.77	12	23	
.77		12	S	68	2.15	188	1.82	123	1.02	30	.78	13	24	3rd
		13	1.68	93	2.11	176	1.62	92	1.04	32	.83	14	25	
		13	1.68	93	S	164	1.57	84	S	197	.87	16	26	
			1.54	79	S	211	1.61	93	1.03	31	.88	17	27	2nd
			1.45	63	S	79	1.45	69	1.10	37	.88	17	28	
		20	1.43	60	1.07	28	1.45	69	1.17	43	.87	16	29	1st
.67		37	1.34	50	S	47	1.46	70	1.10	37	.87	16	30	
	XXX		S	72	XX	XXX	S	119	S	47	XX	XXX	31	Water Year
			1.935		4341		3995		2236		586			1978
			62.4		145		129		72.1		19.5			
			3830		8430		7,910		4430		1,160			
		27	99		259		201		197		44			
		11	34		28		57		30		9.0			

Computed JMS Checked Date

Dis.appld. JMS Dis.check Date

G.H.appd. JMS G.H.check Date

CUCHARAS RIVER Creek near at SPO[illegible] [illegible], near [illegible]

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area 56 square miles. Water stage recorder Stevens A-35

Max. Discharge [illegible] sec.-ft. at 0200 hrs on July 15, 78 G. H. [illegible] +.17 ft.

Max. G. H. 1.73 +.17 ft. at 0200 hrs on July 15 Min. Daily Discharge 4.6 sec.-ft. on DEC. 15

Discharge estimated for "a" and "b" days

"S" - Subdivided Days "y" - Variable Shift

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. Gage height	DEC. Discharge	JAN. Gage height	JAN. Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	.90	+.07 5.6	.91	+.09 6.5	1.40	+.07 32	a	6.0	a	6.0	a	6.0
2	.91	5.9	S	+.10 10	1.42	+.07 33		6.0		6.0	[952]	[illegible]
3	.91	5.9	.94	7.8	S	+.06 15		6.0	[950]	6.0		[illegible]
4	[942] .90	+.07 5.6	[944] .93	+.10 7.4	.93	6.2	[948]	6.0		6.0		6.0
5	.92	+.08 6.5	.92	7.1	.90	5.4		[illegible]		[illegible]		[illegible]
6	.93	+.08 6.8	.93	7.4	S	9.1		6.0		[illegible]		[illegible]
7	.94	+.08 7.1	1.01	10	1.00	8.5		6.0		6.0		[illegible]
8	.93	+.09 7.1	.92	7.1	[946] .89	+.06 5.2		6.0		6.0		[illegible]
9	.92	6.8	.83	+.10 4.6	S	9.9		6.0		[illegible]		[illegible]
10	.92	6.8	S	+.09 11	.97	7.4		6.0		[illegible]		[illegible]
11	.92	6.8	S	+.08 15	.89	5.2		6.0		[illegible]		[illegible]
12	.91	6.5	.97	8.2	.90	5.4		6.0		6.0		[illegible]
13	.92	6.8	1.00	+.08 9.2	1.00	8.6		6.0		6.0	a	[illegible]
14	.90	6.2	.94	+.07 6.8	.97	7.4		[illegible]		6.0	[953] a	[illegible]
15	.92	6.8	.94	6.8	.87	4.6		[illegible]	[951]	[illegible]	.87	[illegible]
16	.92	6.8	.94	6.8	.91	+.06 [illegible]		[illegible]		6.0	.92	6.[illegible]
17	.91	6.5	.94	6.8	a	6.0		[illegible]		6.0	S	7.[illegible]
18	.91	6.5	.94	6.8	a	6.0		6.0		6.0	S	6.[illegible]
19	[943] .91	+.09 6.5	.93	6.5	a	6.0	[949]	6.0		6.0	.92	[illegible]
20	.91	6.5	.92	6.2	a	6.0		6.0		6.0	.96	8.[illegible]
21	.92	6.8	.98	8.2	[947] a	6.0		6.0		6.0	1.00	11
22	.93	7.1	[945] 1.01	+.07 9.2		6.0		6.0		6.0	1.03	[illegible]
23	.93	7.1	.97	7.8		6.0		6.0		[illegible]	.98	11
24	.92	6.8	1.00	8.8		6.0		6.0		[illegible]	.94	[illegible]
25	.91	6.5	.93	6.5		[illegible]		6.0		[illegible]	.94	[illegible]
26	.91	6.5	.93	6.5		[illegible]		6.0		[illegible]	.95	9.[illegible]
27	.91	[illegible]	.92	6.2							1.00	[illegible]
28	.91	[illegible]	.92						a		[954] 1.01	
29	.91	[illegible]	[illegible]						XX	XXX	1.01	[illegible]
30	.90	6.2	S	+.07 13					XX	XXX	1.06	[illegible]
31	.89	+.09 5.[illegible]	XX	XXX	a		a		XX	XXX	1.11	[illegible]

Calendar Year 1977		OCT.	NOV.	DEC.	JAN.	FEB.	MAR.
[illegible]79.1	Total	202.4	240.2	258.4	186	168	250.3
[illegible]	Mean	6.5	8.0	8.[illegible]	6.0	6.0	8.0
[illegible]	Run-off in acre-feet	[illegible]	[illegible]	512	368	[illegible]	[illegible]
	Maximum	[illegible]	15	33	[illegible]	[illegible]	[illegible]
	Minimum	5.[illegible]	6.2	4.6	6.0	[illegible]	5.[illegible]

[redacted] DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

07114000

Rating Table Used #12 3-14-74

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1	1.12	1.13 17	1.08	+.11 14	1.44	+.17 45	1.43	+.15 42	1.09	+.10 14	.89	+.20 9.6
2	[illegible]9	+.12 15	1.05	12	1.47	+.16 43	1.39	+.14 37	1.09	+.10 14	.89	[illegible]
3	[illegible]07	14	1.10	15	1.48	+.16 [illegible]9	1.37	35	1.11	+.10 15	.89	[illegible]
4	[illegible]06	13	1.10	15	1.52	+.15 52	1.35	33	1.12	+.10 15	.89	[illegible]
5	[illegible]6	13	1.08	14	1.54	+.15 55	1.33	+.14 32	1.08	+.10 13	.89	[illegible]
6	1.03	12	1.07	13	1.53	+.17 52	1.32	32	1.07	13	.89	+.20 9.6
7	[illegible]5	13	S	14	1.51	+.17 50	1.31	31	1.06	12	.87	+.14 8.5
8	1.08	14	1.08	14	1.52	+.14 51	1.28	28	1.07	13	.88	8.9
9	[illegible]8	14	1.13	+.11 16	1.49	[illegible] 48	1.32	31	1.05	12	.88	8.6
10	[illegible]5	13	1.21	+.12 21	1.50	[illegible] 49	1.36	34	1.05	12	.87	8.5
11	1.04	+.12 12	1.27	+.13 26	1.55	[illegible] 56	1.31	30	1.03	11	.88	8.6
12	[illegible]4	12	1.32	+.14 31	1.58	[illegible] 62	1.30	30	1.03	11	.87	+.19 8.5
13	1.05	13	1.31	+.14 30	1.62	+.16 67	1.28	28	1.03	11	.84	+.13 7.1
14	[illegible]6	13	1.34	+.14 32	1.67	75	1.27	28	.99	9.6	.83	6.8
15	[illegible]7	14	1.37	+.15 36	1.68	76	1.26	27	.97	8.8	.82	[illegible]
16	1.07	14	1.42	+.16 42	1.67	75	1.24	25	.96	8.5	.80	5.4
17	[illegible]6	13	1.43	+.16 43	1.66	73	1.22	23	.94	7.8	.82	6.5
18	S	1.12 12	1.38	+.17 39	1.64	70	1.21	23	.95	8.2	.82	[illegible]
19	[illegible]	+.11 11	1.34	+.17 35	1.62	67	1.19	21	.95	8.2	.82	[illegible]
20	1.02	[illegible]	1.35	+.17 36	1.62	67	1.20	+.11 22	.95	8.2	.84	[illegible]
21	[illegible]2	[illegible]	1.34	+.17 35	1.60	1.16 64	1.20	+.14 22	.96	8.5	.86	[illegible]
22	[illegible]00	10	1.35	+.17 36	1.57	59	1.20	+.14 22	.96	+.10 [illegible]	.86	[illegible]
23	.99	10	1.37	+.18 39	1.53	55	1.18	+.13 20	.94	+.11 8.2	.85	7.4
24	[illegible]0	10	1.39	+.18 41	1.50	51	1.17	20	.93	+.12 8.2	.87	[illegible]
25	1.02	[illegible]	1.40	+.18 42	1.49	50	1.16	+.12 19	.97	[illegible]	.92	[illegible]
26	[illegible]3	+.11 12	1.38	+.18 40	1.47	[illegible]	1.14	+.12 17	.92	+.16 [illegible]	.92	[illegible]
27	[illegible]6	[illegible]	1.37	[illegible]	1.46	[illegible]	1.12	16	.88	+.17 [illegible]	.88	+.18 [illegible]
28	[illegible]4	[illegible]	1.36	[illegible]	1.46	[illegible]	1.12	16	.90	[illegible]	.87	[illegible]
29	[illegible]4	[illegible]	1.35	37	1.47	[illegible]	[illegible].11	16	.92	[illegible]	.87	[illegible]
30	1.06	[illegible]	1.35	37	1.49	+.16 50	1.13	+.11 16	.91	[illegible]	.86	[illegible]
31	X	XXX	1.37	+.18 39	XX	XXX	1.11	+.10 15	.90	[illegible]	XX	XXX
	[illegible]17		921		1704		791		3253		245.9	
	12.6		29.7		56.8		25.5		10.5		8.2	
	111		1821		3374		1566		6454		487	
	[illegible]		[illegible]		[illegible]		42		15		[illegible]	
	[illegible]		[illegible]		[illegible]		[illegible]		7.8		[illegible]	

Day. | 4th | 3rd | 2nd | 1st | Quarter | Computed | Checked | Date

Dis.appvl. | Dis.check | Date

G.H.appvl. | G.H.check | Date

Water Year 1978

River at
HUERFANO RIVER Creek near near MANZANARES CROSSING near REDWING

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1978

Drainage area 73 square miles. Water stage recorder Stevens A-35 Continuous

Max. G. H. 2.66 ft. at 0700 hrs on June 16 Min. Daily Discharge ____ sec.-ft. on ____

Discharge estimated for "a" and "b" days

"A" - Subdivided days "V" - Variable Discharge

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	a	19	2.06	8.3	S	8.7	a	6.5	a	7.5	a	8.0
2	a	19	2.05	8.0	S	8.2		6.5		7.0		8.0
3	a	19	2.06	8.0	2.09	9.5		7.5		7.5		7.0
4	a	19	2.07	8.3	2.11	9.8		8.5		8.0		6.0
5	a	18	2.06	8.0	S	b 7.1		7.0		8.0		6.5
6	a	18	2.05	7.8	S	8.3		9.5		7.5		7.0
7	2.25	18	2.15	11	2.06	8.6		9.0		7.5		6.5
8	2.24	18	2.10	9.2	2.02	7.6		8.0		7.0		7.0
9	2.23	17	S	7.1	S	7.5		7.0		7.0		7.5
10	2.22	17	S	8.6	S	8.9		7.0		6.5		8.0
11	2.21	16	S	8.1	S	8.5		7.0		6.5		8.0
12	2.17	14	2.07	8.3	S	8.1		7.5		6.5		7.5
13	2.17	14	2.06	8.0	S	7.3		7.5		6.0		7.0
14	2.15	14	2.08	8.4	S	b 7.8		7.0		6.0	a	7.0
15	2.14	13	2.08	8.1	a	8.0		7.0		8.0	S	V 8.1
16	2.12	13	2.08	8.6		8.0		6.5		7.0	S	V 8.2
17	2.12	13	2.09	9.2		7.5		7.0		6.5	S	V 8.1
18	2.12	13	2.09	9.2		7.0		7.0		6.0	2.02	8.0
19	2.13	13	2.08	8.6		7.5		5.0		6.5	2.04	8.1
20	2.14	13	2.09	9.2	a	6.0		6.0		7.0	2.05	8.2
21	2.14	13	S	8.1	a	5.8		6.5		7.0	2.07	8.3
22	2.14	13	2.08	8.6		5.0		7.0		7.5	2.10	9.1
23	2.13	12	2.07	8.3		7.0		7.0		7.5	2.08	8.7
24	2.13	12	S	8.7		7.0		6.0		7.5	2.06	8.6
25	2.12	11	2.08	9.6		7.5		5.0		7.5	2.03	7.7
26	2.12	11	2.08	9.6		7.0		5.5		8.0	2.03	7.7
27	2.11	11	2.08	9.3		7.0		6.0		8.0	2.06	7.9
28	2.10	10	2.08	9.1		6.5		6.5	a	9.0	2.09	8.1
29	2.10	10	S	8.3		6.5		7.0	XX	XXX	2.07	8.0
30	2.10	10	S	8.2		7.0		7.5	XX	XXX	2.08	8.1
31	2.09	9.5	XX	XXX	a	7.0	a	7.5	XX	XXX	2.13	10
Total		440.5		255.4		232.5		217.5		201.5		243.6
Mean		14.2		8.5		7.5		7.0		7.2		7.9
Run-off in acre-feet		872		506		460		431		399		482
Maximum		19		11		9.8		9.5		9.0		10
Minimum		9.5		7.1		5.0		5.0		6.0		6.5

Calendar Year 1977

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07111000

Rating Table Used NO.14 NOV. 8, 1978

Day.	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1	2.16	11	2.14	14	2.48	43	2.43	38	1.98	13	1.81	8.0
2	2.11	9.8	2.18	16	2.50	45	2.37	34	1.96	13	1.80	7.8
3	2.11	9.8	2.19	16	2.49	44	2.32	30	1.99	13	1.78	7.4
4	2.09	9.2	2.18	16	2.52	47	2.29	28	2.07	16	1.78	7.4
5	2.11	9.8	2.18	16	2.53	49	2.27	26	2.04	15	1.77	7.2
6	2.08	9.2	2.19	16	2.46	43	2.24	25	2.00	14	1.77	7.2
7	2.08	9.2	2.18	16	2.41	39	2.22	24	2.06	16	1.76	7.0
8	2.09	9.5	2.20	16	2.41	39	2.18	22	2.04	16	1.75	6.8
9	2.12	10	2.20	16	2.43	41	2.22	24	2.01	15	1.75	6.8
10	2.10	9.8	2.24	18	2.52	49	2.36	33	2.01	15	1.75	6.8
11	2.08	9.5	2.24	18	2.57	54	2.43	33	1.97	14	1.73	6.4
12	2.10	10	2.24	18	2.56	53	2.36	33	1.95	13	1.73	6.4
13	2.09	9.8	2.24	18	2.57	54	2.29	30	1.95	13	1.75	6.8
14	2.09	9.8	2.26	20	2.55	52	2.24	26	1.93	12	1.73	6.4
15	2.09	9.8	2.28	22	2.57	54	2.20	25	1.91	12	1.73	6.4
16	2.08	9.5	2.34	26	2.59	56	2.17	23	1.87	10	1.72	6.2
17	2.08	9.5	2.43	33	2.53	50	2.17	23	1.83	9.7	1.76	7.2
18	S	8.0	2.38	31	2.50	48	2.14	22	1.83	9.5	1.79	8.0
19	2.06	9.5	2.37	30	2.48	45	2.11	20	1.84	9.8	1.80	8.3
20	2.08	10	2.39	32	2.50	47	2.09	19	1.83	9.5	1.82	8.9
21	2.08	10	2.36	31	2.46	43	2.08	18	1.82	9.2	1.82	8.9
22	2.06	10	2.34	30	2.46	43	2.07	18	1.85	10	1.81	8.6
23	2.05	9.8	2.41	36	2.43	41	2.04	16	1.88	11	1.82	8.9
24	2.07	11	2.46	40	2.41	39	2.03	16	1.86	10	1.83	8.6
25	2.06	10	2.44	38	2.42	40	2.03	16	1.88	10	1.82	8.9
26	2.08	11	2.46	40	2.41	39	2.02	16	1.84	8.9	1.82	8.9
27	2.09	12	2.47	41	2.37	35	[illegible]	14	1.83	8.6	1.80	8.3
28	2.12	[illegible]	2.43	[illegible]	2.36	[illegible]	1.98	13	1.82	[illegible]	1.79	[illegible]
29	2.12	12	2.40	36	2.48	[illegible]	1.99	13	1.83	8.6	1.78	7.6
30	2.13	13	2.42	37	2.50	45	1.99	14	1.83	8.6	1.78	7.8
31	XX	XXX	2.45	41	XX	XXX	1.98	13	1.82	8.3	XX	XXX
	3058		816		1354		710		359.8		228.1	
	10.2		26.3		45.1		22.9		11.6		7.6	
	605		1620		2680		1406		712		452	
	12		41		[illegible]		[illegible]		16		5.1	
	9.0		14		24		13		8.3		6.2	

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

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

	4th	3rd	2nd	1st	Quarter
G.H.appl.	JMS	JMS	JMS	JMS	
G.H.check					
Date					

Water Year 1978

53646

14.7

10620

ARKANSAS River at Canal near ABd PUEBLO, COLO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1978

Drainage area 4670 square miles. Water stage recorder STEVENS A-35 CONTINUO

Max. G. H. 5.16 ft. at 0930hrs on JULY 30 Min. Daily Discharge 51 sec.-ft. on MAR 21

DISCHARGE ESTIMATED ON "A" DAYS

"S" - SUBDIVIDED DAYS "V" - VARIABLE SHIFT

Day.	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	0.28	o 106	0.27	t.01 106	0.49	o 148	0.40	t.02 134	0.97	t.01 271	0.42	t.04 128
2	.26	103	.26	105	.40	130	.40	134	304 S	V 216	328 .26	t.04 96
3	.26	103	.26	t.01 105	.37	124	.43	140	0.66	t.03 178	.23	90
4	.39	128	.30	t.02 114	.37	o 124	.47	148	.66	178	.23	90
5	.47	144	.35	124	.50	t.01 148	.53	160	.66	178	.23	90
6	.35	120	.35	t.02 124	.70	192	.63	182	.66	178	.23	t.04 90
7	.34	118	.49	t.03 154	.80	218	301 .67	t.02 192	.63	170	.36	t.03 116
8	.38	126	.70	t.04 205	.71	195	.67	192	.62	168	.42	128
9	.40	130	299 .77	t.04 223	301 .61	t.01 170	.62	t.02 180	.65	175	.31	t.03 106
10	.49	148	.83	241	.61	170	.50	t.01 152	.65	175	.13	t.02 78
11	.45	140	.82	t.04 238	.60	168	.44	140	.65	175	.11	75
12	.38	126	.69	t.03 200	.61	170	.49	150	.65	175	.11	t.02 75
13	.52	154	.65	190	S	217	.55	162	.65	175	.23	t.01 96
14	.45	140	.70	202	1.28	388	.57	166	.65	175	.32	112
15	.42	134	.80	229	302 1.24	t.01 372	.57	166	.65	t.03 175	304 .17	t.01 86
16	.42	134	.85	t.03 244	S	V 205	.62	178	.61	t.04 164	.03	o 66
17	297 .42	o 134	.77	t.02 218	0.44	o 138	.65	185	.57	156	.00	62
18	.53	156	.68	195	.44	138	.55	t.01 162	.57	156	.00	62
19	.63	178	.65	188	.44	o 138	.38	o 126	.57	156	.00	o 62
20	.65	182	.65	t.02 188	.48	t.01 148	S	V 172	.57	t.04 156	.04	t.01 58
21	.63	178	.55	t.01 162	.40	132	0.75	t.01 205	307 S	V 132	.10	t.01 51
22	.46	o 142	.47	146	303 .26	t.01 105	.75	205	0.24	t.05 90	.08	t.01 54
23	.37	t.01 126	.51	t.01 154	S	133	305 .81	t.01 220	.28	97	315 .02	t.02 68
24	.37	126	.60	o 170	0.62	178	.87	238	.38	116	.05	t.01 57
25	.35	122	300 .67	o 188	.63	180	.79	215	.47	134	.08	t.01 54
26	.34	120	.72	200	.63	t.01 180	.66	182	.47	134	.00	o 62
27	.32	116	.72	200	S	V 147	.62	172	.52	144	.03	o 66
28	293 .27	t.01 106	.68	190	0.38	t.02 130	.62	172	.54	t.05 148	.13	t.01 .79
29	.27	106	.62	175	.38	130	.62	172	XX	XXX	.17	t.02 84
30	.27	106	.56	o 162	.39	132	.74	202	XX	XXX	.16	82
31	.28	t.01 108	XX	XXX	.40	t.02 134	.91	t.01 250	XX	XXX	311 .22	t.02 92
Total		4,060		5,340		5,282		5,454		4,545		2,513
Mean		131		178		170		176		162		81.1
Run-off in acre-feet		8050		10,590		10,480		10,820		9,020		4,980
Maximum		182		244		388		250		271		128
Minimum		103		105		105		126		90		51

Calendar Year 1977

97,654

240

173,900

1260

63

[redacted] STATE OF COLORADO
[redacted] DIVISION OF WATER RESOURCES
[redacted] OFFICE OF STATE ENGINEER

No. 070? 100

Rating Table Used No. 9 Oct. 1, 1977 to Sept. 30, 1978

APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge	Day.
.30	-.01 108	1.32	-.02 400	2.30	+.04 949	3.66	+.04 2100	2.14	+.03 847	0.47	-.01 142	1
[redacted]	112	1.57	515	2.50	1080	a	1890	2.06	800	.44	136	2
.32	112	1.51	486	2.60	1150		1800	1.99	761	.41	130	3
[redacted]	118	1.28	384	2.62	1160		1750	1.99	761	.50	148	4
[redacted]	134	1.18	344	[317] S	+.04 1970	a	1750	1.95	739	.56	160	5
.45	-.01 138	1.34	409	3.12	1580	3.16	+.04 1620	1.86	690	.51	150	6
[redacted]	0 120	1.39	432	3.01	1480	[321] 2.99	+.04 1470	1.55	530	[327] .56	-.01 160	7
.16	+.01 87	1.31	396	2.84	1330	2.84	1330	[325] 1.44	+.03 476	.63	175	8
[redacted]	+.02 75	[314] S	-.02 140	2.69	1210	S	1210	1.39	454	.70	192	9
.12	82	0.25	-.02 97	2.60	+.04 1150	S	2090	1.43	472	.73	200	10
[redacted]	86	.07	-.01 70	S	V 1600	1.72	620	1.61	560	.76	208	11
[redacted]	+.02 86	.08	72	S	V 2940	[322] 1.58	+.04 550	2.05	794	.68	188	12
[312] .25	+.03 106	.25	99	4.19	+.11 2790	S	V 717	2.23	901	.63	-.01 175	13
[redacted]	+.02 116	.36	120	4.32	+.11 2950	[323] 2.13	+.03 841	2.17	865	.54	0 158	14
.35	124	.32	112	[318] 4.48	+.11 3150	2.13	841	2.13	841	.48	146	15
[redacted]	114	.27	103	4.80	3560	2.08	811	2.12	835	.48	146	16
[redacted]	114	S	177	4.94	3750	2.13	841	2.14	847	.53	156	17
.34	122	1.44	458	4.78	3540	2.21	889	2.18	871	.53	156	18
[redacted]	+.02 124	1.44	458	4.54	3220	2.40	1000	2.18	871	.43	136	19
.33	+.01 118	S	355	4.32	2950	2.60	1140	2.13	841	.37	124	20
[redacted]	118	0.93	257	4.28	2900	2.64	1170	1.71	610	[328] .48	0 146	21
[redacted]	118	1.06	302	4.18	2780	2.64	+.03 1170	1.73	620	.64	180	22
[redacted]	126	1.12	324	[319] 4.07	+.11 2650	S	V 1370	[326] 1.70	+.03 605	.77	212	23
[redacted]	120	1.10	316	4.10	+.09 2660	S	+.02 1300	1.77	640	.80	220	24
.27	+.01 106	1.27	384	4.05	+.05 2550	2.30	937	1.80	656	.72	0 200	25
[redacted]	0 99	[315] 1.60	-.01 535	4.08	+.04 2570	[324] 2.28	+.02 925	1.75	+.03 630	.53	+.01 158	26
[redacted]	-.01 108	1.99	+.01 750	[320] 4.09	+.04 25[illegible]	2.37	979	1.29	+.02 404	.41	134	27
.23	.01 114	2.13	+.02 835	3.88	2340	2.48	1050	1.14	+.02 344	.34	120	28
[redacted]	V 298	2.10	+.03 823	3.63	2070	2.90	+.02 1370	S	V 1030	.26	105	29
.22	+.02 360	[316] 1.89	+.04 712	3.88	+.04 2340	S	V 2490	S	V 248	.16	+.01 87	30
[redacted]	XXX	1.93	+.04 734	XX	XXX	2.33	+.03 961	0.69	-.01 190	XX	XXX	31

	APR.	MAY	JUNE	JULY	AUG.	SEPT.	Water Year 1978
	3,763	11,599	68,959	38,982	20,733	4,748	175,978
[redacted]	125	374	2,299	1,257	669	158	482
	7,460	23,010	136,800	77,320	41,120	9,420	349,100
	360	835	3750	2490	1030	220	3750
[redacted]	75	70	949	550	190	87	51

Quarter		Computed	Checked	Date
4th		JMS	D. P. DeYoung	Dec 5, 1978
3rd				
2nd				
1st		JMS		

Quarter		Dis. appld.	Dis. check	Date
4th		JMS	DPD	Dec 5, 1978
3rd				
2nd				
1st		JMS	DPD	

Quarter		G.H. copd.	G.H. check	Date
4th		JMS	DPD	Dec 4, 1978
3rd				
2nd				
1st		JMS	DPD	

Water Year 1978

Purgatoire Creek near Combined flo.

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

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

Calendar 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		0		0	3.71	1.47		8.8		16		20
2						2.80		8.1		14		14
3						2.80		9.9		16		3.52
4			3.89	0		2.90		11		19		17
5						2.90		9.9		17		17
6						2.90		9.9		15		12
7	3.88					2.80		13		13		14
8					3.92	6.27		9.9		12		11
9						4.30		8.1		11		13
10						3.52		9.0	4.00	12	4.02	11
11						12.4		9.0		13		13
12					3.93	18.5	3.78	8.7		12		14
13						32.1		8.5		11		12
14					3.94	40.2		8.3		11		11
15						42.5		11		11		11
16				0	3.95	45.4		9.0		11		13
17			3.90	6.72		45.4		7.9		9.0		16
18				4.30		38.0		9.9		7.6		15
19				4.30		31.0		9.9		9.9		11
20				4.30	3.92	23.1		11		11		11
21				1.29		8.0		9.9		9.0		9.0
22				1.29		8.0		9.9		11		7.4
23				4.71	3.97	11.1		9.0		14		7.0
24				3.15		8.0		9.9		14	4.03	5.8
25				3.15		8.0		13		13		6.0
26				2.80		8.0		9.9		12		5.6
27				2.80		8.0	3.72	14	4.01	12		5.1
28				2.80		8.0		14		11		4.7
29				2.80		8.0		14	XX	XXX		4.7
30				2.80		8.0		16	XX	XXX		4.3
31		0	XX	XXX		8.0		15	XX	XXX		3.5
Total		0		47.21		74.33		325.4		347.5		322.6
Mean		0		1.57		2.40		10.5		12.4		10.4
Run-off in acre-feet		0		93		148		646		689		640
Maximum		0		6.72		45.4		16		19		20
Minimum		0		0		1.47		7.9		7.6		3.5

No Flow

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

07126500
Rating Table Used

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1		3.00		0		9.0		74	417	39.6		2.0
2		2.20		0	408	8.38		48		19		1.6
3		1.90		1.3		12	412	57		180		1.2
4		1.70	406	2.12		13		43		1192		0.9
5		1.54		3.0		936		12		365		0.6
6		1.50		5.1		2,017		14		117	421	0.4
7		1.48		16	409	409		17		74		0
8		1.18		20		683		20	418	81		
9		1.16		22		268		2.8		43		
10		1.46		19		108		4.9		30		
11		1.44		15		50	413	91		17		
12		1.44		24		36		52		19		
13		1.42		17		30	414	126		30		
14		1.42		4.8		7.9		50		22	422	0
15		1.40		1.2		2.0		18	419	27.9		
16		1.35		3.4	410	25.5		16		18		
17		1.30	407	2.03		11		20		10		
18		1.25		1.70		8.0	415	13.4		6.3		
19		1.15		1.30		1.9		12		4.0	423	
20		1.05		451		2.7		13		3.2		0
21		0.95		628		17		40	420	2.72		
22		0.75		83		11		14		1.60		
23		0.50		80		28		15		1.20		
24		0.05		70		32	416	29.4		0.90		
25		0.03		26		30		32		0.80		
26		0		11		29		19		0.70	424	
27				14		926		9.0		2.7		
28				23		1610		6.0		1.0		
29				18	411	345		13		7.2		
30		0		11		122		1113		209		0
31	XX	XXX		9.0	XX	XXX		70		3.00	XX	XXX
		33.2		1586		7,812		2,508		2,592		6.7
		1.11		51.2		260		80.9		83.6		0.22
		(6.6.0)		3150		15,500		4,970		5,140		13
		3.0		628		2017		1113		1192		2.0
		0		0		1.1		2.8		0.70		0

Quarter: 4th, 3rd, 2nd, 1st — Computed, Checked, Date
Quarter: 4th, 3rd, 2nd, 1st — Dis.appld., Dis.check, Date
Quarter: 4th, 3rd, 2nd, 1st — G.H.copd., G.H.check, Date

Water Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07[illegible]6500
Rating Table Used

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1		0		6		0	3.25	+1 74	S	+3 4.2	a	0
2				0		0	3.17	+0 48	S	+4 19		
3				0		0	3.21	57	S	+4 180		
4				0	S	+5 13	3.15	+0 43	S	+5 1192		
5				0	S	1936	S	V 12	3.77	365		0
6			S	5.1	S	2,017		0	3.41	117	a	—
7			S	16	3.77	+5 365		0	3.30	74		
8				0	S	683		0	3.26	+5 60		
9				0	3.66	268	S	+0 2.8	3.19	43		
10				0	3.39	108	S	V 448	3.12	30		
11			S	15	3.22	50	3.31	+2 67	3.03	17		
12			3.13	24	3.16	36	3.26	+2 52	3.05	19		
13			3.08	17	3.12	30	3.47	+1 126	3.12	30		
14			S	4.8	S	7.9	3.26	+1 50	S	22		
15				0	S	+2 2.0	3.08	18	S	+5 9.8		
16				0		0		0		0		
17				0		0		0		0		
18				0		0		0		0		
19				0	S	+2 1.4		0		0		
20			S	451		0		0		0		
21			S	628		0		0		0		
22			3.38	83		0	S	+1 14		0		
23			3.37	80		0	S	+1 15		0		
24			3.34	70		0		0		0		
25			3.15	26		0		0		0		
26				0		0		0		0		
27				0	S	V 926		0		0		
28				0	S	+1 1610		0		0		
29				0	3.69	+1 345		0	S	7.2		
30		0		0	3.36	+0 122	S	V 1113	S	209		0
31	XX	XXX		0	XX	XXX	3.31	+0 70	a	3.00	XX	XXX
	0		1419.9		7520		2210		2401		0	
	0		45.8		251		71.3		77.5		0	
	0		2,800		14,920		4,380		4,760		0	
	0		628		2017		1113		1192		0	

No Flow

No Flow

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

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

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

Water Year 1978

	0		14,508										
	0		39.8										
	0		28,780										
	0		2017										

Purgatoire River at ~~Creek near~~ Nine-Mile Dam

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

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

Day	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1		0		0		0		8.0		15.2		0
2								8.0		12.0		
3								8.0		2.0		
4				0				8.0		2.0		
5								8.0		12.1		
6								8.0		25.2		
7								8.0		29.0		
8								8.0		19.2		
9								8.0		12.1		
10								8.0		12.1		
11								8.0		12.1		
12								8.0		12.1		
13						0		8.0		8.20		
14						39.3		8.0		8.20		
15						42		8.0		8.20		
16						44.5		8.0		4.92		
17				0		48		8.0		4.92		
18						48		8.0		4.92		
19						34		8.0		8.98		
20						22.6		8.0		8.98		
21						8.0		8.0		4.50		
22						8.0		8.0		16.2		
23						10.6		8.0		18.5		
24						8.0		8.0		19.9		
25						8.0		9.0		22.1		
26						8.0		8.0		22.1		
27						8.0		8.0		17.2		
28						8.0		8.0		18.2		
29						8.0		8.0	XX	XXX		
30				0		8.0		8.0	XX	XXX		
31		0	XX	XXX		8.0		8.0	XX	XXX		0
Total		0		0		369		248		340		0
Mean		0		0		11.9		8.0		12.1		0
Run-off in acre-feet		0		0		730		490		670		0
Maximum		0		0		48		8.0		22		0
Minimum		0		0		8.0		8.0		2.0		0

Calendar Year

Nine Mile Canal — River at Creek near Nine-Mile Dam

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 78

Drainage area _____ square miles. Water stage recorder _____

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

Day.	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1		0		0		2.80		0.52		15.2		20.7
2						2.80		0.52		11.8		13.6
3						2.80		0.52		27.9		3.52
4				0		2.80		0.52		25.6		16.3
5						2.80		0.52		19		16.3
6						2.80		0.52		24		12.4
7		0				2.80		0.52		23		13.6
8						4.30		0.52		14		10.6
9						4.30		0.52		11		13.0
10						3.52		0.52		11		10.2
11						12.4		0.52		11		13.0
12						18.5		0.52		11		13.2
13						32.1		0.52		7.2		12.4
14						0.93		0.52		7.2		10.6
15						0.93		0.52		7.2		10.6
16		FLOW		0		0.93		0.52		4.1		13.0
17		0		1.72		0.82		0.52		4.1		16.2
18				4.30		0.72		0.52		4.1		14.2
19				4.30		0.62		0.52		8.2		11.2
20		0		4.30		0.52		0.52		8.2		10.6
21		0		1.29		0.52		0.52		3.7		8.72
22				1.29		0.52		0.52		16		7.44
23				4.71		0.52		0.52		18		6.26
24				3.15		0.52		0.52		19		6.48
25				3.15		0.52		0.52		21		6.02
26				2.80		0.52		0.52		21		5.57
27				2.80		0.52		0.61		16		5.1
28				2.80		0.52		0.65		18		4.64
29				2.80		0.52		0.70	XX	XXX		4.21
30				2.80		0.52		0.75	XX	XXX		4.30
31		0	XX	XXX		0.52		0.80	XX	XXX		3.52
Total		0		45.3		105.9		17.05		387.5		321.4
Mean		0		1.51		3.42		0.55		13.8		10.4
Run-off in acre-feet		0		90		210		34		770		640
Maximum		0		1.7		32.1		0.80		27.9		20.7
Minimum		0		1.3		0.52		0.52		4.1		3.5

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07126500

Rating Table Used _____

Day	APR. Gage height	APR. Discharge	MAY Gage height	MAY Discharge	JUNE Gage height	JUNE Discharge	JULY Gage height	JULY Discharge	AUG. Gage height	AUG. Discharge	SEPT. Gage height	SEPT. Discharge
1		3.0		0		9.0		0		35.4		2.0
2		2.2		0		8.38		0		0		1.6
3		1.9		1.3		12		0		0		1.2
4		1.7		2.12		0		0		0		0.90
5		1.54		3.0		0		0		0		0.60
6		1.5		0		0		14		0		0.43
7		1.5		10		44		17		0		0
8		1.5		20		0		20		21		
9		1.5		22		0		0		0		
10		1.5		19		0		0		0		
11		1.4		0		0		24.0		0		
12		1.4		0		0		0		0		
13		1.4		0		0		0		0		
14		1.4		0		0		0		0		0
15		1.4		4.2		0		0		18.1		
16		1.4		3.4		25.5		16		18		
17		1.4		2.0		11		20		10		
18		1.2		1.7		8.0		13.4		6.3		
19		1.2		1.3		0		12		4.0		0
20		1.0		0		27		13		3.2		
21		1.0		0		17		40		2.7		
22		0.75		0		11		0		1.6		
23		0.56		0		28		0		1.2		
24		0.20		0		32		29.4		0.90		
25		0.03		0		30		32		0.80		
26		0		11		29		19		0.70		0
27				14		0		9.0		27		
28				23		0		6.0		40		
29				18		0		13		0		
30		0		11		0		0		0		0
31	XX	XXX		9.0	XX	XXX		0		0	XX	XXX
		33.5		166.		292.		297.8		190.9		6.73
		1.12		5.35		9.73		9.61		6.16		0.22
		66.		330		580		590		380		13
		3.0		23		44		40		40		2.0
		0		0		0		0		0		0

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

Dis.appld., Dis.check, Date

G.H.appd., G.H.check, Date

Water Year 1978

1864

5.11

3,700

44

0