1979
DIVISION ENGINEER'S REPORT

Division 2

INTRODUCTORY STATEMENT

ANNUAL DIVISION ENGINEERS REPORT
IRRIGATION DIVISION NO. 2
1979

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 THIRTEEN WATER DISTRICTS (10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 66, 67, AND 79) 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

APPENDICES

DIVISION ENGINEER'S COMMENTS

Snow pack was, in general, good on both the main stem and on the tributaries. The run-off was timely and occurred over a wide enough time span to generally be used effectively. Except for a cold and fairly wet spring, the season was good although late in starting. There were some problems in harvesting due to the lateness of maturity. This late maturity and an early blizzard caused extensive loss to dry land milo in the extreme Southeast portion of the Division.

All in all, over the Division crops were fair to good with some incidents reported of high populations of insects and the projection of heavier infestations next year.

There were no reported dam failures or heavy damage due to floods (a separate report is made on John Martin). Two times during the year the Corps of Engineers' directed maximum flow of 5,000 cfs at Avondale was reached. The Division has been assigned by the State Engineer the role of lead agency in this event. We have agreed to, when this critical flow is reached, begin an aerial as well as ground surveillance to determine damage before beginning to store out of priority in Pueblo. A field investigation of the critical areas by the Division Engineer immediately after the maximum flow occurred did not disclose any damage. This whole controversy may have been blown out of proportion and may not occur often enough to warrant expenditure of much time and effort.

At least two instances of out of priority storage occurred in Black Hills Reservoir and in each case the water was released immediately. The outlet gate is now controlled by the Water Commissioner, and a breach has been made in the canal to get this water back to the stream. We anticipate no further problems in this area.

Ground water rules and regulations were administered on a fairly low key approach with no injunctions sought for violation. Both well owner groups had plans that could be construed as repairing their members' injuries to the system. We must make some hard decisions in this area next year to fully determine if the plans which involve unidentifiable by point source return flow of transmountain imports.

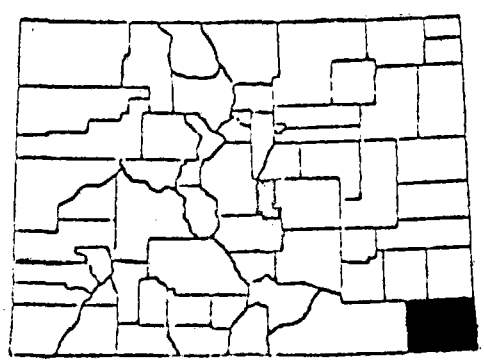
Again this year the Water Court is a great consumer of Division time and effort. The prime consumer is in attending hearings before referees and the consultations which require considerable research and preparation. The impact of these consultations, while apparently increasing, is difficult to evaluate. My comment last year of these being characterized as charades is tempered but still somewhat apt.

The water rights tabulation is covered in a different part of this report, but is mentioned here because of the far-reaching ramifications of some of the findings that will have to be made before next year.

IRRIGATION DIVISION 2

BACA COUNTY

MAJOR CITY	Springfield
1970 POPULATION	5,516
URBAN POPULATION	No city over 2,500
RURAL POPULATION	5,516
COUNTY AREA	2,565 Square 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 2

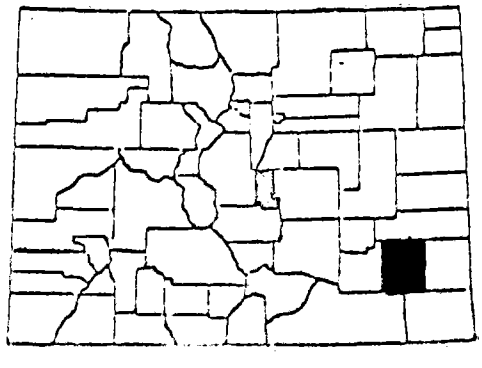
BENT COUNTY

MAJOR CITY	Las Animas
1970 POPULATION	6,343
URBAN POPULATION	2,955
RURAL POPULATION	3,388
COUNTY AREA	1,517 Square 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 2

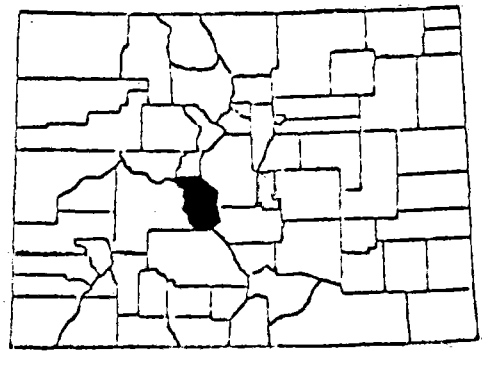
CHAFFEE COUNTY

MAJOR CITY	Salida
1970 POPULATION	9,663
URBAN POPULATION	4,322
RURAL POPULATION	5,341
COUNTY AREA	1,039 Square 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 2

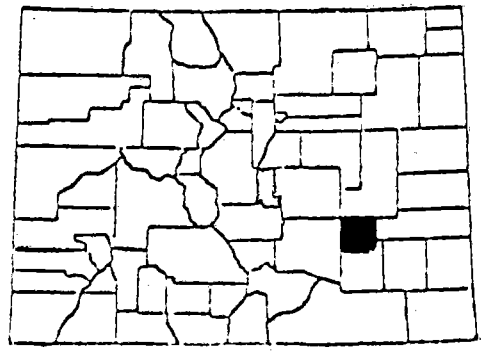
CROWLEY COUNTY

MAJOR CITY	Ordway
1970 POPULATION	2,947
URBAN POPULATION	No city over 2,500
RURAL POPULATION	2,947
COUNTY AREA	803 Square 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	5,043 Acres
STATE	52,711 Acres
COUNTY AND MUNICIPAL	897 Acres

*1978 Assessor

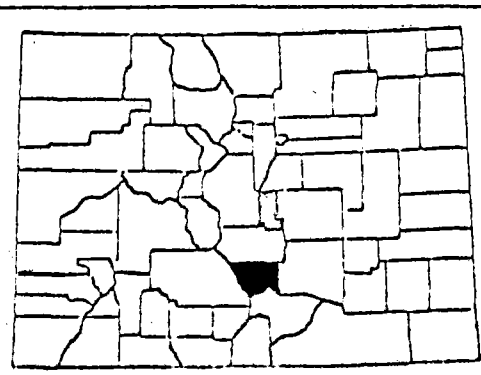


IRRIGATION DIVISION 2

CUSTER COUNTY

MAJOR CITY	Westcliffe
1970 POPULATION	1,028
URBAN POPULATION	No city over 2,500
RURAL POPULATION	1,028
COUNTY AREA	737 Square 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:	298,001 Acres
PRIVATE	186,695 Acres
FEDERAL	11,989 Acres
STATE	452 Acres
COUNTY AND MUNICIPAL	

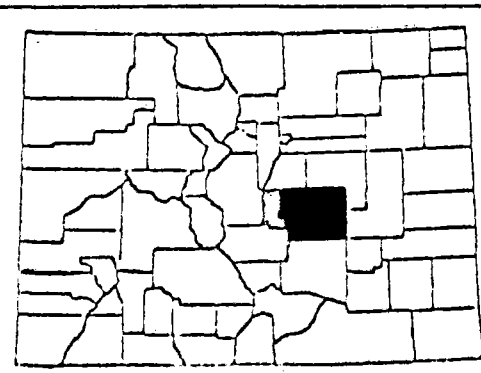
*1978 Assessor



IRRIGATION DIVISION 2

EL PASO COUNTY

MAJOR CITY	Colorado Springs
1970 POPULATION	229,113
URBAN POPULATION	200,145
RURAL POPULATION	27,968
COUNTY AREA	2,158 Square 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

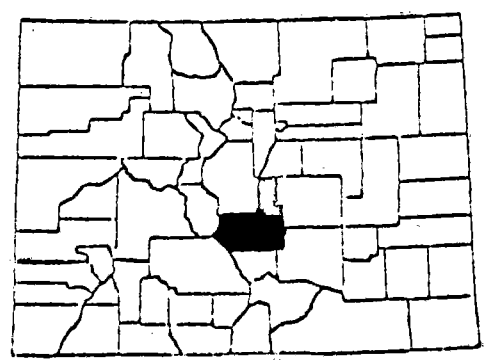


IRRIGATION DIVISION 2

FREMONT COUNTY

MAJOR CITY	Canon City
1970 POPULATION	20,220
URBAN POPULATION	11,917
RURAL POPULATION	8,303
COUNTY AREA	1,562 Square 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 Inches
AVERAGE ANNUAL SNOWFALL	35.6 Inches
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 2

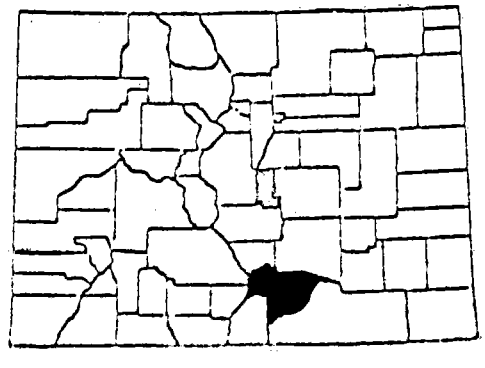
HUERFANO COUNTY

MAJOR CITY	Walsenburg
1970 POPULATION	6,410
URBAN POPULATION	4,227
RURAL POPULATION	2,133
COUNTY AREA	1,578 Square 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



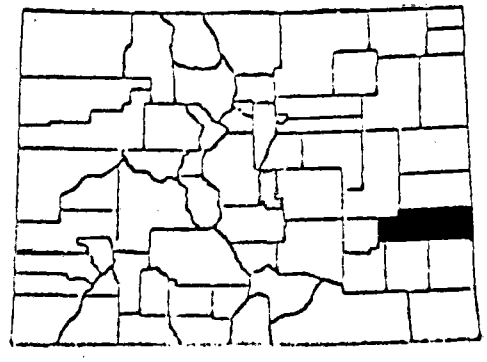
IRRIGATION DIVISION 2

KIOWA COUNTY

MAJOR CITY	Eads
1970 POPULATION	2,006
URBAN POPULATION	No city over 2,500
RURAL POPULATION	2,006
COUNTY AREA	1,792 Square 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



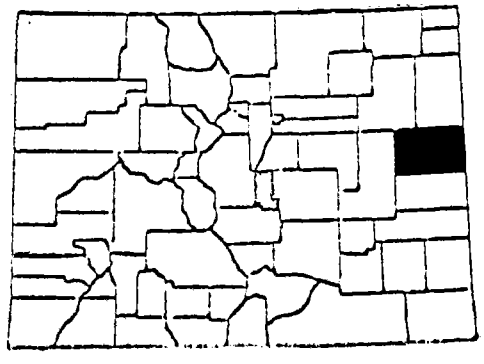
IRRIGATION DIVISION 2

KIT CARSON COUNTY

MAJOR CITY	Burlington
1970 POPULATION	7,379
URBAN POPULATION	2,784
RURAL POPULATION	4,595
COUNTY AREA	1,171 Square 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 2

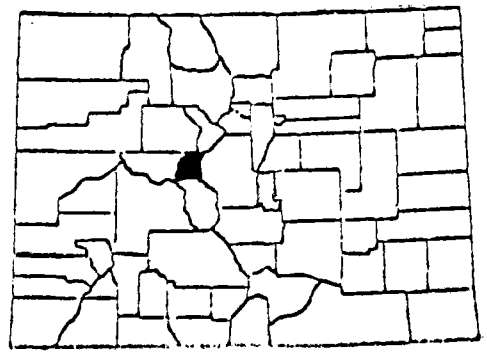
LAKE COUNTY

MAJOR CITY	Leadville
1970 POPULATION	8,138
URBAN POPULATION	4,265
RURAL POPULATION	3,873
COUNTY AREA	380 Square 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

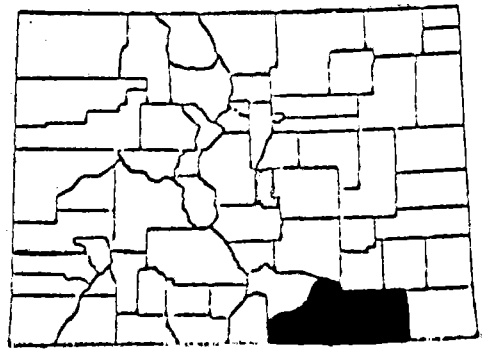


IRRIGATION DIVISION 2

LAS ANIMAS COUNTY

MAJOR CITY	Trinidad
1970 POPULATION	15,291
URBAN POPULATION	9,721
RURAL POPULATION	5,570
COUNTY AREA	4,793 Square 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

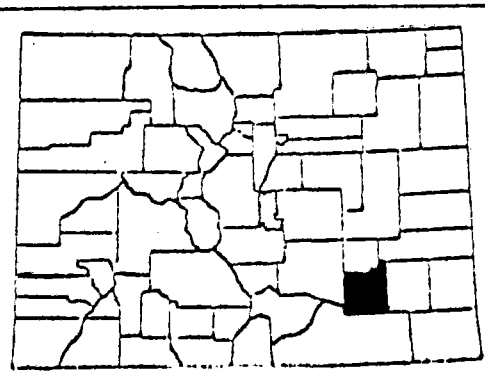


IRRIGATION DIVISION 2

OTERO COUNTY

MAJOR CITY	La Junta
1970 POPULATION	22,824
URBAN POPULATION	12,514
RURAL POPULATION	10,310
COUNTY AREA	1,267 Square 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

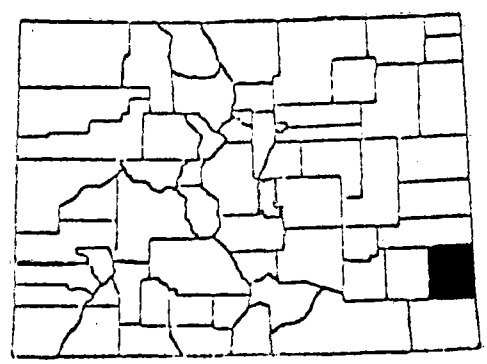


IRRIGATION DIVISION 2

PROWERS COUNTY

MAJOR CITY	Lamar
1970 POPULATION	12,877
URBAN POPULATION	7,510
RURAL POPULATION	5,367
COUNTY AREA	1,626 Square 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 2

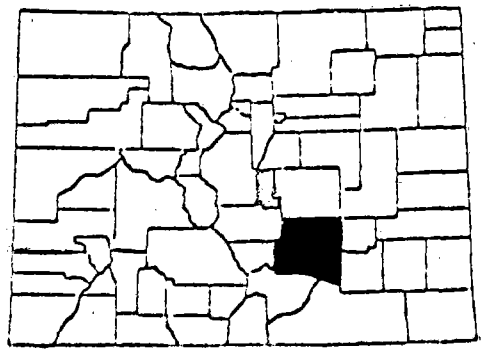
PUEBLO COUNTY

MAJOR CITY	Pueblo
1970 POPULATION	117,212
URBAN POPULATION	106,565
RURAL POPULATION	10,556
COUNTY AREA	2,401 Square 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

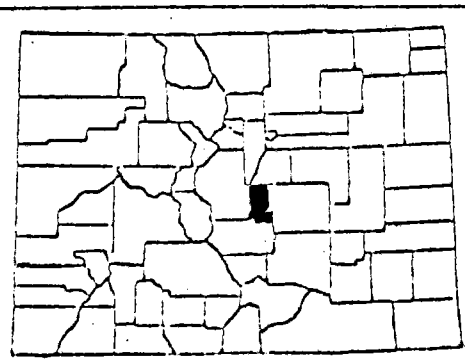
*1978 Assessor



IRRIGATION DIVISION 2

TELLER COUNTY

MAJOR CITY	Cripple Creek
1970 POPULATION	3,033
URBAN POPULATION	No city over 2,500
RURAL POPULATION	3,033
COUNTY AREA	554 Square 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
Park	*100	*20	*18	*4	*12	4,000	---	---	---
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	---	---	---

*In Division 2

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 1979

Pertinent Basin Yield Statistics for Arkansas Drainage in Colorado Division 2

Recorded Flow at Arkansas - Las Animas	103,560 A.F.
*Estimated Depletion by Irrigation above Gage 1.5 A.F./Acre x 240,320 Acres - 360,480 A.F.	360,480 A.F.
Recorded Flow at Purgatoire River - Las Animas	38,620 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 146,555 A.F. Transmountain Import	532,228 A.F.
Less . . .	146,555 A.F.
Native Basin Yield above Confluence of Arkansas and Purgatoire Rivers	385,673 A.F.
Total Diversion in Division 2 (above John Martin)	1,863,890 A.F.

*Estimate of irrigated acreage based on County Assessors records.

Commentary on Basin Yield and Water Budget Data

In Water Administrative Year 1979, the native basin yield for the Arkansas above the confluence of the Purgatoire including the Purgatoire was 385,673 acre feet. The Arkansas flow at Las Animas for 1979 was 103,560 acre feet compared to 68,030 acre feet for 1978. The Purgatoire flow at Las Animas for 1979 was 38,620 acre feet compared to 30,640 acre feet for 1978. The precipitation was more in 1979 than 1978 and the transmountain import was 28,885 acre feet more in 1979 than 1978.

The average precipitation over the area (17,920 square miles) was 15.52 inches. This gives a total volume of water of 14,832,980 acre feet for the basin; of this 14,832,980 acre feet, only 385,673 acre feet, 2.60%, is accounted for. The remaining 97.40% either evaporated, transpired or was retained in the soil.

The diverted water of 1,863,890 acre feet when compared with native yield plus transmountain water indicates the water was used 3.50 times.

COMPARATIVE WATER 1978, 1979 DATA

	1978	1979
Basin Yield including Transmountain	488,718 A.F.	532,228 A.F.
Total Diverted (excluding W.D. 66 & 67)	1,054,933 A.F.	1,863,890 A.F.
Average Precipitation	11.22 Inches	15.52 Inches
Estimated Irrigated Acreage	260,320 Acres	260,320 Acres

DIVERSION DATA

Recorded Diversion by Municipalities	Water Year 1979
Municipal Diversion, Colorado Springs	32,150 A.F.
Municipal Diversion, Canon City	19,720 A.F.
Municipal Diversion, Pueblo	26,060 A.F.
Other	26,020 A.F.
Total Recorded Municipal Diversion	103,950 A.F.
Estimated Return Flow	68,607 A.F.
Estimated Depletion by Municipalities	35,343 A.F.

Recorded Diversion by Industrial Use	
Diversion by Minnequa Canal	89,930 A.F.
C.F.& I. Diversion from St. Charles	6,150 A.F.
Other	52,630 A.F.
Total Industrial Diversion	148,710 A.F.
Estimated Return Flow	89,226 A.F.
Estimated Depletion by Industry	59,484 A.F.

Recorded Diversion by Irrigation	
Water District 10	186,440 A.F.
Water District 11	132,720 A.F.
Water District 12	299,740 A.F.
Water District 13	54,940 A.F.
Water District 14	289,200 A.F.
Water District 15	26,210 A.F.
Water District 16	28,380 A.F.
Water District 17	474,300 A.F.
Water District 18	16,390 A.F.
Water District 19	67,520 A.F.
Water District 66	1,670 A.F.
Water District 67	149,300 A.F.
Water District 79	25,790 A.F.
Total Irrigation Diversion	1,752,600 A.F.

DIVERSION SUMMARY - DIVISION NO. 2
Direct Flow Diversions, 1979

Water Dist.	Active	Inactive		Number of 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	68	4	186,440	13,630	13.7	2,960	32,150		221,500
11	167		138	103	0	132,720	22,162	6.0				132,720
12	239		93	187	52	299,740	14,000	21.4	129,715	19,720		449,175
13	500		53	240	47	54,940	15,930	3.5				54,940
14	40		25	12	4	289,200	37,000	7.8	9,885	26,060		325,145
15	82		42	68	18	26,210	4,654	5.6	6,150	750		33,110
16	115		79	40	37	28,380	4,500	6.3		7,640		36,020
17	44		62	24	7	474,300	140,000	3.4				474,300
18	27		24	28	0	16,390	7,550	2.1				16,390
19	105		137	76	13	67,520	30,000	2.3		4,130		71,650
66&67	45		116	40	6	150,970	76,837	2.0				150,970
79	129		90	102	0	25,790	5,090	5.1				25,790
Other				988	188					13,000		13,000
TOTAL						1,762,200	371,353		148,710	103,450	146,550	2,004,760

*Transmountain Water accounted for in districts used.

TRANSMOUNTAIN DIVERSION

DIVISION NO. 2

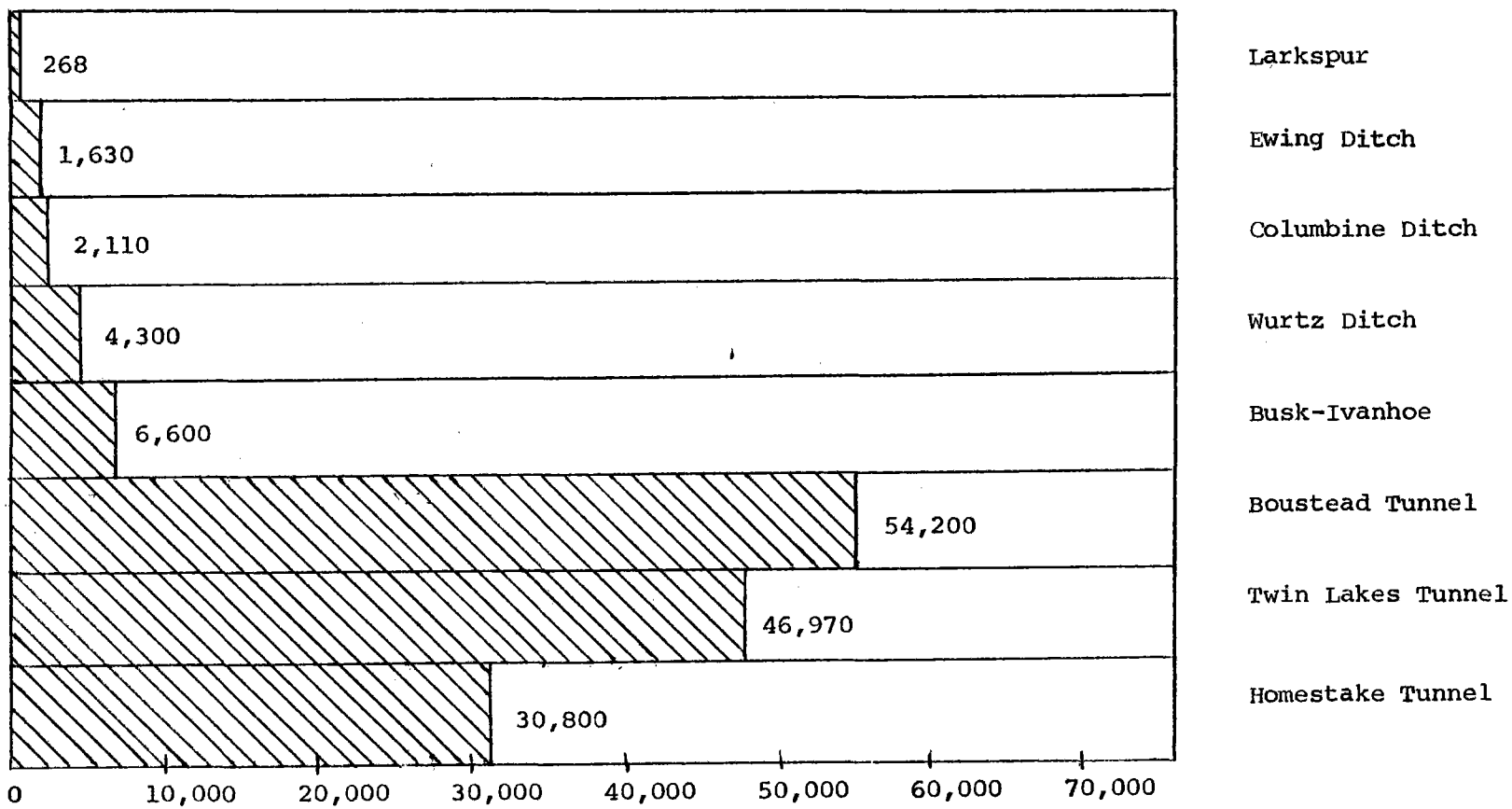
Tabulation 1979

NAME	SOURCE	RECIPIENT	AMOUNT DIVERTED 10/1/78 to 9/30/79
Homestake Tunnel	Middle Fork Homestake Creek Division No. 5	Cities of Colorado Springs and Aurora	30,800 A.F.
Wurtz Ditch	Eagle River Division No. 5	City of Pueblo	4,300 A.F.
Ewing Ditch	Piney Creek	City of Pueblo	1,630 A.F.
Columbine Ditch	Eagle River Division No. 5	City of Pueblo	2,110 A.F.
Twin Lakes Tunnel	Roaring Fork River Division No. 5	Twin Lakes Reservoir and Canal Company	46,970 A.F.
Busk Ivanhoe Tunnel	Ivanhoe Creek Division No. 5	Highline Canal Co. and City of Pueblo	6,600 A.F.
Larkspur Ditch	Tomichi Creek Division No. 5	Catlin Canal Company	268 A.F.
Boustead Tunnel	Fryingpan River Division No. 5	U. S. Bureau of Reclamation	54,200 A.F.

TRANSMOUNTAIN DIVERSION
DIVISION NO. 2

SUMMARY OF DIVERSION FOR

WATER YEAR 1979



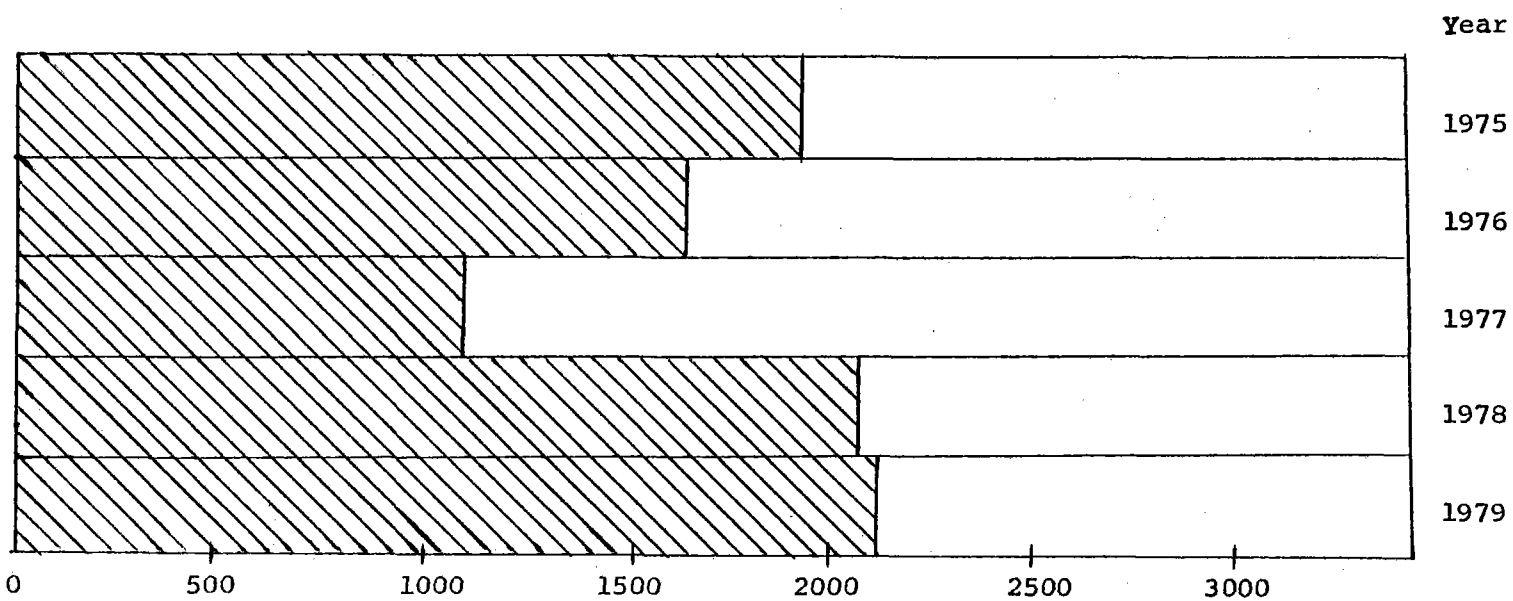
TRANSMOUNTAIN DIVERSION

DIVISION NO. 2

COLUMBINE DITCH 1979

Source: Eagle River, Division No. 5

Recipient: City of Pueblo



ACRE FEET

5-YEAR COMPARISON

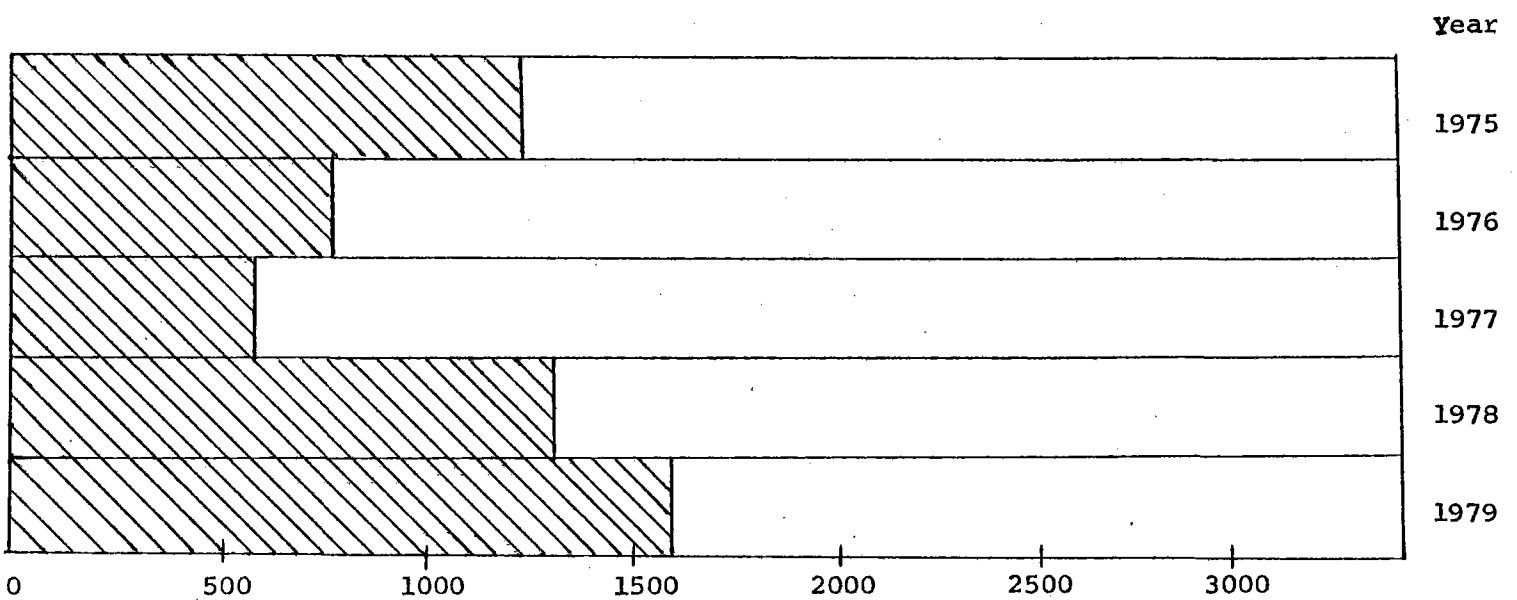
TRANSMOUNTAIN DIVERSION

DIVISION NO. 2

EWING DITCH 1979

Source: Piney Creek, Division No. 5

Recipient: City of Pueblo



ACRE FEET

5-YEAR COMPARISON

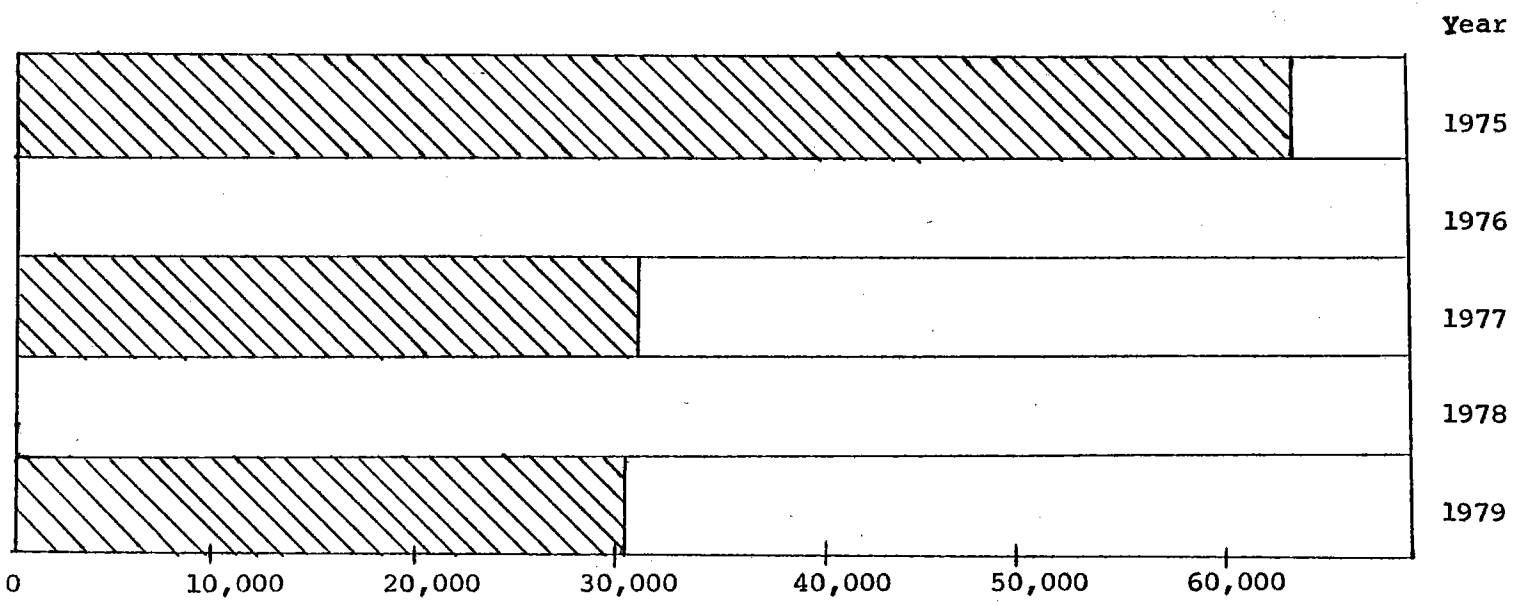
TRANSMOUNTAIN DIVERSION

DIVISION NO. 2

HOMESTAKE TUNNEL 1979

Source: Middle Fork Homestake Creek, Division No. 5

Recipient: Cities of Colorado Springs and Aurora



ACRE FEET

5-YEAR COMPARISON

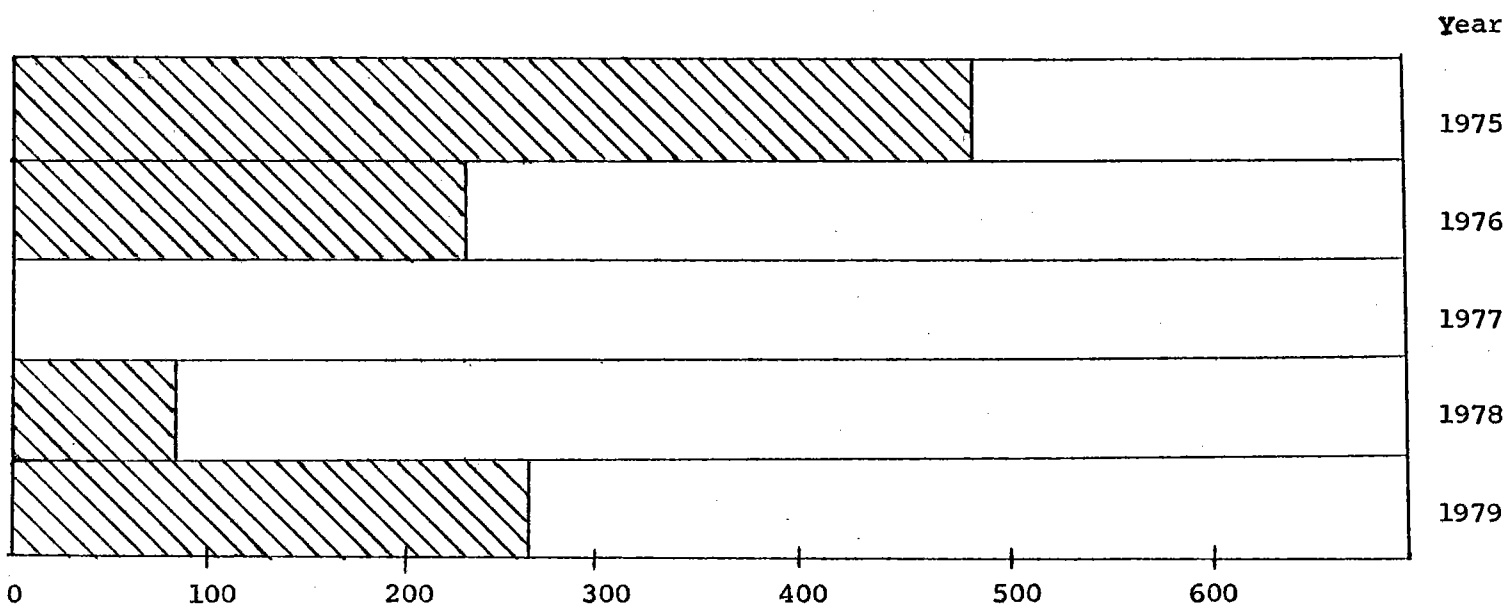
TRANSMOUNTAIN DIVERSION

DIVISION NO. 2

LARKSPUR DITCH 1979

Source: Tomichi Creek, Division No. 4

Recipient: Catlin Canal Company



ACRE FEET

5-YEAR COMPARISON

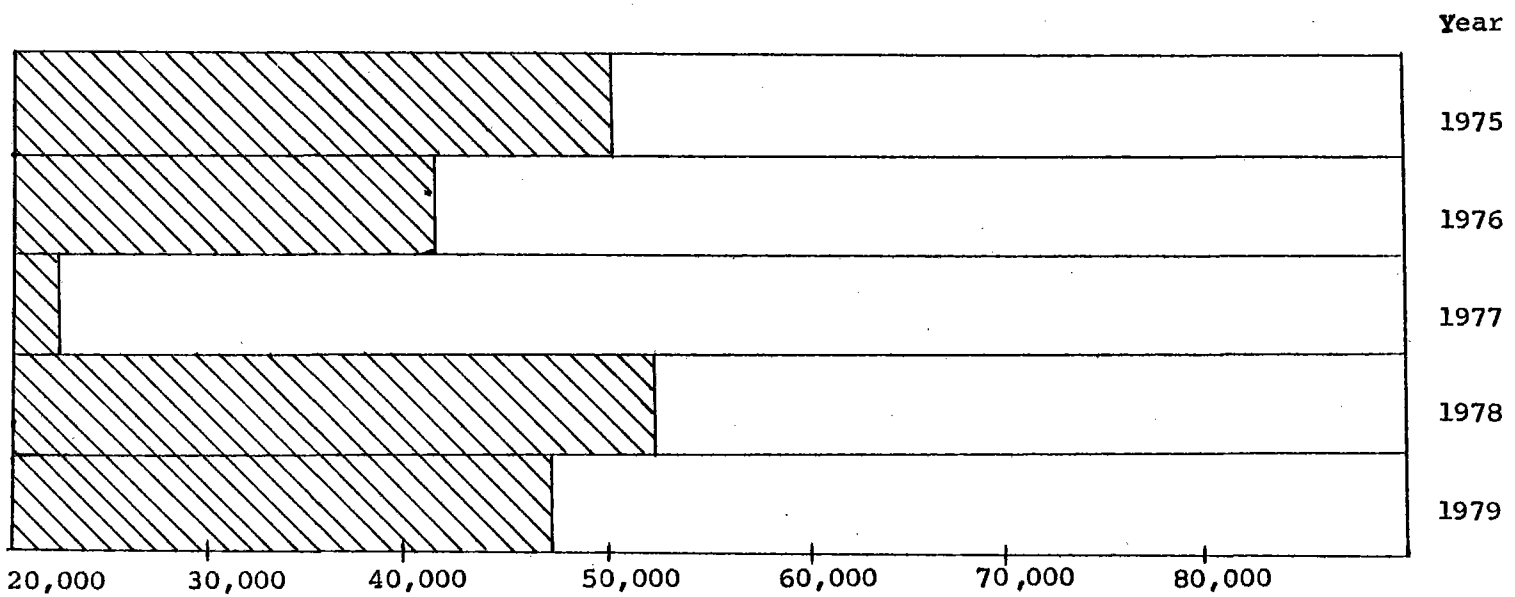
TRANSMOUNTAIN DIVERSION

DIVISION NO. 2

TWIN LAKES TUNNEL 1979

Source: Roaring Fork River, Division No. 5

Recipient: Twin Lakes Reservoir and Canal Company



ACRE FEET

5-YEAR COMPARISON

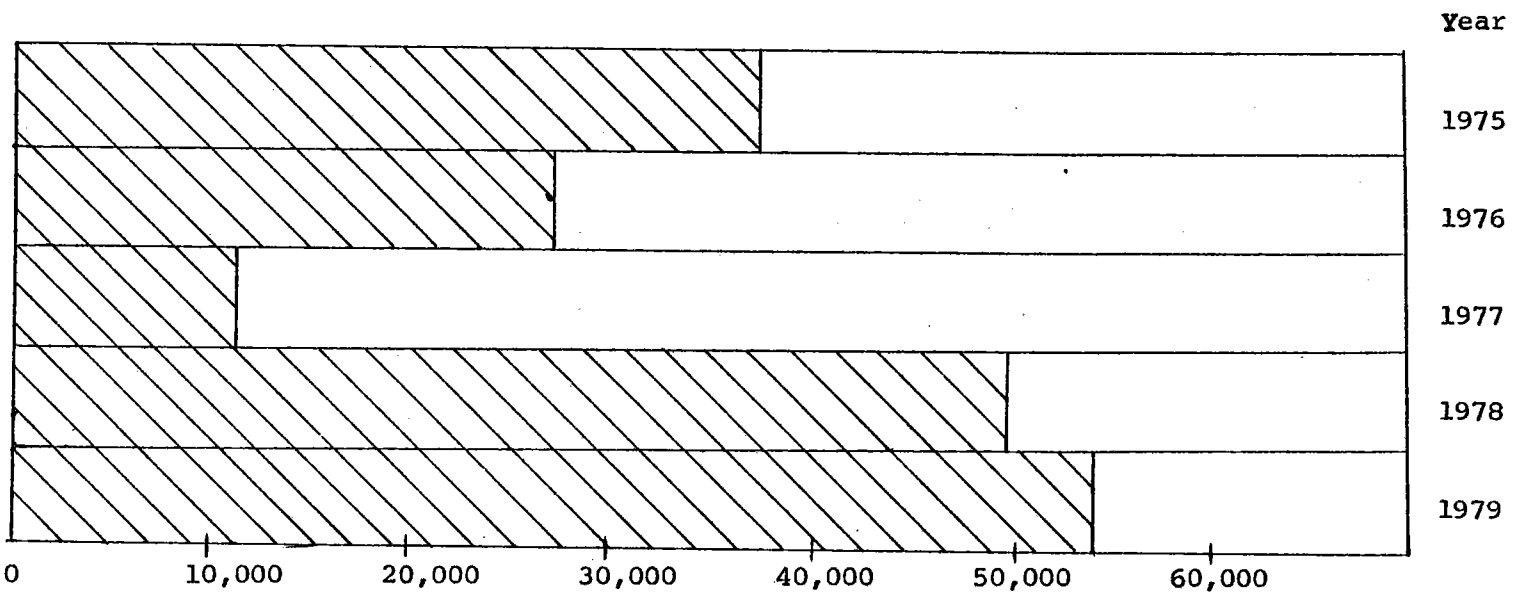
TRANSMOUNTAIN DIVERSION

DIVISION NO. 2

BOUSTEAD TUNNEL 1979

Source: Fryingpan River

Recipient: U. S. Bureau of Reclamation



ACRE FEET

5-YEAR COMPARISON

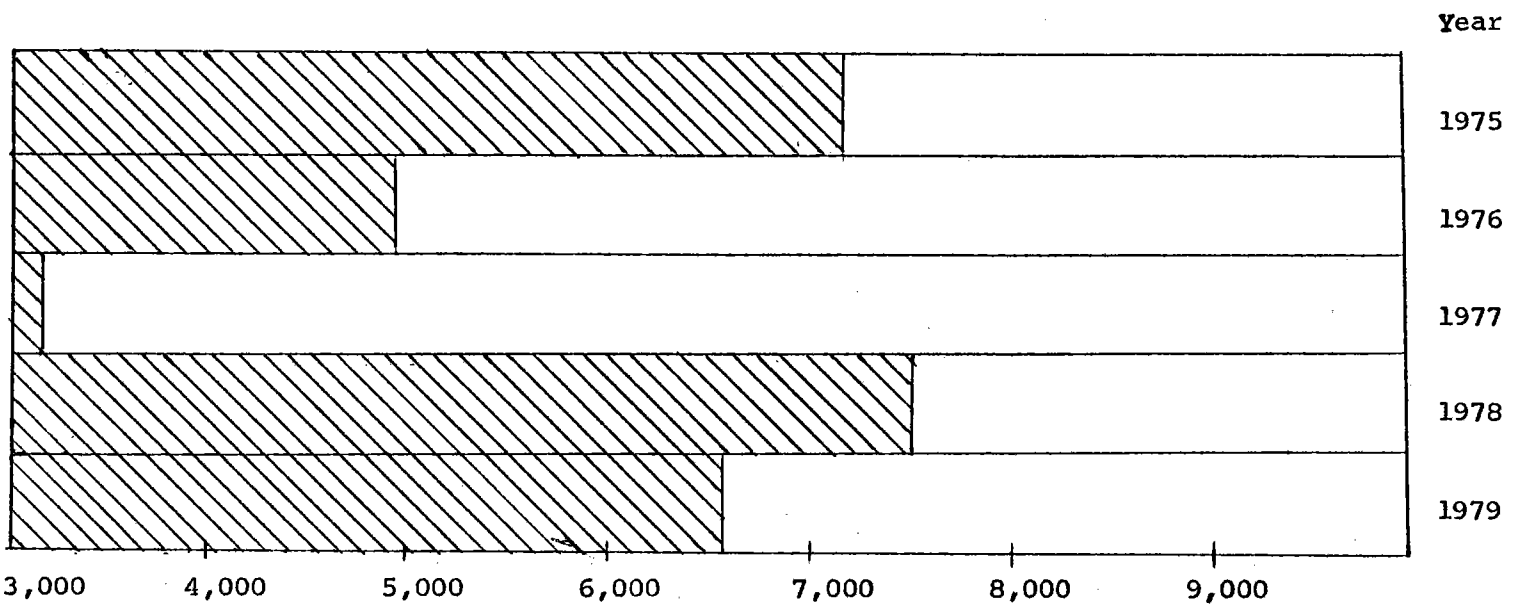
TRANSMOUNTAIN DIVERSION

DIVISION NO. 2

BUSK IVANHOE 1979

Source: Ivanhoe Creek, Division No. 5

Recipient: Highline Canal Company and City of Pueblo



ACRE FEET

5-YEAR COMPARISON

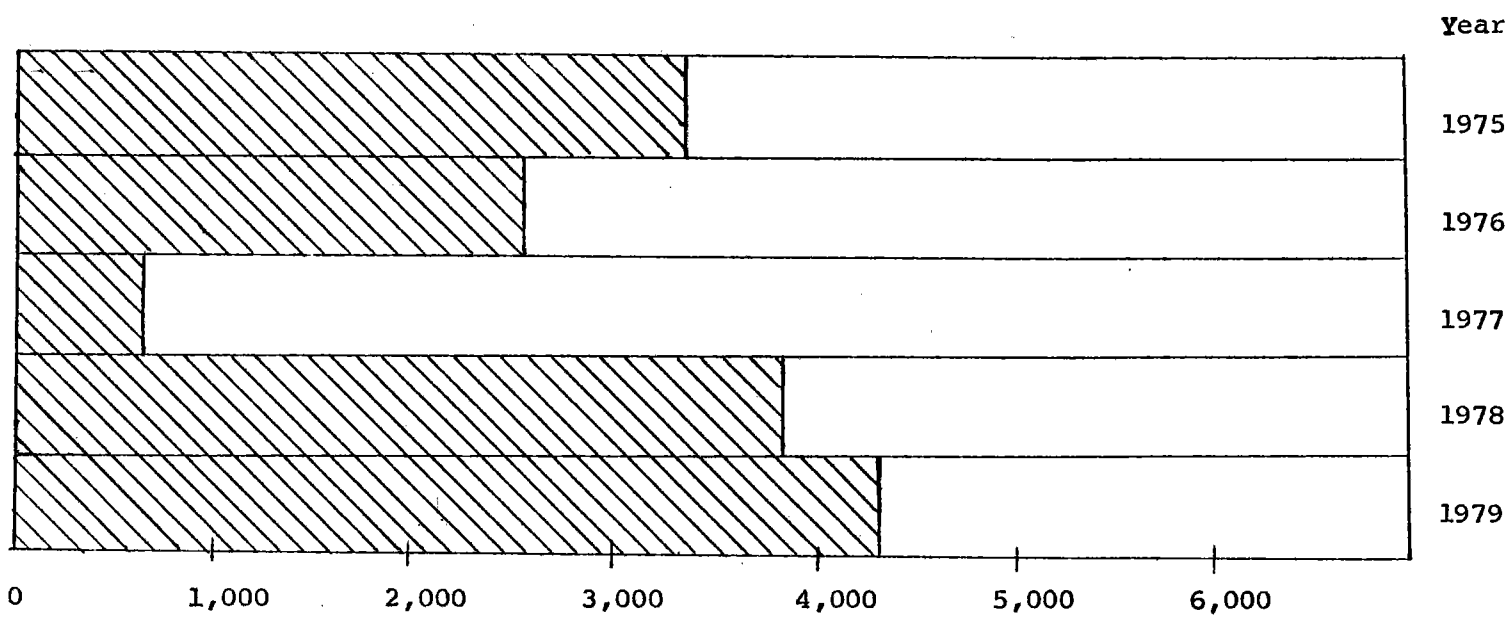
TRANSMOUNTAIN DIVERSION

DIVISION NO. 2

WURTZ DITCH 1979

Source: Eagle River, Division No. 5

Recipient: City of Pueblo



ACRE FEET

5-YEAR COMPARISON

PRECIPITATION

Rainfall was 30% above 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 being 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. The total inspections number 192. Of this total number inspected, 62 were inspected by the Water Commissioners, 80 were inspected by the Dam Inspection Personnel from Denver, and an estimated 50 were inspected by the Corps of Engineers or 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. These floods were due mainly to rainstorms, and neither their intensity nor duration were very high.

In the Trinidad area, a few rainstorms occurred which allowed the gates at the Trinidad Reservoir to be closed. These rainstorms occurred during the months of June, July, August and September, with the most noticeable storm occurring on August 18, 1979, with an estimated flow above the reservoir at 2720 c.f.s.

The Arkansas River had three flash floods; June 24th, July 16th & 17th, and August 10th. These floods ranged in the area of 3490 c.f.s. to 4410 c.f.s. with the tributaries contributing the main floods. The tributaries include the Fountain Creek, the St. Charles Creek, the Apishapa Creek, and the Huerfano River.

IRRIGATION DIVISION NO. 2

STATION	WATER CONTENT PERCENT NORMAL AS OF APR 1, 1979	SNOW DEPTH	WATER CONTENT AS OF APR 1, 1979	AVERAGE INCHES
BIGELOW DIVIDE	133	39	9.6	7.2
COOPER HILL	119	56	12.8	10.8
EAST FORK	105	39	10.0	9.5
FOUR MILE PARK	168	36	8.4	5.0
FREMONT PASS	107	60	16.6	15.5
GARFIELD	144	54	18.4	12.8
HERMIT LAKE	166	42	14.8	8.9
MONARCH PASS	131	60	21.0	16.0
TENNESSEE PASS	140	48	14.0	10.0
TWIN LAKES TUNNEL	173	60	17.0	9.8
WESTCLIFFE	188	40	13.0	6.9
APISHAPA	122	30	9.4	7.7
CUCHARAS CREEK	-	39	10.0	-
LA VETA PASS	174	44	14.1	8.1
BOURBON	128	34	8.8	6.9

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 143% of normal. Carry-over storage is poor and will be of limited value.

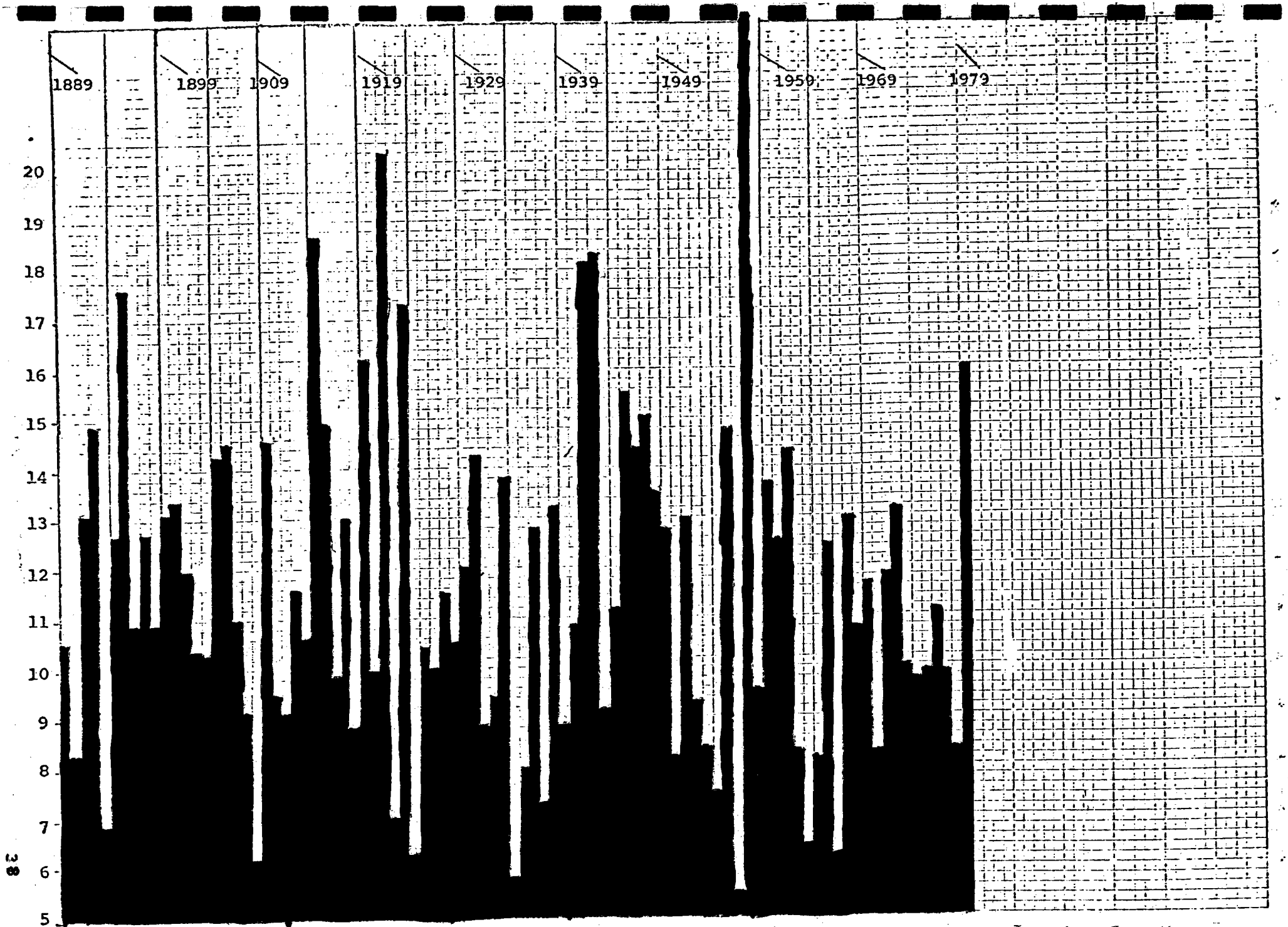
IRRIGATION DIVISION NO. 2

STATION	WATER CONTENT PERCENT NORMAL AS OF MAY 1, 1979	SNOW DEPTH	WATER CONTENT AS OF MAY 1, 1979	AVERAGE INCHES
BIGELOW DIVIDE	136	22	6.4	4.7
COOPER HILL	123	46	14.4	11.7
EAST FORK	104	26	7.6	7.3
FOUR MILE PARK	125	5	2.0	1.6
FREMONT PASS	96	52	17.0	17.7
GARFIELD	113	26	10.7	9.5
HERMIT LAKE	110	18	7.5	6.8
MONARCH PASS	114	43	17.4	15.3
TENNESSEE PASS	155	34	11.5	7.4
TWIN LAKES TUNNEL	139	34	13.2	9.5
WESTCLIFFE	144	9	3.6	2.5
APISHAPA	0	0	0	3.7
CUCHARAS CREEK	-	16	4.6	-
LA VETA PASS	181	14	5.8	3.2
BOURBON	26	2	0.7	2.7

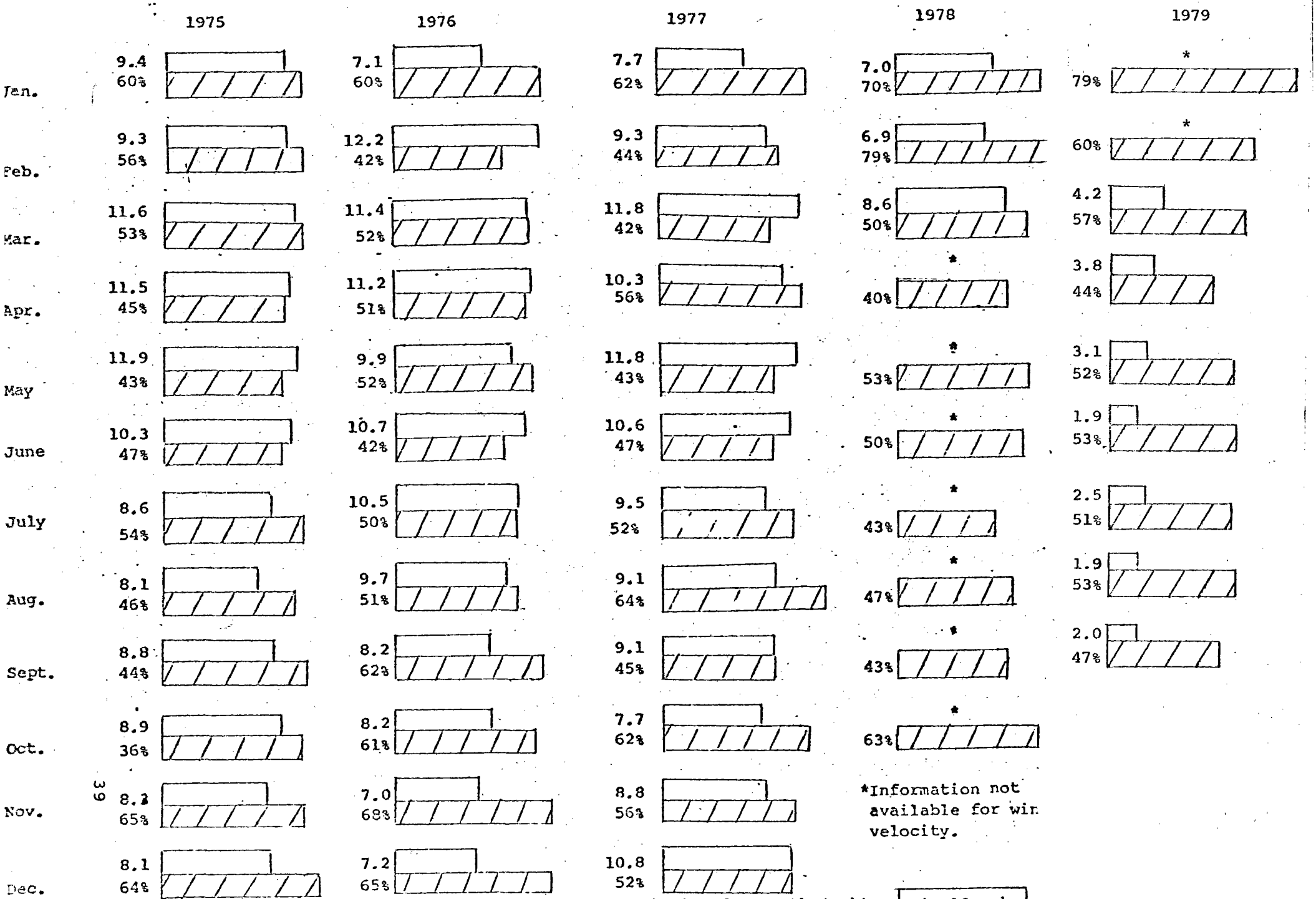
Streamflow should be in the near normal range. The upper tributary stream should be in the above normal range with the Wet Mountain Valley and the Salida Area in the below normal range. The main stem of the Arkansas was forecast to flow at 143% of normal. Carry-over storage is poor and will be of limited value.

PRECIPITATION
IRRIGATION DIVISION NO. 2

STATION	April 1979	DEPART FROM NORMAL	May 1979	DEPART FROM NORMAL	June 1979	DEPART FROM NORMAL	July 1979	DEPART FROM NORMAL	August 1979	DEPART FROM NORMAL	September 1979	DEPART FROM NORMAL
Lamar	.66	-0.69	6.44	+3.91	1.32	-0.94	2.81	+0.48	1.65	-0.69	.87	-0.22
Leadville	-	-	-	-	1.49	+0.44	-	-	-	-	-	-
Pueblo	.54	-0.75	2.60	+0.95	3.51	+2.15	1.47	-0.40	2.04	+0.08	.63	-0.16
Trinidad	.49	-0.82	4.88	+3.03	2.17	+0.71	2.46	+0.60	4.00	+2.09	1.83	+0.86
Westcliffe	.21	-1.71	3.29	+1.65	1.82	+0.73	1.02	-1.44	2.06	-0.38	1.21	+0.25
Colorado Spgs.	1.83	+0.38	3.13	+1.01	1.58	-0.73	2.73	-0.37	2.50	-0.08	.92	-0.19



Precipitation in Inches
Pueblo, Colorado 1889 to Present


1975
1976
1977
1978
1979
Jan.
9.4
60%
7.1
60%
7.7
62%
7.0
70%
*
79%
Feb.
9.3
56%
12.2
42%
9.3
44%
6.9
79%
*
60%
Mar.
11.6
53%
11.4
52%
11.8
42%
8.6
50%
4.2
57%
Apr.
11.5
45%
11.2
51%
10.3
56%
*
40%
3.8
44%
May
11.9
43%
9.9
52%
11.8
43%
*
53%
3.1
52%
June
10.3
47%
10.7
42%
10.6
47%
*
50%
1.9
53%
July
8.6
54%
10.5
50%
9.5
52%
*
43%
2.5
51%
Aug.
8.1
46%
9.7
51%
9.1
64%
*
47%
1.9
53%
Sept.
8.8
44%
8.2
62%
9.1
45%
*
43%
2.0
47%
Oct.
8.9
36%
8.2
61%
7.7
62%
*
63%
Nov.
8.2
65%
7.0
68%
8.8
56%
Dec.
8.1
64%
7.2
65%
10.8
52%
*Information not available for wind velocity.
Ave. wind velocity for month (mph)
1 in=10 mph
Ave. Relative humidity for month (%)
1 in=50%

DAM INSPECTION SUMMARY 1978-1979
IRRIGATION DIVISION NO. 2

W.D.	INSPECTED BY	NAME	U.S. ARMY #	COMMENTS
10	Corps of Engineers	Fountain Valley Dam	00418	
10	Corps of Engineers	Woodmoor Res. Dam	00450	
10	Corps of Engineers	Gold Camp Res. Dam	00444	
10	Corps of Engineers	South Suburban Dam	00429	
10	Corps of Engineers	Lake Moraine Dam	00901	
10	Corps of Engineers	Manitou Res. Dam	00426	
10	Bovay Engr., Inc.	Crystal Dam	00410	
10	Bruns, Inc.	Big Tooth Dam	00445	
10	Bruns, Inc.	South Catamount Dam	00408	
10	Engr. Consult., Inc.	North Catamount Dam	00407	
10	Hydro-Triad, Ltd.	Rampart Res. Dam	01484	
11	Hydro-Triad, Ltd.	Clear Creek Dam	01143	
12	Chas. T. Main, Inc.	Mud Gulch Det M61	00469	61' High
12	Corps of Engineers	Canon Water Storage Dam C-3	00461	
12	Corps of Engineers	Canon Water Storage Dam C-4	00462	
15	Engr. Consult., Inc.	St. Charles Dam #2	02069	
15	Chas. T. Main, Inc.	St. Charles Dam #3	00493	
16	Bovay Engr., Inc.	Cucharas Res. Dam	01146	
16	Engr. Consult., Inc.	Martin Lake		
16	Hydro-Triad, Ltd.	Horseshoe Lake Dam	00498	
17	Chas. T. Main, Inc.	Adobe Creek	00515	14' High
19	Chas. T. Main, Inc.	Fisher Peak FP-1	00533	80' High
19	Chas. T. Main, Inc.	Fisher Peak FP-2	00534	55' High
67	Chas. T. Main, Inc.	Limon Watershed L-1	00751	34' High
67	Chas. T. Main, Inc.	Ramah	01347	48' High

DAM DESIGN REVIEW UNIT SUMMARY

IRRIGATION DIVISION NO. 2

W.D.	NAME	TYPE
10	Lake Moraine	Improvement
12	Skaguay Dam	Report
12	Skaguay Dam	Outlet Repair
12	Skaguay Dam	Alterations
14	Coal Washing Dam	New
19	Russel Lake	Enlargement
67	Bill Mundell No. 2 Dam	New

NAME OF RESERVOIR	SOURCE	AMOUNT OF ACRE FEET NOVEMBER 1, 1978	AMOUNT OF ACRE FEET APRIL 1, 1979	AMOUNT OF ACRE FEET OCTOBER 31, 1979
Ambler Res. No. 2	Unnamed Springs	-	-	-
Callhan Reservoir	Fountain	300	300	300
Crystal Creek Res.	Crystal Creek	486	477	869
Fountain Valley #2	Fountain	189	3825	1407
Fountain Valley #3	Fountain	-	-	-
Manitou Reservoir	No. Branch French Creek	853	632	711
Monument State	Monument Creek	324	370	370
North Catamount	No. Fork Catamount	4,844	3021	8032
North Field No. 1		250	247	265
South Catamount	So. Catamount	78	457	1605
Spring Run	Spring Run	191	232	209
South Suburban Res.	So. Fork Cheyenne	125	215	182
Clear Creek Res.	Clear Creek	0	1310	4697
O'Haver	Gray's Creek	-	-	-
Sugar Loaf Res.	Lake Fork Creek	81,663	79883	102989
Twin Lakes Res.	Lake Creek	18,400	18229	34782
Brush Hollow	Beaver Creek	735	1604	928
Colo. Springs #2	Beaver Creek	541	541	541
Colo. Springs #4	Beaver Creek	1,011	1649	1965
Colo. Springs #5	Beaver Creek	1,056	1754	1827
Colo. Springs #7	Beaver Creek	36	191	0
Colo. Springs #8	Beaver Creek	289	669	197
Lake Moraine	Beaver Creek	270	605	667
Mt. Pisgah	Four Mile Creek	435	681	456
Rosemont Penrose	Beaver Creek	1,687	2319	2036
Skaguay	Beaver Creek	1,593	1593	1593
DeWeese Dye	Grape Creek	2,534	4322	1344
Curiton	Springs	-	-	-
Greenview	Fountain	0	0	0
H.O.P. Reservoir	Springs	-	-	-
Pueblo Reservoir	Arkansas	31,061.09	69085	33967

NAME OF RESERVOIR	SOURCE	AMOUNT OF ACRE FEET NOVEMBER 1, 1978	AMOUNT OF ACRE FEET APRIL 1, 1979	AMOUNT OF ACRE FEET OCTOBER 31, 1979
Hayden Beckwith	Greenhorn	347	588	455
Lake Minnequa	St. Charles	713	11377	9301
Reservoir No. 2	St. Charles	2,377	-	-
Reservoir No. 3	St. Charles	6,975	-	-
Arnold Flood Water	Santa Clara	0	0	0
Bressan #1	Unnamed Arroya	0	0	0
Bressan #2	Unnamed Arroya	0	0	0
Brunelli #1 & #2	Bear Creek	0	0	0
Butte	Cucharas	0	0	20
Chicosa #4 & #5	Huerfano	-	-	-
Coler (Lake Miriam)	Cucharas	0	1282	3016
Cucharas Valley	Cucharas	0	0	580
Dotson	Chicosa Creek	-	-	-
Holita	Cucharas	0	0	73.5
Huerfano Valley	Huerfano	0	0	0
La Joya	Cucharas	0	25	0
Maria Stevens	Cucharas	0	322	588
Martin Reservoir	Cucharas	1,605	1709	2105
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	1,024	3721	2036
Holbrook #1	Arkansas	0	0	1319
Horse Creek	Arkansas	0	11736	0

NAME OF RESERVOIR	SOURCE	AMOUNT OF ACRE FEET NOVEMBER 1, 1978	AMOUNT OF ACRE FEET APRIL 1, 1979	AMOUNT OF ACRE FEET OCTOBER 31, 1979
Hermosa	San Francisco Creek	0	0	0
Monument	Middle Fork Purgatoire	0	0	1552
Model	Purgatoire	0 0	0	0
North	Trinchera	3789	0	-
Trinidad Reservoir	Purgatoire	1837	1799	18368
John Martin	Arkansas	0	15213	5607
Nee No Shee	Arkansas	0	0	0
Nee Skah	Arkansas	0	0	0
Thurston	Arkansas	1,139	1086	739
Two Buttes	Two Buttes Creek	3,905	3324	269

LIVESTOCK WATER TANKS

Applications Filed and Approved:

Water District 10	3
Water District 11	0
Water District 12	3
Water District 13	0
Water District 14	2
Water District 15	0
Water District 16	9
Water District 17	2
Water District 18	12
Water District 19	28
Water District 66	1
Water District 67	10
Water District 79	0
TOTAL	70

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

Last year (1978) the Division had 130 applications.

WATER RIGHTS TABULATION

To date there have been 50 protests to the July 1, 1978 tabulation. Nearly all of them were protests to rights on the abandonment list or protests to clerical errors. Corrective administrative action has been, or will soon be, taken on those protests. Two-hundred fifty-four decrees handed down in 1978 have been entered and 174 decrees handed down in 1979 will be entered soon.

The deadline for protests is July 1, 1980. Soon after this deadline the Division Engineer will hold hearings on those few protests which are not clerical errors or abandonment protests. These hearings will be completed by September 1, 1980.

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 in the original adjudication, administered and tabulated as though decreed in the original adjudication. 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 1979, 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 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		17	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..	217	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
July	W-4754 through W-4759	18	35
August	W-4760 through W-4768	16	40
September	W-4769 through W-4777	12	15
October	W-4778 through W-4787	16	42
November	W-4788 through W-4794	16	30
December	W-4795 through W-4832	47	3402
	Sub-total..	221	3722
	1979		
January	79CW1 through 79CW12	12	32
February	79CW13 through 79CW32	20	39
March	79CW33 through 79CW47	15	26
April	79CW48 through 79CW72	25	47
May	79CW73 through 79CW91	19	33
June	79CW92 through 79CW104	13	30
	Sub-total..	104	207

Total cases filed from 1969 through June 30, 1979 . . . 4,998

Approximate number of claims for same period 21,046

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
July	22
August	17
September	24
October	12
November	27
December	25
TOTAL....	247

MONTH	NUMBER OF CASES TERMINATED
1979	
January	12
February	7
March	24
April	6
May	9
June	8
TOTAL....	66

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	247
Cases Terminated 1979	66
Total cases terminated through June 30, 1979	5017

WINTER WATER STORAGE

On October 27, 1978, plans for a 1978-79 Winter Water Storage Program ended when two ditch companies, Holbrook Mutual Canal and the Fort Lyon Canal Company, made diversion demands that other ditch companies refused to accept. Holbrook Canal said that it needed a guarantee of 10 percent of the total diversion of the river, and the Fort Lyon Canal Company needed 36 percent of its total diversions as a guarantee, whether the river was high or low.

On November 15, 1978, another special meeting was held in La Junta, and after much debate a formula was accepted based on the total system production incorporating averages of the two previous years and arriving with a percentage figure which each company will receive from the total water available in the system.

Bessemer	5.2%
Colorado	8.7%
Highline	9.4%
Oxford	2.1%
Otero	.47%
Catlin	9.4%
Holbrook	9.0%
Fort Lyon	40.2%
Amity	11.2%
Las Animas Consolidated	2.5%
Rocky Ford Ditch did not participate.	
Miscellaneous	1.8%

The Winter Water Program began November 15, 1978 and continued through March 15, 1979.

WINTER WATER STORAGE SUMMARY SHEET
(Pueblo Reservoir)

CANAL	ACTUAL STORAGE
Bessemer	4626.38 A.F.
Colorado	2332.53 A.F.
Highline	8363.35 A.F.
Oxford	1868.49 A.F.
Otero	418.10 A.F.
Catlin	8363.35 A.F.
Holbrook	8007.27 A.F.
Rocky Ford	
Fort Lyon	
Amity	
Consolidated	2199.19 A.F.
West Pueblo	263.20 A.F.
Riverside	113.41 A.F.
Miscellaneous	1253.22 A.F.

WINTER WATER SUMMARY SHEET
(Off Channel Storage)

Colorado	5408.00 A.F.
Fort Lyon	41399.66 A.F.
Amity	10152.00 A.F.
Consolidated	25.00 A.F.

In this summary, the figures are from November 15, 1976 through March 15, 1979. The Amity Canal had their Winter Water delivered to John Martin; the storage began December 22, 1978 in John Martin and ended March 8, 1979.

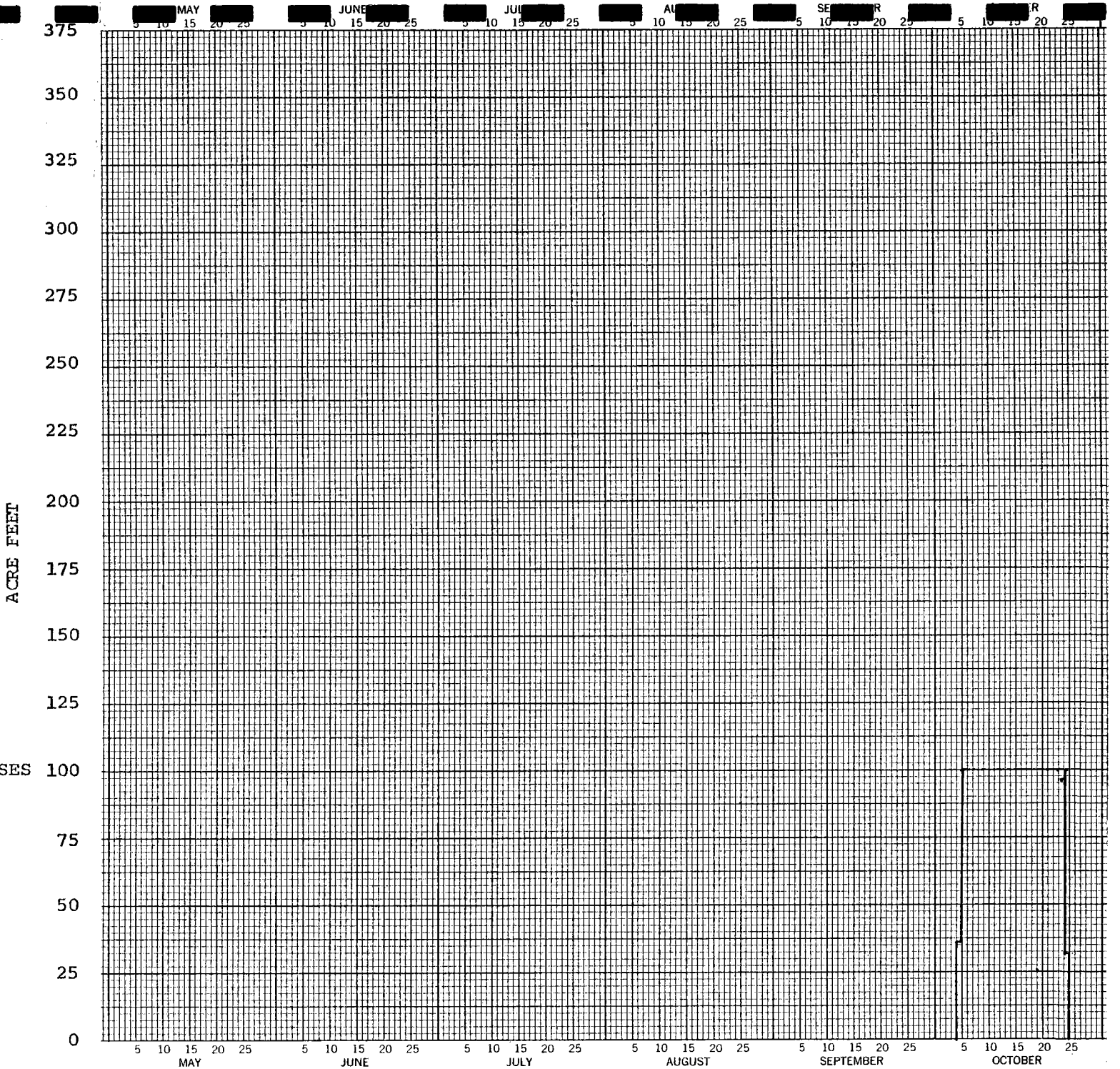
The first release of Winter Water from Pueblo Reservoir was March 3, 1979 to the Colorado Canal to adjust their percentages. The release then continued to various irrigation companies through October 24, 1979 with the majority of the water being run during May, July and August.

The following graphs show the amount and the time the Winter Water was released from Pueblo Reservoir.

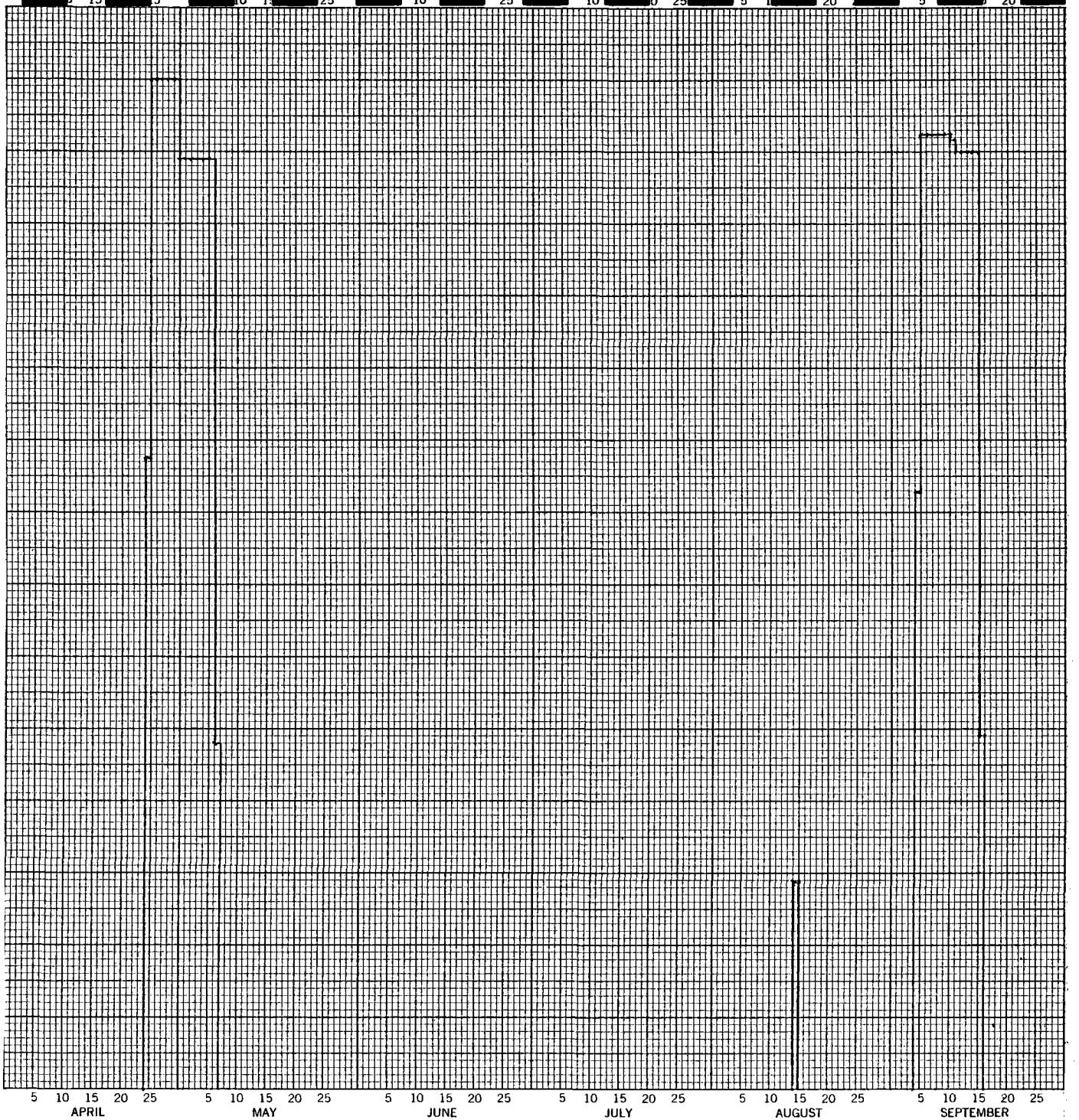
CONSOLIDATED CANAL

WINTER WATER
TIME AND QUANTITY RELEASES
FROM

PUEBLO RESERVOIR
1979



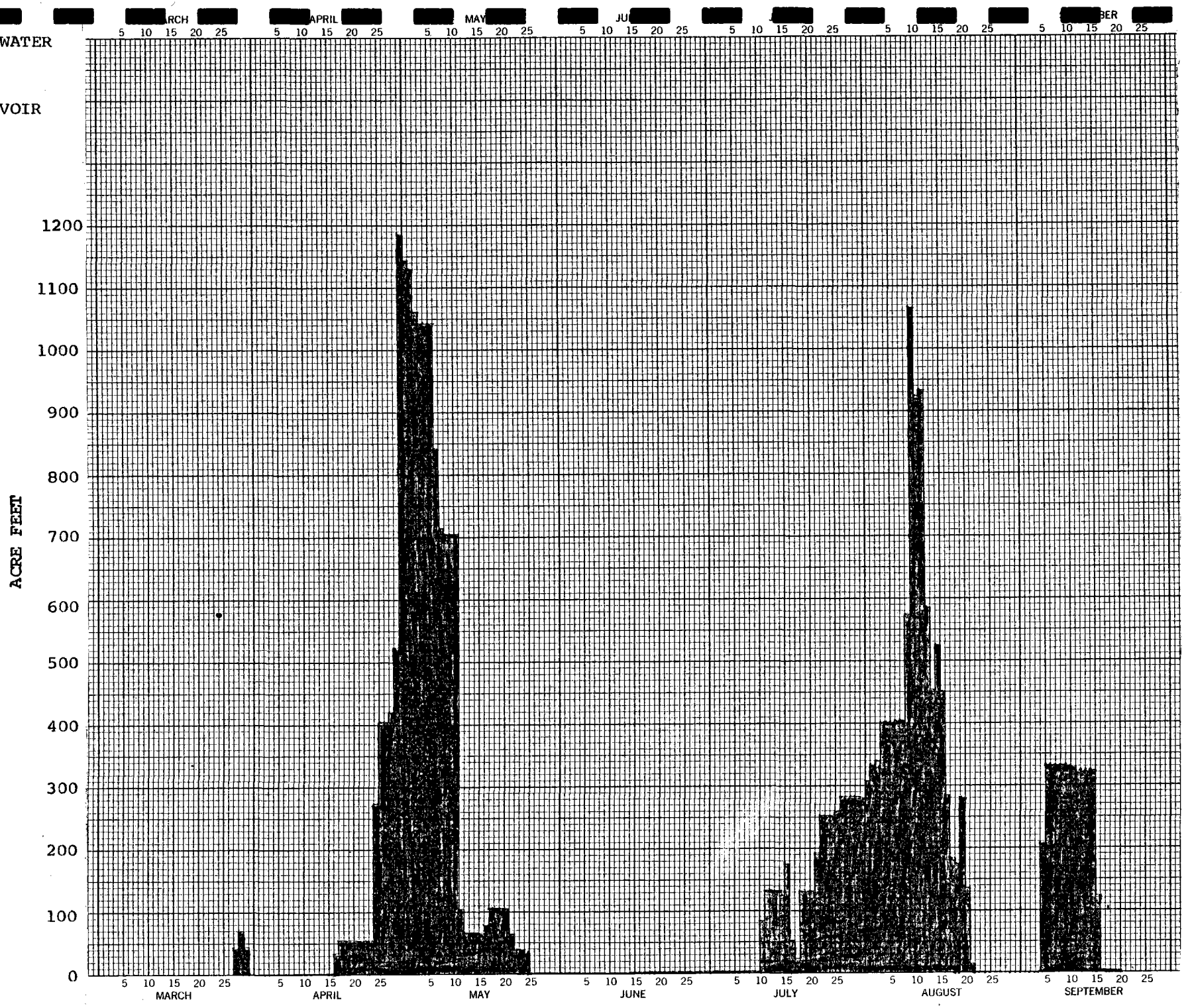
CATLIN CANAL



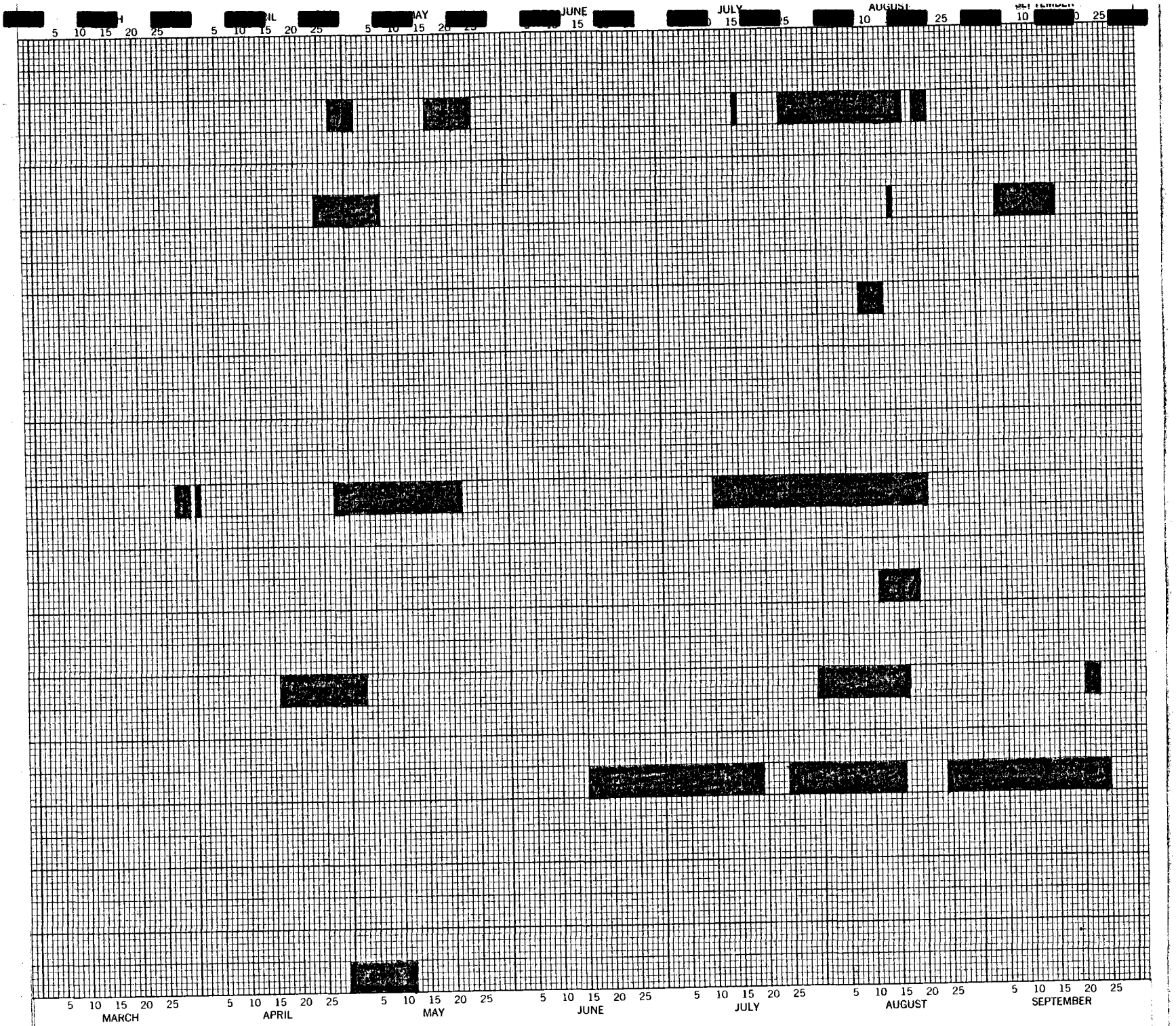
WINTER WATER
TIME AND QUANTITY RELEASES
FROM
PUEBLO RESERVOIR
1979

58

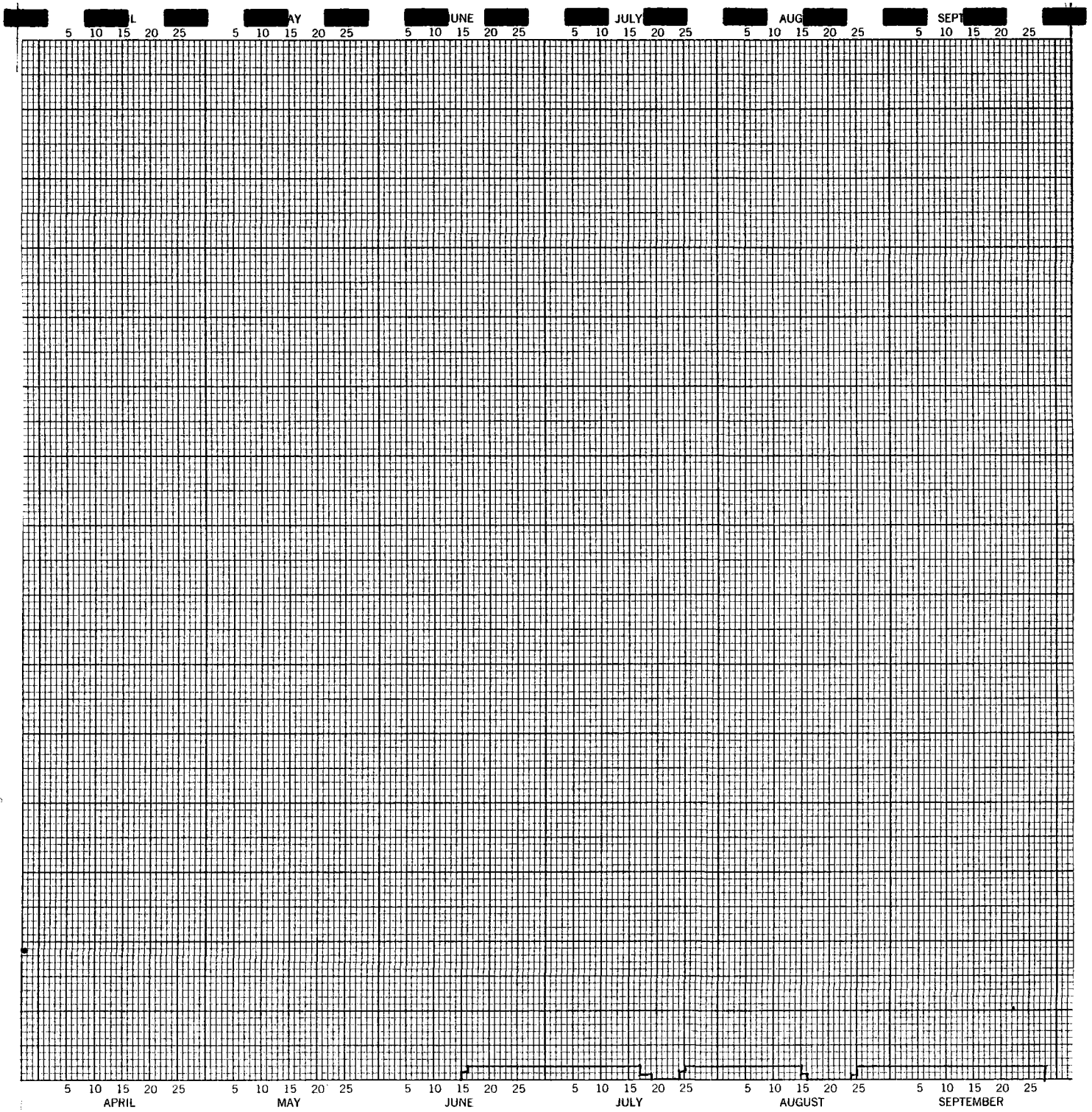
TOTAL WINTER WATER RELEASES FROM PUEBLO RESERVOIR FOR 1979



WINTER WATER
TIME RELEASE FROM
PUEBLO RESERVOIR
FOR 1979



RIVERSIDE DITCH

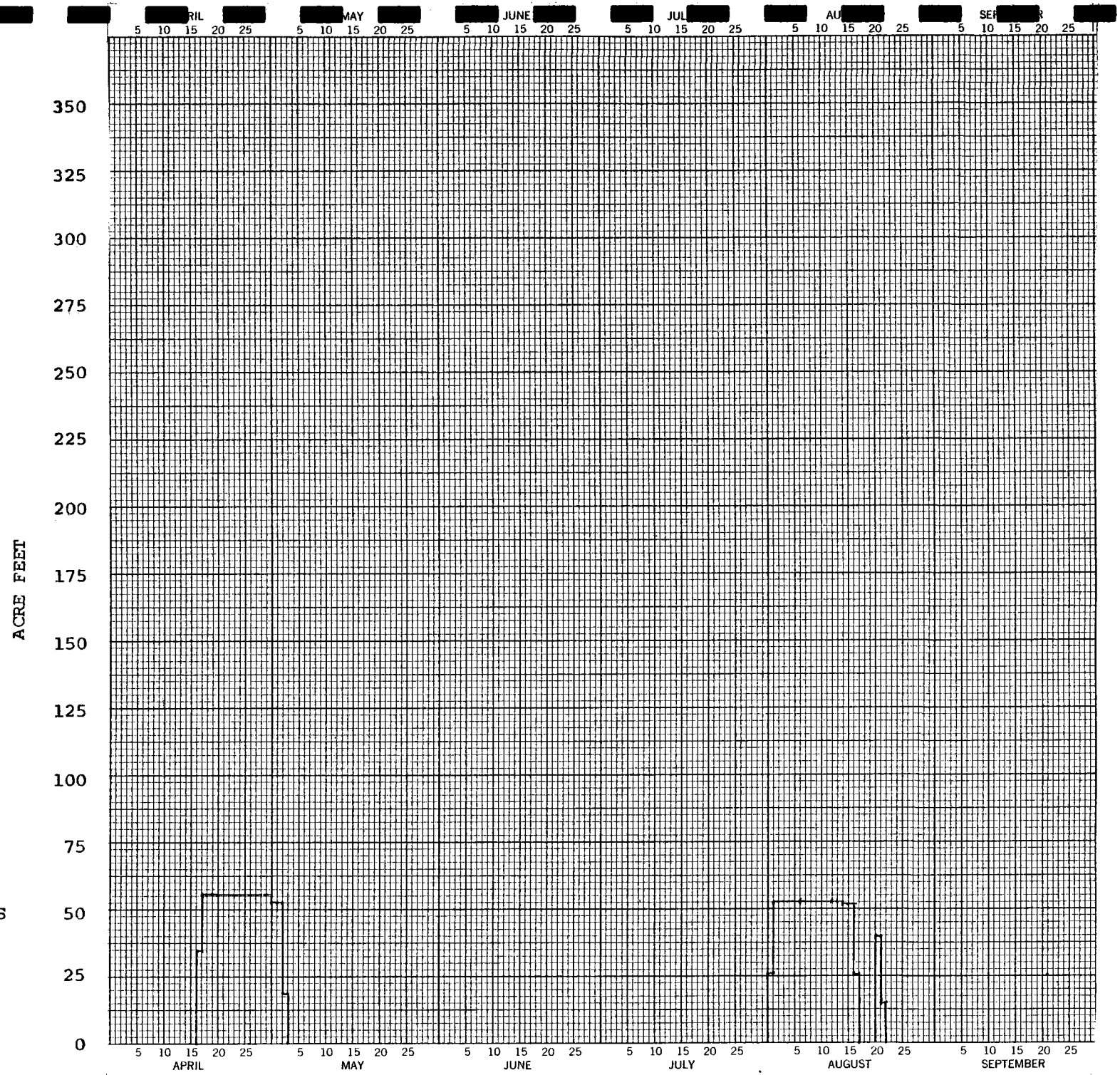


WINTER WATER
TIME AND QUANTITY RELEASES

FROM

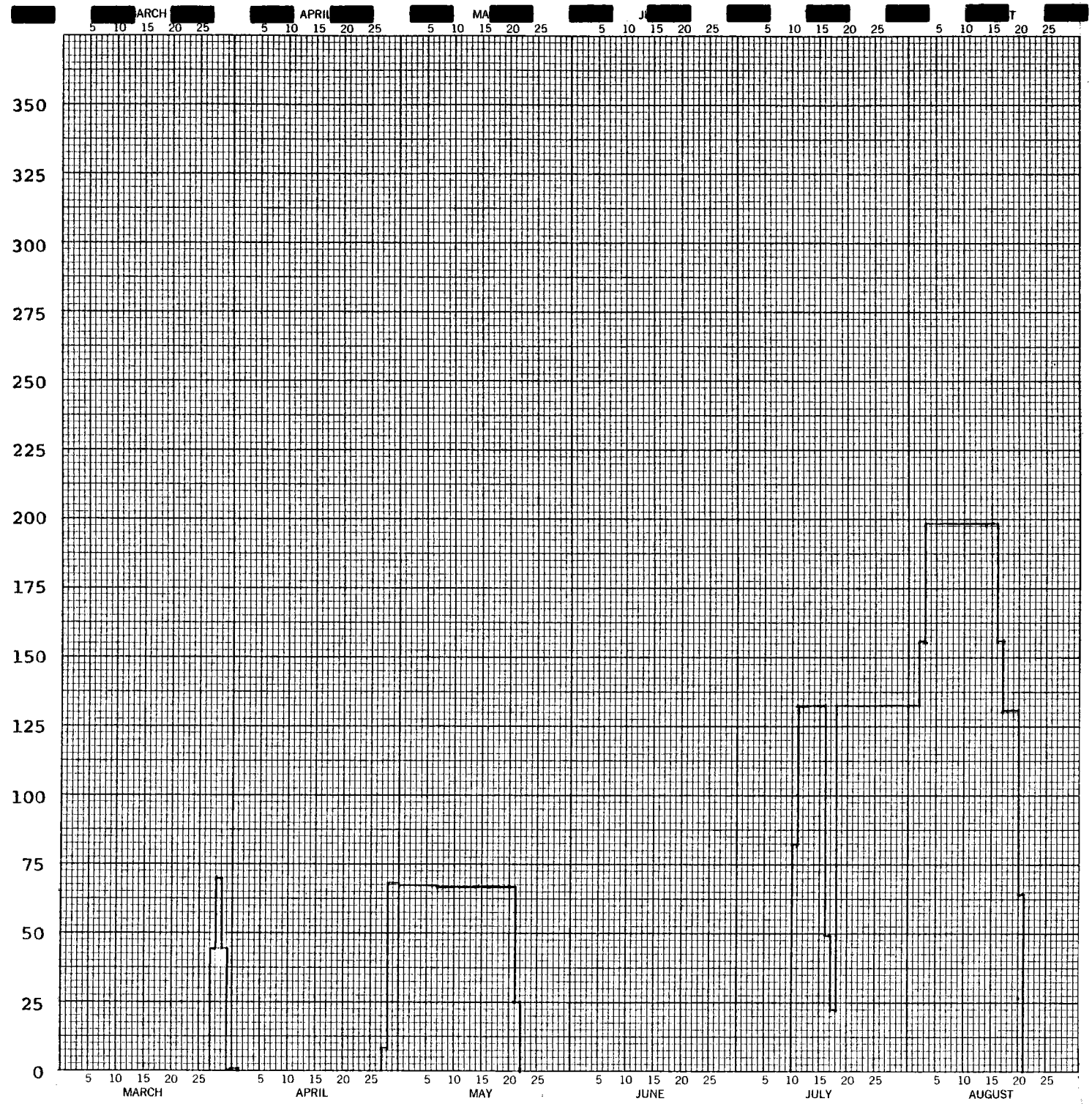
PUEBLO RESERVOIR
1979

OXFORD CANAL



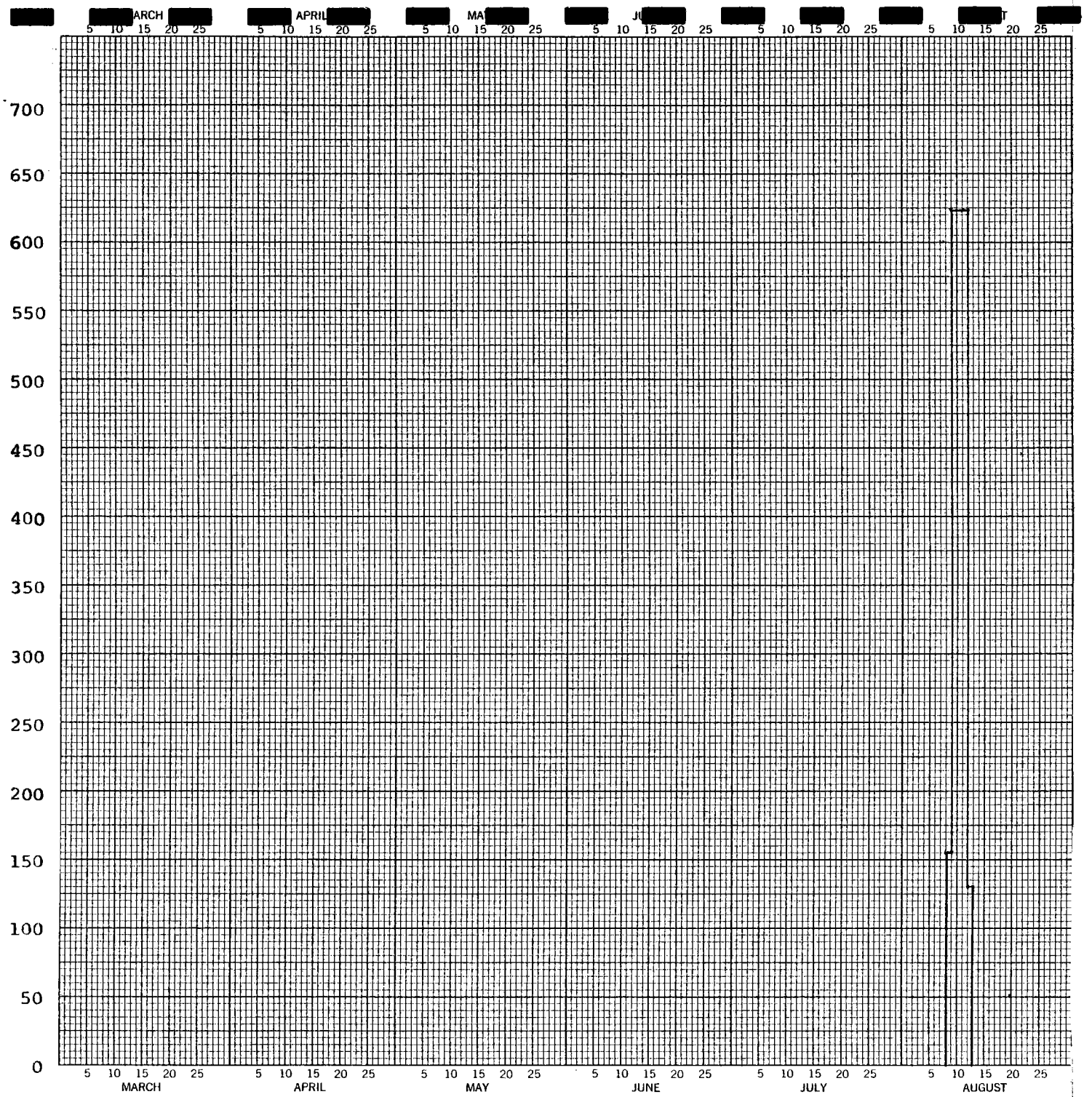
WINTER WATER
TIME AND QUANTITY RELEASES
FROM
PUEBLO RESERVOIR
1979

HIGHLINE CANAL



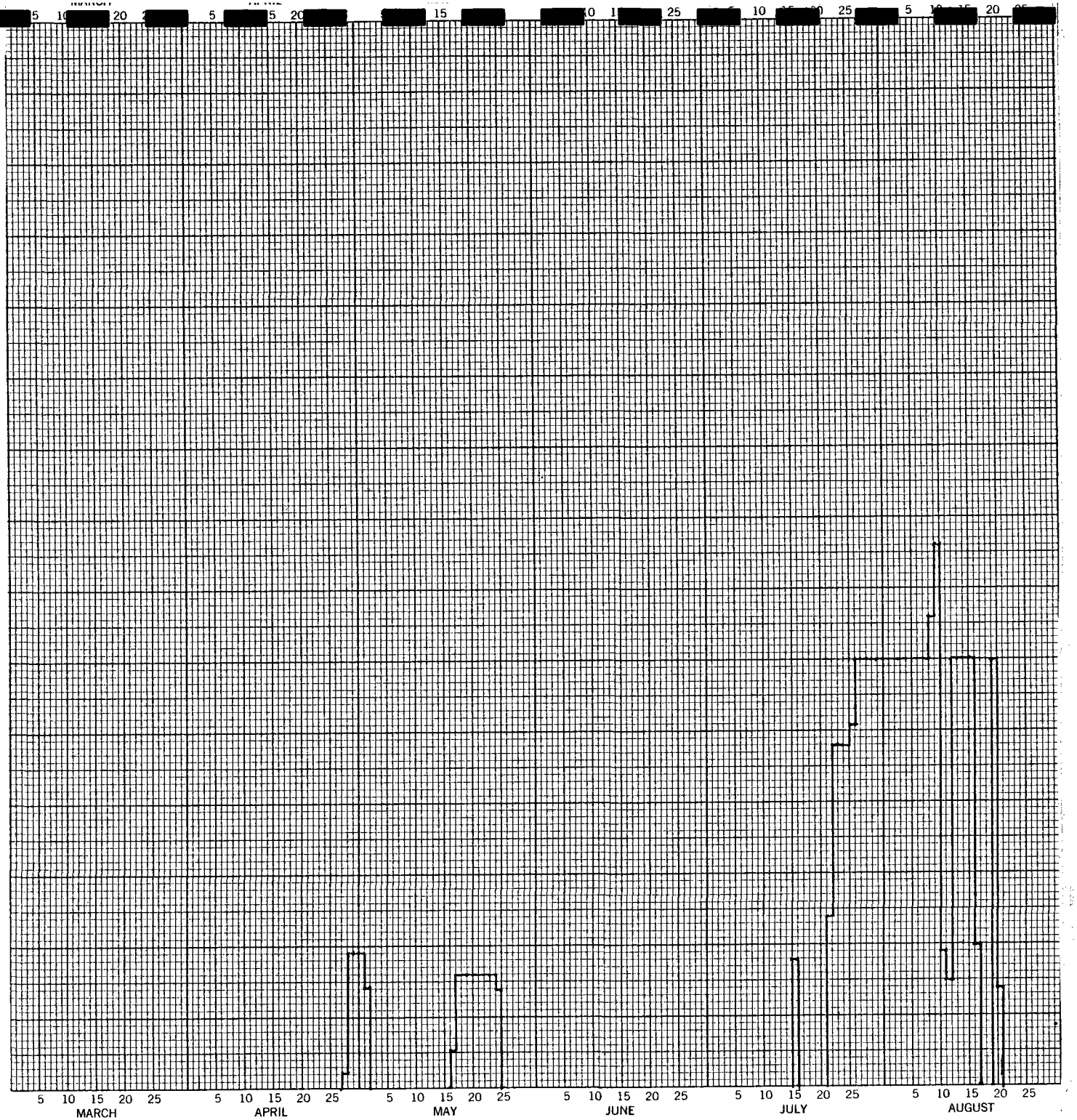
WINTER WATER
TIME AND QUANTITY RELEASES
FROM
PUEBLO RESERVOIR
1979

COLORADO CANAL



WINTER WATER
TIME AND QUANTITY RELEASES
FROM
PUEBLO RESERVOIR
1979

BESSEMER CANAL

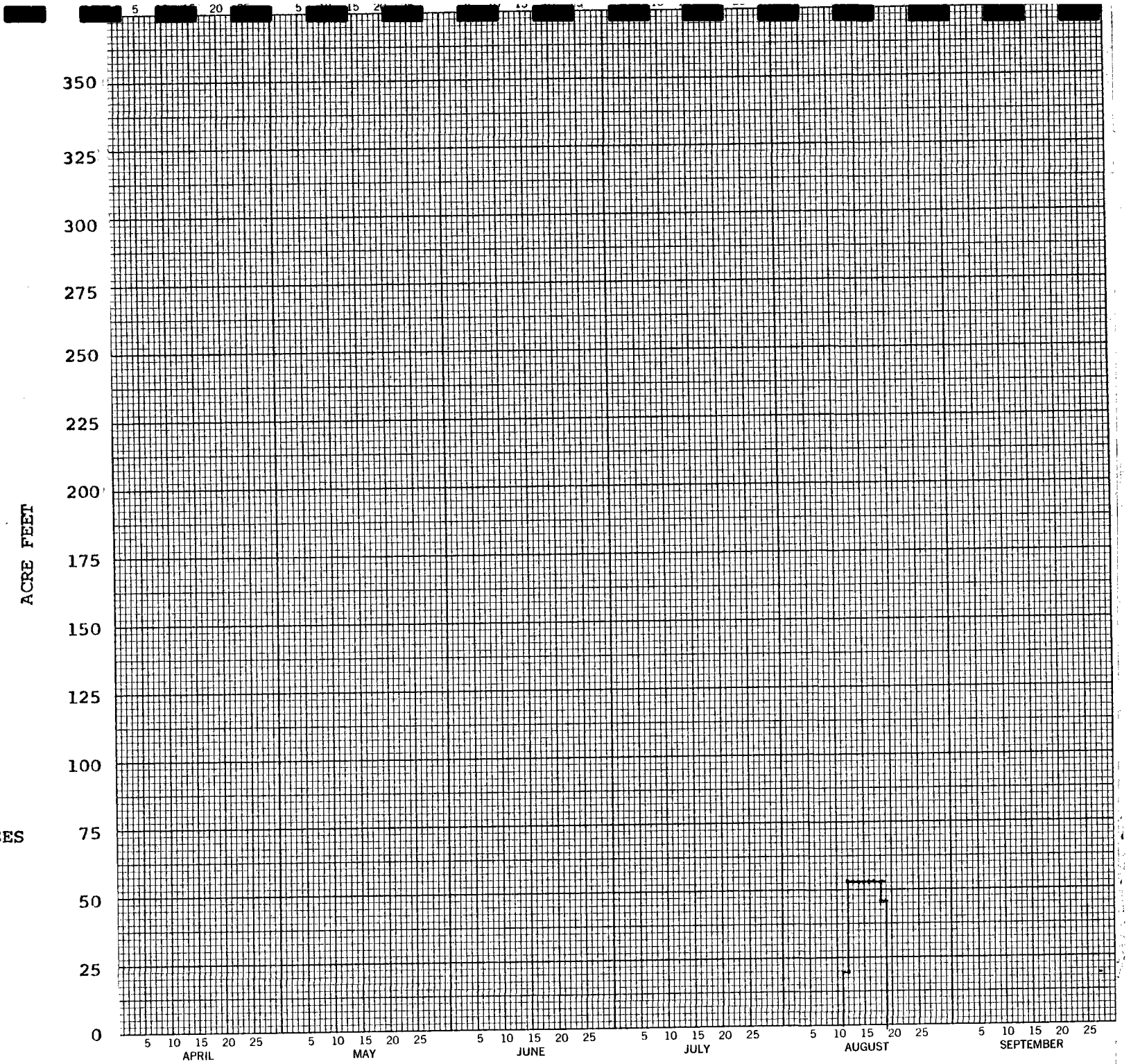


WINTER WATER
TIME AND QUANTITY RELEASES
FROM
PUEBLO RESERVOIR
1979

OTERO DITCH

WINTER WATER
TIME AND QUANTITY RELEASES
FROM

PUEBLO RESERVOIR
1979



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

The decree read:

> 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 maximization 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.

On June 19, 1979, 37-92-401 (1) (b) (VI) C.R.S. 1973 was amended to read:

> 37-92-401. List of priorities. (1) (b) (VI) If, IN THE PREPARATION OF THE TABULATIONS PROVIDED FOR IN THIS SECTION, THE APPLICATION OF the preceding principles would cause in any particular case a substantial change in the priority of a particular water right to the extent theretofore lawfully enjoyed for a period of not less than eighteen years, then the division engineer shall designate the priority for that water right in accordance with historic practice. IN NO EVENT SHALL THE

PROVISIONS OF THIS SUBPARAGRAPH (VI) ENTITLE A WATER RIGHT TO A PRIORITY SENIOR TO ITS ACTUAL DATE OF INITIAL APPROPRIATION OR TO FREEDOM FROM REGULATION AND ADMINISTRATION IN THE PRIORITY SYSTEM.

This act (S.B. 70) clearly negates the 18-year provision of Judge Gobin's ruling. A copy of this is in the Appendix of this report. For the L.A.W.M.A. augmentation to become operative the Buffalo Canal must submit a non-selective written call. The 1973 Pumping Rules and Regulations will be enforced without regard to age of well unless the well is in priority.

This is the first year replacement well permits have been hand delivered to well owners as a means of Rules and Regulations enforcement. This has proved to be more effective and cheaper than other personal contact methods.

On July 30, 1979, Judge Statler issued an order on In Limine issue of law which reads in part, " THE COURT CONCLUDES AND ORDERS that Applicants are required as a matter of law to replace depletions to Fountain Creek and the Widefield Aquifer which are attributable to the pumping of Dragoo Well Nos. 2 and 3 on each and every day of the week by virtue of the inclusion of those wells in Applicants' proposed plan for augmentation."

This order could mean that those wells wishing to pump more than 3 days per week must replace their entire depletion. The effect of this order is still undecided; a copy of this order is in the Appendix of this report.

The Booth case seems to be resolved. The lands that are to be excluded from the "blue area" are monumented and those who wish to irrigate lands in the "blue area" have accepted the fact that they must replace the entire depletion on a year to year basis. This has been pending for nearly a decade; all concerned are grateful it is over.

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 was appealed, but an agreement was made whereby the depletion would be replaced by some surface water owned by the applicants.

SUMMARY OF WELLS
IRRIGATION DIVISION NO. 2

WATER DIST. NO.	TYPE OF USE									
	0	1	2	3	4	5	6	7	8	TOTAL
10	24	2,618	101	73	57	11	227	10	107	3,228
11	77	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	320
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

The preceding table is of January 1977 which predates the formation of Water District 79.

NEW PERMITS ISSUED IN DIVISION 2
1 NOV 78 to 31 OCT 79

New In-House-Use Only (0)	587
Domestic (1), Stock (2), Domestic and Stock (3)	720
New Non-Tributary, Non-Exempt wells	5
Replacements for existing adjudicated wells	30
Denied applications	33

UNDERGROUND WATER
IRRIGATION DIVISION NO. 2

Irrigation Division 2, composed of Water Districts 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 66, 67 & 79, has 17,516 completed 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 - 3,300'	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, the 1975 withdrawal would be 3/7 of that or 65,143 acre feet.

The above study appears to be the most recent. If the reader has knowledge of more recent data and wishes to share it with the Division Engineer's Office, it would be most appreciated.

ARKANSAS RIVER COMPACT

IRRIGATION DIVISION NO. 2

Compact storage began November 1, 1978 and continued until April 15, 1979.

There was a resolution adopted March 31, 1979 by the Arkansas River Compact Administration and an agreement between the nine ditch companies below John Martin. Basically, there were three types of water in John Martin Reservoir:

1) Compact Water, which would be shared by Colorado and Kansas;

2) Winter Water, which was the Great Plains water. This water was divided amongst the nine ditch companies below John Martin and the State of Kansas.

3) Agreement Water, which is water stored in John Martin when the Compact Commission closed the gates. Instead of Kansas running their water and Colorado ditches running their water out, they were able to call for it on demand.

After initially dividing the Compact Water and the Winter Water as per agreement and as shown below, we then entered into the operation of "Agreement Water" which was in operation from April 15 through October 31.

COMPACT WATER AND WINTER WATER
AS OF APRIL 15, 1979

Kansas	2843.56 Acre Feet
Keesee	138.84 Acre Feet
Fort Bent	513.10 Acre Feet
Amity	10224.03 Acre Feet
Lamar	965.83 Acre Feet
Hyde	78.47 Acre Feet
Manvel	144.88 Acre Feet
X-Y	289.75 Acre Feet
Buffalo	513.10 Acre Feet
Sisson	72.44 Acre Feet
	15784.00 Acre Feet

1978-1979
Storage Period in John Martin Reservoir
Agreement Water

Events	Date Begun	Date Ended
1	1 Nov	8 Apr
2	13 Apr	16 Apr
3	30 May	1 June
4	3 June	4 June
5	9 June	12 June
6	24 June	26 June
7	16 July	17 July
8	18 July	20 July
9	1 Aug	2 Aug
10	16 Aug	17 Aug
11	22 Oct	31 Oct

During April 16 through October 31, the water stored was the Agreement Water, and prorated to the participants for each event.

The regular meeting of the Compact was held on December 12, 1978 in Lamar. There were also special meetings by the Compact held during the year as the aspects of John Martin are becoming more involved. Mr. Frank G. Cooley is Chairman, and listed below are the Compact Commissioners.

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

Mr. Felix L. Sparks has retired and he has been replaced by a new Director of the Water Conservation Board, Mr. Bill McDonald.

We are no longer faced with the problem concerning the Compact Secretary and the Water Commissioner being the same person. The Secretary of the Compact has resigned and the resignation became effective in January, 1980. This situation has been resolved by the appointment of Mr. Leo Idler, secretary.

The Catlin Canal water transfer to the Permanent Pool is still pending. The Muddy Creek gages have been operated by our Engineering Technician who also makes preliminary determinations of John Martin contents.

PERSONNEL

Division No. 2

DIVISION OF WATER RESOURCES

NAME	POSITION	DISTRICT	MONTHS WORKED	MILEAGE	ALLOCATED
Robert W. Jesse	Division Engineer	Division 2	Full Time	17,268	12 Months
James F. Kasic	Assistant Division Engineer	Division 2	Full Time	1,995	12 Months
Kenneth J. Cooper	Assistant Division Engineer	Division 2	Full time	4,596	12 Months
Robert Ermel	Water Commissioner	District 10	Full Time	13,403	12 Months
James Everett	Water Commissioner (Terminated March 79)	District 11	Full Time	7,992	12 Months
Bruce Smith	Water Commissioner (Began June 1979)	District 11	Full Time	884	12 Months
George Coffee	Deputy Water Commissioner Water Commissioner Transferred Jan. 1979	District 11 District 17	79 Days Full Time	3,135 7,385	6 Months 12 Months
Larry Brown	Deputy Water Commissioner	District 11	159 Days	5,482	7 Months
John Jackson	Deputy Water Commissioner (Began April 1979)	District 11	55 Days	4,709	6 Months
George Wichmann	Water Commissioner	District 12	Full Time	18,742	12 Months
Juanita Tafoya	Deputy Water Commissioner (Terminated Oct. 78)	District 12	34 Days	1,067	6 Months

NAME	POSITION	DISTRICT	MONTHS WORKED	MILEAGE	ALLOCATED
Louis D. Engelhart	Deputy Water Commissioner	District 12	48 Days	1,839	6 Months
Richard Sierka	Deputy Water Commissioner	District 12	85 Days	765	6 Months
Don Stuart	Water Commissioner	District 13	Full Time	12,473	12 Months
Richard Squire	Deputy Water Commissioner	District 13	117 Days	2,667	4 Months
Larry Young	Water Commissioner	District 15	Full Time	15,031	12 Months
Robert Brgoch	Water Commissioner	District 16	Full Time	11,281	12 Months
Augustine Garcia	Water Commissioner	District 79	168 Days	6,651	8 Months
Arlyn Davison	Water Commissioner Transferred Jan. 1979	District 17	Full Time	8,018	12 Months
Leonard Trujillo	Water Commissioner	District 18	127 Days	5,606	6 Months
Henry Marques	Water Commissioner	District 19	Full Time	15,085	12 Months
Tony Pantano	Deputy Water Commissioner	District 19	90 Days	4,442	2 Months
John Cusimano	Deputy Water Commissioner (Terminated Nov. 1978)	District 19	10 Days	539	2 Months
Lane Hackett	Water Commissioner	Dist. 66 & 67	Full Time	15,695	12 Months
George Ridenour	1042 Water Commissioner	Division 2	Full Time	10,648	12 Months
David DeYoung	Hydrographer (Terminated Dec. 1978)	Division 2	Full Time	5,471	12 Months
Lou Schultz	Hydrographer	Division 2	Full Time	14,651	12 Months
Jim Sullivan	Hydrographer	Division 2	Full Time	25,980	12 Months

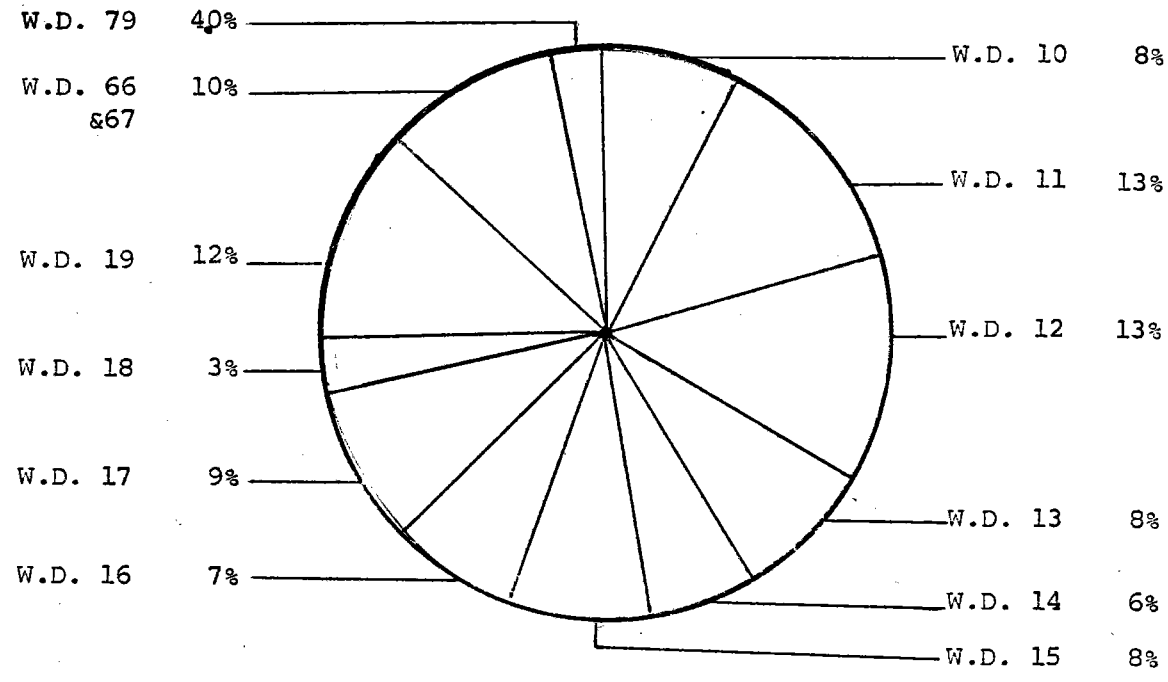
NAME	POSITION	DISTRICT	MONTHS WORKED	MILEAGE	ALLOCATED
Scott Jensen	Hydrographer (Began March 1979)	Division 2	Full Time	2,174	12 Months
William Howland	Engineering Technician (Began November 1978)	Division 2	Full Time	12,183	12 Months
Lynna Muse	Administrative Clerk Typist	Division 2	Full Time	0	12 Months
Helen Bever	Key Punch Operator	Division 2		0	--

Paid Mileage 173,539

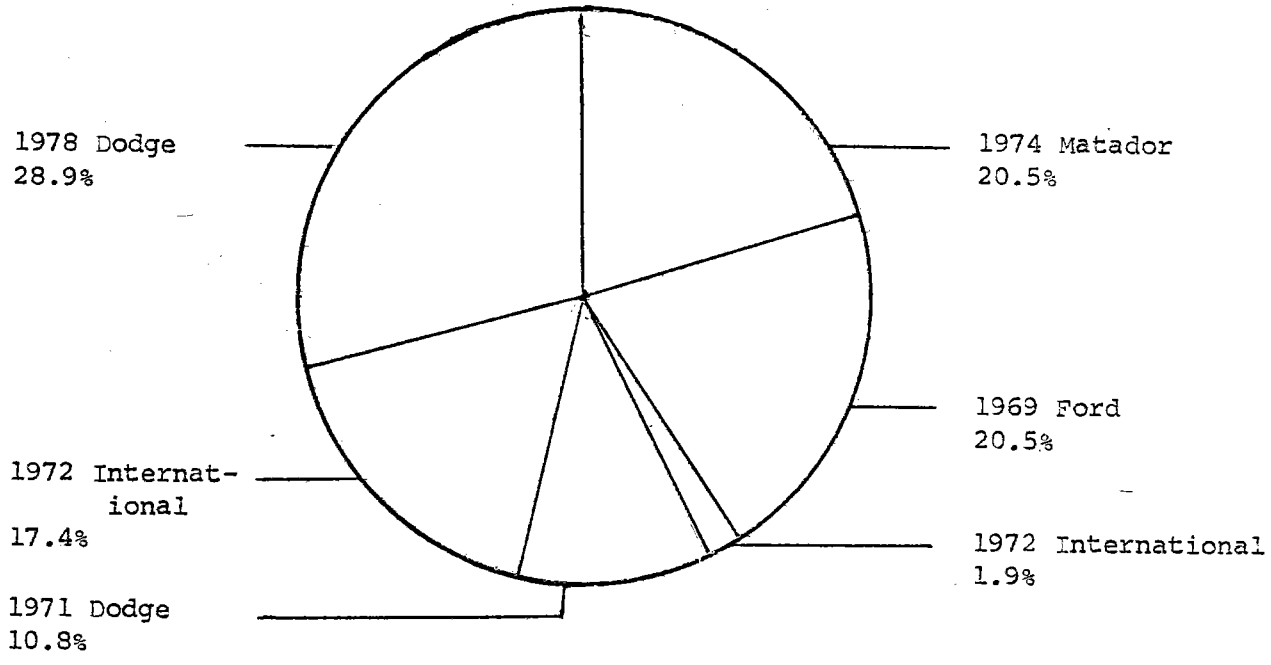
Mileage for State Vehicles 84,318

IRRIGATION DIVISION NO. 2
Water Division Mileage
July 1, 1978 thru June 30, 1979

Water Commissioners' Mileage Reimbursed



State-Owned Vehicles



158,255 = Mileage in Personal Automobiles
84,318 = Mileage in State-Owned Vehicles

242,573 = 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, 1600 Colorado National Building, 950 17th Street, Denver, Colorado 80202

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

1979 ANNUAL SUMMARY - DIVISION 2
(Acre Feet (11-1-78 thru 10-31-79)

			IRRIGATION		
Dists.	No. Registered Non-Exempt Wells	No. Reported Ditch[1] Structures	Direct Diversions To Irrigation	Diversions To Storage	Storage To Irrigation
10	412	72	186,440		
11	101	103	132,720		
12	85	239	299,740		
13	43	287	54,940		
14	1,100	16	289,200	37,800	37,800
15	151	86	26,210		
16	54	77	28,380		
17	1,122	31	474,300	56,980	56,980
18	19	28	16,390		
19	39	89	67,520		
66	608	11	1,670		
67	1,581	35	149,300	15,760	15,760
79	46	102	25,790		
Total	5,361	1176	1,752,600	110,540	110,540

[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.

	CURRENT YEAR	TRANSMOUNTAIN		MUNICIPAL	INDUSTRIAL
	Acres	Diversion to Diversion		Direct	Direct
Dists.	Irrigated*	Export	Import	Diversions	Diversions
10	13,630			32,150	2,960
11	22,162	13,500**	146,500		
12	14,000			19,720	129,715
13	15,930				
14	37,000			26,060	9,885
15	4,654			750	6,150
16	4,500			7,640	
17	140,000				
18	7,550				
19	30,000			4,130	
66	489				
67	76,348				
79	5,090				
Other	0			13,500	
Total	371,343			103,950	148,710

*Revised 1978 based on County Assessors Offices.
**City of Aurora

APPENDIX I

An Act

SENATE BILL NO. 70. BY SENATORS Anderson, Hatcher, Wham, and McCormick; also REPRESENTATIVES Hinman, Shoemaker, Theos, and Winkler.

CONCERNING CRITERIA USED IN PREPARING WATER RIGHT TABULATIONS ACCORDING TO SENIORITY.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. 37-92-401 (1) (b) (VI), Colorado Revised Statutes 1973, is amended to read:

37-92-401. Lists of priorities. (1) (b) (VI) If, IN THE PREPARATION OF THE TABULATIONS PROVIDED FOR IN THIS SECTION, THE APPLICATION OF the preceding principles would cause in any particular case a substantial change in the priority of a particular water right to the extent theretofore lawfully enjoyed for a period of not less than eighteen years, then the division engineer shall designate the priority for that water right in accordance with historic practice. IN NO EVENT SHALL THE PROVISIONS OF THIS SUBPARAGRAPH (VI) ENTITLE A WATER RIGHT TO A PRIORITY SENIOR TO ITS ACTUAL DATE OF INITIAL APPROPRIATION OR TO FREEDOM FROM REGULATION AND ADMINISTRATION IN THE PRIORITY SYSTEM.

SECTION 2. Safety clause. The general assembly hereby

Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

Fred E. Anderson
PRESIDENT OF
THE SENATE

Robert F. Burford
SPEAKER OF THE HOUSE
OF REPRESENTATIVES

Marjorie L. Rutenbeck
SECRETARY OF
THE SENATE

Lorraine F. Lombardi
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

APPROVED Jun. 19, 1979 3:46 pm

Richard D. Lamm
GOVERNOR OF THE STATE OF COLORADO

IN THE DISTRICT COURT IN AND FOR WATER DIVISION NO. 2

STATE OF COLORADO

Case Nos. W-4685
W-4686

IN THE MATTER OF THE APPLICATIONS FOR WATER RIGHTS OF HAROLD E. DRAGOO AND IRMA A. DRAGOO

IN EL PASO COUNTY

ORDER ON IN LIMINE ISSUE OF LAW

After proper notice, on Monday, June 4, 1979, at the Pueblo County Judicial Building in Pueblo, Colorado, the Court heard argument on a designated second issue of law to be decided in limine. Present at the hearing were the Applicants, Harold E. and Irma A. Dragoo; their counsel, David M. Brown of Moses, Wittemyer, Harrison & Woodruff, P.C.; and counsel for the Southeastern Colorado Water Conservancy District, Howard Holme of Fairfield and Woods. Present but not arguing the matter were the Division Engineer, Robert Jesse and his assistant, Kenneth Cooper. Mr. Brown reported that other counsel expressed neutrality on the issue to be decided and would not appear.

The hearing was on issue of law "B" as stated in the Pre-Trial Order and in the Notice of Hearing on In Limine Issues of Law, namely

B. Are Applicants required, as a matter of law, to replace depletions to Fountain Creek and the Widefield Aquifer which are attributable to the future pumping of Dragoo Well Nos. 2 and 3, on Mondays, Tuesdays and Wednesdays by virtue of the inclusion of those wells in their proposed plan for augmentation, even though the Order of the State Engineer in the Matter of the Proposed Rules and Regulations Governing the Use, Control and Protection of Surface and Ground Water Rights Located in the Arkansas River and its Tributaries dated November 16, 1972, does not so require?

Applicants and the Southeastern Colorado Water Conservancy District (District) submitted briefs which were read and considered by the Court before oral argument was had.

The parties and the Court accepted, for the purpose of this argument, the facts as stated in the Applicants' Pre-Trial Statement concerning Dragoo Well Nos. 2 and 3 as follows:

> Applications for the adjudication of conditional and absolute water rights to Dragoo Well Nos. 2 and 3 were initially filed in Case No. W-439 on November 9, 1971. This adjudication was ultimately concluded with the Court's decree in Case Nos. W-438(76) and W-439(76) entered on June 7, 1978, confirming absolute municipal water rights in the amounts of 40 g.p.m. (0.089 cfs.) subject to an annual diversion limitation of 50 acre-feet for Dragoo Well No. 2, and 60 g.p.m. (0.134 cfs.) subject to an annual diversion limitation of 75 acre-feet for Dragoo Well No. 3.

The Applicants' position was that the Rules and Regulations permit pumping of Well Nos. 2 and 3 without replacing depletions to Fountain Creek and the Widefield Aquifer on Monday, Tuesday, and Wednesday of each week. The District argued that whatever rights Applicants might have to pump Dragoo Well Nos. 2 and 3 otherwise, under a plan for augmentation Applicants must fully replace depletions all days of the week for any well used in the plan.

THE COURT CONCLUDES AND ORDERS that Applicants are required as a matter of law to replace depletions to Fountain Creek and the Widefield Aquifer which are attributable to the pumping of Dragoo Well Nos. 2 and 3 on each and every day of the week by virtue of the inclusion of those wells in Applicants' proposed plan for augmentation.

The Court concludes that the Rules and Regulations Governing the Use, Control and Protection of Surface and Groundwater Rights Located in the Arkansas River and its Tributaries, proposed November 16, 1972, effective February 19, 1973 (hereafter "Rules"), are tantamount to a regulatory exemption from administration, analogous to the statutory exemptions stated in CRS 1973, §37-92-602. Under these Rules the State Engineer would not curtail three-day per week pumping without replacement of depletions. However, when included in a plan for augmentation, the pumping of those wells without replacement of their depletions is not permissible. Cache La Poudre Water Users Association v. Glacier View Meadows, ___ Colo. ___, 550 P.2d 288 (1976); Kelly Ranch v. Southeastern Colorado Water Conservancy District, ___ Colo. ___, 550 P.2d 297 (1976).

The question under a plan for augmentation is whether the plan for augmentation will "injuriously affect the owner of or persons entitled to use water under a vested water right or a decreed conditional water right." CRS 1973, §37-92-305(3). There would be such injury if Applicants were allowed to pump without replacing their depletions.

The Rules state enforcement procedures of the State Engineer and do not determine that there is no injury caused by pumping three days a week or preclude a finding of injury under the above statute.

Further, if all depletions were not replaced, there could be no "plan for augmentation" found or approved under the definition of plan for augmentation stated in CRS 1973, §37-92-103 (9) because there would be no program "to increase the supply of water available for beneficial use in a division or a portion thereof." Cache La Poudre Water Users Association v. Glacier View Meadows, supra.

Kuiper v. Atchison, Topeka and Santa Fe Railway Co., ___ Colo. ___, 581 P.2d 293 (1978) does not require a contrary result.

DONE THIS 30th DAY OF ~~JUNE~~ July, 1979, nunc pro tunc June 4, 1979.

BY THE COURT:

Honorable John C. Statler, Water Judge
Water Division No. 2
State of Colorado

APPROVED AS TO FORM

FAIRFIELD AND WOODS

By _____
Howard Holme, No. 1446
Attorneys for Objector,
Southeastern Colorado
Water Conservancy District
1600 Colorado National Building
Denver, Colorado 80202
Telephone: (303) 534-6135

MOSES, WITTEMYER, HARRISON AND WOODRUFF, P.C.

By _____
David M. Brown, No. 7453
Attorneys for Applicants,
Harold E. and Irma A.
Dragoo
P. O. Box 1440
Boulder, Colorado 80306
Telephone: (303) 443-8782

APPENDIX II

BOUSTEAD TUNNEL — River or ~~Creek~~ near TRANS MOUNTAIN DIVERSION

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area TRANS-MTN DIV. square miles. Water stage recorder A-35 CONTINUOUS

Max. Discharge 087 sec. ft. at 2030 HRS on June 29 Min. Daily Discharge 0 sec.-ft. on MANY DAYS

Max. G. H. 5.51 ft. at 2050 HRS on June 29 G. H. 5.51 ft.

"S" - DISCHARGE SUBDIVIDED

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		0		0		0
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28										0		
29									XX	XXX		
30				0					XX	XXX		
31		0	XX	XXX		0		0	XX	XXX		0
25,187.44	Total	0		0		0		0		0		0
69.0	Mean											
49,960	Run-off in acre-feet											
6.95	Maximum											
0	Minimum											

Calendar Year 1978

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		0	2.04	181	S	700	.83	41		0
2				0	S	204	S	610	.91	48		
3				0	S	268	S	542	.84	42		
4				0	S	352	S	512	S	30		
5				0	S	453	S	[illegible]	.52	18		
6				0	S	544	a	411	.51	[illegible]		
7			S	2.2	S	558	a	392	.51	18		
8			.20	4.4	3.15	363	S	381	.53	19		
9			.13	2.2	2.60	267	S	354	.52	16		
10			.13	2.2	2.32	222	S	334	.49	17		
11			.13	2.2	S	261	S	325	.41	12		
12			.13	2.2	S	371	S	325	.26	5.5		
13			.13	2.2	S	514	S	316	.18	2.8		
14			.13	2.2	S	627	S	298	.18	2.8		
15			.19	3.1	S	645	S	274	[26] S	[illegible] 17		
16			.43	15	S	[illegible]	S	258	.69	30		
17			.64	28	S	[illegible]	S	236	.63	26		
18			S	45	S	[illegible]	2.24	210	S	45		
19			1.06	64	S	[illegible]	[25] 1.99	174	.97	52		
20			S	92	[24] S	[illegible]	1.78	145	.97	52		
21			S	132	S	[illegible]	1.77	144	S	41		
22			S	180	S	[illegible]	1.89	160	.57	32		
23			S	220	S	[illegible]	1.72	138	S	15		
24			S	264	S	[illegible]	1.64	128	S	[illegible] 5.7		
25			S	277	S	[illegible]	1.58	120	0	0		
26			S	310	S	[illegible]	1.45	105				
27			S	394	S	[illegible]	1.30	88				
28			S	413	S	[illegible]	1.19	76				
29			S	435	S	[illegible]	1.12	69				
30		0	S	357	S	[illegible]	.97	[illegible] 54				0
31	XX	XXX	S	[illegible] 271	XX	XXX	.82	[illegible]		0	XX	XXX
		0		[illegible]		[illegible] 61		[illegible]		57.8		0
				[illegible]		[illegible]		[illegible]		19.3		
				[illegible]		[illegible] 8		[illegible] 10		1190		
				435		[illegible]		[illegible]		52		
				0		181		[illegible]		0		

NO FLOW

NO FLOW

	4th	3rd	2nd	1st	Quarter
JMS					Computed
SDJ					Checked
79		20		11	Date

	4th	3rd	2nd	1st	Quarter
JMS					Dis.appld.
SDJ					Dis.check
79		20		11	Date

	4th	3rd	2nd	1st	Quarter
JMS					G.H.appd.
SDJ					G.H.check
79		20		11	Date

Water Year 1979

WURTZ EXTENSION Creek near TENNESSEE PASS

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area TRANS MOUNTAIN square miles. Water stage recorder STEVENS "F" WEEKLY

Max. Discharge 28 Sec. ft. at 1900 HRS on JUNE 15, 1979 G. H. 1.09 ft.

Max. G. H. 1.09 ft. at 1900 HRS on JUNE 15 Min. Daily Discharge 0 sec.-ft. on MANY DAYS

S - DISCHARGE SUB DIVIDED

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		0		0		0
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28										0		
29									XX	XXX		
30				0					XX	XXX		
31		0	XX	XXX		0		0	XX	XXX		0
73.63 Total		0		0		0		0		0		0
0.20 Mean												
146 Run-off in acre-feet												
3.3 Maximum												
0 Minimum												

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Rating Table Used STANDARD 6 FT. PARSHALL FLUME
OCT. 1, 1978 - SEPT 30, 1979

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	0	.40	5.6	.70	14		0		0
2					.41	5.8	.63	12				
3					.48	7.4	.58	10				
4					.52	8.5	.54	9.0				
5					.58	10	.49	7.7				
6					.69	13	.48	7.4				
7					.69	13	.46	7.0				
8					.57	9.8	.41	5.8				
9					.53	8.7	.37	4.9				
10					.54	9.0	.34	4.3				
11					.56	9.5	.32	3.9				
12					.62	11	.31	3.7				
13					.72	14	.29	3.3				
14					.82	18	.28	3.2				
15					S	21	.27	3.0				
16					.96	22	.26	2.8				
17					.94	22	.26	2.8				
18					.91	21	.25	2.6				
19					.80	17	.24	2.5				
20					.74	15	.23	2.3				
21			0	0	S	14	.25	2.6				
22			S	1.5	S	17	.24	2.5				
23			.26	2.9	.80	17	.22	2.1				
24			.30	3.5	.81	17	.22	2.1				
25			S	3.7	.78	16	.21	2.0				
26			.36	4.7	.78	16	S	.1				
27			.38	5.1	.78	16	0	0				
28			.44	6.5	.78	16	0	0				
29			.50	7.7	.74	15	0	0				
30		0	.49	7.7	.73	14	0	0				0
31	XX	XXX	.46	7.0	XX	XXX	0	0		0	XX	XXX
		0		50.4		419.3		124.11		0		0

NO FLOW

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

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

Water Year 1979

593.81

TWIN LAKES TUNNEL

River at Creek near E. PORTAL, ABOVE TWIN LAKES, COLO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area TRANS-MTN DIV. square miles. Water stage recorder STEVENS A-35 CONTINUOUS

Max. Discharge 622 Sec. ft. at 0600 HRS on JUNE 17, 1979 G. H. 5.04 ft.

Max. G. H. 5.04 ft. at 0600 on JUNE 17 Min. Daily Discharge .27 sec.-ft. on SEPT 29

a - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED

s - DISCHARGE SUBDIVIDED

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	7.6	.33	7.9	.19	3.3	.18	3.0	.18	3.0	.17	2.7
2	a	4.2	.31	7.2	.23	4.4	.18	3.0	.19	3.3	.17	2.7
3	.13	1.8	.36	9.1	.23	4.4	.16	2.5	.21	3.8	.17	2.7
4	.13	1.8	.33	7.9	.23	4.4	.16	2.5	.20	3.6	.17	2.7
5	.13	1.8	.32	7.6	.23	4.4	.17	2.7	.19	3.3	.17	2.7
6	s	4.0	.30	6.8	.23	4.4	.18	3.0	.19	3.3	.17	2.7
7	.72	28	.25	5.1	.24	4.8	.18	3.0	a	3.3	.17	2.7
8	.68	25	.23	4.4	a	3.0	.18	3.0	a	3.0	.16	2.5
9	s	7.5	.19	3.3	|	2.7	.18	3.0	.17	2.7	.15	2.2
10	.10	1.2	.19	3.3	|	2.5	.18	3.0	.17	2.7	.15	2.2
11	.10	1.2	.20	3.6	|	2.2	.18	3.0	.17	2.7	.15	2.2
12	.10	1.2	.22	4.2	a	2.2	.18	3.0	.17	2.7	.15	2.2
13	.10	1.2	.20	3.6	.20	3.6	.18	3.0	.17	2.7	.14	2.0
14	.11	1.4	.20	3.6	.19	3.3	.18	3.0	.17	2.7	.14	2.0
15	.11	1.4	.19	3.3	.18	3.0	.18	3.0	.17	2.7	.16	2.5
16	.11	1.4	.19	3.3	.18	3.0	.18	3.0	.17	2.7	.17	2.7
17	.11	1.4	.19	3.3	.18	3.0	.18	3.0	.17	2.7	a	2.7
18	.13	1.8	.20	3.6	.18	3.0	a	3.0	.17	2.7	|	2.7
19	.20	3.6	.19	3.3	.20	3.6	a	3.0	.16	2.5	|	3.0
20	.24	4.8	.19	3.3	.20	3.6	.18	3.0	.16	2.5	a	3.0
21	.26	5.4	.19	3.3	.19	3.3	.18	3.0	.16	2.5	.19	3.3
22	.30	6.8	.19	3.3	.19	3.3	.18	3.0	.16	2.5	.19	3.3
23	.28	6.1	.19	3.3	.19	3.3	.18	3.0	.16	2.5	.19	3.3
24	.30	6.8	.19	3.3	.19	3.3	.17	2.7	.16	2.5	.18	3.0
25	.32	7.6	.20	3.6	.20	3.6	.17	2.7	.16	2.5	.18	3.0
26	.28	6.1	.20	3.6	.20	3.6	.17	2.7	.16	2.5	.18	3.0
27	a	6.1	.19	3.3	.24	4.8	.18	3.0	.17	2.7	.18	3.0
28	a	6.4	.18	3.0	.20	3.6	.18	3.0	.17	2.7	.19	3.3
29	s	21	.18	3.0	.18	3.0	.18	3.0	XX	XXX	.20	3.6
30	.51	16	.19	3.3	.19	3.3	.18	3.0	XX	XXX	.21	3.8
31	.38	9.9	XX	XXX	.20	3.6	.18	3.0	XX	XXX	.22	4.2
Calendar Year 1978												
36259.60	Total	200.5		130.7		107.5		90.8		79.0		87.6
71.9	Mean	6.5		4.4		3.5		2.9		2.8		2.8
72090	Run-off in acre-feet	398		259		213		180		157		174
	Maximum	7.6		9.1		4.8		3.0		3.8		4.2
	Minimum	1.2		3.0		2.2		2.5		2.5		2.0

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ____________

Rating Table Used 12 FT. PARSHALL FLUME
OCT. 1, 1978 TO SEPT. 30, 1979

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.
.22	4.2	.28	6.1	S	254	a	1.2	1.44	84	.60	21	1
.21	3.8	.30	6.8	S	261		1.2	1.41	81	.60	21	2
.20	3.6	.31	7.2	S	326		1.2	S	66	S	32	3
.20	3.6	.31	7.2	S	406		1.2	.92	41	.91	40	4
.19	3.3	.33	7.9	S	522		1.2	.97	44	.85	36	5
.19	3.3	.34	8.4	[30] 4.79	573		1.2	.99	46	.78	31	6
.20	3.6	.35	8.7	4.89	592		1.2	1.08	53	S	17	7
.20	3.6	.36	9.1	4.78	571		1.2	1.11	55	.12	1.6	8
.20	3.6	.36	9.1	S	304		.82	1.11	55	.12	1.6	9
.21	3.8	.36	9.1	2.71	230		.82	S	55	.12	1.6	10
.22	4.2	.29	6.4	2.74	235		.82	1.05	51	.12	1.6	11
a	3.8	.22	4.2	S	306	a	18	.98	45	.11	1.4	12
	3.6	.22	4.2	S	453	S	44	.98	45	a	1.8	13
a	3.6	.22	4.2	4.79	573	2.71	230	[32] 1.03	49		1.8	14
.21	3.8	.28	6.1	4.89	592	2.87	253	1.28	69		1.8	15
.22	4.2	.43	12	4.97	608	2.78	240	1.34	75		1.6	16
.23	4.4	.54	17	5.01	616	S	159	1.20	63		1.4	17
.24	4.8	S	15	4.97	608	[31] S	230	1.33	74		1.2	18
.25	5.1	S	16	4.77	569	S	174	1.33	74		.99	19
.25	5.1	2.01	143	S	329	2.18	163	1.28	69		.82	20
.28	6.1	1.99	141	S	354	S	186	1.27	68		.82	21
.28	6.1	S	196	S	491	2.29	176	1.14	58		.66	22
.28	6.1	S	230	4.74	564	2.23	169	1.04	50		.66	23
.28	6.1	3.19	299	4.82	579	S	150	.97	44		.52	24
.29	6.4	S	356	4.90	594	1.91	132	.94	42		.52	25
.29	6.4	S	343	4.97	608	1.97	138	.93	42		.39	26
.28	6.1	S	470	5.01	616	1.91	132	.91	40	a	.39	27
.28	6.1	S	552	5.02	618	1.86	126	.82	34	.05	.39	28
.28	6.1	4.77	569	S	415	S	111	.62	22	.04	.27	29
.27	5.8	S	450	a	3.0	1.46	86	.42	12	.04	.27	30
XX	XXX	S	303	XX	XXX	1.46	86	.49	15	XX	XXX	31

APR.	MAY	JUNE	JULY	AUG.	SEPT.	Water Year 1979
140.3	4216.7	13770	3015.06	1621	222.1	23681.26
4.7	136	459	97.3	52.3	7.4	64.9
278	8360	27,310	5980	3220	441	46,970
6.4	569	618	253	84	40	618
3.3	4.2	3.0	1.2	12	.27	.27

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

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

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

Water Year 1979

COLUMBINE L. CH ~~River at~~ ~~Creek~~ near FRONT PASS, COLORADO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area TRANS-MTN DIV. square miles. / .Water stage recorder STEVENS "E" WEEKLY

Max. Discharge 54 Sec. ft. at 1900HRS on JUNE 15, 1979 G. H. 1.87 ft.

Max. G. H. 1.67 ft. at 1900HRS on JUNE 15 Min. Daily Discharge 0 sec.-ft. on MANY DAYS

S - DISCHARGE SUBDIVIDED

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

Calendar Year 1978

1004.21 Total

2.75 Mean

1990 Run-off in acre-feet

4.4 Maximum

0 Minimum

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		0	.41	(0) 5.8	S	(0) 21	.21	(.02) 1.7	.12	(.02) .61	1
				.45	6.7	S	19	.20	1.6	.12	.61	2
				S	11	.78	16	.19	1.4	.12	.61	3
				S	19	.74	15	.17	1.2	.12	.61	4
				S	25	.70	14	.17	1.2	.11	.52	5
				S	30	.70	14	.17	1.2	.11	.52	6
				S	25	.65	12	.17	1.2	.12	.61	7
				.71	14	.61	(0) 11	.18	(.02) 1.3	.12	.61	8
				.53	8.7	.57	(.01) 9.5	.18	1.3	.12	.61	9
				S	8.2	.53	8.5	.18	1.3	.12	.61	10
				.52	8.5	.50	(.01) 7.7	.17	1.2	.12	.61	11
				S	14	.47	(.02) 6.7	.17	1.2	.12	.61	12
				S	23	.46	6.5	.17	1.2	.12	.61	13
				S	32	.44	6.0	.22	1.8	.12	.61	14
				S	39	.43	5.8	.20	(.02) 1.6	.10	.43	15
	NO FLOW			S	38	.42	5.6	.19	1.4	.09	.35	16
				S	34	.39	4.9	.23	2.0	.08	.27	17
				S	29	.38	4.7	.22	1.8	.05	.09	18
				S	20	10 / .37	(.02) 4.5	.21	1.7	.05	.09	19
			0	S	18	.35	4.1	.19	1.4	.05	.09	20
		S	(0) .62	17 S	28	.34	3.9	.18	1.3	.07	.20	21
		.23	2.3	S	31	.32	3.5	.16	1.0	.07	.20	22
		.30	3.5	S	33	.30	3.2	.14	.82	.06	.14	23
		.36	4.7	S	31	.29	3.0	.14	.82	.05	.09	24
		S	6.0	S	29	.27	2.6	.14	.82	0	0	25
		S	8.3	S	29	.27	2.6	.13	.71	.03	.01	26
		.73	15	S	30	.28	2.8	.13	.71	.08	[illegible]	27
		.76	15	S	29	.27	2.6	.11	.52	.09	.25	28
		.77	16	S	[illegible]	.25	2.3	.06	.14	.07	.20	29
	0	.69	13	S	28	.24	2.1	.08	.27	.02	(.02) 0	30
XX	XXX	.48	(7) 7.4	XX	XXX	.22	(.02) 1.8	.12	(.02) 1.1	XX	XXX	31
	0		[illegible].82		[illegible]		226.9		36.42		11.14	1063.18
			3.0		23.2		7.3		1.2		.37	
			182		1380		450		72.2		22.1	
			16		34		21		2.0		.61	[illegible]
			0		5.3		1.8		.14		0	0

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

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

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

Water Year 1979

VVURTZ DITCH ~~River at~~ ~~Creek~~ near TENNESSEE PASS COLORADO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

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

Max. Discharge 84 sec. ft. at 2100 Hrs on JUNE 15, 1977 G. H. 2.28 ft.

Max. G. H. 2.28 ft. at 2100HRS on JUNE 15 Min. Daily Discharge 0 sec.-ft. on MANY DAYS

Q - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED

S - DISCHARGE ESTIMATED.

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		0		0		0
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28										0		
29									XX	XXX		
30				0					XX	XXX		
31		0	XX	XXX		0		0	XX	XXX		0
1935.52	Total	0		0		0		0		0		0
5.30	Mean											
3840	Run-off in acre-feet											
71	Maximum											
0	Minimum											

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used 6 FT PARSHALL FLUME

OCT 1, 1978 - SEPT. 30, 1979

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	.91	21	S	41	a	3.5	.08	.43
2					.98	23	1.27	35	.27	3.0	.08	.43
3					S	31	1.17	31	.27	3.0	.08	.43
4					S	36	1.10	28	.27	3.0	.07	.35
5					S	45	1.02	25	.25	2.6	.07	.35
6					[26] S	58	.97	23	.25	2.6	.07	.35
7					S	56	.93	21	.26	2.8	.06	.27
8					1.26	35	.88	20	.26	2.8	.06	.27
9					1.07	27	.83	18	.25	2.6	.06	.27
10					1.04	26	.77	16	.24	2.5	.06	.27
11					S	30	.72	14	.23	2.3	.06	.27
12					S	35	.67	13	.22	2.1	.07	.35
13					S	54	.68	13	.22	2.1	.07	.35
14					S	63	.66	12	.33	4.1	.07	.35
15					S	68	.63	12	.34	4.3	.06	.27
16					S	70	.61	11	.27	3.0	.05	.20
17		NO FLOW		0	S	62	.58	10	.25	2.6	.04	.14
18			S	2.3	S	57	.54	9.0	.24	2.5	.03	.09
19			.34	4.3	S	47	[28] .50	7.9	.26	2.8	.02	.05
20			.48	7.4	S	[illegible]	.48	7.4	.22	2.1	.02	.05
21			.57	9.8	[27] S	[illegible]	.49	7.7	.20	1.8	.06	.27
22			.62	11	S	45	.52	8.5	.18	1.6	.04	.14
23			S	15	S	50	.45	6.7	.15	1.2	.03	.09
24			.96	22	S	52	.44	6.5	.14	1.0	.03	.09
25			S	25	S	50	.40	5.6	.14	1.0	.03	.09
26			S	28	S	48	.38	5.1	.14	1.0	.03	.09
27			1.28	36	S	47	.37	4.9	.14	1.0	0	0
28			S	42	S	44	.35	4.5	.13	.93	0	0
29			S	47	S	43	.34	4.3	.13	.93	0	0
30		0	S	40	S	[illegible]	.33	4.1	.10	.61	0	0
31	XX	XXX	1.02	25	XX	XXX	a	3.5	.09	.52	XX	XXX
		0		2148		1347.0		428.7		67.89		6.31

Water Year 1979

2166.7

4300

BUSK-IVANHOE TUNNEL ~~Creek near~~ (INS MOUNTAIN DIVERSION

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

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

Max. Discharge 112 Sec. ft. at 1200 HRS on JUNE 25, 1979 G. H. 2.18 ft.

Max. G. H. 2.18 ft. at 1200 HRS on JUNE 25 Min. Daily Discharge 0 sec.-ft. on MANY DAYS

a - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED.

s - DISCHARGE SUBDIVIDED

Day.	OCT.		NOV.		DEC.		JAN.		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discha
1	.07	.45	.12	1.06		0		0		0		0
2	.07	.45	.12	1.06								
3	.07	.45	.11	.92								
4	.07	.45	.10	.79								
5	.07	.45	.10	.79								
6	.07	.45	.10	.79								
7	.07	.45	.09	.67								
8	.07	.45	.08	.55								
9	.07	.45	a	.67								
10	.07	.45	a	.79								
11	.07	.45	a	.79								
12	a	.45	.11	.92								
13		.45	.12	1.06								
14		.45	.12	1.06								
15		.45	.11	.92								
16		.45	.11	.92								
17	a	.45	.10	.79								
18	.07	.45	.10	.79								
19	.07	.45	.09	.67								
20	.07	.45	.09	.67								
21	.07	.45	.09	.67								
22	.07	.45	.09	.67								
23	.07	.45	.09	.67								
24	.07	.45	.09	.67								
25	.07	.45	a	.67								
26	.07	.45		.67								
27	.07	.45		.67								
28	.10	.79		.67						0		
29	.10	.79		.67					XX	XXX		
30	.10	.79	a	.67					XX	XXX		
31	.10	.79	XX	XXX		0		0	XX	XXX		0
Total		15.71		33.39		0		0		0		0
Mean		.49		.78								
Run-off in acre-feet		30.41		46.4								
Maximum		.79		1.06								
Minimum		.45		.55								

Calendar Year 1978

NO FLOW

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. ________
Rating Table Used 8 FT. PARSHALL FLUME
OCT 1, 1978 TO SEPT 30, 1979

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	S	.82	.84	24	1.64	[illegible]	.30	4.6	.11	.92	1
		.15	1.5	.76	21	1.61	[illegible]	.28	4.1	.11	.92	2
		.15	1.5	.91	28	1.53	[illegible]	.26	3.7	.10	.79	3
		.15	1.5	1.08	36	1.41	56	.24	3.2	.09	.67	4
		.16	1.7	1.22	44	1.32	50	.23	3.0	.09	.67	5
		.16	1.7	1.43	57	1.40	55	.22	2.8	.09	.67	6
		.15	1.5	1.57	66	1.42	56	.21	2.6	.08	.55	7
		.16	1.7	1.53	63	1.42	56	.21	2.6	.08	.55	8
		.16	1.7	S	49	1.38	54	.22	2.8	.08	.55	9
		.15	1.5	1.04	31	1.32	50	.22	2.8	.07	.45	10
		.15	1.5	.97	30	1.33	51	.20	2.4	.07	.45	11
		.15	1.5	1.06	35	1.28	48	.19	2.2	.07	.45	12
		.15	1.5	S	48	1.18	42	.19	2.2	.07	.45	13
		.15	1.5	1.55	65	1.08	36	.20	2.4	.07	.45	14
		.15	1.5	1.66	[illegible]	1.01	32	.28 .23	3.0	.06	.35	15
		.16	1.7	1.81	[illegible]	.94	29	.23	3.0	.06	.35	16
		.17	1.8	1.99	[illegible]	.88	26	.23	3.0	.07	.45	17
		.20	2.4	2.03	100	.82	23	.24	3.2	.06	.35	18
		.22	2.8	1.92	[illegible]	.27 .73	19	.26	3.7	.06	.35	19
		.25	3.4	.26 1.74	78	.68	17	.27	3.9	.07	.45	20
	NO FLOW	.28	4.1	1.64	[illegible]	.63	15	.28	4.1	.07	.45	21
		.32	5.1	1.68	[illegible]	.63	15	.26	3.7	.07	.45	22
		.35	5.9	1.77	80	.59	14	.22	2.8	.07	.45	23
		.42	7.9	1.96	[illegible]	.56	13	.19	2.2	.09	.67	24
		S	9.6	2.16	[illegible]	.52	11	.17	1.8	.09	.67	25
		.55	12	2.01	98	.47	9.5	.16	1.7	.10	.79	26
		.72	19	1.76	70	.45	8.9	.14	1.4	.10	.79	27
		S	27	1.69	[illegible]	.42	7.9	.13	1.2	.10	.79	28
		S	37	1.65	[illegible]	.39	7.0	.12	1.1	.09	.67	29
	0	1.08	36	1.63	[illegible]	.36	6.2	.12	1.1	.09	.67	30
XX	XXX	.98	31	XX	XXX	.33	5.4	.12	1.1	XX	XXX	31
	0	[illegible]		1940		1016.9		[illegible]		17.24		3325.55
		7.4		64.7		32.8		2.7				
		455		3850		2020		165				6596
		36		110		71		4.6				
		.82		21		5.4		1.1				

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

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

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

Water Year 1979

EWING DITCH ~~River at~~ ~~Creek near~~ TENNESSEE PASS, COLORADO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

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

Max. Discharge 20 Sec. ft. at 1900 hrs on JUNE 15 Min. Daily Discharge 0 sec.-ft. on MANY DAYS

Max. G. H. 1.37 ft. at 1200 hrs on JUNE 15 G. H. [illegible] on JUNE 15, 1979

5 - DISCHARGE SUBROUTED

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

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used 4 FT. PARSHALL FLUME

OCT. 1, 1979 - SEPT. 30, 1979

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	.67	8.5	.85	12	.31	2.0	.22	1.1
2					.70	9.1	.79	11	.30	1.9	.22	1.1
3					.74	10	.74	9.7	.30	1.9	.22	1.1
4					.79	11	.71	9.1	.30	1.9	.22	1.1
5					.86	13	.68	8.5	.29	1.8	.22	1.1
6					.98	16	.67	8.3	.29	1.8	.22	1.1
7					1.05	17	.66	8.1	.29	1.8	.22	1.1
8					1.01	16	.63	7.5	.28	1.7	.22	1.1
9					.93	14	.61	7.0	.29	1.8	.21	.98
10					.93	14	.59	6.6	.29	1.8	.21	.93
11					.94	14	.57	6.0	.27	1.6	.20	.89
12					.98	16	.54	5.5	.27	1.6	.20	.89
13					1.06	18	.53	5.4	.26	1.5	.19	.80
14					1.17	20	.51	5.0	.31	2.0	.19	.80
15					1.27	23	.50	4.7	.28	1.7	.19	.77
16					1.31	24	.49	4.5	.28	1.7	.20	.87
17				0	1.31	24	.47	4.2	.29	1.8	.20	.89
18			.5	1.1	1.28	24	.45	3.9	.31	2.0	.20	.89
19		NO FLOW	.28	2.2	1.23	22	.44	3.8	.31	2.0	.20	.87
20			.33	2.8	1.17	21	.44	3.8	.27	1.6	.21	.93
21			.38	3.5	1.12	19	.43	3.6	.26	1.5	.20	.87
22			.42	4.1	1.07	18	.42	3.5	.26	1.5	.19	.83
23			.5	5.2	1.06	18	.40	3.3	.25	1.4	.19	.80
24			.52	5.7	1.04	17	.40	3.3	.24	1.3	.19	.80
25			.5	6.2	1.02	17	.39	3.2	.24	1.3	.19	.80
26			.5	8.1	1.00	17	.37	3.0	.24	1.3	.19	.80
27			.70	9.1	.97	15	.37	3.0	.21	.98	.19	.80
28			.75	10	.94	14	.35	2.8	.5	.55	.18	.72
29			.5	11	.91	14	.35	2.8	0	0	.18	.72
30		0	.76	10	.88	13	.33	2.7	.5	.5	.18	.72
31	XX	XXX	.70	9.1	XX	XXX	.32	2.6	.22	1.1	XX	XXX
	0		2.1		492.1		166.3		47.77		27.33	
			2.84		16.5		5.36		1.54		.91	
			175		979		330		95		54	
			11		24		12		2.0		1.1	
			1.1		8.5		2.2		0		.22	

Quarter	Computed	Checked	Date
4th	JMS	SDT	12-29
3rd	JMS	SDT	12-5
2nd	JMS	SDT	
1st	JMS	SDT	12-

Quarter	Dis. appld.	Dis. check	Date
4th	JMS	SDT	12-29
3rd	JMS	SDT	12-5
2nd	JMS	SDT	
1st	JMS	SDT	12-

Quarter	G.H. copd.	G.H. check	Date
4th	JMS	SDT	12-29
3rd	JMS	SDT	12-4
2nd	JMS	SDT	
1st	JMS	SDT	12-

Water Year 1979

LARKSPUR DITCH ~~Creek~~ near MARSHALL PASS, COLORADO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

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

Max. Discharge 25 Sec. ft. at 1700 HRS on MAY 8, 1979 G. H. 1.37 ft.

Max. G. H. 1.37 ft. at 1700 HRS on MAY 8 Min. Daily Discharge 0 sec.-ft. on MANY DAYS

a - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED

s - DISCHARGE SUB DIVIDED

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		0		0		0
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28										0		
29									XX	XXX		
30				0					XX	XXX		
31		0	XX	XXX		0		0	XX	XXX		0
27.47	Total	0		0		0		0		0		0
0.08	Mean											
54	Run-off in acre-feet	0		0		0		0		0		0
25	Maximum											
0	Minimum											

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used 4 FT PARSHALL FLUME

OCT. 1, 1978 TO SEPT 30, 1979

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	.30	FOS 1.8	.25	FOS 1.3	.14	FOS .36	.13	FOS .30
2					.34	2.3	.24	1.2	.15	.42	.13	.30
3					.36	2.5	.24	1.2	.14	.36	.13	.30
4					.36	2.5	.23	1.1	.14	.36	.12	.24
5					.38	2.8	.20	.80	.14	.36	.12	.24
6					.42	3.3	.25	1.3	.14	.36	.11	.19
7					.40	3.1	.23	1.1	.15	.42	.11	.19
8					.38	2.8	.19	.72	.15	.42	.11	.19
9					S	6.1	.18	.64	.14	.36	.11	.19
10					S	4.6	.17	.56	.14	.36	.11	.19
11					.38	2.8	.17	.56	.14	.36	.12	.24
12					.39	2.9	.18	.64	.14	.36	.11	.19
13					.39	2.9	.18	.64	.15	.42	.11	.19
14					.39	2.9	.17	.56	.25	1.3	.12	.24
15					.38	2.8	.19	.72	.20	.80	.13	.30
16					.37	2.6	.19	.72	.18 (.19)	FOS .64	.12	.24
17					.35	2.4	.19	.72	.17	.56	.12	.24
18					.34	2.3	.22	.93	.17	.56	.12	.24
19					S	4.9	.19	.72	.18	.64	.12	.24
20					.34	2.3	.18 (.18)	FOS .49	.18	.64	a	.42
21					.32	2.0	.18	.64	.17	.56	.16	.49
22					.30	1.8	.17	.56	.15	.42	.14	.36
23					.29	1.7	.17	.56	.14	.36	.14	.36
24					.28	1.6	.16	FOS .49	.14	.36	.13	.30
25					.27	1.5	.16	.49	.14	.36	a	.30
26				0	.27	1.5	.14	.36	.14	.36	a	.36
27				0	.26	1.4	.15	.42	.14	.36	.14	.36
28			S	FOS 5.0	.25	1.3	.14	.36	.13	.30	.13	.30
29			S	5.9	.23	1.1	.15	.42	.13	.30	.13	.30
30		0	.33	2.2	.23	FOS 1.1	.14	.36	.13	.30	.13	.30
31	XX	XXX	S	FOS 2.4	XX	XXX	.15	FOS .42	.13	FOS .30	XX	XXX
		0		15.5		75.6		21.9		14.04		8.30
				.50		2.52		.71		.45		.28
				31		150		43		28		16
				5.9		6.1		1.3		1.3		.49
				2.2		1.1		.36		.30		.19

NO FLOW

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

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

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

Water Year 1979

HOME STAKE TUNNEL River at Creek near TRANS MOUNTAIN DIVERSION

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1979

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

Max. Discharge 310 Sec. ft. at 1350 Hrs on -30-77 G. H. 3.26 ft. on 30

Max. G. H. 3.26 ft. at 1350 on -30-77 Min. Daily Discharge 0 sec.-ft. on MANY Days

S - DISCHARGE SUBDIVIDED.

Q - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED

Calendar Year 1978

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		0	0	0	0	0
2											S	117
3											3.20	301
4											3.19	299
5											3.18	293
6											3.17	296
7											3.19	299
8											3.21	302
9											3.20	301
10											3.20	301
11											3.20	301
12											3.20	301
13											3.20	301
14											3.20	301
15											3.18	298
16											3.20	301
17											3.19	299
18											3.18	298
19											3.19	299
20											3.20	301
21											3.20	301
22											3.18	298
23											3.19	299
24											3.22	304
25											3.21	302
26									0	0	3.19	299
27									S	15	3.18	293
28									S	7.2	3.19	
29									XX	XXX	3.17	296
30				0					XX	XXX	3.20	301
31		0	XX	XXX		0		0	XX	XXX	3.20	301
0	Total	0		0		0		0	22.2		8812	
	Mean								.79		294	
	Run-off in acre-feet								44.0		17479	
	Maximum								15		310	
	Minimum								0		0	

NO FLOW

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 1

Rating Table Used 12 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	3.19	299		0		0		0		0		0
2	3.18	298										
3	3.17	296										
4	3.19	299										
5	3.20	301										
6	3.20	301										
7	3.20	301										
8	3.18	298										
9	3.18	298										
10	3.20	301										
11	3.20	301										
12	3.19	299										
13	3.18	298										
14	3.19	299										
15	3.16	295										
16	a	292		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW
17	a	290										
18	a	289										
19	a	287										
20	3.21	299										
21	3.23	305										
22	3.20	301										
23	S	133										
24	S	1.7										
25	0	0										
26		0										
27		0										
28		0										
29		0										
30		0				0						0
31	XX	XXX		0	XX	XXX		0		0	XX	XXX
	16907			0		0		0		0		0
	223											
	12071											
	305											
	0											

Quarter	4th	3rd	2nd	1st
Computed	JMS	JMS	JMS	JMS
Checked	SDJ	SDJ	SDJ	SDJ
Date	29	2	10	
Dis.appld.	JMS	JMS	JMS	JMS
Dis.check	SDJ	SDJ	SDJ	SDJ
Date	29	2	10	
G.H.copd.	JMS	JMS	JMS	JMS
G.H.check	SDJ	SDJ	SDJ	SDJ
Date	29	2	10	

Water Year 1979

15524.9

42.5

30794

305

0

LAKE FORK Creek ~~near~~ below SUGARLOAF

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

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

Max. Discharge 4.80 Sec. ft. at 1000 HRS on JUNE 18 G. H. 1.97 ft.

Max. G. H. 1.99 +06 ft. at 1000 HRS on JUNE 18 Min. Daily Discharge 4.0 sec.-ft. on MANY DAYS

"a" - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED

"S" - DISCHARGE SUBDIVIDED 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	.63	+01 25	a	11	.30	° 4.0	.93	° 62	S	+02 [illegible]	1.00	[illegible]
2	.63	25		11	.30	° 4.0	a	60	.86	[illegible]	1.00	[illegible]
3	.63	25		11	.30	° 4.0		60	.86	[illegible]	1.00	[illegible]
4	.63	25		11	S	V [illegible]		60	.86	[illegible]	1.00	[illegible]
5	.63	25		11	.78	+01 38	a	72	.86	[illegible]	S	[illegible]
6	.63	25		11	.84	+01 46	1.03	+02 84	.86	[illegible]	.31	[illegible]
7	.63	25		11	.80	+02 40	1.03	84	2911 .86	[illegible]	2811 .31	[illegible]
8	.63	25	a	11	.73	+02 31	1.03	84	.86	[illegible]	.28	[illegible]
9	.63	25	2731 a	+01 11	.73	31	1.03	84	.86	[illegible]	.28	10
10	a	25	.46	12	.73	31	1.03	84	.86	[illegible]	.28	10
11	a	25	.47	12	.73	31	2771 1.03	84	.86	[illegible]	.28	10
12	2711 a	+01 25	.47	12	.73	31	1.03	84	.86	[illegible]	S	[illegible]
13	.65	+01 26	.47	12	2781 .73	+02 31	1.03	84	.86	[illegible]	S	[illegible]
14	a	26	.48	13	.80	+01 41	1.03	84	.86	[illegible]	.85	[illegible]
15		26	.48	13	.84	46	1.03	84	.86	[illegible]	.85	[illegible]
16	a	70	.48	13	.84	46	1.01	80	S	69	S	70
17	1.16	° 106	.48	+01 13	.84	46	1.00	78	1.02	82	1.03	[illegible]
18	1.13	° 100	S	V [illegible]	.84	46	1.00	78	1.02	80	1.03	[illegible]
19	a	100	.97	+02 72	.84	46	1.00	78	1.02	[illegible]	1.03	[illegible]
20	1.11	° 95	.93	66	.84	46	1.00	78	1.01	[illegible]	1.12	[illegible]
21	1.11	95	.92	64	.84	46	1.00	78	1.00	[illegible]	1.12	[illegible]
22	1.11	° 95	.90	60	.84	46	1.00	78	2801 1.00	[illegible]	a	[illegible]
23	1.11	95	.85	52	.84	46	1.00	78	1.00	[illegible]	[illegible]	[illegible]
24	1.11	95	.85	52	.84	46	2781 1.00	+01 [illegible]	1.00	[illegible]	[illegible]	[illegible]
25	1.11	95	.85	52	.84	46	1.00	[illegible]	1.00	[illegible]	[illegible]	[illegible]
26	2721 a	95	.85	52	.87	-01 51	1.00	[illegible]	1.00	[illegible]	a	[illegible]
27		95	.85	52	.92	° 60	1.00	[illegible]	1.00	[illegible]	1.13	[illegible]
28		95	2741 .85	+01 52	2761 .92	60	1.00	[illegible]	1.00	[illegible]	2821 1.13	[illegible]
29		95	S	V [illegible]	.92	60	1.00	[illegible]	XX	XXX	1.13	[illegible]
30		95	.30	° 4.0	92	60	1.00	[illegible]	XX	XXX	1.13	[illegible]
31	a	50	XX	XXX	.93	° 62	.99	+02 [illegible]	XX	XXX	1.13	[illegible]
Total		1849	[illegible]	[illegible]		1242	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mean		59.6	[illegible]	[illegible]		40.1		77.5		45.6		[illegible]
Run-off in acre-feet		[illegible]	[illegible]	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]
Maximum		106	[illegible]	[illegible]		[illegible]		84		82		[illegible]
Minimum		25	[illegible]	[illegible]		[illegible]		60		54		[illegible]

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used NO.4 OCT 1, 1978 TO SEPT. 30, 197

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	1.14	+.02 108	1.95	+.06 400	S	V 187	1.49	+.06 212	.75	+.05 42	.44	+.05 13
2	1.13	106	1.95	400	1.30	+.04 150	1.58	243	2911 .75	+.05 42	.44	13
3	1.11	+.02 100	1.95	400	1.41	181	1.80	332	S	V 80	.44	13
4	1.14	111	1.94	395	1.47	199	2891 1.91	+.06 382	1.31	+.07 161	.44	13
5	1.17	+.04 117	1.94	395	1.55	226	1.91	382	1.31	161	.44	13
6	S	V 143	1.94	395	2871 S	+.04 [illegible]	1.87	364	1.48	212	.45	14
7	1.37	172	1.94	395	1.91	372	1.85	354	1.57	243	.45	14
8	1.37	[illegible]	1.94	395	S	205	1.85	354	1.55	236	.45	14
9	1.37	[illegible]	1.87	364	.87	+.04 59	1.85	354	1.55	[illegible]	.45	14
10	1.37	[illegible]	1.85	354	S	V 34	1.85	354	1.55	236	.45	14
11	2831 1.37	+.05 172	1.83	346	S	V 139	1.85	354	1.55	[illegible]	.45	14
12	1.43	190	1.83	346	1.52	+.06 222	1.82	341	1.55	236	.45	+.05 14
13	1.56	233	1.78	323	1.63	261	1.81	336	1.65	273	2941 S	V 37
14	1.62	254	2851 1.75	+.06 310	1.84	350	1.77	318	1.79	330	.87	+.03 57
15	1.62	254	1.77	318	1.91	380	1.73	301	2921 1.77	+.07 333	.87	57
16	1.61	251	1.77	318	1.94	395	1.67	277	1.73	325	.87	57
17	1.60	247	1.79	+.06 325	1.98	415	S	185	1.73	305	.87	57
18	1.63	258	1.86	+.05 354	1.90	377	.97	80	1.73	305	.87	57
19	1.64	261	1.92	+.04 377	1.70	284	2901 .97	+.06 80	1.73	[illegible]	S	46
20	1.64	261	1.95	+.04 390	2881 1.52	+.05 222	1.04	93	1.79	[illegible]	.85	54
21	1.64	261	1.92	+.03 372	1.38	178	1.08	102	1.84	354	.83	51
22	1.64	261	1.92	+.02 363	1.47	206	1.08	102	1.88	372	.75	40
23	S	V 160	1.96	386	1.64	265	1.02	+.06 89	1.90	380	.75	40
24	S	V 284	2861 1.96	+.02 386	S	280	.92	+.05 69	1.90	382	.77	42
25	1.93	+.03 [illegible]	1.96	386	S	134	.89	64	1.90	332	.82	50
26	2841 .93	+.05 [illegible]	1.88	350	S	299	.89	64	1.90	382	.84	52
27	.95	[illegible]	1.89	354	1.38	176	.89	64	1.90	[illegible]	2951 .88	+.03 57
28	1.94	[illegible]	1.95	+.02 382	1.44	196	.89	64	1.86	1.07 364	.91	64
29	.94	[illegible]	S	V 294	1.51	214	.89	64	S	V 209	.91	64
30	1.95	[illegible]	1.75	+.03 297	1.48	+.06 209	.87	60	2921 .58	+.05 24	.91	+.03 64
31	XX	XXX	1.62	+.03 247	XX	XXX	.78	+.05 46	.46	+.05 14	XX	XXX
	706	111 25		7376		6484		[illegible]		1111		[illegible]
	23.5	357		2.43		2.09		[illegible]		[illegible]		[illegible]
	[illegible]	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]
	[illegible]	[illegible]		415		377		[illegible]		[illegible]		[illegible]
	[illegible]	247		34		[illegible]		14		13		[illegible]

Quarter: 4th, 3rd, 2nd, 1st
Computed: JMS
Checked:
Date:
Dis.appld.: JMS, SDJ, 11
Dis.check: JMS, SDJ, 13 — 29
G.H.copd: JMS, SDJ, 11
G.H.check: JMS, SDJ, 13 — 29

Water Year 1979

LAKE Creek ~~near~~ ABOVE TWIN LAKES

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area 75 square miles. Water stage recorder A-35 CONTINUOUS

Max. Discharge ____ Sec. ft. at 2330 HRS on JUNE 15 1978 G. H. 4.95 ft.

Max. G. H. 4.95 +1.8 ft. at 2330 HRS on JUNE 15 Min. Daily Discharge 9.5 sec.-ft. on MANY DAYS

"a" - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED

"S" - DISCHARGE SUBDIVIDED "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	1.46	° 26	1.42	° 23	a	16	a	11	a	10	a	11
2	1.44	25	1.40	22		15		11		10		10
3	1.47	27	1.41	23		15		10		10		10
4	1.36	20	1.37	20		16		10		10		10
5	1.36	20	1.40	22		16		11		10		10
6	1.35	° 19	1.37	20		15		11		11		9.5
7	S	V 40	1.35	19		14		11	367	11	369	9.5
8	1.67	+.01 43	1.34	19		13		11		10		10
9	1.54	31	361 1.32	° 18		13		10		10		10
10	1.34	18	1.30	16		14		10		10		10
11	1.33	18	1.32	18		14	365	10		11		11
12	359 1.32	+.01 17	1.34	° 19		15		11		11		11
13	1.30	16	a	17	363	15		11		11		11
14	1.28	15		16		14		10		12		10
15	1.30	16		16		14		10		12		10
16	1.30	16		16		14		10		11		10
17	1.30	16		17		14		10		11		10
18	1.32	17		17		14		11		11		10
19	1.33	18		18		15		12		10		10
20	1.36	19		18		15		12		10		10
21	1.38	+.01 20		18		14		11		10		10
22	1.43	° 24		18		13		11	368	10		10
23	1.40	22		15		13		11		10		10
24	1.43	24		17		12	366	11		10		9.5
25	1.47	° 27		17		12		12		9		9.5
26	360 1.37	+.01 20		16		12		12		10		10
27	1.42	24		16		11		11		11		10
28	1.42	+.01 24	362 a	15	364	11		10	a	11	379	10
29	S	V 29		15		11		10	XX	XXX		11
30	1.57	° 32	a	16		11		10	XX	XXX		11
31	1.45	° 25	XX	XXX	a	11	a	10	XX	XXX	a	11
6,205.5	Total	710		540		422		332		294		315
209	Mean	22.9		18.0		13.6		10.7		10.5		10.2
12,300	Run-off in acre-feet	1410		1070		837		658		583		[illegible]
	Maximum	43		22		16		12		12		11
	Minimum	15		15		11		10		10		[illegible]

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07084500

Rating Table Used NO. 16 OCT 1, 1978 - SEPT 30, 1979

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.
a	12	a	36	3.19	+.06 550	3.24	+.19 684	2.34	+.30 242	a	76	1
	12		36	3.22	+.06 571	3.13	600	[378] 2.31	+.30 231		74	2
	11		38	S	V 694	3.03	529	2.21	+.32 204		72	3
	11		38	S	V 1012	[376] 2.95	+.19 479	2.06	+.34 164		70	4
	11		40	S	V 1535	2.91	+.21 467	2.05	161		68	5
	12		40	[374] S	V 1860	2.90	+.21 461	2.04	159		65	6
	12		42	4.55	+.13 2280	2.85	444	2.05	161		63	7
	13		42	4.18	+.13 1680	2.86	+.23 450	2.07	167		62	8
	13		44	S	V 781	2.80	+.24 422	2.05	161		60	9
	13		44	3.19	+.14 608	275	+.25 400	203	+.34 156		58	10
	12		46	3.23	+.14 638	2.75	+.25 400	1.99	+.35 148		55	11
	12		46	S	V 803	2.77	+.26 416	1.94	136		53	12
	11	a	48	S	V 1454	2.77	+.26 416	1.93	+.35 134	[381] a	50	13
	11	[373] a	48	4.46	+.18 2210	3.03	+.29 600	[379] 1.99	+.36 151	1.21	+.50 47	14
	12	1.69	+.03 49	4.61	2490	3.04	+.29 608	2.20	214	1.19	+.49 45	15
	12	1.87	71	4.67	+.18 2600	3.01	592	2.22	220	1.17	+.48 42	16
	13	2.04	96	S	V 2192	2.90	529	2.13	191	1.15	+.48 40	17
	13	2.20	+.03 123	4.17	+.19 1600	[377] 2.91	+.32 536	2.18	207	1.13	+.47 37	18
	15	S	V 153	3.97	1340	2.79	461	2.17	204	1.12	36	19
	17	2.82	+.04 332	S	820	2.79	461	2.14	194	1.13	+.47 37	20
	20	2.92	380	[375] S	+.17 867	2.82	479	2.12	183	1.17	+.46 40	21
	24	3.07	461	S	1300	2.81	473	2.00	154	1.13	+.44 34	22
	28	3.18	529	4.07	1600	276	444	1.93	+.36 136	1.11	+.43 32	23
	30	3.30	615	4.10	1650	2.69	400	1.88	+.35 123	1.10	31	24
	34	3.47	+.04 749	4.13	1690	2.64	375	1.84	115	1.09	30	25
[372]	36	S	V 864	4.14	1700	2.63	370	1.82	112	1.09	30	26
	34	S	V 1285	4.12	1650	2.61	360	1.79	+.35 107	[382] 1.12	31	27
	33	S	+.06 1712	4.14	1700	2.59	350	1.73	+.34 96	1.11	+.41 30	28
	34	4.27	1700	S	1469	2.52	318	1.65	+.34 84	1.08	+.42 28	29
a	36	S	1296	325	+.19 692	2.42	272	[380] a	82	1.06	+.40 27	30
XX	XXX	3.35	+.06 668	XX	XXX	2.37	+.30 253	a	80	XX	XXX	31

APR.	MAY	JUNE	JULY	AUG.	SEPT.	Water Year 1979
557	11671	42,071	14049	4882	1423	77266
19	376	1400	453	157	47.4	212
1100	23150	83450	27870	9680	2820	153300
36	172	2600	684	242	76	2600
11	36	550	253	80	27	9.5

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

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

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

LAKE Creek ~~near~~ below TWIN LAKES

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

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

Max. Discharge 1370 Sec. ft. at 2030 Hrs on June 29, 1977 G. H. 6.90 ft.

Max. G. H. 6.90 ft. at 2030 HRS on June 29 Min. Daily Discharge 2.5 sec.-ft. on SEVERAL DAYS

"a" - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED.

WINTER PERIODS, DISCHARGE FROM TWIN LAKES RESERVOIR DAILY REPORT.

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	1.22	+01 132	.52	FOR 30	.38	FOR 18	a	10	a	5.0	a	5.0
2	1.20	128	.52	30	.38	18		10		5.0		5.0
3	1.19	127	.52	30	.38	18		10		5.0		5.0
4	1.19	127	.52	30	.38	18		10		5.0		5.0
5	1.19	127	.52	30	.38	18		4.5		5.0		5.0
6	1.18	125	.52	30	.39	18		2.5		5.0		5.0
7	1.18	125	.52	30	.41	FOR 19		2.5		5.0		5.0
8	1.18	125	.52	30	a	20		2.5		5.0		5.0
9	1.18	125	38 .52	FOR 30	a	20		2.5		5.0		5.0
10	1.17	123	.52	30	39 a	20		2.5		5.0		5.0
11	1.17	123	.52	30		20	40	5.0		5.0		5.0
12	1.16	122	.52	30		20		5.0		5.0		5.0
13	1.15	120	.52	30		20		5.0		5.0		5.0
14	1.13	117	.52	30		20		5.0		5.0		5.0
15	1.13	117	.52	30		20		5.0		5.0		5.0
16	1.12	115	.52	30		13		5.0		5.0		5.0
17	1.12	+01 115	.48	26		10		5.0		5.0		10
18	.31	FOR 12	.40	19		10		5.0		5.0		10
19	.29	11	.40	19		10		5.0		5.0		10
20	.28	10	.40	18		10		5.0		5.0		10
21	.28	FOR 10	.40	18		10		5.0		5.0		10
22	a	10	.40	18		10		5.0		5.0		10
23		10	.39	18		10		5.0		5.0		10
24		10	.39	18		10		5.0		5.0		10
25		10	.38	18		10		5.0		5.0		10
26	a	10	.38	18		10		5.0		5.0		10
27	.29	FOR 11	.38	18		10		5.0		5.0		10
28	.29	11	.38	18		10		5.0	a	5.0		10
29	.32	13	.38	18		10		5.0	XX	XXX		10
30	.39	18	.38	FOR 18		10		5.0	XX	XXX		10
31	.48	FOR 26	XX	XXX	a	10	a	5.0	XX	XXX	a	10
9454	Total	2265		745		450		162		140		221.6
183	Mean	73.1		24.8		14.5		5.22		5.00		7.47
132400	Run-off in acre-feet	4490		1480		893		321		278		457
1370	Maximum	132		30		20		10		5.0		10
4.1	Minimum	10		18		10		2.5		5.0		5.0

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. [illegible]

Rating Table Used 25 FT. PARSHALL FLUME
OCT. 1, 1978 TO SEPT. 30, 1979

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.
a	10	a	12	3.81	-16 752	6.70	-1.50 1320	1.24	0 134	1.07	0 106	1
	10		14	3.80	-16 748	6.63	-1.46 1310	1.27	139	1.07	106	2
	10		15	3.79	-16 745	S	V 1170	S	172	1.07	106	3
	10		15	3.80	-16 748	5.30	-.80 1050	1.54	189	1.07	106	4
	7.1		15	3.83	-17 755	S	V 903	1.54	189	S	152	5
	5.6		15	3.90	-20 768	S	V 731	1.53	187	1.53	187	6
	5.6		15	3.99	-21 785	3.53	-11 668	1.53	187	1.53	187	7
	5.6	a	15	S	V 596	3.52	11 665	1.54	189	1.53	187	8
	5.6		50	.72	0 56	S	V 625	1.54	189	1.53	187	9
	5.6		76	S	V 234	3.26	12 591	1.54	189	1.53	187	10
a	6.1		95	4.10	-28 808	3.25	588	1.54	189	1.53	187	11
.41	0 23		67	4.11	-28 812	3.23	582	1.54	189	1.52	185	12
.44	26	a	67	4.14	-30 815	3.23	582	1.54	189	S	167	13
.43	24	41 a	0 64	S	V 698	3.22	[illegible]	44 1.63	0 207	1.26	137	14
.42	24	.78	64	.68	0 51	3.22	[illegible]	1.68	217	1.26	137	15
.42	24	.78	64	.78	0 64	3.23	582	1.68	217	1.25	135	16
.42	24	.78	64	S	V 190	3.23	582	1.69	219	S	133	17
.42	24	.78	64	4.81	-56 959	43 a	-12 582	1.69	219	1.22	130	18
.42	24	.78	64	a	960	3.23	582	1.69	219	1.21	128	19
.42	24	.78	64	42 a	960	3.22	[illegible]	1.69	0 219	S	69	20
.42	24	S	97	S	991	3.22	579	S	V 340	.60	42	21
.42	24	S	158	S	1140	3.22	579	3.41	-14 630	.60	42	22
.48	0 [illegible]	1.50	181	S	1194	3.21	[illegible]	3.39	12 624	.60	42	23
a	30	1.51	183	S	1132	3.20	[illegible]	3.25	-12 588	S	81	24
	12	S	250	S	956	3.18	-12 [illegible]	S	V 226	1.17	122	25
	12	2.01	289	S	1120	S	492	1.26	0 137	1.17	122	26
	12	S	384	S	1310	2.48	0 405	1.26	137	1.17	122	27
	12	2.62	0 442	6.78	-1.54 1340	2.48	405	1.26	137	1.17	122	28
	12	S	V 646	6.82	-1.56 1350	2.48	405	1.26	137	1.17	122	29
a	12	3.79	-16 745	6.79	-1.54 1340	S	344	1.26	137	1.17	0 120	30
XX	XXX	3.82	-17 752	XX	XXX	S	289	1.14	0 117	XX	XXX	31

APR.	MAY	JUNE	JULY	AUG.	SEPT.	Water Year 1979
477.2	5046	24367	20069	7058	3858	[illegible]
15.9	163	812	647	228	129	17[illegible]
[illegible]	10000	48300	39800	[illegible]	7650	[illegible]
26	12	1350	1320	630	13[illegible]	1350
5.6	752	56	289	117	42	2.5

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

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

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

ARKANSAS River at ~~Creek near~~ GRANITE, COLO.

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1979

Drainage area 427 square miles. Water stage recorder A-35- CONTINUOUS

Max. Discharge 2710 Sec. ft. at 1000 Hrs on JUNE 15, 1979 G. H. 5.17 ft.

Max. G. H. 5.17 -.18 ft. at 1000 Hrs on JUNE 15 Min. Daily Discharge 75 sec.-ft. on MAR. 7

a - NO GAGE HEIGHT RECORD, DISCHARGE ESTIMATED b - ICE EFFECT

S - DISCHARGE SUBDIVIDED 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	2.58	[06] 226	2.26	[07] 136	2.13	[b] 123	a	140	a	120	3.93	[b] 160
2	2.58	226	2.23	129	2.18	[b] 134		138		120	3.80	154
3	2.58	226	2.23	129	a	132		136		122	3.80	154
4	2.58	226	2.23	129		130	a	140		124	3.90	[b] 160
5	2.58	226	2.23	129		128	3.77	[b] 152		124	a	115
6	2.57	223	2.22	127		133	a	152		122	a	80
7	2.57	223	2.20	123		124		150	[809] a	122	[811] a	75
8	2.57	223	2.21	125		120		150		120	2.47	[b] 80
9	2.57	223	[803] 2.20	[07] 123		120	a	154		120	2.51	[b] 90
10	2.57	223	2.20	123		120	3.96	[b] 164		122	a	130
11	2.56	220	2.21	125		122	[807] 3.99	[b] 165		125	2.95	[b] 150
12	[801] 2.55	[06] 217	2.25	134	a	124	4.03	[b] 168		1.28	2.95	150
13	2.54	214	2.24	131	[805] a	126	3.93	[b] 162		132	3.30	160
14	2.53	211	2.24	131	3.04	[b] 126	a	162		135	3.90	170
15	2.53	211	2.23	[07] 129	3.07	126	3.95	[b] 163		140	3.60	165
16	2.50	202	a	130	3.08	127	3.87	[b] 158		145	3.10	170
17	2.48	196		132	3.13	128	a	154		145	2.58	[b] 170
18	2.47	193		133	3.16	129	3.77	[b] 152		146	2.37	[06] 165
19	2.47	193		134	3.17	129	a	158	a	144	2.35	160
20	2.44	184		134	3.10	127		160	3.60	[b] 144	2.39	170
21	2.46	[06] 190		133	3.17	129		158	3.52	141	2.43	165
22	2.50	[07] 199		132	3.23	131		156	[810] 3.60	[b] 144	2.36	160
23	2.49	196		132	3.25	132	a	154	a	145	2.35	160
24	2.51	202		130	3.24	131	[808] a	152	3.68	[b] 147	2.35	160
25	2.53	208		130	3.25	132	3.73	[b] 150	a	147	2.34	157
26	[802] 2.48	[07] 193		130	3.10	[b] 127	a	145	3.69	[b] 148	2.36	160
27	2.49	196	a	130	a	130		140	3.77	152	2.38	165
28	2.48	193	[804] a	146	[806] a	130		135	3.95	[b] 163	[812] 2.40	170
29	2.47	190	2.31	[b] 138	3.48	137		130	XX	XXX	2.39	165
30	2.48	193	2.14	[b] 125	3.43	[b] 137		132	XX	XXX	2.39	165
31	S	[07] 196	XX	XXX	a	140	a	125	XX	XXX	2.39	165
Total		6744		3912		3981		4653		3787		4422
Mean		208.		130.		128.		150.		135.		150.
Run-off in acre-feet		12,780		7,760		7,900		9,230		7,510		8,770
Maximum		223		146		140		168		163		170
Minimum		184		123		120		125		120		75

Calendar Year 1978

172,000 473 340,500 223 1.5

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07086000

Rating Table Used #9

OCT 1, 1978 TO SEPT. 30, 1979

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	2.38	-06 168	3.17	-04 531	4.34	-17 1530	5.02	-23 2380	2.96	-06 390	2.64	-05 247
2	2.38	168	3.20	552	4.23	-18 1420	4.97	-23 2300	[821] 2.95	-06 385	2.62	241
3	2.36	162	3.18	538	4.28	-19 1480	4.92	-24 2210	3.03	-06 432	2.62	-05 241
4	2.37	-06 165	3.19	545	4.37	-17 1580	[819] 4.83	-25 2060	3.23	-08 545	2.58	-04 232
5	2.42	-06 179	3.19	545	4.48	-17 1710	4.70	-24 1880	3.22	-08 538	S	V 282
6	2.47	-04 197	3.19	545	4.68	1975	4.55	-21 1720	3.26	-08 566	2.79	O 335
7	2.61	-03 244	3.22	566	[817] 4.99	-14 2230	4.48	-21 1630	3.33	-09 612	2.78	330
8	2.63	-02 259	3.28	612	S	2390	4.41	-20 1550	3.33	612	2.77	325
9	2.63	-02 254	3.31	636	S	1000	4.33	-18 1480	3.34	620	2.77	325
10	2.62	-03 250	3.27	604	3.65	-17 822	4.28	-17 1430	3.33	612	2.77	325
11	[13] 2.59	-02 241	3.24	580	S	V 1280	4.27	-17 1420	3.32	604	2.77	325
12	2.62	-02 250	3.25	583	4.62	-18 1860	4.25	-17 1400	3.30	588	2.76	O 320
13	2.72	-02 286	3.23	573	4.76	2060	4.22	-16 1380	3.33	-09 618	[824] 2.71	+.01 300
14	2.82	325	[815] 3.20	-04 552	5.01	-18 2450	4.21	-16 1360	[822] 3.51	-12 741	2.71	300
15	2.86	355	3.22	566	S	V 2080	4.18	1330	3.58	804	2.72	305
16	2.88	365	3.26	596	4.51	-19 1700	4.17	-16 1320	3.53	759	2.72	325
17	2.92	385	3.32	644	4.48	1660	4.08	-15 1240	3.52	750	2.68	286
18	2.98	420	3.42	732	S	2140	[820] 3.93	-13 1110	3.53	759	2.68	+.01 [illegible]
19	2.98	420	3.57	867	4.97	2370	3.88	-12 1070	3.52	750	S	V 236
20	2.96	409	3.73	1010	4.77	2000	3.87	-12 1060	3.52	-12 750	2.43	D 199
21	2.96	409	3.72	1000	[818] 4.73	2000	3.89	-12 1080	S	923	2.56	238
22	2.97	414	3.75	1030	4.87	-20 2200	3.91	-12 1100	4.00	1190	2.47	O 211
23	2.87	-02 360	3.83	1100	5.00	-21 2380	3.86	-12 1060	3.99	1180	S	V 232
24	S	V 357	[816] 3.93	-04 1080	5.03	-21 2450	3.80	-12 1000	3.98	-12 1170	2.65	-05 250
25	3.16	-04 524	4.08	1180	4.76	-22 2000	3.78	-12 984	S	V 972	2.65	250
26	[14] 3.14	-04 510	4.13	[illegible]	4.98	-23 2320	S	V 873	3.40	-09 669	2.67	258
27	3.17	521	4.30	[illegible]	4.98	2320	3.53	-10 777	3.38	652	[825] 2.68	262
28	3.17	521	4.48	[illegible]	5.01	2370	3.51	-10 759	3.36	-09 634	2.69	266
29	3.15	517	4.58	[illegible]	5.03	2400	3.48	-10 732	S	V 528	2.70	270
30	3.16	-04 524	4.72	[illegible]	5.02	-22 2380	3.37	-09 644	[823] 2.80	-07 305	2.69	-05 266
31	XX	XXX	4.53		XX	XXX	S	V 619	2.72	-06 274	XX	XXX
	[illegible]4		702		58,832		40,958		20,928		9248	
	339		926		1961		1321		675		275	
	20,200		56,930		116,700		81,240		41,510		16,360	
	521		7120		2450		2380		1190		335	
	162		531		831		619		274		211	

4th	JMS	SDJ	29	
3rd	JMS	SDJ		
2nd	JMS	SDJ	5	
1st	JMS	SDJ	11	
Quarter	Computed	Checked	Date	
4th	JMS	SDJ	29	
3rd	JMS	SDJ		
2nd	JMS	SDJ	5	
1st	JMS	SDJ	11	
Quarter	Dis.appld.	Dis.check	Date	
4th	JMS	SDJ	29	
3rd	JMS	SDJ		
2nd	JMS	SDJ	2	
1st	JMS	SDJ	11	
Quarter	G.H.copd.	G.H.check	Date	

Water Year 1979

River or Creek [redacted] CLEAR Creek ~~near~~ above CLEAR CREEK RESERVOIR

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area 67.1 square miles. Water stage recorder A-35 CONTINUOUS

Max. Discharge [redacted] Sec. ft. at [redacted] on [redacted] Min. Daily Discharge 7.5 sec.-ft. on MANY DAYS

Max. G. H. 2.82 ft. at 24 HOURS on JUNE 14 G. H. 2.82 ft. on JUNE 14, 1977

"a" - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED.

"s" - DISCHARGE SUBDIVIDED. 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	.79	16	.77	15	a	13	a	9.0	a	8.5	a	9.0
2	.79	16	.76	14		13		9.0		8.5		8.5
3	.79	16	.76	14		14		8.5		8.5		8.5
4	.79	16	.74	13		14		8.5		8.5		8.5
5	.79	16	.75	14		15		9.0		8.5		[illegible]
6	.79	16	.74	13		15		9.0		9.0		7.5
7	.79	16	.73	13		14		9.0	524	9.0	526	7.5
8	.79	16	.73	13		12		9.0		9.0		8.0
9	.78	17	518 .73	13		12		8.5		9.0		8.0
10	.78	17	.73	13		13		8.5		9.0		8.0
11	.78	17	.74	14		14	522	8.5		9.0		8.5
12	516 .78	17	.77	17		15		9.0		9.5		9.0
13	.78	17	.74	14	520	15		9.0		10		9.0
14	.78	17	a	13		15		8.5		10		8.5
15	.77	16		12		15		8.0		9.5		8.0
16	.77	16		12		15		8.0		9.0		8.0
17	.77	16		13		14		8.5		9.0		8.0
18	.77	16		13		14		9.0		9.0		8.0
19	.77	16		14		15		10		8.5		8.0
20	.76	15		14		15		11		8.5		8.0
21	.76	15		14		14		11		8.5		8.5
22	.79	17		14		13		10	525	8.5		8.5
23	.78	16		14		12		10		8.5		8.0
24	.79	17		13		11	523	11		8.5		7.5
25	.80	18		13		11		12		8.5		7.5
26	517 .78	16		14		11		12		8.5		8.0
27	.77	15	a	15		10		10		9.0		8.5
28	.77	15	519 a	15	521	10		10	a	9.0	527	9.0
29	.76	14		14		10		9.0	XX	XXX		9.0
30	.76	14	a	14		9.5		9.0	XX	XXX		9.0
31	.77	15	XX	XXX	a	9.0	a	9.0	XX	XXX	a	9.0
Calendar Year 1978												
2611.5	Total	[illegible]		411		402.5		290.5		248.5		255.5
53.7	Mean		16.0	13.7		13.0		9.4		8.7		8.2
38900	Run-off in acre-feet		99%	815		798		576		493		507
	Maximum		18	17		15		12		10		9.0
	Minimum		14	12		9.0		8.0		8.5		7.5

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07086500
Rating Table Used #11
OCT 1, 1978 TO SEPT. 30, 1979

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
a	9.0	a	22	1.82	296	2.18	457	.89	98	.58	46	1
	10.0		22	1.78	284	2.06	414	.86	95	.57	45	2
	10.		24	1.92	327	1.93	372	.83	87	.56	44	3
	9.0		24	S	390	1.83	344	.82	86	.54	41	4
	9.0		25	S	475	1.78	327	.78	77	.52	37	5
	9.0		25	S	562	1.74	317	.77	75	.51	36	6
	10		26	S	571	1.70	302	.77	75	.51	36	7
	10	a	26	2.13	429	1.69	299	.76	74	.51	36	8
	10	.88	31	1.87	338	1.64	282	.76	74	.50	35	9
	10	.86	29	1.75	299	1.60	268	.77	75	.49	33	10
	9.0	.84	26	1.76	302	1.58	262	.73	67	.49	33	11
	9.0	.84	26	1.88	341	1.56	256	.72	65	.49	33	12
	9.0	.84	26	2.15	437	1.54	251	.71	64	.48	32	13
	10	.87	30	S	535	1.51	240	.77	72	.47	31	14
	10	.95	41	2.50	577	1.50	237	.98	111	.47	31	15
	10	1.04	56	2.51	581	1.46	221	.97	110	.45	29	16
	10	1.15	75	2.40	533	1.37	198	.87	91	.43	27	17
	11	1.27	102	2.25	469	1.31	182	.83	84	.43	27	18
	11	1.39	127	2.03	376	1.23	162	.82	82	.42	26	19
	12	1.52	159	1.83	302	1.19	154	.83	84	.44	29	20
	13	1.62	186	1.86	311	1.18	152	.83	84	.46	31	21
	13	1.68	206	2.04	380	1.25	167	.79	77	.43	29	22
	14	1.81	248	2.13	418	1.19	154	.74	70	.42	27	23
	14	1.93	293	2.21	457	1.13	143	.72	67	.41	26	24
	15	1.95	309	2.26	481	1.12	141	.69	62	.40	25	25
	16	S	350	2.20	457	1.08	133	.67	59	.40	25	26
	16	S	452	2.19	457	1.05	127	.66	56	.41	[illegible]	27
	17	S	512	2.18	[illegible]	1.05	127	.63	[illegible]	.40	[illegible]	28
	18	2.30	465	2.12	429	1.01	121	.61	50	.39	[illegible]	29
a	20	2.20	425	2.12	429	.96	111	.61	50	.38	[illegible]	30
XX	XXX	1.97	394	XX	XXX	.91	102	.61	50	XX	XXX	31

APR.	MAY	JUNE	JULY	AUG.	SEPT.	Water Year 1979
353	4699	12,688	7023	2326	954	30,131
11.8	152	423	227	75.0	31.8	82.6
[illegible]	9320	25,170	13,930	4610	1890	59760
20	498	581	457	111	46	581
9.0	22	284	102	50	25	7.5

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

Quarter	Dis. appld.	Dis. check	Date
4th	JMS	SDJ	10—18—79
3rd	JMS	SDJ	
2nd	JMS	SDJ	
1st	JMS	SDJ	

Quarter	G.H. copd.	G.H. check	Date
4th	JMS	SDJ	10—18—79
3rd	JMS	SDJ	
2nd	JMS	SDJ	
1st	JMS	SDJ	

CLEAR CREEK Creek near below CLEAR CREEK RESERVOIR

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area _____ square miles. Water stage recorder STEVENS "E" RECORDER.

Max. G. H. 3.58 ft. at 1000HRS on JUNE 29 Min. Daily Discharge 0 sec.-ft. on MANY DAYS

a - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED.

S - DISCHARGE SUBDIVIDED.

Calendar Year 1978

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	1.41	+.03 20	1.31	+.01 13	a	13	a	9.0	a	0	a	0
2	1.41	20	1.30	+.01 12		13		9.0				0
3	1.42	21	a	12		14		0				0
4	1.44	23		12		14		0				0
5	1.47	25		12		15		0				0
6	1.48	26		12		15		0				0
7	1.49	27		12		14		0				0
8	1.51	29	a	12		12		0				0
9	1.52	30	7.21 a	12		12		0				0
10	1.53	30	1.31	+.02 12		13		0				0
11	1.41	20	1.26	9.0		14		0				0
12	1.34	16	1.27	9.5		15		0				0
13	1.31	14	1.28	10		16		0				0
14	1.35	16	1.28	10		14		0				0
15	1.41	20	1.28	+.02 10		15		0				25
16	1.41	20	a	11		15		0				25
17	1.43	22		12		14		0				25
18	1.47	25		13		14		0				25
19	1.55	+.03 32		14		15		0				25
20	S	V 28		14		16		0				25
21	1.35	+.01 15		14		14		0				25
22	1.34	14		14		13		0				25
23	1.37	16		14		12		0				25
24	1.36	16		13		11		0				25
25	1.40	18		13		11		0				25
26	1.32	14		14		11		0				25
27	1.32	14		15		10		0				25
28	1.31	13		15		10		0	a	0		25
29	1.31	13		14		10		0	XX	XXX		25
30	1.31	13	a	14		9.5		0	XX	XXX		25
31	1.31	+.01 13	XX	XXX	a	9.0	a	0	XX	XXX	a	25
12715.4	Total	623		373.5		403.5		18		0		425
61.1	Mean	20.1		12.4		13.0		0.58		0		13.7
4,260	Run-off in acre-feet	1240		741		800		36				843
349	Maximum	32		15		16		9.0				25
2.4	Minimum	13		9.0		9.0		0				0

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used NO.1 OCT 1, 1978 - SEPT. 30 1979

APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.				
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		4th			
a	25	a	0	3.49	° 351	3.55	° 364	2.52	° 165	S	° 194	1	3rd			6
	25		0	3.47	347	3.55	364	a	165	1.50	.25	2	2nd	JMS		
	18		0	3.44	341	3.52	357	2.52	° 165	S	° 21	3	1st		SDJ	12
	6.2		0	3.43	339	3.53	359	2.52	165	a	.90	4	Quarter	Computed	Checked	Date
	0		0	3.44	341	3.53	359	2.49	159		.80	5				
	0		0	3.48	349	3.52	357	2.50	° 161		.90	6				
	0		0	3.50	353	3.51	355	a	161		.90	7				
	0		0	S	282	3.50	353	a	120		.90	8				
	0		0	1.13	4.2	3.49	351	a	52		.90	9	4th		SDJ	29
	0		4.5	1.13	4.2	3.48	349	1.50	+.07 31		.90	10				
	0		18	S	94.1	3.47	347	1.50	31		.90	11	3rd			6
	0		18	S	150	3.46	345	1.50	+.07 31		.90	12		JMS		
	0	a	18	2.34	133	S	260	a	31		.90	13	2nd			
	0	7.31 a	18	S	217	2.52	165	75	31		.90	14				
	0	1.38	+.07 18	2.89	233	2.52	165		31		.90	15	1st		SDJ	12
	0	1.38	18	S	296	2.52	165	a	31		.90	16				
	0	1.38	18	3.44	341	2.52	165	1.50	+.07 31		.90	17	Quarter	Dis.appld.	Dis.check	Date
	0	1.38	18	3.45	343	2.52	165	1.50	31		.90	18				
	0	1.38	18	3.45	343	7.41 2.52	° 165	1.50	+.07 31		100	19				
	0	1.38	+.07 18	3.45	343	2.41	145	a	91	a	250	20	4th		SDJ	29
	0	a	18	S	° 243	2.35	134		248	3.01	° 256	21		JMS		
	0		95	a	.60	2.34	133		246	2.97	248	22	3rd			6
	0		327	1.42	° 19	2.34	133	a	243	2.74	205	23				
	0	a	327	S	103	2.48	° 157	2.82	° 228	2.74	205	24	2nd			
	0	3.37	° 327	S	272	a	172	S	° 117	S	46	25				
	0	3.38	329	S	162	a	170	1.26	10	1.02	.60	26	1st		SDJ	12
	0	3.42	337	3.35	323	2.54	° 168	a	155	1.03	.90	27				
	0	3.45	343	3.42	337	2.54	168		305	1.02	.60	28	Quarter	G.H.copd.	G.H.check	Date
	0	3.48	349	3.57	368	2.53	166		305	1.01	.30	29				
a	0	3.49	351	3.57	° 368	2.53	166	a	305	1.01	° .30	30		Water Year		
XX	XXX	3.50	° 353	XX	XXX	2.52	° 165	3.26	° 305	XX	XXX	31		1979		
74.2		3340.5		7406.1		7397		4173		1566.2		25,990				
2.47		108		247		238		135		52.2		70.7				
147		6630		14,690		14,650		8280		3110		51,150				
35		353		368		364		305		256		368				
0		0		.60		133		10		.30		0				

CHALK River at / Creek near NATHROP, COLORADO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1979

Drainage area ______ square miles. Water stage recorder A-35 CONTINUOUS

Max. Discharge ______ Sec. ft. at 0200 HRS on JUNE 15, 1979 G. H. 4.87 ft.

Max. G. H. 4.89 (7.05) ft. at 0200 HRS on JUNE 15 Min. Daily Discharge ______ sec.-ft. on ______

"a" - NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED "b" - ICE EFFECT

"S" - DISCHARGE SUBDIVIDED "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	2.18	5.3	2.22	5.6	2.46	14	a	16	a	15	2.52	17
2	2.18	5.3	2.26	6.2	2.47	14		16		15	2.53	[illegible]
3	2.17	5.0	2.27	6.5	2.54	19		16		15	2.52	17
4	2.09	3.2	2.27	6.5	2.55	19		16		15	2.52	17
5	2.09	3.2	2.37	10	2.49	16		16		15	2.54	[illegible]
6	2.10	3.4	2.44	12	2.61	23		15		15	2.54	18
7	2.11	3.5	2.43	12	2.67	27		15	a	15	2.54	16
8	2.10	3.4	2.45	13	2.63	25		15	2.52	17	2.55	19
9	2.09	3.2	2.46	14	2.53	20		15	2.49	[illegible]	2.55	19
10	2.10	3.4	2.46	14	2.53	20		16	2.48	15	2.54	19
11	2.13	4.1	2.47	14	2.50	17	a	16	2.47	15	2.54	19
12	2.12	3.8	2.48	14	2.49	17	2.37	16	2.48	15	2.55	[illegible]
13	2.13	4.1	2.47	14	2.49	17	2.35	15	2.48	15	2.53	17
14	2.13	4.1	2.47	14	2.48	16	2.35	15	2.48	15	2.52	17
15	2.16	5.0	2.46	14	2.47	16	2.36	16	2.48	15	2.52	17
16	2.14	4.4	2.46	14	2.45	14	2.36	16	2.48	15	2.52	17
17	2.10	3.4	2.46	14	2.47	16	2.35	15	2.48	15	2.46	13
18	2.11	3.5	2.46	14	2.46	15	2.36	16	2.48	15	2.41	[illegible]
19	2.10	3.4	2.46	14	2.47	16	2.36	16	2.48	15	2.39	[illegible]
20	2.12	3.8	2.46	14	2.46	15	2.34	14	2.48	15	2.37	9.0
21	2.13	4.1	2.47	14	2.47	16	2.34	14	2.48	15	2.40	[illegible]
22	2.22	6.2	2.47	14	2.47	16	2.34	14	2.48	15	2.45	[illegible]
23	2.17	4.7	2.47	14	2.48	16	2.35	15	2.48	15	2.46	[illegible]
24	2.16	4.4	2.47	14	2.48	16	a	15	2.48	15	2.45	[illegible]
25	2.16	4.4	2.48	14	2.48	16		[illegible]	2.50	[illegible]	2.47	[illegible]
26	2.16	4.4	2.48	14	2.48	16		14	2.50	[illegible]	2.46	[illegible]
27	2.16	4.4	2.48	14	2.48	16		[illegible]	2.50	[illegible]	2.46	[illegible]
28	2.17	4.7	2.48	14	2.48	16		14	2.51	[illegible]	2.46	[illegible]
29	2.22	5.6	2.46	14	2.48	16		15	XX	XXX	2.45	[illegible]
30	2.23	5.9	2.46	14	2.48	16		15	XX	XXX	2.44	[illegible]
31	2.20	5.0	XX	XXX	a	16	a	15	XX	XXX	2.44	[illegible]
Total		132.3		379.8		[illegible]		[illegible]71		[illegible]		[illegible]
Mean		4.27		12.7		17.2		15.2		15.2		14.6
Run-off in acre-feet		262		753		1060		934		842		8[illegible]
Maximum		6.2		14		27		16		17		19
Minimum		3.2		5.6		14		14		15		[illegible]

Calendar Year 1978

Total [illegible]

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used NO. 3

OCT. 1, 1977 TO SEPT. 30, 1979

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	2.44	-22 11	2.04	-12 2.3	3.29	+06 140	3.63	+01 218	2.67	-18 26	2.66	-20 25
2	2.43	10	2.08	2.9	3.26	133	3.63	+01 218	2.65	25	2.64	23
3	2.43	10	2.14	4.1	3.32	147	3.55	+06 203	[189] 2.61	-18 [illegible]	2.63	23
4	2.42	10	2.13	3.8	3.45	+06 178	[187] 3.47	+00 188	2.52	17	2.63	23
5	2.43	10	2.12	3.5	3.62	+07 223	3.41	+07 170	2.50	16	2.63	23
6	2.45	12	2.11	3.4	S	V 262	3.38	163	2.49	16	2.66	25
7	2.45	12	2.15	4.4	4.04	+05 343	3.36	+07 158	2.48	15	2.64	23
8	2.43	-22 10	2.14	4.1	4.01	+08 334	3.32	+06 147	2.49	16	2.64	23
9	[illegible]	V 7.7	2.10	3.2	3.82	+09 284	3.27	+00 133	2.53	18	2.64	23
10	2.12	-12 3.5	2.12	3.5	3.61	+10 229	3.22	+04 121	2.65	[illegible]	2.64	22
11	2.10	3.2	2.09	3.0	[185] 3.60	+10 226	3.19	+04 115	2.63	[illegible]	2.65	24
12	2.06	2.6	2.08	2.9	3.71	+09 253	3.11	+02 96	2.62	-18 [illegible]	2.65	24
13	2.06	2.6	2.07	2.8	S	V 325	3.06	85	2.66	-15 28	[192] 2.65	-20 24
14	2.06	2.6	2.08	-12 2.9	S	V 455	3.03	[illegible]	2.84	-10 46	2.66	25
15	2.07	2.8	2.11	-11 3.5	S	V 496	3.02	[illegible]	[195] 2.97	+02 74	2.66	[illegible]
16	2.06	2.6	2.21	-09 7.2	S	V 474	3.00	75	2.98	+02 75	2.65	24
17	2.06	2.6	2.29	-08 10	4.43	O 434	2.97	70	2.92	-04 60	2.63	23
18	2.06	2.6	S	V 25	S	V 364	[189] 2.97	70	2.88	-08 51	2.65	[illegible]
19	[illegible]	[illegible]	2.72	+02 46	3.85	-05 253	2.93	01 65	2.89	52	2.65	-20 [illegible]
20	2.06	[illegible]	2.90	65	3.68	-07 203	2.90	60	2.88	[illegible]	2.62	-21 [illegible]
21	[illegible]	2.6	3.02	81	[186] 3.66	-07 198	2.92	62	2.88	[illegible]	2.63	[illegible]
22	[illegible]	2.3	3.06	88	3.70	-06 211	2.95	65	2.83	10 [illegible]	2.63	[illegible]
23	2.06	2.6	3.17	107	3.74	-05 223	2.89	55	2.78	-12 [illegible]	2.62	-21 [illegible]
24	[illegible]	2.6	[184] 3.30	+00 133	3.77	-04 234	2.87	[illegible]	2.77	-13 [illegible]	2.60	-20 [illegible]
25	2.06	[illegible]	3.31	+00 134	3.77	-04 234	2.82	[illegible]	2.75	-15 [illegible]	2.58	19
26	[193] [illegible]	-10 2.3	3.40	+05 148	3.75	-04 231	2.77	[illegible]	2.73	16 [illegible]	2.58	19
27	[illegible]	2.3	3.62	+04 214	3.72	-04 229	2.75	[illegible]	2.76	[illegible]	[193] 2.58	-22 19
28	2.03	2.2	3.84	+05 [illegible]	3.70	-04 226	2.74	[illegible]	2.74	[illegible]	2.57	18
29	[illegible]	2.2	3.86	[illegible]	3.61	-03 211	2.73	[illegible]	2.73	[illegible]	2.56	17
30	2.03	-10 2.2	3.89	+05 [illegible]	3.61	-03 211	2.71	[illegible]	[191] 2.69	-19 27	2.55	-22 17
31	XX	XXX	S	V [illegible]	XX	XXX	2.70	29	2.67	-20 [illegible]	XX	XXX
	147.4		2171.5		7964		2986		1070		[illegible]	
	4.91		70.0		265		96.3		34.5		22.3	
	292		4310		15800		5920		2120		1320	
	12		296		496		218		75		25	
	[illegible]		2.3		133		29		15		17	

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

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

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

Water Year 1979

17402.2

47.7

34520

496

2.2

ARKANSAS Creek near CA, COLO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1979

Drainage area 1218 square miles. Water stage recorder A-35 CONTINUOUS

Max. Discharge 3690 Sec. ft. at 1130 HRS on JUNE 8, 1979 G. H. 4.13 ft.

Max. G. H. 4.13 ft. at 1130HRS on JUNE 8 Min. Daily Discharge 119 sec.-ft. on JAN. 6

"a"-NO GAGE-HEIGHT RECORD, DISCHARGE ESTIMATED.

"B": ICE EFFECT. S- DISCHARGE SUBDIVIDED 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	.68	+.03 205	.67	+.04 205	.71	+.04 225	.63	° 168	a	190	.60	° 178
2	.68	205	.67	205	.73	235	.57	143		185	.59	173
3	.68	205	.64	191	.72	+.04 230	.54	131		170	.58	173
4	.72	225	.64	191	.70	+.03 215	.53	127		160	.59	178
5	.73	230	.64	191	.72	225	.52	123		155	.59	173
6	.73	230	.65	196	.72	225	.51	° 119		170	.71	° 240
7	.73	230	.64	191	.70	+.03 215	a	120	a	160	.63	+.10 215
8	.73	230	.64	191	.68	+.03 200		130	[824] a	B 170	[826] .64	+.10 [illegible]
9	.73	230	.64	191	.68	200		140	a	175	.60	[illegible]
10	.72	225	[818] .66	+.04 200	.66	191		160	.66	182	.55	175
11	.72	225	.69	215	.67	+.02 196	a	180	.63	168	.55	178
12	.72	225	.72	230	.71	+.01 210	[822] a	215	.63	168	.58	191
13	[816] .72	+.03 225	.73	235	.72	+.01 215	.67	B 235	.63	168	.58	191
14	.72	225	.71	225	[820] .68	° 191	.65	220	.64	173	.56	182
15	.72	225	.72	230	.66	182	.62	200	.63	168	.63	215
16	.72	+.03 225	.73	235	.65	178	.63	210	.62	164	.63	215
17	.68	+.04 210	.72	230	.63	168	.65	196	.58	147	.76	[illegible]
18	.69	215	.72	+.04 230	.67	186	.61	178	.58	147	.81	[illegible]
19	.69	215	.68	+.03 215	.67	186	.63	186	.62	164	.78	[illegible]
20	.69	215	.72	235	.67	186	.63	186	.62	164	.81	311
21	.70	220	.72	235	.64	173	.63	186	.61	160	.77	[illegible]
22	.73	235	.71	230	.63	168	.64	B 191	.61	160	.77	288
23	.72	230	.69	220	.65	178	a	180	[825] .61	160	.73	266
24	.71	225	.68	215	.64	173	a	170	.60	155	.70	250
25	.72	230	.70	225	.63	168	[823] a	190	.60	155	.70	[illegible]
26	.72	230	.71	230	.63	168		190	.59	155	.71	[illegible]
27	[817] .67	+.01 205	.68	215	.60	155		170	.61	168	.69	245
28	.63	186	.70	225	.60	155		150	.59	B 164	.76	+.10 [illegible]
29	.62	180	[819] .76	+.05 256	[821] .63	° 168		180	XX	XXX	[827] .72	+.10 261
30	.63	186	.75	+.05 250	.65	178		170	XX	XXX	.67	[illegible]
31	.63	+.01 186	XX	XXX	.67	196	a	150	XX	XXX	.71	[illegible]
[illegible]	Total	6735		6533		5929		5274		4625		7182
561	Mean	217		218		191		171		165		[illegible]
406300	Run-off in acre-feet	13360		12960		11760		10500		9,170		14,250
	Maximum	230		256		235		235		170		[illegible]
	Minimum	182		191		155		119		155		173

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07091500
Rating Table Used #23
OCT 1, 1978 TO SEPT. 30, 1979

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	.73	266	1.04	+.16 500	2.88	-.19 2000	3.94	-.13 3570	S	V 817	1.25	+.15 655
2	.67	235	1.10	545	2.67	-.20 1750	3.94	-.13 3570	1.27	+.16 680	S	V 426
3	.65	225	1.10	545	2.71	-.20 1790	S	V 3260	[836] 1.25	+.16 664	.87	+.13 347
4	.63	215	1.08	530	2.87	-.20 1970	3.57	-.12 3040	1.33	+.14 [illegible]	.85	335
5	.65	225	1.08	530	3.08	-.21 2230	[834] 3.44	-.12 3260	1.35	732	.81	311
6	.65	225	1.07	522	S	V 2620	3.23	-.08 3620	1.33	714	.85	335
7	.69	245	1.07	522	[832] S	-.23 3325	3.13	-.06 3510	1.38	758	.87	347
8	.81	317	1.09	538	4.04	-.24 [illegible]	3.02	-.05 3270	1.32	706	.86	341
9	.86	347	1.18	599	S	V 1750	2.93	-.02 [illegible]	1.30	69[illegible]	.86	341
10	.79	305	1.16	583	2.02	-.20 1040	2.83	0 2190	1.32	706	.87	347
11	.73	272	1.15	575	S	V 1070	2.78	+.02 2140	1.32	706	.87	347
12	[831] .69	250	1.13	560	2.97	-.19 2110	2.74	+.02 2090	1.28	672	.87	347
13	.72	266	1.13	560	S	-.19 [illegible]	S	V 2030	1.28	+.14 [illegible]	.87	347
14	.79	311	1.09	528	S	-.19 [illegible]	2.47	+.06 1810	1.48	+.11 [illegible]	[839] .86	+.10 341
15	.84	345	[830] 1.12	545	S	V [illegible]	2.41	+.07 1760	[837] 1.66	+.07 [illegible]	.85	335
16	.87	365	1.14	560	3.44	-.17 2780	2.39	+.07 1740	1.62	+.07 911	.83	323
17	.87	365	1.18	+.14 591	3.48	-.17 [illegible]	2.33	+.05 [illegible]	1.57	+.10 [illegible]	.82	317
18	.90	385	1.28	+.12 655	S	V [illegible]	2.17	+.10 [illegible]	1.53	857	.78	294
19	.92	398	1.42	+.10 758	3.88	-.16 [illegible]	2.10	+.12 1470	1.53	+.10 857	.78	294
20	.88	372	1.70	+.07 990	3.54	[illegible]	[835] 2.03	+.13 1410	1.49	+.11 820	S	421
21	.87	365	1.77	+.07 1060	S	-.16 2760	2.02	[illegible]	S	V 1090	1.05	465
22	.87	365	1.75	+.07 1040	[833] 3.17	-.16 2420	2.04	[illegible]	S	+.12 1530	1.03	451
23	.98	372	S	V [illegible]	3.47	[illegible]	2.00	+.13 1370	2.15	1530	.98	+.10 417
24	.97	311	2.32	+.01 1570	3.57	-.16 [illegible]	1.95	+.14 1330	2.13	+.12 1505	a	360
25	S	402	[831] 2.50	+.01 1770	S	V 3160	1.94	1320	S	V 1450		375
26	.98	458	2.71	-.04 1970	S	V 2920	1.90	+.14 1270	1.40	+.14 776		325
27	[824] .98	+.15 [illegible]	2.90	-.08 [illegible]	3.89	-.13 [illegible]	1.73	+.15 [illegible]	1.37	[illegible]		320
28	[illegible]	[illegible]	S	V 2570	3.93	[illegible]	1.72	[illegible]	1.61	[illegible]	[840] a	[illegible]
29	.79	[illegible]	3.29	-.13 2630	3.94	[illegible]	1.68	[illegible]	1.58	980	.79	+.12 311
30	.99	[illegible]	3.50	-.16 2890	3.91	-.13 [illegible]	1.64	1010	1.38	+.14 758	.79	+.12 311
31	XX	XXX	S	V [illegible]	XX	XXX	1.58	+.15 [illegible]	[838] 1.31	+.16 [illegible]	XX	XXX
	[illegible]		32,310		80,495		[illegible]		[illegible]		10,801	
	336		1,070		2680		1910		882		360	
	[illegible]		66070		[illegible]		117,700		54240		21,420	
	[illegible]		2890		3570		3570		1530		655	
	[illegible]		500		1040		950		664		311	

Quarter: 4th | 3rd | 2nd | 1st — Computed JMS — Checked JMS — Date
Quarter: 4th | 3rd | 2nd | 1st — Dis.appld. JMS — Dis.check JMS — Date
Quarter: 4th | 3rd | 2nd | 1st — G.H.copd. JMS — G.H.check SDJ SDJ — Date 10/31/79
Water Year 1979

ARKANSAS River at ~~Creek~~ near WELLSVILLE, COLO.

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area 1485 square miles. Water stage recorder A-35 CONTINUOUS

Max. Discharge [redacted] sec. ft. at 1300 Hrs on June 8, 197[redacted] G. H. [redacted] ft.

Max. G. H. 6.96 -02 ft. at 1300 Hrs on June 8 Min. Daily Discharge 125 sec.-ft. on Dec. 8

"a" - NO GAGE-HEIGHT RECORDS, DISCHARGE ESTIMATED.

"S" - DISCHARGE SUBDIVIDED 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	2.95	-03 247	2.98	+.01 272	3.22	-03 351	2.82	-03 202	3.08	-06 283	2.95	-06 236
2	2.95	-03 247	3.01	283	3.24	359	a	191	3.08	283	2.94	233
3	2.96	-03 250	2.97	268	3.12	311		184	3.02	-06 261	2.92	226
4	a	250	2.97	268	3.12	311		177	S	V 227	2.90	219
5		283	2.96	264	3.20	343		174	2.93	-07 226	2.89	-06 216
6		299	2.97	268	3.18	335		170	3.00	250	3.17	-04 327
7		299	2.96	264	S	284		170	2.95	233	2.98	-04 254
8		299	2.93	254	2.58	-03 125		180	329 2.98	-07 244	331 3.00	-04 261
9		[illegible]	2.95	261	S	V 249		200	2.95	233	2.97	250
10		299	323 2.95	+.01 261	3.14	-04 315		220	2.94	230	2.87	216
11		299	3.02	+.01 287	3.22	347	a	240	2.97	240	2.88	219
12	a	299	3.10	315	3.28	371	321 a	260	2.98	244	2.93	236
13	321 a	299	3.12	323	322	347	3.04	-02 283	3.02	-07 258	2.95	244
14	3.05	+.01 299	3.06	299	325 3.14	-04 315	2.97	-03 254	3.05	-06 272	2.93	236
15	3.05	299	3.08	307	3.09	295	3.03	-03 275	3.01	258	3.02	248
16	3.05	299	3.12	323	3.06	283	3.05	-03 283	2.98	247	3.03	272
17	3.02	287	3.12	323	3.06	283	3.03	-04 272	2.93	230	S	350
18	2.98	272	3.17	343	3.15	319	3.02	-01 268	2.91	222	3.35	325
19	2.99	275	3.12	-01 319	3.17	327	3.02	-04 268	2.94	233	3.29	311
20	3.01	283	3.17	339	3.11	-04 303	2.96	-05 244	2.97	244	3.36	400
21	3.04	+.01 295	3.17	339	3.06	-03 287	2.96	-05 244	2.96	240	3.28	367
22	3.20	+.02 363	3.16	335	3.06	287	3.03	-05 268	2.96	240	3.31	379
23	3.17	351	3.14	327	3.09	299	2.92	-05 230	330 2.95	-06 236	3.22	339
24	3.12	331	3.12	-01 319	3.04	279	2.90	-05 222	2.93	230	3.16	315
25	3.13	335	3.17	-02 335	3.07	291	328 3.05	-06 272	2.92	226	3.15	311
26	3.13	335	3.17	335	3.02	272	3.05	272	2.95	236	3.17	319
27	322 3.05	+.02 303	3.15	327	2.97	254	2.93	230	2.97	244	3.15	311
28	2.96	268	3.14	-02 323	3.00	264	S	185	2.96	-06 240	3.25	351
29	2.94	261	324 3.26	-03 367	324 3.01	-03 268	3.02	261	XX	XXX	332 3.22	-06 339
30	2.94	261	3.28	-03 375	3.03	-03 275	2.92	226	XX	XXX	3.11	295
31	2.92	+.02 254	XX	XXX	2.93	-07 240	2.84	-16 198	XX	XXX	3.16	315
235[redacted]	Total	9040	9[redacted]		[redacted]		7133		6810		9[redacted]	
647	Mean	292	307		296		230		243		293	
[redacted]8100	Run-off in acre-feet	17930	18290		18230		14,150		13510		17990	
	Maximum	363	375		359		283		283		[redacted]	
	Minimum	247	254		125		170		232		[redacted]	

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 9370C

Rating Table Used #4 10-30-76

OCT. 1978 TO SEPT. 30, 1979

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	3.24	-05 313	3.73	-11 540	5.98	-02 2500	6.67	-07 3480	S	V 877	4.02	-12 680
2	3.11	-07 291	3.78	565	5.79	2240	6.68	3500	4.07	-10 720	S	V 516
3	3.06	272	3.82	585	5.80	2260	6.58	3340	341 4.02	-10 690	3.43	-04 436
4	3.03	261	3.74	545	5.93	2430	6.42	3085	4.12	752	3.38	-04 413
5	3.05	268	3.74	545	6.11	2790	339 6.33	-07 [illegible]	4.17	752	3.30	-03 393
6	3.07	275	3.71	530	6.32	[illegible]	6.19	-06 2740	4.16	716	3.37	413
7	3.13	291	3.71	530	6.74	3680	6.11	2630	4.22	812	3.42	436
8	3.35	383	3.74	545	6.88	-08 3930	6.02	2500	4.14	764	3.38	418
9	3.46	431	3.87	610	S	V 2830	5.94	[illegible]	4.09	[illegible]	3.38	418
10	3.32	367	3.86	605	5.23	-01 1640	5.86	[illegible]	4.12	[illegible]	3.38	418
11	3.20	319	3.83	590	337 S	-01 [illegible]	5.83	[illegible]	4.13	[illegible]	3.37	413
12	332 3.72	-04 287	3.78	565	6.03	-02 2570	5.78	2180	4.07	[illegible]	3.37	413
13	3.14	-04 295	3.77	560	6.22	2840	5.73	[illegible]	4.06	-10 [illegible]	3.36	408
14	3.27	347	3.73	[illegible]	6.61	-02 3460	5.53	-06 [illegible]	S	V 910	344 3.33	-03 395
15	3.40	-05 395	335 3.77	-11 560	S	V 3700	S	V 1870	4.64	-07 1110	3.33	395
16	3.48	431	3.82	585	6.41	-03 3130	5.47	-06 [illegible]	342 4.58	-07 [illegible]	3.31	387
17	3.51	444	3.89	-11 620	6.42	-03 3140	5.41	-06 1780	4.47	990	3.30	383
18	3.55	462	3.99	-10 675	S	V 3100	5.19	-04 1570	4.42	955	3.27	371
19	3.57	472	4.20	-09 806	6.65	-05 [illegible]	5.10	[illegible]	4.41	948	3.23	-03 355
20	3.51	444	S	V 1056	6.41	[illegible]	340 4.98	-04 [illegible]	4.36	-07 914	S	V 497
21	3.48	431	4.68	-06 1140	6.29	[illegible]	4.97	[illegible]	S	V 1030	3.73	-04 575
22	3.49	436	4.67	-06 1130	338 6.11	-05 [illegible]	5.01	1420	S	V 1380	3.71	565
23	3.52	449	S	V 1540	6.32	[illegible]	4.97	[illegible]	5.09	-10 1430	3.65	535
24	3.35	375	5.37	-02 1770	6.38	-05 [illegible]	4.92	[illegible]	5.07	1420	3.66	540
25	S	461	336 5.54	-02 1940	6.49	-06 [illegible]	4.91	[illegible]	5.04	-10 1390	3.70	560
26	3.66	[illegible]	5.80	2260	S	V 2730	4.87	-07 1320	S	V 954	S	V 368
27	341 3.64	[illegible]	5.93	[illegible]	6.63	-07 3420	4.67	-05 [illegible]	4.20	-12 [illegible]	3.23	-05 347
28	3.68	[illegible]	6.28	[illegible]	6.66	3440	4.66	[illegible]	S	944	345 3.24	351
29	3.67	[illegible]	6.41	[illegible]	6.67	3480	4.61	-05 1100	4.47	955	3.22	347
30	3.67	[illegible]	6.53	[illegible]	6.66	-07 [illegible]	4.56	-07 [illegible]	S	799	3.22	-05 343
31	XX	XXX	6.28	[illegible]	XX	XXX	4.49	[illegible]	341 4.10	-12 [illegible]	XX	XXX
	[illegible]	[illegible]	33739		88550		60830		28574		13,075	
	393		1086		2950		1960		922		436	
	[illegible]		66,920		175,600		120,700		56680		25,930	
	[illegible]		3340		3930		3500		1430		680	
	[illegible]		[illegible]		1530		1000		692		343	

Water Year 1979

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

Grape Creek near We[illegible]cliffe

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area 320 square miles. Water stage recorder Stevens A-35

Max. Discharge 900 sec.-ft. at 0830 on June 1 G.H. 3.47 ft. on June 1
Max. G.H. 3.47 ft. at 0830 on June 9 Min. Daily Discharge 3.0 sec.-ft. on Oct. 11
"S" - subdivided day, "V" - variable shift
Discharge estimated for "a" & "b" days

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. '78 Gage height	DEC. '78 Discharge	JAN. '79 Gage height	JAN. '79 Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	0.46	5.8	0.51	8.9	0.67	19	a	9.0	a	4.4	a	26
2	.46	5.8	.51	8.9	.63	15		10		5.0		23
3	.45	5.2	.53	11	.84	36		11		5.9		21
4	.45	5.2	.55	12	.92	41		11		6.4		20
5	.44	4.7	.55	12	.88	39		12		7.0		19
6	.43	4.2	.55	12	.59	8.0		12		7.4		22
7	.42	3.6	.55	12	.92	7.0		11		7.9		25
8	.43	4.2	.56	13	1.02	6.0		11		8.5		28
9	.44	4.7	.56	13	0.93	5.6		10		9.1		31
10	.42	3.6	.56	13	.96	5.4		9.8		10		33
11	.41	3.0	.62	13	.87	6.0		12		13		34
12	.43	4.2	.66	13	.87	7.0		13		15		36
13	.42	3.6	.64	13	.75	7.0		12		18		38
14	.44	4.7	.59	11	.73	7.0		12		17		40
15	.43	4.2	.57	10	.71	6.8		13		16		43
16	.45	5.8	.57	10	.72	6.6		12		15		46
17	.47	6.9	.57	10	.93	7.6		11		16		48
18	.47	6.9	.56	8.9	.86	8.4		10		17		50
19	.47	6.9	.56	8.9	.82	9.1		9.0		18		51
20	.48	7.4	.57	10	.77	10		8.4		19		52
21	.47	6.9	.59	12	.91	11		8.2		21		52
22	.51	9.8	.60	13	.94	12		8.0		23		52
23	.52	11	.60	13	.95	12		7.5		24		52
24	.53	12	.59	13	1.15	12		7.2		24		51
25	.53	12	.61	15	1.15	13		7.0		25		50
26	.53	12	.59	13	1.06	12		6.4		26	a	70
27	.54	12	.58	12	0.87	12		5.8		27	S	92
28	.53	12	.61	14	.87	12		5.2	a	28	S	149
29	.52	9.8	.61	14	.77	11		4.6	XX	XXX	1.41	112
30	.51	8.9	.61	14	.65	11		4.2	XX	XXX	S	102
31	.51	8.9	XX	XXX	a	10	a	4.0	XX	XXX	1.27	89
Total		216		357		388		287		434		1557
Mean		7.0		12		13		9.3		15		50
Run-off in acre-feet		428		707		771		570		860		3,090
Maximum		12		15		44		13		28		149
Minimum		3.0		8.9		5.4		4.0		4.4		19

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07095000

Rating Table Used #7, since 8/66

APR.		MAY		JUNE		JULY		AUG.		SEPT.		Day.				
Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge		4th			
1.08	63	0.58	12	S	268	1.77	196	0.86	38	0.61	13	1	3rd			
0.99	52	.59	12	S	206	1.77	196	.80	31	.60	12	2	2nd			
.97	51	.63	17	S	184	1.68	170	.77	29	.60	12	3				
.92	45	.65	19	1.49	125	1.63	156	.73	25	.59	12	4	1st			
S	74	.60	14	1.50	128	1.57	139	.72	24	.58	12	5				
S	97	.58	12	1.56	142	1.60	146	.70	22	.57	11	6	Quarter	Computed	Checked	Date
S	80	.55	9.8	1.70	175	1.71	173	.65	18	.55	8.9	7				
S	61	.56	11	S	332	1.58	142	.64	17	.53	7.4	8				
0.93	46	.63	17	S	771	1.49	121	.67	20	.52	6.9	9	4th			
.87	39	.64	18	S	338	1.38	101	.75	29	.52	6.9	10				
.86	38	.67	22	1.76	198	1.34	94	.75	29	.52	6.9	11	3rd			
.80	32	.62	17	1.67	175	1.23	79	.89	45	.52	6.9	12				
.74	26	.55	11	1.73	190	1.19	75	.75	29	.52	6.9	13	2nd			
.74	26	.52	8.0	1.92	240	1.18	74	S	57	.62	16	14				
.73	25	.50	6.9	2.06	281	1.19	75	1.21	82	.68	22	15	1st			
.70	21	.48	5.8	2.13	302	1.23	81	1.10	67	.62	16	16				
.69	20	.47	5.2	2.11	296	1.32	94	1.06	61	.59	13	17	Quarter	Dis.appld.	Dis.check	Date
.68	19	.51	7.4	1.97	254	1.35	99	1.04	59	.58	12	18				
.67	19	.51	7.4	1.85	222	1.29	89	1.05	60	.57	12	19				
.68	20	S	41	1.62	163	1.16	71	0.95	47	.58	12	20	4th			
.65	17	1.03	61	1.42	117	1.03	55	a	41	.69	25	21				
.65	17	0.87	39	1.39	110	1.00	51	a	37	.61	16	22	3rd			
.63	15	.80	30	1.50	134	0.99	51	a	32	.60	15	23				
.61	13	S	44	1.59	156	.93	44	0.77	28	.58	13	24	2nd			
.58	11	1.70	185	1.84	219	.89	40	.74	25	.57	12	25				
.54	7.4	1.75	196	1.76	196	.87	38	.72	22	.57	12	26	1st			
.53	6.9	1.59	151	1.74	188	.86	37	.71	21	.55	11	27				
.54	7.4	1.57	142	1.73	185	.83	35	.68	19	.54	9.8	28	Quarter	G.H.copd.	G.H.check	Date
.56	8.9	1.65	158	1.72	183	.81	32	.65	16	.54	9.8	29				
.58	12	S	171	1.76	193	.82	34	.63	15	.54	9.8	30	Water Year			
XX	XXX	S	345	XX	XXX	.81	32	.62	14	XX	XXX	31	1979			
970		1,796		6,671		2,820		1,059		359			16,914			
32		60		222		91		34		12			46			
1920		3,560		13,230		5,590		2,100		712			33,550			
.97		345		771		196		67		25			771			
6.9		5.2		110		32		14		6.9			3.0			

Arkansas River at ~~Creek near~~ Canon City

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

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

Max. Discharge 3,060 Sec. ft. at 2030 on June 8 Max. G. H. 8.97 ft. on June 8

Min. Daily Discharge 140 sec.-ft. on Dec. 6 G. H. 8.97 ft.

"a" & "b" days - discharge estimated

"S" - subdivided day, "V" - variable shift

Day	OCT. Gage height	OCT. Discharge	NOV. Gage height	NOV. Discharge	DEC. '79 Gage height	DEC. '79 Discharge	JAN. '80 Gage height	JAN. '80 Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	a	200	4.78	167	5.30	290	5.35	b 160	a	220	5.26	255
2		202	4.89	185	5.30	290	5.29	180		210	5.27	260
3		204	4.90	187	5.45	b 250	5.33	200		230	5.25	250
4	a	206	4.86	180	5.38	300	6.20	b 250		210	5.22	237
5	a	206	4.80	170	5.44	230	a	300		240	5.21	237
6	5.03	208	4.83	175	5.46	140		290		210	5.32	270
7	5.03	208	4.86	180	5.46	160		250		240	5.41	307
8	5.04	211	4.83	175	5.67	150		230		210	5.35	275
9	5.02	206	4.83	175	a	170		260		250	5.39	290
10	5.03	208	4.81	171	5.76	260		240		260	5.37	280
11	5.02	204	4.89	185	5.80	290		220		270	5.37	280
12	4.98	195	5.01	206	5.83	310		200		280	5.39	290
13	4.99	197	5.07	224	5.69	335		190		290	5.42	301
14	4.99	197	5.07	224	5.63	280		200		300	5.42	301
15	4.99	197	5.12	234	5.60	290		210		285	5.42	301
16	4.98	195	5.16	240	5.57	270		230		270	5.49	329
17	4.98	195	5.15	237	5.53	330		260		250	5.52	345
18	4.94	183	5.17	245	5.57	320		240		260	5.69	418
19	4.92	178	5.20	250	5.61	310		230		280	5.72	431
20	4.93	182	5.19	245	5.55	270		220		300	5.75	451
21	4.95	189	5.23	260	5.47	260		230		320	5.77	457
22	5.08	224	5.22	255	5.49	190		240	a	310	5.73	431
23	5.13	245	5.21	250	5.49	240		230	a	270	5.68	399
24	5.04	214	5.20	245	5.48	230		220	5.26	255	5.65	381
25	5.04	214	5.22	255	5.49	240		220	5.26	255	5.61	357
26	5.05	218	5.25	265	5.46	200		200	5.25	250	5.65	381
27	5.01	206	5.24	260	5.43	180		180	5.26	255	5.69	405
28	4.94	194	5.18	234	5.45	200		170	5.25	250	5.77	484
29	4.84	176	5.24	260	5.46	190		150	XX	XXX	5.91	631
30	4.81	171	5.32	301	5.46	150		145	XX	XXX	5.68	464
31	4.80	170	XX	XXX	5.40	b 140	a	140	XX	XXX	5.52	363
Total		6,202		6,640		7,465		6,675		7,500		10,858
Mean		200		221		241		215		268		350
Run-off in acre-feet		12,300		13,200		14,800		13,200		14,900		21,500
Maximum		245		301		330		300		320		631
Minimum		170		167		140		140		210		237

Calendar Year 1978

20,361 | 604 | 437,100 | 450 | 101

STATE OF COLORADO

DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. (96000

Rating Table Used #21

from Oct. 1 1976

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	5.54	09 375	5.52	01 425	7.88	06 2980	8.49	21 3770	6.28	09 941	5.99	05 727
2	5.47	334	5.60	02 484	7.65	2620	8.53	21 3850	6.00	07 703	5.90	05 655
3	5.39	290	5.72	03 578	7.56	2490	8.46	20 3740	5.91	08 639	5.54	03 412
4	5.34	265	5.67	540	7.63	2600	8.30	19 3470	5.92	647	5.49	03 381
5	5.29	240	5.57	470	7.82	2890	8.17	18 3260	6.01	719	5.43	345
6	5.41	09 301	5.52	438	8.03	06 3230	8.02	17 3030	5.99	703	5.37	312
7	5.49	345	5.48	03 412	8.41	05 3920	7.93	17 2890	6.00	08 711	5.44	351
8	5.57	393	5.53	02 438	8.76	04 4630	7.84	16 2760	6.00	711	5.41	334
9	5.71	484	5.61	01 484	S	4323	7.73	16 2600	5.95	671	5.39	323
10	5.66	451	5.71	548	S	2524	7.63	15 2450	5.98	695	5.40	329
11	5.54	09 375	5.65	505	7.15	04 1940	7.57	15 2380	5.98	695	5.40	329
12	5.43	10 307	5.60	470	S	V 03 2561	7.52	2310	5.94	663	5.43	345
13	5.35	11 260	5.58	457	7.98	04 3180	7.46	15 2220	5.91	08 639	5.52	399
14	5.39	280	a	438	8.32	06 3740	7.32	14 2040	S	V 832	5.52	03 399
15	5.52	351	a	418	8.69	09 4410	S	V 1959	6.57	10 1200	5.36	01 318
16	5.59	393	5.55	438	8.45	09 3920	S	13 2070	6.64	11 1260	5.29	285
17	5.63	418	5.60	470	8.39	10 3790	7.21	13 1900	6.52	1140	5.25	265
18	5.64	425	5.67	519	8.29	11 3590	7.13	12 1810	6.48	1100	5.23	255
19	5.64	425	5.82	631	8.50	15 3900	7.02	12 1670	6.40	1030	5.18	234
20	5.57	11 381	6.17	01 914	8.42	16 3740	6.93	11 1570	6.34	977	S	V 851
21	5.47	323	6.36	1080	8.16	17 3260	6.87	1510	S	998	5.62	02 505
22	5.43	301	6.33	01 1060	7.98	18 2950	6.86	11 1500	S	1308	5.64	01 526
23	5.43	301	6.57	02 1280	8.05	19 3050	6.83	10 1470	6.87	11 1510	5.57	05 484
24	5.41	290	6.92	03 1660	8.18	20 3250	6.75	1380	6.85	1480	5.54	05 464
25	5.21	11 208	7.13	03 1930	8.33	21 3490	6.73	1360	6.83	11 1460	5.57	491
26	S	V 402	7.43	04 2340	8.17	3210	6.70	1330	S	V 1132	S	436
27	5.47	387	7.56	04 2520	8.43	3670	6.57	10 1200	6.12	07 818	5.21	270
28	5.47	387	7.93	05 3080	8.52	3830	6.48	09 1120	6.21	896	5.21	270
29	5.50	01 412	8.13	03 3400	8.54	3870	6.43	1080	6.34	1010	5.22	275
30	5.50	01 412	8.24	3590	8.52	21 3830	6.39	1040	6.22	07 905	5.18	255
31	XX	XXX	8.25	06 3610	XX	XXX	6.33	09 986	6.06	06 775	XX	XXX
	10,516		35,627		101,388		65,725		28,968		11,228	
	351		1149		3,380		2,120		934		374	
	20,900		70,700		201,100		130,400		57,500		22,300	
	424		3,610		4,630		3,850		1,510		727	
	203		412		1,940		986		639		234	

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

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

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

Water Year 1979

ARKANSAS ~~Creek near~~ POTLAND

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area 4280 square miles. Water stage recorder STEVENS A-35

Max. Discharge 5010 Sec. ft. at 2200 on June 8 Max. G. H. 6.96 +09 ft. at 2200 on June 8 Min. Daily Discharge 100 sec.-ft. on Jan 2 G. H. 6.96 +09 ft.

"S" SUBDIVIDED DAY "V" VARIABLE SHIFT "A" + "B" DAYS

DISCHARGE ESTIMATED FOR

Day.	OCT. Gage height	OCT. Discharge	NOV. ✓ Gage height	NOV. ✓ Discharge	DEC. '78 Gage height	DEC. '78 Discharge	JAN. '79 Gage height	JAN. '79 Discharge	FEB. Gage height	FEB. Discharge	MAR. Gage height	MAR. Discharge
1	1.51	+14 168	S	+10 214	1.98	+12 260	1.35	B 720	1.40	B105	1.53	+16 20
2	1.46	+13 153	[76] 1.62	+10 185	1.96	+12 200	1.35	100	1.60	180	1.54	1 20
3	1.47	+13 155	1.62	+10 185	1.90	b 204	1.40	125	1.58	175	1.52	+16 20
4	1.51	+13 165	1.57	+09 170	1.87	b 220	1.95	144	1.54	195	1.47	+7 19
5	[74] 1.57	+13 180	1.54	+08 160	1.97	b 250	2.40	175	1.51	185	1.44	+8 18
6	1.66	+13 204	1.54	160	1.76	+12 185	2.55	280	1.51	180	[185] 1.47	+9 19
7	1.64	+12 196	1.56	165	1.65	+11 110	2.26	256	1.53	200	1.70	26
8	1.63	194	1.57	168	1.71	135	1.96 [81]	205	1.54	169	1.51	204
9	1.63	194	1.55	162	1.80	125	1.82	178	[83] 1.55	+12 199	1.67	25
10	1.61	188	1.54	+08 160	1.97	b 140	1.97	187	1.53	194	1.59	22
11	1.58	180	1.62	+07 178	2.03	b 230	2.11	195	1.57	204	1.56	21
12	1.62	191	1.76	+05 210	2.15	b 270	2.28	300	1.58	+12 207	1.60	23
13	1.60	185	[77] 1.84	+04 231	2.10	b 285	2.22	200	1.68	b 212	1.63	24
14	1.64	196	1.82	225	2.06	324	2.02	130	1.88	b 230	1.67	25
15	1.65	199	1.83	+04 228	[79] 1.98	+11 265	1.85	B 145	1.74	+4 263	1.67	+8 25
16	[75] 1.64	+12 196	1.86	+06 243	1.88	270	1.70	B 205	1.63	228	1.81	+6 29
17	1.63	194	1.86	+6 243	1.83	250	1.68	229	1.61	222	1.83	+26 30
18	1.59	183	1.87	+07 250	1.85	310	1.66	244	1.54	202	S	+4 39
19	1.63	194	1.89	+8 259	1.97	+11 305	1.64	216	1.54	202	[86] 2.18	+3 42
20	1.63	191	1.88	+8 256	1.91	+10 295	1.57	195	1.57	210	2.21	+4 44
21	1.63	191	1.92	+10 276	1.76	+5 256	1.48	172	1.60	219	2.18	42
22	1.82	250	1.91	272	1.74	+6 250	1.56	193	1.58	213	2.06	38
23	1.88	+12 269	1.90	269	1.74	185	1.57	196	[87] 1.55	+14 209	2.01	36
24	1.81	+11 243	1.89	+10 266	1.75	235	1.36 [82]	145	1.50	+5 194	1.91	38
25	1.79	237	1.93	+11 283	1.74	+6 225	1.46	+20 140	1.48	+6 191	1.83	29
26	1.79	237	1.94	+12 289	1.72	+7 230	1.62	B 220	1.52	202	1.85	3
27	1.77	231	[78] 1.94	+12 289	1.63	+2 195	1.50	200	1.52	202	1.92	3
28	1.69	207	1.88	269	1.68	190	1.45	120	1.52	+6 202	2.00	+3 35
29	1.63	+11 191	1.89	272	[80] 1.70	+20 200	1.43	145	XX	XXX	2.23	+5 45
30	1.59	+10 178	2.00	+12 310	1.66	+8 188	1.42	130	XX	XXX	2.09	32
31	1.59	+10 178	XX	XXX	1.61	+6 135	1.40	B 125	XX	XXX	1.97	+5
206,028	Total	6,124		6,849		6,912		5615		5,589		
564	Mean	198		228		223		181		200		225
408,700	Run-off in acre-feet	12,150		13,580		13,710		11,140		11,090		18,14
3390	Maximum	269		289		324		300		267		456
93	Minimum	153		160		110		120		105		13

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07 297000

Rating Table Used NO.1 10-28-75

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	2.01	+5 364	2.06	+2 378	[195] 5.60	−03 3060	6.15	−07 3690	3.16	+0 899	2.90	+04 699
2	1.98	358	2.25	+23 456	5.28	+03 2750	[202] 6.21	−06 3780	S	V 701	2.82	+04 653
3	1.87	310	2.42	+24 545	5.10	+07 2600	6.08	−05 3630	2.63	+4 604	2.41	+02 434
4	1.78	279	2.34	505	[196] 5.13	+09 2650	5.87	−03 3390	2.60	587	[212] 2.24	+02 364
5	1.68	247	2.24	456	5.28	2800	5.73	−02 3230	2.74	664	2.17	+01 333
6	[187] 1.77	+5 276	2.20	438	5.52	3110	5.52	−01 2990	2.72	653	2.08	0 296
7	1.85	303	[191] 2.14	+24 412	5.97	3670	5.41	0 2870	[207] 2.69	+4 636	2.17	329
8	1.90	322	2.21	442	6.51	4380	5.28	+01 2730	2.76	+4 675	2.18	333
9	2.08	399	2.28	475	S	4530	[203] 5.14	+02 2590	2.67	+3 620	2.15	322
10	2.11	404	2.46	+24 565	S	2720	4.97	+03 2410	2.75	664	[213] 2.18	333
11	2.01	+5 364	2.38	+22 515	4.54	+09 2030	4.88	+4 2320	2.77	+3 675	2.17	329
12	1.86	+3 300	2.32	+1 480	[197] S	V 2430	4.81	+05 2260	2.71	+2 636	2.20	340
13	1.75	+1 256	2.28	+9 452	[198] 5.45	+2 3060	4.72	+06 2180	[208] 2.65	+0 592	2.29	376
14	1.76	+0 256	2.23	+8 424	5.85	3550	4.55	+07 2020	S	V 842	2.40	0 420
15	1.89	+0 300	2.17	+7 396	6.33	+2 4130	S	V 2100	S	V 1500	2.29	−01 372
16	[180] 1.94	+0 318	2.22	416	6.14	+09 3890	[204] S	V 2120	S	V 1380	2.18	−03 322
17	2.02	348	2.28	442	5.97	+07 3640	4.46	+9 1930	[209] 3.62	1150	[214] 2.11	−04 293
18	2.02	348	[192] 2.37	+7 485	[199] 5.83	+05 3440	4.36	1840	S	1180	2.09	286
19	2.02	348	2.51	+7 555	6.05	3720	4.20	1690	3.39	+01 990	2.06	276
20	2.01	+5 344	S	V 784	5.99	+05 3640	4.06	1570	3.32	944	2.03	−04 266
21	1.92	+0 303	3.34	+12 1030	5.65	+02 3180	3.95	1470	S	910	S	V 426
22	1.91	300	3.37	+12 1050	5.39	0 2850	3.92	1440	S	1220	2.55	−03 475
23	1.90	+3 296	S	V 1250	5.49	2970	[205] 3.89	+07 1430	[210] S	+01 1600	2.50	452
24	1.86	+7 279	4.10	+08 1610	5.64	3150	3.79	1340	3.96	1430	[215] 2.45	−03 429
25	[189] 1.71	+5 225	4.37	+07 1850	[200] 5.85	0 3400	3.84	+7 1390	3.92	+1 1390	2.49	−03 447
26	S	V 333	4.66	+05 2110	5.65	0 3160	3.77	+1 1320	S	V 1150	S	V 452
27	[201] 2.00	+22 318	4.88	+04 2320	6.00	−05 3520	3.57	+03 1170	[211] 3.01	+05 771	2.16	0 325
28	2.00	348	5.30	+02 2760	6.11	−3 3680	3.41	+1 1060	S	831	2.06	+02 296
29	2.05	368	[193] 5.70	0 3220	[201] 6.17	−01 3720	3.31	+0 1040	3.26	932	2.04	+03 293
30	2.06	372	5.92	−01 3470	6.13	−1 3670	[206] 3.33	+0 1010	3.18	+1 880	2.02	+4 289
31	XX	XXX	[194] 6.05	−03 3320	XX	XXX	3.23	+0 944	2.97	+4 741	XX	XXX
	9603		33,905		99,150		64,934		28,447		11,260	
	320		1094		3305		2,095		918		375	
	19,050		67,250		196,700		128,800		56,420		22,330	
	404		3620		4530		3780		1600		699	
	225		372		2,030		944		587		266	

Quarter	Computed	Checked	Date
4th	LKS	SDJ	29
3rd	LKS	SDJ	22
2nd	LKS	SDJ	
1st	LKS	SDJ	11

Quarter	Dis.appld.	Dis.check	Date
4th	LKS	SDJ	29
3rd	LKS	SDJ	22
2nd	LKS	SDJ	
1st	LKS	SDJ	11

Quarter	G.H.copd.	G.H.check	Date
4th	LKS	SDJ	29
3rd	LKS	SDJ	22
2nd	LKS	SDJ	
1st	LKS	SDJ	11

Water Year 1979

ARKANSAS ~~Creek near~~ ABOVE PUEBLO, COLO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1979

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

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

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

"S" - SUBDIVIDED DAYS "V" VARIABLE SHIFT

DISCHARGE ESTIMATED FOR "a" DAYS

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	0.12	t.01 81	0.12	t.02 82	0.05	-.01 55	-0.02	0 60	0.04	-.01 56	0.94	t.01 56
2	.08	75	0.22	t.02 99	-.05	55	-.02	60	-.04	56	S	V 110
3	.05	70	.27	t.02 108	-.05	-.01 55	-.02	0 66	-.01	56	1.93	t.02 268
4	.09	76	.17	t.01 89	-.04	0 57	-.01	-.01 66	-.04	56	1.93	268
5	.17	t.01 89	.16	87	-.04	57	-.02	-.02 57	-.04	56	S	233
6	.32	t.02 118	.12	81	-.04	57	-.03	-.03 55	-.04	56	1.63	t.02 182
7	.41	t.03 138	.09	76	-.04	0 57	-.03	55	-.04	56	S	158
8	.43	142	.10	78	-.04	t.01 58	-.03	55	-.04	56	1.44	142
9	.43	142	.12	81	-.04	58	-.03	-.03 55	-.04	-.01 56	1.44	142
10	.43	142	.12	81	-.04	58	-.03	55	-.04	56	1.44	142
11	.40	136	.12	81	-.04	t.01 58	-.04	54	-.04	56	1.44	142
12	.38	132	.12	81	-.04	t.02 60	-.04	54	-.04	56	1.44	142
13	.34	124	S	t.01 115	-.04	60	-.05	52	-.04	56	1.43	140
14	.34	124	.52	t.01 156	-.04	60	-.05	52	-.05	55	1.43	140
15	.34	124	S	V 138	-.04	t.02 60	-.06	-.03 51	-.05	55	1.45	t.02 144
16	.36	t.03 128	-.06	-.01 54	-.04	t.02 60	-.05	-.02 54	-.05	55	S	V 190
17	.40	t.04 138	-.07	52	-.03	t.01 60	-.05	54	-.05	55	1.82	t.07 235
18	.41	140	-.07	52	-.02	0 60	-.05	-.02 54	-.05	55	1.85	t.03 244
19	.41	t.04 140	-.07	52	-.02	60	-.04	-.01 56	-.05	55	S	V 280
20	.38	134	-.07	52	-.03	58	-.04	56	-.05	-.01 55	S	V 400
21	.23	105	-.06	54	-.03	58	-.04	56	0.96	57	2.34	t.06 445
22	.24	106	-.06	54	-.03	58	-.04	56	.93	0 54	S	414
23	.37	t.04 132	-.06	54	-.03	58	-.04	56	.94	t.01 56	2.00	t.06 306
24	.65	t.03 190	-.06	54	-.03	58	-.04	56	.94	56	1.89	268
25	.56	168	-.06	54	-.02	60	-.04	-.01 56	.94	56	1.79	235
26	.47	150	-.05	55	-.02	60	-.04	56	.94	56	1.72	215
27	.48	152	-.05	-.01 55	-.02	60	-.04	56	.94	56	1.82	t.06 244
28	.46	148	-.05	55	-.02	60	-.04	56	.95	t.01 57	1.94	t.07 288
29	.33	t.03 122	-.05	55	-.02	0 60	-.04	56	.94	XXX	2.03	t.07 320
30	.19	t.02 94	-.05	-.01 55	-.02	60	-.04	56	XX	XXX	2.04	324
31	.12	t.02 82	XX	XXX	-.02	0 60	-.04	-.01 56	XX	XXX	1.96	296
Total		3,842		2,240		1,815		1,737		1,561		7,113
Mean		124										
Run-off in acre-feet		7620										
Maximum		190										
Minimum		70										

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07099400
Rating Table Used No #9 Oct. 1, 1973 to

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.
1.89	271	3.25	955	S	V 3269	5.21	2860	3.19	949	2.47	535	1
1.87	264	3.32	998	4.97	2540	a	3060	S	V 743	2.61	605	2
1.82	247	3.38	1040	4.87	2420	a	2930	2.73	673	S	561	3
1.77	232	3.38	1040	4.96	2530	a	2790	2.67	635	S	545	4
1.74	223	3.28	973	S	2827	a	2730	2.62	610	2.59	595	5
1.66	202	S	828	5.43	3100	a	2570	2.67	635	2.53	570	6
1.64	198	2.94	772	S	3316	4.76	2340	2.90	761	2.46	535	7
1.69	210	2.93	766	a	4241	4.65	2220	S	867	2.34	481	8
1.93	285	2.93	766	a	4440	4.51	2070	3.52	1180	2.26	445	9
2.08	340	2.94	772	a	V 2661	4.27	1830	3.53	1200	S	515	10
1.84	250	S	V 558	a	1897	4.25	1810	3.54	1210	2.88	761	11
1.68	202	2.34	450	S	2090	4.46	2010	3.43	1140	2.87	756	12
1.69	205	2.26	409	S	V 3008	4.43	1980	3.36	1100	2.89	766	13
1.57	175	S	V 343	S	V 3640	4.38	1930	3.43	1150	2.34	476	14
1.39	136	S	143	S	V 4253	4.40	1950	S	V 1341	2.31	458	15
1.58	175	S	158	S	4432	S	278[illegible]	S	V 1940	1.21	110	16
1.69	202	S	163	5.73	3690	4.32	1840	S	1721	1.20	106	17
1.79	229	S	210	S	3890	4.46	1980	3.62	1280	1.18	103	18
1.84	244	S	252	S	3733	4.21	1730	S	V 1375	1.15	97	19
S	223	S	423	S	V 3921?	3.92	1460	3.51	1210	S	145	20
S	179	S	938	5.16	3320	3.91	1450	3.49	1160	1.60	200	21
1.47	152	S	869	S	V 2983	3.88	1410	3.52	1180	1.64	212	22
1.46	150	S	931	5.05	2790	3.86	1400	S	1957	1.67	223	23
S	V 241	S	1459	5.23	3010	3.79	1330	S	V 1516	1.69	232	24
2.03	313	S	V 1664	S	V 3358	3.77	1310	S	V 1010	1.71	238	25
2.07	328	S	V 1907	S	V 1829	3.78	1320	3.15	913	1.74	247	26
2.06	[illegible]	4.68	2130	S	2765	3.65	1230	S	779	1.79	264	27
S	V 409	S	V 2465	5.57	3540	3.41	1030	2.64	620	1.86	288	28
3.21	[illegible]	S	3169	5.97	3210?	3.32	1030	2.63	615	1.96	324	29
3.21	[illegible]	5.80	3590	5.21	[illegible]	3.26	996	2.57	585	2.00	336	30
XX	XXX	5.87	3690	XX	XXX	3.22	77[illegible]	2.44	520	XX	XXX	31
8,507		34831		95,373		58,407		32,575		11,729		

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

HUERFANO near MANZANARES CROSSING, RE... CO.

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1979

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

Max. G. H. 3.42 ft. at 400 Hrs on June 16 Min. Daily Discharge 4.5 sec.-ft. on Several days

S-Discharge Subdivided b-Ice Affected Days a-No Record Days

Discharge Estimated for "a" and "b" 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	1.78	7.8	1.83	9.5	1.86	8.9	a	5.5	a	5.0	916 1.83	5.7
2	1.78	7.8	1.83	9.5	1.83	8.0		6.0		5.5	1.82	5.6
3	1.78	7.8	1.88	11	1.78	7.0		6.5		5.5	1.81	5.4
4	1.78	7.8	1.87	10	1.83	8.0	a	7.0		6.0	1.80	5.2
5	1.78	7.8	1.86	10	1.92	8.0	1.84	7.0	914 a	7.0	1.85	6.2
6	1.79	8.0	1.84	9.2	2.12	8.0	1.81	6.2	1.90	8.6	1.84	6.0
7	1.78	7.8	1.83	8.9	a	7.5	1.80	5.8	1.89	8.3	1.84	6.0
8	1.79	8.0	909 1.83	8.9		7.0	1.80	5.8	1.87	7.8	1.87	6.8
9	1.78	7.8	1.84	9.2		7.5	1.81	5.8	1.85	7.6	1.85	6.4
10	1.80	8.6	1.84	9.2	a	8.0	912 1.81	5.8	1.85	7.6	1.79	5.6
11	1.81	8.9	1.85	9.2	1.98	13	1.82	6.0	1.86	7.8	1.82	6.0
12	902 1.81	9.2	1.92	11	1.94	12	1.83	6.2	1.85	7.6	1.85	6.8
13	1.79	8.6	1.84	8.9	1.88	9.8	1.84	6.4	1.87	8.3	1.86	7.0
14	1.80	8.9	1.85	9.2	1.87	9.5	1.84	6.4	915 1.87	8.3	1.84	6.8
15	1.81	9.2	1.85	9.2	1.83	8.3	1.84	6.4	1.87	8.3	1.88	7.6
16	1.81	9.2	1.84	8.9	1.83	8.3	1.83	6.4	1.88	8.3	1.87	7.6
17	1.80	8.9	1.82	8.3	1.83	8.3	1.82	6.2	1.88	8.3	1.87	7.6
18	1.81	9.2	1.84	8.9	911 1.85	8.9	1.82	6.2	1.90	8.6	1.85	7.2
19	1.81	9.2	1.82	8.3	1.84	8.3	1.81	6.0	1.90	8.6	1.84	7.2
20	1.81	9.2	1.85	8.9	1.84	8.3	1.82	6.0	1.90	8.6	1.88	8.0
21	1.82	9.5	1.88	9.8	1.87	8.9	1.84	6.2	1.90	8.6	1.88	8.0
22	1.87	11	1.89	10	1.84	8.0	913 1.82	6.4	1.87	7.6	1.85	7.6
23	1.84	10	1.88	9.8	1.83	7.6	a	6.0	1.92	8.6	1.87	8.0
24	1.86	11	1.87	9.5	1.85	8.0		6.0	1.93	8.9	1.85	7.6
25	1.92	13	1.90	10	1.82	7.2		6.0	2.01	11	1.89	8.9
26	908 1.85	10	1.87	8.9	1.81	7.0		5.5	1.91	7.8	917 1.90	9.2
27	1.85	10	1.87	8.9	1.80	6.6		5.0	1.92	7.8	1.90	9.2
28	1.84	9.8	1.78	8.9	1.81	6.8		5.0	1.90	7.2	1.90	9.2
29	1.83	9.5	1.86	8.9	1.81	6.8		4.5	X	X X	1.89	8.9
30	1.83	9.5	910 1.86	8.9	1.80	6.4		4.5	XX	XXX	1.87	8.3
31	1.83	9.5	XX	XXX	1.85	7.2	a	4.5	XX	XXX	1.89	8.9
Total		283.5		279.8		253.1		183.2		219.1		224.5
Mean		9.11		9.33		8.16		5.91		7.82		7.24
Run-off in acre-feet		560		555		502		363		435		445
Maximum		13		11		13		7.0		11		9.2
Minimum		7.8		8.3		6.4		4.5		5.0		5.2

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07. 1000
Rating Table Used #14

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	.88	8.6	2.38	36	3.02	102	3.19	136	2.54	53	2.28	21
2	.85	9.8	2.39	38	3.05	105	3.19	136	2.53	52	2.29	21
3	.83	9.4	2.38	37	3.07	106	924 3.15	130	2.47	45	2.28	20
4		8.3	2.34	35	3.12	112	3.05	114	2.47	45	2.29	20
5	1.89	9.2	2.32	34	3.10	108	3.03	111	2.44	42	2.29	20
6	.91	9.8	2.35	37	923 3.21	122	2.98	104	2.44	42	928 2.28	20
7	.97	12	919 2.40	42	3.33	144	2.97	102	2.46	43	2.28	20
8	2.00	13	2.44	46	3.39	153	2.97	102	2.47	43	2.27	19
9	.01	13	2.42	49	3.30	143	2.93	97	2.49	45	2.24	17
10	1.99	12	2.43	45	3.20	130	2.91	94	2.48	43	2.23	17
11	.96	11	2.42	45	3.16	125	2.88	90	2.47	42	2.24	17
12	1.96	11	2.39	42	3.18	130	2.87	88	2.48	43	2.29	19
13	1.94	11	2.36	40	3.28	150	2.86	88	2.47	42	2.26	18
14	.99	12	2.35	39	923 3.36	167	2.86	88	S	52	2.27	18
15	2.05	15	2.38	42	3.39	173	2.86	88	2.66	59	2.27	18
16	.13	18	2.43	47	3.36	167	2.84	86	2.62	54	2.23	16
17	2.19	21	2.55	60	3.29	155	2.83	84	2.58	50	2.22	16
18	.26	25	2.62	68	3.24	146	2.80	81	2.53	44	929 2.22	16
19	.30	27	2.72	88	3.23	144	2.77	77	2.50	42	2.22	16
20	918 2.32	25	2.83	97	3.14	130	2.72	71	927 2.44	36	2.21	15
21	.26	25	2.82	95	3.13	128	2.68	66	2.40	34	2.23	16
22	2.26	25	920 2.85	99	3.16	133	2.69	67	2.37	30	2.20	15
23	.32	30	2.89	102	3.18	136	925 2.66	64	2.38	30	2.18	14
24	.35	32	S	148	3.23	143	2.63	62	2.36	28	2.17	14
25	2.35	32	S	149	3.21	139	2.62	60	2.36	28	2.16	14
26	.34	32	3.08	123	3.20	138	2.62	60	2.37	28	2.16	14
27	2.36	34	3.00	110	3.21	139	2.60	58	2.35	26	2.16	14
28	.37	35	3.04	114	3.22	141	2.58	57	2.33	25	2.16	14
29	.37	35	3.22	139	3.20	138	2.58	57	2.32	24	2.16	14
30	.36	35	921 3.21	136	3.20	138	2.54	53	2.30	22	2.15	13
31	XX	XXX	3.10	116	XX	XXX	926 2.52	51	2.28	21	XX	10-10-79 to 10-22 XXX
	592.1		2291		4085		2622		1213		506	
	19.7		73.9		136		84.6		39.1		16.9	
	1170		4540		8100		5200		2410		1000	
	35		113		173		136		59		31	
	2.00		34		102		51		21		13	

	4th	3rd	2nd	1st	Quarter	Computed	Checked	Date
	SDJ	SDJ	SDJ	SDJ		SDJ	JMS	
	JMS	JMS	JMS	JMS		JMS	JMS	NOV. 2 1979

	4th	3rd	2nd	1st	Quarter	Dis.appld.	Dis.check	Date
	SDJ	SDJ	SDJ	SDJ		SDJ	JMS	
	JMS	JMS	JMS	JMS		JMS	JMS	NOV. 2, 1979

	4th	3rd	2nd	1st	Quarter	G.H.copd.	G.H.check	Date
	SDJ	SDJ	SDJ	SDJ		SDJ	JMS	
	JMS	JMS	JMS	JMS		JMS	JMS	NOV. 2, 1979

Water Year 1979

CUCHARAS ~~Creek near~~ SPOOL RANCH, LA VETA

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1979

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

Max. Discharge 1[illegible] sec.-ft. at 1[illegible] Hrs on Jun 7 G.H. 2.[illegible] ft.

Max. G. H. 2.24 ft. at 1[illegible] Hrs on Jun. 8 Min. Daily Discharge 4.5 sec.-ft. on Many Days

S - discharge subdivided, V - variable shift, Discharge estimated for

"a" - no gage height record and "b" - ice effect

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	.85	+12 7.1	.92	+11 7.4	a	7.5	a	4.5	a	4.5	[977] a	6.5
2	.86	+16 7.1	.92	7.4		6.5		4.5		5.0		6.5
3	.86	+16 7.1	.93	+11 7.8		6.5		5.0		5.0		6.0
4	.86	+15 6.8	.96	+10 8.5		7.0		5.5		5.0		5.0
5	.86	+15 6.8	.97	8.8		7.0		5.0	[975]	5.0		5.0
6	.86	+14 6.5	.94	+10 7.8		6.0		5.0		5.0	a	5.0
7	.87	+14 6.8	.92	+09 6.8		5.0		5.0		5.0	.88	+07 5.2
8	.86	+13 6.2	[970] .91	+09 6.5		5.0		5.0		5.0	.88	5.2
9	.85	+13 5.9	.91	6.5		5.5		5.5		5.0	.88	+07 5.2
10	.86	+12 5.9	.91	6.5		5.5	[973]	6.0		5.5	.90	+07 5.9
11	.85	+12 5.6	.92	6.8		6.0		6.0		5.5	.93	+07 7.1
12	[968] .85	+11 5.4	.96	8.2		6.0		6.0		6.0	.93	7.1
13	.84	5.2	.95	7.8		6.0		6.0		6.0	.93	7.1
14	.85	5.4	.95	7.8		6.0		6.0	[976]	6.5	.92	+07 6.9
15	.84	+11 5.2	.97	8.5		6.0		5.5		6.5	.90	+10 6.5
16	a	5.5	.97	8.5		6.0		5.5		6.0	.91	6.8
17		5.8	.98	8.8		6.5		6.0		5.5	.90	+10 6.5
18		6.2	.98	8.8	[972]	7.5		6.0		5.5	.92	+11 7.4
19		6.5	.98	8.8		7.0		6.0		6.0	.89	+12 6.8
20		6.9	.99	9.2		6.5		6.0		6.0	.88	6.5
21		7.2	.98	8.8		6.5		6.0		6.0	.88	+12 6.5
22		7.5	.96	8.2		6.5	[974]	6.0		6.0	.89	+13 7.1
23		7.9	.95	7.8		6.5		6.0		5.5	.91	+14 8.2
24		8.2	.95	7.8		6.5		6.0		5.5	.92	8.5
25		8.6	.95	7.8		6.0		6.0		6.0	.91	+14 8.2
26	[969] a	8.7	1.00	+07 9.6		6.0		5.5		6.5	[978] .93	+15 9.2
27	.95	+12 8.8	a	8.5		6.5		5.0		6.5	.93	9.2
28	.94	+12 8.5		8.0		6.0		5.0	a	5.5	.95	10
29	.93	+11 7.8		7.5		5.5		4.5	XX	XXX	.96	10
30	.92	7.4	[971] a	7.0		5.0		4.5	XX	XXX	.96	+15 10
31	.92	+11 7.4	XX	XXX	a	5.0	a	4.0	XX	XXX	.93	+16 9.6
Total		211.9		238.2		191.0		168.5		157.0		220.6
Mean		6.84		7.94		6.16		5.44		5.61		7.12
Run-off in acre-feet		420		472		379		334		311		438
Maximum		8.8		9.6		7.5		6.0		6.5		10
Minimum		5.2		6.5		5.0		4.0		4.5		5.0

Calendar Year

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 021 000

Rating Table Used #12

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	.91	t16 8.8	1.14	t10 16	1.80	t6 86	1.21	t14 28	1.23	t13 23	1.06	t17 16
2	.95	10	1.16	12	1.77	81	1.69	25	1.21	22	1.06	16
3	.92	9.2	1.17	t6 18	1.74	76	1.68	23	1.19	21	1.05	15
4	.95	10	1.15	t11 17	1.76	80	1.65	69	1.19	21	1.04	15
5	.95	t16 10	1.13	16	1.79	84	1.62	64	1.17	20	1.03	14
6	.90	t15 8.2	1.17	t11 18	983 1.80	t6 86	985 1.60	t14 62	1.17	20	989 1.03	t12 14
7	.94	t14 9.2	981 1.18	t12 20	1.85	t6 94	1.58	t15 60	1.17	20	1.02	t18 14
8	.99	t13 11	1.21	21	S	t11 129	1.55	56	1.16	19	1.01	14
9	.01	t13 12	1.24	23	2.12	t11 146	1.54	t15 55	1.18	20	1.01	14
10	.97	t12 9.6	1.22	22	2.02	t12 139	1.51	t16 52	1.19	21	1.00	13
11	.95	t12 8.8	1.21	21	1.93	t12 112	1.49	50	1.17	20	1.01	14
12	.94	t11 8.2	1.21	21	1.90	t13 108	1.48	t16 49	1.15	18	1.02	14
13	.94	t11 8.2	1.18	20	1.89	t13 107	1.46	t12 48	1.15	t13 18	1.04	t15 15
14	.97	t10 8.8	1.18	20	1.93	t14 116	1.44	45	S	V 39	1.12	t19 20
15	1.03	t12 11	1.19	20	1.99	t14 127	1.43	t12 44	1.39	t14 39	1.10	19
16	.96	t09 12	1.22	t12 22	2.01	t15 132	1.43	t18 45	1.33	32	1.07	17
17	.91	t08 14	1.32	t11 28	1.98	t15 127	1.42	44	1.26	26	1.05	16
18	1.17	t07 16	1.37	32	1.93	t16 119	986 1.40	t18 42	1.24	25	990 1.05	t19 16
19	.98	t06 16	1.41	36	984 1.89	t14 112	1.38	t12 39	1.22	23	1.04	16
20	1.16	15	1.46	41	1.82	t16 100	1.37	38	993 1.20	t14 22	1.03	15
21	.94	t06 14	1.50	t11 45	1.77	t15 97	1.36	t17 37	1.18	21	1.03	15
22	.95	t07 15	982 1.57	t10 52	1.74	84	1.34	t16 34	1.17	20	1.02	15
23	1.16	16	1.56	51	1.75	86	1.32	t16 32	1.15	t17 19	1.00	t19 14
24	.93	t07 20	1.59	55	1.76	88	1.31	t15 31	1.14	t15 19	.99	t18 13
25	1.22	t08 20	1.64	62	1.77	87	1.31	31	1.13	18	.98	12
26	1.19	18	1.78	83	1.75	86	1.30	t15 30	1.16	20	.97	12
27	1.18	t08 19	1.78	83	1.74	84	1.29	t14 28	1.17	t15 21	.97	12
28	1.19	t07 18	1.78	83	1.74	t15 84	1.27	27	1.12	t14 18	.97	12
29	1.17	17	1.85	94	1.70	t14 76	1.27	t14 27	1.10	17	.97	12
30	1.14	t09 16	1.91	105	1.71	t14 78	1.25	t13 25	1.08	16	.96	t18 12
31	XX	XXX	1.86	t10 96	XX	XXX	932 1.24	t13 24	1.08	t16 16	XX	XXX
	382.0		1258		2993		1414		670		436	8345.2
	12.9		40.6		99.8		45.6		21.6		14.5	22.9
	760		2,500		5,940		2800		1,330		865	16,600
			105		146		78		37		22	146
			16		76		24		16		12	4.0

Quarter	Computed	Checked	Date
4th	SDJ	JMS	
3rd	SDJ	JMS	
2nd	SDJ	JMS	
1st	SDJ	JMS	10-31-79

Quarter	Dis.appld.	Dis.check	Date
4th	SDJ	JMS	
3rd	SDJ	JMS	
2nd	SDJ	JMS	
1st	SDJ	JMS	10-31-79

Quarter	G.H.copd.	G.H.check	Date
4th	SDJ	JMS	
3rd	SDJ	JMS	
2nd	SDJ	JMS	
1st	SDJ	JMS	10-31-79

Water Year 1979

PURGATOIRE River at ~~Creek near~~ TRINIDAD, COLORADO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1979

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

Max. G. H. 5.33 +.12 ft. at 1200 Hrs on Aug. 18 Min. Daily Discharge 2.2 sec.-ft. on Mar. 2

S - discharge subdivided, V - variable shift, Discharge estimated for "a" - no gage height record and "b" - ice effect

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	.86	16	a	14	.90	26	a	7.5	.90	b-11	7.01 .83	15
2	.85	16		14	.82	20		4.5	.87	11	.78	13
3	.84	15		14	.77	17		3.0	.85	11	.76	12
4	.83	14		16	S	V 19		3.0	.85	11	.78	13
5	.82	14		18	1.03	33		3.5	6.99 .85	11	.72	10
6	S	18		20	.93	25		7.5	.83	11	.58	5.7
7	1.13	33		21	.95	26		9.5	.86	11	.41	2.2
8	1.10	31	6.94 a	18	a	7.0		12	.25	9.0	.83	15
9	.83	14	.77	15		7.0		10	.73	9.5	.90	19
10	.77	12	.72	12		7.0	6.97 a	b 13	.77	12	.84	16
11	.70	9.0	.69	11		7.0	.88	10	.77	b 12	.79	13
12	6.92 S	10	.68	11		7.0	.80	10	a	14	.79	13
13	.95	20	S	V 18		10.	.92	10	a	15	.75	11
14	.96	21	.76	15		15	.86	10	7.00 a	18	.72	10
15	.97	22	.77	16		18	.81	10	.93	22	.72	10
16	.98	22	.85	20		19	.80	12	.92	22	.74	11
17	S	V 11	.91	25		19	.81	13	.87	19	.73	11
18	.74	9.4	.91	25	6.96 a	19	.80	14	.80	14	.73	11
19	.71	8.4	.86	22	.82	b 22	.86	17	.76	13	7.02 .71	9.8
20	.71	8.4	.81	20	.76	25	.88	18	.78	14	.63	7.5
21	S	V 12	.83	21	.83	18	.80	12.	.84	16	.68	9.0
22	.93	17	.80	19	.92	13	6.98 .65	9.0	.84	16	.78	14
23	S	V 25	.77	18	1.06	10.	.78	9.0	.83	16	.79	14
24	1.16	31	.79	19	1.04	9.0	.79	9.0	.70	9.8	.79	14
25	S	V 18	.81	20	1.10	9.0	.69	9.0	.67	8.7	.76	13
26	6.93 .90	14	.81	20	1.14	9.0	.75	9.0	.69	9.4	.71	11
27	.91	14	.87	24	1.03	9.0	.83	10	.76	12	.67	9.4
28	.94	16	S	V 25	1.06	11	.92	11	.80	14	.66	9.0
29	.96	18	.91	28	1.00	12	.84	11	XX		.73	12
30	S	V 23	6.95 .94	30	.81	12	.86	11	XX	XXX	.74	13
31	1.04	24	XX	XXX	1.00	b 10	.92	b 11	XX	XXX	.71	11
Total		536.2		569.0		470.0		308.5		322.4		356.6
Mean		17.3		19.0		15.2		9.95		13.3		11.5
Run-off in acre-feet		1060		1130		932		612		639		707
Maximum		33		30		33		18		22		2
Minimum		8.4		11		7.0		3.0		9.0		2.2

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 0 124500

Rating Table Used #17

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.
.70	+04 11	1.01	+02 26	S	+04 13	S	+12 284	S	+07 150	.43	+06 3.2	1
2	+04 11	1.05	29	.86	18	S	228	710 S	v 129	.43	+06 3.2	2
.75	+05 13	1.03	28	.83	16	708 2.03	+12 198	1.93	+08 163	.42	+05 2.8	3
7	14	1.01	26	.91	21	2.02	196	1.92	161	S	v 26	4
.76	+05 14	1.02	27	.98	25	2.03	+12 198	1.91	159	712 1.24	+04 47	5
.76	+05 14	.98	24	706 S	+04 22	1.98	+11 183	1.88	152	1.22	45	6
5	+04 13	.91	20	1.02	+05 29	1.94	173	1.87	150	S	87	7
.73	+04 12	.88	+02 18	1.20	44	1.94	173	1.87	150	1.73	114	8
2	+03 11	705 S	v 22	S	+05 26	1.92	+11 168	1.89	154	1.73	114	9
.72	11	S	+03 41	.88	+06 20	2.01	+10 188	1.92	161	1.82	131	10
2	+03 11	1.25	47	.86	19	2.08	207	1.93	163	1.87	141	11
3	+02 11	1.19	41	.90	+06 22	2.06	+10 201	1.92	161	1.88	143	12
.74	11	S	33	.92	+07 23	1.93	+09 166	1.91	+08 159	S	158	13
4	11	S	22	.78	+07 16	1.81	139	S	+09 224	S	118	14
.73	+02 11	.83	16	.67	+08 11	1.89	+09 157	S	+10 59	.56	6.0	15
4	+01 11	.79	14	.67	11	S	v 223	.66	+11 12	.49	4.1	16
4	11	.80	14	.61	+08 8.7	S	+08 175	.62	+11 10	.46	3.5	17
.75	+01 11	S	30	1.68	+10 116	709 S	+07 217	S	v 187	.44	3.0	18
a	0 15	S	54	707 2.39	+12 314	2.02	183	1.06	+12 37	.58	6.6	19
	17	S	73	2.38	310	1.97	171	711 S	v 156	.86	18	20
	17	S	134	S	226	S	214	S	+12 14	.94	23	21
	17	S	123	1.93	173	2.03	185	S	v 56	.91	21	22
	21	1.72	+03 110	1.92	171	2.01	180	1.60	+11 104	.90	20	23
a	25	S	+04 217	1.95	178	2.00	178	1.57	+11 99	.92	22	24
.94	0 20	S	353	1.93	173	2.00	178	1.47	+10 83	713 .94	+04 23	25
00	+01 25	2.63	323	1.97	183	2.00	178	S	v 43	S	v 14	26
1.02	26	S	313	2.02	196	2.01	180	.55	+08 6.9	.44	+05 3.2	27
.98	23	2.43	300	S	213	2.02	183	S	+08 7.4	.43	+05 3.0	28
90	17	2.45	306	2.17	239	S	172	.62	+07 8.7	S	v 14	29
.93	+01 20	S	175	2.21	+12 253	1.99	175	.46	+06 3.9	.96	+06 25	30
XX	XXX	S	+04 14	XX	XXX	S	+07 170	.43	+06 3.2	XX	XXX	31

457.0	3023	3088.7	5841	3126.1	1342.6	19491.1
15.2	97.5	103	188	101	44.8	53.4
906	6000	6130	11590	6200	2660	38660
26	323	314	284	224	158	323
11	14	8.7	139	3.2	2.8	2.2

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

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

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

Water Year 1979

B

Arkansas River at ~~Creek~~ near Nepesta

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 19 79

Drainage area 9345 square miles. Water stage recorder Stevens A-35

Max. G. H. 7.21 ft. at 2000 hrs on June 9th Min. Daily Discharge 52 sec.-ft. on Oct. 4th

"S" - discharge subdivided; "V" - variable shift ⑤ - Specification

Discharge estimated for "a" - no gage-height record and "b" - ice affected gage-height record.

Calendar Year 1978

Day.	OCT.		NOV.		DEC. '78		JAN. '79		FEB.		MAR.	
	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge	Gage height	Discharge
1	a	80	548 3.70	5 103	3.76	173	a	220	a	B 140	4.15	19 272
2		60	3.72	21 106	3.76	173		225	555 a	180	557 4.13	19 261
3	a	54	3.73	23 106	3.80	175		220	4.84	185	3.97	182
4	548 a	50	3.80	17 109	3.75	167		195	4.85	187	3.77	106
5		50	3.81	16 109	3.77	170		185	4.83	190	3.79	112
6		52	3.81	16 109	3.98	195		190	4.83	194	3.95	173
7		60	3.82	15 109	3.98	200		195	4.85	197	3.89	148
8		80	3.79	100	3.99	130		200	4.87	200	3.93	164
9	a	90	549 3.77	15 94	a	134		210	S	B/V 216	3.94	168
10	549 a	98	3.73	83		138		225	4.10	15 225	3.96	178
11	549 a	100	3.76	91		147	a	243	4.02	186	3.94	168
12		100	3.78	97	a	165	553 a	250	4.01	182	3.91	155
13		102	3.79	15 100	551 a	200		230	4.05	200	3.89	148
14		100	3.83	16 115	4.20	205		210	4.11	15 230	3.88	144
15		105	3.98	17 178	4.25	210		230	556 4.23	22 335	3.90	19 148
16		100	4.11	19 250	4.26	214		240	4.18	21 300	559 4.03	20 215
17	a	100	4.01	200	4.28	220		235	4.10	19 245	4.18	20 294
18	545 a	100	3.97	182	4.30	230		240	4.09	240	4.33	21 391
19		104	3.93	168	4.08	240		240	4.13	261	4.39	430
20		110	3.91	155	3.93	235		240	4.19	294	4.42	21 451
21		110	3.92	19 160	3.92	233		245	4.17	283	4.60	22 444
22		140	536 3.75	18 168	554 a	220		245	4.18	288	4.91	23 868
23		150	3.76	173		220		240	4.13	261	4.75	723
24	a	156	3.77	178		230		240	4.13	261	4.56	568
25	546 a	156	3.77	178		220	a	235	4.12	256	4.45	486
26	a	130	3.77	178		210	554 a	225	4.12	256	4.34	410
27	547 a	23 120	3.76	173		220		220	4.13	261	4.31	391
28	3.78	24 125	3.78	182		218		205	4.13	19 261	4.34	410
29	3.82	25 144	3.79	186		210		195	XX	XXX	4.35	417
30	3.81	140	3.77	18 178		200		190	XX	XXX	561 4.38	23 437
31	3.72	25 109	XX	XXX	a	200	a	190	XX	XXX	4.34	23 410
156,044	Total	3,175		4,318		6,102		6,853		6,814		9,872
428	Mean	102		144		197		221		243		318
309,500	Run-off in acre-feet	6,300		8,565		12,100		13,590		13,520		19,580
1,810	Maximum	156		250		240		250		335		868
52	Minimum	50		83		130		185		140		106

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07117000
Rating Table Used # 8, Oct. 1, 1977 to Sept. 30, 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	4.29	378	4.70	631	6.54	2890	6.21	2270	5.02	664	4.90	430
2	4.26	359	4.73	655	6.29	2350	6.33	2520	4.96	623	4.90	430
3	4.27	365	4.90	803	5.81	1530	6.19	2230	4.92	599	4.98	486
4	4.31	391	4.99	887	5.53	1160	6.03	1940	4.84	538	4.86	404
5	4.37	430	4.96	858	5.66	1320	S	2120	4.74	465	4.90	430
6	4.35	417	4.81	714	5.96	1760	6.35	1810	4.80	508	4.92	444
7	4.34	404	4.51	465	6.03	1870	6.35	1810	4.80	508	4.89	424
8	4.25	335	4.48	444	S	2960	6.30	1740	5.04	689	4.87	410
9	4.25	335	4.53	479	7.15	4600	6.28	1710	5.13	758	4.84	398
10	4.41	437	4.69	599	S	4380	6.18	1580	S	1860	4.83	391
11	S	586	4.63	552	S	1590	6.00	1340	5.34	906	4.82	391
12	S	598	4.09	215	S	1080	6.00	1340	5.20	776	4.36	391
13	4.33	424	3.99	168	S	1680	6.03	1380	5.08	672	4.37	398
14	4.29	391	3.86	118	6.40	2470	5.98	1310	5.17	749	4.48	472
15	4.22	341	3.88	125	6.65	3040	6.08	1450	5.26	830	4.64	444
16	4.06	230	3.78	94	S	3710	S	2320	S	1540	4.41	424
17	4.14	272	3.74	83	S	2730	S	2100	5.96	1600	4.00	235
18	4.22	317	3.72	79	6.46	2560	S	2080	5.72	1250	3.92	205
19	4.28	353	3.89	129	S	2260	6.01	2030	5.38	858	3.86	186
20	4.26	341	S	193	6.47	2540	5.86	1380	S	939	3.79	155
21	4.22	317	S	984	S	2350	5.65	1100	5.33	767	3.79	155
22	4.13	266	5.21	998	6.12	1870	5.64	1080	5.30	740	3.90	196
23	4.06	230	5.14	925	S	1710	5.58	1010	5.35	785	3.95	205
24	4.02	205	5.25	1040	S	2820	5.56	988	S	1280	3.95	205
25	4.15	272	5.71	1640	S	3090	S	1250	a	1040	3.94	200
26	4.34	384	5.99	2010	S	2030	5.58	1060		909	4.00	215
27	4.35	391	5.99	2010	S	1500	5.56	1040		778	4.05	225
28	4.32	372	5.97	1980	6.62	3160	5.32	821	a	647	4.06	225
29		424	6.22	2350	6.39	2640	S	834	5.14	591	4.10	245
30	4.71	639	6.26	2410	6.22	2290	5.05	680	5.09	552	4.17	278
31	XX	XXX	6.58	2990	XX	XXX	4.98	631	5.00	486	XX	XXX
	11,204		27,628		71,940		46,954		25,907		9,697	230,464
	373		891		2,398		1,515		836		323	631
	22,220		54,800		142,700		93,130		51,390		19,230	457,100
	639		2,990		4,600		2520		1,860		486	4600
	205		79		1080		631		465		155	50

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 1979

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 79

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

Max. G. H. 6.53 ft. at 0500 on June 10 Min. Daily Discharge 40 sec.-ft. on Jan. 2

S - discharge subdivided; V - variable shift

Discharge estimated for "a" days.

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	1.67	to 50	[443] 2.10	oz 95	2.64	B 190	1.40	B 42	2.85	B 195	2.63	to 256
2	1.59	41	2.05	87	2.62	190	a	40	[450] 3.03	220	[454] 2.66	oc 268
3	1.69	53	2.07	oz 90	2.57	B 185		50	3.11	233	2.68	oc 276
4	[439] 1.69	to 53	2.12	o1 100	a	180		55	3.04	255	2.40	to 176
5	1.59	41	2.17	o 111		174		65	2.98	272	2.34	o3 158
6	1.59	41	2.18	113		170		74	2.96	285	2.38	o3 168
7	1.59	41	2.18	113		165		80	2.95	298	e.50	to 199
8	1.62	to 44	2.18	113		160		120	2.91	B 336	2.41	173
9	1.72	t4 62	[439] 2.15	o 108		140		180	2.98	o 394	2.49	195
10	1.75	t5 68	2.12	102		120		190	3.04	o1 423	2.51	202
11	[445] 1.81	t8 81	2.11	100		150	a	200	3.01	o1 405	2.51	to 202
12	1.84	t9 87	2.16	109	a	160	[448] a	200	2.91	o2 366	2.48	t1 197
13	1.86	90	2.19	o 115	[436] a	160	3.00	B 204	2.80	o5 330	2.42	173
14	1.86	90	2.21	o1 122	3.16	B 180	3.06	220	2.85	356	2.42	173
15	1.86	90	2.32	o2 150	3.25	210	2.99	210	[451] 2.84	o6 350	2.41	t1 170
16	1.87	92	2.57	o3 225	3.11	215	3.10	230	2.77	315	[453] S	V o2 153
17	1.88	93	2.67	o4 264	3.01	220	3.21	240	2.71	288	2.54	o1 202
18	[441] 1.88	t9 93	2.54	218	3.09	235	3.22	235	2.75	305	2.54	202
19	1.93	t7 98	2.50	205	3.11	240	3.22	235	2.67	272	2.58	215
20	1.98	t5 104	2.48	199	2.89	225	3.19	230	2.65	264	2.47	o1 191
21	2.03	t3 109	2.48	199	2.79	230	3.11	225	2.64	260	2.75	o 280
22	2.08	t11 115	[445] 2.48	t1 199	2.70	236	3.03	230	2.64	260	2.99	to 311
23	2.14	t8 122	2.47	195	2.46	168	2.88	225	2.61	250	S	V 764
24	2.19	to6 128	2.47	195	2.40	152	2.88	225	2.59	242	2.72	t2 372
25	[442] 2.22	to5 133	2.47	195	2.22	113	2.96	210	2.60	246	2.58	260
26	2.31	t5 155	2.47	t1 195	2.06	87	[449] 2.93	200	2.60	246	2.39	195
27	2.30	t5 152	2.50	B 190	[447] 2.30	133	2.84	200	2.61	250	2.50	232
28	2.26	t4 140	2.63	195	2.54	195	2.76	195	2.62	to6 253	2.50	232
29	2.25	to3 135	2.60	190	1.88	65	2.77	195	XX	XXX	2.46	218
30	2.19	o1 117	2.61	B 190	[1.52]	44	2.83	200	XX	XXX	[454] 2.51	t2 236
31	2.16	o 109	XX	XXX	1.62	B 64	2.80	F 195	XX	XXX	2.65	t2 288
Total		2827		4682		5,176		5,400		8169		7419
Mean		91		156		167		174		292		239
Run-off in acre-feet		5,610		9,290		10,270		10,710		16,200		14,720
Maximum		155		264		240		240		423		[illegible]
Minimum		41		87		44		40		195		153

Calendar Year 1978

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. 07119700

Rating Table Used No. 3 - Oct. 1, 1977 to Sept. 30, 1979

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
2.65	288	2.93	383	5.41	2560	4.96	2020	3.14	441	2.86	272	1
.51	205	3.02	435	5.43	2570	5.27	2570	2.98	361	2.80	250	2
2.50	199	3.15	498	S	2030	5.14	2360	2.86	310	3.21	447	3
.55	215	3.24	537	4.64	1400	4.98	2180	2.80	284	3.23	459	4
.61	236	3.30	565	4.66	1420	S	2215	2.61	215	2.94	296	5
2.57	222	3.22	498	4.97	1810	4.96	2100	2.55	195	2.84	253	6
.58	225	3.15	441	5.18	2120	4.83	1910	2.74	256	2.87	264	7
2.54	212	3.25	491	5.64	2900	4.92	2040	2.94	340	2.81	242	8
.63	242	3.23	472	5.63	4030	4.71	1740	3.09	417	2.77	228	9
2.72	276	3.12	411	S	4398	4.56	1560	S	1343	2.75	222	10
3.01	378	2.91	305	S	2570	4.45	1430	S	1005	2.82	246	11
	509	S	251	S	1219	4.40	1370	3.61	752	2.76	222	12
S	252	2.67	222	S	1442	4.37	1340	3.48	648	2.69	199	13
.28	150	2.70	228	S	2314	4.36	1320	S	1220	2.62	178	14
2.31	158	S	173	S	2676	4.28	1230	4.18	1120	3.01	330	15
.44	169	2.57	192	S	3178	S	1471	3.90	832	3.05	350	16
.43	187	2.51	178	S	2716	S	2218	S	1148	2.75	232	17
2.49	202	2.42	158	5.32	2260	S	2021	4.25	1140	2.72	222	18
.50	205	2.46	165	S	2134	S	1361	3.72	656	2.66	205	19
2.48	199	2.58	195	S	2093	S	1208	3.77	688	2.58	187	20
.48	199	S	472	S	2108	3.92	796	3.49	484	2.54	176	21
.61	239	3.94	877	4.82	1540	3.83	728	3.40	429	2.57	184	22
2.66	253	3.79	760	S	1938	3.79	696	3.38	417	2.67	215	23
.58	225	3.81	760	S	3225	3.74	656	S	729	2.68	218	24
2.53	208	S	1164	5.76	3140	S	1229	S	862	2.64	205	25
.38	165	4.49	1310	S	2689	4.03	1950	S	799	2.65	208	26
.41	173	4.60	1430	S	979	3.85	796	3.52	648	2.71	228	27
2.40	170	4.59	1420	S	2860	3.70	683	S	885	2.73	236	28
.32	150	S	1757	5.31	2570	3.53	565	3.10	394	2.63	202	29
S	286	4.94	1840	5.02	2120	3.37	465	3.10	394	2.78	253	30
XX	XXX	S	1816	XX	XXX	S	1417	3.07	378	XX	XXX	31
	6811		20,404		70,504		44,590		19,790		7,429	203,201
	227		658		2,350		1,440		638		248	557
	13,510		40,470		139,840		88,440		39,250		14,740	403,000
	509		1840		4,398		2,570		1,343		459	4398
	150		158		979		465		195		176	40

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

Water Year 1979

CATLIN CANAL ~~River at Creek~~ near FOWLER, COLORADO

Daily Gage Height, in Feet, and Discharge in Second-Feet for the Year Ending September 30, 1979

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

Max. Discharge 35 ft. at Sec. ft. Max. G. H. 3.12 ft. at 1900 Hrs on Aug. 14 Hr. ft. on Aug. 3 Min. Daily Discharge 0 sec.-ft. on May Days

S - Discharge Subdivided

Calendar Year 1978

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											0	
3											0	
4											0	
5											0	
6											0	
7											0	
8											0	
9											0	
10											0	
11											0	
12											0	
13		NO FLOW		NO FLOW		NO FLOW		NO FLOW		NO FLOW	.09	1.2
14											.09	1.2
15											.08	1.0
16											.07	.82
17											S	5.4
18											S	55
19											S	129
20											S	169
21											S	166
22											S	182
23											2.10	190
24											2.23	209
25											2.21	206
26											2.21	206
27											2.26	213
28											2.24	210
29											2.24	210
30									XX	XXX	2.24	210
31			XX	XXX					XX	XXX	2.23	209
Total		0		0		0		0		0		2573.62
Mean												83.0
Run-off in acre-feet												5,100
Maximum												213
Minimum												0

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF STATE ENGINEER

Sta. No. _____

Rating Table Used STANDARD 15-FT PARSHALL FLUME DATED 6-12-25

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	.83	209	1.83	152	S	168	S	271	2.51	252	1.90	161
2	.83	209	1.83	152	2.17	200	2.61	268	2.49	249	1.85	155
3	.23	209	S	196	2.15	197	2.77	295	2.48	247	1.09	66
4	.1	191	2.46	244	2.18	201	2.88	314	2.47	246	1.00	58
5	.01	177	2.47	246	2.36	228	2.90	318	2.47	246	S	68
6		196	2.38	231	2.51	252	S	292	2.48	247	2.07	185
7	S	197	S	146	S	235	2.65	274	2.17	200	2.07	185
8	S	140	0	0	S	116	2.75	291	2.07	185	2.10	190
9	.32	96	S	15	0.92	50	2.74	290	S	165	2.09	188
10	.32	90	S	162	S	70	2.91	319	S	198	2.03	179
11	.32	90	S	218	1.65	129	S	303	2.36	228	1.90	161
12	.32	90	S	186	2.10	190	2.49	249	1.82	151	2.04	181
13	S	183	S	44	2.26	213	2.48	247	1.59	121	2.14	195
14		225	0	0	2.21	206	2.47	246	S	171	2.25	212
15	S	178	0		2.30	219	2.47	246	2.16	198	2.29	218
16		59	0		2.36	228	S	248	2.34	225	2.28	216
17	.50	19	0		2.39	233	S	291	2.44	241	S	142
18	.63	28	0		2.35	227	S	248	2.33	224	0.53	21
19	.94	52	0		2.38	231	2.65	274	2.48	247	0	0
20	.19	76	0	0	2.50	250	2.65	274	2.47	246	0	
21	.3	20	S	117	2.68	280	2.54	257	2.46	244	0	
22	S	40	2.50	250	2.81	302	2.50	250	2.48	247	0	
23		0	2.50	250	S	247	2.49	249	2.49	249	0	
24	0	0	2.50	250	0	0	2.48	247	2.49	249	0	
25	S	7.0	2.50	250	S	19	2.40	235	2.49	249	0	
26		136	2.62	270	S	210	2.29	215	2.49	249	0	
27	1.83	152	2.65	274	2.49	249	2.49	249	2.47	246	0	
28	.83	152	2.64	273	S	262	2.49	249	2.47	246	0	0
29	.83	152	2.65	274	2.65	274	2.48	247	2.34	225	S	44
30	.83	152	2.65	274	2.74	290	2.48	247	2.04	181	S	36
31	XX	XXX	S	213	XX	XXX	2.50	250	1.85	155	XX	XXX
	3575		4687		5976		8253		6822		2861	
	119		151		199		266		220		95.4	
	7090		9300		11,850		16,370		13,540		5,670	
	225		224		302		319		252		218	
	0		0		0		215		121		0	

			34,252.62
			95.2
			68,930
			319
			0

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

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

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

Water Year 1979