ANNUAL REPORT

WATER DIVISION VII

PERIOD PERIOD NOVEMBER 1, 1978 THRU OCTOBER 31, 1979

Submitted to

Dr. Jeris A. Danielson

State Engineer

State of Colorado

By

Davies C. Lile

Division Engineer

Durango, Colorado

January 17, 1980

RICHARD D. LAMM
Governor

JERIS A. DANIELSON
~~xxxxxxxxx~~
State Engineer

DIVISION OF WATER RESOURCES

DARIES C. LILE, P.E.
DIVISION WATER ENGINEER
DIVISION 7
P. O. Drawer 1931 1880
DURANGO, COLORADO 81301
Office Phone: 247-1845

January 17, 1980

Dr. Jeris, A. Danielson, State Engineer
Colorado Division of Water Resources
1313 Sherman Street
Denver, Colorado 80203

Dear Dr. Danielson:

Attached herewith is the Division VII Annual Report for the period November 1, 1979 through October 31, 1980.

Very truly yours,

Daries C. Lile
Division Engineer

DCL:alf
Enclosure

I. INTRODUCTORY STATEMENT

Irrigation Division 7 is located in the southwest corner of Colorado. The drainage basins include the San Juan and the Dolores Rivers which are both tributaries of the Colorado River system. The geography consists of mountain ranges, mesas, and valleys. The mountain areas are used for mining, grazing, timber production, and recreational purposes. The mesas and valleys support a large agricultural economy with both irrigated and dry land farming being practiced.

Population trends in the Basin continue to show an influx of newcomers. This growth is partly due to the desirability of the area's living conditions, and a result of the national energy problem. Interest is being generated in exploration for oil and gas as well as evaluating the potential for hydro and thermo power plants.

The U.S.B.R. (or Water & Power Resources Service as it is now known), is in the construction stage on the Dolores Project. They have completed plans and specifications for Great Cut Dike, McPhee Reservoir, and the bypass tunnel. Bids have been asked for and contracts are hoped to be let by April of 1980 for these phases of the project. They have completed work on a new office building and access road in the project area.

The Animas-La Plata Project is still in the planning process. Work has been completed on the E.I.S. draft, and it has been submitted for public review. They have received $600,000 advanced planning funds for this fiscal year.

The process of forming the conservancy district is being contested in the courts, and there may be a need for a formal election before the district is organized. Once the district is formed, then negotiations will begin on the repayment contract which will be necessary before a construction start can be authorized.

II. PERSONNEL

NAME	POSITION	FISCAL YEAR MONTHS BUDGETED/	WORKED	WATER YEAR MILEAGE
Daries C. Lile	Division Engineer	12	12	873 P 7,140 S*
Orlyn J. Bell	Asst. Division Engineer	12	12	3,023 P
Edward W. Blank 1/	Hydrographer	1	1	1,540 P 3,853 S
Kenneth A. Beegles 2/	Hydrographer	9	9	50 P 14,522 S
Ann-Louise Fauth	Secretary	12	12	--

FULL TIME EMPLOYEES IN FIELD

NAME	POSITION	DISTRICT			
William E. Baker 3/	Water Comm. A	32	7	7	9,759 P
E. Ivan Danielson	Water Comm. B	30	12	12	7,578 P
George E. Davis	Water Comm. B	30	12	12	412 P 9,565 S
George Edmonson 4/	Water Comm. A	32	1	1	1,850 P
Glen E. Humiston	Water Comm. C	34,32,	12	12	14,614 S
J. Russell Kennedy 5/	Water Comm. C	33 69,71	12	12	11,541 P
William P. Lynn	Water Comm. C	29,77,78	12	12	10,457 P
Larry Nielsen	Water Comm. B	77	12	12	11,794 P
Avrit G. Sparks	Water Comm. B	31,46	12	12	10,378 P 5,473 S 6/
Wilford E. Speer	Water Comm. B	71, 69	12	12	15,963 P

PERMANENT PART-TIME EMPLOYEES IN FIELD***

Roy M. Brown, Jr.	Water Comm. A	29,78	7.0	10.1	9,722 P
Bob R. Shahan	Water Comm. A	77	3.0	3.2	1,493 P
Lawrence J. Shock	Water Comm. A	46,31	7.0	9.5	7,169 P
John J. Taylor	Water Comm. A	78	4.0	2.8	2,556 P
	TOTALS		171.0	175.6	106,158 P 55,167 S
	TOTAL MILEAGE FOR PERIOD				161,325

*Vehicle #5313 used by Division Engineer, Assistant, and Dam Section personnel.
*** Permanent Part-Time Employees received additional budget time for tabulation.
1/ Edward Blank to Assistant Division Engineer position in Division I 2/79.
2/ Kenneth Beegles to Water Resource Engineer "C" assigned to Division 7 effective 3/1/79.
3/ William E. Baker Probationary Appointment effective 5/1/79 to replace George Edmonson.
4/ George Edmonson given a total of 28 days to train William E. Baker.
5/ J. Russell Kennedy to Water Commissioner "C" position effective 9/1/79.
6/ State vehicle used during winter months for Avrit Sparks & Lawrence Shock to work in Division Office.

III. WATER SUPPLY

A. SNOW PACK (Winter 1978-1979)

The San Juan Basin seasonal accumulation, October through April, was one of the wettest on record; 150 to 200% of normal. Pagosa Springs received 20.22", 198% of normal; Fort Lewis, 19.29", 208%, which were the wettest seasonal totals in over 40 years. The entire Basin received a very high snow pack which is illustrated by the following table based on May 1, 1979 conditions:

SNOW PACK	NO. OF COURSES AVERAGED	THIS YEAR'S WATER CONTENT AS A PERCENTAGE OF LAST YEAR	AVERAGE
ANIMAS RIVER	7	184%	219%
DOLORES RIVER	5	153%	191%
SAN JUAN RIVER	4	209%	214%
LA PLATA RIVER	1	195%	300% (13 yrs.)
MANCOS RIVER	1	120%	145% (5 yrs.)

WATER SUPPLY	APR. THRU SEPT. FORECAST (1,000 A.F.)	APR. THRU SEPT. RECORDED (1,000 A.F.)	15 YR. AVERAGE (1,000 A.F.)	APR. THRU SEPT. % OF AVERAGE
ANIMAS RIVER @ DURANGO	800	759	425	179
DOLORES RIVER @ DOLORES	430	408	233	175
LA PLATA RIVER @ HESPERUS	45	45	23.5	191
PIEDRA RIVER @ ARBOLES	455	461	201	229

B. PRECIPITATION (Summer 1979)

There was very heavy precipitation during the winter months which resulted in an excellent spring runoff. However, the summer months with the exception of August, were all very dry. The following is a table giving a comparison of the 1979 precipitation with respect to normal for Durango, Colorado:

MONTH	PRECIPITATION	HISTORIC NORMAL "
NOVEMBER 1978	2.86"	1.11"
DECEMBER 1978	2.23"	1.90"
JANUARY 1979	4.24"	1.70"
FEBRUARY 1979	1.85"	1.14"
MARCH 1979	3.72"	1.47"
APRIL 1979	.66"	1.36"
MAY 1979	1.77"	1.12"
JUNE 1979	.13"	.88"
JULY 1979	.38"	1.78"
AUGUST 1979	2.27"	2.43"
SEPTEMBER 1979	.17"	1.59"
OCTOBER 1979	.89"	1.94"
TOTAL	21.17"	18.42"

B-1 COMPARATIVE STREAM FLOW DATA

LA PLATA RIVER AT HESPERUS

MONTH	TEN YEAR MONTHLY AVERAGE STREAMFLOW	1978-1979 MONTHLY STREAMFLOW	PERCENT OF MONTHLY AVERAGE	PERCENT OF CUMULATIVE MONTHLY AVERAGE
October	1,226	296	24	24
November	750	497	66	40
December	561	405	72	47
January	444	334	75	51
February	451	291	65	53
March	822	562	68	56
April	3,157	5,570	176	107
May	8,066	17,040	211	161
June	6,984	15,660	224	181
July	2,702	4,430	164	179
August	1,101	1,530	139	177
September	1,171	678	58	172

LA PLATA RIVER AT STATE LINE

October	1,041	33	3	3
November	566	237	42	17
December	600	222	37	22
January	584	430	74	33
February	564	508	90	43
March	1,267	2,970	234	95
April	4,977	21,890	444	274
May	6,642	22,720	342	302
June	4,460	9,840	221	284
July	1,428	3,070	215	280
August	442	930	210	278
September	547	167	31	272

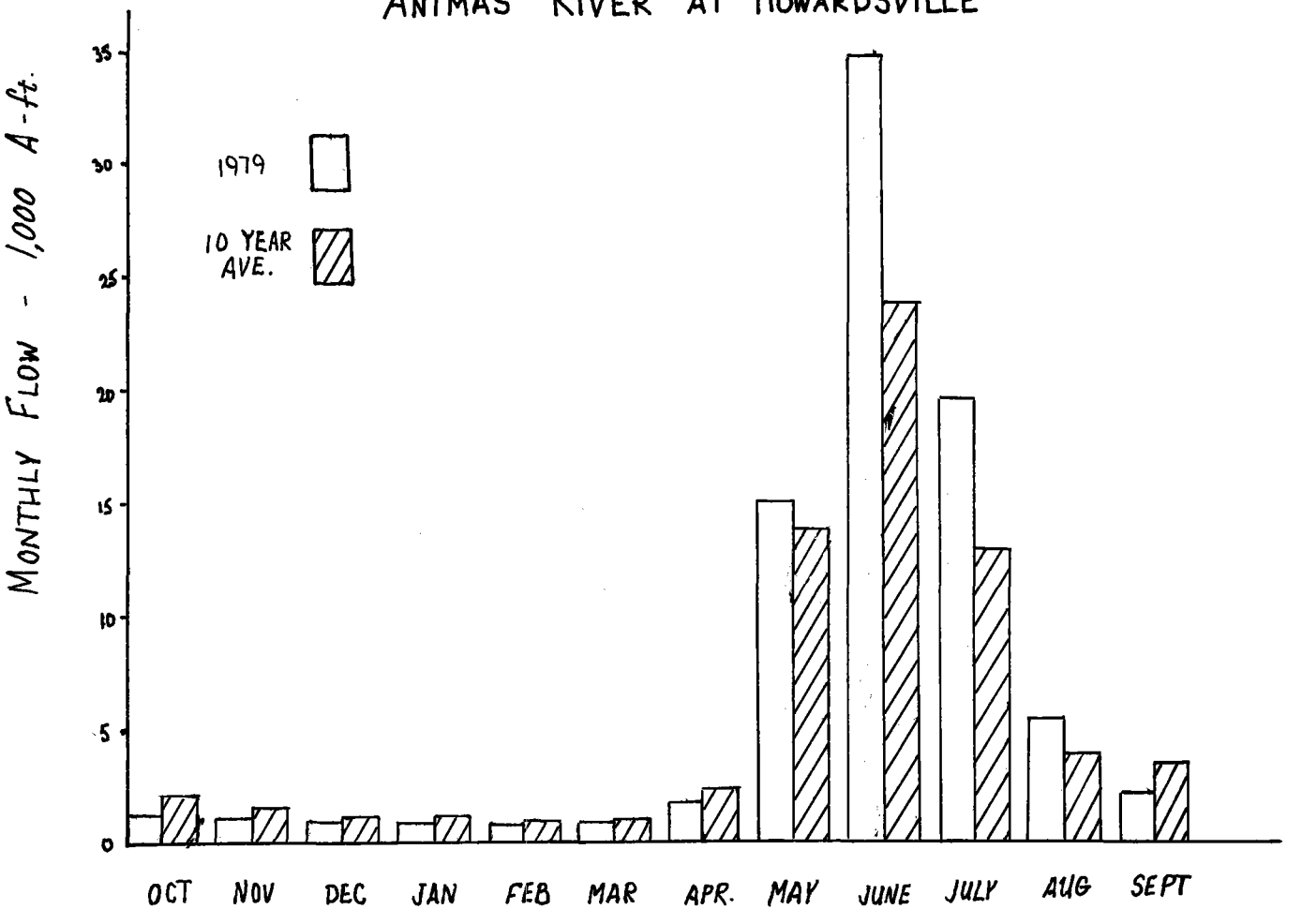
ANIMAS RIVER AT HOWARDSVILLE

October	2,174	1,250	57	57
November	1,463	1,040	71	63
December	1,191	928	63	67
January	1,026	879	78	61
February	848	772	91	73
March	984	875	89	75
April	2,258	1,730	77	75
May	13,654	14,900	109	95
June	23,721	34,590	146	120
July	12,940	19,540	151	127
August	3,940	5,440	138	128
September	3,402	2,150	63	124

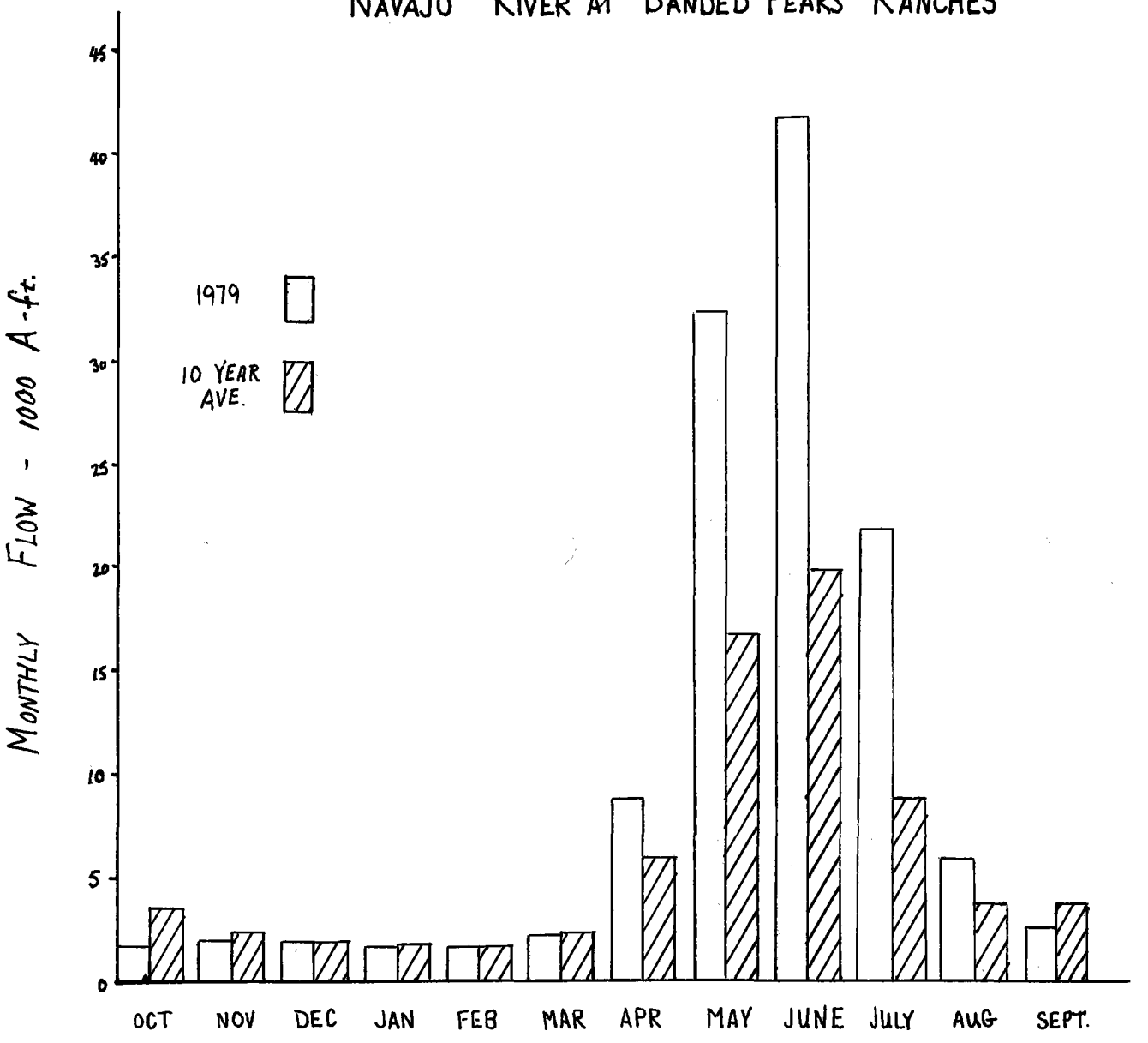
NAVAJO RIVER AT BANDED PEAKS

October	3,480	1,770	51	51
November	2,326	1,970	85	64
December	1,841	1,850	100	73
January	1,682	1,630	97	77
February	1,612	1,600	99	81
March	2,228	2,150	96	83
April	5,914	8,750	148	103
May	16,741	32,190	192	145
June	19,755	41,610	211	168
July	8,672	21,710	250	179
August	3,646	5,810	159	178
September	3,578	2,560	72	173

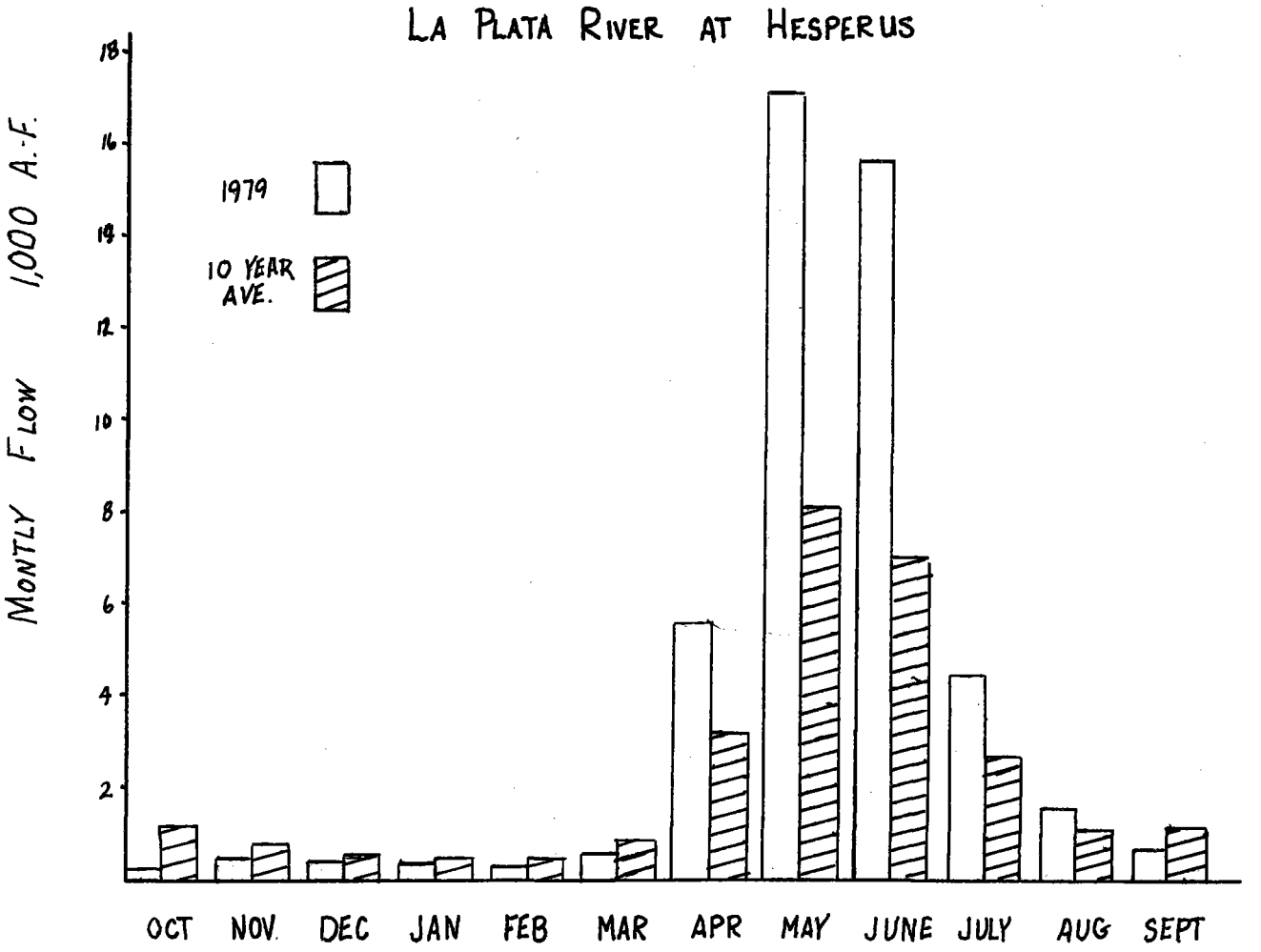
ANIMAS RIVER AT HOWARDSVILLE



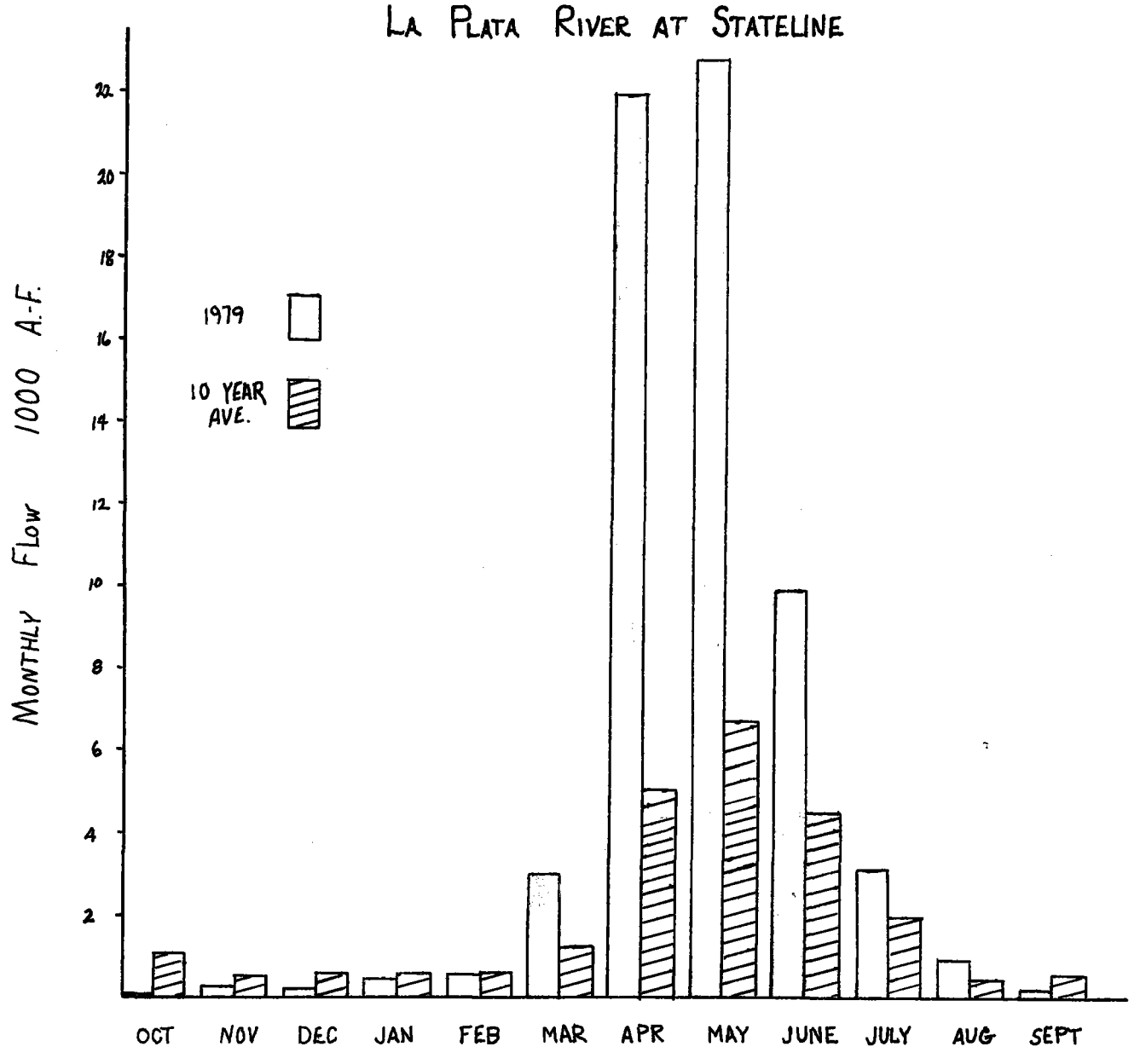
NAVAJO RIVER AT BANDED PEAKS RANCHES



La Plata River at Hesperus



La Plata River at Stateline



C. FLOODS

Although this season received one of the heaviest snow packs of recorded history, there was no substantial property damage from floods. We did have considerable high flows on all of the streams with erosion of stream banks and ditch headings occurring. No major flooding was experienced in the towns of Durango, Pagosa Springs, Cortez, and Dolores. However, the Mancos River did erode rip rap protecting around sewer manholes and preventative maintainance was necessary. The Division staff was kept very busy monitoring the streams in case of flood problems. A network which kept track of the weather patterns, stream flows and potential storms was established by the State Office of Emergency Preparedness. Local sheriff officers and civil defense were very active in being alert as to changing conditions. The entire Division was very fortunate that no disastrous flooding resulted.

The rivers peaked during the Memorial Day weekend when snow melt was coupled with rains. Another peak occurred approximately three to four weeks later, but the stage did not exceed those of the Memorial weekend. Peaks on the various rivers were as follows:

STREAM	DATE 1979	PEAK
ANIMAS RIVER @ DURANGO	May 28	7,810 c.f.s.
LA PLATA RIVER @ HESPERUS	May 27	1,210 c.f.s.
MANCOS RIVER @ MANCOS	May 27	1,650 c.f.s.
DOLORES RIVER @ DOLORES	May 30	4,580 c.f.s.
SAN JUAN RIVER @ PAGOSA	May 26	5,210 c.f.s.
PIEDRA RIVER @ ARBOLES	May 27	5,860 c.f.s.

D. WATER BUDGET

Schedule on following page.

III. D. WATER BUDGET

FLOWS IN ACRE FEET

DRAINAGE	GAGED FLOW	ACRES IRRIGATED	EST. IRR. DEP.	EST. RES. EVAP.	EST. MUNICIPAL DEP.	FLOW BYPASSED GAGE	TRANS. MT. DEPLETION	STORAGE CORRECTION	ESTIMATED BASIN YIELD
SAN JUAN RIVER 1/	780,000	17,849	14,400	480	100	--	156,598 4/	486	952,064
PIEDRA RIVER	595,500	6,906	8,300	3,000	100	--	148	594	607,642
PINE RIVER 2/	450,000	58,825	70,600	5,300	150	--	1,452	12,090	539,592
ANIMAS RIVER	1,041,000	35,610	39,200	3,700	1,400	8,021	170	20,931	1,114,422
MANCOS RIVER	92,740	15,480	14,700	700	230	--	--	-2,258	106,112
LA PLATA RIVER	63,010	13,922	12,500	140	10	721	--	31	76,412
MC ELMO CREEK	52,920	48,552	63,100	2,100	640	--	-103,164 5/	2,278	17,874
DOLORES RIVER 3/	429,100	2,177	2,400	2,100	230	--	8,100 6/	187	439,117
DISAPPOINTMENT CREEK	24,650	1,335	1,600	130	--	--	-58	63	26,385

NOTE: Figures included in this budget are based on estimates and should only be considered as such. As more accurate irrigated acres are calculated, better values of irrigation depletion can be determined. Also, reservoir evaporation and municipal depletions need additional data to improve the accuracy.

1/ Includes Blanco and Navajo drainages, Districts 29, 77.

2/ Combined flow of Pine River at LaBoca and Spring Creek gages and estimate of Siembritas flow and Rock Creek flow.

3/ Flow gaged at Town of Dolores and includes Montezuma Valley Irrigation water.

4/ Includes 156,209 A.F., San Juan-Chama into New Mexico; and 389 A.F. into the Rio Grande Basin in Colorado.

5/ Correction of imported water from District 71, Dolores River.

6/ Diverted to Summit and used in District 32.

E. UNDERGROUND WATER

There have been several filings in the Division 7 Water Court on underground non-tributary water. Colorado Pacific Aztec and Colorado Pacific Energy filed on 156 wells to be located in the Dakota and Menefee formations. Also, Bluepond Associates filed on six underground reservoirs. These applications have created quite a state-wide problem as similar filings were made throughout the state. The State Supreme Court consolidated all the claims into one case and appointed a special water judge to hear the points of law. It appears it will be several years before the cases are concluded.

The Colorado Pacific Energy and Colorado Pacific Aztec wells requested a total amount of 28.0 c.f.s. There have been well permits applied for on these wells. The Groundwater Section has reviewed and denied the majority of them; however, there were some issued in the Montezuma County area.

Bluepond Associates requested to be granted water rights on so-called underground reservoirs for a total of 102,500 acre feet. These reservoirs are defined as being a result of terminal moraines in the valley fill on several of the streams. These cases have also been consolidated with the deep well cases.

The primary activity in groundwater has been with small capacity domestic wells. There seems to be an unending stream of applications for domestic wells and new subdivisions. There are only a few areas left in the Division where these type of wells can be issued without requiring augmentation water. Reviewing and evaluating the plans of augmentation involves a great amount of staff time. We are fortunate, however, since the Water Court works very closely with the Division in assuring that the plans of augmentation are feasible.

F. TRANSMOUNTAIN DIVERSIONS

NAME OF DITCH	WATER DISTRICT	SOURCE OF SUPPLY	RECIPIENT	AMOUNT A.F.
Pine R. Weminuche Pass (Fuchs Ditch)	31	Pine River	Leland & Harley Fuchs Del Norte, Colorado	207
Weminuche Pass Ditch (Raber-Lohr Ditch)	31	Pine River	Hilde Lohr & Leon Raber Del Norte, Colorado	1,244
Treasure Pass Diversion	29	San Juan R.	Fred Falk, Del Norte, CO.	389
Williams Creek Squaw Pass Diversion Ditch	78	Piedra River	Seaborn Collins, Navajo Development Co., Creede, CO	0
Don LaFont Ditch #1 (South River Peak Ditch)	78	Piedra River	Colorado Div. of Wildlife	.45
Don LaFont Ditch #2 (Piedra Pass Ditch)	78	Piedra River	Colorado Div. of Wildlife	148
Carbon Lake Ditch	30	Animas River	Ouray Ditch Co., Montrose, CO	63
Red Mountain Ditch	30	Animas River	Ouray Ditch Co., Montrose, CO	107
Mineral Point Ditch	30	Animas River	Warren Gibbs, Ouray, CO.	No. Struc.
St. John Ditch	30	Animas River	Charles Gunn & W. Worley Olathe, Colorado	No. Struc.

III G. RESERVOIR STORAGE IN ACRE FEET

DISTRICT 29	BEGINNING OF SEASON	MAXIMUM	END OF SEASON
BARROW DITCH AND RESERVOIR	3	13	13
BLANCO RETAINING POND	1	1	1
BORNS LAKE RESERVOIR	68	68	68
BRAMWELL RESERVOIRS, 1, 2, 3	0	4	1
BROWN RESERVOIR	1	6	1
CRESCENT LAKE RESERVOIR	35	35	35
DRY GULCH RESERVOIR	0	1	0
ECHO CANYON RESERVOIR	1,950	2,200	2,150
ECHO RESERVOIR	0	2	0
ECHO RESERVOIR NO. 2	0	7	1
EIGHT MILE RESERVOIR	0	1	0
FAWN GULCH RESERVOIR	0	1	0
FREEMANS LAKE AND SPRING	4	4	4
GALE RESERVOIR SYSTEM NO. 1	10	10	10
GALE RESERVOIR SYSTEM NO. 2	7	7	7
GALE RESERVOIR SYSTEM NO. 3	11	11	11
HARRIS BROS. AND BOONE RESERVOIR NO. 1	20	49	31
HARRIS BROS. AND BOONE RESERVOIR NO. 2	100	205	172
HARVEY LAKE	4	4	4
HATCHER RETAINING POND	7	7	7
HYDEAWAY RANCH RESERVOIR	1	4	4
JOE HERSCH RESERVOIR	2	2	2
MC GIRR AND GOMEZ RESERVOIR	0	0	0
PAGOSA RESERVOIR	25	25	25
SHOESTRING RESERVOIR	0	1	0
SPILER CANYON RESERVOIR	0	2	0
SQUAW GAP RESERVOIR	0	1	0
SUNSET COTTAGES RESERVOIR NO. 1	18	18	18
SUNSET COTTAGES RESERVOIR NO. 2	23	23	23
THOMAS RESERVOIR	56	56	56
TOWN OF PAGOSA RESERVOIR	0	1	1
VALLE SECO RESERVOIR	0	.5	0
WILLOW DRAW RESERVOIR	0	1	0
WILSONS LAKE	7	7	7
FOUR MILE RESERVOIR	8	8	8
TOTAL	2,361	2,786	2,660

DISTRICT 30			
ANDREWS LAKE	125	132	116
CASCADE RESERVOIR	2,502	15,589	11,358
CLIFTY LODGE RESERVOIR	1	1	1
DURANGO RESERVOIR NO. 1	450	450	450
DURANGO RESERVOIR NO. 2	10	10	10
DURANGO RESERVOIR NO. 3	42	42	42
DURANGO RESERVOIR NO. 4	120	120	120

III G. RESERVOIR STORAGE IN ACRE FEET

DISTRICT 30 (Continued)		BEGINNING OF SEASON	MAXIMUM	END OF SEASON
FLORIDA CANAL AND RESERVOIR		200	200	200
GREGG RESERVOIR		2	2	2
HAVILAND LAKE RESERVOIR		220	220	220
HENDERSON LAKE		55	58	54
HOTTER BROTHERS LAKE		39	39	39
ICE LAKE RESERVOIR		415	416	415
JOHANSING-VINNEL FISH RESERVOIR		4	4	4
KEELER RESERVOIR		487	487	487
LAKE CAROL		8	8	8
LAKE OF THE PINES		105	105	102
LAKE SUSAN		17	17	17
LEMON RESERVOIR		7,315	39,163	19,330
LEMON RR RESERVOIR		15	15	15
L-U LAKES		3	3	3
MACY RESERVOIR		0	11	0
PATRICIA A. SHERWOOD RESERVOIR		4	4	4
SHORT RESERVOIR		0	0	0
TURNER PUMP STATION AND PONDS		0	84	20
TURNER RESERVOIR		410	473	465
WARNER RESERVOIRS NO. 1 THRU NO. 8		47	47	45
	TOTAL	12,596	57,700	33,527
DISTRICT 31				
BELLFLOWER RETENTION RESERVOIR		15	15	10
FITZGERALD IRRIGATION SYSTEM		1	2.5	.5
FREDERICK RESERVOIR NO. 2		3	3	3
JEFFRIES POND NO. 1		1	1	1
JEFFRIES POND NO. 2		2	3	1.5
MARK E. TAYLOR RESERVOIR		4.5	4.5	4.5
PINE SPRINGS RANCH RESERVOIR NO. 1		1	1	0
VALLECITO RESERVOIR		26,098	117,989	38,182
WILDORADO RESERVOIR NO. 26		10	14	14
WOMMER RESERVOIR NO. 1		125	186	133
	TOTAL	26,260	118,219	38,350
DISTRICT 32				
A M PUETT RESERVOIR		284	1,681	165
BUTTS RESERVOIR		18	18	18
DUCKS NEST RESERVOIR		0	160	130
LIVELY RESERVOIR		2	15	15
MARGWAIN STORAGE RESERVOIR		0	5	0
NARRAGUINNEP RESERVOIR		4,670	18,900	6,086
ROBERT LEIGHTON RESERVOIR		19	40	40
TOTTEN RESERVOIR		1,460	3,302	2,277
WEST RESERVOIR		6	6	6
WILKERSON POND NO. 1		11	11	11
	TOTAL	6,470	24,134	8,748

III G. RESERVOIR STORAGE IN ACRE FEET

DISTRICT 33		BEGINNING OF SEASON	MAXIMUM	END OF SEASON
RED MESA WARD RESERVOIR		253	1,176	284
TAYLOR RESERVOIR		86	86	86
	TOTAL	339	1,262	370
DISTRICT 34				
BAUER RESERVOIR NO. 1		134	357	54
BAUER RESERVOIR NO. 2		274	1,533	502
COPPINGER NO. 1 RESERVOIR		9	35	29
COPPINGER NO. 2 RESERVOIR		4	14	11
JACKSON GULCH RESERVOIR		2,607	9,980	29
L A BAR RESERVOIR		20	73	62
SELLARS & MC CLANE RESERVOIR		24	52	12
SPENCER RESERVOIR		0	15	0
WEBER RESERVOIR		116	442	231
	TOTAL	3,188	12,501	930
DISTRICT 69				
BELMAR LAKE RESERVOIR		176	409	223
DUNHAM RESERVOIR		50	79	49
GARDNER RESERVOIR		20	37	23
MORRISON RESERVOIR		85	116	95
NORTH DRAW RESERVOIR		0	14	4
	TOTAL	331	655	394
DISTRICT 71				
BIG PINE RESERVOIR		209	460	160
BUCK PASTURE RESERVOIR		43	53	53
ETHEL BELMAR RESERVOIR		23	87	40
GROUNDHOG RESERVOIR		8,800	21,711	7,744
LOST CANYON RESERVOIR		60	106	70
R. B. COPPINGER RESERVOIR		0	16	0
SUMMIT RESERVOIR		783	4,795	663
	TOTAL	9,918	27,228	8,730
DISTRICT 77				
GARDNER LAKE		0	15	15
SPENCE RESERVOIR		0	441	172
	TOTAL	0	456	187

III G. RESERVOIR STORAGE IN ACRE FEET

DISTRICT 78	BEGINNING OF SEASON	MAXIMUM	END OF SEASON
BENNETT RESERVOIR	0	2	1
DEVIL RESERVOIR	8	8	8
DUNNAGAN RESERVOIR	0	94	89
G. S. HATCHER RESERVOIR	1,735	1,735	1,735
LAKE FOREST RESERVOIR	0	400	350
J BAR J POND	2	5	0
LINN AND CLARK RESERVOIR	997	997	997
O'CONNELL LAKE	42	42	42
PARK RESERVOIR	0	1	0
PIEDRA RETAINING POND	5	5	5
PALISADE LAKE	40	50	50
PARGIN RESERVOIR	531	531	531
PINON LAKE RESERVOIR	98	162	162
POMA RESERVOIR	27	27	27
SCHMIEDEN RESERVOIR	36	50	50
SPRING CREEK RESERVOIR	0	46	11
STEVENS RESERVOIR AND DAM	614	635	615
TOWN CENTER LAKE RESERVOIR	416	604	472
TURKEY SPRING RESERVOIR	0	2	0
WILLIAMS CREEK RESERVOIR	10,084	10,084	10,084
TOTAL	14,635	15,480	15,229

IV. AGRICULTURE

Agricultural production for southwestern Colorado during 1979 was substantially improved over 1978. The only crop that did not yield above average was dry land wheat, which produced 21.3 bushels/acre. This compares to 1978 production of 15 bushels/acre and an average production of 24 bushels/acre. Precipitation for the months of June and July was extremely poor which possibly accounts for the drop in dry land production.

With the extremely heavy snow pack and excellent storage, irrigated crops received adequate water which resulted in excellent yields. Historically, irrigation has been limited to primarily grass and hay crops. However, during the past few years, more diversified irrigated grain crops are beginning to be raised. In the Florida Mesa area we are seeing the planting of corn silage and irrigated grains such as wheat, oats, and barley.

Some representative crop yields are listed below:

CROP	YIELD/ACRE 1979	NORMAL YIELD/ACRE
Dry land beans	350 lbs.	310 lbs.
Dry land wheat	21.3 bushels	24 bushels
Dry land barley	49.7 bushels	28 bushels
Irrigated hay	3.25 tons	2.1 tons
Irrigated corn silage	15 tons	No data
Irrigated wheat	60 bushels	No data
Irrigated oats	70 bushels	No data
Irrigated barley	70 bushels	No data

V. COMPACTS AND COURT STIPULATIONS

A. GENERAL

Irrigation Division 7 is included in four interstate compacts. They are; The Colorado River Compact, the Upper Colorado River Basin Compact, the La Plata River Compact and the Animas-La Plata Compact. Since there has been no demand from downstream states to meet deliveries required as a result of the Colorado River Basin Compacts, and the Animas- La Plata Compact, which was established for the coordination of the Animas-La Plata Project when it is built, no administration of these compacts was necessary. There was, however, administration of the La Plata River as a result of New Mexico's request.

B. SAN JUAN-CHAMA DIVERSION PROJECT

With the above-normal snow pack on the San Juan drainage, there was a record amount of diversion to New Mexico from the San Juan River. Preliminary figures show that diversion totalled 156,280 acre feet. This compares to 105,100 acre feet in 1978 and 153,300 acre feet in 1973, which had been the previous high. The totals diverted by each tunnel was as follows: Rio Blanco, 60,140 A.F., Little Blanco, 8,970 A.F., Navajo River, 87,170 A.F.

We are still experiencing some problems with debris, and questions as to the amount of water to be bypassed. The U.S.B.R. has recently installed parshall flumes at both the Blanco and Navajo diversions. It is hoped that these new measuring devices will improve the accuracy of the measured required bypass and that the controversy as to whose stream measurements are the most accurate will be resolved.

C. LA PLATA RIVER COMPACT

There was an exceptional heavy snow pack on the La Plata drainage this past irrigation season which resulted in a record runoff. The state line total flow was 63,017 A.F. which was 273% of normal. This extremely high runoff was very helpful to both the Colorado and New Mexico users. It was not necessary for New Mexico to place a call for water until June 23, 1979, when they requested 90 c.f.s. to be delivered at the state line. The Compact was then administered accordingly, until August 29 when the river was ruled futile and Colorado picked up the entire flow at Hesperus, leaving the return flows for New Mexico's use. There was no major administrative problem as a result of the futile call and in general, there were no problems in the administration of the Compact.

C.1 LA PLATA RIVER COMPACT MONTHLY SUMMARY IN ACRE FEET - see table on following page.

V. C.1 LA PLATA RIVER COMPACT MONTHLY SUMMARY IN ACRE FEET

MONTH	HESPERUS STATION	LA PLATA & CHERRY CR. DITCH	PINE RIDGE DITCH	HESPERUS TOTAL	STATE LINE STATION	ENTERPRISE DITCH (N. MEX.)	PIONEER DITCH	DELIVERED STATE LINE TOTAL	REQUIRED DELIVERY 1/2 HESPERUS TOTAL
FEBRUARY (1/2 MO.)	151	0	0	151	168	0	0	168	76
MARCH	562	0	0	562	2,970	0	0	2,970	1,485
APRIL	5,570	0	0	5,570	21,890	0	3.4	21,893	2,785
MAY	17,040	0	0	17,040	22,720	0	48	22,768	8,520
JUNE	15,660	883	77	16,620	9,840	46	90	9,976	8,423 1/
JULY	4,430	1,680	137	6,247	3,070	146	149	3,365	3,054 1/
AUGUST	1,530	222	0	1,752	930	59	98	1,087	876 2/
SEPTEMBER	678	0	0	678	167	0	72	239	339
OCTOBER	434	0	0	434	205	39	4.8	249	217
NOVEMBER	366	0	0	366	438	0	0	438	183
TOTALS	46,421	2,785	214	49,420	62,398	290	465.2	63,153	25,845

1/ Adjusted for New Mexico demand under the Compact.

2/ After August 29 call was considered futile.

NOTE: New Mexico requested 90 c.f.s. delivery August 23, 1979.

VI. A. DAMS

There are presently two new reservoirs under construction in the Division. They are Sappington Reservoir in District 77, with a capacity of approximately 400 A.F., and Johnson Reservoir in District 30 with a capacity of 1,000 A.F. Sappington Reservoir began construction in the late fall of 1979 with clearing of the reservoir basin and construction of the core trench being completed before construction was discontinued due to winter weather conditions at the site. Johnson Reservoir was more fortunate and has been able to complete 90% of the structure to date. This reservoir, although located in District 30, will derive its primary supply from District 33, the La Plata River, via the Pine Ridge Ditch.

Cash Canyon Reservoir in District 32 has given the Division several problems this past season. The reservoir is an old earth structure located on a small tributary of McElmo Creek upstream from Cortez. The reservoir has been the subject of controversy for several years, and there is a zero storage order issued and in effect. In April, as a result of heavy runoff, the outlet was not able to pass the total flow and the reservoir filled and began breaching over the northwest side of the embankment. The owner was given directions to clear the emergency spillways which was done after much effort on the part of the Division of Water Resources and the Montezuma County Sheriff. One road was closed below the reservoir and residents were notified of the possible total failure of the reservoir. As a result of the spillways being cleared by the owner, the total failure of the structure did not occur and major property damage was averted. Recently, the owner excavated the right spillway to allow for a total of seven feet of freeboard and widened the spillway to approximately fifty feet. This action is hoped to aid in preventing any further problems with this structure.

The 1979 legislative session revised the law concerning when plans and specifications are needed for construction of a reservoir embankment. It has been changed to allow for ten feet of height to the bottom of the spillway, rather than the top of the dam as was previously required. They did not change the storage capacity or surface acre requirement.

B. LIVESTOCK WATER TANKS

There were twenty-one permits issued for livestock water tanks and/or erosion control dams this year. This compares to eighteen permits for the previous year. The Soil Conservation Service has been cooperating extremely well with the Division 7 staff with regards to applications for new tanks and their construction.

VII. WATER RIGHTS

A. TABULATIONS

As yet the 1978 Tabulation has not received much public interest. There have been several opportunities to publicize the need for the public to review the Tabulation. During the past year, there has been one radio program and several newspaper reports, however, we have not received much inquiry.

Work is continually being done to keep the data current and we are presently attempting to coordinate the Tabulation with the Water Data Bank.

VII. WATER RIGHTS (continued)

B. REFEREE'S FINDINGS AND DECREES

	NO. FILED	INVESTIGATED BY DIVISION VII	REFEREE RULINGS	COURT DECREES
1. Underground Water Rights	183	183	28	42
2. Change of Water Rights	20	20	20	67
3. Plans of Augmentation	2	2	1	17
4. Surface Water Rights	35	35	40	68
5. Due Diligence:				
Quadriennial Findings	7	7	18	7
Conditional Made Absolute	6	6	15	14
6. Water Storage Rights	16	16	9	6
TOTALS	269	269	131	221

VIII. ORGANIZATIONS

A. WATER CONSERVATION AND CONSERVANCY DISTRICTS

NAME	ADDRESS	ATTORNEY	PRESIDENT
La Plata Water Conservation	Box 497, Durango	F. S. Maynes	Bob K. Taylor
Dolores Water Conservancy	16 E. Main, Cortez	George Armstrong	Bruce McAfee
Florida Water Conservancy	Box 1157, Durango	L. W. McDaniel	Loyd Hess
Mancos Water Conservancy	Cortez	Guy Dyer	Noland Alexander
Pine River Irrigation Dist.	843 Main, Durango	Robert Duthie	Frank Wommer, Jr.
San Miguel Water Conservancy	Box 497, Durango	F. S. Maynes	W. E. Bray
Southwest Water Conservation	Box 497, Durango	F. S. Maynes	Fred Kroeger

B. INCORPORATED DITCH COMPANIES

NAME	OFFICER	ADDRESS
DISTRICT 29		
Echo Ditch Company	William Jackson, Pres.	Pagosa Springs, Colorado
Park Ditch Company	Hood Formwalt, Pres.	Pagosa Springs, Colorado
DISTRICT 30		
Animas Ditch Company	R. V. Bonds	Rt. 2, Box B61, Durango, CO
Animas Consolidated Ditch Co.	Lois Hood, Sec.	32446 Hiway 550, Durango, CO
Florida Canal Company	T. G. Eggleston	135 Riverview Dr., Durango
Florida Farmers Ditch Co.	Hazel Brown	505 Co. Rd. 234, Durango
Hermosa Ditch Company	Lois Hood, Sec.	32446 Hiway 550, Durango
Pioneer Ditch Company	Marjorie Hurt	383 Co. Rd. 225, Durango
Reid Ditch Company	Althea Knowlton, Sec. Animas Valley Ditch	4315 Co. Rd. 250, Durango
DISTRICT 31		
King Ditch Company	John Olbert, Sec.	1728 Co. Rd. 501, Ignacio, CO
Los Pinos Ditch Company	Mrs. Frank Ludwig, Sec.	Box 245, Bayfield, CO
Robert Morrison Ditch Company	Rex Richmond, Sec.	399 Co. Rd. 315, Ignacio, CO
*Schroder Irrigation Ditch Co.	Jim Sitton, Pres	40644 Hiway 160, Bayfield
Spring Creek Ditch (Pine River	Glen Faverino, Sec.	Rt. 2, Ignacio, CO
Canal Co. & Spring Cr. Ext.)	David Sullivan, Sec.	Rt. 2, Ignacio, CO
Sullivan Ditch Company	Ruby Bowers, Sec.	520 C. Red. 505, Ignacio, CO
Thompson-Epperson Ditch Co.	Earl Canby, Sec.	38717 U.S. Hiway 160, Bayfield
Vallecito Reservoir (Pine River Irrigation District)	Steve Newman, Supt.	277 Vallecito Rd., Bayfield
DISTRICT 32		
Montezuma Valley Irrigation Co.	Les Nunn, Supt.	Cortez, Colorado
DISTRICT 33		
Big Stick Ditch Co.	Grant Paulek	Hesperus, Colorado
Hay Gulch Ditch Co.	Lawrence Huntington	Hesperus, Colorado
H. H. Ditch Company	Bob Willis	Hesperus, Colorado
Joseph Freed Ditch Co.	Nancy Price	Hesperus, Colorado
La Plata River & Cherry Creek Ditch Company	Georgia Patcheck	Mancos, Colorado
Lightner Canal Company	V. A. Paulek	Hesperus, Colorado
Pine Ridge Ditch Company	Colo. Div. of Wildlife	Durango, Colorado
Red Mesa-Ward Reservoir & Ditch Supply Company	Nancy Price	Hesperus, Colorado
Reorganized Revival Ditch Co.	Lila Greer	Hesperus, Colorado
Slade Ditch Company	Judy Albrecht	Hesperus, Colorado
Townsite Ditch Company	Judy Albrecht	Hesperus, Colorado
Treanor Enterprise Ditch Co.	Ruth Candelaria	Marvel, Colorado
DISTRICT 34		
Bauer Lakes Water Company	Leroy Everett	Mancos, Colorado
Ratliff & Root Ditch Company	Lloyd Doerfer	Mancos, Colorado
Town of Mancos Ditch Company	Grace McWhirt	Mancos, Colorado
Webber Ditch Company	Lloyd Doerfer	Mancos, Colorado
Webber Reservoir & Ditch Co.	Foster Hall	Mancos, Colorado
DISTRICT 71		
Groundhog Reservoir & Beaver Ditch System	Les Nunn, Supt.	Cortez, Colorado
Montezuma Valley Irrigation Dist.	Les Nunn, Supt.	Cortez, Colorado
Summit Irrigation System	Eddie McRea	Dolores, Colorado
DISTRICT 78		
Piedra Falls Ditch Company	Louis Beecherl, Pres.	Pagosa Springs, Colorado

*Pine River-Bayfield Ditch Lateral or Split

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 29

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	45,052
STORAGE	424
STOCKWATER	10,253
MUNICIPAL	175
DOMESTIC	329
INDUSTRIAL	--
RECREATIONAL	--
FISH	2,809
OTHER: GEOTHERMAL	4,245
TRANSMOUNTAIN-TRANSBASIN (OUT OF BASIN)	2,258
INTERSTATE	60,085
TOTAL DIVERSIONS	125,630
DELIVERIES FROM STORAGE:	
IRRIGATION	--
DOMESTIC	--
MUNICIPAL	--
STOCK	--
INDUSTRIAL	--
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	52
OTHER: RESERVOIR LOSSES (EVAPORATION AND/OR SEEPAGE)	74
TOTAL FROM STORAGE	126
DELIVERIES FROM TRANSBASIN:	
IRRIGATION	--
STORAGE	--
MUNICIPAL	--
TOTAL FROM TRANSBASIN	--
DUTY OF WATER:	
TOTAL TO IRRIGATION (DIRECT DIVERSION)	45,052
ACRES IRRIGATED	14,670
ACRE FEET DIVERTED PER ACRE	3.07
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	0
ACTIVE DIVERSIONS - DAILY	151
INFREQUENT	94
INACTIVE DIVERSIONS - NO WATER AVAILABLE	1
NOT USED	124
NO INFORMATION AVAILABLE	6
NUMBER OF DITCHES	285
NUMBER OF RESERVOIRS	52
NUMBER OF WELLS	39
NUMBER OF OBSERVATIONS	4,108

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 30

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	118,297
STORAGE	39,969
STOCKWATER	4,454
MUNICIPAL	6,961
DOMESTIC	182
INDUSTRIAL	12,951
RECREATIONAL	302
FISH	5,126
OTHER:	--
TRANSMOUNTAIN-TRANSBASIN (OUT OF BASIN)	170
INTERSTATE	8,021
TOTAL DIVERSIONS	196,433
DELIVERIES FROM STORAGE:	
IRRIGATION	23,238
DOMESTIC	--
MUNICIPAL	16
STOCK	--
INDUSTRIAL	16,560
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	--
OTHER: EVAPORATION OR SEEPAGE	213
TOTAL FROM STORAGE	40,027
DELIVERIES FROM TRANSBASIN:	
IRRIGATION	--
STORAGE	--
MUNICIPAL	6
TOTAL FROM TRANSBASIN	6
DUTY OF WATER:	
TOTAL TO IRRIGATION (DIRECT & STORAGE)	141,535
ACRES IRRIGATED	35,610
ACRE FEET DIVERTED PER ACRE	3.97
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	11
ACTIVE DIVERSIONS - DAILY	258
INFREQUENT	329
INACTIVE DIVERSIONS - NO WATER AVAILABLE	11
NOT USED	219
NO INFORMATION AVAILABLE	2
NUMBER OF DITCHES	531
NUMBER OF RESERVOIRS	56
NUMBER OF WELLS	243
NUMBER OF OBSERVATIONS	9,106

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 31

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	173,452
STORAGE	104,115
STOCKWATER	3,402
MUNICIPAL	506
DOMESTIC	82
INDUSTRIAL	--
RECREATIONAL	922
FISH	665
OTHER: COMMERCIAL	--
TRANSMOUNTAIN-TRANSBASIN (OUT OF BASIN)	1,452
INTERSTATE	--
TOTAL DIVERSIONS	284,596
DELIVERIES FROM STORAGE:	
IRRIGATION	66,112
DOMESTIC	--
MUNICIPAL	166
STOCK	2
INDUSTRIAL	--
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	--
OTHER: EVAPORATION OR SEEPAGE	2,613
TOTAL FROM STORAGE	68,893
DELIVERIES FROM TRANSBASIN:	
IRRIGATION	--
STORAGE	--
MUNICIPAL	--
TOTAL FROM TRANSBASIN	--
DUTY OF WATER:	
TOTAL TO IRRIGATION	239,564
ACRES IRRIGATED	56,720
ACRE FEET DIVERTED PER ACRE	4.22
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	1
ACTIVE DIVERSIONS - DAILY	108
INFREQUENT	179
INACTIVE DIVERSIONS - NO WATER AVAILABLE	0
NOT USED	79
NO INFORMATION AVAILABLE	0
NUMBER OF DITCHES	248
NUMBER OF RESERVOIRS	23
NUMBER OF WELLS	96
NUMBER OF OBSERVATIONS	19,394

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 32

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	37,110
STORAGE	8,501
STOCKWATER	140
MUNICIPAL	130
DOMESTIC	11
INDUSTRIAL	1
RECREATIONAL	--
FISH	--
OTHER: COMMERCIAL	4
TRANSMOUNTAIN-TRANSBASIN	--
INTERSTATE	--
TOTAL DIVERSIONS	45,897
DELIVERIES FROM STORAGE:	
IRRIGATION	17,905
DOMESTIC	--
MUNICIPAL	--
STOCK	720
INDUSTRIAL	--
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	--
OTHER:	--
TOTAL FROM STORAGE	18,625
DELIVERIES FROM TRANSBASIN:	
STOCK	7,109
IRRIGATION	102,712
STORAGE	12,063
MUNICIPAL	3,055
TOTAL FROM TRANSBASIN	124,939
DUTY OF WATER:	
TOTAL TO IRRIGATION (DIRECT & STORAGE & TRANSBASIN)	157,727
ACRES IRRIGATED	48,552
ACRE FEET DIVERTED PER ACRE	3.23
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	0
ACTIVE DIVERSIONS - DAILY	135
INFREQUENT	58
INACTIVE DIVERSIONS - NO WATER AVAILABLE	14
NOT USED	61
NO INFORMATION AVAILABLE	0
NUMBER OF DITCHES	235
NUMBER OF RESERVOIRS	13
NUMBER OF WELLS	20
NUMBER OF OBSERVATIONS	6,887

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 33

		ACRE FEET
DIRECT DIVERSIONS:		
	IRRIGATION	25,613
	STORAGE	899
	STOCKWATER	3,528
	MUNICIPAL	--
	DOMESTIC	38
	INDUSTRIAL	--
	RECREATIONAL	--
	FISH	--
	OTHER: COMMERCIAL	5
	TRANSMOUNTAIN-TRANSBASIN	6
	INTERSTATE	721
	TOTAL DIVERSIONS	30,810
DELIVERIES FROM STORAGE:		
	IRRIGATION	871
	DOMESTIC	--
	MUNICIPAL	--
	STOCK	--
	INDUSTRIAL	--
	RECREATIONAL	--
	TRANSBASIN-TRANSMOUNTAIN	--
	OTHER:	--
	TOTAL FROM STORAGE	871
DELIVERIES FROM TRANSBASIN:		
	IRRIGATION	--
	STORAGE	--
	MUNICIPAL	--
	TOTAL FROM TRANSBASIN	--
DUTY OF WATER:		
	TOTAL TO IRRIGATION (DIRECT & STORAGE)	26,484
	ACRES IRRIGATED	13,972
	ACRE FEET DIVERTED PER ACRE	1.90
NUMBER OF STRUCTURES OBSERVED:		
	WATER RUN - NO INFORMATION AVAILABLE	0
	ACTIVE DIVERSIONS - DAILY	71
	INFREQUENT	32
	INACTIVE DIVERSIONS - NO WATER AVAILABLE	2
	NOT USED	34
	NO INFORMATION AVAILABLE	27
	NUMBER OF DITCHES	135
	NUMBER OF RESERVOIRS	8
	NUMBER OF WELLS	23
	NUMBER OF OBSERVATIONS	4,307

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 34

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	33,353
STORAGE	9,820
STOCKWATER	8,593
MUNICIPAL	1,064
DOMESTIC	26
INDUSTRIAL	--
RECREATIONAL	--
FISH	--
OTHER:	--
TRANSMOUNTAIN-TRANSBASIN	--
INTERSTATE	--
TOTAL DIVERSIONS	52,856
DELIVERIES FROM STORAGE:	
IRRIGATION	2,912
DOMESTIC	--
MUNICIPAL	50
STOCK	415
COMMERCIAL	10
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	--
OTHER: EVAPORATION OR SEEPAGE	180
TOTAL FROM STORAGE	3,567
DELIVERIES FROM TRANSBASIN:	
IRRIGATION	84
STORAGE	--
MUNICIPAL	--
TOTAL FROM TRANSBASIN	84
DUTY OF WATER:	
TOTAL TO IRRIGATION (DIRECT & STORAGE TRANSBASIN)	36,349
ACRES IRRIGATED	15,480
ACRE FEET DIVERTED PER ACRE	2.35
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	0
ACTIVE DIVERSIONS - DAILY	59
INFREQUENT	40
INACTIVE DIVERSIONS - NO WATER AVAILABLE	0
NOT USED	22
NO INFORMATION AVAILABLE	1
NUMBER OF DITCHES	102
NUMBER OF RESERVOIRS	12
NUMBER OF WELLS	8
NUMBER OF OBSERVATIONS	547

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 46

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	5,708
STORAGE	--
STOCKWATER	1
MUNICIPAL	--
DOMESTIC	--
INDUSTRIAL	--
RECREATIONAL	293
FISH	--
OTHER:	--
TRANSMOUNTAIN-TRANSBASIN	--
INTERSTATE	--
TOTAL DIVERSIONS	6,002
DELIVERIES FROM STORAGE:	
IRRIGATION	--
DOMESTIC	--
MUNICIPAL	--
STOCK	--
INDUSTRIAL	--
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	--
OTHER:	--
TOTAL FROM STORAGE	--
DELIVERIES FROM TRANSBASIN:	
IRRIGATION	--
STORAGE	--
MUNICIPAL	--
TOTAL FROM TRANSBASIN	--
DUTY OF WATER:	
TOTAL TO IRRIGATION	5,708
ACRES IRRIGATED	2,105
ACRE FEET DIVERTED PER ACRE	2.71
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	0
ACTIVE DIVERSIONS - DAILY	30
INFREQUENT	1
INACTIVE DIVERSIONS - NO WATER AVAILABLE	0
NOT USED	3
NO INFORMATION AVAILABLE	0
NUMBER OF DITCHES	34
NUMBER OF RESERVOIRS	0
NUMBER OF WELLS	0
NUMBER OF OBSERVATIONS	1,610

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 69

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	3,712
STORAGE	266
STOCKWATER	--
MUNICIPAL	--
DOMESTIC	--
INDUSTRIAL	--
RECREATIONAL	--
FISH	--
OTHER:	--
TRANSMOUNTAIN-TRANSBASIN	--
INTERSTATE	--
TOTAL DIVERSIONS	3,978
DELIVERIES FROM STORAGE:	
IRRIGATION	211
DOMESTIC	--
MUNICIPAL	--
STOCK	--
INDUSTRIAL	--
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	--
OTHER:	--
TOTAL FROM STORAGE	211
DELIVERIES FROM TRANSBASIN:	
IRRIGATION	--
STORAGE	58
MUNICIPAL	--
TOTAL FROM TRANSBASIN	58
DUTY OF WATER:	
TOTAL TO IRRIGATION	3,923
ACRES IRRIGATED	1,335
ACRE FEET DIVERTED PER ACRE	2.94
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	0
ACTIVE DIVERSIONS - DAILY	21
INFREQUENT	1
INACTIVE DIVERSIONS - NO WATER AVAILABLE	0
NOT USED	14
NO INFORMATION AVAILABLE	0
NUMBER OF DITCHES	30
NUMBER OF RESERVOIRS	5
NUMBER OF WELLS	1
NUMBER OF OBSERVATIONS	274

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 71

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	5,357
STORAGE	17,606
STOCKWATER	82
MUNICIPAL	1,111
DOMESTIC	28
INDUSTRIAL	8
RECREATIONAL	--
FISH	1,272
OTHER:	--
TRANSMOUNTAIN-TRANSBASIN	102,452
INTERSTATE	--
TOTAL DIVERSIONS	127,916
DELIVERIES FROM STORAGE:	
IRRIGATION	432
DOMESTIC	--
MUNICIPAL	--
STOCK	22
INDUSTRIAL	--
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	22,253
OTHER: EVAPORATION OR SEEPAGE	1,047
TOTAL FROM STORAGE	23,754
DELIVERIES FROM TRANSBASIN:	
IRRIGATION	--
STORAGE	--
MUNICIPAL	--
TOTAL FROM TRANSBASIN	--
DUTY OF WATER:	
TOTAL TO IRRIGATION (IN DISTRICT 71)	5,789
ACRES IRRIGATED	2,177
ACRE FEET DIVERTED PER ACRE	2.66
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	0
ACTIVE DIVERSIONS - DAILY	58
INFREQUENT	52
INACTIVE DIVERSIONS - NO WATER AVAILABLE	0
NOT USED	83
NO INFORMATION AVAILABLE	1
NUMBER OF DITCHES	132
NUMBER OF RESERVOIRS	18
NUMBER OF WELLS	44
NUMBER OF OBSERVATIONS	1,937

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 77

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	14,246
STORAGE	456
STOCKWATER	462
MUNICIPAL	--
DOMESTIC	--
INDUSTRIAL	5
RECREATIONAL	--
FISH	2,252
OTHER: COMMERCIAL	2
TRANSMOUNTAIN-TRANSBASIN	564
INTERSTATE	96,124
TOTAL DIVERSIONS	114,111
DELIVERIES FROM STORAGE:	
IRRIGATION	268
DOMESTIC	--
MUNICIPAL	--
STOCK	--
INDUSTRIAL	--
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	--
OTHER:	--
TOTAL FROM STORAGE	268
DELIVERIES FROM TRANSBASIN:	
IRRIGATION	564
STORAGE	--
MUNICIPAL	--
TOTAL FROM TRANSBASIN	564
DUTY OF WATER:	
TOTAL TO IRRIGATION	15,078
ACRES IRRIGATED	3,179
ACRE FEET DIVERTED PER ACRE	4.74
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	0
ACTIVE DIVERSIONS - DAILY	61
INFREQUENT	25
INACTIVE DIVERSIONS - NO WATER AVAILABLE	0
NOT USED	45
NO INFORMATION AVAILABLE	0
NUMBER OF DITCHES	100
NUMBER OF RESERVOIRS	17
NUMBER OF WELLS	14
NUMBER OF OBSERVATIONS	1,356

IX. WATER COMMISSIONER'S SUMMARY

WATER DISTRICT 78

	ACRE FEET
DIRECT DIVERSIONS:	
IRRIGATION	26,315
STORAGE	428
STOCKWATER	207
MUNICIPAL	--
DOMESTIC	374
INDUSTRIAL	163
RECREATIONAL	--
FISH	108
OTHER: COMMERCIAL	85
TRANSMOUNTAIN-TRANSBASIN	148
INTERSTATE	--
TOTAL DIVERSIONS	27,828
DELIVERIES FROM STORAGE:	
IRRIGATION	40
DOMESTIC	--
MUNICIPAL	152
STOCK	--
INDUSTRIAL	--
RECREATIONAL	--
TRANSBASIN-TRANSMOUNTAIN	--
OTHER: EVAPORATION OR SEEPAGE	59
TOTAL FROM STORAGE	251
DELIVERIES FROM TRANSBASIN:	
IRRIGATION	939
STORAGE	416
MUNICIPAL	--
TOTAL FROM TRANSBASIN	1,355
DUTY OF WATER:	
TOTAL TO IRRIGATION	27,294
ACRES IRRIGATED	6,906
ACRE FEET DIVERTED PER ACRE	3.95
NUMBER OF STRUCTURES OBSERVED:	
WATER RUN - NO INFORMATION AVAILABLE	8
ACTIVE DIVERSIONS - DAILY	81
INFREQUENT	34
INACTIVE DIVERSIONS - NO WATER AVAILABLE	1
NOT USED	82
NO INFORMATION AVAILABLE	3
NUMBER OF DITCHES	166
NUMBER OF RESERVOIRS	29
NUMBER OF WELLS	14
NUMBER OF OBSERVATIONS	2,689

X. A. DIVISION ENGINEER'S SUMMARY

DIRECT FLOW DIVERSIONS
TOTAL AMOUNTS IN ACRE FEET USED

W.D.	IRR.[1]	ACRES IRR.	A.F./ACRE	STOCK	MUN.	DOM.	IND.	REC.	FISH	COMM.	GEO THERMAL	TRANS. MTN.[2]	TRANS. BASIN[3]	COMPACT	OTHER
29	45,052	14,670	3.1	10,253	175	329	--	--	2,809	-	4,245	389	2,362	60,085 [4]	74
30	141,535	35,610	4.0	4,454	6,983	182	29,511	302	5,126	-	--	170	--	8,021 [5]	213
31	239,564	56,720	4.2	3,404	672	82	--	922	665	-	--	1,452	--	--	2,613
32	157,727	48,552	3.2	7,969	3,185	11	1	--	--	4	--	--	--	--	--
33	26,484	13,922	1.9	3,528	--	38	--	--	--	5	--	--	6	721 [6]	--
34	36,349	15,480	2.4	8,593	1,114	26	--	415	--	10	--	--	--	--	180
46	5,708	2,105	2.7	1	--	--	--	293	--	-	--	--	--	--	--
69	3,923	1,335	2.9	--	--	--	--	--	--	-	--	--	--	--	--
71	5,789	2,177	2.7	104	1,111	28	8	--	1,272	-	--	--	124,705 [7]	--	1,047
77	15,078	3,179	4.7	462	--	--	5	--	2,252	2	--	--	564	96,124 [8]	--
78	27,294	6,906	4.0	207	152	374	163	--	108	85	--	148	--	--	59
TOTAL	704,503	200,656	3.5	38,975	13,392	1,070	29,688	1,932	12,232	106	4,245	2,159	127,637	164,951	4,186

1/ Includes water delivered directly plus storage and/or transbasin.

2/ Diverted out of Division 7.

3/ Diverted between water districts but remained in Division 7.

4/ Delivered to New Mexico thru Blanco Tunnel and out of Colorado River Basin.

5/ Water diverted in Colorado but used in New Mexico.

6/ Diverted to New Mexico through Colorado ditches.

7/ Used in District 32 under Montezuma Valley Irrigation and Summit Systems.

8/ Delivered to New Mexico from Navajo and Little Navajo diversion tunnels.

X. B. DIVISION ENGINEER'S SUMMARY

STORAGE IN ACRE FEET

W.D.	STORAGE: BEGINNING OF SEASON	STORAGE: MAXIMUM	STORAGE: END OF SEASON	INCREASE DURING SEASON	DECREASE DURING SEASON [1]	NET CHANGE FOR SEASON	DELIVERED FROM STORAGE [2]: IRR.	DOM.	MUN.	IND.	COMM.	STOCK	TRANS-BASIN/ TRANS-MNTN.	OTHER [3]
29	2,361	2,786	2,660	425	126	299	--	--	--	--	--	--	52	74
30	12,596	57,700	33,527	45,104	24,173	20,931	23,238	--	16	16,560	--	--	--	213
31	26,260	118,219	38,350	91,959	79,869	12,090	66,112	--	166	--	--	2	--	2,613
32	6,470	24,134	8,748	17,664	15,386	2,278	17,905	--	--	--	--	720	--	--
33	339	1,262	370	923	892	31	871	--	--	--	--	--	--	--
34	3,188	12,501	930	9,313	11,571	- 2,258	2,912	--	50	--	10	415	--	180
46	--	--	--	--	--	--	--	--	--	--	--	--	--	--
69	331	655	394	324	261	63	211	--	--	--	--	--	--	--
71	9,918	27,228	8,730	17,310	18,498	- 1,188	432	--	--	--	--	22	22,253	1,047
77	0	456	187	456	269	187	268	--	--	--	--	--	--	--
78	14,635	15,480	15,229	845	251	594	40	--	152	--	--	--	--	59
TOTALS	76,098	260,421	109,125	184,323	151,296	33,027	111,989	--	384	16,560	10	1,159	22,305	4,186

1/ Decrease in storage will not equal total deliveries from storage because of loss of storage during winter season.

2/ Amount delivered from storage is based on diversion records, not capacity tables.

3/ Includes losses in storage due to evaporation and/or seepage.

X. C. DIVISION ENGINEER'S SUMMARY — WORKLOAD AND STATISTICAL INDICATORS

W.D.	(TOTAL DITCHES REPORTED) ACTIVE USED-NR	ACTIVE DAILY	ACTIVE INFREQUENT	INACTIVE NA	INACTIVE NI	INACTIVE NU	NUMBER OF OBSERVATIONS	NUMBER OF WELLS	NUMBER OF RESERVOIRS	NUMBER OF DITCHES	TOTAL NUMBER OF STRUCTURES
29	0	151	94	1	6	124	4,108	39	52	285	376
30	11	258	329	11	2	219	9,106	243	56	531	830
31	1	108	179	0	0	79	19,394	96	23	248	367
32	0	135	58	14	0	61	6,887	20	13	235	268
33	0	71	32	2	27	34	4,307	23	8	135	166
34	0	59	40	0	1	22	547	8	12	102	122
46	0	30	1	0	0	3	1,610	0	0	34	34
69	0	21	1	0	0	14	274	1	5	30	36
71	0	58	52	0	1	83	1,937	44	18	132	194
77	0	61	25	0	0	45	1,356	14	17	100	131
78	8	81	34	1	3	82	2,689	14	29	166	209
TOTALS	20	1,033	845	29	40	766	52,215	502	233	1,998	2,733

NA - No Water Available NU - Non Use NR - No Report NI - No Information

X. D. DIVISION 7 ANNUAL SUMMARY

1979

ANNUAL SUMMARY - DIVISIONS

ACRE FEET (11-1-78 thru 10-31-79)

Divisions	Non-Exempt Wells #	Ditch Structures Reported #	IRRIGATION Direct Diversions To Irrigation	IRRIGATION Diversions To Storage	IRRIGATION Storage To Irrigation	CURRENT YEAR Acres Irrigated	TRANS-MOUNTAIN Div. to Div. Export	TRANS-MOUNTAIN Div. to Div. Import	TRANS-STATE EXPORT
1									
2									
3									
4									
5									
6									
7	502	1,998	591,750	182,484	111,989	200,656	2,159	0	157,100
TOTAL									

Divisions	MUNICIPAL Direct Diversions	MUNICIPAL Diversions To Storage	MUNICIPAL Storage Releases	INDUSTRIAL Direct Diversions	INDUSTRIAL Diversions To Storage	INDUSTRIAL Hydro-Power	RECREATION Storage-Wildlife Parks	ACTUAL STORAGE For Year All Reservoirs	DECREES	# Water Court Applications
1										
2										
3										
4										
5										
6										
7	9,947	938	384	13,128	13,087	29,511	12,950	260,421	221	269
TOTAL										

XI. DIVISION ENGINEER'S CONCLUSIONS AND RECOMMENDATIONS

The past year has been very busy and quite productive. The water supply was excellent which meant that early spring kept the staff working long hours as a result of the heavy runoff and the threat of floods. Once the high water subsided, we were able to return to more normal water administration problems.

We have been able to complete several projects in the office organization, such as the well file, and index of water court cases. The Division-wide index of all decree books is approximately 75% completed and work is continuing this winter on that project. All of these systems have helped us in finding problems in the tabulation and has improved our ability to reply to questions from the public more efficiently.

From work this past year on the tabulation and comparing it to the decrees, we are finding that it would be helpful to include line items in the tabulation which would show when diligence has occurred on a conditional right, and another line item that would show when a water right application has been totally denied. This would aid in keeping track of the status of all water court cases.

There is a need for greater detailed information on groundwater resources in our Division. There are several stream systems and numerous geological formations which contain groundwater. A study should be compiled which would clearly define groundwater resources, what tributaries they affect, the time lag as a result of pumping, and other non-tributary sources.

The water commissioners are busy working on measuring the irrigated acres from aerial photos which we obtained from the Agriculture Stabilization Service. This work will probably require at least two winter seasons to complete and check.

The hydrographic section has made several improvements in gaging station equipment. There has been repair work required on the cableway on the Florida River above Lemon Reservoir. High waters destroyed the control on the Little Navajo and caused severe damage to the rip rap at the Hesperus gage on the La Plata. The control has been replaced on the Navajo, but as yet, there is still the need to replace rip rap at the Hesperus gage. Several stations were painted and levels were run.

The Water Court has been quite active hearing a multitude of cases during the past year. As a result there have been solutions to many administrative problems, particularly plans of augmentation. Presently, in the case of all plans of augmentation, the Court is maintaining jurisdiction to insure that the plans are operated as proposed. This is not only helpful for administrative purposes, but gives the applicants an opportunity to adjust their plans without lengthy legal problems.

We are still receiving protests from the Federal Government on behalf of the Indian claims to all water court cases. This has created unnecessary delays in completing water court applications and has resulted in quite a few hearings. Generally, there is a stipulation agreed upon by the U.S. Attorney General's Office and the applicant which then clears the way for the granting of the decrees. This stipulation is nothing more than a recognition of the priority system and is only

creating a time delay and considerable extra work for both the Court and the Division Office.

From the Division office standpoint, there are areas in my opinion that would improve the general system. It appears that because of the remoteness of the Division offices on the western slope, that it would be a more efficient use of manpower if representatives from both the reservoir and groundwater sections were stationed in the field. This would be of particular value with respect to improving our knowledge of local groundwater situations and would also allow for quicker and more frequent inspection of reservoirs.

We have compiled an excellent data bank that contains a multitude of information. This data should be applied to practical situations when possible, instead of being basically a file. The computer can be very helpful too in compiling, calculating, and analizing data. It may be advantageous to provide more direct local input and retreval of information. Often, very simple programs could be utilized which would keep tabulation, well files, diversion records, climatological data, daily diversions, reservoir storage, evaporation losses and other data current and available to division offices.

The only other area that may not necessarily be a system organization problem, but does have a great bearing on our operation, is that we are able to continue to keep quality water commissioners. To insure this, their compensation has to be competitive with other employment opportunities in the area. Not only does the salary have to be adequate, so should the health and retirement benefits, as well as more equitable reimbursement for mileage.

Daries C. Lile

Division Engineer