

JOHN A. LOVE
Governor



C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

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December 12, 1974

Mr. C. J. Kuiper
State Engineer
Colorado Division of Water Resources
1845 Sherman Street
Denver, Colorado 80203

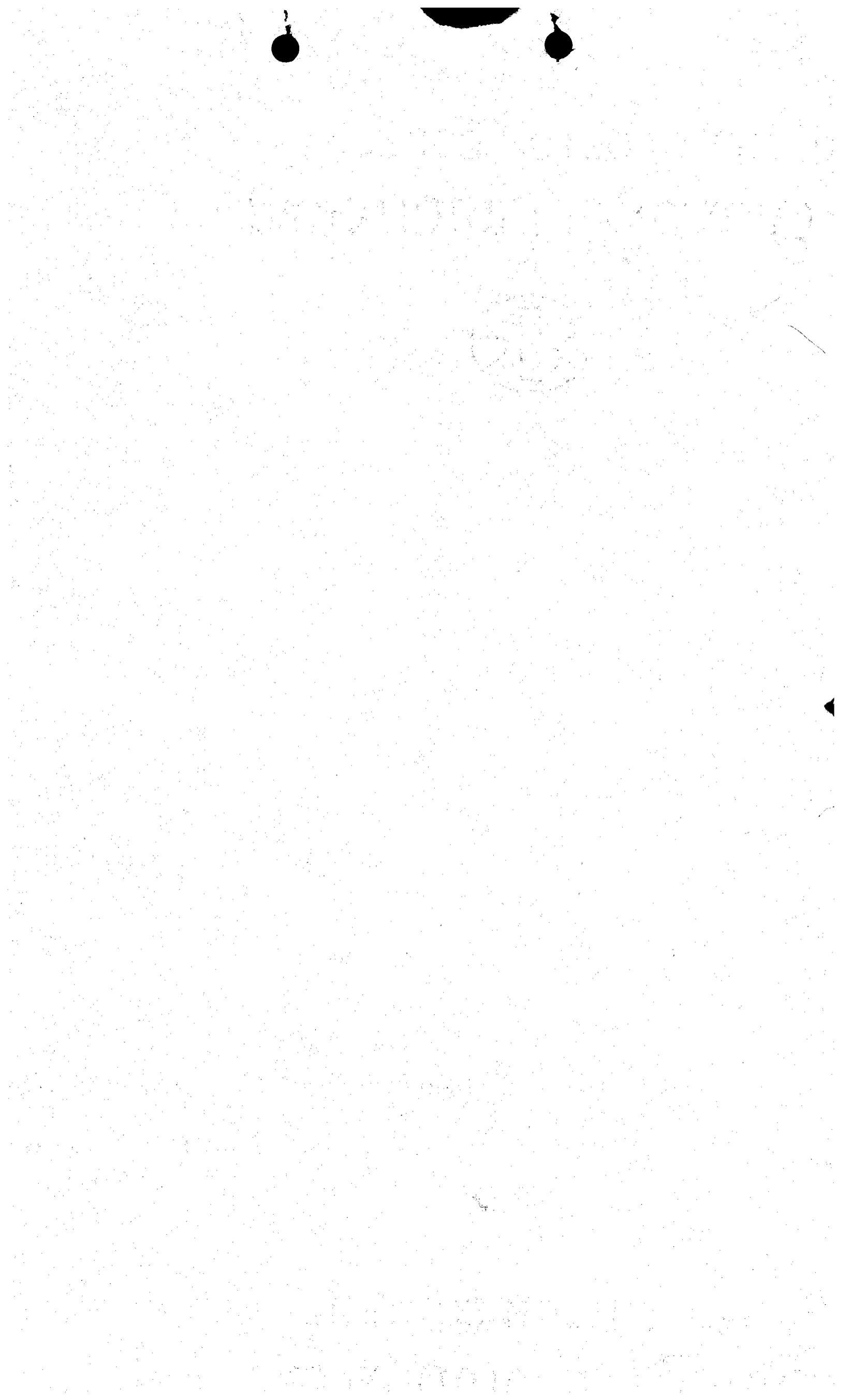
Dear Mr. Kuiper:

Attached herewith is our annual report for the period
November 1, 1973 through October 31, 1974.

Very truly yours,

Wayne M. Crosby, P.E.
Division Engineer

WMC:alf



ANNUAL REPORT

WATER DIVISION VII

REPORT PERIOD NOVEMBER 1, 1973 THRU OCTOBER 31, 1974

Submitted To
Mr. C. J. Kuiper
State Engineer
State of Colorado

by
Wayne M. Crosby
Division Engineer
Durango, Colorado

December 12, 1974

CONTENTS

PAGE

I.	Introductory Statement	1
II.	Personnel	3
III.	WATER SUPPLY:	
	A. Snow Pack	5
	B. Precipitation - Summer	5
	C. Floods	6
	D. General - Water Budget	6
	E. Underground Water	6
	F. Transmountain Diversions	7
	G. Reservoir Storage	7
IV.	Agriculture	11
V.	COMPACTS AND COURT STIPULATIONS:	
	I. La Plata Project	12
	II. San Juan-Chama Diversion Project	12
VI.	A. Dams	12
	B. Livestock Water Tanks	12
VII.	WATER RIGHTS:	
	A. Tabulations	13
	B. Referee Findings and Decrees	13
VIII.	ORGANIZATIONS:	
	A. Water Conservation and Conservancy Districts	14
	B. Ditch Companies	14
IX.	WATER COMMISSIONERS' SUMMARIES:	
	Division VII Summary	16
	Districts 29, 30	16
	Districts 31, 32, 33	17
	Districts 34, 46, 69	18
	Districts 71, 77, 78	19
X.	DIVISION ENGINEER'S SUMMARY:	
	A. Direct Flow Diversions - Table A	20
	B. Storage Report - Table B	21
XI.	Recommendations and Suggestions	22

1974 ANNUAL REPORT

DIVISION 7

DURANGO, COLORADO

Water Division 7, comprised of the San Juan River Basin located in Southwestern Colorado, was a Spanish territory for many years and later a part of Mexico. It was added to the United States after the Mexican War. Although the Basin was part of a large area ceded to the Ute Indians, adjustments of Indian land boundaries during the 1870's opened a large part to future settlers. With the arrival of the narrow gauge railroad in the 1880's, mining and the raising of livestock and farming increased.

Of slightly under 5,000,000 acres in the Basin, approximately half are federally controlled forest or woodlands. Land uses are for timber production, watershed, recreation, wildlife and agriculture. Of the 1.6 million acres of non-federal land, more than half is used for livestock grazing. Livestock grazing is also permitted on a large part of the federally controlled lands. The importance of rangeland and grazeable woodland as watersheds overshadows all other considerations. Food and cover for wildlife is also of great importance.

Soils in the area are highly variable. They include deep, wind-deposited soils in the valleys, shale-derived clays in many valleys and adjoining slopes, and shallow, stony rocky soils over much of the mountain and foothill areas.

The geologic formations, along with the vegetative cover, make the San Juan Basin one of the most scenic areas in Colorado. Rocks ranging in age from one-to-five-hundred million years are exposed here. They are crystalline, volcanic, and sedimentary in nature and of various geological ages.

Climate in the San Juan Basin differs with elevation. Variations are found in the mountainous foothill mesa and desert zones. A climatic feature common to all zones is that winter snow accounts for about half of the annual precipitation averaging about twenty-one inches.

Most of the Basin has an elevation of over 6,000 feet, therefore, not only is the growing season limited (six months generally), but also the mean daily temperature. One hundred and ninety-five thousand acres of irrigated croplands produce four major crops; pasture grass, hay, small grain, and corn.

The Basin is one of the most popular recreation areas in the state, with over twelve million dollars per year being spent on hunting and fishing alone. There are several big game animals indigenous to the area such as elk, deer, black bear, and big horn sheep. The western cottontail rabbit is the principal small game animal, while others include the snowshoe hare, squirrels, game birds, and waterfowl. The Basin provides good fishing both in the streams and lakes which provide an excellent habitat for Rainbow, Native Brown, and Brook Trout; Walleye, Northern Pike, and Kokanee Salmon.

Winter sports are an important activity with approximately 74,000 skier visits annually. At the Purgatory Ski Area, the largest of five ski areas, in or adjacent to the Basin; development now in progress will make the San Juan Basin

a major attraction for skiers. Cross country skiing and snowmobiling are currently among the rapidly growing winter sports.

The Denver and Rio Grande Western Railroad conducts daily passenger tours every summer on its narrow gauge line between Durango and Silverton. Formerly a principal means of transporting heavy freight, the railroad was converted to passenger service mainly due to the curtailment of mining and the topographic nature of the Basin, making the construction costs of expansion too high.^{1/} All freight moving into the Basin except from the South, must be transported by truck over the mountain passes. Highway construction and maintenance is costly due to the terrain and unstable shale soils, but cheaper than railroad construction.

The growth of the San Juan Basin is dependent on certain other utilities and their respective services such as the availability of telephone, electric, and natural gas. These are available in most communities, however, toll charges between cities and towns hamper communication.

There is a definite need for rural water and sewage disposal systems. A shortage of underground water and the limitations of certain soils for septic systems create problems. This is particularly important at a time when rapid growth of subdividing of farms and ranches for housing developments is taking place. Home construction and recreational developments have been on the rise in rural areas in recent years, with more rapid increase projected for the future.

Clean air and clear water are among the valuable resources of the area. Pollution of these resources must be eliminated. The most common source of water pollution in the San Juan Basin is sediment resulting from soil erosion. The lack of plant cover accelerates the runoff from snow melt and rain, leading to critically eroded areas. Deep gullies are the most obvious feature of these areas. Wind erosion on dry crop land is less critical generally, but is serious in some localized areas and contributes to air pollution. Air pollution on prevailing westerly winds from the Four-Corners Power Plant near Shiprock, New Mexico, is the major concern in the area. Pollution such as lumber mills, is of a minor extent.

Water is the most important resource in the San Juan Basin. Of the total annual water supply, approximately 270,000 acre feet are used locally. There are slightly over 195,000 acres of irrigated land within the Basin at the present time. Water will be available for an additional 250,000^{2/} acres in the western part of La Plata County and dryland areas of Dolores and Montezuma Counties, with the proposed Animas-La Plata and Dolores Projects. There are nine major irrigation systems which distribute water to seventy percent of all irrigated crop lands in the San Juan Basin. They are listed in this report with other pertinent data concerning the administration of water in Division 7 for the year 1974.

^{1/} The change in mode of transportation also must be considered as a reason for the lack of railroad expansion.

^{2/} Subject to change depending on cost-benefit.

II. PERSONNEL

During the reporting year some changes have occurred in the staffing of Division 7:

January 31, 1974

Harold Coffey, W.R.E.II transferred to Water Division I. Harold had transferred from Division III to Division VII on September 21, 1973.

September 1, 1974

Kenneth J. Cooper transferred from Water Division II to Division VII to fill the vacancy left by Harold Coffey. Ken was promoted to W.R.E.II November 1, 1974

November 1, 1974

George Edmonson, Deputy Water Commissioner of District 32, McElmo Canyon, received full-time status. He was formerly working part-time on a twelve-month basis.

The staff for Division VII is listed on the following page.

The filing of applications for adjudications causes an ever-increasing work load for the water commissioners, in addition structures to be checked and additional records to be maintained. We are averaging approximately twenty-five applications per month.

In addition, a concentrated effort is being made to tabulate ground water withdrawal and categorize according to use. Our needs as reflected in the budget for the fiscal year 1974-1975, were again submitted in the 1975-1976 budget.

NOVEMBER 1, 1973 to OCTOBER 31, 1974

FULL TIME EMPLOYEES - ADMINISTRATION

<u>NAME</u>	<u>POSITION</u>	<u>GRADE</u>	<u>MONTHS BUDGETED/</u>		<u>MILEAGE</u>
			<u>WORKED</u>		
Wayne M. Crosby,	Division Engineer	W.R.E. IV	12	12	1,871 P 7,488 S
Orlyn J. Bell	Ass't. Div. Engin.	W.R.E. III	12	12	919 P 8,144 S
Harold Coffey ^{1/}	Hydrographer	W.R.E. II	12	3	4,556 S
Kenneth J. Cooper ^{2/}	Hydrographer	W.R.E. II	2	2	270 P 6,615 S
Ann-L. Fauth ^{3/}	Secretary 1-A		12	11	

FULL TIME EMPLOYEES - WATER COMMISSIONERS

		<u>DISTRICT</u>			
E. Ivan Danielson	W. C. I.	30	12	12	7,291 P
George E. Davis	W. C. I.	30	12	12	12,105 P 2,417 S
Glen E. Humiston	W. C. I.	32,34,69,71	12	12	2,445 P 10,975 S
J. Russell Kennedy	W. C. I.	33	12	12	11,350 P 985 S
Larry Nielsen	W. C. I.	77	12	12	14,991 P

PERMANENT PART TIME EMPLOYEES - WATER COMMISSIONERS AND DEPUTIES

		<u>DISTRICT</u>			
Roy Brown, Jr.	D. W. C.	78, 29	7-3/4	9-1/2	9,117 P 3,833 S
George Edmonson ^{4/}	D. W. C.	32	12	12	12,342 P
William P. Lynn	W. C. I.	29, 78	11	10-2/3	7,754 P
Ronald R. Robinson	D. W. C.	78, 29	8	7-1/6	7,199 P
Bob Shahan	D. W. C.	77	3-1/4	3-1/4	3,429 P
Lawrence J. Shock	D. W. C.	31, 46	8-1/4	9-5/6	10,328 P
Avrit G. Sparks	W. C. I.	31, 46	9-3/4	11-3/4	13,096 P
Wilford E. Speer	D. W. C.	69, 71	7-1/4	11-2/3	15,196 P
TOTALS					129,703 P 45,013 S
GRAND TOTAL					<u>174,716</u>

1/ Transferred to Division I

2/ Transferred from Division II

3/ On unpaid leave time 25 working days (temporary help secured to fill vacancy)

4/ Made full-time permanent on November 1, 1974

P = Private Vehicles

S = State Vehicles

III. WATER SUPPLY

A. SNOW PACK (winter 1973-1974)

Relatively no snow was received until the first day of January 1974. On the first day of February, there were 54" on the ground in Durango. This was the extent of the snow pack for the winter of 1973-1974, with no more measurable precipitation until the first week in July.

<u>SNOW PACK</u>	NO. OF COURSES AVERAGED	THIS YEAR'S SNOW WATER AS PERCENTAGE OF	
		<u>LAST YEAR</u>	<u>AVERAGE</u>
ANIMAS RIVER	6	48	87
DOLORES RIVER	4	48	115
SAN JUAN RIVER	3	52	83

<u>WATER SUPPLY</u>	APRIL THRU SEPT.	% OF AVERAGE	15 YEAR		% OF <i>Last year</i>
	1000 A.F. FORECAST		AVERAGE	ACTUAL	
ANIMAS RIVER AT DURANGO	340	80	423	259,960	61
DOLORES RIVER AT DOLORES	180	78	232	143,910	62
LA PLATA RIVER AT HESPERUS	17	71	24	19,574	81
PIEDRA RIVER NEAR ARBOLES	150	81	185	84,910	50

<u>STREAM SUPPLY OUTLOOK</u>	FLOW PERIOD	
	<u>SPRING</u>	<u>SUMMER</u>
FLORIDA RIVER	Fair	Poor
SAN JUAN RIVER	Fair	Poor
PIEDRA RIVER	Fair	Poor
ANIMAS RIVER	Fair	Poor
DOLORES RIVER	Fair	Poor

<u>SOIL MOISTURE</u>	<u>NO. OF STATIONS</u>	THIS YEAR'S MOISTURE AS PERCENT OF	
		<u>LAST YEAR</u>	<u>AVERAGE</u>
ANIMAS RIVER	3	74	66
DOLORES RIVER	3	86	89
SAN JUAN RIVER	3	74	66

III. WATER SUPPLY

B. PRECIPITATION (summer 1974)

No measurable precipitation was received after February 1, 1974 until the first week in July. With a below-normal snow pack, water went on call early and reservoir storage was depleted early. When the rains finally came, they caused problems with the harvest. Summertime temperatures were slightly above normal.

III. WATER SUPPLY
C. FLOODS

No floods, either from snow-melt or precipitation were experienced this year in Division VII. Some repair work from flooding the previous year was completed.

III. WATER SUPPLY
D. WATER BUDGET FOR 1973

<u>WATER DISTRICT</u>	<u>SUPPLY - A.F.</u>	<u>DEMAND - A.F.</u>	<u>OUT OF DISTRICT-A.F.</u>
69	28,898	2,851	27,795
71	524,230	143,773	376,526 (82,460 A.F. to Dist.32)
32	82,460	37,964	68,010
34	124,665	37,650	100,200
33	97,122	30,918	79,120
30	1,103,722	221,737	1,181,000
31	256,133	203,742	386,200 (4,340 A.F. to Dist. 46)
46	4,340	6,808	10,000
78	505,000	66,295	560,200
77	152,970	69,452	121,300
29	459,460	179,940	639,400
DIVISION VII	<u>3,339,000</u>	<u>1,001,130</u>	<u>3,549,751</u>

III. WATER SUPPLY
E. UNDERGROUND WATER

<u>TYPE</u>	<u>NO. OF WELLS</u>	<u>CHANGE BY UPDATE 10-31-74</u>	<u>AMOUNT REGISTERED IN C.F.S.</u>
(0) HOUSEHOLD	18		21.3
(1) DOMESTIC	1,192	+52	2,002.0
(2) STOCK	90	+ 7	128.0
(3) DOMESTIC AND STOCK	69	+14	304.0
(4) COMMERCIAL	39	+ 4	206.0
(5) INDUSTRIAL	20	+ 3	223.0
(6) IRRIGATION	12	+ 5	326.0
(7) IRRIGATION AND STOCK	2	0	136.0
(8) MUNICIPAL	17	+ 3	182.0
TOTALS	<u>1,477</u>	<u>+224</u>	<u>3,527.0</u>

Well permits continue to be processed for household, commercial, domestic, fire protection and other uses. Although flows from the aquifers are small, generally two to twenty gallons per minute, the influx in population continues to create the demand. Subdivision of land for a multitude of purposes continues to increase. Although administrative problems do not now exist in the administration of ground water, they are just around the corner. A few alternate points of diversion are being adjudicated but more profound is the transfer of portions of decreed surface rights to wells in critical areas where permits are denied.

III. WATER SUPPLY

F. TRANSMOUNTAIN DIVERSIONS

All water via transmountain diversion is exported from Division 7. The various diversions are listed below.

<u>NAME OF DITCH</u>	<u>WATER DISTRICT</u>	<u>SOURCE OF SUPPLY</u>	<u>RECIPIENT</u>	<u>AMOUNT A.F.</u>
Pine R. Weminuche Pass (Fuchs Ditch)	31	Pine River	Leland & Harley Fuchs Del Norte, CO	142
Weminuche Pass Ditch (Raber-Lohr Ditch)	31	Pine River	Hilde Lohr & Leon Raber Del Norte, CO	716
Treasure Pass Diversion	29	San Juan R.	Fred Falk, Del Norte, CO	153
Williams Creek Squaw Pass Diversion Ditch	78	Piedra River	Seaborn Collins, Navajo Development Co., Creede, CO	47
Don LaFont Ditch #1 E., & South River Peak Ditch	78	Piedra River	Colo. Division of Wildlife	78
Don LaFont Ditch #2 W. (Piedra Pass Ditch)	78	Piedra River	Colo. Division of Wildlife	10
Carbon Lake Ditch	30	Animas River	Ouray Ditch Co., Montrose, CO	181
Red Mountain Ditch	30	Animas River	Ouray Ditch Co., Montrose, CO	137
Mineral Point Ditch	30	Animas River	Warren Gibbs, Ouray, CO.	No Record
St. John Ditch	30	Animas River	Charles Gunn & <u>W. Worley</u> Olathe, Colorado	No Record

III. WATER SUPPLY

G. RESERVOIR STORAGE

This was a low runoff year, and consequently, only some of the major storage reservoirs were filled.

The reservoirs under the Montezuma Valley Irrigation System in Water Districts 32 and 71 filled out of the Dolores River, providing 44,200 acre feet of storage water. Jackson Reservoir reached 75% of its capacity, providing 8,000 acre feet of storage to the Mancos Valley. Lemon Reservoir reached 22,324 acre feet or 56% of its capacity, and Vallecito Reservoir reached 80,200 acre feet or 62% of its capacity.

Because of the shortage of storage water, all of the reservoir companies and irrigation districts operated on reduced heads, and either irrigated less land or reduced the acre-foot-per-acre ratio normally attained.

The carryover storage for next year is very poor, with many irrigation reservoirs presently down to dead storage.

Reservoirs in the Division, noting their change in storage, are listed on the following pages.

III. WATER SUPPLY
G. RESERVOIR STORAGE

<u>DIST.</u>	<u>NAME OF RESERVOIR</u>	<u>DECREED A.F. CAPACITY</u>	<u>SOURCE OF SUPPLY</u>	<u>AMOUNT A.F. 11-1-1973</u>	<u>AMT. A.F. BEGINNING IRR. SEASON</u>	<u>AMT. A.F. 10-31-1974</u>
71	A.M. Puett Reservoir	2,584	Summit Reservoir Sys.	534	534	66
29	Barrow Reservoir	12.97	San Juan River	13	13	13
34	Bauer Reservoir #1	2,294	Crystal Creek	100	256	33
34	Bauer Reservoir #2	1,073	Crystal Creek	0	800	0
77	Beaver Creek Reservoir	1.42	Navajo River	1	2	2
31	Bellflower Retention Res.	59.8	Pine River	30	30	30
69	Belmear Lake Reservoir	445.0	Rinconone Creek	300	464	300
29	Bennett Reservoir	1.512	Stollsteimer Cr.	2	2	2
71	Big Pine Reservoir	519.0	Turkey Creek	234	460	425
29	Blanco Retaining Pond	68.0	Blanco River	1	1	1
29	Born's Lake Reservoir	67.879	W. Fork San Juan River	68	68	68
29	Bramwell Reservoir #1	1.749	Little Blanco River	2	2	2
29	Bramwell Reservoir #2	0.424	Little Blanco River	1	1	1
29	Bramwell Reservoir #3	1.555	Little Blanco River	2	2	2
29	Brown Reservoir	5.44	Little Blanco River	5	5	5
69	Buck Pasture Reservoir	53.94	Disappointment Creek	Drained	For	Repair
30	Cascade Reservoir	23,352	Cascade Creek	16,914	5,492	14,486
30	Cascade Reservoir #3	97.8	Cascade Creek	Power	Stabilization	
30	Clifty Lodge Reservoir	1.43	Elbert Creek	1	1	1
77	Columbine Reservoir	5.10	Little Navajo River	5	5	4
77	Confar Hill Reservoir	0.50	Coyote Creek	1	1	1
34	Coppinger Reservoir #1	17.73	Summit Res. System	9	19	0
34	Coppinger Reservoir #2	13.84	Summit Res. System	2	20	0
77	Coyote Park Reservoir	1.21	Coyote Creek	1	1	1
29	Crescent Lake	26.24	White Creek	26	26	26
29	Daily Hott Reservoir			Not	Built	
29	Dry Gulch Reservoir	0.123	San Juan River	1	1	1
32	Ducks Nest Reservoir	1,219	Monument Creek	626	1,100	438
30	Duck Slough-Andrews Lake	131.38	Animas River	122	130	122
69	Dunham Reservoir	78.75	Groundhog Creek	60	100	40
78	Dunnagan Reservoir	93.48	Devil Creek	38	190	190
30	Durango Reservoir #1	2,220	Florida River	2,220	2,220	2,220
30	Durango Reservoir #2	570.0	Florida River	570	570	570
30	Durango Reservoir #3	42.5	Florida River	42	42	42
30	Durango Reservoir #4	440.0	Florida River	440	440	440
29	East Fork San Juan Res.			Not	Built	
29	Echo Canyon Reservoir	2,148.79	Echo Creek	1,748	1,748	1,748
29	Echo Dam & Reservoir			Not	Built	
29	Echo Reservoir #1	2.2	Echo Creek	2	2	2
29	Echo Reservoir #2	0.678	Echo Creek	1	1	1
31	Emerald Lake Reservoir	7,077.7	Lake Fork/Pine River	No Storage	Dam Breached	
29	Eight Mile Reservoir	1.72	San Juan River	2	2	2
69	Ethel Belmear Reservoir	87.30	Unnamed Draw	80	125	0

<u>DIST.</u>	<u>NAME OF RESERVOIR</u>	<u>DECREED A.F. CAPACITY</u>	<u>SOURCE OF SUPPLY</u>	<u>AMOUNT A.F. 11-1-1973</u>	<u>AMT. A.F. BEGINNING IRR. SEASON</u>	<u>AMT. A.F. 10-31-1974</u>
77	Fall Creek Reservoir	4.67	Fall Creek	5	5	5
77	Fall View Reservoir	7.78	Aspen Creek/Navajo R.	8	8	8
29	Fawn Gulch Reservoir	0.63	San Juan River	1	1	1
31	Fitzgerald Irr. Sys. Res.	2.5	Crowbar Creek	2.5	2.5	2.5
33	Fellers Reservoir	1.6	Big Stick Ditch	0	1.6	0
30	Florida Res. & Canal (Pastorius Reservoir)	970.0	Florida River	560	560	560
29	Four M. Reservoir	8.0	Blanco River	-	-	-
29	Gale Reservoir #1	10.292	Blanco River	10	10	10
29	Gale Reservoir #2	6.89	Blanco River	7	7	7
29	Gale Reservoir #3	11.060	Blanco River	11	11	11
77	Gardner Lake Reservoir	23.16	Gardner Lake Cr./ Little Navajo R.	15	15	15
69	Garner Reservoir	36.97	Bear Creek	25	36	12
30	Gregg Reservoir	1.802	Florida River	2	2	2
71	Glade Reservoir	50.0	Dolores River	-	-	-
71	Groundhog Reservoir	21,710	Fish Creek	16,054	18,000	9,697
78	G. S. Hatcher Reservoir	1,730	Martinez Creek	1,366	1,295	815
29	Harris Bros. & Boone #1	16.62	Branch Creek	49	49	49
29	Harris Bros. & Boone #2	205.3	Branch Creek	80	206	22
29	Hatcher Retaining Pond	6.87	West Fork San Juan	7	7	7
30	Haviland Lake Reservoir	403.86	Elbert Creek	170	170	170
78	Hersch Reservoir	32.04	Stollsteimer Creek	Rebuilding		
77	Hidden Lake Reservoir	14.92	Indian Creek	5	5	5
29	Hidden Valley Reservoir			Not	Built	
30	Highland Mary Reservoir	650.0	Animas River	Not	Used	
30	Hotter Brothers Reservoir	39.36	Cascade Creek (Little)	39	39	39
30	Howardsville Reservoir	90,700	Animas River	Not	Built	
30	Hutchinson Reservoir	10.9596	Bear Creek	17	8	0
29	Hydeaway Ranch Reservoir	2.29	San Juan River	-	-	-
30	Ice Lake Reservoir	416.20	Elbert Creek	410	400	410
34	Jackson Lake Reservoir	10,000	West Mancos River	6,340	7,825	2,824
29	Joe Hersch Reservoir #1	1.74	San Juan River	2	2	2
30	Johansing Vinnel Fish Res.	4.0	Florida River	4	4	4
30	Keeler Reservoir	437.53	Elbert Creek	488	488	488
77	King Dam and Reservoir	5.0	Butler Creek	1	5	1
77	Kruger Reservoir	90.0	Oil Well Creek	-	-	-
77	Kruger Reservoir #2	9.0	Oil Well Creek	9	9	9
34	L A Bar Reservoir	73.33	Bauer Reservoir System	4	35	0
30	L-U Lakes	3.25	Florida River	3	3	3
30	Lake Carol	8.109	Non-Tributary	8	8	8
30	Lake of the Pines	114.4	Little Cascade Creek	114	100	100
30	Lake Susan	17.459	Non-Tributary	18	18	18
33	Lapp Davis Res. System	1.70	Cherry Creek	0	1	2
33	Lapp Home Res. System	0.40	Cherry Creek	1	1	1

<u>DIST.</u>	<u>NAME OF RESERVOIR</u>	<u>DECREED A.F. CAPACITY</u>	<u>SOURCE OF SUPPLY</u>	<u>AMOUNT A.F. 11-1-1973</u>	<u>AMT. A.F. BEGINNING IRR. SEASON</u>	<u>AMT. A.F. 10-31-1974</u>
33	Lapp North Res. System	2.25	Cherry Creek	0	2	2
33	Lapp Ranch S. Stock Res.	0.80	Cherry Creek	0	1	0
78	Linn & Clark Reservoir	426.0	Martin Creek	1,070	690	1,070
30	Lemon Reservoir	40,240	Florida River	19,438	20,027	5,264
71	Lost Canyon Lake	106.0	Dolores River	30	106	30
29	Lost Creek Reservoir			Not	Built	
30	Macy Reservoir	11.2	Spring Creek	0	2	0
29	Martinez Dam	2,900	Four Mile Creek	-	-	-
29	McGirr Ditch & Reservoir			Water	Moved	
69	Morrison Reservoir	42.0	Morrison Creek	80	100	80
77	Muddy Creek Reservoir	8.16	Big Muddy Creek	8	8	8
71	Narraguinnep Reservoir	19,046	Dolores River	5,000	19,046	4,000
69	North Draw Reservoir	13.64	North Draw	30	30	20
78	Pargin Reservoir	530.6	Stollsteimer	531	531	531
29	Park Reservoir	0.52	Stollsteimer	1	1	1
30	Pat. A. Sherwood Res.	3.7	Animas River	4	4	4
29	Piedra Retaining Pond	5.24	Piedra River	5	5	5
31	Pine Spring Ranch Res. #1	2.9	Beaver Cr./Pine River	0	0	0
78	Pinon Lake	161.85	San Juan Tributary	162	162	162
29	Price-Kinny Reservoir	1.31	Coyote Creek	1	1	1
78	Poma Reservoir	26.53	Piedra River	27	27	27
71	R.B. Coppinger Res. #1	16.16	Dolores River	16	16	0
33	Red Mesa-Ward Reservoir	1,176	Hay Gulch	185	1,210	50
30	Relay Retaining Pond	19.54	Hermosa Creek	Not	Used	
32	Robert Leighton Res.	36.65	Mc Elmo Creek	30	37	37
29	San Juan Raw Storage Res.			Not	Built	
34	Sellers & McClane Res.	52.09	Summit Res. System	10	52	7
30	Shaul Reservoir	1.0 cfs	Florida River	0	0	0
29	Shoestring Reservoir	1.16	Mill Creek	1	1	1
30	Short Reservoir	40.0	Trumble Draw	40	40	35
29	Spiller Canyon Reservoir	2.31	Blanco River	2	2	2
29	Spring Buck Reservoir			Not	Built	
78	Spring Creek Reservoir	46.201	Spring Creek	1	46	0
77	Spence Reservoir	441.007	Coyote Creek	330	441	118
29	Squaw Gap Reservoir	0.87	Little Blanco River	1	1	1
78	Stevens Reservoir	634.84	Stollsteimer	405	635	555
71	Summit Reservoir	7,733	Lost Canyon	1,109	1,109	950
29	Sunset Cottages Res. #1	18.03	San Juan River	18	18	18
29	Sunset Cottages Res. #2	22.95	San Juan River	23	23	23
29	Talon Reservoir			Not	Built	
33	Taylor Reservoir #3	85.58	La Plata River	86	86	86
29	Thomas Reservoir	55.66	San Juan River	56	56	56

<u>DIST.</u>	<u>NAME OF RESERVOIR</u>	<u>DECREED A.F. CAPACITY</u>	<u>SOURCE OF SUPPLY</u>	<u>AMOUNT A.F. 11-1-1973</u>	<u>AMT. A.F. BEGINNING IRR. SEASON</u>	<u>AMT. A.F. 10-31-1974</u>
77	Three Lakes Res. #1	3.40	Navajo River	0	0	0
77	Three Lakes Res. #2	8.39	Navajo River	8	8	8
77	Three Lakes Res. #3	10.47	Navajo River	5	10	5
32	Totten Reservoir	3,460	Dolores River	1,755	2,700	1,363
29	Trilsch Reservoir	2.76	Blanco River	Not	Built	
29	Trujillo Reservoir			Not	Built	
30	Turner Ponds	84.0	Animas River	84	40	0
29	Turkey Springs Reservoir	2.0	Stollsteimer	2	2	2
30	Turner Reservoir	472.37	Waterfall Creek	472	472	430
31	Vallecito Reservoir	129,675	Pine River	67,711	80,222	16,932
29	Valle Seco Reservoir	0.496	San Juan River	1	1	1
29	Wapiti Reservoir			Not	Built	
30	Warner Reservoir #1	13.0	Elbert Creek	13	13	13
30	Warner Reservoir #2	6.0	Elbert Creek	6	3	6
30	Warner Reservoir #3	0.8	Elbert Creek	1	1	1
30	Warner Reservoir #4	0.5	Elbert Creek	1	1	1
30	Warner Reservoir #5	23.0	Elbert Creek	23	17	23
30	Warner Reservoir #6	0.4	Elbert Creek	1	1	1
30	Warner Reservoir #7	0.3	Elbert Creek	1	1	1
30	Warner Reservoir #8	2.0	Elbert Creek	2	2	2
34	Weber Reservoir	441.8	Middle Mancos River	88	442	60
32	West Reservoir	6.0	Mc Elmo Creek	2	6	2
78	Williams Creek Reservoir	10,084	Williams Creek	10,084	10,084	10,084
29	Willow Draw Reservoir	1.06	Mill Creek	1	1	1
29	Wilson's Lake	7.025	Blanco River	7	7	7
31	Wommer Reservoir #1	185.69	Little Bear Creek	179	115	103
<u>TOTAL OF 153 RESERVOIRS</u>		<u>391,722</u>		<u>159,187</u>	<u>182,869</u>	<u>78,782</u>

IV. AGRICULTURE

The major crop in the San Juan Basin is dry beans. Production was up 38% in 1973 (1969-1973), while dollar value rose 330%. A total of \$3,955,500 was realized from this crop in 1969, while \$13,070,000 went to the bank in 1973. Dolores and Montezuma Counties are second and third in production of dry beans, with Weld County in northeastern Colorado first.

This year (1974) a dry spring and summer hampered growth. The harvest was down 20-30%, but increased prices per hundred-weight may reflect a larger value over last year.

Hay production was off due to the dry weather, and a shortage exists in winter hay storage.

Livestock prices and production followed a state-wide trend with big cattle hitting a low of twenty-two cents per pound.

V. COMPACTS AND AGREEMENTS

I. THE LA PLATA RIVER COMPACT

The New Mexico Compact Commissioner called for the available water to be split between Colorado and New Mexico on March 26, 1974, under the terms of the Compact Agreement. The flow at the New Mexico State Line was 12.6 c.f.s. and the flow at Hesperus, Colorado was 10.9 c.f.s. Therefore, New Mexico was entitled to 5.45 c.f.s. and was, in fact, receiving more than double their share due to low elevation runoff. The situation for either State did not improve until late April, when flows finally rose above 40 c.f.s. at Hesperus and reached a twenty-four hour peak of 132 c.f.s. on May 9th. June daily runoff at Hesperus only averaged 43 c.f.s.

Historically, Colorado has applied a futile call to the river when flows reached 25 c.f.s. at Hesperus, and administers the available water accordingly. This occurred on June 26 of this year and remained throughout the year.

The low fluctuating supply of water in April, May, and June, coupled with high transportation losses and negligible return flows, made the river extremely difficult to administer under the Compact.

In all, this must be one of the poorest years of record on the La Plata River.

II. THE SAN JUAN-CHAMA DIVERSION PROJECT

Problems with the U.S. Bureau of Reclamation continue with the Bureau disregarding our flow measurements as a basis of shorting Colorado water users.

Water stored behind the Oso Diversion Dam was called out for Colorado users. The call was refused. The Division Engineer and Water Commissioners operated the manual control and released the water. The Diversion was then posted.

At present, the suit filed by the Southwest Water Conservation District is awaiting a decision on a motion to dismiss, entered by the United States.

VI. DAMS

All repairs caused by the floods and heavy runoff of 1973 have been completed. As the Dams Section in Denver becomes better staffed, more and better inspections are made with the accent on preventive maintenance and repair, prior to an emergency. Narraguinnep, Bauer No. 1, Buck Pasture, and Pastorius Reservoirs were among those in this category that have been, or are being worked on.

There was no damage by flooding or heavy runoff this year.

VI. DAMS

B. LIVESTOCK WATER TANKS

Stocktank or Erosion Control Dam Permits were issued in individual districts as follows:

<u>DISTRICT</u>	<u>NUMBER OF PERMITS</u>
29	10
30	1
31	1
32	1
33	3
34	2
71	8

There were no permits issued for Districts 46, 69, 77, and 78 this year.

VII. WATER RIGHTS

A. TABULATION

Many corrections to the Water Rights Tabulation were made and the new print-outs were received and put on sale October 10, 1974. Publication was confirmed in all periodicals as required. Protests to the tabulation were belatedly received and all valid objections will be corrected this winter. Three Districts still need extensive research into the Old Court Decrees in order to satisfy the exactness required of the Tabulation. Also, Decrees issued since 1969 need to be added to the tabulation.

Much legwork has been done by Division 7 personnel this past year, toward getting Water Right owners to correct and revise their decrees according to present location and usage.

VII. WATER RIGHTS

B. REFEREE'S FINDINGS AND DECREES

	<u>INVESTIGATED</u>	<u>REFEREE</u>	<u>COURT</u>
	<u>BY</u>	<u>RULINGS</u>	<u>DECREES</u>
	<u>DIVISION VII</u>		
1. Underground Water Rights	50	33	33
2. Change of Water Rights	39	20	20
3. Plans of Augmentation	3	1	1
4. Surface Water Rights	99	69	52
5. Due Diligence:			
Quadriennial Findings	9	2	2
Conditionals made Absolute	14	7	5
6. Water Storage Rights	22	8	8
TOTALS	<u>236</u>	<u>140</u>	<u>121</u>

Special filings were made by the U.S.A. Department of Justice, Land and Natural Resources Division, covering cases W-1120-73 through W-1139-73, and W-1143-73 through W-1148-73 for miscellaneous surface, underground, and storage rights in Division 7.

Plans of Augmentation are few. Some applications that should have been filed as Plans of Augmentation were not. Most of the Augmentation plans filed are of a Conditional Nature, and to be used for a trial period due to the drastic changes in water use.

Many of the development projects have slowed down or come to a standstill due to high interest rates and the increased cost of construction.

All other types of water right applications remain consistent with last

year, as shown by the tabulation above. There has been no price increase on water right applications.

The majority of well use in the Division is household and domestic. The Adjudication of these wells continues to be a problem, taking them out of the exempt category and putting them into the priority system. This adds to the already too-heavy work load of administration.

VIII. ORGANIZATIONS

A. WATER CONSERVATION AND CONSERVANCY DISTRICTS

<u>NAME</u>	<u>ADDRESS</u>	<u>ATTORNEY</u>	<u>PRESIDENT</u>
La Plata Water Conservation	Box 497 Durango	F. S. Maynes	V. A. Paulek
Dolores Water Conservancy	Box 790 Cortez	George Buck	Jack C. Kinkade
Florida Water Conservancy	Box 1157 Durango	L. W. McDaniel	Chester Beaton
Mancos Water Conservancy	Cortez	Guy Dyer	Noland Alexander
Pine River Irrigation	843 Main Durango	Robert Duthie	Frank Wommer, Jr.
San Miguel Water Conservancy	Box 497 Durango	F. S. Maynes	George M. Young
Southwest Water Conservation	Box 497 Durango	F. S. Maynes	Fred Kroeger

VIII. ORGANIZATIONS

B. INCORPORATED DITCH COMPANIES

<u>DISTRICT 29</u>	<u>NAME</u>	<u>OFFICER</u>	<u>ADDRESS</u>
	Echo Ditch Co.	William Jackson	Pagosa Springs, Colorado
	Park Ditch Co.	Hood Formwalt	Pagosa Springs, Colorado
<u>DISTRICT 30</u>			
	Animas Ditch Co.	R. V. Bonds	Rt. 2, Box B61, Durango
	Animas Consolidated Ditch Co.	Robert McCormick	Rt. 1, Box 378, Durango
	Florida Canal Co.	T. G. Eggleston	135 Riverview, Durango
	Florida Canal Reservoir Co.	T. G. Eggleston	135 Riverview, Durango
	Hermosa Ditch Co.	Robert McCormick	Rt. 1, Box 378, Durango
	Pioneer Ditch Co.	Roy Annala	Rt. 2, Box 122, Durango
	Reid Ditch Co.	Animas Valley Ditch Co. % N. W. Knowlton	Rt. 1, Durango
<u>DISTRICT 31</u>			
	King Ditch Co.	James F. Mayfield	Rt. 1, Ignacio, Colorado
	Los Pinos Ditch Co.	Frank Ludwig, Jr.	Box 245, Bayfield, CO
	Robert Morrison Ditch Co.	Delwin Fassett	Rt. 2, Durango
	Schroder Irrigation Ditch Co.	Lucian Squires	Bayfield, Colorado
	Spring Creek Ditch Co.	Ed Lane	Rt. 2, Ignacio, CO
	Sullivan Ditch Co.	Chris Kugle	Rt. 1, Bayfield
	Thompson-Epperson Ditch Co.	Treman Dunevant	Ignacio Rt., Bayfield, CO
	Vallecito Reservoir	Pine River Irr. Dist. % Frank Wommer	Rt. 1, Bayfield, CO
<u>DISTRICT 32</u>			
	Montezuma Valley Irr. Co.	Victor Bryan	Cortez, Colorado

Incorporated Ditch Companies continued

<u>NAME</u>	<u>OFFICER</u>	<u>ADDRESS</u>
<u>DISTRICT 33</u>		
Big Stick Ditch Co.	Charles Payne	Hesperus, Colorado
Hay Gulch Ditch Co.	Lawrence Huntington	Hesperus, Colorado
H. H. Ditch Co.	Orlo Schmitt	Hesperus, Colorado
Joseph Freed Ditch Co.	Nancy Price	Hesperus, Colorado
La Plata River & Cherry Creek Ditch Company	Roland Bartel	Mancos, Colorado
Lightner Canal	V. A. Paulek	Hesperus, Colorado
Pine Ridge Ditch Co.	Randy Bodo	Durango, Colorado
Red Mesa Ward Reservoir & Ditch Supply Co.	Nancy Price	Hesperus, Colorado
Reorganized Revival Ditch Co.	Lila Greer	Hesperus, Colorado
Slade Ditch Co.	Judy Albrecht	Hesperus, Colorado
Townsite Ditch Co.	Judy Albrecht	Hesperus, Colorado
Treanor Enterprise Ditch Co.	Ruth Candelaria	Marvel, Colorado
<u>DISTRICT 34</u>		
Bauer Lakes Water Company	Leroy Everett	Mancos, Colorado
Root & Ratliff Ditch Co.	Lloyd Doerfer	Mancos, Colorado
Town of Mancos Ditch Co.	Geraldine Wallace	Mancos, Colorado
Webber Ditch Co.	Vernon Ellis	Mancos, Colorado
Webber Reservoir & Ditch Co.	Foster Hall	Mancos, Colorado
<u>DISTRICT 71</u>		
Summit Irrigation System	Eddie McRea	Dolores, Colorado
Groundhog Reservoir & Beaver Ditch System	Victor Bryan	Cortez, Colorado
Montezuma Valley Irr. System	Victor Bryan	Cortez, Colorado
<u>DISTRICT 78</u>		
Piedra Falls Ditch Company	Raymond McWhiter	Pagosa Springs, Colorado

IX. WATER COMMISSIONERS' SUMMARIES

Tabulations of each water commissioner's summary with the districts in numerical sequence follow, preceded by a summary of the entire Division. Of the Decreed structures in the report, 971 receive "Standard Administration" and 1,394 receive "Semi-Standard Administration".

IX. WATER COMMISSIONERS' SUMMARIES

<u>DIVISION VII SUMMARY</u>	<u>NUMBER</u>	<u>A.F.</u>	<u>DUTY OF WATER</u>	
			<u>DIRECT A.F./A.</u>	<u>STORAGE A.F./A</u>
Direct Flow Diversions (includes wells)	1,446	665,045	2.70	
Delivered Reservoir Storage		171,170		1.05
Reservoir Storage Max. 220,028 Carryover 75,892 to 1975				
Acres Irrigation 207,352	<u>Direct 203,727</u>			
	Storage 139,242			
Number of Active Ditches	1,122			
Number of Reservoirs Served	135	(36 irrigation)		
Average Demand A.F./A. (Direct Storage)				
Number Water Rights Nonuse	640	(32 Reservoirs)		
Number Water Rights Not For Irr.	625			
Number of Daily Ditch Reports	54,133			
<u>WATER DISTRICT 29 (San Juan Chama Diversion Project)</u>		(25,130 A.F.)		
Direct Flow Diversions (includes wells)	181	109,858	4.20	
Delivered Reservoir Storage		423		0.52
Reservoir Storage Max. 2,254 A.F. Carryover 2,071 to 1975				
Acres Irrigation 16,001	<u>Direct 16,001</u>			
	Storage 820			
Number of Active Ditches	164			
Number of Reservoirs Served	36	(3 irrigation)		
Average Demand A.F./A. (Direct & Storage)	6.89			
Number Water Rights Nonuse	93	(14 Reservoirs)		
Number Water Rights Not For Irr.	31			
Number of Daily Ditch Reports	11,004			
288 A.F. diverted to Water Division III through Transmountain Diversions				
<u>WATER DISTRICT 30</u>				
Direct Flow Diversions (includes wells)	372	152,060	3.40	
Delivered Reservoir Storage		47,124		2.06
Reservoir Storage Max. 47,263 Carryover 22,578 to 1975				
Acres Irrigation 38,590	<u>Direct 37,880</u>			
	Storage 22,905			
Number of Active Ditches	252			
Number of Reservoirs Served	35	(2 irrigation)		
Average Demand A.F./A. (Direct & Storage)	5.17			
Number Water Rights Nonuse	289	(9 Reservoirs)		
Number Water Rights Not For Irr.	226			
Number of Daily Ditch Reports	9,418			

IX. WATER COMMISSIONERS' SUMMARIES

<u>WATER DISTRICT 31</u>	<u>NUMBER</u>	<u>A.F.</u>	<u>DUTY OF WATER</u>	
			<u>DIRECT A.F./A.</u>	<u>STORAGE A.F./A</u>
Direct Flow Diversions (includes wells)	212	134,858	2.23	
Delivered Reservoir Storage		79,480		1.61
Reservoir Storage Max. 93,420 Carryover 17,095 to 1975				
Acres Irrigation 55,820	Direct 55,820			
	Storage 49,260			
Number of Active Ditches	140			
Number of Reservoirs Served	6	(2 irrigation)		
Average Demand A.F./A. (Direct & Storage)	3.66			
Number Water Rights Nonuse	30	(2 Reservoirs)		
Number Water Rights Not For Irr.	168			
Number of Daily Ditch Reports	12,106			

<u>WATER DISTRICT 32</u>				
Direct Flow Diversions (includes wells)	152	41,920	4.55	
Delivered Reservoir Storage		2,132		0.23
Reservoir Storage Max. 4,445 Carryover 1,840 to 1975				
Acres Irrigation 9,176	Direct 9,176			
	Storage 9,176			
Number of Active Ditches	140			
Number of Reservoirs Served	4	(2 irrigation)		
Average Demand A.F./A. (Direct & Storage)	4.80			
Number Water Rights Nonuse	43	(1 Reservoir)		
Number Water Rights Not For Irr.	18			
Number of Daily Ditch Reports	1,950			

<u>WATER DISTRICT 33</u> (La Plata Compact - Direct Flow)		(4,423 A.F.)		
Direct Flow Diversions (includes wells)	68	13,065 17,488	1.61	
Delivered Reservoir Storage		1,049		1.07
Reservoir Storage Max. 1,302 Carryover 140 to 1975				
Acres Irrigation 8,187	Direct 8,187			
	Storage 980			
Number of Active Ditches	58			
Number of Reservoirs Served	7	(4 irrigation)		
Average Demand A.F./A. (Direct & Storage)	1.74			
Number Water Rights Nonuse	50	(0 Reservoirs)		
Number Water Rights Not For Irr.	26	(5 Reservoirs)		
Number of Daily Ditch Reports	3,162			

IX. WATER COMMISSIONERS' SUMMARIES

<u>WATER DISTRICT 34</u>	<u>NUMBER</u>	<u>A.F.</u>	<u>DUTY OF WATER</u>	
			<u>DIRECT A.F./A.</u>	<u>STORAGE A.F./A</u>
Direct Flow Diversions (includes wells)	74	20,777	1.23	
Delivered Reservoir Storage		8,339		0.58
Reservoir Storage Max. 10,100 Carryover 2,924 to 1975				
Acres Irrigation 16,315	<u>Direct 13,835</u>			
	Storage 14,480			
Number of Active Ditches	67			
Number of Reservoirs Served	9	(All irrigation)		
Average Demand A.F./A. (Direct & Storage)	1.78			
Number Water Rights Nonuse	13	(0 Reservoirs)		
Number Water Rights Not For Irr.	14			
Number of Daily Ditch Reports	2,250			
<hr/>				
<u>WATER DISTRICT 46</u>				
Direct Flow Diversions (includes wells)	31	6,056	4.39	
Delivered Reservoir Storage		0		
Reservoir Storage		0		
Acres Irrigation 1,378	<u>Direct 1,378</u>			
	Storage 0			
Number of Active Ditches	28			
Number of Reservoirs Served	0			
Average Demand A.F./A.	2.64			
Number Water Rights Nonuse	3			
Number Water Rights Not For Irr.	0			
Number of Daily Ditch Reports	1,990			
2,167 A.F. diverted in Colorado for use in New Mexico thru the Briggs & Horner-Heath Ditches - 700 acres				
<hr/>				
<u>WATER DISTRICT 69</u>				
Direct Flow Diversions (included wells)	21	2,916	2.12	
Delivered Reservoir Storage		392		0.92
Reservoir Storage Max. 1,002 Carryover 452 to 1975				
Acres Irrigation 1,375	<u>Direct 1,375</u>			
	Storage 426			
Number of Active Ditches	20			
Number of Reservoirs Served	6	(1 stockwater)		
Average Demand A.F./A. (Direct & Storage)	2.41			
Number Water Rights Nonuse	11	(1 Reservoir)		
Number Water Rights Not For Irr.	1			
Number of Daily Ditch Reports	300			

IX. WATER COMMISSIONERS' SUMMARIES

<u>WATER DISTRICT 71</u>	<u>NUMBER</u>	<u>A.F.</u>	<u>DUTY OF WATER</u>	
			<u>DIRECT A.F./A.</u>	<u>STORAGE A.F./A</u>
Direct Flow Diversions (includes wells)	169	99,924	2.09	
Delivered Reservoir Storage		30,726		0.77
Reservoir Storage Max. 45,613 Carryover 15,168 to 1975				
Acres Irrigation 43,510	Direct 43,460			
35,000 acres M.V.I. System	Storage 40,110			
Number of Active Ditches	106			
Number of Reservoirs Served	8	(7 irrigation)		
Average Demand A.F./A. (Direct & Storage)	2.80			
Number Water Rights Nonuse	31	(1 Reservoir)		
Number Water Rights Not For Irr.	72			
Number of Daily Ditch Reports	1,800			
<hr/>				
<u>WATER DISTRICT 77</u>	(SAN JUAN CHAMA DIVERSION PROJECT)	(19,568 A.F.)		
Direct Flow Diversions (includes wells)	62	43,585	2.74	
Delivered Reservoir Storage		465		0.76
Reservoir Storage Max. 519 Carryover 190 to 1975				
Acres Irrigation 8,051	Direct 8,051			
	Storage 600			
Number of Active Ditches	59			
Number of Reservoirs Served	14	(1 irrigation)		
Average Demand A.F./A. (Direct & Storage)	2.79			
Number Water Rights Nonuse	21			
Number Water Rights Not For Irr.	28			
Number of Daily Ditch Reports	1,951			
<hr/>				
<u>WATER DISTRICT 78</u>				
Direct Flow Diversions (includes wells)	104	40,026	4.60	
Delivered Reservoir Storage		1,040		2.14
Reservoir Storage Max. 14,110 Carryover 13,434 to 1975				
Acres Irrigation 8,949	Direct 8,564			
	Storage 485			
Number of Active Ditches	88			
Number of Reservoirs Served	10	(1 irrigation)		
Average Demand A.F./A. (Direct & Storage)	4.52			
Number Water Rights Nonuse	56	(3 Reservoirs)		
Number Water Rights Not For Irr.	41			
Number of Daily Ditch Reports	8,202			

Direct Flow Diversions

WATER DIST.	Total Ditches Reported		IRRIGATION Diversions Ac.Ft.	No. of Acres Irrigated	Ac.Ft. Per Acre	Industrial Use Diversions Ac.Ft.	Municipal Use Diversions Ac.Ft.	Recreation Use Diversions Ac.Ft.	Trans Mtn. Diversions Ac.Ft.	Total Diversions Ac.Ft.	No. of Daily Ditch Rpts.	Delivered to Company
	Active	Inactive										
29	164	20	67,136	16,001	4.20	* 9,268 NONE	# 4,275 2,846	915	From 288	109,858	11,004	25,130
30	252	85	128,893	37,880	3.40	* 5,600 2,064	# 1,519 5,877	7,789	From 318	152,060	9,418	NONE
31	140	3	124,690	55,820	2.23	* 7,934 NONE	# 109 993	274	From 858	(incl. 11,384 AF div. in CO-used in NM) 134,858	12,106	NONE
32	140	7	41,762	9,176	4.55	* 158 NONE	NONE	NONE	NONE	41,920	1,950	NONE
33	58	23	9,856	8,187	1.20	* 3,209 NONE	NONE	NONE	NONE	17,488 13,065	3,162	4,423
34	67	2	17,076	13,835	1.23	* 2,886 NONE	815	NONE	NONE	20,777	2,250	NONE
46	28	3	6,056	1,378	2.64	NONE	NONE	NONE	NONE	6,256 8,223	1,990	NONE
69	20	0	2,916	1,375	2.12	NONE	NONE	NONE	(incl. 2,167 AF diverted in CO-used in NM) 2,916	2,916	300	NONE
71	106	2	90,910	43,460	2.09	* 45 589	# 4,052 43	4,285	NONE	99,924	1,800	0.0
77	59	1	22,036	8,051	2.74	* 533 NONE	NONE	1,448	NONE	43,585	1,951	19,568
78	88	22	39,285	8,564	4.60	* 741 NONE	NONE	NONE	Carried in District 29	40,026	8,202	NONE
TOTAL	1,122	168	550,616	203,727	2.70	30,374 30,369 2,653	# 5,946 14,583 20,529	14,711	1,464	669,468 667,212	54,133	49,121
				# COMMERCIAL * STOCK & DOMESTIC						13,551 A.F. diverted in Colorado - Used in New Mexico		

NA= No Water Available NU = Non Use

Transmountain Diversions: Designate either to or from Division

WATER DISTRICT	Amount in Storage Acre Feet			Actual Am't Diverted to Storage During Season	Delivered from Storage to Irrigation	Storage to Industrial Use	Storage to Municipal Use	Storage to Recreation Use	Storage to Projects	TOTAL DELIVERED FROM STORAGE
	11-1-73	5-1-74	11-1-74							
29	1/ 2,158	1/ 2,283	1/ 2,100	366	NONE	NONE	NONE	NONE	NONE	366
30	39,821	29,144	22,578	14,376	23,250	#163 335	240	NONE	NONE	47,301
31	67,711	80,367	17,065	30,366	NONE	NONE	NONE	NONE	NONE	79,480
32	2,413	3,843	1,840	1,818	NONE * 72	NONE	NONE	NONE	NONE	2,142
33	271	1,302	140	1,084	NONE * 7	NONE	NONE	NONE	NONE	1,056
34	6,553	9,464	2,924	3,570	NONE	NONE	NONE	NONE	NONE	8,339
46				NO RESERVOIR	IN THIS	DISTRICT				
69	575	855	452	415	* 20 NONE	NONE	NONE	NONE	NONE	392
71	23,626	39,271	15,168	22,777	NONE	NONE	NONE	NONE	NONE	30,726
77	401	547	190	150	* 4 NONE	NONE	6	NONE	NONE	465
78	13,684	14,420	13,434	1,763	* 43 NONE	#175 242	NONE	NONE	NONE	1,040
TOTALS	157,213	181,496	75,891	76,685	* 146 23,250	#338 335	246			171,307

COMMERCIAL
* STOCK & DOMESTIC
1/ INCLUDES U.S.F.S. STOCK PONDS

XI. RECOMMENDATIONS AND SUGGESTIONS

1. Snow Courses

Direct runoff data is not available for the La Plata and Mancos River drainages. Comparative areas are presently being used to predict runoff for these drainages and have been found to be inaccurate for purposes needed.

The La Plata River is under Compact with New Mexico and the Mancos River has a claim on it for Indian Water.

2. Groundwater Studies

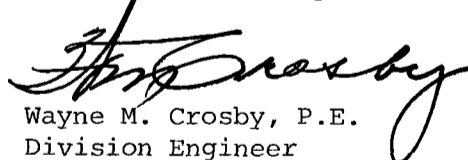
A ground water study is sorely needed in Water Division VII to accurately determine adverse effect upon withdrawals. Surface geology greatly limits shallow well volume, however, there are some wells (deeper than 400 feet) that produce volumes far in excess of the shallower ones. It is not known whether or not the deep wells are tributary to the surface flows. Also, some of the deeper wells are Artesian in nature.

3. Diversion Records and Data Bank

The procedures that we have developed and used for inserting diversion records into the Data Bank System have been of real benefit to both the water commissioners and the records involved. Timing on the updating of the records and availability of summaries need to be improved in the future. We hope to expand the number of districts entering records into the Data Bank, and include the whole Division as soon as possible.

I would like to express my appreciation to all the staff of Division VII, and especially to those Districts on Data Bank who were thrown a curve when it was learned that C.S.U. would not have the computer totals in time for the annual reports. These people had to come up with a complete year's totals on a week's notice. Although the work load has increased, so has the efficiency of the entire Division.

Thank You Sincerely,


Wayne M. Crosby, P.E.
Division Engineer

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