

DIVISION OF WATER RESOURCES

STATE ENGINEERS OFFICE

IRRIGATION DIVISION NO. 4

ANNUAL REPORT

1975 Water Year

December 1, 1975

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

Dear Mr. Kuiper:

On behalf of the staff and field personnel of Irrigation Division Four, I submit herewith the annual report for 1975.

Respectfully submitted,

Ralph V. Kelling, Jr.
Ralph V. Kelling, Jr.
Division Engineer

RVK:mm

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ANNUAL REPORT
IRRIGATION DIVISION NUMBER FOUR
MONTROSE, COLORADO

I. INTRODUCTORY STATEMENT

Division four is located in West Central Colorado and its boundaries include the following drainage basins: Gunnison River and its tributaries, San Miguel River, Little Dolores River, Coates Creek, and Dolores River in Montrose and Mesa Counties. Larger communities in the division include Gunnison, Montrose, and Delta, with a number of small towns including Ouray, Norwood, Nucla, Naturita, Cedaredge, Hotchkiss, Paonia, and Crawford. The total population for the division is approximately 60,000 people. The Gunnison River basin encompasses the largest portion of Division 4 with an area in excess of 8,000 square miles. The San Miguel basin is the second largest with an area of approximately 2,000 square miles of the total 12,000 square miles (7,600,000 acres) of area in Division 4. Several other small basins make up approximately 2,000 square miles. Four hundred and forty four thousand (444,000) acres are irrigated in the division. There is less than 3,000 dry land acres farmed in Division 4. Major crops are

hay, sugar beets, corn, grains, and fruit bearing trees. Beef cattle, and sheep are the primary stock products. Twelve former water districts are defined in Division 4. Elevations range from 4,500 feet to an excess of 14,000 feet in the San Juan mountain range. The climate is semi-arid with annual precipitation varying from 8 to 15 inches in much of the agricultural area. In most parts of the Division average precipitation occurred in 1975, and in some locations above average existed.

Summer moisture was limited in most of Division 4. This years accumulative precipitation in Montrose was 7.07 inches which is 2.4 inches below normal.

Agriculture and ranching are the main industries of the division's economy with fruit ranching, lumbering, and mining being important areas of employment. Uranium, coal, silver, copper, and zinc are major mineral resources with oil and gas exploration having continued activities. Moderate exploration drilling has been taking place in several areas of the division. Tourism plays a major role in the division's economy and when all of 1975 statistics are compiled a record year may be recorded. The following activities continue to effect the division's economy:

1. The U. S. Bureau of Reclamation construction of Crystal Dam.
2. The continued operation of Russell Stover Candy Company in Montrose.

3. Modest expansion of the ski resort complexes in Crested Butte and Telluride.
4. The processing and packaging of agricultural products from mid-July until after the first of the year.
5. Active coal resource investigation including the acquisition and development of water rights by major energy and industrial companies.
6. Continued oil and gas exploration activities with large acreages being investigated and brought under mineral leases.
7. Continued mining and milling activities in the Ouray-Telluride areas.

The economy is agriculturally dominated and because of this the major water usage is for irrigation. Farms and ranches are oriented to the regions drainage systems and related water diversions are tied to the irrigable lands. Most of the large reservoirs are located on major rivers, and long canals and tunnels are required to transport water to the point of use. The Curecanti Unit Reservoirs of the Colorado River Storage Project use approximately two million acre feet of water in the production of electrical power. The hydro-power plants of the three reservoirs will have a combined capacity of 200,000 kilowatts at the completion of Crystal Dam.

Operating water resource projects within Division 4 are the Uncompahgre Project, which includes Taylor Park Reservoir and the Gunnison Tunnel, Fruitgrowers Reservoir, Fruitland Mesa Project, Paonia Project, Crawford Project, and the Bostwick Park Project, which includes Silverjack Reservoir. Blue Mesa and Morrow Point Reservoirs of the Curecanti Unit are part of the Bureau of Reclamation Projects. Crystal Dam, which is now approximately two-thirds completed, is also part of the Curecanti Unit. Additional Bureau projects that are in various study phases are Fruitland Mesa, Dallas Creek, San Miguel, Upper Gunnison, and the Uncompahgre Extension. A more comprehensive statement of the Uncompahgre Project is included in this report. Land use planning is a subject of continued concern throughout the division. The extent of Division Four's involvement in land use planning has been to act as consultant to the Division of Water Resources planning section. Areas of greatest activity remain similar to those of last years annual report. Subdivision development in Water Districts 59, 60, 62, and 40 contain the bulk of land development acitivity. Development continues in the Gunnison-Crested Butte area with limited construction taking place. The general economy seems to have slowed the construction pace somewhat. The Telluride area and along the San Miguel River are also active development areas and in both locations there is contact between local planning commissions and

and the Denver planning office.

Large deposits of low sulphur coal along the North Fork of the Gunnison and the Cedaredge area continue to produce rumors of heavy land development in those parts of Water District 40. Surface flows in these locations are over appropriated which will produce many problems concerning water supply as this land is developed. The towns of Hotchkiss, Cedaredge, and Paonia are working toward to developing additional water supplies:

Land ownership by county is as follows:

Ownership in Acres

<u>County</u>	<u>Private</u>	<u>Federal</u>	<u>State</u>	<u>County and Municipal</u>
Delta	305,976	434,169	0	2,335
Montrose	434,246	995,740	474	2,500
Mesa	554,504	1,562,040	220	3,556
Ouray	182,711	160,920	1,920	49
San Miguel	302,672	497,994	19,854	600
Gunnison	420,553	1,640,757	13,388	750
Hinsdale	28,999	637,599	9,377	505
Saguache	581,650	1,320,622	109,708	180

II. PERSONNEL

Division 4 was involved in the retirement, resignation, and replacement of four water officials during the 1975 irrigation season. Gordon Aldridge retired due to the mandatory requirement after having over 32 years of service. Bill Rhodes retired due to disability after 14 years of service. Buck Catt and Jim Hoganson both resigned at the end of the irrigation season. Special commendation is noted for the outstanding work of Gordon Aldridge and his replacement will be especially difficult. New personnel are as follows: Marvin Stephens, Crandall Howard, and Lester Whiting. At the writing of this report one vacancy for a Water Commissioner B still remains in Division 4. In addition to the change in water officials, Ken Cooper, Hydrographer for Division 4 and 7, transferred to Division 2 at Pueblo. His position remains vacant at this time. We continue to recognize the high qualifications and abilities of our field staff and commend them for a job well done.

All water officials were reclassified as of September, 1975. Two men were advanced because of this action. It appears that the initial reaction to this reclassification was favorable and we are now able to create greater flexibility and career opportunities with this new series of jobs. The following is a list of personnel in the division for the year 1975. Mileage listed is for the calendar year 1975 with November and December being estimated on the basis of 1974:

PERSONNEL

Name	Position	District	Months Worked/ Budgeted		Mileage
			Budgeted	Worked	
Clifford Aldridge (retired)	WCA	40	7 mos.	7½ mos.	2,460
Richard Belden	WCA	40	6 mos.	6 mos.	8,148
Russell Bertram	WCA	40	7 mos.	6 mos.	2,071
Willard Bull	WCA	40	6 mos.	6 mos.	3,101
Lyman Campbell	WCB	60	6 mos.	7½ mos.	8,251
James Carr	WCA	40	7 mos.	6½ mos.	8,549
*Buck L. Catt	WCA	42	6 mos.	5¼ mos.	4,830
**Ken Cooper	WREII	Staff	Annual		--
Lloyd Connell	WCA	40	7 mos.	6 mos.	7,635
Richard Drexel	SR.WC	40	Annual		6,773
Robert Drexel	WCA	59	7 mos.	7 mos.	4,423
***Chalmer Garber		61	Temporary		308
Ralph Glendening	WCB	41	Annual		10,073
Mack Gorrod	WCA	40	7 mos.	6½ mos.	4,709
Edwin Hofmann	WCB	59,62	Annual		9,751
*James Hoganson	WCB	61	10 mos.	9 mos.	9,837
C. Crandall Howard (new '75)	WCB	28	8 mos.	6-3/4 mos.	5,797
Audrey Keep	CAB	Staff	6 mos.	7 mos.	--
Ralph V. Kelling, Jr.	SWRE	"	Annual		8,601
Thomas A. Kelly	SRWRE	"	"		14,084
Dwayne Mansker	WCB	1042	"		8,673
Melita Maten	ACTA	Staff	"		--
John McHugh	WCA	40	6 mos.	6½ mos.	6,161

Personnel - 1975 (continued)

Name	Position	District	Months		Mileage
			Budgeted	Worked/ Worked	
James Miller (new '75)	WCA	40	7 mos.	5-1/3 mos.	7,291
H. Roger Noble	WCB	68	Annual		8,188
Jack Raine	WCA	42	6 mos.	5½ mos.	4,379
William Rhodes (retired)	WCB	28	8 mos.	6-3/4 mos.	2,280
W. W. Saunders (share w/Div.5)	SRWC	42,63, 73,74	Annual		(recorded Div. 5)
Marvin Stephens (new '75)	WCA	40	6 mos.	5 mos.	2,041
Paul Stockemer	WCA	40	6 mos.	6¼ mos.	5,572
Stephen Tuck	WCA	40	6 mos.	6½ mos.	5,496
Elton J. Watson	WCC	40	Annual		17,163
Charley Woolley	WCA	40	6 mos.	6 mos.	5,792
David Woolley	WCA	40	6 mos.	6 mos.	3,106
Lester Whiting (new '75)	WCA	42	6 mos.	1 mo.	--
TOTAL.....					195,543

*Resigned end of irrigation season

**Shared with Division 7 - mileage recorded in Division 7. Position vacant at this time.

***Temporary - Jim Hoganson off because of illness in family.

Water Commissioners Annual Mileage Review:

<u>Year</u>	<u>Total Annual Mileage</u>
1966	168,598
1967	176,164
1968	167,174
1969	149,862
1970	135,195
1971	143,852
1972	160,070
1973	157,709
1974	189,865
*1975	172,858

*November and December 1975 mileage estimated

III. WATER SUPPLY

A. Snow Pack

Water supply forecasts for the Gunnison and San Miguel water sheds were reported from above average to greatly in excess of average. Much above normal moisture fell from the first of the year until late spring. All drainage areas surveyed recorded more than a hundred per cent of average. The final SCS snow survey indicated record snow depth and moisture content. High water was predicted on all major rivers with extensive flooding possible. The late and cool spring resulted in continued high flows and most streams reached peak flow much later than normal. Peak flow on the Uncompahgre River at Colona occurred July 4, 1975. Flooding was not a problem in Division 4.

Snow Pack (continued)

The cloud seeding weather modification program in the San Juan mountains directed by the Bureau of Reclamation continued through the 1974-75 winter and the E. G. & G. Services of Durango was the major contractor. The following is quoted from a letter to this office from Dr. Archie Kahan, the USBR Chief of Division of Atmospheric Water Resources Management, relative to this project:

"The field activities of the Colorado River Basin Pilot Project, a 5-year research program in Colorado's San Juan mountains, are completed and the final analyses are well underway. Preliminary analyses from the project indicate:

1. Mountain snowfall increases can be caused by selective seeding of the warmer winter clouds.
2. With protective restraints implemented during the project, no adverse environmental effects were found.
3. Downwind increases in precipitation are indicated rather than often presupposed decreases.
4. Airflow patterns near the mountains are complex which make targeting of seeding plumes difficult.

Recent studies estimate the water supplies of the Colorado River could be increased an average of some 1.3 million acre-feet annually at a cost of about \$2.50 per acre-foot".

The Grand Mesa Water Users Association has a contract with the Water Resources Development Corporation of Palm Springs, California for cloud seeding on the south side of the Grand Mesa water shed area. We are not aware of any reports available on this project, however, it was active during the 1975 winter season. Copies of the May, 1975, snow survey are found at the end of this report.

Summary of Snow Measurement - May 1, 1975:

<u>Basin or Watershed</u>	<u>Number of Courses Averaged</u>	<u>This years snow water as per cent of: Last Yr.</u>	<u>Average</u>
Gunnison	12	144	116
Surface Creek	3	138	143
Uncompahgre	3	195	206

Streamflow Forecasts (1000 A. F. - Apr-Sep):

<u>Forecast Point</u>	<u>Forecast</u>	<u>% of Avg.</u>	<u>Avg.</u>
Gunnison River in-flow to Blue Mesa	1200	151	793
Gunnison River near Grand Junction	2000	169	1184
Surface Creek near Cedaredge	23	144	16
Uncompahgre River at Colona	230	172	134

Soil Moisture - May 1, 1975:

<u>River Basin</u>	<u>No. of Stations</u>	<u>This years moisture as per cent of: Last Yr.</u>	<u>Average</u>
Gunnison	1	100	100
Surface Creek	1	No report	No report
Uncompahgre	2	"	"

B. Precipitation - Summer

The water year began with above average precipitation through April, 1975. From May through October below normal precipitation has been experienced. Some limited summer thunder storms occurred throughout the division, however, the majority of summer water usage came from sustained snow melt and high storage levels. The fall season in Division 4 has been unusually dry with exceptionally good conditions for crop harvesting. Carry over storage is above average and soil moisture is below average. With normal winter precipitation the water outlook for 1976 should be favorable. No hail suppression work is being conducted in Division 4.

Climatological Data 1974:

<u>County</u>	<u>Average Mean Temperature, F.</u>	<u>Average Annual Precipitation, In.</u>
Delta	50.6	7.89
Mesa	52.7	8.41
Montrose	49.1	9.67
Ouray	44.1	16.86
San Miguel	39.8	23.41
Gunnison	37.7	11.24
Hinsdale	37.6	11.36
Saguache	43.1	8.49

C. FLOODS

No flows in any area of the division were considered to approach flood conditions in 1975. Many of the rivers did reach bank full stages, however, because of cool weather conditions there was no damage reported.

D. WATER BUDGET

Because of the lack of stream flow data and the change of diversion record keeping this particular subject will be considered when the information is available.

E. UNDERGROUND WATER

There is limited information relative to the underground water supply in Division 4. Ground water studies and literature are limited to a minimum number of bulletins and reports. A few deep water wells exist, however, the bulk of the ground water activity is concerned with domestic and household use only wells. Potentially all formations may prove productive with the shale sections having minimal water content and sands, especially of the Dakota and Entrada formations, capable of containing large volumes of water. A number of water wells in the Grand Junction area produce from the Morrison sands; in the Montrose area the Dakota formation is the primary aquifer.

The computer print out of registered wells in Division 4, dated
March 5, 1974, breaks down as follows:

<u>Type of Wells</u>	<u>Number of Wells</u>	<u>GPM</u>	<u>CFS</u>
Domestic	1,316	26,952	59.89
Livestock	121	2,639	5.89
Domestic & Livestock	95	2,282	5.07
Commercial	113	6,127	13.61
Industrial	14	3,956	8.79
Irrigation	67	19,836	44.08
Domestic & Irrigation	7	2,194	4.87
Municipal	28	6,923	15.38
Other	8	90	0.033

Total Registered Wells 1,769

F. TRANS-MOUNTAIN AND TRANS-BASIN DIVERSIONS - 1975

Trans-Mountain Diversions:

<u>Name</u>	<u>Source</u>	<u>Recipient and/ or Claimant</u>	<u>Amount A. F.</u>
Red Mountain Ditch	Mineral Cr.	Ouray Ditch Co. Montrose, Colo.	191
Carbon Lake Ditch	" "	" "	195
St. John Ditch	E. Fk. of Animas River	Charles, Gunn, & % W. Worley Olathe, Colorado	No Diversion
Mineral Pt. Ditch	Burrows Cr., tr. N. Fk. Animas River	W. Gibbs Ouray, Colorado	No Diversion
Larkspur Ditch	Tr. of Tomichi Cr.	Rocky Ford High- Line Canal Co. Rocky Ford, Colo.	254
Tabor	Spring Cr. tr.	Colo. Div. of Wildlife Alamosa, Colorado	972
Tarbell	Cochetopa	Saguache Land & Water Company Saguache, Colo.	691
Divide Cr. Highline Feeder Ditch	Divide Creek	F. M. Starbuck, Mgr. Silt, Colorado	1,112
Leon Lake	Leon Creek	Sam Oaks Eckert, Colorado	2,093

Trans-Basin Diversions:

Leopard Cr. Ditch	Leopard Creek	Harry McClure Ridgway, Colorado	484
N. Fk. of the Paxton Ditch	Cottonwood and Horsefly Creeks	William Hofmann Montrose, Colorado	No Record
Cimarron Feeder of the Garnet Ditch	W. Fk. of the Cimarron	Unc. Valley Water Users Association Montrose, Colo.	1,892
Gunnison Tunnel	Gunnison River	" "	316,904
Head & Ferrier	Soap Creek	H. Head & Ferrier Delta, Colorado	421
Lake Brennand	Lake Brennand	Town of Crested Butte, Colorado	511
Meek Tunnel	Crystal Creek	Carton Meek Maher, Colorado	840
Mesa Creek Ditch	Mesa Creek	" "	238

G. RESERVOIR STORAGE

With the prolonged dry period of the 1974 irrigation season most reservoirs began the winter of 1974-75 with below average storage. Soil moisture was also below normal at that time. At the beginning of the 1974-75 winter the outlook for 1975 reservoir storage was not optimistic and severe shortages were predicted in the event of below normal snowfall. However, as each month of winter passed, heavy mountain snows improved the reservoir storage outlook. By June 1, 1975, nearly all Division 4 reservoirs were full or rapidly approaching spillway elevations. The only exception to this was Blue Mesa Reservoir which had been drawn down in anticipation of excessive runoff which did not fully materialize. Blue Mesa Reservoir lacked several feet in filling this year.

SPECIAL NOTE

The storage and diversion data presented in this report has been compiled from the water official's field books and diaries after it was noted that the computer data system would not be able to have this information available in time to present it in this report at the Annual Meeting. It is important to point out that all of the diversion and storage records should be considered preliminary and subject to correction.

Listed below is a tabulation of storage in the division for 1975:

<u>Water District</u>	<u>Name of Reservoir</u>	<u>Amount, A.F. 11-1-74</u>	<u>Amt., A.F. Start of Irr. Season</u>	<u>Amt., A.F. 10-31-75</u>
28	Hot Springs Reservoir	97.50	603.00	603.00
28	McDonough Reservoir #1	264.90	805.20	805.20
28	McDonough Reservoir #2	29.00	887.90	101.00
28	Needle Creek Reservoir	186.40	1,045.80	129.00
28	Upper Cochetopa Reservoir	77.61	880.46	201.00
28	Vouga Reservoir	10.80	492.90	102.00
40	Alexander Lake Res.	116.20	145.00	73.00
40	Arch Slough Res.	0	65.60	13.45
40	Ault Res.	0	116.00	0
40	Bailey Res.	0	420.00	0
40	Bald Mountain Res.	0	120.00	0
40	Barren Lake Res.	337.50	800.00	358.45
40	Basin #1 Res.	0	199.40	0
40	Basin #2 Res.	0	50.80	0
40	Battlement Mesa #1 Res.	75.50	79.50	79.50
40	Battlement Mesa #2 Res.	518.00	713.30	537.20
40	Baxter Res.	150.00	318.00	318.00
40	Beaver Dam Res. (Escalante)	0	405.00	0
40	Beaver Res. (Minnesota Creek)	32.00	1,146.00	37.00
40	Bonita Res.	3.1	285.80	62.50
40	Bottle Stomp Res.	0	17.00	0
40	Boulder Lake #1 Res.	0	18.00	0
40	Brockman #1 Res.	0	26.00	0
40	Brockman #2 Res.	0	40.00	0
40	Bruce Park Res.	31.50	700.00	0
40	Bull Finch #1 Res.	0	78.80	0
40	Bull Finch #2 Res.	0	34.40	0
40	Coalby Horse Park Res.	103.00	516.80	141.50
40	Cabin Lake Res.	0	24.00	0
40	Calument Res.	0	13.50	0

Division tabulation of storage - continued

<u>Water District</u>	<u>Name of Reservoir</u>	<u>Amount, A.F. 11-1-74</u>	<u>Amt., A.F. Start of Irr. Season</u>	<u>Amt., A.F. 10-31-75</u>
40	Carbonate Camp #3 Res.	0	7.20	0
40	Carbonate Camp #6 Res.	0	129.50	24.10
40	Carbonate Camp #7	0	107.50	0
40	Carl Smith Res.	246.00	932.00	426.00
40	Cedar Mesa Res.	0	925.80	162.50
40	Clark Res.	0	39.00	0
40	Cole #1 Res.	0	28.20	0
40	Cole #2 Res.	0	53.50	0
40	Cole #3 Res. (Cherry Lane)	0	56.90	0
40	Cole #4 Res.	0	29.80	0
40	Cole #5 Res.	0	116.80	0
40	Columbine #1 Res. (Reynolds)	0	176.00	0
40	Crawford Res.	2,720.00	1,434.10	5,438.00
40	Cyphers Res.	21.00	21.00	21.00
40	Daniels Slough Res. (Reed)	23.00	212.30	59.20
40	Davenport Res.	10.00	20.00	20.00
40	Deep Slough Res.	32.00	498.00	32.00
40	Deep Ward Lake Res.	456.20	1,619.00	984.40
40	Delta City #1 Res.	0	14.30	0
40	Delta Control Res.	30.00	40.00	40.00
40	Deserted Park Res.	0	31.60	0
40	Dog Fish Lake Res.	0	238.00	0
40	Don Meek #1 Res.	0	45.00	0
40	Donnelly Slough Res.	9.90	276.90	96.00
40	Doughty #1 Res. (Chipmunk)	0	42.00	0
40	Doughty #2 Res. (Sliderock)	0	18.50	0
40	Dowdy Res.	0	212.00	0
40	Dreyfus Res.	0	44.80	0
40	Dugger Res.	101.00	212.00	52.90
40	East Beckwith #1 Res.	169.00	565.50	217.00
40	Eggleston Lake Res.	1,095.00	2,705.00	1,476.00
40	Elk Park Res.	0	96.80	0
40	Elk Wallows Res.	0	168.00	0

Division tabulation of storage - continued

<u>Water District</u>	<u>Name of Reservoir</u>	<u>Amount, A.F. 11-1-74</u>	<u>Amt., A.F. Start of Irr. Season</u>	<u>Amt., A.F. 10-31-75</u>
40	Ella Res.	0	109.00	0
40	Ellington & Cook Res.	0	24.50	0
40	Fairmont Res.	0	78.00	0
40	Fairmount Park Res.	0	30.00	0
40	Fish Lake Res.	0	60.00	0
40	Fisher Res.	0	10.00	0
40	Forrest Res. (Finney)	0	65.50	0
40	Fruitgrowers Res.	66.00	4,311.40	612.50
40	G&M Volk Fish Pond #1 Res.	6.00	5.90	5.90
40	Goodenough Res. (Kiser Res.)	9.70	148.80	0
40	Goodenough #2 Res. (Leroux)	0	872.00	0
40	Granby #6 Res.	0	43.30	0
40	Granby #7 Res.	5.00	59.10	7.0
40	Granby #8 Res.	13.00	17.00	17.00
40	Granby #9 Res.	0	63.10	30.70
40	Granby #11 Res.	8.10	775.00	279.00
40	Granby #12 Res.	339.00	741.00	358.30
40	Gray Res.	0	423.00	0
40	Green Mountain Dam Res.	0	3.00	0
40	Greenwood Res.	0	56.80	0
40	Gregg #1 Res.	0	27.80	0
40	Gregg #2 Res.	0	5.00	0
40	Hale Res.	0	37.70	0
40	Hanson #2 Res.	0	210.00	0
40	Holy Terror Res.	0	102.00	0
40	Hotel Lake Res.	307.60	536.00	315.80
40	Howard Lake Res.	9.00	60.00	38.50
40	Island Lake Res.	415.50	1,593.80	654.10
40	Kehmeier Res.	0	319.50	150.00
40	Kiser Slough Res.	76.80	510.60	113.30
40	Knox Reservoir	12.50	241.20	9.00

Division Tabulation of storage - continued

<u>Water District</u>	<u>Name of Reservoir</u>	<u>Amount, A.F. 11-1-74</u>	<u>Amt., A.F. Start of Irr. Season</u>	<u>Amt., A.F. 10-31-75</u>
40	Kennicott Slough Res.	0	673.80	68.00
40	Lake Brennard Res.	367.00	367.00	367.00
40	Leon Lake Res.	0	2,109.00	0
40	Leon Park Res.	70.00	181.50	0
40	Lily Pad Res. (Young Cr)	8.00	33.40	0
40	Little Gem Res.	30.10	214.50	130.40
40	Little Giant #1 Res.	0	30.80	0
40	Little Giant #2 Res.	0	5.80	0
40	Little Grouse Res.	0	42.00	7.50
40	Lone Cabin Res.	0	165.00	0
40	Lucky Find Res.	0	66.00	0
40	Marcott Park Res.	0	371.10	0
40	McKoon Res. (Blanchard Res.)	39.90	148.00	73.00
40	Military Park Res.	0	236.60	0
40	Miller Res.	0	20.00	0
40	Monument Res.	0	500.00	0
40	Morris Res. #2	16.30	16.30	16.30
40	New Pond Res.	2.50	2.20	0
40	Meek Res.	0	29.00	0
40	Onion Valley Res.	155.70	9,167.00	1,702.00
40	Overland #1 Res.	0	4,606.00	0
40	Owens Res.	0	92.00	0
40	Paonia Res.	2,623.00	18,468.00	5,200.00
40	Park Res.	490.00	3,375.90	624.00
40	Patterson #1 Res.	0	75.00	0
40	Patterson #2 Res.	0	135.00	0
40	P.C. & G. Res. (Muskrat)	0	19.40	0
40	Pedro Res.	110.00	194.90	109.20
40	Pine Res.	0	0	0
40	Pine Cone Res.	0	37.00	0
40	Pitcairn Res.	27.00	100.00	0

Division Tabulation of storage - continued

<u>Water District</u>	<u>Name of Reservoir</u>	<u>Amount, A.F. 11-1-74</u>	<u>Amt.A.F. Start of Irr. Season</u>	<u>Amt., A.F 10-31-75</u>
40	Poison Spring Res.	50.00	123.00	80.00
40	Porter #1 Res.	3.00	201.00	98.90
40	Porter #4 Res.	11.00	38.00	28.00
40	Prebble Res.	33.80	180.00	76.60
40	Rex Res.	0	24.00	0
40	Reynolds Res. (Reynolds Cr.)	0	46.50	0
40	Rim Rock Lake Res.	0	107.00	0
40	Rockland Res.	0	33.00	2.80
40	Roeber #2 Res.	0	0	0
40	Round Lake Res.	0	16.00	0
40	Ryan Res.	0	29.80	0
40	Rockwell Res.	0	50.00	0
40	Sackett Res.	20.00	108.00	0
40	Safety #1 & 2 Res.	0	23.70	0
40	Scotland Peak Res.	0	81.20	22.80
40	Sheep Lake Res.	0	153.00	88.00
40	Skim Milk Res.	0	80.00	0
40	Spatafore Res.	0	70.00	0
40	Stell Res.	0	62.40	0
40	Todd Res.	0	0	0
40	Tomahawk Res.	44.0	87.30	53.40
40	Trickle Res.	0	27.00	0
40	Trio Res.	65.70	127.60	72.80
40	Twin Lake Res. #1	0	82.90	0
40	Twin Lake Res. #2	0	138.40	0
40	Tyler Res.	43.00	169.00	37.00
40	Upper Hotel Lake Res.	0	104.00	51.80
40	Van Den Berg #1 Res.	5.6	5.6	5.6
40	Vela Res.	98.30	437.00	210.00
40	Ward Creek Res.	62.20	284.40	36.00
40	Wash Tub Res.	0	25.00	0
40	Water Bug Res.	0	85.00	0

Division Tabulation of storage - continued

<u>Water District</u>	<u>Name of Reservoir</u>	<u>Amount, A.F. 11-1-74</u>	<u>Amt., A.F. Start of Irr. Season</u>	<u>Amt., A.F. 10-31-75</u>
40	Weir & Johnson #2 Res.	55.70	540.40	72.90
40	Weir Park Res.	0	40.70	0
40	West #1 Res.	0	454.50	37.00
40	Williams Creek Res.	40.00	100.00	40.00
40	Willow Res.	0	104.00	0
40	Womack #1 Res.	0	184.00	0
40	Womack #2 & #3 Res.	0	156.20	0
40	Womack #5 Res.	0	22.90	0
40	Young Creek Res. #1 & 2	56.50	693.00	145.50
40	Young Creek #3 Res.	96.10	193.40	91.20
40	Y & S Res.	36.60	189.00	61.20
41	Buckhorn Reservoir	29.00	205.00	29.00
41	Citizens Reservoir	118.00	120.00	118.00
41	Garnet Mesa (Sweitzer)	156.00	1,332.60	156.00
41	Wenger #1 Reservoir	0	48.00	0
42	Anderson #1 Res.	94.20	505.00	200.00
42	Bolen Reservoir	19.00	536.00	0
42	Bolen Anderson & Jacobs Res.	0	293.00	0
42	Carson Reservoir	608.72	677.00	677.00
42	Chambers Reservoir	0	153.70	0
42	Deep Creek Reservoir #2	118.96	350.00	0
42	Flowing Park Reservoir	100.46	618.00	0
42	Grand Mesa #1 Res.	100.82	468.00	150.00
42	Grand Mesa #6 Res.	21.16	201.00	0
42	Grand Mesa #9 Res.	0	143.00	0
42	Hollenbeck #1 Res.	0	552.00	600.00
42	Hollenbeck #2 Res.	0	466.00	0
42	Juniata Reservoir	491.00	1,839.00	1,200.00

Division Tabulation of storage - continued

<u>Water District</u>	<u>Name of Reservoir</u>	<u>Amount, A.F. 11-1-74</u>	<u>Amt., A.F. Start of Irr. Season</u>	<u>Amt., A.F. 10-31-75</u>
59	Spring Creek	1,700.00	1,700.00	1,700.00
59	Taylor Reservoir	57,590.00	0	0
59	Kapushion Res.	0	1.45	0
59	Cunningham Res.	80.00	80.00	80.00
59	Ferris Creek Res.	0	15.11	0
59	Rainbow Lake	0	74,521.00	74,463.00
59	Meridian Lake	0	692.85	571.85
60	Alexander Reservoir	0	0	0
60	Gurley Reservoir	275.50	9,302.00	510.00
60	Lilylands Reservoir	34.64	494.03	47.19
60	Lone Cone Reservoir	90.00	1,840.00	55.00
60	Miramonte Reservoir	7,699.00	7,699.00	7,699.00
60	Mosca Livestock Reservoir #2	0	10.00	0
60	Mosca Livestock Reservoir #3	0	4.00	0
60	Palmer Reservoir	0	8.00	0
60	Palmer Reservoir #2	0	6.00	0
60	Rice Reservoir #2	0	4.80	0
60	Sheats Reservoir #1-2-3-4	0	30.00	0
60	Paxton Reservoir	210.96	898.37	139.33
60	Trout Lake Reservoir	743.00	3,520.00	740.00
61	Buckeye Reservoir	93.12	1,900.00	900.00
62	Blue Mesa	522,800.00	730,100.00	656,951.00
62	Morrow Point	115,200.00	116,800.00	114,871.00
62	Fish Creek #1	50.00	150.00	46.00
62	Fish Creek #2	225.00	522.00	185.00
62	Cerro Res.	675.00	675.00	675.00
62	Silverjack Res.	4,040.00	13,820.00	5,480.00

Division Tabulation of storage - continued

<u>Water District</u>	<u>Name of Reservoir</u>	<u>Amount, A.F. 11-1-74</u>	<u>Amt., A.F. Start of Irr. Season</u>	<u>Amt., A.F. 10-31-75</u>
62	Lake San Cristobal	9,786.00	9,786.00	9,786.00
63	Big Creek Res.	0	400.00	100.00
63	Burg Reservoir	0	125.00	0
63	Casement Res.	10.00	185.00	50.00
63	Casto Res.	0	170.00	0
63	Craig Res.	0	full	0
68	Carrol Brown	1.00	40.00	0.50
68	Elephant Reservoir	4.00	25.00	4.00
68	Jacques Reservoir	1.00	45.00	1.00
68	Victor Reservoir	0	30.00	0
73	No Records	0	0	0
74	No Records	0	0	0

IV. AGRICULTURE

Because of the great variety of agricultural lands throughout the division almost every type of farming enterprise is found within the division. Various crops range from high mountain hay meadows and range land to high productive low valley truck farms. Over-all production for the entire division can be estimated at this date as above average to excellent. Several factors work together to produce the successful agricultural year. Division wide water supply was more than adequate for all farming activities. When the final stream flow records are computed I am sure many drainage areas will record near record run offs.

The Upper Gunnison hay producing lands along with the San Miguel basin hay lands all experienced average or better than average crop yields. Hay prices were quite high during the early spring and most of the carry over inventories were depleted. The fall hay market is down some because of the bumper yields. Small grains, sugar beets, and corn grown along the lower Gunnison River and the Uncompahgre valley recorded above average yields. Prices paid for these commodities all remain at a high level.

The fruit industries along the North Fork valley experienced favorable spring conditions and produced bumper crops of peaches, pears, cherries, apricots, and apples. An extra hard freeze on the 24th of October left from 300,000 to 500,000 bushels of apples ruined on the trees at the higher

elevations. All of the agricultural areas were slow at the beginning of the season because of a late, cool, and wet spring, however, the extra moisture made up for the late beginning.

Sheep production was about the same as last year with lambs still commanding good prices. Cattle production seems to be about the same as 1974, however, the cattle market still remains depressed. In some areas there are entire cattle herds being sold because of the inability of the cattle rancher to pay expenses, disregarding a profit for his business. Hog production is beginning to be more of an economic factor in Division 4. High pork prices has helped to increase hog production through-out the lower elevations of the division. Good farm land continues to be sold at a premium price with an annual inflation rate of approximately 10 percent.

Presented below is a brief resume by area:

<u>County</u>	<u>Average Growing Season, Days</u>	<u>Crop Production* Irrigated Land</u>			<u>Livestock**</u>	
		<u>Barley</u>	<u>Beets</u>	<u>Corn</u>	<u>Cattle/ Calves</u>	<u>Stock Sheep</u>
Delta	146	66.0	20.5	88	49,000	27,000
Montrose	153	63.5	17.5	97	49,500	54,000
Mesa	188	55.0	18.1	102.0	87,000	48,000
Ouray	48	---	---	---	-----	4,000
San Miguel	45	50.0	---	---	10,500	17,000
Gunnison	49	---	---	---	34,000	13,000
Hinsdale	45	---	---	---	3,500	5,000
Saguache	105	50.0	---	---	53,000	12,000

* 1973 Colorado Agriculture Statistics, Published July 1975; in bu./ac. or tons/ac.

** Number of head, 1974

Several crop dollar value for 1973 are as follows:

<u>County</u>	<u>Grain & Silage</u>	<u>Hay</u>	<u>Sugar Beets</u>	<u>Barley</u>	<u>All other crops</u>
Delta	1,871,600	3,116,300	1,213,000	818,800	8,744,850
Montrose	2,107,400	2,777,800	1,257,000	1,441,300	1,835,500
Mesa	2,396,200	3,880,200	2,215,000	301,200	3,890,200
Ouray	-----	742,500	-----	-----	1,200
San Miguel	-----	431,000	-----	40,900	408,800
Gunnison	-----	1,905,500	-----	-----	-----
Hinsdale	-----	117,000	-----	-----	-----
Saguache	-----	3,201,000	-----	1,798,000	2,152,200

The above production data has been extracted from the 1975 Colorado Agriculture Statistics - Colorado Department of Agriculture.

V. COMPACTS AND COURT STIPULATIONS

The Colorado River Compact of 1922, and the Upper Colorado River Basin Compact of 1948 apply to all waters in Division Four. The lower basin states can put a call on any series of water short years based on the long term average flow at Lee Ferry. This year there was no occasion that involved administration of water in Division 4 relating to these compacts.

VI. DAMS

Many of those reservoirs that have been problems in past irrigation seasons continue to be issues of concern this year.

1. Beaver reservoir in Water District 40, on the East Fork of Minnesota Creek, developed additional abutment leaks. These holes appear on the same axis as previous seepage zones and at about the same elevations. Leakage from these new holes was much less than the previous years. Considerable repair work was accomplished during the fall of 1974 and this was probably the reason for a limited amount of leakage. The Reservoir Company has secured the services of Mr. Raymond Schuster, Colorado Registered Professional Engineer, and under his supervision additional repair work is being accomplished.

2. The large seepage holes on the upstream bank of Gurley reservoir in Water District 40 were repaired during the fall of 1974 and all evidence to date indicates an adequate repair job. There was some erosion of the concrete sections of the outlet structure and a maintenance and repair program for this portion of the structure is now being planned and carried out under the supervision of a registered Colorado engineer.

3. Porter No. 1 reservoir in Water District 40 has had the necessary repair work completed and inspection was made by the Denver office's Dam Section.

4. The inspection of the several small dams in the Pinon Mesa area west of Grand Junction indicate a border line problem and hopefully it will be resolved without further involvement.

5. Grand Mesa Reservoir No. 10 in Water District 42 has had some repair work accomplished and inspection was made by the Denver office.

Of the over several hundred reservoirs and dams in Division 4, most are inspected and regulated by field personnel many times during the 1975 season. These men have been alert to possible trouble spots and constant communication between the division office and the field personnel keeps the division office informed of the conditions of most reservoirs within the division.

Reservoir stop storage orders are in effect as follows:

<u>Name</u>	<u>Water District</u>	<u>Order Date</u>	<u>Restrictions</u>
Dogfish	40	8-9-72	5' below spillway; repair has been completed; restriction not lifted to date.
Lone Cabin	40	8-9-72	5' below lowest embankment.
Waterbug	40	"	5' below embankment.
Weir & Johnson	40	"	5' below embankment.
Eureka	40	"	Repair work has been completed.
Porter No. 1	40	Verbal, fall '73	2' below spillway.
Beaver	40	"	Not over 50' on gage in filled season; may fill late.
Full Moon	68	8-24-72 7-24-75	5' below dam crest; Breach dam from crest to toe.
Hidden Treasure	62	Verbal, fall '73	Enlarge channel opening at base of dam.

Livestock Water Tanks - Permits Issued 1975:

<u>Name</u>	<u>Stream</u>	<u>Height</u>	<u>Cap., A.F.</u>	<u>Permit No.</u>
Roy Davis #1	SW18-42N-13W	13	1.0	14721
Roy Davis #2	SW11-42N-14W	9	0.5	14722
Roy Davis #3	SW11-41N-14W	8	1.0	14723
Delany Springwater	NE22-48N-2W	15	6.0	14823
O. F. DeMoulin #2	NE33-14S-92W	16	10.0	14715
O. F. DeMoulin #3	NE33-14S-92W	14	5.0	14716
O. F. DeMoulin #4	NE33-14S-92W	11	3.0	14717
O. F. DeMoulin #5	NE33-14S-92W	15	1.0	14718
O. F. DeMoulin #6	NE33-14S-92W	15	10.0	14719
Hulteen #1	SW19-14S-94W	19	4.0	14675
Wacker #1	SW6-48N-8W	11	0.5	14762

Livestock Water Tanks (continued)

Inspections were made of several livestock water tanks during the 1975 season. There were no problems of any magnitude concerning stock water tanks for this season.

VII. WATER RIGHTS

A. Tabulation

Water commissioner personnel were involved to a limited degree in the updating and correcting of errors in the Water Rights Tabulation. Errors are still being identified and corrections are made as time becomes available.

B. Referee Findings and Decrees:

<u>Type of Application</u>	<u>Number Received Nov-Dec '74 (Jan-Oct 1975)</u>
Underground Water Rights	35
Change of Water Rights	23
Plan for Augmentation	0
Water Rights (Surface)	68
Diligence (Conditional)	36
To Make Absolute	48
Water Storage Rights	21
Applications Received in Water Court	231
Number of Referee Consultations	231

W-2372 was the State Engineer's case to postpone the adjudication of the October, 1974, tabulation. The General Assembly of 1975, made various revisions to the tabulation laws and Division 4 is proceeding with the correction and updating of the tabulation in order to meet the new time table directed

by the legislature. The following statement was presented to this office by the Water Referee, Elra Wilson, which relates to the Water Court action concerning the cancellation of Conditional Water Rights. It is presented here in order that this report might contain an idea of the Water Court's thinking and involvement in these "CW" cases:

"A procedure to cancel all inactive and outdated conditional decrees, on file prior to 1969, was initiated November 1, 1974.

Most of these date back to the turn of the century with no subsequent action and all of them have been presumed abandoned for years, however, the court has never taken the necessary action to clean the files.

Procedure:

1. Publication of list in all county papers.
2. Notification by registered letter to last know address.
3. Copy of resume sent to all interested parties.
4. Hearing date set for each case in court by Water Judge.
5. Order by the court to cancel and abandon or continue.

The procedure took approximately 6 months and was completed May 1, 1975. There were 450 cases considered. Approximately

four hundred (400) were abandoned, and 50 were continued for further action, of one type or another.

The authority for the procedure is found to a varying degree in almost every revision of the water statutes since the turn of the century, including the Act of 1969. However, the best authority for this procedure is found in the compiled Laws of Colorado, 1921." Elra L. Wilson, Water Referee.

VIII. ORGANIZATIONS

A. Water Conservation and Conservancy Districts:

Upper Gunnison River Water Conservancy District, % Rial Lake, Chairman, Gunnison, Colorado 81230.

Tri-County Water Conservancy District, % Harold Westesen, Manager, 601 North Park, Montrose, Colorado 81401.

Crawford Water Conservancy District, Danny Shuss, Manager, Crawford, Colorado 81415.

Southwest Colorado Water Conservancy District, % Bob Tyner, La Plata County Court House, Durango, Colorado 81301.

Bostwick Park Water Conservancy District, % Frank Woodrow, Attorney, 144 South Uncompahgre St., Montrose, Colo. 81401.

Grand Mesa Water Conservancy District, % Art Scott, Pres., Cedaredge, Colorado 81413.

North Fork Water Conservancy District, % John Neill, Sec., Hotchkiss, Colorado 81419.

Fruitland Mesa Water Conservancy District, % Carton Meek, President, Maher, Colorado 81421.

Colorado River Water Conservation District, % Roland Fisher,
Secretary, Glenwood Springs, Colorado 81601.

B. Water Related Organizations

Gunnison River Water Users Association, % Jerry Goldsmith,
Cedaredge, Colorado 81413.

Grand Mesa Water Users Association, % Barbara Hood, Secretary,
Cedaredge, Colorado 81413.

Big Ditch Co., % Barabara Hood, Secretary, Cedaredge, Colo.
81413.

W. D. 28

Arch Ditch Co., % Deno Piloni, Gunnison, Colorado 81230.

Hot Springs Res. Co., % Taramarcaz Bros., Gunnison, Colo.
81230

Vouga Res. Co., % Geo. Steenbergen, Gunnison, Colo. 81230.

Needle Creek Res. Co., % Ty Watson, Gunnison, Colo. 81230.

W. D. 40

Surface Creek Ditch & Res. Co., % R. M. Campbell, President,
Cedaredge, Colorado 81413.

Lone Pine Ditch Co., % Emil Cozzetto, Secretary, Cedaredge,
Colorado 81413.

Leroux Creek Water Users Association, % Raymond White,
Secretary, Hotchkiss, Colorado 81419.

Bone Mesa Domestic Water Co., % Fred Vernard, Paonia, Colo.
81428.

Sunshine Mesa Domestic Water Co., % Helen Quain, Secretary,
Route 1, Hotchkiss, Colorado 81419.

Alfalfa Ditch Co., % Sam Oaks, President, Eckert, Colo. 81418.
Orchard City Irr. District, % Wesley England, Secretary,
Austin, Colorado 81410.
Cedar Mesa Ditch & Res. Co., % Bob Phillips, Secretary,
Cedaredge, Colorado 81413.
Palmer & Co., % Benson Palmer, President, Cedaredge, Colo.
81413.
Bonafide Ditch Co., % Leo Ryan, Delta, Colorado 81416.
North Delta Canal Co., % James Winkler, President, Delta,
Colorado 81416.
Hartland Canal Co. % Kenneth Johnson, Delta, Colorado 81416.
Relief Ditch Co., % Gess Ensley, Delta, Colorado 81416.
Fire Mountain Canal Co., % Mrs. Ora N. Housewert, Secretary,
Hotchkiss, Colorado 81419.
Grand View Canal Irr. Co., % Don Reid, President, Crawford,
Colorado 81415.
Overland Ditch Co., % John Neill, Secretary, Hotchkiss,
Colorado 81419.
Childs Ditch Co., % Willard N. Bull, President, Cedaredge,
Colorado 81413.
Crawford Clipper Ditch Co., % Henry Hamilton, Secretary,
Crawford, Colorado 81415.
Coalby Domestic Pipeline, Archie Peterson, President, Cedar-
edge, Colorado 81413.
Fruitland Irr. Co., % R. C. Steckel, Secretary, Crawford,
Colorado 81415.

W. D. 41

Uncompahgre Valley Water Users Association, % Harold
Anderson, Manager, Montrose, Colorado 81401.

Chipeta Water Company, % B. J. White, Manager, Montrose,
Colorado 81401.

Menoken Water Co., % Ray Weaver, President, Montrose,
Colorado 81401.

W. D. 42

Redlands Water & Power Co., % Jim Rankin, Secretary,
768 North Avenue, Grand Junction, Colorado 81501.

Grand Mesa Res. Co., % John Whiting, President, Whitewater,
Colorado 81527.

Kannah Creek Water Users Association, % W. D. Bradbury,
President, Whitewater, Colorado 81527.

W. D. 60

Lilylands Canal & Res. Co., % Marshall Hughes, President,
Norwood, Colorado 81423.

Farmers Water Development Co., % Roy Davis, President,
Norwood, Colorado 81423.

Lone Cone Ditch & Res. Co., % Gordon Palmer, Secretary-
Treasurer, Norwood, Colorado 81423.

Colorado Cooperative Ditch Co., % Roy Knickerbocker, Secre-
tary, Nucla, Colorado 81424.

W. D. 61

Paradox Valley Canal & Res. Co., % Wyvonna Irish, Secretary,
Paradox, Colorado 81429.

Ray Ditch Co., % Kermit Redd, Pres., Paradox, Colo. 81429.

W. D. 62

Big Cimarron Canal & Res. Co., % Frank Woodrow, Attorney,
144 South Uncompahgre St., Montrose, Colorado 81401.

W. D. 68:

Alkali No. 1 Ditch Co., Inc., % Darrell Kinney, President,
Ridgway, Colorado 81432.

Dallas Ditch Co., Inc., % Henry Stanton, President, Ridgway,
Colorado 81432.

IX. WATER COMMISSIONER'S SUMMARY - 1975

Division No. 4

Direct flow diversions (A.F.).....	2,781,463
Reservoir storage (A.F.).....	2,387,149
Amount delivered from storage.....	236,482
Acres irrigated.....	443,901
Number of ditches.....	3,054
Standard administration.....	1,898
Semi-standard administration.....	382
Number of daily ditch reports.....	42,779
Number of reservoir served.....	509
Power diversions (A.F.).....	2,509,355

District No. 28

Direct flow diversions (A.F.).....	229,614
Reservoir storage (A.F.).....	3,407
Amount delivered from storage.....	1,067
Acres irrigated.....	37,053
Number of ditches.....	216
Standard administration.....	136
Semi-standard administration.....	80
Number of daily ditch reports.....	1,284
Number of reservoirs.....	6
Average demand (Flow & reservoir) AF/AC	6.0
Power diversions.....	0

NOTE: Average demand AF/AC. is adjusted to include only that water that has been used for irrigation.

District No. 40

Direct flow diversions (A.F.).....	452,439
Reservoir storage (A.F.).....	89,218
Amount delivered from storage.....	68,354
Acres irrigated.....	168,403
Number of ditches.....	1,079
Standard administration.....	742
Semi-standard administration.....	337
Number of daily ditch reports.....	22,590
Number of reservoirs served.....	162
Average demand (flow & reservoir)AF/AC.	3.08
Power diversions (A.F.).....	0

District No. 41

*Direct flow diversions (A.F.).....	680,005
Reservoir storage (A.F.).....	3,032
Amount delivered from storage.....	897
Acres irrigated.....	92,757
Number of ditches.....	162
Standard administration.....	76
Semi-standard administration.....	1
Number of daily ditch reports.....	1,695
Number of reservoirs served.....	7
Average demand (Flow & Reservoirs)AF/AC.	7.33
Power diversions(A.F.).....	7,797

* Includes 316,904 A.F. imported water from Water District 62.

NOTE: Average demand AF/AC. is adjusted to include only that water that has been used for irrigation.

District 42

Direct flow diversions (A.F.).....	517,500
Reservoir storage (A.F.).....	10,315
Amount delivered from storage.....	3,002
Acres irrigated.....	9,417
Number of ditches.....	95
Standard administration.....	24
Semi-standard administration.....	10
Number of daily ditch reports.....	425
Number of reservoirs served.....	30
Average demand (flow & reservoirs)AF/AC.	4.67
Power diversions (A.F.).....	469,424

District No. 59

Direct flow diversions (A.F.).....	299,842
Reservoir storage (A.F.).....	101,462
*Amount delivered from storage.....	60,689
Acres irrigated.....	39,115
Number of ditches.....	345
Standard administration.....	155
Semi-standard administration.....	89
Number of daily ditch reports.....	2,480
Number of reservoirs served.....	7
Average demand (flow & reservoirs)AF/AC.	7.45
Power diversions (A.F.).....	0

*Not used in Water District 59.

NOTE: Average demand AF/AC. is adjusted to include only that water that has been used for irrigation.

District No. 60

Direct flow diversions (A.F.).....	157,414
Reservoir storage (A.F.).....	31,873
Amount delivered from storage.....	28,077
Acres irrigated.....	28,679
Number of ditches.....	306
Standard administration.....	191
Semi-standard administration.....	41
Number of daily ditch reports.....	2,508
Number of reservoirs served.....	76
Average demand (flow & reservoir) AF/AC	5.49
Power diversions (A.F.).....	1,266

District No. 61

Direct flow diversions (A.F.).....	16,819
Reservoir storage (A.F.).....	1,807
Amount delivered from storage.....	1,000
Acres irrigated.....	2,900
Number of ditches.....	44
Standard administration.....	44
Semi-standard administration.....	0
Number of daily ditch reports.....	2,612
Number of reservoirs served.....	1
Average demand (flow & reservoir) AF/AC	5.99
Power diversions (A.F.).....	0

NOTE: Average demand AF/AC. is adjusted to include only that water that has been used for irrigation.

District No. 62

+Direct flow diversions (A.F.).....	287,411
Reservoir storage (A.F.).....	871,853
*Amount delivered from storage.....	105,925
Acres irrigated.....	36,422
Number of ditches.....	342
Standard administration.....	70
Semi-standard administration.....	189
Number of daily ditch reports.....	1,648
Number of reservoirs served.....	23
*Average demand (flow & reservoir)AF/AC.	4.84
Power diversions (A.F.).....	2,027,270

*Less exported water.

*Includes 100,000 A from Taylor Res.

+Includes 216,904 A from Gunnison Tunnel

District No. 63

Direct flow diversions (A.F.).....	10,593
Reservoir storage (A.F.).....	880
Amount delivered from storage.....	0
Acres irrigated.....	2,035
Number of ditches.....	83
Standard administration.....	21
Semi-standard administration.....	10
Number of daily ditch reports.....	504
Number of reservoirs served.....	0
Average demand (flow & reservoirs)...	5.20
Power diversions (A.F.).....	0

NOTE: Average demand AF/AC. is adjusted to include only that water that has been used for irrigation.

District No. 68

Direct flow diversions (A.F.).....	120,730
Reservoir storage (A.F.).....	300
Amount delivered from storage.....	145
Acres irrigated.....	24,779
Number of ditches.....	259
Standard administration.....	138
Semi-standard administration.....	7
Number of daily ditch reports.....	1,380
Number of reservoirs served.....	43
Average demand (flow & reservoirs)AF/AC.	4.49
Power diversions (A.F.).....	0

District No. 73

Direct flow diversions (A.F.).....	5,992
Reservoir storage (A.F.).....	48
Amount delivered from storage.....	48
Acres irrigated.....	1,028
Number of ditches.....	33
Standard administration.....	14
Semi-standard administration.....	5
Number of daily ditch reports.....	340
Number of reservoirs served.....	0
Average demand (flow & reservoirs)AF/AC.	5.82
Power diversions (A.F.).....	0

NOTE: Average demand AF/AC. is adjusted to include only that water that has been used for irrigation.

District No. 74

Direct flow diversions (A.F.).....	3,104
Reservoir storage (A.F.).....	0
Amount delivered from storage.....	0
Acres irrigated.....	1,313
Number of ditches.....	14
Standard administration.....	9
Semi-standard administration.....	5
Number of daily ditch reports.....	310
Number of reservoirs served.....	0
Average demand (flow & reservoir)AF/AC.	2.36
Power diversion (A.F.).....	0

NOTE: Average demand AF/AC. is adjusted to include only that water that has been used for irrigation.

NA - No water available
 NU - Non use
 NR - No record

TABLE A

DIVISION SUMMARY - DIVISION NO. 4

Direct Flow Diversions

1975

Water District	Total Ditches Reported		Irrigation Diversions Ac. Ft.	No. of Acres Irrigated	Ac. Ft. Per Acre	Industrial, Fish Use Diversions Ac. Ft.	Municipal Use Diversions A.F.	Recreation Use Diversions A.F.	Trans-Mtn. Diversions A. F.	Total Diversions A. F.	No. of Daily Ditch Rpts.	Delivered to Compact Cmtmt.-A.F.
	Active	Inactive										
28	136		229,614	37,053	6.20	882	1,459	2,572	945	235,472	1,284	0
40	742	17 110210	452,439	168,403	2.68	7,822	20,230	0	3,864	484,355	27,590	0
41	79	1 83	680,005	92,757	7.33	7,797	365	1,750	0	689,917	1,695	0
42	24	3 10 61	40,762	9,417	4.32	469,424	310	0	0	517,500	425	0
59	155	32 57 101	299,842	39,115	7.67	1,396	6,170	0	0	307,408	2,480	0
60	267	14 35 16	157,414	28,679	5.49	38,715	4,338	33,733	0	217,161	2,511	0
61	44	0 0 0	16,819	2,900	5.79	0	0	1,900	0	18,719	2,612	0
62	259	2 81 0	176,432	36,422	4.84	2,027,270	2,003	0	972	2,408,916	1,648	0
63	31	0 3 59	10,593	2,035	5.20	0	0	0	0	10,593	504	0
68	138	3 4 150	110,391	24,779	4.45	823	568	30	386	112,198	1,380	0
73	14	0 5 14	5,992	1,028	5.82	0	309	0	0	6,301	340	0
74	9	0 5 0	3,104	1,313	2.36	0	0	0	0	3,104	310	0
TOTAL	1898	71 311 774	2,183,407	443,901	4.92	2,554,129	35,752	39,985	6,167	5,011,644	42,779	0

TABLE B

DIVISION SUMMARY - DIVISION NO. 4
Storage Report - Acre Feet

1975

Water District	Amount in Storage Acre Feet		Actual Amt. of Diverted to Storage During Season	Delivered from Storage to Irrigation	Storage to Industrial/Power Use	Storage for Municipal Use	Storage for Recreation Use	Storage to Projects
	11-1-74	6-1-75						
28	663	3,407	2,744	1,067	0	0	2,572	0
40	12,272	89,218	77,945	66,622	0	1,732	89,218	20,316
41	1,989	3,032	1,043	897	0	365	3,032	0
42	1,553	10,315	6,924	4,037	0	1,872	10,315	0
59	58,788	106,989	48,201	26,469	0	0	108,689	26,469
60	9,614	37,691	28,077	29,240	12,661	15,880	32,835	11,637
61	93	1,900	1,807	1,000	0	0	1,900	0
62	652,776	871,853	83,858	105,925	846,900	2,003	870,506	83,858
63	0	1,080	0	1,080	0	0	0	0
68	150	300	150	145	0	15	17	0
73	0	0	0	0	0	0	0	0
74	0	0	0	0	0	0	0	0
TOTALS	737,898	1,125,785	250,749	235,482	859,561	21,867	1,119,084	142,280

Uncompahgre Project - 1975 Season

Under the terms of the contract between the Bureau of Reclamation and the Uncompahgre Valley Water Users Association approved August 4, 1931, the operation and maintenance of the Uncompahgre Project was taken over by the Association on January 1, 1932.

The project irrigation system includes 575 miles of irrigation canals and laterals, including 7.2 miles of tunnels and 5.1 miles of siphons. The project drainage system includes 204 miles of open drains.

The water content of the snow on the Uncompahgre River watershed measured at Ironton Park was 353% of normal on May 1, 1975. Weather conditions were favorable and the runoff was gradual so that no extreme river flows occurred to cause damaging floods. Delivery of water to users was favorable and few days of shortage occurred during the season.

The Taylor Reservoir filled and started spilling on July 10, 1975, and reached an elevation of 9330.70. The maximum spill was on July 17, 1975, with a flow of 512 c.f.s.

The Gunnison Tunnel was shut out on June 18 for the annual summer inspection of the tunnel and A Canal. Interruption to water service was approximately thirteen hours for the inspection.

No major operating difficulties were experienced during the year.

The Gunnison Tunnel Rehabilitation and Betterment Program continued during the non-irrigation season. A total of 101 steel sets were installed in three sections of the tunnel. New lining was placed from Station 228+70 to Station 229+24, from Station 230+25 to Station 231+25, and from Station 238+03 to Station 240+71. A total of 1039 cubic yards of concrete were placed. Work started on November 4, 1974, and finished on February 25, 1975. A total of \$1,672,288 has been spent on the Gunnison Tunnel R & B Program through September 30, 1975.

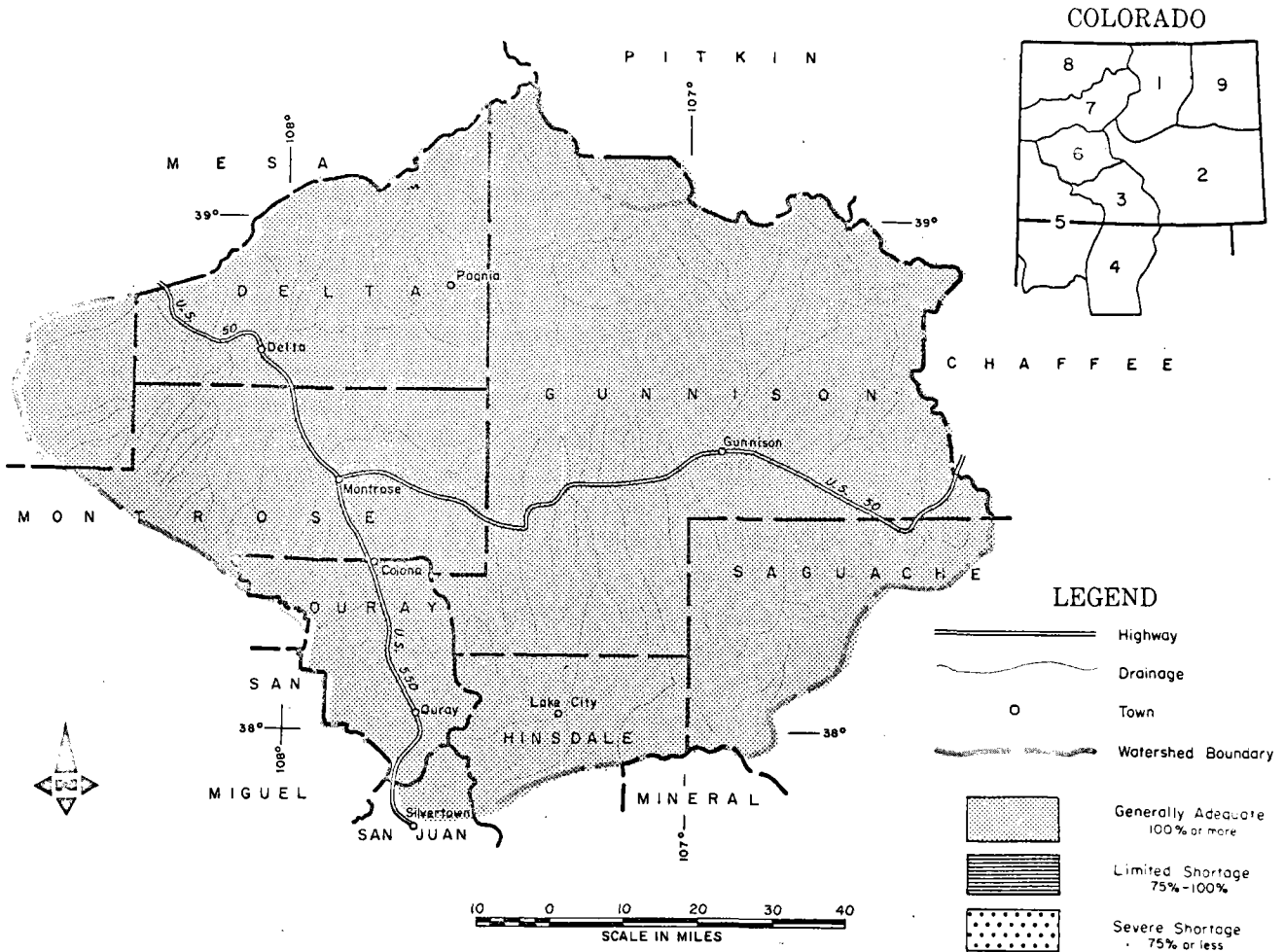
Rehabilitation of major project structures included nine reinforced concrete drop and headgate structures and a reinforced concrete flume on the Selig Canal crossing the end of the Loutzenhizer Canal. A reinforced concrete siphon was constructed on the West Canal to replace a metal flume at East Dolores Creek drainage.

Uncompahgre Valley Water Users

Harold C. Anderson, Manager

WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE GUNNISON RIVER WATERSHED IN COLORADO

as of
MAY 1, 1975



YOUR WATER SUPPLY

THE GUNNISON RIVER AND ITS TRIBUTARIES SHOULD PROVIDE ADEQUATE WATER FOR ALL ITS USERS THIS SUMMER. THE SNOWPACK IS EXTREMELY HIGH AND FORECASTS RANGE FROM 150% OF NORMAL AND UP. HIGH WATER COULD RESULT ABOVE BLUE MESA RESERVOIR ON THE GUNNISON AND ON THE UNCOMPAHGRE AND SURFACE CREEKS IF TEMPERATURES ARE UP DURING THE NEXT 60 DAYS. BLUE MESA CONTAINS 260,000 A.F. SO CAN SLOW THE FLOW MATERIALLY.

This report prepared by
JACK N. WASHICKE
SNOW SURVEY UNIT, SOIL CONSERVATION SERVICE
DENVER, COLORADO

Issued by
M. D. BURDICK - STATE CONSERVATIONIST
DENVER, COLORADO
DUANE L. JOHNSON - AREA CONSERVATIONIST
GRAND JUNCTION, COLORADO
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept

FORECAST POINT	FORECAST	% of Average	Average
			†
Gunnison inflow to Blue Mesa (1)	1200	151	793
Gunnison nr Grand Junction (2)	2000	169	1184
N. Fork of Gunnison (3)	410	156	263
Surface Creek nr Cedaredge	23	144	16
Uncompahgre at Colona	230	172	134

(1) Observed flow plus change in storage in Taylor Reservoir. (2) Observed flow plus change in storage in Blue Mesa, Morrow Point and Taylor Reservoirs. (3) Observed flow plus change in storage in Paonia Reservoir.

SUMMARY of SNOW MEASUREMENTS
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average †
Gunnison	12	144	168
Surface Creek	3	138	143
Uncompahgre	3	195	206

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Taylor	Exc.	Exc.

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average †
Gunnison	1	100	100
Surface Creek	--	--	--
Uncompahgre	--	--	--

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average †
Blue Mesa	830	260	311	308
Morrow Point	121	114	114	115
Taylor	106	50	66	62

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average †

† 1958-1972 period.

Return if not delivered
 UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 SNOW SURVEY UNIT
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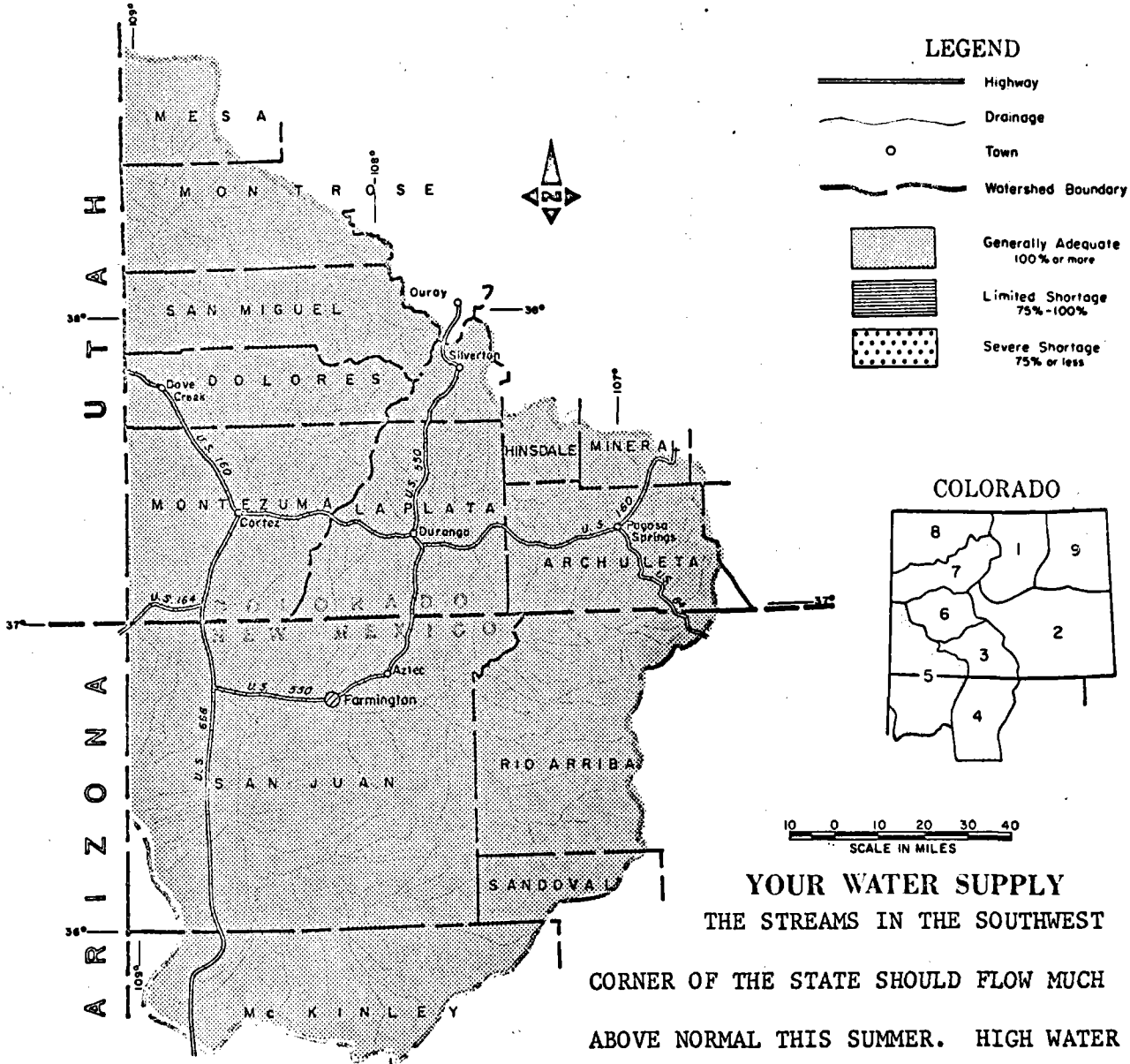


FIRST CLASS MAIL

WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN WATERSHEDS IN COLORADO AND NEW MEXICO

as of
MAY 1, 1975

DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
NATIONAL SPECIAL STUDY ENGINEERS OF GEOGRAPHIC GRID UNIT



This report prepared by
JACK N. WASHCREE
SNOW SURVEY UNIT, SOIL CONSERVATION SERVICE
DENVER, COLORADO

Issued by
M. D. BURDICK - STATE CONSERVATIONIST
DENVER, COLORADO
MARION E. STRONG - STATE CONSERVATIONIST
ALBUQUERQUE, NEW MEXICO
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
D. W. ORLASPIE - AREA CONSERVATIONIST
ALAMOSA, COLORADO
JAMES E. TATUM - AREA CONSERVATIONIST
SANTA FE, NEW MEXICO

STREAMFLOW FORECASTS (1000 Ac. Ft.) Apr-Sept

FORECAST POINT	FORECAST	% of Average	Average
			+
Animas at Durango	735	176	423
Dolores at Dolores	395	170	232
La Plata at Hesperus	43	180	24
Los Pinos at Bayfield(1)	350	177	198
Piedra Cr. at Arboles	340	184	185
San Juan at Carracas	650	184	354
San Miguel at Placerville	230	177	130
Inflow to Navajo R.(1&2)	1100	184	597
Mancos nr Towac	24	171	14

(1) Observed flow plus change in storage in Vallecito Reservoir. (2) April - July

SUMMARY of SNOW MEASUREMENTS
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average +
Animas	6	239	207
Dolores	4	253	292
San Juan	4	218	181

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Florida	Exc.	Exc.

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average +
Animas	-	--	--
Dolores	3	73	65
San Juan	-	--	--

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +
Groundhog	22	9	16	12
Jackson Gulch	10	7	7	7
Lemon	40	8	19	25
Narraguinnep	19	18	16	--
Navajo	1036	394	322	284*
Vallecito	126	29	83	68

*Less than 15 yrs.

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average +

+ 1958-1972 period.

Return if not delivered
 UNITED STATES DEPARTMENT OF AGRICULTURE
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FIRST CLASS MAIL

TABLE OF ORGANIZATION - PERSONNEL

IRRIGATION DIVISION NO. 4

Division Engineer - Ralph V. Kelling, Jr.
 Assistant Division Engineer - Thomas A. Kelly
 Administrative Clerk Typist - Melita Maten
 Clerical Assistant - Audrey Keep
 Hydrographer - Ken Cooper ***

<u>Water District 28</u> Water Commissioner B William E. Rhodes (a)	<u>Water District 41</u> Water Commissioner B Ralph Glendening*	<u>Water District 59</u> Water Commissioner B Edwin S. Hofmann*	<u>Water District 61</u> Water Commissioner B James Hoganson (b)	<u>Water District 63</u> Sr. Water Commissioner W. W. Saunders*
<u>Water District 40</u> Sr. Water Commissioner Richard L. Drexel* Water Commissioner C Elton J. Watson*	<u>Water District 42</u> Sr. Water Commissioner W. W. Saunders* (**)	<u>Water District 60</u> Water Commissioner B Lyman D. Campbell	<u>Water District 62</u> Water Commissioner B Edwin S. Hofmann*	<u>Water District 68</u> Water Commissioner B H. Roger Noble*
<u>Water Commissioners A</u> Gordon Aldridge (a) Richard Belden Russell Bertram James E. Carr Lloyd Connell Willard Bull Mack Gorrod John McHugh James Miller Marvin Stephens Paul Stockemer Stephen Tuck Charley Woolley David Woolley	<u>Water Commissioners A</u> Buck L. Catt (b) Jack Raine Lester Whiting	<u>Water District 70</u> Sr. Water Commissioner W. W. Saunders*	<u>Water District 73</u> Sr. Water Commissioner W. W. Saunders*	<u>Water District 74</u> Sr. Water Commissioner W. W. Saunders*
	<u>Water Commissioner A</u> Robert Drexel	<u>Water Commissioner A</u> Jack Raine	<u>Water Commissioner A</u> Jack Raine	<u>Well Commissioner</u> Dwayne Mansker*

*Annual

**Seasonal w/
Division 5*** " w/Div. 7
(a)Retired
(b)Resigned

AREAS OF RESPONSIBILITY OF WATER COMMISSIONERS AND DEPUTIES

IRRIGATION DIVISION NO. 4

Well Commissioner

Dwayne Mansker - Division Wide

Water District 28

Rhodes - Tomichi and Cochetopa Creek

C. Crandall Howard (replacement)

Water District 40

Richard L. Drexel - Cystal Creek; the Gunnison River from Mesa County line to Montrose County line & its tributaries except the Uncompahgre River

Elton J. Watson - North Fork of Gunnison River & Smith Fk.

Deputies:

* Gordon Aldridge - Upper Surface Creek

Richard Belden - Gunnison River and Excalante Creek

Russell Bertram - Granby and Battlement Reservoirs

James Carr - Leroux Creek

Lloyd Connell - Minnesota Creek and Stewart Mesa

Willard Bull - Upper Surface Creek

Mack Gorrod - Ward, Kiser, & Youngs Creek Reservoirs

Jack McHugh - Youngs, Kiser, and Wards Creek

James Miller - Muddy, Anthracite, Hubbard Creeks

Marvin Stephens - Leon Reservoirs

Paul Stockemer - Dry Creek & Alfalfa Run

Stephen Tuck - Forked Tongue

Charley Woolley - Lower Surface Creek

David Woolley - Park Basin

Water District 41

Alph Glendening - Uncompahgre River from Colona to Delta

Water District 42

W. W. Saunders - Gunnison River below Mesa County line and its tributaries

Deputy:**Buck Catt (same area)

Lester Whiting (replacement-same area)

Water District 59

E. S. Hofmann - Gunnison River above Gunnison & tributaries on north side of the Gunnison River from Gunnison to Mesa Creek

Deputy: Robert Drexel (same area)

Water District 60

Lyman Campbell - San Miguel River

Water District 61

**Jim Hoganson - Dolores River below the San Miguel County line to confluence with San Miguel River (Paradox Valley)

Water District 62

E. S. Hofmann - Cimarron River, Lake Fk. of the Gunnison, and Cebolla Creek

Water District 63

W. W. Saunders - Dolores River below confluence of San Miguel River

Water District 73

W. W. Saunders - Little Dolores River

Water District 74

W. W. Saunders - Coates Creek

*retired
**resigned

HYDROMETEOROLOGICAL DATA - BLUE MESA RESERVOIR (From U. S. Bureau of Reclamation, CRSP Power Operations, Monthly Reports

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
<u>1973</u>												
Precip. (In.)	0.52	0.38	0.35	0.49	1.08	0.76	1.50	0.78	0.69	0.45	0.22	1.67
Avg. Max. Temp.	19.70	28.30	42.30	51.80	67.10	75.90	82.00	81.30	72.40	65.10	48.80	29.70
Avg. Min. Temp.	-8.20	0.00	17.20	21.40	31.80	40.10	44.70	45.60	37.20	27.70	20.90	5.90
Total Ann. Precip.	8.89 In.											
Total Ann. Dischg.	796,190 A.F.											

6 months precipitation sub total 3.58

<u>1974</u>												
Precip. (In.)	2.64	0.62	0.34	0.83	0.00	0.38	0.84	1.34	0.39	0.48	0.26	0.85
Avg. Max. Temp.	18.20	15.40	45.60	55.30	72.60	80.20	82.70	79.70	74.70	64.10	42.60	25.10
Avg. Min. Temp.	5.60	-15.30	14.90	22.90	32.30	40.50	48.10	42.60	36.80	32.20	18.00	0.70
Total Ann. Precip.	8.12 In.											
Total Ann. Dischg.	918,630 A.F.											

6 months precipitation sub total 4.81

<u>1975</u>												
Precip. (In.)	1.22	0.60	1.15	0.37	0.56	0.08	1.64	0.64	0.18	0.33	1.64	0.85
Avg. Max. Temp.	20.60	25.40	37.10	47.90	64.10	74.40	82.60	81.20	73.90	65.65	44.20	29.70
Avg. Min. Temp.	-5.90	-4.30	13.80	20.00	30.90	37.10	46.20	40.20	36.80	27.70	20.90	5.90
Total Ann. Precip.	8.41 In.											
Total Ann. Dischg.	827,530 A.F.											