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COLORADO DIVISION OF WATER RESOURCES

DIVISION 3 ANNUAL REPORT - 1973

I. INTRODUCTORY STATEMENT

Water Division 3 includes about five million acres of land. Approximately one-half of this land is federally owned, including national forests, public domain, wildlife refuges and the Great Sand Dunes National Monument.

Of the remaining 2 1/2 million acres of private land in the area, about 500,000 acres is irrigated crop land, 250,000 acres permanent pasture or hay, 500,000 acres woodland and 1,250,000 acres is range land consisting of sage, chico, and natural grasses.

Division 3 includes all land in Colorado which drains into the Rio Grande river. The area is more specifically referred to as the San Luis Valley. It is located in south central Colorado and includes all or part of the counties of Saguache, Rio Grande, Alamosa, Conejos, Costilla, San Juan, Hinsdale, Mineral, and Archuleta. The Division is bounded on the north and west by the Continental Divide, on the east by the Sangre De Cristo mountains, and on the south by the Colorado-New Mexico state line. The Valley floor, at an average elevation of 7,600' is nearly flat, sloping generally from north to south at a grade of 4 to 10 feet per mile. The area along the Rio Grande in the vicinity of Alamosa has a slope of only 0.6 of a foot per mile.

Soils of the Valley range from coarse gravel and rock next to the mountains to a fine blow-sand texture toward the center. The finer textured soils are underlain by sand and gravel with clay lenses beginning generally at a depth of 60 feet. During most years a substantial part of the land is subwatered.

The growing season between frosts ranges from a minimum of 90 to a maximum of 120 days. Precipitation averages about seven inches a year on the Valley floor. Hail storms

are common during the growing season and weather modification has been practiced in previous years to reduce crop damage. The prevailing winds blow from south to west and are strongest in the spring.

The main crops raised by irrigation are alfalfa, potatoes, barley, oats, natural grasses, hay, and pasture. Cattle and sheep are feed-lot fed in the winter months and transported to mountain ranges in the summer. Crop yields are high and the quality is good.

The headwaters of the Rio Grande river are in Hinsdale county on the west side of the Valley. The Rio Grande flows generally west to east through the Valley turning south at Alamosa. Major tributaries to the main stem of the Rio Grande are the South Fork at South Fork, Colorado, the Alamosa River, La Jara and Trinchera Creeks between Alamosa and La Sauses, and the Conejos River at La Sauses. The Los Pinos and San Antonio rivers are tributary to the Conejos river east of the town of Manassa. The San Antonio river heads in New Mexico and flows into Colorado. The Los Pinos heads in the Cumbres pass area in Colorado, flows into New Mexico and then back into Colorado. The Conejos river heads in the San Juan Range near Platoro. The streams flowing into the Closed Basin (Saguache, San Luis, La Garita, Carnero creeks and their tributaries) are not tributary as surface waters to the Rio Grande. Recent studies by the USGS indicate communication between the confined and unconfined aquifer in the closed basin and may result in a change in interpretation of the extent of waters which are tributary to the Rio Grande.

Agriculture continues to be the predominant economic factor in the San Luis Valley. Several small towns exist as supply centers for the agricultural industry. Adams State College, a liberal arts college offering both graduate and undergraduate degrees, is at Alamosa, the largest town in the Valley.

Manufacturing is primarily based on the region's resources. Perlite is processed in the Antonito area by Grefco, Johns-Manville, and Silbrico Corp. The Homestake, Emperius, and Summitville mines produce silver, lead and copper. Lumber mills and potato starch plants round out the major part of the manufacturing sector. In 1970, the Gerry Division of Outdoor Industries, Inc. located a new plant to manufacture ski parkas in Alamosa. With the vast amount of high quality potatoes grown in the San Luis valley, local officials are attempting to find a major processor to locate in the area.

The population explosion felt in other areas of the state has not reached the San Luis Valley, which has had a relatively stable population the past decade. Subdivision development has had a resurgence in the Valley in the last five years. Costilla county has the highest amount of subdivided land (450 sq. miles). Saguache and Alamosa counties have significant amounts of subdivided lands. Although sales of tracts in these subdivisions are reportedly proceeding at a rapid pace, there has been no significant impact on the population growth or on the building economy to date.

Most subdivision developers operating in the Valley before Senate Bill 35 was passed in May, 1972 had a rather casual approach to the availability of a water supply for their lands, and this attitude apparently was shared by the county commissioners when they approved the subdivisions. After the passage of S. B. 35 and House Bill 1042 in 1972 the subdividers were forced to provide firmer water supplies for lots. Several concerned subdividers have applied to the Water Court for plans of augmentation including water exchange or alternate points of diversion and changes in use to make their existing irrigation or storage water rights available for domestic or municipal use.

Due to the problems brought on by the high water yield

year, interest in water matters has been extremely high this year. This high interest has brought about a large number of water resource related projects. The larger projects are listed below.

PROJECTS CARRIED OVER FROM PREVIOUS REPORTS

<u>Sponsor</u>	<u>Project</u>	<u>Work</u>	<u>Status</u>
Rio Grande Water Cons. Dist.	Norton Drain	Opening new laterals into main drain-new structures	Completed
Rio Grande Water Cons. Dist.	Small Well Program	Valving, capping flowing artesian wells	Approx. 800 wells completed
Rio Grande Water Cons. Dist. plus DWR, CWCB, USBR and others	Closed Basin	Water Salvage	Authorized, but not funded - dormant
Conejos Water Cons. Dist. with Fed. Disaster Assist. Admin. Funds	Conejos River, San Antonio and Los Pinos Cr.	Channel repair and rectification structure repair - flood damage	Essentially completed

NEW PROJECTS

<u>Sponsor</u>	<u>Project</u>	<u>Work</u>	<u>Status</u>
RGWCD - DWR	SW Costilla Co investment	Logging; drilling & logging of wells	See Par. III. E
RGWCD	Observation Wells Network	Valley floor 6 mile grid- 73 wells to monitor static water level	Drilling began on Nov 1, 1973
Weisbart & Weisbart	Extraction of hot water from wells for commercial purposes	Drill and log 3 deep 2000-3000' wells	See Par. III. E

<u>Sponsor</u>	<u>Owner/ Project</u>	<u>Work</u>	<u>Status</u>
San Luis Valley Resource Cons. & Development Project	Sanchez D & Res. Co.	6 mi ditch lining 6 1/2 mi SW San Luis	Completed
"	Commonwealth Irrigation Co.	Div struct- ure at Empire Ditch Syphon at Spring Cr.	Under constr. - Scheduled complet- ion date 1974
"	McDonald Ditch Co.	3 mi concrete ditchlining - 7 mi Plaza area	Planning
"	Manassa Land and Irrigation Co.	Ditchlining (concrete) near Manassa	Pre-planning
"	Prairie Ditch Co.	Lining & Struc- tures closed basin area	Pre-planning
"	La Garita Res.	On stream reser.	Pre-planning
"	Rito Seco Flood Control	Channel di- version in town of San Luis	Being reviewed by USCE

## II. PERSONNEL

<u>NAME</u>	<u>POSITION <sup>1/</sup></u>	<u>DIST.</u>	<u>MO. WORKED <sup>2/</sup> (BUDGETED)</u>	<u>MILEAGE <sup>3/</sup></u>
Crosby, W. M.	Div. Engr. WRE IV	Div.	6 FTE	*2384
Blewitt, R. I.	Div. Engr. WRE IV	Div.	6 FTE	*1477
McFadden, D. H.	Asst. D.E. WRE III	Div.	FTE	*2651
Quigley, G. J.	Senior Clerk Typist	Div.	11 FTE	None
McOllough, P.	Water Comm. II	20	8 FTE	*0
Alsbaugh, L. R.	Water Comm. II	20	FTE	20,083
Fuchs, L. M.	D. Water Comm.	20	1 (1)	0
Nash, M. E.	D. Water Comm.	20	9 (5)	13,137
Hinton, P. A.	D. Water Comm.	20	2 (1)	2,751
Gonzales, L. B.	Water Comm. I	21	10 (8)	13,569
Morch, K. S.	D. Water Comm.	21	8 (0)	8,902
Parker, E.	Water Comm. II	Div.	FTE	12,611
Sorensen, D. H.	D. Water Comm.	22	FTE	12,614

III.

A. SNOW PACK

The May 1, 1973 annual yield forecast of the Rio Grande Compact index supply was made by Wayne Crosby. Most Soil Conservation Service snow courses were measured by the SCS. One SCS and the Division 3 supplemental courses were measured by Division 3 Water Resources personnel.

LOCATION OF COURSES MEASURED BY DIVISION 3 PERSONNEL

<u>Snow Course</u>	<u>Drainage Basin</u>
Big Meadows	South Fork Rio Grande
Snow Embargo	Embargo Cr.-Trib. to Rio Gr.
San Antonio Sink	San Antonio River
Pinos Mill	Los Pinos Creek
Platoro (SCS Course)	Conejos River

ANNUAL YIELD FORECAST  
(Thousands of Acre - Feet)

<u>Index Station</u>	<u>Estimated % of Avg</u>	<u>Actual Yield Jan-March 73</u>	<u>Estimated Yield April-thru Sept</u>	<u>Estimated Yield</u>
Conejos R. @ Mogote	172%	10.2	304.3	347.7
Los Pinos @ Or- tiz	172%	<u>1/</u>	113.7	116.1
San Antonio @ Ortiz	172%	<u>1/</u>	22.9	<u>23.2</u>
		Total Conejos River and Tributaries		487.0
Rio Grande & Del Norte	150%	34.5	690.4	<u>739.9</u>
			Total	1,280.9

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1/ Not Charged as Rio Grande Compact index supply.



Simons, L.	Water Comm. II	22	8 (1)	11,483
Espinoza, J. M.	Water Comm. I	24	9 (10)	9,212
Lamm, H. R.	Water Comm. I	25	11 (6)	12,509
Crowley, G. W.	Water Comm. I	26	10 (8)	13,085
Watts, G. R.	Water Comm. I	27	9 (6)	5,633
Smith, W. B.	Water Comm. I	35	9 (8)	6.702
Armstrong, M.	Engr. Tech. - Hydro	Div.	3 (0)	*0
Coffer, H.	WRE I - Hydro	Div.	11 FTE	*0
Vandiver, S. E.	Engr. & Phys. Sci. Trainee	Div.	5 FTE	*0
Waddington, L. A.	WRE II - Hydro	Div.	FTE	*0
Walker, R. D.	WRE II - Engr.	Div.	FTE	*0

Months actually worked include annual leave taken.

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1/ Status on November 1, 1973.

2/ Working months - November 1972 through October 1973.  
Months budgeted for the position in FY 1972 - 1973.

3/ Asterisk indicates that some mileage was by a state-owned vehicle. Where both an asterisk and miles are shown, the mileage shown is by privately owned vehicle.

Ronald I. Blewitt assumed the division engineer's job on April 30, 1973 when Wayne M. Crosby was transferred to Division 7 as division engineer.

Steven E. Vandiver joined our ranks as hydrographer in June.

Phil McOllough passed away July 2. Ray Walker temporarily assisted Lyle Alspaugh in Water Administration in District 20.

Harold Coffer transferred to Division 7 with promotion at end of September.

COMPARISON OF FORECASTS TO ACTUAL YIELD (APRIL THUR SEPT)  
(Thousands of Acre - Feet)

<u>Index Station</u>	<u>Div 3 Forecast</u>	<u>SCS Forecast</u>	<u>Actual Yield</u>
Conejos @ Mogote	304.3	270.0	293.7 <u>1/</u>
Rio Grande @ Del Norte	690.4	680.0	776.3 <u>2/</u>

- 
- 1/ Includes 33,900 AF stored in Platoro Reservoir.  
2/ The change in amount stored in reservoirs above the index station during the April to Sept period was not included since it was not significant.

**B. PRECIPITATION - SUMMER**

The period reported is the summer growing season from May 1 through September 30. Normal precipitation (1931-1960 averages) for the period, at National Oceanic and Atmospheric Administration reporting stations, is 5.72 inches.

The average annual precipitation is approximately 7" on the Valley floor.

PRECIPITATION AND DEVIATION FROM NORMAL (FROM NOAA REPORTS)  
(inches of precipitation)

Station	May <u>1/</u>		June		July		August		Sept	
	1	2	1	2	1	2	1	2	1	2
Alamosa	1.85	1.12	.69	.20	1.09	.02	.65	-.33	1.06	.29
Blanca	1.32		1.37		1.05		.98		.71	
Center	.56		.45		.87		1.07	-.52	.59	
Del Norte	.41	-.46	.55	-.04	1.60	.42	1.05		.41	-.47
Great Sand Dunes	.62		.26		1.37		.96		.77	
Hermit	1.05	-.13	.70	-.30	1.10	-.80	1.75	-.48	.75	-.65
Manassa	1.16	.35	.03	-.45	1.60	.77	.91	-.35	2.13	1.39
Monte Vista	1.23		.30		1.08		.51		.85	
Saguache	.75	-.02	.40	-.21	3.64	2.28	1.57	.03	.51	-.23
Wolf Creek	3.20		2.42		2.89		3.51		2.07	
Average	1.22	.24	.72	.06	1.63	.19	1.80	-.15	.99	.00

- 
- 1/ Column 1 - Precipitation. Column 2 - Deviation from normal.

The figure of .03" at Manassa for month of June was the lowest amount of precipitation at any reporting station in the State of Colorado; the figures of 3.51" for Wolf Creek is the highest of any reporting station for the month of August.

Data from the table indicate a slightly above normal precipitation for the period. No major storms occurred except in scattered instances. Very little of the precipitation was effective in reducing irrigation water requirements.

No hail suppression work was done in Division 3 this year. Although there was some severe hail damage at scattered points, the area as a whole suffered only minimal hail damage.

#### C. FLOODS

Widespread out-of-bank flooding occurred from snow-melt flows along the valleys of the Conejos, Los Pinos, and San Antonio rivers, Alamosa, La Jara, and Trinchera creeks, and the main stem of the Rio Grande. Little damage was done to farm lands. However, the sustained high stream flows eroded stream banks and deposited gravel bars, particularly along the Alamosa, Conejos and San Antonio rivers. Some 12 diversion dams, 3 stream gaging stations (Ute Creek, Rock Creek, and County Line-Rio Grande), and various canal structures suffered significant damage. Repair and restoration costs were estimated at \$56,000 in damage survey reports prepared by Max Baccus of the Amarillo, Texas Bureau of Reclamation office for the Federal Disaster Relief Administration. Alamosa, Conejos, Costilla, Mineral and Rio Grande counties qualified for assistance. Some County roads and bridges also suffered significant damage.

John Cunico of the District Corps of Engineer's office at Albuquerque, New Mexico, monitored the rivers during the flood hazard period from May 21 to June 15.

1973 PEAK FLOWS

<u>Stream</u>	<u>Gaging Station</u>	<u>Date</u>	<u>Flow (cfs)</u>
Rio Grande	Near Del Norte	June 12	6380
Rio Grande	Near Lobatos	May 23	3640
Conejos River	Near Mogote	June 10	2840
Conejos River	Near Mogote	June 27	3430 <u>1/</u>
Conejos River	Near LaSausas	May 22	1670
Los Pinos River	Near Ortiz	May 21	1870
Alamosa Creek	Above Terrace Res.	June 12	1580
Alamosa Creek	Below Terrace Res.	June 12	895
San Antonio River	At Ortiz	May 11	820
Culebra Creek	Near Chama	June 11	800
Trinchera Creek	Below Smith Res. near Fort Garland	May 22	450

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1/ Constructed peak with mean flow calculated from previous 24 hour storage in PLATORO reservoir added.

Because of flood damage, out-of-bank flooding and resulting difficulties in water administration when the Conejos river discharge was 2,000 cfs near Mogote, the criteria for flood storage in PLATORO reservoir was reduced to 1,650 cfs at the Mogote gaging station on June 19. (See appendix Letter-C. J. Kuiper to J. A. Bradley, June 27, 1973). The average flow stored in the previous 24 hour period was added to the Mogote index supply up to a total of not more than 2,000 cfs in determining the Mogote index supply for water administration. Thirty-four thousand one hundred (34,100) acre feet of water were stored in PLATORO reservoir in flood control operations.

D. GENERAL

WATER BUDGET - DIVISION 3  
Nov 1, 1972 thru Oct 31, 1973

WATER YIELD:

<u>Water Source</u>	<u>Yield (AF)</u>
1. Inflow from gaged and estimates on ungaged streams. <u>1/</u>	1,669,000

2. Valley floor precipitation not accounted for in previous item. 1,383,000

Total 3,052,000

Diversions and Depletions:

<u>Item</u>	<u>Diversions (AF)</u>	<u>Depletions (AF)</u>
Directflow diversions	1,354,000 <u>2/</u>	700,000 <u>3/</u>
Wells	625,000	415,000
Non-beneficial use (ET)	0	1,060,000
Municipal	0 <u>4/</u>	0
State line delivery		520,000
Underflow leaving division		<u>55,000</u>
Total		2,750,000

Summary:

<u>Item</u>	<u>AF</u>
Total water yield	+3,052,000
Total water depletion	<u>-2,750,000</u>
Change in underground storage	+ 302,000

- 1/ Estimated at entrance to Valley floor. Does not reflect changes in reservoir storage upstream.  
2/ Includes only those ditches on which official records are kept.  
3/ Includes depletions from all surface diversions.  
4/ Not significant, so zero was entered.

E. UNDERGROUND WATER

No clearly defined aquifers exist in the San Luis Valley, except in a local sense. The basin is filled with intermittent layers of sand, gravel, silt, and clay, with some layers of volcanics, which are more common south and west of the Rio Grande. Hydrologic boundaries do not necessarily correspond to geologic formational boundaries. Aquifers of the San Luis Valley as defined by the USGS are shown in the table below:

<u>Aquifer</u>	<u>Depths (ft.)</u>	<u>Remarks</u>
Unconfined	0 to 60-300	Continuing clay layer varies in depth and thickness
Artesian A	60-300 to 1620	Division into two zones based on differences in transmissivity and storage coefficients.
Artesian B	1620 to 3120	

There are wells in the valley producing water from depths greater than 2500 but little is known of the reservoir characteristics of the deeper water producing zones. This sequence

of aquifers is generally confined to the valley floor; the peripheral area is assumed to be the area of recharge to these aquifers.

This version of the underground water distribution in the valley is not adequate for water administration needs in Division 3. For effective and equitable administration of waters, we need answers to many questions just a few of which are listed below.

- (1) To what extent and in what areas are the unconfined and confined aquifers hydraulically connected?
- (2) Where is the western limit of the confining clay layer in the area north of MonteVista, and how effective a seal is the clay in this general area?
- (3) What is the proportional rate of recharge to the different aquifers in the Valley from the various peripheral streams? Do some streams, Costilla and Culebra Creeks for instance supply recharge to the artesian, or to the Rio Grande flow, surface or underground, above Lobatos?
- (4) Which artesian wells, (and what are their producing depth) have the most detrimental effect on the flow of McIntyre Springs and on the associated diminution of return flows to the Conejos River?

Several projects of interest have been undertaken this year in Division 3. (See Par. I. A., New Projects p.4). The first is the Weisbart and Weisbart hot water well program in parts of T35 and 36N, R10, and 11E. Three artesian wells were permitted by the State Engineer, proposed depth 2000-3000 feet, solid cased to 1200' with yields of 3500 gpm per well. The primary use of the water was for heat extraction, with some use as irrigation water in July and August. It was hoped that a sufficient quantity of water in the 100° F. or above temperature range would provide a source of hot water (minimum temperature 80°) for commercial channel catfish production and for a controlled environment hog farrowing operation.

Drilling on this project was beset with many mechanical and man-made problems. The results were disappointing as a source of information, since we were hoping for deep artesian well input to question (4) above. Well completion data for the three wells is shown in the table below:

WELL COMPLETION DATA - WEISBART AND WEISBART WELLS

	<u>Depth (ft.)</u>	<u>Yield (gpm est.)</u>	<u>Water Temp. (F°)</u>	<u>Remarks</u>
(1)	830	2000 Flow	81	Lost circulation @ 830' unable to drill deeper
(2)	800±	1000 Flow	73	Drilled from 800 to 1200' set solid casing; drilled to 1300', unable to kill flow so could not drill deeper
	1300±	1800 Flow	58	
(3)	2572	40-50 Flow 400 pump	83	Casing and drilling problems make evaluation difficult

Self potential, resistivity, gamma ray and temperature logs were run on all wells, giving some minimal indication of formation water bearing capability, but failing as a correlation tool. An apparent separation of the artesian aquifers is indicated by temperature variations and differences in flowing yields.

The second project of interest was a combination logging-drilling operation in southeastern Costilla county. The project was jointly funded and directed by the Division of Water Resources and the Rio Grande Water Conservation District. The project was intended as a preliminary investigation of this area to see if we could answer part of Question (3) above, and also learn more of the near surface geology which might affect ground water movement.

The initial phase of the investigation consisted of gamma ray logging of five existing fairly deep holes (200-500') in the general area of T 1 & 2N, R, 74 and 75 W, CSPM. Two

additional holes were to be drilled and logged, but this phase was delayed indefinitely by a serious accident on the drilling rig.

The one significant result from the investigation to date was the indication of a fairly consistent static water level at  $7330 \pm 10'$  above sea level in all five wells logged. A rather tentative gamma ray log correlation has been made on what is thought to be one of the lower flows in the Conejos volcanics of Oligocene Age, but the data are considered too scattered and unreliable to be useful at this time.

Further work on this project will require drilling equipment not currently available to the co-sponsoring RGWCD. A decision should be made by the sponsors as to whether or not to proceed on this project.

Colorado Water Resource Circular 18 "Water In The San Luis Valley" was issued by the CWCB and the USGS in September, 1973 and contains much valuable information on water budget, impact of increasing underground water withdrawal from wells, communication between the unconfined and confined aquifers in the closed basin; as well as detailed information on water quality.

Leasing of lands in the Valley for oil, gas, minerals, and geothermal energy was reported during the last year. A seismograph crew, using shot holes and thumper devices was headquartered in Alamosa during the late summer and fall, and appeared to be working both north and south of the city.



F. TRANS-MOUNTAIN DIVERSIONS (November 1, 1972 thru October 1973)

<u>Ditch</u>		<u>Source</u>	<u>District</u>		<u>Acre Feet</u>
			<u>From</u>	<u>To</u>	
Don La Font No. 1	<u>1/</u>	Piedra R	78	20	265.12
Don La Font No. 2	<u>2/</u>	Piedra R	78	20	127.8
Pine River Weminuche Pass	<u>3/</u>	Pine R	31	20	698.4
Tabor Diversion	<u>4/</u>	Spring CR	62	20	1328.8
Treasure Pass Diversion	<u>5/</u>	San Juan R	29	20	712.6
Weminuche Pass	<u>6/</u>	Pine R	31	20	1972.4
Williams Squaw Pass	<u>7/</u>	Williams CR	29	20	214.8
Tarbell	<u>8/</u>	Cochetopa CR	28	26	96.2
Medano and Hudson Ditches	<u>9/</u>	Medano CR	35	16	2124.0 <u>10/</u>

Recipient

- 1/ Colorado Division of Wildlife
- 2/ Colorado Division of Wildlife
- 3/ Paul Weaver, L. B. McClung, Bill Buttman
- 4/ Colorado Division of Wildlife
- 5/ Falk Brothers
- 6/ Leon Raber
- 7/ Seaborn Collins
- 8/ Mel Coleman, Ted Goehl, George Ward
- 9/ Cuerno Verde Ranch, Gardner, Colorado
- 10/ Water exported to Division 2, District 16

The flume on Don LaFont No. 1 ditch (Piedra East) was leveled and the old wing walls were replaced. When the recorder on Piedra East was started, the pen was in reverse which caused some difficulty in accounting for delivery credit towards storage in Beaver Park Reservoir for the Colorado Division of Wildlife.

G. RESERVOIRS

<u>Name</u>	<u>Capacity in A.F.</u>	<u>Water District</u>
Alberta Park	598	20
Beaver Park	4,434	20
Big Meadows	2,437	20
Big Ruby	94	20
Bristol Head No. 1	121	20
Bristol Head No. 2	804	20
Continental	22,679	20
Cove Lake	6,380	22
Downing	30	20
Estdale No. 1	3,519	24
Estdale No. 2	3,041	24
Fuchs	238	20
Goose Lake	232	20
Hay Press Park	200	20
Hermit No. 1	385	20
Hermit No. 2	407	20
Hermit No. 3	192	20
Humphreys	842	20
Hunters Lake	39	20
Jumper Creek	38	20
La Jara	14,052	21
Loch Laven	24	20
Lost Lake (Lower)	966	20
Lost Lake (Upper)	68	20
Love Lake	24	20
Meadow Lake (McCrone)	174	20
Meadow Lake (Wright)	115	20
Metroz (Lower Basin)	396	20
Metroz (Upper Basin)	84	20
Mill Creek	43	20
Mountain Home	18,595	35
Platoro	60,000	22
Poage	261	20
Regan's Lake	823	20
Rio Grande	51,113	20
Rito Hondo	561	20
Road Canyon No. 1	1,367	20
Road Canyon No. 2	84	20
Salazar No. 1	234	24
Salazar No. 2	35	24
Sanchez	103,155	24
Santa Maria	45,070	20
Shaw Lake	681	20
S. Lazy U. Dude Ranch	106	20
S. Lazy U. No. 2	42	20
Smith	5,651	35
Sowards No. 1-A	8	20
Sowards No. 2	35	20
Sowards No. 3	19	20
Sowards No. 4	45	20
Spring Creek	97	20
Spruce Lake No. 1	98	20
Spruce Lake No. 2	105	20
Squaw Lake	162	20
Stabilization (Head)	260	24
Streams Lake	41	20
Terrace	17,233	21
Trout Lake	198	20
Troutvale No. 1	201	20
Troutvale No. 2	257	20
Trujillo Meadows	913	22
Wee Ruby	186	20

G. RESERVOIRS

<u>Reservoir</u>	<u>Source</u>	<u>Nov. 1, 1972</u>	<u>May 1, 1973</u>	<u>Oct. 31, 1973</u>	<u>Maximum</u>
Alberta Park	Pass Cr.	598	598	598	598
Beaver Park	Beaver Cr.	3,332	3,000	2,678	4,434
Big Meadows	So. Fork R.G.	2,437	2,437	2,437	2,437
Big Ruby	Texas Cr.	0	94	94	94
Bristol Head #1	Seepage Cr.	0	0	0	0
Bristol Head #2	Seepage Cr.	0	0	0	0
Continental	No. Clear Cr.	2,222	6,123	29	16,072
Cove Lake	San Antonio R.	0	1,702	0	4,590
Downing	Lima Cr.	30	30	30	30
Eastdale #1	Costilla Cr.	0	1,151	1,309	2,557
Eastdale #2	Costilla Cr.	0	0	0	0
Fuchs	Pinos Cr.	237	237	237	237
Goose Lake	Fisher Cr.	1	96	162	232
Hay Press Park	Goose Cr.	200	200	200	200
Hermit #1	So. Clear Cr.	385	385	385	385
Hermit #2	So. Clear Cr.	407	407	407	407
Hermit #3	So. Clear Cr.	192	192	192	192
Humphreys	Goose Cr.	842	842	842	842
Hunters Lake	Lake Fork, Cr.	19	19	0	19
Jumper Cr. Lake	Jumper Cr.	38	38	38	38
La Jara	Torcido-Jim Cr.	2,080	7,220	4,938	7,474
Loch Laven	Trout Cr.	0	0	0	0
Lost Lake (Lower)	Lost Lake Cr.	6	188	0	374
Lost Lake (Upper)	Lost Lake Cr.	20	30	20	30
Love Lake	Middle Cr.	24	24	24	24
Meadow Lake (McCrone)	Middle Cr.	174	174	174	174
Meadow Lake (Wright)	Crooked Cr.	115	115	115	115
Metroz Lake (Lower)	Decker Cr.	396	396	396	396
Metroz Lake (Upper)	Decker Cr.	84	84	84	84
Mill Creek	Mill Cr.	43	43	43	43
Mountain Home	Trinchera	1,115	2,554	2,821	12,543
Platoro	Conejos River	2,900	4,600	36,900	37,000
Poage	Beaver Cr.	2	107	133	261
Regan's Lake	Crooked Cr.	42	379	379	379
Rio Grande	Rio Grande R.	8,483	21,048	21,383	51,113
Rito Hondo	Rito Hondo Cr.	561	561	561	561
Road Canyon #1	Long Canyon Cr.	1,367	1,367	1,367	1,367
Road Canyon #2	Saw Mill Cr.	84	84	84	84
Salazar #1	Rito Seco	30	190	125	210
Salazar #2	Rito Seco	5	18	5	30
Sanchez	Culebra	3,085	7,574	17,312	26,919
Santà Maria	No. Clear Cr.	2,998	5,764	5,949	14,919
Shaw Lake	Kitty Cr.	62	316	437	681
S. Lazy U. Dude Ranch	Crooked Cr.	106	106	106	106
S. Lazy U. #2	Crooked Cr.	42	42	42	42
Smith	Trinchera	886	3,574	3,574	5,730
Sowards #1-A	Middle Cr.	8	8	8	8
Sowards #2	Middle Cr.	35	35	35	35
Sowards #3	Middle Cr.	19	19	19	19
Sowards #4	Middle Cr.	45	45	45	45
Spring Creek	Spring Cr.	165	165	165	165
Spruce Lake #1	Trib. So. Fork	3	39	1	98
Spruce Lake #2	Trib. So. Fork	34	63	2	105
Squaw Lake	Squaw Cr.	0	0	0	0
Streams Lake	Springs	41	41	41	41
Terrace	Alamosa R.	1,917	6,819	6,890	16,930
Trout Lake	Trout Cr.	1	198	198	198
Troutvale #1	So. Clear Cr.	201	201	201	201
Troutvale #2	So. Clear Cr.	257	257	257	257
Trujillo Meadows	Los Pinos Cr.	913	913	913	913
Wee Ruby	Texas Cr.	0	100	125	125

IV.

A. AGRICULTURE

According to Abe Relyea, San Luis Valley Extension Agronomist, 1973 has been an excellent agricultural year in the valley - possibly the best overall year on record. We have made no breakdown on a "common source" stream basis, nor on a crop yield by county, because the Valley is essentially a single agricultural entity.

Mr. Relyea's estimated figures for the 1973 season are as follows:

<u>Crop</u>	<u>Avg. Yield/Acre</u>	<u>Acres</u>
Malting Barley	60 bushel	80,000
Feed Barley	80 bushel	20,000
Spring Wheat	70 bushel	8,000
Oats	60 bushel	4,000
Potato	225 cwt	30,000
Alfalfa	2.4 ton	100,000
Native Hay	1.75 ton	150,000
Lettuce	525 ctn	5,000

V. COMPACTS AND COURT STIPULATIONS

A. Costilla Creek Compact

The 28th annual meeting of Costilla Creek Compact Commission was held at Alamosa, Colorado, on May 25, 1973. The following items have been extracted from the Watermaster's (Charles D. Miller) report for the 1972 season.

Feb. 29 to April 24	1237 AF of water was delivered to Eastdale No. 1 Reservoir
April 24	Costilla Creek flow was made available to direct flow users
May 15	Maximum storage in Costilla reservoir —4,961 AF
May 15	Began first release of water from Costilla reservoir
Aug. 21	Completed draining Costilla reservoir

The total 1972 calendar year yield of Costilla creek near Costilla (Canyon Mouth) from USGS records was 14,710 AF, of which 4,246 AF was from reservoir releases. It was a poor water year. Ditches in the Amalia area did not receive any water under direct flow rights. They did receive Costilla reservoir water until July 31 by agreement with the Rio Costilla Cooperative Livestock Assn. The Costilla and Garcia areas received very little water. Water users under the Jaroso Mutual ditch supplemented their supply with ground water and raised reasonably good crops. The Acequia Madre ditch (first direct flow priority) had close to a sufficient supply. The Watermaster had plenty of help by persons unknown in unauthorized adjustments of headgates.

The 1973 season has been a good water year and has been rather uneventful.

B. RIO GRANDE COMPACT

The State of Colorado remains current under the 1968 U. S. Supreme Court stipulation to meet the delivery obligation established by Article III of the Rio Grande Compact.

1973 WATER SUPPLY FORECASTS AND REQUIRED COMPACT DELIVERIES

Estimator	Period	Date Made	Index Supply (1000 AF)		Total	Delivery Required
			Conejos R.	Rio Grande R.		
Div. Engr. Crosby	Calendar Yr.	May	487	793.9	1280.9	492.0
Div. Water Resources (Denver office)	"	April	382	806	1188	434.4
		June	428	809	1237	475.9
		July 31	450	835	1320	541.2
		Sept 1	450	870	1285	514.0
		Oct 1	460	857	1317	539.2
		Nov 1	448.9	827.7	1276.6	507.4
Div Engr.	"	Dec 5	443	834	1277	506.6

The delivery obligation for the current forecast is 506.6 AF. Anticipated delivery is 530,000 AF, or 23,400 AF over the requirement. The corresponding alleged indebtedness balance at the end of 1973 would be 742,800 AF.

Extensive modifications were made to the 1969 - 1972 operating

criteria in developing the criteria for 1973. (See Appendix - Operating Criteria - Rio Grande Compact, dated May 21, 1973). Major change was that the 1973 criteria affects all surface and underground water except that from exempt wells. It provides for use of underground water from non-exempt wells not filed with the Water Clerk prior to July 1, 1972 only when

1. A well is approved as a temporary alternate point of diversion under an approved written plan, or
2. A well is operated under an approved written plan whereby the amount of injury is reasonably lessened.

The 1973 operating criteria provided for stream deliveries to Colorado appropriators of

1. 85% of the Del Norte index supply
2. 105% of the Conejos system indexes less the percentage of the annual supply to be delivered at the La Sauses gaging station.

(See Appendix for other provisions of the 1973 operating criteria). Operating criteria permits adjustments from these percentages based upon regular status reports.

Diversions for irrigation in 1973 were at the following percentages of index supply.

<u>Date</u>	<u>Rio Grande Del Norte</u>	<u>Conejos River (3 indexes)</u>
May 16	85	----
May 29	85	55
June 5	85	85
June 15	85	75
June 20	85	55
June 23	85	100
June 26	100	100
July 5	100 + return flow	100
July 9	100	100

July 10	100	85
July 11	100 + return flow	85
July 19	100	85
July 24	85	50
Aug. 2	95	100
Aug. 9	95	100 + return flow
Aug. 14	85	75
Aug. 22	85	100 + return flow
Aug. 30	85	50
Oct. 5	30	0
Oct. 8	0	0
Oct. 10	85	0
Oct. 15	0	0
Nov. 3	Permitted irrigation of crops subject to winterkill -- as seedling alfalfa	

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 CGLC

Deliveries higher than operating criteria percentages were made when it appeared that they were rather conservative for the 1973 runoff pattern. Many water users and some bankers complained of the varying percentages.

The curtailment of deliveries below operating criteria beginning October 5 resulted after the New Mexico Compact Commissioner revoked on August 24 the release of the 34,100 AF of compact water stored in Platoro reservoir. (See Appendix-- letter-- S. E. Reynolds to Messrs. Fishback, Gilmer and Kuiper dated August 27, 1973 and letter - Kuiper to Messrs. Fishback, Gilmer and Reynolds dated August 29, 1973, relating thereto).

On October 12, the State Engineer and division engineer issued a Rio Grande Compact call order to all owners of water rights in Division 3 diverting water for irrigation use by direct diversion either through ditches or wells, or storing water to cease at noon on October 15, 1973. This call on diversions from wells, from diversions in the Closed Basin and from Trinchera, Alamosa, La Jara, and Culebra Creeks was without precedent. Modifications to the order were made by the

division engineer on October 16 (amended October 19), October 26, and November 2. (See Appendix for copies of orders).

The November 2 order permitted "out of priority" storage of Compact water in pre-compact reservoirs. Reservoir owners affected in Water Districts 20, 21, 22 and 35 were notified by letter that

Storage in reservoirs will be permitted in order of priority. Fifteen percent of the water stored in each reservoir between now and December 31, will be "out of priority" storage under Section 148-11-25, CRS 1963, as amended, and will be subject to call if needed before December 31, to meet the 1973 Rio Grande Compact commitments.

Precipitation was below normal during the growing season and fall. Irrigation requirements remained high late into the year. (See---III. B. PRECIPITATION - SUMMER).

Runoff patterns on both the Rio Grande and Conejos river varied considerably from normal percentages. Snowmelt was late starting and runoff was below normal on both rivers through April. Runoff was above normal in June and the first half of July on the Conejos, and above normal the first two thirds of July on the Rio Grande. Runoff percentages were below normal on both streams after mid-September.

## VI. DAMS

### A. Dams - Inspections, Restrictions, and Stop Orders

During the week of May 15, 1973, Fred J. Davis, P. E., retained by the Colorado Division of Water Resources, and Assistant Division Engineer, D. H. McFadden, Jr., inspected large dams at the following reservoirs. Davis' report of May 25 delineated a number of conditions, deficiencies and recommendations which are briefed here.

SANTA MARIA (WD 20) - Emergency spillway should never be allowed to operate. Reservoir has high leakage at high stages.

RIO GRANDE (WD 20) - Detritus in spillway should be



removed (has since been done). Seepage through left abutment of dam.

COVE LAKE (WD 22) - Outlet works in poor condition; piping into outlet conduit; incomplete upstream concrete wall; poor wooden parapet wall; crumbly concrete in emergency spillway structure.

SANCHEZ (WD 24) - Severe and extensive erosion on downstream slope of main dam and the dike section; deep gullies in upstream slope of main dam; seepage.

MOUNTAIN HOME (WD 35) - Spillway should not be allowed to operate because of unstable river bank conditions below when wet.

LA JARA (WD 21) - Leakage around stem of left outlet gate; tree growth in spillway; beaching of upstream slope.

TERRACE (WD 21) - No special comments.

On May 23, the Assistant Division Engineer, and Division Engineer visited PARADISE reservoir dam in WD 27. Leakage is severe through the right abutment and emerges about 100 to 200 yards below the dam.

On June 10 PEARL LAKES NO. 8 Reservoir in Water District 20 failed and spilled into Continental reservoir. No serious damage resulted downstream.

On June 21, John Shurer, Dams inspector, visited the dams at RIO GRANDE, SANTA MARIA and both upper and lower TROUTVALE reservoirs.

On June 22, John Shurer visited TERRACE reservoir with particular attention to the masonry concrete emergency spillway chute.

On July 12, the Division Engineer, Ray Walker and Lyle Alspaugh visited the following reservoirs dams:

<u>Reservoir</u>	<u>WD</u>	<u>Observation</u>
FUCHS	20	Badly eroded emergency spillway
Beaver Park	20	Large rocks has sloughed from

cribbed downstream slope of  
 extra wide section of dam into  
 Beaver creek immediately below  
 discharge end of outlet conduit.

These items were reported by telephone to the state office  
 dam section.

On August 23, Terrace Irrigation Company officers Phillip  
 Skinner and Dale Cowan and the Division Engineer made an  
 investigation of the masonry emergency spillway to TERRACE  
 reservoir (WD 21) to follow up a letter of concern from  
 Colonel James Sutton, District Engineer, Corps of Engineers,  
 Albuquerque, New Mexico, to Colorado's Governor John A. Love.  
 The Division Engineer concluded that the spillway was basically  
 of sound materials and prepared a report dated September 7,  
 1973, recommending only minor repairs.

Repair or restoration work to dams includes:

<u>Reservoir</u>	<u>WD</u>	<u>Nature of Work</u>
HUNTER'S LAKE	20	Restoration of embankment section.  Replacement of outlet headgate.
LOST LAKE (Lower)	20	Repaired outlet works.
TROUTVALE NO. 2 (Lower)	20	Emergency spillway repairs.

Current restrictions and stop orders in effect are:

<u>Reservoir</u>	<u>WD</u>	<u>Date of Order</u>	<u>Restriction</u>
COVE LAKE	22	May 11, 1973	Stop order - 5 ft below top of concrete face of dam or Gage Height 34, whichever is lower.
MOUNTAIN HOME	35	-----	Mutual understanding that spillway should not be allowed to operate more than absolutely necessary.

B. LIVESTOCK WATER TANKS

Copies of applications for 167 stock water tanks in Division 3 were received by this office in January of 1973. These applications, filed by the Bureau of Land Management are stamped "AS BUILT", and presumably the structures have been completed for some time. The date of receipt by the State Engineer is August 18, 1972, but there is no date of approval by the State Engineer or Deputy.

A summary of these applications follows:

USBLM LIVESTOCK WATER TANK APPLICATIONS - 1973

<u>Numbers Assigned Tanks</u>	<u>Number of Tanks</u>
13939 thru 14000	62
14051 thru 14118	68
14148 thru 14184	<u>37</u>
Total	167

The staff has not officially visited any water tank, and we have no problems with them.

VII. WATER RIGHTS

A. Tabulations

The 1973 revised tabulation of water rights for Division 3 was published in October. Reaction was greater than at first anticipated because of the effect of the Rio Grande Compact call order of October 12, 1973 (See Appendix).

Ordinary protests to the tabulation were for the most part related to the following deficiencies:

1. Alphabetical printout of priorities having the same appropriation dates in the same adjudication suit that varied from the priorities established by the court.
2. Omission of various water rights, particularly some involving transfers. These appear to be related primarily to voids in our office decree records.

Other protests were received which were primarily against the possibility of water administration on a multiple water district basis. The 1970 and 1973 tabulations were

both published as 4 units - (a) WD 20, 21, 22, 24 and 35; (b) WD 25; (c) WD 26; and (d) WD 27. Section 148-21-27, CRS 1963, as amended, requires that lists of priorities be published by common source. In Division 3, two common sources are immediately apparent - Costilla Creek and the Rio Grande above the state line. Realignment of the tabulation by these sources appears to be in order. Needed underground investigations may delineate separate underground sources exiting from Division 3.

B. Referee's findings and decrees

SUMMARY OF WATER COURT DECREES

Category <hr/>	1969 through <hr/> Oct., 1972	Nov. 1, 1972 thru <hr/> Oct. 1973
Underground Water Right	52	340
Change of Water Right	2	1
Plan of Augmentation	0	0
Water Right	5	1
Diligence (Conditional Decree)	2	2
Water Storage Right	<u>1</u>	<u>2</u>
	62	346
Application Rec'd in Water Court	2915	302
Number of Referee Consultations	62	346

The big improvement in the rate of processing Underground Water Right applications is due to the water referee (Judge R. Conour) working two days a week on applications. However, progress as related to the total number of cases pending is somewhat less than would be inferred from the numbers because the applications processed in 1973 are less complex than average. Since many applications relate to more than one structure, it can be seen that the backlog is still very large. At the present rate of processing it will be many years before the Water Court is current.

One plan of augmentation is presently before the water court. No protests were lodged during the protest period, and the law does not provide for consultation with the division engineer on plans of augmentation. The division staff plans to review future applications carefully during the protest period.

VIII. ORGANIZATIONS

A. Water Conservation and Water Conservancy Districts

Rio Grande Water Conservation District  
Mr. Franklin Eddy, Manager  
Alamosa, Colorado 81101

Conejos Water Conservancy District  
Mr. Leland Holman, Secretary  
Manassa, Colorado 81141

San Luis Valley Conservation District  
Mr. William DeSouchet, Attorney  
Alamosa, Colorado 81101

Trinchera Water Conservancy District  
Mr. Carl Escherman, Secretary  
Blanca, Colorado 81123

B. Ditch Companies and Irrigation Districts

Antonito Ditch Company	Felix F. Gallegos Antonito, Colorado
Arroya Springs Ditch Company	Joe A. Martinez La Jara, Colorado
Billings Ditch Company	Mrs. Elma Christensen Alamosa, Colorado
Bountiful Lateral Ditch Company	Edwin T. Boice Romeo, Colorado
Canon Ditch Company	L. M. Gonzales Antonito, Colorado
Capulin Ditch Company	Joseph H. Chavez, Sec. La Jara, Colorado
Centennial Canal Company	Maurice Stillings Alamosa, Colorado
Centennial Irrigating Company	Warren Deacon Monte Vista, Colorado
Commonwealth Irrigation Company	Wilbur Wiescamp Alamosa, Colorado
Conejos and San Rafael Ditch Company	F. W. Smith Antonito, Colorado
Consolidated Ditch and Headgate Company	Rowe & Gunnison Monte Vista, Colorado
Costilla Ditch Company	George S. Myers Alamosa, Colorado
Cotton Creek Water Company	Mrs. Elsie Neese Moffat, Colorado
Ephraim Ditch Company	Bruce Reynolds Sanford, Colorado
Excelsior Ditch Company	Ed Loman Alamosa, Colorado
Farmers Union Ditch Company	Don Spencer Center, Colorado
Guadalupe Main Ditch Company	Leland R. Holman Manassa, Colorado

Head Overflow Ditch Company	D. E. Shawcroft
Jaroso Mutual Ditch Company	Alamosa, Colorado
Lariat Irrigation Company	Dave Barker
Los Rincones Ditch Company	Jaroso, Colorado
Los Sauces Ditch Company	Hugh Garrison
Manassa Land & Irrigation Company	Monte Vista, Colorado
McDonald Ditch Company	Gordy L. Bagwell
Medano & Zapata Ranches Ditches	Manassa, Colorado
Miller Ditch Company	Nick Espinoza
Mogote-Northeastern Consolidated Ditch Co.	Sanford, Colorado
Monte Vista Canal Company	Leland R. Holman
Mosca Irrigation Company	Manassa, Colorado
Morgan Ditch Company	Leo Stoeber
New Cenicero Ditch Company	Monte Vista, Colorado
New Union Ditch Company	Malcolm G. Stewart, Jr.
Oklahoma Company Ditches	Hooper, Colorado
Plano Vista Ditch Company	Clark Hutchinson
Prairie Ditch Company	La Jara, Colorado
Prairie Irrigation Company	Robert McCarroll
Richfield Canal Company	La Jara, Colorado
Richfield Ditch Company	Edgar Ryker
Rio Grande-San Luis Irrigation Company	Alamosa, Colorado
Rio Grande & Piedro Valley Ditch Company	Thomas H. Rees
Romero Ditch Company	Alamosa, Colorado
Romero Irrigation Company	Maurice Smith
Sanchez Ditch & Reservoir Company	La Jara, Colorado
Sanford Canal Company	Joseph H. Chavez, Sec.
San Juan & San Rafael Ditch Company	La Jara, Colorado
San Luis Valley Canal Company	Ralph Curtis
San Luis Valley Irrigation District	Saguache, Colorado
Santa Maria Reservoir Company	W. W. Platt
Scandinavian Ditch Company	Alamosa, Colorado
Servietta Ditch Company	L. B. Casselman
	Mosca, Colorado
	LaVern Hart
	Monte Vista, Colorado
	Dan Guymon, Supt.
	La Jara, Colorado
	Ray Shawcroft
	La Jara, Colorado
	Rowe & Gunnison
	Monte Vista, Colorado
	Dick Postel
	Monte Vista, Colorado
	Leland R. Holman
	Manassa, Colorado
	Robert McCarroll
	La Jara, Colorado
	Frank Barker
	San Acacio, Colorado
	H. LaMont Morgan
	Sanford, Colorado
	Antonio Lucero
	Conejos, Colorado
	Roy Outcalt
	Alamosa, Colorado
	W. O. Souder
	Center, Colorado
	Barry Nelson, Engr.
	Monte Vista, Colorado
	Edgar Ryker
	Alamosa, Colorado
	Leland R. Holman
	Manassa, Colorado

South Side Arroya Ditch Company

Sanford Ditch Company

Terrace Irrigation Company

Trinchera Irrigation Company

C. Water Users Associations

Alamosa-La Jara Creeks Water Users  
Protective Ass'n.

Association of Senior Water Rights

Monte Vista Water Users Association

Rio Grande Canal Water Users Association

Saguache Creek Water Users

Rio Grande Water Users Ass'n.

Dan Guyman  
La Jara, Colorado  
Clayton Peterson, Pres.  
Sanford, Colorado  
Phil Skinner, Pres.  
La Jara, Colorado  
Lyle Smith, Pres.

John Shawcroft, Pres.  
Alamosa, Colorado 81101

James Higel, Pres.  
Alamosa, Colorado 81101  
Bill Kopfman  
Center, Colorado 81125  
H. C. Boyce, Pres.  
Center, Colorado 81125  
Roy Alexander, Sec.  
Saguache, Colorado 81149  
Ruth Clark, Sec.  
Monte Vista, Colorado  
81144

WATER COMMISSIONER'S SUMMARY

Table 1  
Item

	Water Districts											Maximum
	20	21	22	24	25	26	27	35				
Direct Flow Diver- sions (Ac. Ft. )	638,767.2	113,762	261,020	94,873.4	86,186.1	79,305.4	20,792	48,986.8	1,343,692.9			
Reservoir Storage (Ac. Ft.)	71,146	20,407	38,690	26,570	None	290	None	16,272	173,375			
Amount Delivered from Storage	55,483.8	10,790	4,590	24,399	None	290	None	12,086	107,638.8			
Acres Irrigated	347,989	50,842	109,553	33,427	17,427	20,605	3,625	18,723	602,191			
Number of Ditches	441	96	127	67	127	235	44	77	1,214			
Number of Daily Ditch Reports	213	67	102	62	96	87	18	45	690			
Number of Reservoirs Served	50	2	3	4	0	1	None	2	62			
Average Delivery (Ac. Ft./Ac.)	1.83	2.23	2.38	3.87	4.95	3.85	5.74	2.62	2.25			

See Water Commissioner's records submitted under separate cover.



DIVISION SUMMARY - DISTRICT NO. 3  
 Table 2 - Direct Flow Diversions  
 (Period Nov. 1, 1972 through Oct., 1973)

WD	Total Ditches Reported		Direct Diversions Ac. Ft.	No. of Acres Irrigated	Ac. Ft. per Acre	Indus. Use Divisions Ac. Ft.	Munic. Use Divisions Ac. Ft.	Rec. Use Divisions Ac. Ft.	Trans Mtn Divisions AF	Total Divisions Ac. Ft.	No. of Daily Ditch Rpt	Deliver to Compact Cmtmt AF
	Active	Inactive										
20	233	11	638,767.2	347,989	1.83	365	659	442	+ (to) 5319.92	696,063.7	213	342,500
21	77	9	113,762	50,842	2.22	0	0	2282	0	124,554	67	None
22	104	0	261,020	109,553	2.38	0	438	913	0	261,020	102	198,300
24	62	0	94,873.4	33,427	3.87	0	0	0	0	131,180.4	62	None
25	101	19	86,186.14	17,427	4.95	0	0	0	0	86,186.14	96	None
26	152	5	79,305.4	20,605	3.85	0	0	0	+ (to) 96.2	79,305.4	87	None
27	21	0	20,792	3,625	5.74	0	0	0	0	20,792	18	None
35	59	1	48,986.8	18,723	2.62	0	0	0	- (from) -2124.0	61,072.8	45	None

NA = No Water Available  
 NU = Non Use

Transmountain Diversions: Designate either to or from Division

DIVISION SUMMARY - DIVISION 3  
 Table 3 - Storage Report - Acre Feet  
 (Period Nov. 1, 1972 thru Oct., 1973)

WD	Amount in Storage Acre Feet			Actual Am't Diverted to Storage During Season	Delivered from Storage to Irrigation	Storage to Indus. Use	Storage to Munic. Use	Storage to Rec. Use	Storage to Proj
	11-1-71	5-1-73	10-31-73						
20	17,143	36,744	30,774	71,146	55,483.8	0	0	432	0
21	3,997	14,039	11,828	20,407	10,790	0	0	2,536	0
22	2,900	6,302	36,900	38,690	4,590	0	0	0	0
35	2,001	6,128	6,395	16,272	12,086	0	0	0	0
24	3,115	8,915	18,746	26,570	24,399	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	250	290	290	0	0	0	0
27	0	0	0	0	0	0	0	0	0
Totals	29,156	72,128	104,643	173,375	280,723.8	0	0	2,968	0

## XI. RECOMMENDATIONS AND SUGGESTIONS

### A. Tabulation of Water Rights.

The 1970 and 1973 tabulations were compiled as 4 water source lists - (1) Water Districts 20, 21, 22, 24 and 35; (2) WD 25; (3) WD 26; and (4) WD 27. Considering the State Engineer's declaration that some waters of the Closed Basin are tributary to the Rio Grande, it is recommended that the 1974 tabulation be based on two common sources - (1) Costilla Creek, and (2) the Rio Grande River excluding Costilla Creek.

### B. Water District Boundaries:

The water district boundaries as drawn on the current official 1971 water district map vary from topographic water district boundaries that are now possible with the new USGS 7 1/2' coverage. Recommendation: That boundaries be revised and adopted.

### C. Administration of Wells:

The following recommendations relate to administrative, data and installation needs to efficiently administer wells.

1. Recommendation: That we encourage an existing or new water organization in the San Luis Valley to assume the responsibility of managing water and water rights acquisition and sale of water to well owners who wish to operate them for beneficial use out of priority under a written agreement with the Division Engineer.
2. Recommendation: That orders requiring installation of totalizing meters for non-exempt wells be started in 1974.
3. Recommendation: That the State office furnish the division office copies fo the 7 1/2' USGS maps on which non-exempt wells have been plotted. The division office could keep such maps current by

plotting data from

- a. Permits for new wells including replacement and alternate points of diversion data.
- b. Well driller, well completion and pump installation reports.
- c. Statements of beneficial use.
- d. Data on abandoned wells, both voluntary and decreed.

D. Administration of RIO GRANDE COMPACT

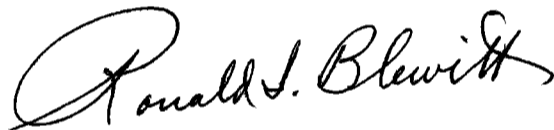
1. Recommendation: That the Division Engineer assist in organizing an advisory board representing the various water right factions and available agronomic technicians for purposes of
  - a. developing input to operating criteria to establish dates of commencement and ending of irrigation season for the various water districts or portions thereof.
  - b. advising the division engineer regarding problems that may develop because of a compact call.
  - c. input toward establishing water depletions from pump irrigation related to the various soil types and crops.
  - d. disseminating information to water users.
2. Recommendation: That post-compact Conejos river depletions and other related factors be studied to up-date the present system of return flow credits to the Conejos river deliveries at La Sauses.
3. Recommendation:
  - a. That the Mogote index gaging station be telemetered.
  - b. That deliveries to Colorado appropriators be based on the current daily index at the Mogote

gaging station plus the previous ten day report period average of the Los Pinos and San Antonio rivers indexes rather than current daily total of all three.

These recommendations will significantly reduce time and mileage demands on our water commissioner and deputy in District 22. This is very important considering the energy crisis.

4. Recommendation: That studies be made of the relationship between the unconfined and confined aquifers and groundwater recharge in the Closed Basin to provide guidelines for issuance or denial of well permits and for administration of wells and surface rights as related to a Compact call, specifically:
  - a. The extent of communication between unconfined and confined aquifers in the sump area - particularly on the piezometric head of the artesian when the head on the unconfined aquifer is lessened.
  - b. Better delineation of the extent of the confining clay layer between Monte Vista and the Russell Springs and Russell Lakes area.
  - c. The recharge relationship between the confined and unconfined aquifers in the San Luis, Kerber, Saguache and La Garita - Carnero creek areas.
5. Recommendation: That studies be made to delineate tributary and non-tributary aspects of Culebra creek as related to deliveries at the Lobatos gaging station.
6. Recommendation: That operating criteria for 1974 be firmed up and adopted prior to the irrigation season if possible. Criteria should be rigid enough to avoid radical departures, yet flexible enough to handle emergencies.

This has been a trying water year because of a new division engineer entering on duty on April 30 at the beginning of a high water year with flooding hazards and damage; introduction of greatly revised operating criteria for the Rio Grande Compact; the revocation of the resolution to release 34,000 AF in Platoro Reservoir by the New Mexico Commissioner on August 24 and the resulting precipitation of the Rio Grande Compact call order of October 12 by the Colorado State Engineer and Division 3 Engineer; an understaffed hydrography section after September, and some turnover in clerical help. I very much appreciate the efforts of all Division 3 personnel in bringing us through the season.

A handwritten signature in cursive script that reads "Ronald S. Blewitt". The signature is written in dark ink and is centered on the page.

Division 3 Engineer

OPERATING CRITERIA

GENERAL CRITERIA - RIO GRANDE AND CONEJOS RIVER

I

These operating criteria shall affect all surface and underground water as defined in Section 148-21-3(3) and (4), Colorado Revised Statutes 1963, as amended, as follows:

"(3) 'Waters of the state' means all surface and underground water in or tributary to all natural streams within the State of Colorado, except waters referred to in 148-18-2(3).

(4) 'Underground water' as applied in this act for the purpose of defining the waters of a natural stream, means that water in the unconsolidated alluvial aquifer of sand, gravel, and other sedimentary materials, and all other waters hydraulically connected thereto which can influence the rate or direction of movement of the water in that alluvial aquifer or natural stream. Such 'underground water' is considered different from 'designated ground water' as defined in 148-18-2(3)."

except water withdrawn from wells, such as domestic and livestock, exempted from administration under Section 148-21-45, Colorado Revised Statutes 1963, as amended.

II

Administration of all water, both surface and underground, will be based on the fact that the delivery of certain quantities of water pursuant to the Rio Grande Compact constitutes the most senior water right in the Rio Grande Basin. As a result, all other water rights, whether deriving from surface water or underground water, may be regulated at those times and to the extent necessary to deliver the amount of water required pursuant to the terms of that compact.

III

Any diversion of water from an aquifer hydraulically connected to surface streams shall be prohibited except at those times, and in those quantities necessary for the permitted beneficial use of such water. Such times shall be described as follows: for irrigation purposes, those times during which direct flow diversions are allowed from the Rio Grande or Conejos River or their tributaries, whichever is applicable; for stock or domestic uses as exempted by Section 148-21-45, Colorado Revised Statutes 1963, as amended, only in those quantities allowed by said section, and necessary for such uses; for

all other purposes, including fish and wildlife propagation, only at those times and in those quantities necessary for the application thereof to permitted beneficial use, and when such does not constitute waste of water.

#### IV

All rights to appropriate underground water for which an application for determination of the amount and priority thereof has not been filed with the Water Clerk prior to July 1, 1972 are junior to all claims for underground water filed with the Water Clerk prior to that date. Effective on the date of these criteria, such junior rights are not allowed to divert any water unless such junior rights meet the terms of Paragraph V or VI.

#### V

Any injury to senior vested rights by appropriators of underground water must be reasonably lessened in order for the appropriator to continue to divert water. Appropriation of all or part of such junior right may be permitted if the Division Engineer approves a written plan submitted to him whereby the amount of the injury caused by that junior right will be reasonably lessened.

#### VI

Any appropriator may elect to treat any well or wells as temporary alternate points of diversion for part or all of any decreed surface right or any other valid water right, upon the approval of a written plan therefor by the State Engineer; provided that no material injury accrues to any other vested right.

#### VII

All compact index stations will be rated by state hydrographers a minimum of three times monthly and runoff records adjusted accordingly.

#### VIII

The water users of the Rio Grande and Conejos River and their tributaries are encouraged to utilize either an existing entity such as the Rio Grande Water Conservation District or another entity to make full use of these operating criteria to augment the runoff at the Lobatos Gaging Station and to attempt to remedy injury by junior appropriators so that maximum utilization can be made of all of the waters available in the San Luis Valley. The Office



of the State Engineer will give whatever assistance possible to implement plans of augmentation or replacement water.

DETAILED CRITERIA - RIO GRANDE AND ITS TRIBUTARIES EXCEPT THE CONEJOS RIVER

1. Runoff Estimate

a. Estimate total annual runoff from Soil Conservation Service and other estimates for April - September on May 1, and, using a long term average monthly runoff pattern, extend the estimate to a full year.

2. January, February and March

a. There will be no direct flow diversions from the Rio Grande during the months of January, February and March except for livestock and domestic water where no other supply is available, and those rights decreed for use throughout the year.

700,000 + A. F. annual runoff at Del Norte

3. April through October

a. Direct flow diversions may commence upon a date to be determined annually by the State Engineer after consultation with the Rio Grande Water Conservation District, the Rio Grande Water Users Association, and other interested entities.

b. Actual runoff at the Del Norte Index Station for the months of January, February and March and the estimated runoff for November and December will be combined to provide an estimated supply at the index station during the non-irrigation months of the calendar year. The actual Rio Grande deliveries at the Lobatos Gaging Station, less the Conejos at La Sauses, for January, February and March will be combined with the estimated Rio Grande deliveries, less the Conejos at La Sauses, at that station for November and December and deducted from the estimated annual requirements to provide an estimated compact delivery requirement for the remainder of the year.

c. From the estimated monthly runoff pattern at the Del Norte Index Station, as computed in 1a and 3b above, monthly delivery requirements will be projected for the months of April through October.

d. Deliveries to Colorado appropriators will start at 85% of the amount of the discharge at the Del Norte Index Station. This amount will be distributed to decrees in order of priority until the entire amount is delivered.

e. If, at any time, this delivery schedule results in a flow at Alamosa in excess of 2,000 cubic feet per second, delivery to Colorado appropriators may be increased temporarily to include deliveries to additional decrees within the priority system to prevent flooding at Alamosa.

f. Every ten days throughout this period, a status report will be made by the Division Engineer to reflect the accuracy

of the monthly and annual estimates of both the supply at the Del Norte Index Station and the delivery at the Lobatos Gaging Station and deliveries to Colorado appropriators adjusted, when necessary.

4. November and December

a. There will be no direct flow diversions from the Rio Grande during the months of November and December (except for livestock and domestic water when no other supply is available, and those rights decreed for use throughout the year) unless it is determined that such curtailment is not necessary to meet compact delivery requirements at the Lobatos Gaging Station.

DETAILED CRITERIA - CONEJOS RIVER AND ITS TRIBUTARIES

1. Runoff Estimate

a. Estimate total runoff from Soil Conservation Service and other estimates for April through September on May 1 and using the long term average monthly runoff pattern, extend the estimate for the index stations to a full year.

2. January, February and March

a. There will be no direct flow diversions from the Conejos River and its tributaries during the months of January, February and March except for livestock and domestic water if no other supply is available, and those rights decreed for use throughout the year.

3. April through October

a. Direct flow diversions may commence upon a date to be determined annually by the State Engineer after consultation with the Rio Grande Water Users Association, the Conejos Water Conservancy District and other interested entities.

b. Actual runoff at the Mogote Index Stations for the months of January, February and March and the estimated runoff for November and December will be combined to provide an estimated supply at that station during the non-irrigation season. The actual Conejos River deliveries at La Sauses gaging station for January, February and March will be combined with the estimated deliveries at La Sauses for November and December and deducted from the estimated annual delivery requirement to provide an estimated delivery requirement for the remainder of the year.

c. From the estimated monthly runoff pattern at the Conejos River near Mogote, the Los Pinos near Ortiz and the San Antonio River at Ortiz, monthly delivery requirements at the La Sauses gaging station will be projected for the months of April through October.

d. Deliveries to Colorado appropriators will total 105% of the amount of discharge at the Conejos, Los Pinos and San Antonio River index stations less the percentage of the annual amount to be delivered to La Sauses in the current year. This amount will be distributed to decrees in order of priority until the entire amount is delivered.

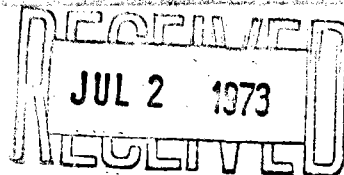
e. If, at any time, this delivery schedule results in a flow in the Conejos River Channel in excess of its capacity, without flooding, delivery to Colorado appropriators may be increased temporarily to include deliveries to additional decrees within the priority system to prevent such flooding.

f. Every ten days throughout this period, a status report will be made by the Division Engineer to reflect the accuracy of the monthly and annual estimates of the supply at the three index stations and the delivery at the La Sauses gaging station and the deliveries adjusted when necessary.

4. November and December

a. There will be no direct flow diversions from the Conejos River or its tributaries during the months of November and December (except for livestock and domestic water if no other supply is available, and those rights decreed for use throughout the year) unless it is determined that such curtailment is not required to meet compact delivery requirements at the La Sauses gaging station.

JOHN A. LOVE  
Governor



C. J. KUIPER  
State Engineer

**DIVISION OF WATER RESOURCES**

Department of Natural Resources  
101 Columbine Building  
1845 Sherman Street  
Denver, Colorado 80203

June 27, 1973

Mr. J. A. Bradley, Director  
Southwestern Region  
U. S. Bureau of Reclamation  
Amarillo, Texas 79100

Attention: Richard Ochs

Re: Platoro Reservoir

Dear Sir:

This letter of explanation is in response to Mr. Ochs' telephone call to Mr. Ronald I. Blewitt, Division Engineer at Alamosa, on June 20th. As you are aware, operating criteria for Platoro Reservoir specifies that the reservoir will go into operation when the Conejos River flow at the Mogate Station is above 2,000 c.f.s. This criterion was based on flood factors existing at the time. Since then the river channel has deteriorated and flooding occurs at lower flows.

On June 18, Blewitt reviewed the flooding conditions with Elwin Parker, Water Commissioner for District 22, when the flow at Magote was approximately 2,000 c.f.s. Out of bank flow into meadow areas was common. Ditches that were out of priority were filling from overland flow from the river even though headgates were closed. One headgate had been washed out. Strict administration of water rights by priority is impossible under these condition.

In addition, considerable damage was observed to eroding stream banks. Emergency work by Conejos County was in progress at one bank where the county road west of Magote was endangered. Also considerable damage had occurred and was occurring to the channel rectification work that has been done in recent years by the Conejos Water Conservancy District.

On June 19, Elwin Parker requested Dalton Morrow, your tender at Platoro Reservoir to store water so that the flow at the Magote Station would be approximately 1,650 c.f.s. We will observe the flooding conditions to see if further adjustments are warranted.

JUL 2 1973

REGISTERED

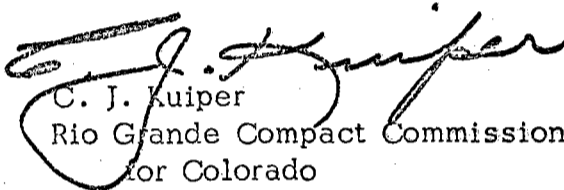
Mr. J. A. Bradley

Page 2

June 27, 1973

We appreciate the cooperation of your organization in this matter very much.

Sincerely yours,



C. J. Kuiper  
Rio Grande Compact Commissioner  
for Colorado  
(State Engineer)

CJK:grl

cc: R. I. Blewitt  
Elwin Parker  
J. Gilmer, Texas Commissioner  
S. Reynolds, New Mexico Commissioner  
A. Fischback, Chairman

RIO GRANDE COMPACT COMMISSION

COLORADO

TEXAS

NEW MEXICO

August 27, 1973

Mr. A. A. Fischback, Jr.  
Chairman, Rio Grande Compact Commission  
Water Resources Division  
U. S. Geological Survey  
Room 1229, Building 25  
Denver Federal Center  
Denver, Colorado 80225

Mr. Jesse B. Gilmer  
Commissioner for Texas  
P. O. Box 771  
El Paso, Texas 79945

✓ Mr. C. J. Kuiper  
Commissioner for Colorado  
101 Columbine Building  
1845 Sherman Street  
Denver, Colorado 80203

Gentlemen:

This is to confirm my statement at the informal Commission meeting in Albuquerque on August 24 that I must revoke my consent to the release of water from Platoro Reservoir pursuant to the resolution on that subject adopted by the Commission at its meeting in Alamosa, Colorado on March 30, 1973 and to give written notice of that revocation pursuant to the proviso of the resolution.

I also want to confirm that my advisers and I will continue to study the facts, projections and issues involved with a view to reinstatement of my consent if that can be done without serious jeopardy to New Mexico's interests.

Sincerely,

  
S. E. Reynolds

Commissioner for New Mexico

SER:lm1

cc: James A. Bradley  
Colonel James L. Sutton  
Don Farr  
L.J. Reiland, Secretary

Representatives of the U. S. Bureau of Reclamation attended the meeting to present a report on accounting of San Juan River Basin water diverted to the Rio Grande Basin in New Mexico in 1972. The Engineer Advisers accepted the Bureau of Reclamation's report on accounting subject to any revision of records of flows and/or losses as may be indicated by subsequently acquired data.

The Bureau of Reclamation recommended a change in the method of accounting the inflow to Heron Reservoir. The recommended method would also affect the accounting of the 1971 inflow to the reservoir. The Engineer Advisers noted certain inconsistencies in the results shown by the recommended method but were unable to suggest a different method pending additional data and study. It was agreed that the results of the Bureau of Reclamation's recommended method would be used for the years 1971 and 1972 subject to any revision of data and results as may be indicated by subsequently acquired data. The results of the Bureau's recommended method indicate a total of 1,380 acre feet of Rio Grande water stored in Heron Reservoir as of December 31, 1972. The Engineer Advisers recommend that this water be retained in Heron Reservoir pending additional study and data pertaining to accounting of the inflow to Heron Reservoir.

The Engineer Advisers recommend adoption of the following resolution providing for release of debit water from storage in reservoirs in Colorado:

WHEREAS, the Engineer Advisers to the members of the Commission have concluded that substantial emptying of upstream storage reservoirs during the nonirrigating season between November 1 of this year and March 1 of next year would tend to conserve water, and

WHEREAS, under provisions of the fourth unnumbered paragraph of Article VI of the Compact, the Commission, by unanimous action, may authorize the release of water held in storage pursuant to the second and third unnumbered paragraphs of this Article.

NOW THEREFORE, IT IS HEREBY RESOLVED that Colorado be authorized to release and is hereby requested to release from storage in Platoro Reservoir any amount of water which is held in storage on November 1, 1973 by reason of accrued debits of Colorado, such releases to be commenced as soon as practicable thereafter, to attain maximum delivery of the released water to Elephant Butte Reservoir, and to be completed prior to March 1, 1974; provided that said authorization and request shall be subject to revocation by written notice of the Commission or any signatory state at any time prior to October 1, 1974.

John D. Vanderhoof  
XXXXXXXXXX

August 29, 1973

Mr. A. A. Fischback, Jr.  
Chairman, Rio Grande Compact Commission  
591 S. Xenon Court  
Lakewood, Colorado

Mr. Jesse B. Gilmer  
Rio Grande Compact Commissioner for Texas  
P.O. Box 771  
El Paso, Texas 79945

Mr. S. E. Reynolds  
Rio Grande Compact Commissioner for New Mexico  
State Engineer's Office  
State Capitol  
Santa Fe, New Mexico 87501

Gentlemen:

I am in receipt of a letter, dated August 27, 1973, from Mr. S. E. Reynolds, Rio Grande Compact Commissioner for New Mexico, revoking his consent to release of water from Platoro Reservoir pursuant to the Commission Resolution adopted on March 30, 1973. I fully recognize the Commissioner's authority to exercise this right under the resolution and will abide by this revocation.

Due to operational difficulties in administering water to Colorado appropriators in order to comply with the letter of the Compact provisions, I must be more definitive than the expression in the 2nd paragraph of Commissioner Reynolds' letter. In order to completely comply with provisions of the Rio Grande Compact and the Stipulation and Agreement before the Supreme Court of the United States on the 9th day of May 1968, I must necessarily administer Colorado diversions as though the stored water in Platoro Reservoir will remain in storage throughout Calendar Year 1973. In the best interest of Colorado water users, I must likewise revoke my consent to the release of water from Platoro Reservoir pursuant to the resolution adopted by the Commission on March 30, 1973 until further notice.



Mr. A. A. Fischback, Jr.  
Mr. Jesse B. Gilmer  
Mr. S. E. Reynolds

Page 2

August 29, 1973

I regret having to take this action; however, it is impossible for Colorado's interests to be protected when the "rules of the game" are changed at will.

Sincerely yours,

CJK:grl

C. J. Kulper  
Rio Grande Compact Commissioner for  
Colorado  
(State Engineer)

cc: James A. Bradley  
Colonel James L. Sutton  
L. J. Reiland, Secretary

LEGAL NOTICE

TO ALL OWNERS OF WATER RIGHTS	)	ORDER
OF WATER DIVISION NO. 3	)	OF THE
DIVERTING WATER FROM THE RIO	)	STATE ENGINEER
GRANDE AND ITS TRIBUTARIES	)	AND
EXCEPT COSTILLA CREEK	)	DIVISION ENGINEER

TO ALL OWNERS OF WATER RIGHTS  
IN WATER DIVISION NO. 3:

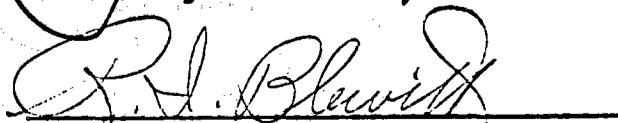
YOU ARE HEREBY NOTIFIED that diversions of water for irrigation uses and storage from the Rio Grande and its tributaries, except Costilla Creek, shall cease at noon on October 15, 1973 in order to meet the senior water right as established by the Rio Grande Compact. This Order is issued pursuant to Section 148-21-35, CRS 1963, as amended. It should be understood that this Order applies to all water users diverting water by direct diversion either through ditches or wells, or storing water.

Notice has been previously given that diversions were ordered discontinued on October 5, 1973 for water users diverting from the Conejos River and its tributaries.

These Orders shall remain in force and effect until further notice.

Dated this 12th day of October, 1973.

  
C. J. Kuiper  
State Engineer

  
R. I. Blewitt  
Division Engineer

JOHN D. VANDERHOOF  
Governor



C. J. KUIPER  
State Engineer

## DIVISION OF WATER RESOURCES

RONALD I. BLEWITT  
DIVISION ENGINEER  
P.O. BOX 269  
ALAMOSA, COLORADO 81101  
OFFICE: 589-6683

October 16, 1973

TO: Ray Walker, WRE II.  
Lyle Alspaugh, Water Commissioner  
Leo Gonzales, "  
Elwin Parker, "  
Joe Espinoza, "  
Henry Lamm, "  
George W. Crowley, "  
George R. Watts, "  
Walter Smith, "  
Leo Simons, "

FROM: Ronald I. Blewitt, Division Engineer

SUBJECT: WRA - Water Commissioners - Directives

In carrying out the legal notice of October 12, 1973, relating to the Rio Grande Compact call which was mailed to you on October 13, please observe the following:

1. The order applies only to diversions for irrigation uses.
2. Allow ditches in the Closed Basin to run for irrigation or stock water in order of priority that will recharge the artesian aquifer. The recharge area is that area outside of the blue line. 1/
3. Allow decreed stock water to flow in ditches as needed for beneficial use.

Use discretion in allowing water to flow into other ditches for stock water. Allow it only on a "dribble" basis. Have owners store in ponds or checked ditches where possible. Supply only where no other source is available.

4. Irrigation wells in the Closed Basin are exempt from the order that are in the area where permits for new irrigation are still being granted provided they do not penetrate the confining clay layer. See map 1/.

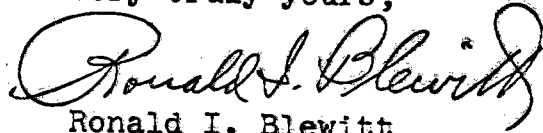
WRA - Water Commissioners - Directives  
October 16, 1973  
Page Two

5. Allow diversions, in priority and for beneficial use, through ditches where such diversions are necessary to prevent flooding.
6. Since damage can occur to some installations when pumps are shut off, do not physically shut a pump off. Order the owner or his agent to shut it off. Post it.
7. If postings are violated, furnish me with the name of the owner, (or agent), his address, the name of the structure, location (if a well), and the circumstances relating to the violation.

A generalized map of your water district is enclosed for your guidance.

1/ A map of the boundary of the confining clay layer and the permit area will be sent to you shortly.

Very truly yours,



Ronald I. Blewitt  
Division Engineer

RIB:ss  
cc: C. J. Kuiper  
Wm. Mattern

JOHN D. VANDEMOOR  
Governor



FILE COPY

C. J. KUPFER  
State Engineer

DIVISION OF WATER RESOURCES

RONALD I. BLEWITT  
DIVISION ENGINEER  
P.O. BOX 269

ALAMOSA, COLORADO 81101  
OFFICE: 569-6683

October 16, 1973

*Corrected copy  
sent to this list  
on 10-19-73*

*DKM*

TO: Ray Walker, WRE II.  
 Lyle Alspaugh, Water Commissioner  
 Leo Gonzales, "  
 Elwin Parker, "  
 Joe Espinoza, "  
 Henry Lamm, "  
 George W. Crowley, "  
 George R. Watts, "  
 Walter Smith, "  
 Leo Simons, "

*also copies via  
Bill Mattern  
to C.J. Kupfer  
2. M.W. Mattern  
3. Hallan Eker.*

FROM: Ronald I. Blewitt, Division Engineer

SUBJECT: WRA - Water Commissioners - Directives

In carrying out the legal notice of October 12, 1973, relating to the Rio Grande Compact call which was mailed to you on October 13, please observe the following:

1. The order applies only to diversions for irrigation uses.
2. Allow ditches in the Closed Basin to run for irrigation or stock water in order of priority that will recharge the artesian aquifer. The recharge area is that area outside of the ~~blue~~ line. *1/*  
*DKM green 10-19-73*
3. Allow decreed stock water to flow in ditches as needed for beneficial use.

Use discretion in allowing water to flow into other ditches for stock water. Allow it only on a "dribble" basis. Have owners store in ponds or checked ditches where possible. Supply only where no other source is available.

4. Irrigation wells in the Closed Basin are exempt from the order that are in the area where permits for new irrigation <sup>wells</sup> are still being granted provided they do not penetrate the confining clay layer. See map 1/.

*DKM  
10-19-73*

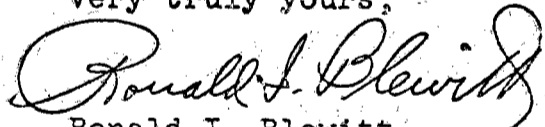
WRA - Water Commissioners - Directives  
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Page Two

5. Allow diversions, in priority and for beneficial use, through ditches where such diversions are necessary to prevent flooding.
6. Since damage can occur to some installations when pumps are shut off, do not physically shut a pump off. Order the owner or his agent to shut it off. Post it.
7. If postings are violated, furnish me with the name of the owner, (or agent), his address, the name of the structure, location (if a well), and the circumstances relating to the violation.

A generalized map of your water district is enclosed for your guidance.

1/ A map of the boundary of the confining clay layer and the permit area will be sent to you shortly.

Very truly yours,



Ronald I. Blewitt  
Division Engineer

RIB:ss

cc: C. J. Kuiper  
Wm. Mattern

JOHN D. VANDERHOOF  
Governor



FILE COPY

C. J. KUIPER  
State Engineer

**DIVISION OF WATER RESOURCES**

RONALD I. BLEWITT  
DIVISION ENGINEER  
P.O. BOX 269  
ALAMOSA, COLORADO 81101  
OFFICE: 589-6683

October 26, 1973

TO: Ray Walker, WRE II  
Lyle Alspaugh, Water Commissioner  
Leo Gonzales, "  
Elwin Parker, "  
Joe Espinoza, "  
Henry Lamm, "  
George W. Crowley, "  
George R. Watts, "  
Walter Smith, "  
Leo Simons, "

FROM: Ronald I. Blewitt, Division Engineer

SUBJECT: WRA - Water Commissioners - Directives - Rio Grande Compact Call

My directive of October 16, 1973, relating to the October 12, 1973, Rio Grande Compact call is modified and restated as follows:

1. The Rio Grande Compact call order of October 12, 1973, applies only to diversions for irrigation uses.
2. The call is not on ditch or reservoir decrees in the Closed Basin.
3. Allow decreed stock water to flow in ditches as needed for beneficial use.  
  
Use discretion in allowing water to flow into other ditches for stock water. Allow it only on a "dribble" basis. Have owners store in ponds or checked ditches where possible. Supply only where no other source is available.
4. The call is not on wells in the Closed Basin withdrawing water only from the unconfined aquifer over the confining clay. The area is north of the hydraulic divide (red line) and within the green line on the map furnished with the directive of October 16, 1973.
5. Allow diversions, in priority and for beneficial use, through ditches where such diversions are necessary to prevent flooding.

WRA - Water Commissioners - Directives - Rio Grande Compact Call  
October 26, 1973  
Page Two

6. Since damage can occur to some installations when pumps are shut off, do not physically shut a pump off. Order the owner or his agent to shut it off. Post it.
7. If postings are violated, furnish me with the name of the owner, (or agent), his address, the name of the structure, location (if a well), and the circumstances relating to the violation.
8. The call is not on Culebra Creek. This was rescinded by telephone order to Joe Espinoza on October 25, 1973.

The Closed Basin is defined in Article I of the Rio Grande Compact.



Ronald I. Blewitt  
Division Engineer

RIB:ss

XC: C. J. Kuiper  
Wm. Mattern



JOHN D. VANDERHOOF  
Governor



C. J. KUIPER  
State Engineer

**DIVISION OF WATER RESOURCES**

RONALD I. BLEWITT  
DIVISION ENGINEER  
P.O. BOX 269  
ALAMOSA, COLORADO 81101  
OFFICE: 589-6683

November 2, 1973

TO: Ray Walker, WRE II  
Lyle Alspaugh, Water Commissioner  
Leo Gonzales, "  
Elwin Parker, "  
Joe Espinoza, "  
Henry Lamm, "  
George W. Crowley, "  
George R. Watts, "  
Walter Smith, "  
Leo Simons, "

FROM: Ronald I. Blewitt, Division Engineer

SUBJECT: WRA - Rio Grande Compact Call - Directive

The latest review of deliveries at Lobatos to the Rio Grande Compact indicates that we can permit the following diversions until further notice without endangering Compact commitments. Therefore my directive of October 26, 1973, relating to the October 12, 1973, Rio Grande Compact call is hereby modified as follows until further notice.

1. Diversions for irrigation of crops subject to winterkill this winter will be permitted. This applies specifically to seedling alfalfa, and tame grass pasture.
2. Storage in reservoirs will be permitted in order of priority. Fifteen percent of the water stored in each reservoir between now and December 31, 1973, will be "out of priority" storage under Section 148-11-25, CRS 1963, as amended, and will be subject to call if needed before December 31 to meet the 1973 Rio Grande Compact commitments.

Ronald I. Blewitt  
Division Engineer

RIB:ss

XC: C. J. Kuiper  
Wm. Mattern