

ANNUAL REPORT
WATER DIVISION VII
IRRIGATION SEASON 1971-1972

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

By
George E. Barclay
Division Engineer
Durango, Colorado

December 14, 1972

JOHN A. LOVE
Governor



C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

GEORGE E. BARCLAY P.E.
IRRIGATION DIVISION ENGINEER
P. O. BOX 551
DURANGO, COLORADO 81302
OFFICE: 247-3770 HOME: 247-5821

December 14, 1972

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

Dear Mr. Kuiper:

Attached herewith is our Annual Report for the irrigation
season of 1971-1972.

Very truly yours,


George E. Barclay
Division Engineer

GEB:alf

CONTENTS

PAGE

I.	Introductory Statement	1
II.	Personnel	3
III.	Water Supply:	
	A. Snow Pack	4
	B. Precipitation - Summer	5
	C. Floods	6
	D. General - Water Budget	6
	E. Underground Water	6
	F. Transmountain Diversions	7
	G. Reservoir Storage	7
IV.	Agriculture	11
V.	Compacts and Court Stipulations:	
	I. La Plata Project	11
	II. San Juan-Chama Diversion Project	11
VI.	A. Dams	11
	B. Livestock Water Tanks	12
VII.	Water Rights:	
	A. Tabulations	12
	B. Referee Findings and Decrees	12
VIII.	Organizations:	
	A. Water Conservation and Conservancy Districts	13
	B. Ditch Companies	13
IX.	Water Commissioners' Summaries:	
	Division VII Summary	14
	District 29, 30	14
	Districts 31, 32, 33	15
	Districts 34, 46, 69	16
	District 71	17
X.	Division Engineer's Summary	17
	A. Direct Flow Diversions - Table A	18
	B. Storage Report - Table B	19
XI.	Recommendations and Suggestions	20
	Appendix A - Temperature Tabulation	21
	Appendix B - Precipitation Tabulation	22
	Exhibit I - Application for Water Right W-866	23

1972 ANNUAL REPORT

DIVISION 7

DURANGO, COLORADO

A large percentage of Division 7 lies within the Greater San Juan Basin. Much of the area above the San Juan Basin in Division 7 is faulted in a way that it can still be tributary to the Basin. The geological San Juan Basin encompasses an area approximately 150 miles east and west, and 150 miles north and south. Ninety percent of this Basin lies in the state of New Mexico, and approximately ten percent is in Colorado. This is a non-tributary Basin having a lower limit of -1,000 below sea level, to 6,000 above sea level. Within this Basin lie large aquifers of water, gas, and oil. Many of the oil bearing strata are found in the Lower Basin, and water bearing strata in the Upper Basin.

The more information we have relative to test wells and the types of aquifers there are in the Division, the more we can learn relative to the upper limits of this Basin. The development of suitable water in the Basin has a direct bearing on the potential growth of this entire Division. This last year marked rapid acceleration in the subdivision of much of the private lands in the Basin, especially in the Upper Basin on the river valley floors.

The primary industry in Durango and its adjoining countryside twenty years ago was either irrigated farming on small tracts of land adjoining the different rivers, or ranches consisting mainly of hay and improved pasture on the upper reaches of the rivers. Due to a lack of labor, harvesting hay in this Division has nearly come to a complete halt. Most of the ranchers utilize pasture lands for the grazing of steers in the summertime. There is some conversion back to the calf and cow operation in this country, but this is of a minor nature. Many of the large ranches are being broken up into real estate subdivisions. Lot sizes vary from a typical city-type lot to ten-twenty- or forty-acre tracts. We feel that the future of this country lies in a large area of subdivisions wherein people are living on small acreages throughout the whole Division. With this type of development, and with the scarcity of groundwater, it becomes apparent that the proper development of water is imperative. We have been stressing the installation of a number of rural water systems to supply the water needed for suburban developments.

Durango, Cortez, and Pagosa Springs and adjoining towns, were primarily used for headquarters of ranch and farming operations for the entire year. Within the last twenty-five years there has been a surge of summer activity wherein a large number of people live in the general area only during the summer months. Recently there has been expanded growth in winter activities consisting of the Purgatory Ski area north of Durango, the Hesperus Ski area west of Hesperus, and the Telluride-Rico-Dolores ski regions in the western part of the Division. Four-season occupancy is being stressed by all developers. We feel that within the next two years, a large number of light types of industry will be established in this vicinity.

This year has been one of the most complex and troublesome seasons on record. Starting with the irrigation season in November and December last year we had excessive rains, then we had cold and late frost in the spring, and a prolonged drought until September of 1972. During September and October we had above-normal precipitation. In fact, during the month of October here in Durango, we had 11.79" of moisture which was approximately five inches more than in any month on record since 1894. The weather pattern seems to show that most of the storms were centered in, or adjoining mountain areas. Cortez and Ignacio received below-normal precipitation, whereas Durango received approximately twenty-five percent above normal for the irrigation season.

The result in this variance in normal precipitation patterns in this vicinity is as follows: No precipitation fell from January to September; the month of April was below-normal both in precipitation and temperatures, resulting in very little range grass growing in the summer months. It was necessary in many instances for ranchers to feed cattle during this period which is very rare in this country. The rains came late, but even so it was noted that in higher elevations the grass grew two inches during the last week of September and the first week in October. At lower elevations, the grass grew up to eight inches, furnishing a good grass supply during the late summer and early fall. Most of the wheat harvested showed only about eight to ten bushels per acre. Winter wheat showed very poor growth due to drought and high temperatures during June and July.

Due to the late spring frost, the fruit crop in Division 7 was nearly non-existent; all apples, peaches, and cherries were killed by this frost. Bean crops were also very poor in this locality; it was doubtful whether they would average three hundred pounds per acre. The beans set very good on the vines early, but

the vines were very small and the ground very dry; the late rains did not do much to improve the situation. Farmers were unable to harvest the crop in the fall due to excessive rains in October and most of the bean crop did not survive. By and large, the farmers and ranchers in this country did not do well at all this year.

Two large federal irrigation projects are being worked on and promoted at the present time. The Dolores Project has a completion date of Fall of 1974 for planning; construction is slated to begin in 1975. The Animas-La Plata Project's final plans are to be approved by 1975; construction is slated to begin in 1976. The way it looks now, the Dolores Project will incorporate sprinkler systems in order that larger areas can be irrigated with less erosion and less chance of large amounts of salt being returned to the stream. From all indications, the Animas-La Plata Project will consist of a pump project from a reservoir south of Durango, to a reservoir in Ridges Basin, and from there a tunnel will be driven to the La Plata River. This Project is only in the planning stage; no formal plans have been made to date.

This office has been working closely with the county planners in the Division and also the County Commissioners on rural developments. The main problem in subdivisions in this country as cited above, is getting suitable and adequate water supplies.

II. PERSONNEL

This office was pleased to be allowed additional man-months employment for the water commissioners. House Bill 1042 on wells has increased the number of filings and the administrative load of the water commissioners. In some districts, water commissioners or their deputies are recording at least three times as many surface and underground diversions as five years ago. We feel that the next step would be to make the water commissioner in District 32 full time due to the complexities of the water pattern in this district.

The following is a list of the personnel in the Division for the period November 1, 1971, to October 31, 1972:

<u>NAME</u>	<u>POSITION</u>	<u>DISTRICT</u>	<u>MONTHS WORKED/</u>		<u>MILEAGE</u>
			<u>BUDGETED</u>		
George E. Barclay	Division Engineer		12	/ 12	12,548 S*
Thomas A. Kelly	Assistant D. E.		12	/ 12	12,860 S*
Orlyn J. Bell	Hydrographer		4	/ 4	687 P* 2,571 S*
Ann Fauth	Stenographer		12	/ 12	(940) PN*
Terry P. Alley	D.W.C.	30	3-1/2	/ 1-1/2	3,104 P
Neil Bankston (Retired Spring 1972)	W.C.I.	71, 69	1/4	/ 1/2	22 P
Roy M. Brown, Jr.	D.W.C.	29	6-1/2	/ 3-1/2	14,903 P
E. Ivan Danielson	W.C.I.	29/30	12	/ 12	15,368 P
George E. Davis	W.C.I.	30	11	/ 11	14,223 P
George Edmonson	D.W.C.	32	8-1/4	/ 7	11,639 P
Glen E. Humiston	W.C.I.	32, 34 69, 71	10	/ 10	12,055 P
J. Russell Kennedy	W.C.I.	33	10-3/4	/ 10	12,901 P
William P. Lynn	W.C.I.	29	8-1/4	/ 8	7,612 P
Ronald R. Robinson	D.W.C.	29	6	/ 4-1/2	6,438 P
Bob R. Shahan	D.W.C.	29	2-1/4	/ 4	1,591 P
Lawrence J. Shock	D.W.C.	46	6-3/4	/ 4	5,050 P
Avrit G. Sparks	W.C.I.	31, 46	10	/ 9	11,203 P
Michael A. Sparks (New 7/20/1972)	W.C.I.	29	3-1/4	/ 3-1/4	4,977 P
Wilford E. Speer	D.W.C.	69, 71	8	/ 7	11,413 P
TOTALS			94.5	/ 84.5	133,186 P <u>27,979 S</u>
GRAND TOTAL					<u>161,165</u>

P* Private Vehicle
S* State Vehicle
PN* Private Non-reimbursible

III. WATER SUPPLY
A. SNOW PACK

This year started out to be one of the best years for precipitation on record. Above-normal precipitation was experienced in November and December 1971, but that is all there was. Below-average precipitation was recorded in 1972 with the general exception of June and October. A small runoff occurred during a

Chinook rain in the latter part of December 1971. The Bureau of Reclamation sponsored the E.G.G. to carry on weather modification but we had no clouds to seed.

<u>SNOW PACK</u>	<u>NO. OF COURSES</u>	<u>THIS YEAR'S SNOW WATER PERCENTAGE</u>	
		<u>LAST YEAR</u>	<u>AVERAGE</u>
ANIMAS	6	82	60
DOLOROS	4	29	15
SAN JUAN	3	102	52

<u>WATER SUPPLY</u>	<u>MAY THRU SEPT.</u>	<u>% OF NORMAL</u>	<u>15 YEAR AVERAGE</u>	<u>ACTUAL</u>	<u>% OF NORMAL</u>
	<u>1000 A.F. FORECAST</u>				
ANIMAS AT DURANGO	210	58	365		
DOLOROS AT DOLOROS	117	60	195		
LA PLATA AT HESPERUS	11.4	58	19.7	6.9	35%
PIEDRA AT PIEDRA	66	50	132		

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

<u>SOIL MOISTURE</u>	<u>NO. OF STATIONS</u>	<u>THIS YEAR'S MOISTURE AS PERCENT OF</u>	
		<u>LAST YEAR</u>	<u>AVERAGE</u>
ANIMAS	3	97	82
DOLOROS	3	77	61
SAN JUAN	1	93	71

III. WATER SUPPLY
B. PRECIPITATION - SUMMER

Heaviest precipitation on record in the Division occurred during the month of October 1972. The highest precipitation at any station was experienced in Durango where 11.79" of rain fell during the month. This was over twice the precipitation that fell in 1911 when the flood record was established in southwestern Colorado. We were leading up to a record flood when during the last round of

precipitation, it snowed in the high mountains instead of raining.

III. WATER SUPPLY
C. FLOODS

Floods of approximately fifty-years' duration occurred on the Rio Blanco. This is the only stream, with the exception of the streams in Durango, that experienced a flood of any magnitude. The conditions were right on the southern slope of the La Plata River to cause an extremely high runoff on October 26, 1972. Highest floods occurred on Lightner and Junction Creeks at 3,400 c.f.s. and 1,700 c.f.s. respectively, the mouths of these creeks being close to the city limits of Durango. Approximately \$800,000 worth of damage was caused by the floods consisting mainly of the destruction of houses, roads, and ditch headings. Approximately 800 c.f.s. of water were recorded on the La Plata River. No serious damage occurred on this stream.

III. WATER SUPPLY
D. WATER BUDGET

WATER BUDGET WILL BE COMPLETED WHEN THE INFORMATION IS RECEIVED FROM THE U.S.G.S. AND BUREAU OF RECLAMATION.

III. WATER SUPPLY
E. UNDERGROUND WATER

This water year has been interesting to this office with reference to underground aquifers in the Division. Due to intensified subdivision activity and the new Senate Bill 35, many test wells and test holes have been driven into the lower aquifers. We are not confronted however, with administrative problems relative to wells being alternate points of diversion for stream flows.

The computer printout of registered wells in Division 7, dated April 6, 1972 breaks down as follows:

<u>TYPE</u>	<u>NO. OF WELLS</u>	<u>AMOUNT REGISTERED IN C.F.S.</u>
Domestic	987	30.71
Stock	84	2.45
Domestic and Stock	48	4.10
Commercial	32	2.93
Industrial	19	13.51
Irrigation	8	4.22
Irrigation and Stock	1	2.22
Municipal	17	2.50
TOTALS	<u>1,196</u>	<u>62.64</u>

III. WATER SUPPLY
F. TRANSMOUNTAIN DIVERSIONS

<u>NAME OF DITCH</u>	<u>SOURCE OF SUPPLY</u>	<u>RECIPIENT</u>	<u>AMOUNT A.F.</u>
Pine R.-Weminuche Pass (Fuchs Ditch)	Pine River	Liland & Harley Fuchs Del Norte	225
Weminuche Pass Ditch (Raber-Lohr Ditch)	Pine River	Hilde Lohr & Leon Raber Del Norte	929
Treasure Pass Ditch	San Juan River	Fred Falk, Del Norte	273
Williams Creek Ditch (Squaw Pass)	Piedra River	Loren & Craton Sanderson Monte Vista	-
Don LaFont Ditch (Piedra Pass Ditch)	Piedra River	Colo. State Game & Fish	254
Carbon Lake Ditch	Animas River	Helen Tinkler, et al Montrose	248
Red Mountain Ditch	Animas River	John Jutten, Silverton	133
Mineral Point Ditch	Animas River	Warren Gibbs, Ouray	-
St. John Ditch	Animas River	Carroll Charles, Ridgeway	-
San Juan-Chama Project	Navajo, Blanco, Little Navajo R.	U.S. Bureau of Reclamation Chama, New Mexico	53,714

III. WATER SUPPLY
G. RESERVOIR STORAGE

With the exceptionally dry spring and summer, reservoir storage was depleted to a dangerous level in this Division. The heavy rains in October were welcome as they restored a large amount of storage water in our main reservoirs.

The following is a tabulation of all reservoirs in this Division:

III. WATER SUPPLY

G. RESERVOIR STORAGE

<u>DIST.</u>	<u>NAME OF RESERVOIR</u>	<u>SOURCE OF SUPPLY</u>	<u>AMOUNT A.F. 11-1-1971</u>	<u>AMOUNT A.F. BEGINNING IRR. SEASON</u>	<u>AMOUNT A.F. 10-31-1972</u>
71	A.M. Puett Res.	Summit Res. System	1,141	2,537	654
34	Bauer Reservoir #1	Crystal Creek	200	350	100
34	Bauer Reservoir #2	Chicken Creek	300	1,200	200
29	Beaver Creek Res.	Navajo River	1	1	1
69	Belmear Lake Res.	Rincones Creek	135	600	0
71	Big Pine Reservoir	Turkey Creek	259	460	15
29	Born's Lake Reservoir	W. Fork San Juan R.	68	68	68
69	Buck Pasture Reservoir	Disappointment Cr.	20	80	15
30	Cascade Reservoir	Cascade Creek	19,246	20,130	22,350
30	Clifty Lodge Res.	Elbert Creek	1	1	1
30	Columbine Reservoir	Little Cascade Cr.	383	383	383
29	Columbine Reservoir	Little Navajo R.	5	5	4
29	Confar Hill Res.	Coyote Cr.	0	8	8
34	Coppinger Res. #1	Summit Reservoir Sys.	2	29	7
34	Coppinger Res. #2	"	4	14	6
32	Ducks Nest Res.	Monument Creek	0	0	0
30	Duck Slough-Andrews Lake	Animas R.	131	131	131
69	Dunham Res.	Groundhog Cr.	37	80	50
29	Dunnagan Res.	Devil Creek	94	94	23
30	Durango Res. #1	Florida River	2,220	2,220	2,220
30	Durango Res. #2	"	570	570	570
30	Durango Res. #3	"	43	43	43
30	Durango Res. #4	"	440	440	440
29	Echo Canyon Res.	Echo Creek	832	1,050	789
31	Emerald Lake Res.	Lake Fork of Los Pinos River	7,078	7,078	7,078
69	Ethel Belmear Res.	Unnamed Draw	75	125	1
29	Fall Creek Res.	Fall Creek	5	5	5
29	Fall View Res.	Aspen Cr.-Navajo R.	8	8	8
30	Florida Res. & Canal (Pastorius Res.)	Florida River	560	560	560
29	Four Mile Res.	Blanco River	8	8	8

<u>DIST.</u>	<u>NAME OF RESERVOIR</u>	<u>SOURCE OF SUPPLY</u>	<u>AMOUNT A.F. 11-1-1971</u>	<u>AMOUNT A.F. BEGINNING IRR. SEASON</u>	<u>AMOUNT A.F. 10-31-1972</u>
29	Gale Res. #1	Blanco River	11	10	10
29	Gale Res. #2	Blanco River	7	7	7
29	Gale Res. #3	Blanco River	12	11	11
29	Gardner Lake Res.	Gardner Lake Cr.- Little Navajo R.	15	15	15
69	Garner Res.	Bear Creek	4	36	20
30	Gregg Res.	Florida River	2	2	2
71	Groundhog Res.	Fish Creek	8,469	16,539	7,922
29	G. S. Hatcher Res.	Martinez Cr.	1,536	17,293	8,647
29	Harris & Boone Bros. Reservoir #1	Branch Cr.	49	49	49
29	Harris & Boone Bros. Reservoir #2	Branch Cr.	42	206	15
30	Haviland Lake Res.	Elbert Creek	388	404	404
29	Hence Barrow Res.	San Juan River	13	13	13
29	Hersch Res.	Stollsteimer Cr.	16	16	16
29	Hidden Lake Res.	Indian Cr.	5	5	5
30	Hotter Bros. Res.	Cascade Cr.	39	39	39
30	Hutchinson Res.	Bear Cr.	11	11	11
30	Ice Lake Res.	Elbert Cr.	416	416	416
34	Jackson Lake Res.	W. Mancos R.	4,177	8,014	4,742
30	Johansing Vinnel Fish	Florida River	4	4	4
30	Keeler Res.	Elbert Cr.	437	437	437
29	King Dam & Reservoir	Butler Cr.	2	5	5
29	Kruger Reservoir	Oil Well Cr.	5	9	9
34	L.A. Bar Reservoir	Bauer Res. System	10	63	14
30	Lake Carol	Non-Tributary	8	8	8
30	Lake of the Pines	Little Cascade Cr.	114	114	114
30	Lake Susan	Non-Tributary	18	18	18
29	Linn & Clark Res.	Yellowjacket	1,070	1,070	267
30	Lemon Reservoir	Florida River	17,096	27,825	15,941
71	Lost Canyon Res.	Summit Res. System	106	106	30
30	Macy Reservoir	Spring Creek	0	0	0
69	Morrison Reservoir	Morrison Creek	38	120	70
29	Muddy Creek Res.	Big Muddy Creek	8	8	8
71	Narraguinnep Res.	Dolores River	12,836	19,046	15,183
69	North Draw Res.	North Draw	10	20	0

<u>DIST.</u>	<u>NAME OF RESERVOIR</u>	<u>SOURCE OF SUPPLY</u>	<u>AMOUNT A. F. 11-1-1971</u>	<u>AMOUNT A. F. BEGINNING IRR. SEASON</u>	<u>AMOUNT A. F. 10-31-1972</u>
29	Pargin Res.	Stollsteimer	530	530	530
30	Pat. A. Sherwood Res.	Animas River	4	4	4
29	Price Kenny Res.	Coyote Creek	0	1	1
71	R.B. Coppinger Res.	Summit Res. System	5	16	7
33	Red Mesa-Ward Res.	Hay Gulch-La Plata R.	296	1,200	160
32	Robert Leighton Res.	Unnamed Draw-McElmo	12	37	37
34	Sellers & McClane Res.	Summit Res. System	30	52	40
30	Shaul Reservoir	Florida River	0	0	0
30	Short Reservoir	Tumble Arroyo	40	40	40
29	Slesinger Res.	White Creek	13	13	13
29	Spring Creek Res.	Spring Creek	12	46	4
29	Spence Reservoir	Coyote Creek	296	441	44
29	Stevens Reservoir	Stollsteimer	635	635	159
71	Summit Reservoir	Lost Canyon	1,298	4,795	1,205
29	Sunset Cottages Res. #1	San Juan River	18	18	18
29	Sunset Cottages Res. #2	San Juan River	23	23	23
33	Taylor Reservoir #3	La Plata River	0	0	0
29	Thomas Reservoir	San Juan River	0	56	56
29	Three Lakes Res.	Navajo River	22	22	22
32	Totten Reservoir	Dolores River	2,384	3,303	1,750
30	Turner Ponds	Animas River	4	4	4
30	Turner Reservoir	Waterfall Creek	472	472	472
31	Vallecito Reservoir	Pine River	48,052	89,998	55,545
30	Warner Reservoir #1	Elbert Creek	13	13	13
30	Warner Reservoir #2	Elbert Creek	6	6	6
30	Warner Reservoir #3	Elbert Creek	1	1	1
30	Warner Reservoir #4	Elbert Creek	0.5	0.5	0.5
30	Warner Reservoir #5	Elbert Creek	23	23	23
30	Warner Reservoir #6	Elbert Creek	0.4	0.4	0.4
30	Warner Reservoir #7	Elbert Creek	0.3	0.3	0.3
30	Warner Reservoir #8	Elbert Creek	2	2	2
34	Weber Reservoir	Middle Mancos River	40	223	116
32	West Reservoir	McElmo Creek	6	6	6
29	Williams Creek Res.	Williams Cr.	10,422	10,678	10,084
29	Wilson Lake	Blanco River	7	7	7
31	Wommer Reservoir	Little Bear Creek	143	159	186

IV. AGRICULTURE

Yields per acre for all irrigated and dryland crops were way below normal in this Division due to extreme drought conditions which prevailed during the spring and summer months. Late rains crippled the harvesting of hay, and also hampered the harvesting of beans.

V. COMPACTS AND COURT STIPULATIONS

I. THE LA PLATA COMPACT

The La Plata Compact was operated smoothly this year. Highest discharge at Hesperus was 760 c.f.s. on October 19, 1972. At the State Line the highest discharge was 1,320 c.f.s. on October 20, 1972. New Mexico requested one-half of the stream flow on March 11; Colorado took over the upper water on June 30. Due to extremely light snow pack and much below-normal runoff, many Colorado decrees were not able to draw water during the irrigation season. We had very few complaints from New Mexico on the operation of the Compact this year.

II. THE SAN JUAN-CHAMA DIVERSION PROJECT

Policies and regulatory procedures on this Project are still being worked out between the Bureau of Reclamation and the State of Colorado. Studies are being made by a joint committee of the Bureau of Reclamation, U.S. Fish and Wildlife Service, and the State of Colorado on the impact on stream fisheries due to low flows on the Navajo and Blanco Rivers. A complete report relative to the operation of the Project is being worked up at the present time.

VI. DAMS

With the cooperation of the Dam Section, we are gradually getting our dams in the Division in good condition. On both the upper and lower Bauer Lakes, the owners cleaned up the bermes and side slopes of vegetation, and cleaned the spillways.

Work is still progressing on Big Pine Reservoir to place this structure in good condition.

Very little work has been done to date on the Summit Reservoir dam.

VI. B. LIVESTOCK WATER TANKS

Stocktank permits were issued in individual districts as follows:

<u>DISTRICT</u>	<u>NUMBER OF PERMITS</u>
29	9
30	3
31	11
32	24
33	8
34	7
69	10

There were no permits issued for District 46 this year.

VII. WATER RIGHTS

A. TABULATION

It has been found that it is easier for us to check the tabulations as they are now being prepared on a stream or basin rank basis, rather than as previously prepared on a Division basis.

B. REFEREE'S FINDINGS AND DECREES*

	<u>INVESTIGATED BY DIV. ENGINEER</u>	<u>REFEREE RULING</u>	<u>COURT DECREE</u>
1. Underground Water Rights	224	212	189
2. Change of Water Rights	19	15	14
3. Plan for Augmentation	0	0	0
4. Surface Water Rights	176	156	127
5. Due Diligence: Biennial Findings	68	64	60
Conditional Made Absolute	23	21	19
6. Water Storage Rights	<u>7</u>	<u>6</u>	<u>4</u>
	TOTALS		
	<u>517</u>	<u>474</u>	<u>413</u>

*As of 11/14/1972,
Case No. W-954, Dist. 31

There were very few wells in the Division filed on as alternate points of diversion and those were of a very minor nature. As aquifers in the Division are not being used for irrigation at the present time, well owners are not taking advantage of Senate Bill 81 to tie in surface decrees. Many domestic wells were decreed using the original appropriation date.

We do not anticipate encountering any trouble in administration of decrees as set forth by the referee and water judge. The referee's recommendation has differed from those of the Division Engineer on only two cases; the judgments on these cases were of a very minor nature.

Protests to eighteen applications were filed; six of these protests were resolved through court hearings or private conference between the applicant's

attorney and the Division Engineer. The remaining twelve protests are still pending at this writing.

VIII. ORGANIZATIONS

A. WATER CONSERVATION AND CONSERVANCY DISTRICTS

<u>NAME</u>	<u>ADDRESS</u>	<u>ATTORNEY</u>	<u>OFFICER</u>
La Plata Water Conservation	115 W. 11th Durango	F. S. Maynes	J. R. Kroeger
Dolores Water Conservancy	115 W. 11th Durango	F. S. Maynes	I. W. Patterson
Florida Water Conservancy	1157 Main Ave. Durango	L. W. McDaniel	Chester Beaston
Mancos Water Conservancy	16 N. Market Cortez	Robert Parga	Lloyd Doerfer
Pine River Irrigation	842 Main Ave. Durango	Fred Emigh	Frank Wommer, Jr.
San Miguel Water Conservancy	115 W. 11th Durango	F. S. Maynes	Dan Noble
S.W. Water Conservation	115 W. 11th Durango	F. S. Maynes	D. L. Williams

VIII. ORGANIZATIONS

B. DITCH COMPANIES

Montezuma Valley Irrigation Company
Les Fraley, Superintendent
Cortez, Colorado 81321

Summit Ditch Company
Stanley McCabe, President
Dolores, Colorado 81323

Bauer Lakes Water Company
LeRoy Everett, President
Mancos, Colorado 81328

Park Ditch Company
Hood Formwalt, President
Pagosa Springs, Colorado 81147

IX. WATER COMMISSIONERS' SUMMARIES

The following are tabulations of each water commissioner's summary with the districts in numerical sequence, preceded by a summary of the entire Division:

IX. WATER COMMISSIONERS' SUMMARIES

<u>DIVISION 7 SUMMARY</u>	<u>NUMBER</u>	<u>A.F.</u>	<u>DUTY OF WATER</u>	
			<u>DIRECT A.F./A.</u>	<u>STORAGE A.F./A</u>
Direct Flow Diversions		631,610	3.30	
Delivered Reservoir Storage		147,968		1.21
Reservoir Storage	235,961			
Acres Irrigation	Direct 191,408			
	Storage 122,579			
Number of Active Ditches	880			
Number of Reservoirs Served	100 (14 for irrigation)			
Average Demand A.F./A.	4.07			
Number Water Rights Nonuse	526			
Number Water Rights Not For Irr.	135			
Number of Daily Ditch Reports	49,368			
TOTAL NUMBER OF STRUCTURES	1,430			

<u>DISTRICT 29</u>				
Direct Flow Diversions		136,387	4.33	
Delivered Reservoir Storage		3,467		1.21
Reservoir Storage	32,433			
Acres Irrigation	Direct 31,502			
	Storage 2,875			
Number of Active Ditches	277			
Number of Reservoirs Served	35 (6 for irrigation)			
Average Demand A.F./A.	4.44			
Number Water Rights Nonuse	236			
Number Water Rights Not For Irr.	26			
Number of Daily Ditch Reports	14,958			

<u>DISTRICT 30</u>				
Direct Flow Diversions		163,782	4.13	
Delivered Reservoir Storage		23,842		1.04
Reservoir Storage	54,321			
Acres Irrigation	Direct 39,635			
	Storage 23,090			
Number of Active Ditches	251			
Number of Reservoirs Served	34 (4 for irrigation)			
Average Demand A.F./A.	4.74			
Number Water Rights Nonuse	142			
Number Water Rights Not For Irr.	85			
Number of Daily Ditch Reports	13,554			

IX. WATER COMMISSIONERS' SUMMARIES

<u>DISTRICT 31</u>	<u>NUMBER</u>	<u>A.F.</u>	<u>DUTY OF WATER</u>	
			<u>DIRECT A.F./A.</u>	<u>STORAGE A.F./A</u>
Direct Flow Diversions		142,254	2.81	
Delivered Reservoir Storage		77,544		1.81
Reservoir Storage	90,157			
Acres Irrigation	Direct 50,605			
	Storage 42,817			
Number of Active Ditches	85			
Number of Reservoirs Served	3 (1 for irrigation)			
Average Demand A.F./A.	4.34			
Number Water Rights Nonuse	33			
Number Water Rights Not For Irr.	31			
Number of Daily Ditch Reports	4,590			

<u>DISTRICT 32</u>				
Direct Flow Diversions		36,647	5.59	
Delivered Reservoir Storage (REPORTED IN WATER DIST. 71)				
Reservoir Storage	3,346			
Acres Irrigation	Direct 6,559			
	Storage			
Number of Active Ditches	87			
Number of Reservoirs Served	4 (2 for irrigation)			
Average Demand A.F./A.	5.58			
Number Water Rights Nonuse	25			
Number Water Rights Not For Irr.	1			
Number of Daily Ditch Reports	5,916			

<u>DISTRICT 33</u>				
Direct Flow Diversions		16,381	1.80	
Delivered Reservoir Storage		952		1.10
Reservoir Storage	1,200			
Acres Irrigation	Direct 9,118			
	Storage 862			
Number of Active Ditches	45			
Number of Reservoirs Served	2 (1 for irrigation)			
Average Demand A.F./A.	1.90			
Number Water Rights Nonuse	45			
Number Water Rights Not For Irr.	3			
Number of Daily Ditch Reports	3,060			

IX. WATER COMMISSIONERS' SUMMARIES

<u>DISTRICT 34</u>	<u>NUMBER</u>	<u>A.F.</u>	<u>DUTY OF WATER</u>	
			<u>DIRECT A.F./A.</u>	<u>STORAGE A.F./A</u>
Direct Flow Diversions		24,061	1.84	
Delivered Reservoir Storage		7,044		.56
Reservoir Storage	9,944			
Acres Irrigation	Direct 13,105			
	Storage 12,640			
Number of Active Ditches	52			
Number of Reservoirs Served	8			
Average Demand A.F./A.	2.37			
Number Water Rights Nonuse	12			
Number Water Rights Not For Irr.	4			
Number of Daily Ditch Reports	2,808			

<u>DISTRICT 46</u>				
Direct Flow Diversions		8,872	4.39	
Delivered Reservoir Storage				
Reservoir Storage	0			
Acres Irrigation	Direct 2,023			
	Storage 0			
Number of Active Ditches	25			
Number of Reservoirs Served	None			
Average Demand A.F./A.	4.39			
Number Water Rights Nonuse	5			
Number Water Rights Not For Irr.	0			
Number of Daily Ditch Reports	1,350			

<u>DISTRICT 69</u>				
Direct Flow Diversions		3,382	3.76	
Delivered Reservoir Storage		545		1.85
Reservoir Storage	1,061			
Acres Irrigation	Direct 900			
	Storage 295			
Number of Active Ditches	9			
Number of Reservoirs Served	7			
Average Demand A.F./A.	4.36			
Number Water Rights Nonuse	11			
Number Water Rights Not For Irr.	0			
Number of Daily Ditch Reports	486			

IX. WATER COMMISSIONERS' SUMMARIES

<u>DISTRICT 71</u>	<u>NUMBER</u>	<u>A.F.</u>	<u>DUTY OF WATER</u>	
			<u>DIRECT A.F./A.</u>	<u>STORAGE A.F./A</u>
Direct Flow Diversions		99,844	2.63	
Delivered Reservoir Storage		34,486		0.86
Reservoir Storage	43,499			
Acres Irrigation	Direct	37,961		
	Storage	40,000		
Number of Active Ditches	49			
Number of Reservoirs Served	7			
Average Demand A.F./A.	3.36			
Number Water Rights Nonuse	17			
Number Water Rights Not For Irr.	5			
Number of Daily Ditch Reports	2,646			

X. DIVISION ENGINEER'S SUMMARY

The following pages contain two tables:

- A. Direct Flow Diversions
- B. Storage Report

DIVISION SUMMARY - DIVISION NO. /
Direct Flow Diversions
1972

WATER DISTRICT	Total Ditches Reported		Direct Diversions Ac.Ft.	No. of Acres Irrigated	Ac.Ft. Per Acre	Industrial Use Diversions Ac.Ft.	Municipal Use Diversions Ac.Ft.	Recreation Use Diversions Ac.Ft.	Trans Mtn. Diversions Ac.Ft.	Total Diversions Ac.Ft.	No. of Daily Ditch Rpts.	Delivered to Compact Cmtt Ac.Ft.
	Active	Inactive										
29	277	80	136,387	31,502	4.33	12,010	1,038	32,433 * 20,952 **	From 54,241	203,676	14,958	53,715
30	251	10	163,782	39,635	4.13	35,098	6,212	54,321 44,657	From 381	205,473	13,554	
31	85	2	142,254	50,605	2.81	2,400	730	90,157 55,731	From 1,184	146,568	4,590	
32	87	2	36,647	6,559	5.59	None	None	3,346 1,793	None	36,647	5,916	
33	45	22	16,381	9,118	1.80	None	None	1,200 160	None	16,381	3,060	10,100
34	52	-	24,061	13,105	1.84	174	872	9,944 5,224	None	25,107	2,808	
46	25	-	8,872	2,023	4.39	None	None	None	None	8,872	1,350	
69	9	1	3,382	900	3.76	None	None	1,061 215	None	3,382	486	
71	49	3	99,844	37,961	2.63	146	3,585	43,499 25,016 6,026 ***	None	109,601	2,646	
TOTALS	880	120	631,610	191,408	3.30	49,828	12,437	235,961 * 153,748 **	55,806	755,707	49,368	63,815
* Total high storage A.F. for Recreation ** Total low storage A.F. for Recreation *** This amount added to total diversions but not to total Recreation Use Diversions Transmountain Diversions: Designate either to or from Division												
= No Water Available NU = Non Use												

DIVISION SUMMARY - DIVISION NO. 7
Storage Report - Acre Feet
1972

WATER DISTRICT	Amount in Storage Acre Feet			Actual Am't Diverted to Storage During Season	Delivered from Storage to Irrigation	Storage to Industrial Use	Storage to Municipal Use	Storage to Recreation Use	Storage to Projects
	11-1-71	5-1-72	10-31-72						
29	15,789	32,433	20,952	10,034	3,467	-	-	0	--
30	42,693	54,321	44,657	55,487	23,842	28,983	119	-	22,390
31	48,195	90,157	55,731	72,815	77,544	-	40	0	77,544
32	2,402	3,346	1,793	-	-	-	1,600	0	--
33	296	1,200	160	1,064	952	0	0	0	0
34	4,763	9,944	5,224	7,469	7,044	-	-	0	5,377
46	0	0	0	0	0	0	0	0	0
69	319	1,061	215	742	545	-	-	0	--
71	24,113	43,499	25,016	33,173	34,486	-	-	0	--
TOTALS	138,570	235,961	153,748	180,784	147,880	28,983	1,723	0	105,311

XI. RECOMMENDATIONS AND SUGGESTIONS

The questions have been asked, "Will it be possible to administer water adjudicated by the Water Judge on recommendations supplied him by the Referee only?". "Has the Division Engineer been consulted in regard to these recommendations?" We realize that in this Division we have been working more closely with the Water Judge than have most Divisions in the state. At the present time many of the applications we receive are fairly well correct and have the desired information to properly identify these rights.

We feel that unless the Division Engineer's office works very closely with the Referee and the Court on adjudicated water rights, many mistakes will be found on location, amount of water desired, and other very difficult administrative problems. In this Division we feel that we have cleaned up many of the mistakes on the old adjudications, and have tried to keep abreast of the new adjudications to see that everything is proper.

We feel that if the Division Engineer has not been contacted by the Referee and has not worked closely with the Water Judge, he will have many surprises coming after water is adjudicated.

For your information we are attaching Exhibit I to the Appendix showing the relationship between the Division Engineer, Referee, and Water Judge on filing, inspection, recommendation, and adjudication of water rights in this Division.

APPENDIX A

TEMPERATURE

NOVEMBER 1971 TO OCTOBER 1972 (INCLUSIVE)

STATION	19 NOV.	19 DEC.	19 JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	19 AVERAGE	LONG TERM AVERAGE
Durango Difference	35.9 -0.2	25.2 -2.7	27.9 +2.6	35.0 +5.3	43.9 +7.2	46.5 +1.4	54.3 +1.8	62.7 +2.1	69.0 +2.0	66.6 +0.6	60.2 +1.2	49.2 +0.5	48.0	46.2
Ft. Lewis Difference	30.9 -2.3	21.9 -4.0	23.7 +0.7	30.6 +4.7	40.4 +8.7	41.0 -0.2	49.5 +0.5	59.4 +2.2	M	62.0 +0.1	54.5 -----	46.5 -----	-----	-----
Silverton Difference	34.0 -1.2	21.4 -5.5	16.5 -0.2	20.9 +1.9	31.6 +7.8	36.3 +3.1	42.6 +0.7	52.0 +2.3	59.8 +2.2	54.4 +0.3	48.2 -0.1	41.4 +2.4	38.2	35.6
Pagosa Springs Difference	32.4	21.5	20.6	28.7	39.3	41.1	49.2	58.2	64.5	62.2	55.0	47.8	43.4	41.4
Cortez Difference	35.9 +0.9	25.9 -3.6	29.8 +2.3	35.0 +3.1	47.7 +6.2	48.3 +0.9	56.0 +0.1	66.8 +2.1	72.8 +1.5	69.5 -0.1	62.9 +0.7	52.2 -0.8	50.2	48.9
Ignacio Difference	34.0 -1.2	21.4 -5.5	24.5 +1.1	31.9 +3.5	41.0 +4.6	44.1 -1.2	53.2 -0.2	62.7 +0.9	69.0 +0.7	66.2 -0.6	58.5 -1.1	49.8 +0.9	46.4	46.2

APPENDIX B

PRECIPITATION

NOVEMBER 1971 TO OCTOBER 1972 (INCLUSIVE)

<u>STATION</u>	<u>19</u> <u>NOV.</u>	<u>19</u> <u>DEC.</u>	<u>19</u> <u>JAN.</u>	<u>FEB.</u>	<u>MAR.</u>	<u>APR.</u>	<u>MAY</u>	<u>JUNE</u>	<u>JULY</u>	<u>AUG.</u>	<u>SEPT.</u>	<u>OCT.</u>	<u>19</u> <u>TOTAL</u>	<u>LONG</u> <u>TERM</u> <u>MEAN</u>
Durango Difference	1.46 +0.48	3.35 +1.72	.22 -1.39	00 -1.30	.23 -1.26	.33 -0.96	.19 -0.94	1.55 +0.70	.75 -1.06	2.47 +0.31	1.22 -0.51	11.79 +9.90	23.56	18.04
Ft. Lewis Difference	2.28 +0.95	2.53 +0.93	00 -1.64	00 -1.71	.26 -1.29	.30 -1.18	.11 -1.08	1.47 +0.57	.91 -0.73	2.42 +0.28	1.94 +0.14	9.04 +7.02	21.26	18.78
Silverton Difference	1.51 +0.35	3.07 +1.57	.25 -1.21	.10 -1.57	1.04 -1.04	.96 -0.80	.72 -0.67	1.76 +0.35	2.07 -0.40	1.02 -0.47	2.98 +0.70	6.23 +3.97	21.71	22.26
Pagosa Springs Difference	1.48	2.95	.14	.21	.41	.63	.63	1.29	1.59	2.09	1.64	7.80	20.86	
Cortez Difference	.84 +0.09	1.74 +0.62	00 -1.06	00 -1.10	.15 -0.94	.13 -0.96	.14 -0.72	.67 +0.13	.33 -0.88	.45 -1.06	1.91 +0.50	6.56 +5.10	12.92	13.20
Ignacio Difference	1.09 +0.34	1.40 +0.21	00 -1.30	00 -1.17	.23 -0.96	.16 -0.91	.74 -0.26	.54 -0.20	.61 -0.79	1.78 -0.01	.64 -0.67	7.04 +5.46	11.23	10.73

4. Description of ditch, pump, or pipeline: thence S 75° 5' W 600'; thence South 80'; thence S 70° 20' W 160'; thence S 34° 40' E 140'; thence S 33° 17' S 245'; thence S 24° E 250' thence S 9° 54' W 200'; thence S 71° E 250'; thence S 36° 48' W 330'; thence S 67° 17' W 760'. Ditch 2' wide by 1' deep by approximately $\frac{1}{2}$ mile long.
5. Source of water (River and tributary): Walden # 1 reservoir overflow
6. A. Date of initiation of the appropriation: 1915
B. Date water first applied to beneficial use: 1915
C. How appropriation was initiated: by use of water
7. Amount of water claimed by diversion in cubic feet per second of time (Indicate whether conditional or absolute):
A. Portion absolute: 2 cfs B. Portion conditional: _____ cfs
8. Use or proposed use of the water: irrigation
9. In case of an irrigation priority, the number of acres being irrigated: 40; the number of acres historically irrigated: 40; and the number of acres proposed to be irrigated 60 by the decree sought.
10. Remarks: _____

Signature of applicant or attorney for applicant

Walter R. Percell

Anna B. Percell

Name, address and telephone number of attorney for applicant.

STATE OF COLORADO)
)
) ss.
)
 _____ COUNTY OF Montezuma)

_____, being first
they have
duly sworn, upon oath, deposes and says that ~~(xxxxxxx)~~ read the
foregoing application, knows the contents thereof, and that the
same are true.

Walter R. Ricell / Dennis B. Ricell

Subscribed and sworn to before me this 14 day of
August, 19 72.

My commission expires: November 22, 1975

M. R. Kruse
Notary Public

IT IS ORDERED that this application is referred to the Water Referee for
his investigation and ruling.

DATED August 15, 1972

[Signature]
WATER JUDGE

DATE 8/22/72
Checked

CASE NO. 866

NAME OF APPLICANT Walter
FIRST

R.
INITIAL

Percell
LAST

ADDRESS Rt. 1 Box 131
STREET OR BOX NO.

Cortez
CITY

STATE

ZIP CODE

TELEPHONE NO. 565-7703

NAME OF WELL Wilson Ditch (Should be Wilson #2 ditch - In Spillway? Walden #1 Reservoir)

LEGAL DESCRIPTION N.W. Corner Sec. N. 18° 27' W 1020.0' FROM SECTION 12 TOWNSHIP & RANGE 36N 16W

WATERSHED Mc Elmo. TRIBUTARY Walden Reservoir?

DEPTH OF WELL _____ FT.

DEPTH TO WATER _____ FT.

DATE OF APPROPRIATION 12/31/1915

AMOUNT CLAIMED: G.P.M. C.F.S. AMOUNT RECOMMENDED: G.P.M. C.F.S.

ABSOLUTE: _____ 2 - 60 acres ABSOLUTE: _____

CONDITIONAL: _____ CONDITIONAL: _____

ANNUAL DIVERSION _____ ACRE FEET

PURPOSE DOMESTIC STOCK IRRIGATION COMMERCIAL OTHER

PERMIT NO. _____

TYPE OF PUMP CENTRIFUGAL JET. SUBMURGIBLE

SIZE OF INTAKE _____ "

SIZE OF OUTLET _____ "

REMARKS: O.K.

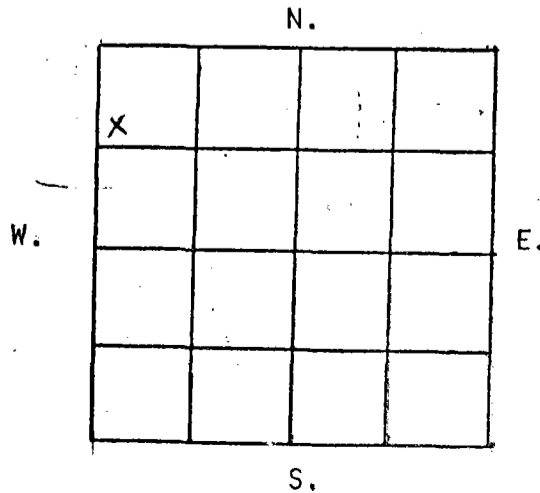
Original Wilson Leasing is 36N 16W Sec. 4 ABD

TO WATER COMMISSIONERS: As it will be necessary for you to keep a record of all wells in your district, we felt that you should make the preliminary investigation on all domestic wells. The above is a form that we have made out and filled in to a certain extent; you should complete filling in the blank spaces if this information is available. In some instances we know it will be impossible for you to determine the depth of the well or the size of a submergible pump if one is installed. If the request is for an excessive amount of water, or the purpose is other than domestic, someone from this office will check the well out with you. After this form is completed by you, return it to the office. We will make a listing of all decreed wells in your district for you intermittently during the year.

CODE: 36N 16W 12 B B C
TOWNSHIP & RANGE SECTION (A, B, C, OR D)

DISTANCE FROM N SEC. LINE 1000 FT.
(NORTH OR SOUTH)

DISTANCE FROM W SEC. LINE 300 FT.
(EAST OR WEST)





DIVISION OF WATER RESOURCES

GEORGE E. BARCLAY P.E.
IRRIGATION DIVISION ENGINEER
P. O. BOX 551
DURANGO, COLORADO 81302
OFFICE: 247-1845 HOME: 247-5821

DATE: September 8, 1972

IN THE MATTER OF THE APPLICATION FOR)
WATER RIGHTS OF CASE NO. W- 866)
 AMENDED)
IN MONTEZUMA COUNTY)
IN THE MC ELMO WATERSHED)
WATER DISTRICT NO. 32)

RECOMMENDATION OF DIVISION ENGINEER

INSPECTION DATE: August 22, 1972
TYPE OF WATER RIGHT : SURFACE

- 1. APPLICANT'S NAME AND ADDRESS: Walter & Verna Percell, Rt. 1, Box 131
Cortez, Colo.
- 2. NAME OF DITCH OR STRUCTURE: WILSON DITCH** THIS SHOULD BE DESIGNATED
AS WILSON #2 DITCH AS THERE
IS ALREADY A WILSON DITCH IN
THIS DISTRICT
- 3. LEGAL DESCRIPTION OF POINT OF DIVERSION:
At a point on the spillway of Walden #1 Reservoir
in the N.W. 1/4, N.W. 1/4 of Sec. 12, T.36N., R.16W.,
N.M.P.M. whence the N.W. cor. of Sec. 12 brs.
N. 18° 27' W., 1020'.
BBC
- 4. MEANS OF DIVERSION: Gravity flow
- 5. TYPE OF USE: Irrigation of 60 acres
- 6. AMOUNT OF WATER CLAIMED: 2.0 c.f.s. absolute
- 7. DATE OF PRIORITY: December 31, 1915

RECOMMENDATION:

It is recommended that this application be approved with the amending of the name to the WILSON DITCH #2 as stated above.

IF NO OBJECTION IS MADE TO THIS
RECOMMENDATION WITHIN 10 DAYS,
THE RULING OF THE REFEREE WILL
BE MADE IN ACCORDANCE HEREWITH.

