

Richard Lamm  
JOHN D. VANDERHOOF  
Governor



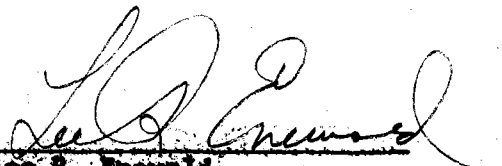
Jeris Danielson  
~~F. L. KILGER~~  
State Engineer

## DIVISION OF WATER RESOURCES

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IRRIGATION DIVISION ENGINEER  
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November 1981

This annual report is hereby respectfully submitted to the State  
Engineer of Colorado for the water year 1980-81.

  
Lee R. Enewold  
Division Engineer

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## **INTRODUCTORY STATEMENT**

November 30, 1981

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

Re: Division Engineer's  
Annual Report

This annual report for Division No. 5 for the water year ending November 30, 1981, is as follows:

I. Introductory Statement.

- A. Division 5 consists of all the Colorado River Basin, including all of its tributaries from the Continental Divide through its course within the State of Colorado to the Utah state line; excluding only the Gunnison River drainage basin, but including the White River drainage, which is located in Division 6, only and expressly provided by law as under judiciary, decretal rule by the Water Judge presiding in the Division 5 Water Court.

The major tributaries of the Colorado River from its headwaters to the state line are the North Fork of the Colorado, Willow Creek, Fraser River, Williams Fork, Troublesome Creek, Blue River, Muddy Creek, Eagle River, Roaring Fork, Divide Creek, Mamm Creek, Rifle Creek, Parachute Creek, Roan Creek, Plateau Creek and the Big Salt Wash.

The major population centers are:

<u>Name</u>	<u>Stream</u>	<u>Approx. Pop.</u>
Carbondale	Roaring Fork	4,600
Glenwood Springs	Roaring Fork	10,000
Area surrounding Glenwood Springs	Roaring Fork	Includes sur. areas
New Castle	Colorado River	2,000
Silt	Colorado River	2,000
Rifle	Colorado River	9,000
Grand Valley	Colorado River	5,000
DeBeque	Colorado River	2,000
Collbran	Colorado River	1,000
Palisade	Colorado River	2,000
Grand Junction	Colorado River	37,000
Fruita	Colorado River	5,000
Grand Lake	Colorado River	300
Granby	Fraser-Colorado River	
Fraser-Winter Park	Fraser River	
Hot Sulphur Springs	Colorado River	
Kremmling	Colo. Muddy, Blue River	
Breckenridge	Blue River	
Frisco	Blue River	
Dillon	Blue River	
Minturn	Eagle River	
Vail	Eagle River	
Eagle	Eagle River	
Aspen	Roaring Fork	
Basalt	Roaring Fork	



POPULATION PROJECTIONS

<u>Counties</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Eagle	11,761	11,903	12,082	12,273	12,500
Garfield	18,597	19,290	20,148	21,127	22,700
Grand	8,203	8,582	9,006	9,461	9,800
Mesa	64,052	65,889	65,256	70,988	75,900
Pitkin	11,004	11,357	11,761	12,193	13,000
Summit	6,743	7,248	7,895	8,403	9,000





POPULATION PROJECTIONS

Community	End of Year									
	1960	1970	1974	Present *	1975	1976	1977	1978	1979	1980
Carbondale	612	726	1,600	2,400	3,100	3,850	4,300	4,600	4,800	5,000
Collbran	310	225	265	265	275	315	375	450	530	600
Craig	3,984	4,205	5,495	6,000	6,600	8,300	9,900	11,600	13,300	15,000
Cebegue	172	155	300	325	370	490	620	740	870	1,000
Dinosaur	318	247	350	350	370	450	570	710	850	1,000
Fruita	1,830	1,822	2,000	2,000	2,030	2,300	2,800	3,450	4,250	5,000
Glenwood Springs	3,637	4,106	4,646	4,900	5,200	6,200	7,100	8,000	8,900	9,800
Grand Valley	245	270	354	325	340	500	840	1,220	1,600	2,000
Grand Junction	18,694	20,170	26,400	27,000	28,000	29,500	31,000	32,400	34,000	35,700
Keeker	1,655	1,597	2,000	2,150	2,350	2,950	3,750	4,700	5,550	6,200
New Castle	447	499	618	625	650	720	780	860	930	1,000
Palisade	860	874	900	1,000	1,050	1,150	1,270	1,380	1,480	1,600
Rangely	1,464	1,591	1,725	1,785	1,850	2,200	2,850	3,800	5,000	6,100
Rifle	2,135	2,150	2,403	2,750	2,900	3,500	4,200	5,400	6,900	8,600
Silt	384	434	720	750	780	850	920	1,030	1,160	1,300
Totals	36,747	39,071	49,776	52,625	55,865	63,275	71,275	80,340	90,120	99,900

Note: Revision was the results of information McDowell-Smith & Associates obtained during their meetings with the various communities during June and July, 1975, and the current trends of the oil shale industry.  
\*July 1975

PERSONNEL

<u>Name</u>	<u>Position</u>	<u>District</u>	<u>Months Worked/ Budgeted</u>	<u>Mileage</u>
Enewold, Lee R.	Division Engineer		Annual	13,032
Bell, Orlyn J.	Asst. Div. Engineer		Annual	7,307
Martellaro, Alan	Hydrographer		Annual	
Dalton, Ruth	Sr. Adm. Clerk Typist		Annual	-0-
Broadhurst, Chris	Engineering Aide		Annual	-0-
Anderson, George	Commissioner	70	7	5,417
Bieser, Robert	Deputy	72	6	3,577
Callicotte, Steve	Commissioner	38	9	7,388
Cerise, Alvin	Commissioner (SB42)	45	Annual	9,230
Gerry, Woodrow	Deputy	72	7	4,768
Hart, Daniel	Commissioner	51	Annual	4,815
Hill, Clifford	Deputy	72	7	1,704
Hittle, Ray	Deputy	72	7	7,742
Jackson, Arlen	Commissioner	45	8	12,413
Klocker, Marcus	Commissioner	72	Annual	10,726
Lemon, James	Commissioner	39	9	3,572
Nelson, Glen	Deputy	45	6	920
Raine, Jack	Deputy	72	9	
Reed, Miles	Deputy	72	7	2,101
Shelden, Jim	Commissioner	52,53	Annual	18,186
Thompson, William	Commissioner	50	8	8,060
Wells, Wayne	Commissioner	36,37	Annual	14,511
Yeoman, Richard	Deputy	45	3	1,994
Werner, Nels	Deputy	72	Hourly	4,537

#### SNOWPACK

Winter precipitation was significantly below normal over most of the Western Division system. Temperatures have been above normal throughout all watersheds in the system.

Total storage in major reservoirs in the Western Division System on February 1 was above normal. However, snow course measurements at all key locations throughout the Western Division System are significantly below normal.

Precipitation during March was above normal to near normal in all parts of the System. Temperatures were above normal over most of the System for the first three weeks of the month.

April precipitation was below normal on all watersheds in the Western Division System. Temperatures were much above normal for the month of April.

May 1 snow course measurements indicated a significant decrease in snow-water content between April 1 and May 1.

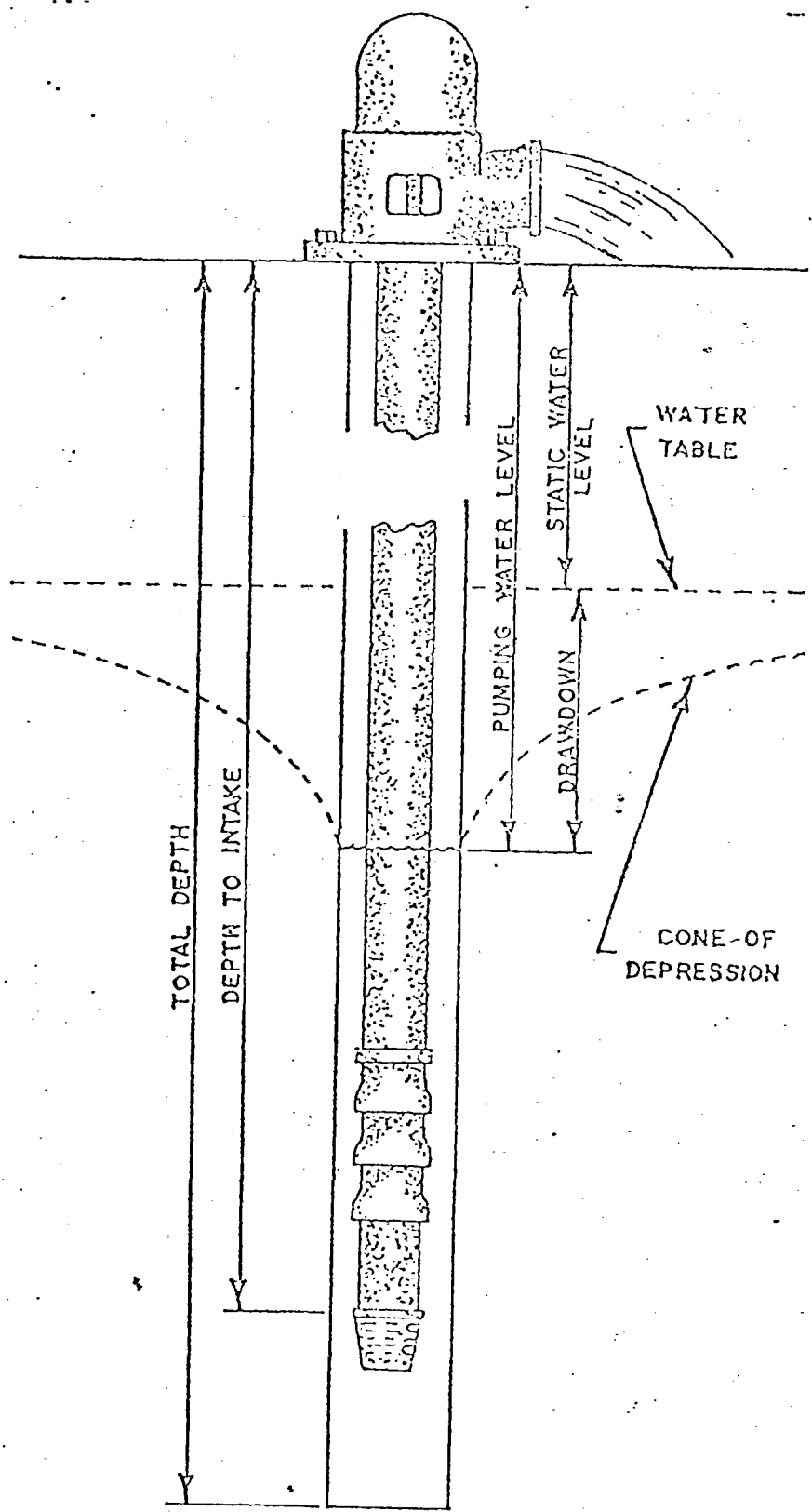
## **PRECIPITATION SUMMER**

## PRECIPITATION

Precipitation during the month of July was above normal over essentially all of the Western Division System. The average precipitation was 138 percent of normal.

In spite of the light snowfall and warm winter, the rains during the summer months brought about a good crop year. The call on the river was a little later this year than normal, indicating that precipitation was way above normal.

# **UNDERGROUND WATER**



In the Colorado River valley, ground water is quite limited as to irrigation use. Most wells in this area are used for domestic purposes. They vary from relatively soft water wells and springs in the mountain areas to water which is quite high in soluble salts along the lower river valleys.

A study of the ground water resources of the Middle Park areas was made by the USGS and the State Water Conservation Board. According to this study in Middle Park, the best source of ground water is the alluvium including the terrace deposits of streams. The alluvium consists mainly of sand and gravel in a matrix of silt and other fine grained material. Their thickness ranges up to 100 feet. Ground water in Middle Park is used mostly for domestic and livestock purposes. The natural conditions for developing large capacity wells do not seem to exist in most of the park.

Further studies of ground water are currently being made, and further information will be available from time to time.

Non-exempt small capacity wells have been issued only with a plan for augmentation. This took effect June 12, 1981.



Division 5  
Wells Adjudicated In The  
Water Court

District	No. of Applications	Domestic	Commercial	Irrigation	Municipal	Other Uses
36	25	7	6	5	2	5
37	7	2	3	0	0	2
38	111	76	7	9	8	46
39	21	9	1	2	3	6
45	14	10	1	0	0	3
50	0	0	0	0	0	0
51	23	10	0	1	5	7
52	0	0	0	0	0	0
53	2	2	0	0	0	0
70	1	0	0	1	0	0
72	0	0	0	0	0	0
TOTAL	204	116	18	18	18	69

Division 5  
Well Permits Issued

District	No. of Permits	Domestic	Commercial	Irrigation	Municipal	Other Use
36	127	15	3	0	0	109
37	20	9	1	0	1	9
38	134	59	3	2	1	69
39	119	39	4	6	19	55
45	181	80	0	2	2	59
50	37	7	0	0	0	30
51	246	20	5	0	1	185
52	5	2	0	0	1	2
53	20	13	0	0	0	7
70	6	1	0	0	0	5
72	32	23	1	0	0	8
TOTAL	927	188	17	10	25	538

# **TRANSMOUNTAIN DIVERSIONS**

Transmittal Disbursements  
 To Division No. 1  
 1980-1981

Name	Source	Recipient	Amount AF	IDent No
Grand River Ditch	North Fork Colo R		13720	5104601
Eureka Ditch	"		-0-	51
Alon B Adams Tunnel	"	Colo-BIG T Project	252600	5104604
Mosley Tunnel	Frazier River	Denver Water Board	55730	5104655
Berthoud Canal Tunnel	"		Never received info	5104625
August P Conklick Tunnel <small>4800' long</small>	Williams Fork	Denver Water Board	Included in Mo. H. T	51
Vasquez Ditch	"	"	"	7
Vidler Tunnel	Snake River		880	3604626
Roberts Tunnel	Blue River	Denver Water Board	156968	2604512
Carson Pass Ditch	"	Cons of Colorado	-0-	36
Hoosier Tunnel	"		5510	3604683
			<u>485404</u>	

TRANSMOUNTAIN DIVERSIONS  
 TO DIVISION NO 2  
 TABULATION 19  
 1980-1981

I Dent No

<u>Name</u>	<u>Source</u>	<u>Recipient</u>	<u>Amount Diverted AF</u>	<u>Amount Diverted</u>
Homestake Tunnel	Middle Fork Homestake Creek Division #5	Cities of Colorado Springs and Aurora	22396	3704614
Wurtz Ditch	Eagle River Division #5	City of Pueblo	794	2704648
Ewing Ditch	Piney Creek Division #5	City of Pueblo	506	3704642
Columbine Ditch	Eagle River Division #5	City of Pueblo	958	2704641
Twin Lakes Tunnel	Roaring Fork River Division #5	Twin Lakes Reservoir and Canal Company	34541	
Busk Ivanhoe Tunnel	Ivanhoe Creek Division #5	Highline Canal Co.	4090	3804617
<del>Markspur Ditch</del>	<del>Fornice Creek Division #4</del>	<del>Calvin Canal Co.</del>		
Boustead	Frying Pan River Division #5	City of Pueblo	20931 AF	3800699

TOTALS 98953

Transmission Divisions

To Division 4

1980-1981

Recipient

Amount A/F

IDest Ab

Name: Leon Travel Card

1160

7200758

Source: Leon Cr.

From Division 4

Class Ford Dites

Also Divide Cr Highline Feeder

1460

4500577

Redlands Power Canal Transmission Power

?

10000

All Divisions

Total Exported

585517

Total Imported

1460

+ Redlands

## **RESERVOIR STORAGE**

Storage Report - Acre Feet

1981

Tract	Amount in Storage		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 or TM Projects	From Storage Total
	11-1-77	10-31-77							
36	332039	264438	95796	975	(3844) 28904	Exchange 39339	44	56954	126172
	35183	12637	16410	484				23396	23924
38	96335	91552	56784	8114			40872	1573	50559
39	5433	15231	13730	13784					13784
45	3	246	153	193					193
50	606	4251	5006	3866	(46794)				3866
51	570770	454976	78639	1500	3912	53056		201556	260024
52									
53	0	2420	2420	2420					2420
70									
72	11280	27032	29084	28875	3242			785	32872
	1051649	872783	298022	60211	36028	92395	40916	284264	513814



## AGRICULTURE

Agriculture is one of the largest industries in Division 5. The number of farms showed a decrease from 1970 to 1980, while at the same time farm income also decreased. The approximate acres of farm land total 1,593,893, which is divided into three main areas of agriculture. The high mountain area is classed as livestock and grazing. The major crop is hay, with 3/4 to 1 ton per acre. The grazing land in the area ranges in elevation from 4,500 to 12,000 feet. With this difference in elevation, there is a great difference in ability to produce forage for cattle and browse for wild game and sheep. Some sites can produce no more than 100 pounds of plant material per acre. Other sites in favorable years produce 4000 pounds per acre.

The Middle Park area crops are mostly barley, potatoes, corn and hay. Over the last twenty years the cropping patterns have changed in this area. Carbondale and Aspen used to be known for potatoes, and crops like strawberries were common around Glenwood Springs. Today this area is devoted to pasture and hayland, with minor acreages of cash crops.

The Lower Grand Valley area produces fruits and row crops. About 8,141 acres of fruit orchards - peaches, pears and apples.

In all three areas combined, the approximate yield of wheat and hay is 105,700 bushels and 310,276 tons. There are approximately 152,548 sheep and lambs, and 143,276 cattle and calves. Livestock is an important part of the agriculture industry. However, the total number has decreased. Cattle and sheep are often summered on land administered by the U. S. Forest Service and Bureau of Land Management.

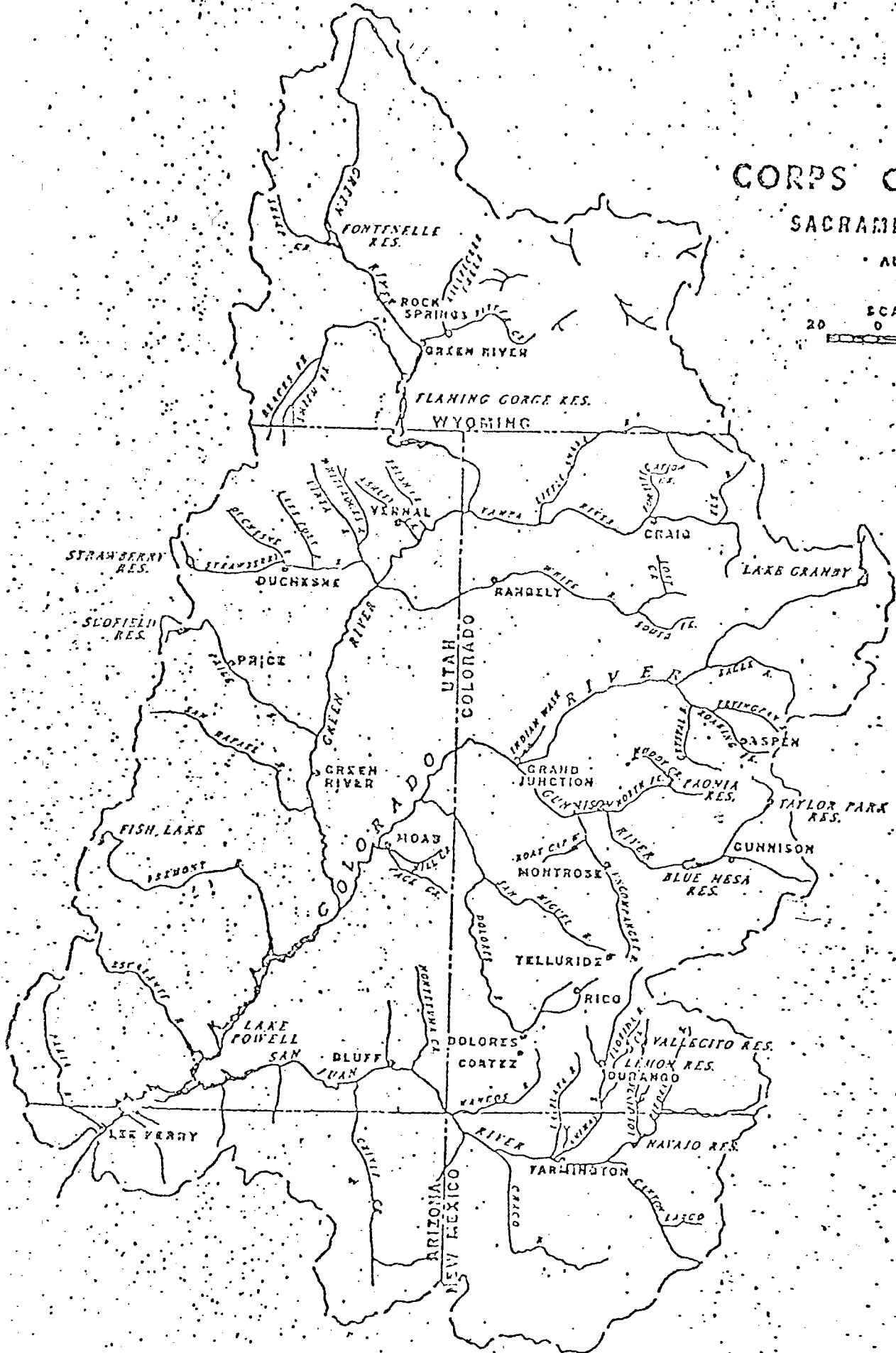
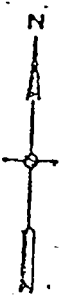
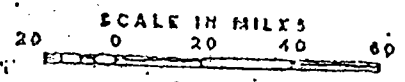
In the past few years we have seen much farm land become residential areas. Due to the uncertainty of making a living on a farm or ranch and due to high taxes on farm land, many ranches and farms have fallen into the hands of subdividers.

The uncertainty of the weather on fruit orchards causes hardships on everyone. If the fruit growers have a short crop due to late frosts in the spring, the consumer has to pay more for the product.

Irrigation water is available for many farms in the three areas and new planned developments are underway to promote more irrigation water.

CORPS OF ENGINEER  
SACRAMENTO DISTRICT

AUGUST 1970



UPPER COLORADO RIVER BASIN

DAM INSPECTIONS

	<u>High</u>	<u>Medium</u>	<u>Low</u>
Regular Inspection	6	6	6
Construction Inspection	3	1	7
Two Phase I Inspections			
		Matheson Reservoir - District 50	
		Robinson Reservoir - District 37	

DAMS

The following is a tabulation of all livestock water tank applications which were approved during the 1980-81 irrigation year:

<u>District</u>	<u>No. of Stock Tanks</u>
36	0
37	0
38	0
39	0
45	0
50	0
51	8
52	0
63	0
70	0
72	0

## **WATER RIGHTS TABULATION**

WATER RIGHTS TABULATION

1. Underground water rights	204
2. Changes in water rights	37
3. Water rights (absolute)	278
4. Diligence (conditional)	224
5. Water storage rights	64
6. Applications received in Water Court	461
7. Referee consultations	461

## **REFEREE'S FINDINGS AND DECREES**



# **HYDROGRAPHER'S REPORT**

HYDROGRAPHERS ANNUAL REPORT

During the [980-8] water year the hydrographers for Division 5 reported 87 stream discharge measurements at seven stream gaging stations. For these stations records were computed for publication. Records were also prepared for publication at one other station. The records are good and complete, with extrapolated data for periods of ice. In addition to the measurements above, ]5 administrative measurements were made.

# **ORGANIZATIONS**

WATER USER ORGANIZATION ROSTER

Project and Unit  
BASALT - Basalt Water Cons. District

Chairman: Austin Hueschkel, Carbondale  
V-Chairman: George Locksinger, Basalt  
Sec.: Steve Callicotte, Carbondale  
Treas.: Willis Kenney, Carbondale  
Atty: Edward Mulhall, Glen. Springs  
Dir: Bernard Hopkins  
Willis Kenny  
Austin Hueschkel  
Harold Fender  
Thomas Turnbull  
George Locksinger  
Floyd Crawford

BATTLEMENT MESA - Battlement Mesa Wtr. Cons. Dist.

Pres: Carleton Currier, Gr. Junction  
V-Pres: Clyde Bruton, Collbran  
Sec. Treas: Arthur Linn, Collbran  
Atty: Albin Anderson, Gr. Junction  
Dir: Carleton Currier  
Arthur Linn  
Ray Hittle  
Rex Clifton  
Paul Height  
George Gipp  
Clyde Bruton

BLUESTONE - Bluestone Wtr. Cons. Dist.

Pres: Orville Mahaffey, Grand Valley  
V-Pres: Robert Latham, Gr. Valley  
Sec-Treas: Geo. Anderson, DeBeque  
Atty: Kenneth Balcomb, Gl. Springs  
Dir: LeRoy Latham  
George Anderson  
Orville Mahaffey  
Robert Latham  
Carlos Carpenter  
Harry Blue  
Richard Looney

COLLBRAN - Collbran Conservancy District

Pres: Herbert Milholland, Molina  
V-Pres: Francis Chapman, Collbran  
Sec: H. R. Lloyd, Mesa  
Atty: Nelson, Hoskin & Groves, Gr. Jct.  
Sec. Treas: Everett Collins, Collbran  
Dir: Ben Nichols  
Bill Tupper  
Francis Chapman  
Herbert Milholland  
W. D. Meador  
H. R. Lloyd

GRAND VALLEY-Gr. Valley Wtr Users Assoc.

Pres: W. J. Baker, Loma  
V-Pres: Taylor Roberts, Mack  
Sec: Ray Gobbo, Gr. Junction  
Treas: G. W. Klapwyk, Gr. Junction  
Atty: Williams & Turner, Gr. Junction  
Mgr: G. W. Klapwyk, Gr. Junction  
Asst. Mgr: Bob Byers  
Dir: Arnon Alstatt  
W. J. Baker  
Avery Kohls  
Bruce Currier  
Dan Galle

WEST DIVIDE - West Divide Water Conservancy District

Pres: William B. Jackson, Glenwood Springs  
V-Pres: Harold C. Carmack  
Sec-Treas: Frieda H. Jackson, Glenwood Springs  
Atty: Frank Delaney, Glenwood Springs  
Dir: William B. Jackson  
Harold C. Carmack  
Carl Barnklau  
Paul Pitman  
L. Christensen  
Ralph L. Antonides

MISCELLANEOUS - Colorado River Water Users Association

Pres: L. Y. Siddoway, Vernal, Utah  
V-Pres: Clifford Tabor, Wellton, Ariz.  
Sec-Treas: Lynn S. Ludlow, Orem, Utah  
Dir: Floyd M. Smith, Arizona  
Victor I. Corbell, Arizona  
Norris Soma, Arizona  
Carl Vevine, California  
Warren Butler, California  
Leon Kennedy, California  
Roland Fischer, Colorado  
Don D. Noble, Colorado  
Robert Delaney, Colorado  
Ivan P. Head, Nevada

COLORADO DEPARTMENT OF NATURAL RESOURCES

T. W. Ten Eyck  
Division of Game Fish & Parks  
Division of Mines  
Division of Water Resources  
Geological Survey  
Board of Land Commissioner  
Oil and Gas Conservation Commission  
Soil Conservation Board  
Water Conservation Board

COLORADO RIVER WATER CONSERVATION DISTRICT

Ken Balcomb  
R. C. Fischer

COLORADO WATER CONSERVATION BOARD

Felix L. Sparks

GRAND VALLEY - Mesa County Irrigation District

Pres: Harry W. Brown, Grand Junction  
Sec-Treas: O. F. Christenson, Gr. Junction  
Supt: Joff Bell  
Dir: Harry Brown  
O. F. Christensen  
Harold Gardinier

GRAND VALLEY - Orchard Mesa Irrigation District

Pres: Edward T. Bryant, Gr. Junction  
V-Pres: H. E. Porterfield, Palisade, Colo.  
Sec: Florence K. Pauly, Gr. Junction  
Treas: Mesa County Treasurer, Gr. Junction  
Atty: Williams & Turner  
Supt: W. F. Green, Palisade  
Mgt: G. W. Klapwyk, Gr. Junction  
Dir: H. E. Porterfield  
E. T. Bryant  
Clyde Rooks

GRAND VALLEY - Palisade Irrigation District

Pres: Everett Corlett, Gr. Junction  
V-Pres: John Vesakis, Clifton  
Sec: W. E. Funk, Palisade  
Treas: Mesa County Treasurer, Gr. Junction  
Atty: William H. Nelson  
Ditchrider: Delbert Kitson  
Dir: W. E. Funk  
John Vesakis  
Everett Corlett

MIDDLE PARK - Middle Park Water Conservancy District

Pres: Redwood Fisher, Granby  
V-Pres: Karl H. Knorr, Dillon  
Sec-Treas: Carl Breeze, Kremmling  
Atty: Bob Delaney, Glenwood Springs  
Dir: Red Fisher  
Jack Horn  
Carl Breeze  
Karl H. Knorr  
Kenneth Wheatley  
Frank F. Brown

SILT - Silt Water Conservancy District

Pres: Marvin Ryden, Rifle  
V-Pres: Jake Haas, Rifle  
Sec. Treas: Mike Dmitrich, Price  
Atty: Therald N. Jensen  
Dir: Chris Jouffas  
George Waterman  
Paul Moynier  
William Welsh  
Gordon Newbold

UTE WATER - Ute Water Conservancy District

Pres: Fred J. Simpson, Grand Junction  
V-Pres: W. J. Baker, Loma  
Sec: L. P. Morse, Gr. Junction  
Treas: Bobby J. White, Gr. Junction  
Atty: Albin Anderson, Gr. Junction  
Mgt: Riney F. Wilbert, Gr. Junction  
Dir: John Brophy  
W. J. Baker, Loma  
Frank Needs

## **WATER COMISSIONER'S SUMMARY**

DIRECT DIVERSIONS:

ACRE FEET

STORAGE		95,796
IRRIGATION		125,722
MUNICIPAL		1,810
COMMERCIAL		
INDUSTRIAL		
RECREATION		
FISH		
FIRE		
DOMESTIC		
STOCK		145
OTHER:		
TRANSBASIN		
TRANSMOUNTAIN		106,404
	TOTAL DIVERSIONS	329,877

DELIVERIES FROM STORAGE:

IRRIGATION		975
MUNICIPAL		
COMMERCIAL	Industrial & Industrial with exchange	(3844) 28,904
RECREATION		
FISH		
OTHER:	Exchange Release	39,339
TRANSBASIN		
TRANSMOUNTAIN		56,954
	TOTAL FROM STORAGE	126,172

DELIVERIES FROM TRANSBASIN:

IRRIGATION		
STORAGE		
MUNICIPAL		
INDUSTRIAL		
	TOTAL FROM TRANSBASIN	

DUTY OF WATER:

TOTAL TO IRRIGATION		126,697
ACRES IRRIGATED		16,040
ACRE FEET DIVERTED PER ACRE		7.9

NUMBER OF STRUCTURES OBSERVED:

WATER RUN - NO INFORMATION AVAILABLE		49
ACTIVE DIVERSIONS - DAILY		0
INFREQUENT		235
INACTIVE DIVERSIONS - NO WATER AVAILABLE		0
NO WATER WANTED OR STRUCT. NOT USUABLE		191
NO INFORMATION AVAILABLE		5

NUMBER OF DITCHES		384
NUMBER OF RESERVOIRS		39
NUMBER OF WELLS		0
NUMBER OF OBSERVATIONS		878





DIRECT DIVERSIONS:

ACRE FEET

STORAGE	56,784
IRRIGATION	345,958
MUNICIPAL	21,463
COMMERCIAL	
INDUSTRIAL	
RECREATION	
FISH	61,877
FIRE	
DOMESTIC	1,764
STOCK	
OTHER:	
TRANSBASIN	1,056
TRANSMOUNTAIN	74,088
TOTAL DIVERSIONS	562,990

DELIVERIES FROM STORAGE:

IRRIGATION	8,114
MUNICIPAL	
COMMERCIAL	
RECREATION	40,553
Release from Ruedi	
FISH	319
OTHER:	1,573
Exchange from Ruedi	
TRANSBASIN	
TRANSMOUNTAIN	
TOTAL FROM STORAGE	50,559

DELIVERIES FROM TRANSBASIN:

IRRIGATION	580
STORAGE	200
MUNICIPAL	
INDUSTRIAL	
TOTAL FROM TRANSBASIN	780

DUTY OF WATER:

TOTAL TO IRRIGATION	354,652
ACRES IRRIGATED	59,612
ACRE FEET DIVERTED PER ACRE	5.9

NUMBER OF STRUCTURES OBSERVED:

WATER RUN - NO INFORMATION AVAILABLE	11
ACTIVE DIVERSIONS - DAILY	0
INFREQUENT	465
INACTIVE DIVERSIONS - NO WATER AVAILABLE	2
NO WATER WANTED OR STRUCT. NOT USUABLE	162
NO INFORMATION AVAILABLE	1

NUMBER OF DITCHES	648
NUMBER OF RESERVOIRS	49
NUMBER OF WELLS	0
NUMBER OF OBSERVATIONS	755



DIRECT DIVERSIONS:

ACRE FEET

STORAGE	153
IRRIGATION	<u>90,289</u>
MUNICIPAL	<u>235</u>
COMMERCIAL	
INDUSTRIAL	
RECREATION	
FISH	
FIRE	
DOMESTIC	<u>13,637</u>
STOCK	<u>165</u>
OTHER:	
TRANSBASIN	
TRANSMOUNTAIN	
TOTAL DIVERSIONS	<u>104,479</u>

DELIVERIES FROM STORAGE:

IRRIGATION	<u>193</u>
MUNICIPAL	
COMMERCIAL	
RECREATION	
FISH	
OTHER:	
TRANSBASIN	
TRANSMOUNTAIN	
TOTAL FROM STORAGE	<u>193</u>

DELIVERIES FROM TRANSBASIN:

IRRIGATION	<u>4,022</u>
STORAGE	<u>90</u>
MUNICIPAL	<u>140</u>
INDUSTRIAL	
TOTAL FROM TRANSBASIN	<u>4,252</u>

DUTY OF WATER:

TOTAL TO IRRIGATION	<u>94,504</u>
ACRES IRRIGATED	<u>34,017</u>
ACRE FEET DIVERTED PER ACRE	<u>2.8</u>

NUMBER OF STRUCTURES OBSERVED:

WATER RUN - NO INFORMATION AVAILABLE	<u>58</u>
ACTIVE DIVERSIONS - DAILY	<u>107</u>
INFREQUENT	<u>9</u>
INACTIVE DIVERSIONS - NO WATER AVAILABLE	<u>11</u>
NO WATER WANTED OR STRUCT. NOT USUABLE	<u>104</u>
NO INFORMATION AVAILABLE	<u>3</u>

NUMBER OF DITCHES	<u>356</u>
NUMBER OF RESERVOIRS	<u>17</u>
NUMBER OF WELLS	<u>0</u>
NUMBER OF OBSERVATIONS	<u>2,107</u>

DIRECT DIVERSIONS:

ACRE FEET

STORAGE	<u>5,006</u>
IRRIGATION	<u>43,548</u>
MUNICIPAL	<u>          </u>
COMMERCIAL	<u>          </u>
INDUSTRIAL	<u>          </u>
RECREATION	<u>          </u>
FISH	<u>          </u>
FIRE	<u>          </u>
DOMESTIC	<u>          </u>
STOCK	<u>          </u>
OTHER:	<u>          </u>
TRANSBASIN	<u>          </u>
TRANSMOUNTAIN	<u>          </u>
TOTAL DIVERSIONS	<u>48,554</u>

DELIVERIES FROM STORAGE:

IRRIGATION	<u>3,866</u>
MUNICIPAL	<u>          </u>
COMMERCIAL	<u>          </u>
RECREATION	<u>          </u>
FISH	<u>          </u>
OTHER:	<u>          </u>
TRANSBASIN	<u>          </u>
TRANSMOUNTAIN	<u>          </u>
TOTAL FROM STORAGE	<u>3,866</u>

DELIVERIES FROM TRANSBASIN:

IRRIGATION	<u>          </u>
STORAGE	<u>          </u>
MUNICIPAL	<u>          </u>
INDUSTRIAL	<u>          </u>
TOTAL FROM TRANSBASIN	<u>0</u>

DUTY OF WATER:

TOTAL TO IRRIGATION	<u>47,414</u>
ACRES IRRIGATED	<u>20,886</u>
ACRE FEET DIVERTED PER ACRE	<u>2.3</u>

NUMBER OF STRUCTURES OBSERVED:

WATER RUN - NO INFORMATION AVAILABLE	<u>3</u>
ACTIVE DIVERSIONS - DAILY	<u>83</u>
INFREQUENT	<u>16</u>
INACTIVE DIVERSIONS - NO WATER AVAILABLE	<u>10</u>
NO WATER WANTED OR STRUCT. NOT USUABLE	<u>92</u>
NO INFORMATION AVAILABLE	<u>1</u>
NUMBER OF DITCHES	<u>172</u>
NUMBER OF RESERVOIRS	<u>38</u>
NUMBER OF WELLS	<u>0</u>
NUMBER OF OBSERVATIONS	<u>993</u>





DIRECT DIVERSIONS:

ACRE FEET

STORAGE	2,420
IRRIGATION	90,258
MUNICIPAL	8,484
COMMERCIAL	
INDUSTRIAL	740,914
RECREATION	
FISH	630
FIRE	
DOMESTIC	1,527
STOCK	
OTHER:	
TRANSBASIN	
TRANSMOUNTAIN	
TOTAL DIVERSIONS	844,233

DELIVERIES FROM STORAGE:

IRRIGATION	2,420
MUNICIPAL	
COMMERCIAL	
RECREATION	
FISH	
OTHER:	
TRANSBASIN	
TRANSMOUNTAIN	
TOTAL FROM STORAGE	2,420

DELIVERIES FROM TRANSBASIN:

IRRIGATION	
STORAGE	
MUNICIPAL	
INDUSTRIAL	
TOTAL FROM TRANSBASIN	0

DUTY OF WATER:

TOTAL TO IRRIGATION	92,678
ACRES IRRIGATED	33,077
ACRE FEET DIVERTED PER ACRE	2.8

NUMBER OF STRUCTURES OBSERVED:

WATER RUN - NO INFORMATION AVAILABLE	81
ACTIVE DIVERSIONS - DAILY	0
INFREQUENT	190
INACTIVE DIVERSIONS - NO WATER AVAILABLE	10
NO WATER WANTED OR STRUCT. NOT USUABLE	26
NO INFORMATION AVAILABLE	20

NUMBER OF DITCHES	394
NUMBER OF RESERVOIRS	54
NUMBER OF WELLS	1
NUMBER OF OBSERVATIONS	680







## **DIVISION ENGINEER'S SUMMARY**



Direct Flow Diversions  
1981

Incl Fish Storage

District	Total Ditches		Direct Diversions Ac.Ft.	No. of Acres Irrigated	Ac.Ft. Per Acre	Industrial Use Diversion Ac.Ft.	Municipal Use Diversion Ac.Ft.	Domestic Use Diversion Ac.Ft.	Trans Mtn. Diversions Ac.Ft.	Total Diversions Ac.Ft.	No. of Daily Ditch Rotns.	Delivered to Contract Ac.	
	Reported	Active Inactive											
36	235	49	125722	16040	7.8		1810	145	106404	329877	878		
37	230	51	109797	19905	5.5		6838	145	2288	135478	1073		
38	465	13	345958	59612	5.8		21463	1764	75144	562990	755		
39	88	62	114180	25729	4.4		6018		1139	136235	424		
45	116	69	90289	34017	2.7		235	13802		104479	2107		
50	99	13	43548	20886	2.1					48554	993		
51	297	289	169152	36943	4.6	3439	1574	43	120494	373341	777		
52	106	17	38545	8915	4.3			506	780	39831	400		
53	190	91	90258	33077	2.7	740914	8484	1527		844233	680		
50	37	35	25964	4951	5.2		100	1111		27175	500		
2	154	126	610851	104817	5.8	511426	6334	8285	1711	1167691	6439		
ALS	2017	815	2037	1764264	364892	4.8	1255779	52856	27328	307960	3769884	15026	0

= No Water Available

NU = Non Use

Transmountain Diversions: Designate either to or from Division.

ANNUAL SUMMARY - DIVISIONS  
ACRE FEET (11-1577 thru 10-31-72)

Districts	Non-Exempt Wells #			Ditch Structures Reported #	IRRIGATION			CURRENT YEAR Acres Irrigated	TRANS-MOUBTAIN	
	Non-Exempt Wells #	Ditch Structures Reported #	Direct Diversions To Irrigation		Diversions To Storage	Storage To Irrigation	Export		Div. to Div. Import	
36	0	235	125722	95796	975	16040	163358			
37	0	220	109797	16410	484	19905	25684			
38	0	465	345958	56784	8114	59612	74088			
39	1	88	114180	13730	13784	25729				
45	0	116	90289	153	193	34017				
50	0	99	43548	5006	1866	20886				
51	201	297	169152	78639	1500	36943	201556			
52	0	106	38545			8915				
53	1	190	90258	2420	2420	33077				
70	9	37	25964			4951				
72	18	154	610851	29084	28875	104817	1060			
TOTAL	230	2017	1764264	298022	60211	364892	465746			

Districts	MUNICIPAL			INDUSTRIAL			RECREATION		ACTUAL STORAGE		
	Direct Diversions	Diversions To Storage	Storage Releases	Direct Diversions	Diversions To Storage	Hydro-Power	Storage-Wildlife Parks	All Reservoirs For Year	# Decree Applications	# Water Court Applications	
36	1810				(3844)	28904		126172			
37	6838							23924			
38	21463						40872	50559			
39	6018							13784			
45	235							193			
50								3866			
51	1574			3439		(46794)	3912	260024			
52											
53	8484			740914				2420			
70	100										
72	6334			511426		3212		32872			
TOTAL	52856			1255779		(50638)	36028	40872	513814		

## **RECOMMENDATIONS AND SUGGESTIONS**