

ROSWELL BASIN WATERMASTER

15th

ANNUAL REPORT

1980

Glenn W. Brim, Watermaster

909 East Second Street

Roswell, New Mexico

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INTRODUCTION

On January 10, 1966, Partial Judgment and Decree was entered under Causes Nos. 20294 and 22600 Consolidated in Chaves County, New Mexico. This Decree, which adjudicated all ground water rights for irrigation, municipal, and industrial purposes in the Roswell Artesian Basin in Chaves and Eddy Counties, further provided for the metering of wells, to commence January 1, 1967, and the establishment of a watermaster as follows:

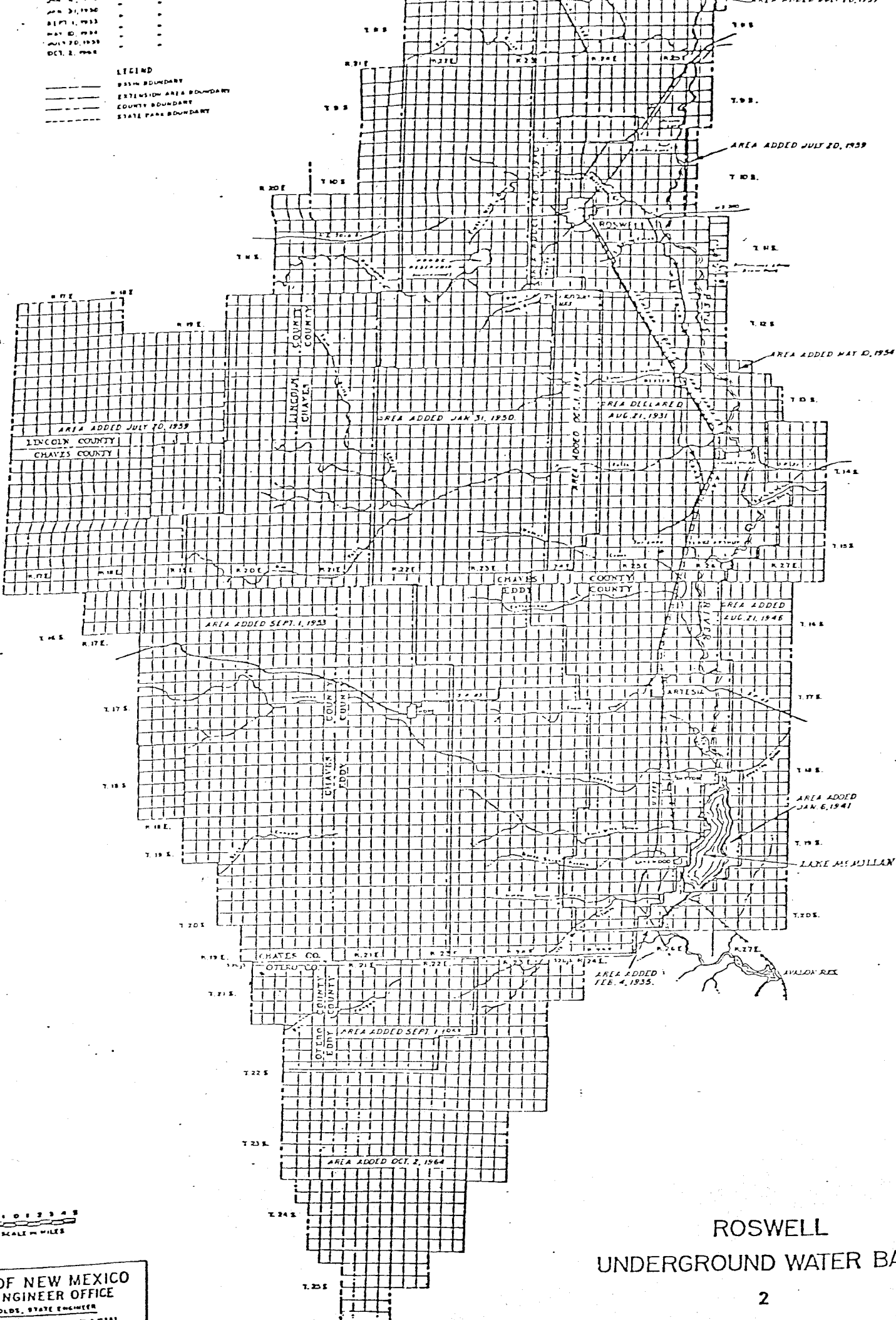
"5. The state engineer shall appoint and employ a watermaster and such assistants as are necessary in the administration and enforcement of this judgment and decree, provided that the appointment of the watermaster shall be subject to the approval of the Court. Such watermaster shall be appointed to commence work not later than July 1, 1966. The watermaster and any assistants appointed shall serve under the direction of the state engineer and under the general supervision of the Court."

The Office was established with the appointment of a Watermaster on February 2, 1966. The present Watermaster, Glenn W. Brim, was appointed by State Engineer, S. E. Reynolds, on January 31, 1969.

This is the 15th Annual Report of the Watermaster Office.

APR 31, 1930
 MAY 1, 1933
 MAY 10, 1934
 JULY 20, 1939
 OCT. 2, 1964

LEGEND
 - - - - - BASIN BOUNDARY
 - - - - - EXTENSION AREA BOUNDARY
 - - - - - COUNTY BOUNDARY
 - - - - - STATE PARK BOUNDARY



1 0 1 2 3 4 5
 SCALE IN MILES

**ROSWELL
 UNDERGROUND WATER BASIN**

DEPARTMENT OF NEW MEXICO
 STATE ENGINEER OFFICE
 W. H. HOLDEN, STATE ENGINEER
 ROSWELL UNDERGROUND WATER BASIN

ADMINISTRATION

GENERAL

The Roswell Basin Watermaster administers the diversion of water under the Adjudication Decree in an area extending, in general, six to eighteen miles west of the Pecos River and from twenty miles north of Roswell in Chaves County to twenty miles south of Artesia in Eddy County, a distance of about eighty miles. The principal use of water in the area is for agricultural purposes which accounts for about 95% of the total diverted. Municipal use accounts for less than 5% and the remainder is used for commercial and industrial purposes.

Ground water is the principal source of water diverted under the Decree and this is further divided into artesian and shallow ground water. Generally, a little less than two-thirds of the water is diverted from the artesian source, about one-third is diverted from the shallow source and a small portion is diverted from a combination of surface and well waters primarily through the Hagerman Canal.

Approximately 130,000 acres of land were adjudicated irrigation rights under the Decree. The amount of acreage actually irrigated, however, varies from year to year as some rights have, under permit, been spread over larger acreages, a few rights have been "stacked" to permit larger diversions on reduced acreages, some rights have been transferred to municipal and industrial uses, some rights have been retired by the Pecos Valley Artesian Conservancy District, and some acreage is fallowed.

Procedures for accounting of water diverted under the Hagerman Canal were revised in January of 1977. Rights under the Hagerman Canal not having a

supplemental source from individually owned shallow or artesian wells are considered by this office to be adjudicated under the Hope Community Ditch Decree and not under Chaves County Cause No. 22600 and 20294 Consolidated. Thereafter, diversion of water for rights under the Hagerman Canal were accounted by the Roswell Basin Watermaster as follows:

- (1) Water diverted to farms having canal rights only will not be accounted.
- (2) Water diverted to farms having an underground right adjudicated or permitted to supplement the entire canal right shall be accounted as other adjudicated ground water rights with appropriate provisions for 5-year accounting, carriage loss and carryover.
- (3) Water diverted to farms having a combined or commingled right (either as decreed or permitted) where part of the canal right is not supplemented by ground water shall be accounted by considering the canal water diverted to be in direct proportion to the ratio of the unsupplemented canal right to the supplemented canal right and only the supplemented right shall be accounted, unless otherwise indicated by conditions of approval of an individual permit.

The Honorable Paul Snead, Judge of the Fifth Judicial District, served by designation as judge in the adjudication suit during the 1980 reporting period.

Personnel of the Watermaster office at the beginning of 1980 consisted of Glenn W. Brim, Watermaster; Jo Ann Romero, Secretary-Clerk; and Robert Marr as an assistant to the Watermaster. On March 31, 1980, Ramon Torres and Richard Jones were transferred from the Water Rights Division to the Watermaster's office as assistants during the irrigation season. On October 1, 1980, Ramon Torres and Richard Jones were transferred to the Water Rights Division, and November 3, 1980, Ramon Torres transferred to the Watermaster's office where he remained until November 24, 1980, to assist in the annual accounting.

The operations of the Watermaster office are financed through the Pecos Valley Artesian Conservancy District. Under the terms of the Adjudication Decree the State Engineer annually submits to the Pecos Valley Artesian Conservancy District a budget for the operations of the Watermaster office and the District Board then moves the Court to approve or modify the budget submitted. The District then reimburses the State Engineer for monthly expenses incurred. The funds of the Conservancy District are derived from a levy of lands within the District.

METERING PROGRAM

Four hundred and sixty-seven meters were found inoperative during the 1980 irrigation season. Based on a total of 1586 meters installed on irrigation, feed pen, dairy, and Hagerman Canal wells, this is 29.45% as compared to 34.10% found inoperative in 1979. Each meter was read an average of 8.3 times.

The number of totalizing meters, by brand, installed on these wells and the number of each brand found to be inoperative during the 1980 irrigation season, are listed as follows:

Make of Meter	Total	% of Total	Total Inoperative	Make % Inoperative	% of Total Installed
Brand A	92	5.80	31	33.70	1.96
Brand B	964	60.78	269	27.90	16.96
Brand C	398	25.10	118	29.65	7.44
Brand D	109	6.87	36	33.03	2.27
Misc.	<u>23</u>	<u>1.45</u>	<u>13</u>	56.52	<u>0.82</u>
	1586	100.00	467		29.45

Adjustments in amounts of water diverted through inoperative meters for 1980 totaled 5069.6 acre feet; 2856.4 acre feet of which was artesian and 2213.2 acre feet of which was shallow. The total adjustment is 1.41% of the total diverted for irrigation use.

The problem remains of having a large percentage of the water meters

inoperative at the onset of spring pumping. It is still believed that an extensive winter maintenance program would alleviate most of this problem.

Meters are being maintained, repaired and/or replaced by field personnel of the Pecos Valley Artesian Conservancy District, at no cost to the water user.

CHANGES IN THE ADJUDICATION DECREE

There were no changes in the Adjudication Decree during the 1980 water year.

VIOLATIONS

Two small farming units having artesian rights, have exceeded the five year duty.

As of this date, these violations have not been resolved although the parties have been in contact with this office in reference to the overuse.

WATER DIVERSION

Use of Water in the Roswell Basin in 1980

The total water diverted in the Roswell Ground Water Basin for the water year 1980 (November 1, 1979 - October 31, 1980) under the administrative jurisdiction of the Roswell Basin Watermaster, was 380,677.3 acre-feet, the third lowest quantity diverted during the past ten years. Under the decree adjudicating water rights in the basin, five year periods were set up for accounting of the metered water and the 1980 water year was the fourth year of the third five year period.

Of the total diversion, 244,831.3 acre-feet (64%) was from the artesian source, 121,793.8 acre-feet (32%) was from the shallow source and 14,052.2 acre-feet (4%) was diverted from combined underground and surface sources primarily under the Hagerman Canal and the Rio Hondo.

Irrigation use accounted for 95% of the total diverted, municipal type use accounted for 4% and miscellaneous industrial and commercial uses accounted for the remaining 1%.

The irrigation use on 121,763.3 equivalent water right acres (acres as originally adjudicated) permitted an average diversion of 2.96 acre-feet per acre for the basin as a whole, varying from a high of 3.44 acre-feet per acre in the Lakewood-Seven Rivers area to a low of 1.06 acre-feet per acre in the Upper Felix area. The equivalent acreage figures and pumpage figures do not include unmetered stock and domestic uses, water right acreage (less than 200) not metered and not farmed, and water right acreage retired from irrigation under the program of the Pecos Valley Artesian Conservancy District. Eight hundred and sixty-one farming units are included.

Included in the totals are 5069.6 acre-feet (1.0% of the total irrigation diversion) which was computed for periods when meters were inoperative.

Roswell Basin Watermaster Office
December 1980

ROSWELL BASIN WATERMASTER

Tabulation of Annual Water Diverted

1967-1980

Year:	Ac. Ft.	Irrigation Eq. Ac.	Ac. Ft./Ac.	Municipal Ac. Ft.	Ind. & Com. Ac. Ft.	Total Ac. Ft.
:1967 :	371,250.6	: 130,132.7	: 2.85	:14,428.3	: 1,582.6	:387,361.5:
:1968 :	323,917.1	: 128,245.0	: 2.53	:13,596.3	: 1,611.1	:339,124.5:
:1969 :	345,087.1	: 128,330.6	: 2.69	:15,586.9	: 899.1	:361,573.1:
:1970 :	358,686.8	: 126,002.4	: 2.85	:15,888.5	: 916.3	:375,491.6:
:1971 :	384,228.1	: 126,121.0	: 3.05	:16,439.6	: 3,082.0	:403,749.7:
:5 Yr.:						
:Aver.:	356,633.9	: 127,766.3	: 2.79	:15,207.9	: 1,618.2	:373,460.0:
:1972 :	367,363.6	: 125,233.8	: 2.93	:14,821.2	: 2,398.9	:384,583.7:
:1973 :	386,288.8	: 125,293.0	: 3.08	:15,335.0	: 2,983.0	:404,606.8:
:1974 :	392,413.3	: 124,240.1	: 3.16	:18,318.5	: 3,646.3	:414,378.1:
:1975 :	368,512.6	: 123,740.7	: 2.98	:16,145.9	: 3,083.9	:387,742.4:
:1976 :	419,491.9	: 123,170.1	: 3.41	:18,182.2	: 3,271.9	:440,946.0:
:5 Yr.:						
:Aver.:	386,814.0	: 124,335.5	: 3.11	:16,560.6	: 3,076.8	:406,451.4:
:1977 :	387,858.0	: 122,703.7	: 3.16	:18,422.7	: 3,071.5	:409,352.2:
:1978 :	359,011.0	: 122,233.7	: 2.94	:15,569.7	: 3,270.7	:377,851.4:
:1979 :	355,163.8	: 122,002.4	: 2.91	:16,181.9	: 2,853.0	:374,198.7:
:1980 :	360,484.4	: 121,763.3	: 2.96	:17,804.3	: 2,388.6	:380,677.3:

METERED PUMPAGE SUMMARY SHEET

TOWNSHIP _____

RANGE _____

SECTIONS _____

Water Right No.	Well No.	Source	Use	Well Location	Right Acre Feet	PUMPAGE - ACRE FEET				Remarks
						Surface	Shallow	Artesian	Total	
				MUNICIPAL & MUNICIPAL TYPE USE						
				Roswell				11346.1	11346.1	
				Dexter			372.1	287.5	659.6	
				Hagerman				556.5	556.5	
				Lake Arthur				49.7	49.7	
				Artesia				4117.2	4117.2	
				Hope				78.0	78.0	
				Co-ops				880.6	880.6	
				Domestic Utilities			28.0	88.6	116.6	
				Total			400.1	17404.2	17804.3	
				FEED PEN OPERATIONS (NOT FARM CONNECTED)			400.4	36.3	436.7	
				(Feed Pen Operations - Farm Connected Charged to Irrigation Water Right)			* 144.6	386.4	531.0	---
				SCHOOL SYSTEMS				86.0	86.0	Not to be included in totals
				POWER GENERATION						
				S.W.P.S. Co.				32.4	32.4	
				MISCELLANEOUS INDUSTRIAL & COMMERCIAL						
				Chaves County			1310.0	173.4	1483.4	
				Eddy County			67.0	283.1	350.1	
				TOTALS			2177.5	18015.4	20192.9	

TWP _____

RNG _____

NEW MEXICO STATE ENGINEER
METERED PUMPAGE SUMMARY SHEET

TOWNSHIP _____

RANGE _____

SECTIONS _____

	Location	Right Acre Feet	PUMPAGE - ACRE FEET				Date	Rate of Application
			Surface	Shallow	Artesian	Total		
T 7,8,9 S; R 23 Thru 26 E	Northern	30216.9		702.5	23560.2	24262.7		2.41
	Extension	10072.3						
T 10,11,12 S; R 22,23,24 E	Roswell - East	103938.0	623.0	26426.6	74123.4	101173.0		2.92
T 10,11,N $\frac{1}{2}$ 12 S; R 25,26 E	Grand Plains	34646.0						
T 13,14, N $\frac{1}{2}$ 15 S; R 23,24 E	Dexter-Hagerman	103447.4	13429.2	45364.6	46636.5	105430.3		3.06
T S $\frac{1}{2}$ 12,13,14; N $\frac{1}{2}$ 15 S; R 25,26,27 E	Area	34482.5						
T S $\frac{1}{2}$ 15; N 2/3 16 S; R 23 thru 26 E	Cottonwood	60640.8		20145.3	42088.9	62234.2		3.08
	Area	20213.6						
T 15 S; R 17, 18 E	Upper Rio	2281.0			807.0	807.0		1.06
	Felix	760.3						
T S 1/3 16,17,18 S; R 25,26 E	Artesia	53044.2		19321.5	33817.1	53138.6		3.01
	Area	17681.4						
T 19,20 S; R 25,26 E	Lakewood -	11721.5		7655.8	5782.8	13438.6		3.44
	Seven Rivers	3907.2						
	Total Irrigation	365289.8	14052.2	119616.3	226815.9	360484.4		2.96
	Use	121763.3						

TWP _____

RNG _____

1980 METERED USE
(IRRIGATION)

NORTHERN EXTENTION

24262.7 AC.FT.
2.41 AC.FT./AC.

ROSWELL
EAST GRAND PLAINS

101,173.0 AC.FT.
2.92 AC.FT./AC.

DEXTER - HAGERMAN

105430.3 AC. FT.
3.06 AC.FT./AC.

UPPER FELIX
807.0 AC.FT.
1.06 AC.FT./AC.

COTTONWOOD
62234.2 AC. FT.
3.08 AC.FT./AC.

ARTESIA
53138.6 AC.FT.
3.01 AC.FT./AC.

LAKWOOD
SEVEN RIVERS

13438.6 AC.FT.
3.44 AC.FT./AC.

BASIN WIDE
360484.4 AC.FT.
2.96 AC.FT./AC.

FINANCIAL STATEMENTS

STATE OF NEW MEXICO


Roswell Basin Watermaster Office
Glenn W. Brim, Watermaster

Approved Budget for the
69th Fiscal Year
(1980-1981)

Salaries

Watermaster	\$22,225.00
Assistant	11,249.00
Secretary	9,551.00
Aide	5,603.00
Aide	4,632.00
Temporary	2,240.00
Total:	55,500.00
Group Insurance	1,260.00
Social Security	3,546.00
Retirement	3,413.00
Liability Insurance	250.00
Unemployment Compensation	1,453.00
Workmen's Compensation	200.00
Total:	10,122.00
Mileage and Fares	15,000.00
Per Diem	2,500.00
Total:	17,500.00
Maintenance, Supplies, Tools, and Equipment	100.00
Services of Agencies	390.00
Communications	400.00
Rent	1,200.00
Total:	2,090.00
Grand Total:	85,212.00

It is anticipated that line items will vary, but the total will not exceed \$85,212.00 for the 69th fiscal year.


Fred Hennighausen
District II Supervisor
May 20, 1980

	January	February	March	April	May	June	1980 First Half	1979 Last Half
Salaries:								
Watermaster	\$ 1466.76	\$ 1503.23	\$ 1539.70	\$ 1539.70	\$ 2309.55	\$ 2001.61	\$ 10360.55	\$ 8862.69
Assistant	740.30	740.30	740.30	740.30	1129.38	1011.61	5102.19	4579.97
Secretary	639.70	639.70	639.70	639.70	959.55	831.61	4349.96	3911.59
Other				1813.10	2054.77	1800.30	5668.17	5639.29
Insurance, State Share	60.82	30.41	60.82	123.43	161.67	140.12	577.27	642.20
Social Security	174.52	176.75	178.98	290.13	395.59	346.05	1562.02	1410.37
Reirement	175.06	177.31	179.56	291.01	396.86	347.18	1566.98	1411.71
Workman's Comp								
Unemployment								
Mileage, Gas	822.80	858.67	1325.32	1610.07	1603.10	1462.17	7682.13	6797.79
Maint... & Repairs								
Per Diem	56.00	180.00	72.00	288.00	208.00	260.00	1064.00	1264.00
Liability Insurance								
Communications	33.33	33.33	33.33	33.33	33.33	33.33	199.98	201.64
Rent	100.00	100.00	100.00	100.00	100.00	100.00	600.00	600.00
Maint., Fixture, Equip., & Supplies								
Totals	\$ 4269.29	\$ 4439.70	\$ 4869.71	\$ 7468.77	\$ 9351.80	\$ 8333.98	\$ 38733.25	\$ 35321.25

Roswell Basin Watermaster

Itemized Expenditures

1980

	July	August	September	October	November	December	1980 Last Half	Year 1980
Salaries:								
Watermaster	\$ 1131.39	\$ 1646.90	\$ 1646.90	\$ 2470.35	\$ 1729.66	\$ 1729.66	\$ 10354.86	\$ 20715.41
Assistant	583.68	856.10	856.10	1284.15	856.10	856.10	5292.23	10394.42
Secretary	479.66	655.04	703.44	1108.99	739.32	840.96	4527.41	8877.37
Other	1063.34	1126.25	1559.54	1255.73	1852.29		6857.15	12525.32
Insurance, State Share	78.20	105.01	107.78	117.67	100.93	46.96	556.55	1133.82
Social Security	226.29	262.63	292.16	375.12	316.58	210.05	1682.83	3244.85
Retirement	227.03	263.49	293.12	376.33	318.42	210.75	1689.14	3256.12
Workman's Compensation								
Unemployment								
Mileage, Gas, Maint. & Repairs	1714.11	1763.58	1763.77	1467.94	53.39	63.65	6826.44	14508.57
Per Diem	131.50	176.00	382.50	274.50	184.50		1149.00	2213.00
Liability Insurance								
Communications	33.33	33.33	33.33	33.33	33.33	33.33	199.98	399.96
Rent	100.00	100.00	100.00	100.00	100.00	100.00	600.00	1200.00
Maint., Fixt., Supplies		2.67	30.82				33.49	33.49
Totals	\$ 5768.53	\$ 6991.00	\$ 7769.46	8864.11	\$ 6284.52	\$ 4091.46	\$ 39769.08	\$ 78502.33

SUMMARY

SUMMARY

Metered use of water during 1980 resulted in an average use, for irrigation purposes, of 2.96 acre feet per water right acre. The total quantity diverted for all uses was the third lowest during the past ten years.

Inoperative meters continued to present some problems; however, under the present system of making adjustments essentially all of the water diverted through inoperative meters is accounted for. The program of checking and rating meters with the present staff seems to be working satisfactorily.

In addition to the two instances of over-use, notices were sent out on seventy-four farm units advising the owners that they are nearing their allowable. Each of these has less than 3.5 af. remaining for 1981.