

ROSWELL BASIN WATERMASTER

19th

ANNUAL REPORT

1984

Glenn W. Brim, Watermaster

909 East Second Street

Roswell, New Mexico 88201

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INTRODUCTION

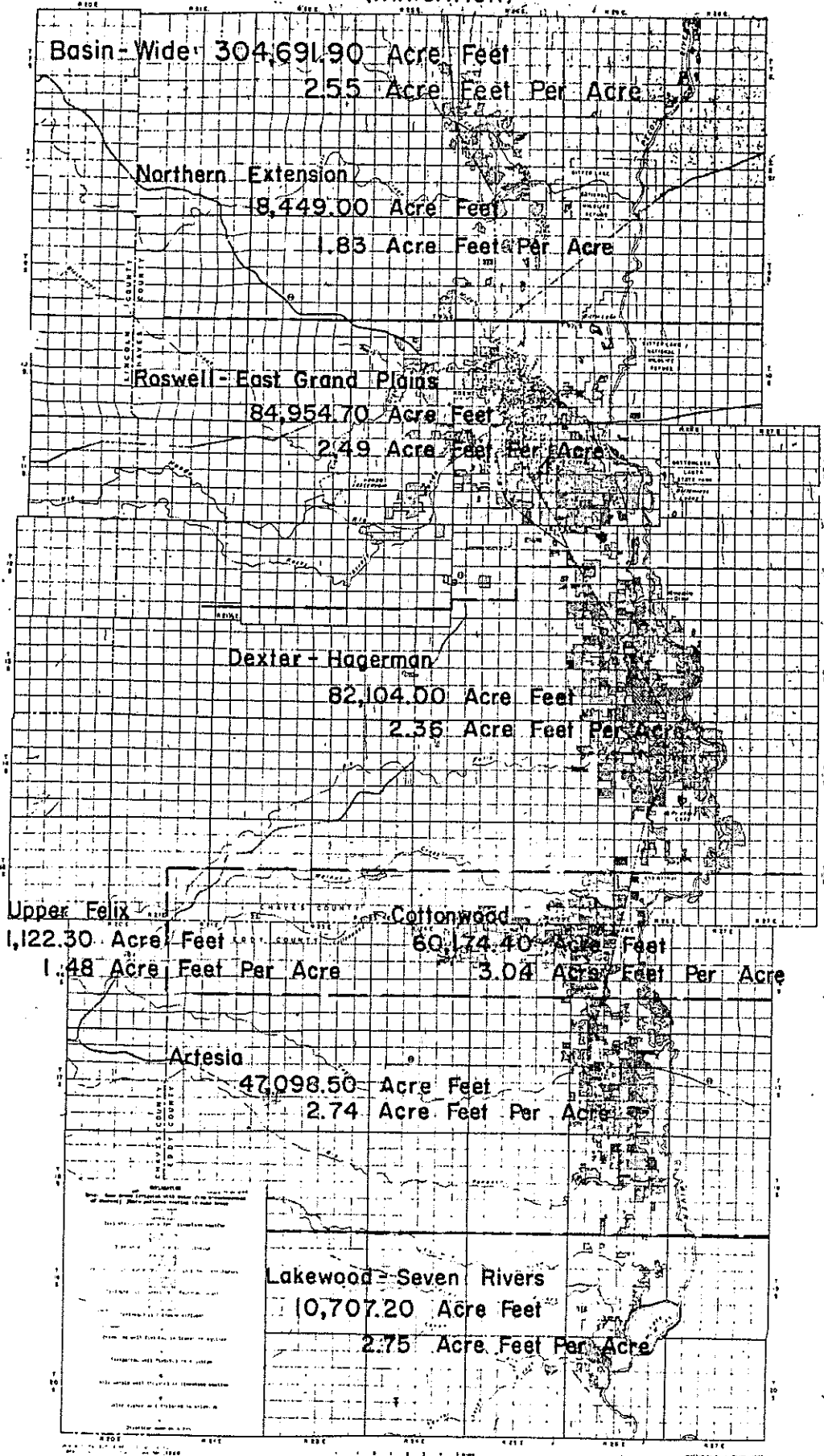
On January 10, 1966 Partial Judgment and Decree was entered under Cause No. 20294 and No. 22600 Consolidated in Chaves County, New Mexico. This Decree which adjudicated all ground water rights for irrigation, municipal, and industrial purposes in the Roswell Artesian Basin in Chaves and Eddy Counties, 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 19th Annual Report of the Watermaster Office.

1984 METERED USE
(IRRIGATION)



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 twenty miles north of Roswell in Chaves County to twenty miles south of Artesia, in Eddy County. A distance of approximately eighty miles. The principal use of water in the area is for agricultural purposes which accounts for about 95% of the total water diverted. Municipal use of water 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. 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 this Decree. The amount of acreage actually irrigated, however, varies from year to year as some rights have, under permit, been spread over larger acreages. Some rights have been transferred to municipal and industrial uses, while some rights have been retired by the Pecos Valley Artesian Conservancy District, and some acreage is fallow.

Procedures for accounting of water diverted under the Hagerman Canal were revised in January 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 No. 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 in be direct proportion to the ratio of the unsupplemented canal right and only the supplemented right shall be accounted unless otherwise indicated by conditions of approval of an individual permit.

The Honorable Lafel Oman, retired State Supreme Court Chief Justice, sitting by designation as Judge in the Adjudication suit, served during the 1984 reporting period. Personnel of the watermaster office at the beginning of the 1984 season consisted of Glenn W. Brim, Watermaster; Rita Valdez, Secretary-Clerk; and Robert Marr, as an assistant to the Watermaster.

On April 2, 1984 Ramon Torres and Ken Bickle were transferred from the Water Rights Division to the Watermaster's Office to assist during the irrigation season. On April 20, 1984 Ken Bickle resigned, and was not replaced until July 23, 1984 when Phillip Kelble was hired.

Ramon Torres and Philip Kelble transferred to the Water Rights division on October 1, 1984.

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 P.V.A.C.D. a budget for the operations of the watermaster office and the P.V.A.C.D. Board then moves the Court to approve or modify the budget submitted. P.V.A.C.D. then reimburses the state engineer for monthly expenses incurred. The funds of P.V.A.C.D. are derived from a levy of lands within the district.

METERING PROGRAM

Four hundred and seventy-three meters were found inoperative during the 1984 irrigation season. Based on a total of 1611 meters installed on irrigation, feed pen, dairy, and Hagerman Canal wells, this 29.36% as compared to 34.58% found inoperative in 1983. Due to a shortage of personnel the meters were read fewer times, and inoperative meters remained so for longer periods. Each meter was read an average of 7.9 times, including the beginning and year end readings.

The number of totalizing meters, by brand installed on these wells and the number of each brand found to be inoperative during the 1984 irrigation season, are listed as follows:

Make of Meter	Total	% of Total	Total Inoperative	Make Inoperative	% of Total Installed
BRAND A	48	2.98	13	27.08	0.81
BRAND B	1061	65.86	330	31.10	20.48
BRAND C	374	23.22	93	24.87	5.77
BRAND D	90	5.59	18	20.00	1.12
MISC.	38	2.36	19	50.00	1.18
	1611	100.00	473		29.36

Adjustments in amounts of water diverted through inoperative meters for 1984 totaled 7983.5 acre-feet of which was artesian and 4025.8 acre-feet of which was shallow. The total adjustment is 2.62% 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 believed that the maintenance program initiated by the Pecos Valley Artesian Conservancy District will alleviate most of this problem.

Meters are being maintained, repaired and/or replaced by field personnel of the PVACD at no cost to the water user.

CHANGES IN THE ADJUDICATION DECREE

There were no changes in the Adjudication Decree during the 1984 water year.

VIOLATION ACTIONS

There were five instances of over use in 1984.

Four were from a well with irrigation rights. One was from a well with commercial rights.

USE OF WATER IN THE ROSWELL BASIN IN 1984

The total water diverted in the Roswell Ground Water Basin for the water year 1984 (November 1, 1983-October 31, 1984) under the administrative jurisdiction of the Roswell Basin Watermaster, was 326,362.4 acre-feet. Under the decree adjudicating water rights in the basin, discrete five-year periods were set-up for accounting of the metered water. The third year of the fourth five-year period was 1984.

Of the total diversion, 209,136.1 acre-feet (64.08%) was from the artesian source, 101,472.6 acre-feet (31.09%) was from the shallow source and 15,753.7 acre-feet (4.83%) was diverted from combined underground and surface sources primarily under the Hagerman Canal and the Rio Hondo.

Irrigation use accounted for 93% of the total diverted, municipal type use accounted for 6% and miscellaneous, industrial and commercial uses accounted for the remaining 1%.

The irrigation use on 119,415.2 equivalent water right acres (acres as originally adjudicated) permitted an average diversion of 2.55 acre-feet per acre for the basin as a whole varying from a high of 3.04 acre-feet per acre in the Cottonwood area to a low of 1.83 acre-feet per acre in the Northern Extention. The equivalent acreage figures and pumpage figures do not include unmetered stock and domestic uses of water right acreage retired from irrigation under the program of the Pecos Valley Artesian Conservancy District. There are eight hundred and eighty-four farming units.

Included in the totals are 7,893.5 acre-feet (2.62% of the total irrigation diversion) which was computed for periods when meters were inoperative.

ROSWELL BASIN WATERMASTER

TABULATION OF ANNUAL WATER DIVERTED

1967 - 1984

YEAR	ACRE-FEET	IRRIGATION EQ. AC.	ACRE-FEET PER ACRE	MUNICIPAL ACRE-FEET	INDL./COML. ACRE-FEET	TOTAL ACRE-FEET
1967	371,250.6	130,132.7	2.85	14,528.3	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 YEAR 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 YEAR 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	3,071.4	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
1981	317,225.2	121,530.0	2.61	14,558.1	2,340.8	334,124.1
5 YEAR AVER.	355,948.5	122,046.6	2.92	16,507.3	2,784.9	375,240.7
1982	377,179.4	120,932.0	3.12	18,292.1	2,747.2	398,218.7
1983	356,836.0	120,277.7	2.97	19,312.3	2,718.3	378,966.6
1984	304,691.9	119,415.2	2.55	19,246.4	2,424.1	326,362.4

NEW MEXICO STATE ENGINEER
METERED PUMPAGE SUMMARY SHEET
1984

TOWNSHIP	RANGE	SECTIONS	Location	Right Acres	Surface	PUMPAGE - ACRE FEET		Total	Date	Rate of Application
						Shallow	Artesian			
T 7,8,9 S; R 23 Thru 26 E			Northern Extension	30,275.3		223.0	18,226.9	18,449.9		1.83
T 10,11,12 S; R 22,23,24 E			Roswell - East Grand Plains	103,269.5		22,391.7	62,563.0	84,954.7		2.49
T 10,11,N $\frac{1}{2}$ 12 S; R 25,26 E										
T 13,14, N $\frac{1}{2}$ 15 S; R 23,24 E			Dexter-Hagerman Area	99,764.8		32,428.0	33,922.3	82,104.0		2.36
T S $\frac{1}{2}$ 12,13,14; N $\frac{1}{2}$ 15 S; R 25,26,27 E										
T S $\frac{1}{2}$ 15; N 2/3 16 S; R 23 thru 26 E			Cottonwood Area	59,456.3		20,591.4	39,583.0	60,174.4		3.04
T 15 S; R 17, 18 E			Upper Rio Felix	2,281.0			1,203.2	1,203.2		1.58
T S 1/3 16,17,18 S; R 25,26 E			Artesia Area	51,537.3		17,053.1	30,045.4	47,098.5		2.74
T 19,20 S; R 25,26 E			Lakewood - Seven Rivers	11,661.5		6,474.4	4,232.8	10,707.2		2.75
			Total Irrigation Use	358,245.7		99,161.6	189,776.6	304,691.9		2.55

TWP _____ RNG _____

NEW MEXICO STATE ENGINEER
 METERED PUMPAGE SUMMARY SHEET

1984

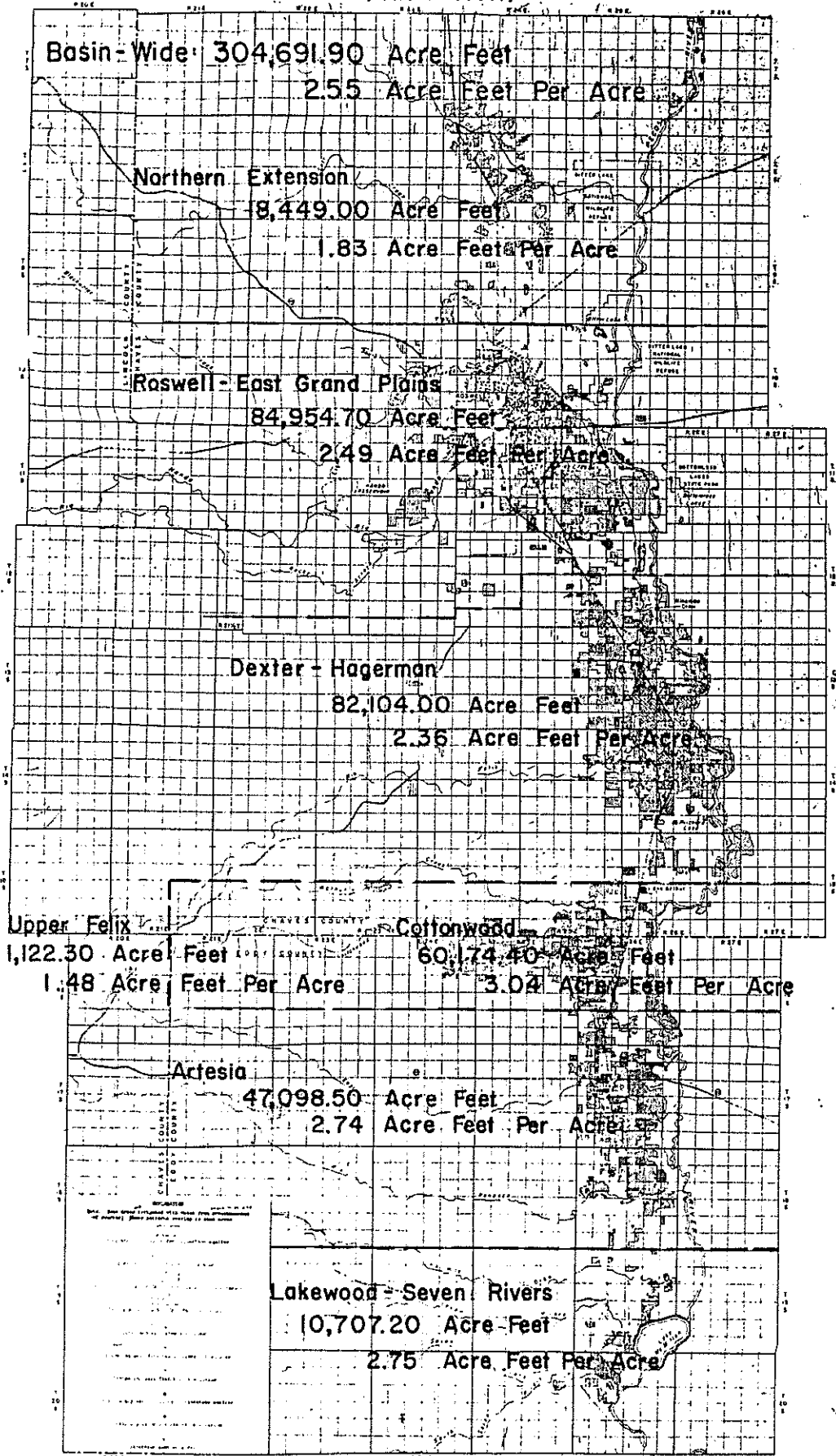
RANGE _____ SECTIONS _____

TOWNSHIP _____

Water Right No.	Well No.	Source	Use	Well Location	Right Acre Feet	PUMPAGE - ACRE FEET			Total	Date	Remarks
						Surface	Shallow	Artesian			
			MUNICIPAL & MUNICIPAL TYPE USE								
				Roswell				10,779.1	10,779.1		
				Dexter			382.2	288.9	672.1		
				Hagerman				478.7	478.7		
				Lake Arthur				55.6	55.6		
				Artesia				4,271.4	4,271.4		
				Hope				41.9	41.9		
				Co-Ops			8.3	2,843.9	2,852.2		
				Domestic Utilities			22.9	72.5	95.4		
				TOTAL			(414.4)	(18,832.0)	(19,246.4)		
				FEED PEN OPERATIONS (NOT FARM CONNECTED)			231.5		231.5		
				FEED PEN OPERATIONS (FARM CONNECTED)			* 19.6	* 137.5	* 157.1		* Not to be included in Total
				DAIRIES-FARM CONNECTED- CHARGED TO IRRIGATION WATER RIGHTS			* 461.5	* 390.7	* 852.2		
				SCHOOL SYSTEMS: ROSWELL				44.0	44.0		
				MISCELLANEOUS INDUSTRIAL & COMMERCIAL							
				Chaves County			1,591.7	198.2	1,789.9		
				Eddy County			73.4	285.3	358.7		
				TOTALS			2,311.0	19,359.5	21,670.5		

TWP _____ RNG _____

**1984 METERED USE
(IRRIGATION)**



Glenn W. Brim
 Approved Budget for the
 73 Fiscal Year
 (1984-1985)

SALARIES:	
Watermaster	\$ 33,468.00
Assistant	17,748.00
Secretary	12,000.00
Aide 6 mos.	8,874.00
Aide 6 mos.	<u>4,611.00</u>
	83,001.00
 BENEFITS:	
Group Insurance	4,148.00
Retirement	8,342.00
FICA	5,831.00
Workman's Compensation	554.00
Unemployment Compensation	266.00
Liability Insurance	<u>332.00</u>
	19,473.00
 TRAVEL:	
Mileage and Fares	18,920.00
Per Diem	<u>3,630.00</u>
	22,550.00
Postage	290.00
Maintenance	150.00
Communications	600.00
Rent & Utilities	<u>1,800.00</u>
	2,840.00
TOTAL	\$127,864.00

It is anticipated that line items will vary, but that the total will not exceed \$127,864.00 for the 73rd Fiscal Year.

Glenn W. Brim
 Roswell Basin Watermaster

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	1984 First Half	1983 Last Half
SALARIES:								
Watermaster	\$2,466.24	\$2,466.24	\$2,466.24	\$2,466.24	\$2,466.24	\$3,699.36	\$16,030.56	\$16,153.87
Assistant Watermaster	1,307.52	1,307.52	1,307.52	1,307.52	1,307.52	1,961.28	8,498.88	8,564.26
Secretary	884.64	884.64	884.64	884.64	884.64	1,326.96	5,750.16	5,790.30
Other	20.66		1,118.78	1,341.72	1,186.24	1,676.21	5,343.61	7,713.08
Insurance, State Share	126.65	126.08	185.28	209.26	217.16	310.37	1,174.80	1,294.37
Social Security	327.50	326.08	404.39	420.01	409.12	606.48	2,493.58	2,558.24
Retirement	367.30	365.68	453.50	471.01	458.80	680.09	2,796.38	2,995.49
Workman's Compensation								
Unemployment								
Mileage, Gas, Maint. & Repairs	1,162.48	1,115.18	1,562.00	1,888.70	1,674.42	1,538.02	8,940.80	8,061.46
Per Diem	96.00	234.00	276.00	330.00	300.00	300.00	1,536.00	2,466.00
Liability Insurance								
Communications	50.00	50.00	50.00	50.00	50.00	50.00	300.00	300.00
Rent	150.00	150.00	150.00	150.00	150.00	150.00	900.00	900.00
Maint., Fixt., Supplies		1.10	4.38				5.48	11.64
Service to other Agency								
TOTALS	\$6,958.99	\$7,026.52	\$8,862.73	\$9,519.10	\$9,104.14	\$12,298.77	\$53,770.25	\$56,808.71

	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1984 LAST HALF	1984 YEAR
SALARIES:								
Watermaster	\$3,539.80	\$ 2,574.40	\$ 2,574.40	\$2,574.40	\$ 3,861.60	\$2,574.40	\$17,699.00	\$ 33,729.56
Assistant Watermaster	1,365.28	1,365.28	1,365.28	1,365.28	2,047.92	1,365.28	8,874.32	17,373.20
Secretary	923.04	923.04	923.04	923.04	1,384.56	923.04	5,999.76	11,749.92
Other	856.70	2,198.04	2,334.56	535.18	1,726.20	-0-	7,650.68	12,994.29
Insurance, State Share	212.58	301.06	312.74	186.81	342.26	148.02	1,503.47	2,678.27
Social Security	467.92	494.22	503.78	377.84	631.41	341.61	2,816.78	5,310.36
Retirement	574.80	709.60	723.34	542.49	906.55	488.70	3,945.48	6,741.86
Workman's Compensation								
Unemployment								
Mileage, Gas, Maint. & Repairs	1,538.02	2,212.76	1,964.82	1,579.16	278.08	84.70	7,657.54	16,598.34
Per Diem	318.00	444.00	366.00	318.00	294.00	36.00	1,776.00	3,312.00
Liability Insurance								
Communications	50.00	50.00	50.00	50.00	50.00	50.00	300.00	600.00
Rent	150.00	150.00	150.00	150.00	150.00	150.00	900.00	1,800.00
Maint., Fixt., Supplies		2.77					2.77	8.25
Service to other Agency								
TOTALS	\$9,996.14	\$11,425.17	\$11,267.96	\$8,602.20	\$11,672.58	\$6,376.83	\$59,125.80	\$112,896.05

SUMMARY

Metered use of water during 1984 resulted in an average use, for irrigation purposes, of 2.55 acre-feet per water right acre. The total quantity diverted for all uses was the lowest in eighteen 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 satisfactory.