

ROSWELL BASIN WATERMASTER

22nd

ANNUAL REPORT

1987

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:

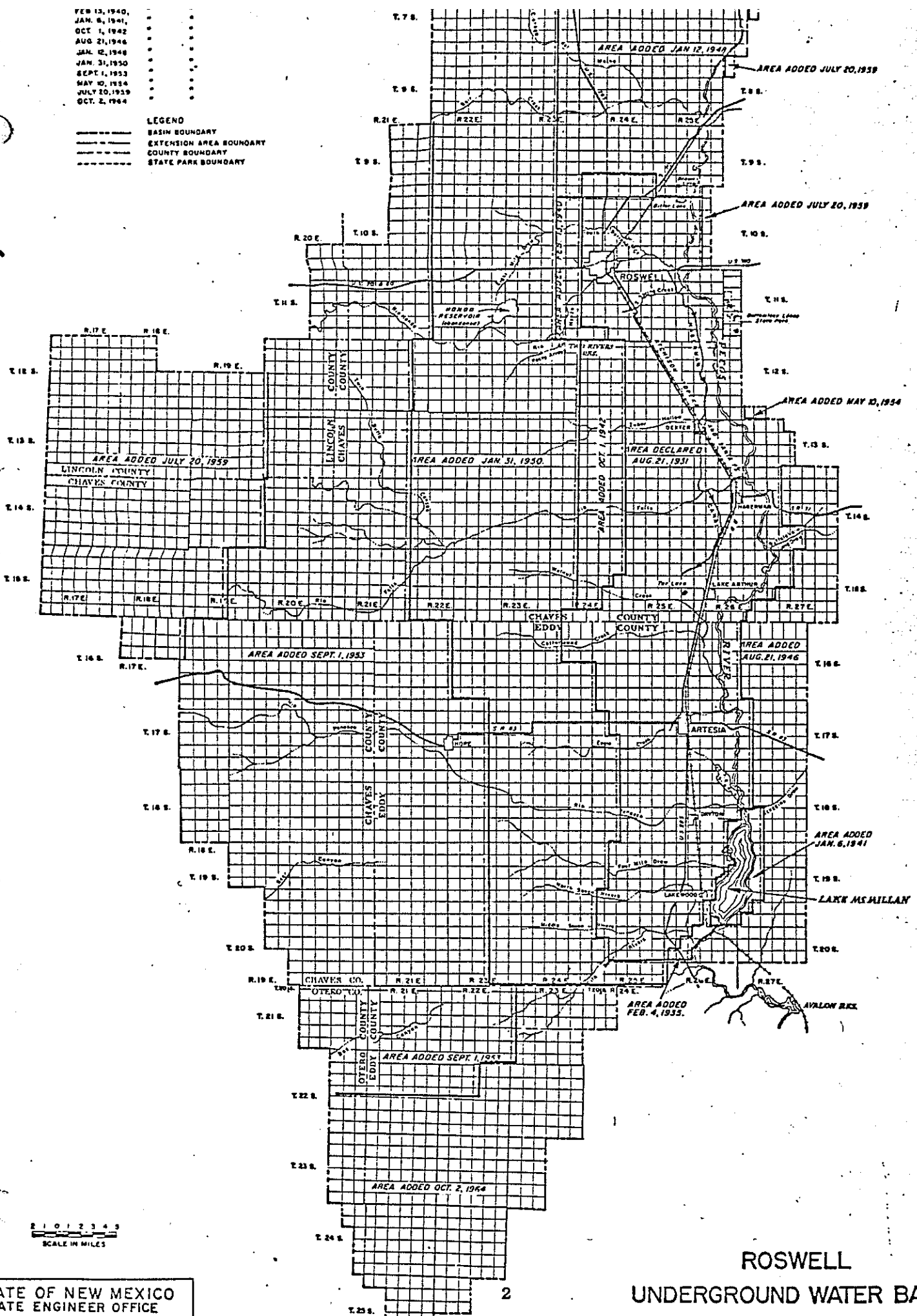
"5. The state engineer shall appoint and employ a watermaster and such assistants as are necessary in the administration and enforcement of this judgment and decree, provided that the appointment of the watermaster shall be subject to the approval of the Court. Such watermaster shall be appointed to 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 22nd Annual Report of the Watermaster Office.

- FEB 12, 1940
- JAN. 8, 1941
- OCT 1, 1942
- AUG 21, 1944
- JAN. 12, 1948
- JAN. 31, 1950
- SEPT. 1, 1953
- MAY 10, 1954
- JULY 20, 1959
- OCT. 2, 1964

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



0 1 2 3 4 5
 SCALE IN MILES

**ROSWELL
 UNDERGROUND WATER BASIN**

STATE OF NEW MEXICO
 STATE ENGINEER OFFICE
 E. E. REYNOLDS, STATE ENGINEER
 ROSWELL ARTESIAN BASIN

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 be in 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 1987 reporting period. Personnel of the watermaster office at the beginning of the 1987 season consisted of Glenn W. Brim, Watermaster; Rita Valdez, Secretary-Clerk; and Robert Marr, as assistant to the Watermaster.

On March 30, 1987 Ramon Torres and David Bernardone were transferred from the Water Rights Division to the Watermaster's Office to assist during the irrigation season.

Ramon Torres and David Bernardone transferred to the Water Rights division on September 28, 1987.

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

METERING PROGRAM

Five hundred and eleven meters were found inoperative during the 1987 irrigation season. Based on a total of 1639 meters installed on irrigation, feed pen, dairy, and Hagerman Canal wells, this is 31.18% as compared to 31.34% found inoperative in 1986. Each meter was read an average of 10.2 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 1987 irrigation season, are listed as follows:

Make of Meter	Total	% of Total	Total Inoperative	Make Inoperative	% of Total Installed
BRAND A	31	1.89	3	9.68	0.18
BRAND B	1256	76.63	425	33.84	25.94
BRAND C	242	14.77	62	25.62	3.78
BRAND D	63	3.84	10	15.87	0.61
MISC.	47	2.87	11	23.4	0.67
	1639	100.00	511		31.18

Adjustments in amounts of water diverted through inoperative meters for 1987 totaled 8219.7 acre-feet of which 5594.8 acre-feet was artesian and 2624.9 acre-feet of which was shallow. The total adjustment is 2.88% 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. The maintenance program initiated by the Pecos Valley Artesian Conservancy District is alleviating some 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 1987 water year.

VIOLATION ACTIONS

There were no instances of over use in 1987.

One alleged meter tampering incident was investigated. Due to a lack of conclusive evidence of intentional tampering no charges were filed. A letter setting forth the findings and an implied warning was sent to the owner.

USE OF WATER IN THE ROSWELL BASIN IN 1987

The total water diverted in the Roswell Ground Water Basin for the water year 1987 (November 1, 1986 - October 31, 1987) under the administrative jurisdiction of the Roswell Basin Watermaster, was 304,057.6 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 first year of the fifth five-year period was 1987.

Of the total diversion, 199,087.6 acre-feet (65.5%) was from the artesian source, 93,039.3 acre-feet (30.6%) was from the shallow source and 11,930.7 acre-feet (3.9%) was diverted from combined underground and surface sources primarily under the Hagerman Canal and the Rio Hondo.

Irrigation use accounted for 93.9% of the total diverted, municipal type use accounted for 5.1% and miscellaneous, industrial and commercial uses accounted for the remaining 1%.

The irrigation use on 118,324.9 equivalent water right acres (acres as originally adjudicated) permitted an average diversion of 2.41 acre-feet per acre for the basin as a whole varying from a high of 2.86 acre-feet per acre in the Cottonwood area to a low of 1.37 acre-feet per acre in the Upper Felix. The equivalent acreage figures and pumpage figures do not include unmetered stock and domestic uses or water right acreage retired from irrigation under the program of the Pecos Valley Artesian Conservancy District. There are eight hundred and eighty-seven farming units.

ROSWELL BASIN WATERMASTER

TABULATION OF ANNUAL WATER DIVERTED

1967 - 1987

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	2,818.3	378,966.6
1984	304,691.9	119,415.2	2.55	19,246.4	2,424.1	326,362.4
1985	293,465.1	119,333.3	2.46	17,494.4	2,863.7	313,823.2
1986	259,739.9	118,634.1	2.19	17,800.6	2,673.0	280,213.5
5 Year						
AVER.	318,382.5	119,718.5	2.66	18,429.2	2,705.3	339,516.9
1987	285,389.6	118,324.9	2.41	15,775.5	2,892.5	304,057.6

NEW MEXICO STATE ENGINEER
METERED PUMPAGE SUMMARY SHEET

TOWNSHIP _____ RANGE _____ SECTIONS _____

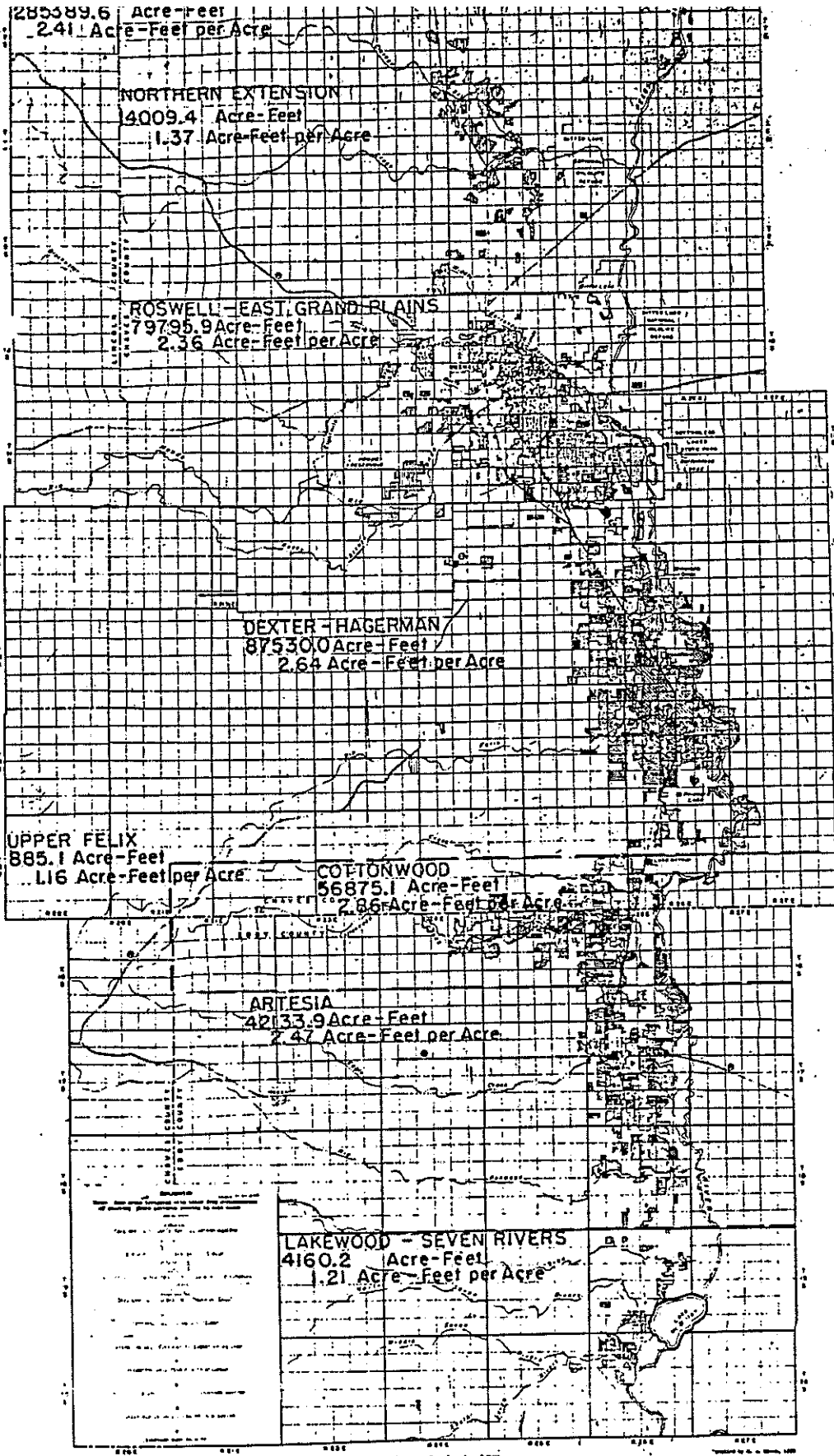
TOWNSHIP	RANGE	SECTIONS	Location	Right Acre Feet	PUMPAGE - ACRE FEET			Date	Rate of Applicant
					Surface	Shallow	Artesian		
					Total				
T 7, 8, 9 S; R 23 Thru 26 E			Northern Extension	30599.9	562.4	13447.0	14009.4	1.37	
T 10, 11, 12 S; R 22, 23, 24 E			Roswell - East	101514.2	250.0	59378.4	79795.9	2.36	
T 10, 11, N $\frac{1}{4}$ 12 S; R 25, 26 E			Grand Plains						
T 13, 14, N $\frac{1}{4}$ 15 S; R 23, 24 E			Dexter-Wagerman Area	90412.6	11680.7	40395.0	87530.0	2.64	
T S $\frac{1}{4}$ 12, 13, 14; N $\frac{1}{4}$ 15 S; R 25, 26, 27 E									
T S $\frac{1}{4}$ 15; N 2/3 16 S; R 23 thru 26 E			Cottonwood Area	59741.9	-0-	38753.5	56875.1	2.86	
T 15 S; R 17, 18 E			Upper Rio Felix	2281.0	-0-	885.1	885.1	1.16	
T S 1/3 16, 17, 18 S; R 25, 26 E			Artesia Area	51100.0	-0-	27448.3	42133.9	2.47	
T 19, 20 S; R 25, 26 E			Lakewood - Seven Rivers	10303.0	-0-	2444.3	4160.2	1.21	
			Total Irrigation Use	354974.6	11930.7	162751.6	285389.6	2.41	

NEW MEXICO STATE ENGINEER
METERED PUMPAGE SUMMARY SHEET

1987

Water Right No.	Well No.	Source	Use	Well Location	Right Acre Feet	RANGE			SECTIONS			Remarks
						Surface	Shallow	Pumpage - Acre Feet	Artesian	Total	Date	
			MUNICIPAL & MUNICIPAL TYPE USE									
			Roswell					9373.3		9373.3		
			Dexter				380.0	100.1		680.1		
			Hagerman					367.8		367.8		
			Lake Arthur					53.7		53.7		
			Artesia					3883.0		3883.0		
			Hope					44.7		44.7		
			Co-Ops					1260.5		1260.5		
			Domestic Utilities				37.0	75.4		112.4		
			TOTAL				(417.0)	(15358.5)		(15775.5)		
			FEED PEN OPERATIONS (NOT FARM CONNECTED)				112.7			112.7		
			FEED PEN OPERATIONS (FARM CONNECTED)				62.5	349.7		412.2*		
			DAIRIES-FARM CONNECTED- CHARGED TO				90.9	763.0		853.9*		** DO NOT INCLUDE IN TOTALS
			IRRIGATION WATER RIGHTS				(112.7)	(-0-)		(112.7)		
			SCHOOL SYSTEMS: ROSWELL					26.1		26.1		
			MISCELLANEOUS INDUSTRIAL & COMMERCIAL					(26.1)		(26.1)		
			Chaves County				1676.5	276.7		1953.2		
			Eddy County				125.8	674.7		800.5		
			TOTALS				(1802.3)	(951.4)		(2753.7)		
			TOTALS				(2332.0)	(16336.0)		(18668.0)		

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ROSWELL BASIN WATERMASTER
 BUDGET FOR THE 76TH FISCAL YEAR
 1987 - 1988

SALARIES:

Watermaster	\$ 35,412.00	
Assistant	18,900.00	
Secretary	12,864.00	
Aide - 6 months	9,450.00	
Aide - 6 months	6,750.00	
Temporary	<u>5,145.00</u>	
		\$ 88,521.00

BENEFITS:

Group Insurance	4,319.00	
Retirement	10,162.00	
FICA	6,489.00	
Workman's Compensation	600.00	
Unemployment Compensation	564.00	
Liability Insurance	<u>600.00</u>	
		22,734.00

TRAVEL:

Mileage and Fares	19,487.60	
Per Diem	<u>3,738.90</u>	
		23,226.50

POSTAGE		361.50
MAINTENANCE - RADIO COMMUNICATIONS		600.00
COMMUNICATIONS		693.00
RENT AND UTILITIES		<u>2,079.00</u>
TOTAL		\$138,215.00

It is anticipated that line items will vary, but that the total will not exceed \$138,215.00 for the 76th fiscal year.

Frank F. Rendon 6/9/87

Frank F. Rendon
 Chief, Management Services Division

	July	August	September	October	November	December	1987 LAST HALF	1987 YTD
SALARIES:								
Watermaster	2740.80	2740.80	2740.80	2740.80	4111.20	2877.92	117952.32	35862.08
Assistant Watermaster	1462.88	1462.88	1462.88	1462.88	2194.32	1506.72	9552.56	19111.47
Secretary	995.68	995.68	995.68	995.68	1493.52	1025.60	6501.84	13007.86
Other	1925.29	2383.87	2263.03	531.12	2403.83		9507.14	17959.19
Insurance, State Share	280.45	312.69	306.90	194.28	370.91	160.36	1625.59	3105.31
Social Security	497.29	521.23	520.45	409.84	782.56	396.59	3127.96	6145.49
Retirement	818.36	871.17	857.25	658.00	1410.48	748.24	5363.50	10233.36
Workman'S Compensation								
Unemployment								
Mileage, Gas, Maint. & Repairs	1736.24	1972.08	1796.30	1505.90	410.96	301.84	7723.32	17356.46
Per Diem	342.00	270.00	420.00	318.00	222.00	126.00	1698.00	3396.00
Liability Insurance								
Communications	57.75	57.75	57.75	57.75	57.75	57.75	346.50	689.46
Rent	173.25	173.25	173.25	173.25	173.25	173.25	1039.50	3087.96
Maint., Fixt., Supplies								395.30
Service to other Agency								
TOTALS	11029.99	11761.40	11594.29	9047.50	13030.78	7374.27	64138.23	130849.94

SUMMARY

Metered use of water during 1987 resulted in an average use, for irrigation purposes, of 2.41 acre-feet per water right acre. The total quantity diverted for all uses was the second lowest since metering began in 1967.

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.