

ROSWELL BASIN WATERMASTER

33rd

ANNUAL REPORT

1998

RAMON L. TORRES, WATERMASTER

1900 WEST SECOND STREET

ROSWELL, NEW MEXICO 88201

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INTRODUCTION

On January 10, 1966 Partial Judgement 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:

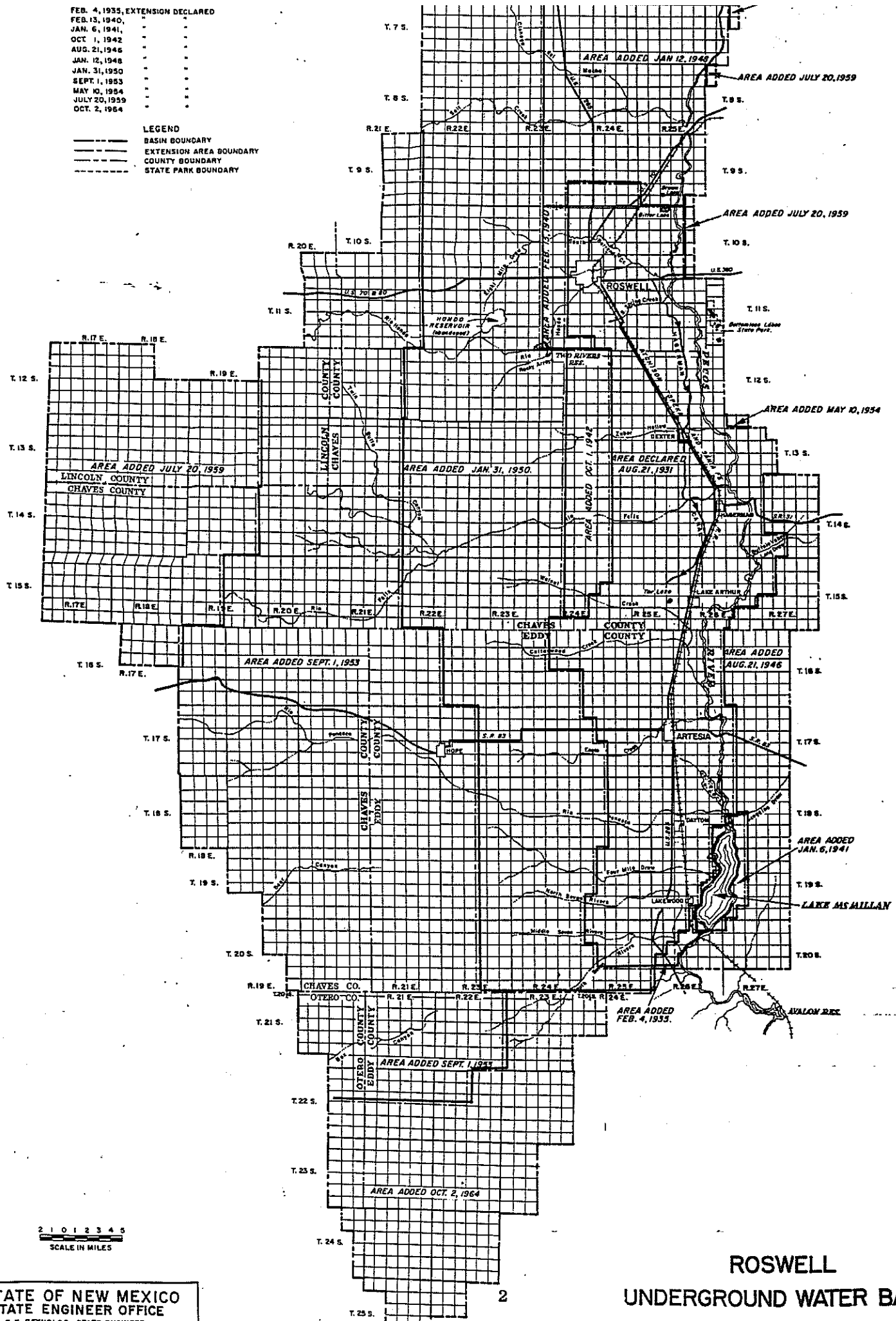
"5. The State Engineer shall appoint and employ a Watermaster and such assistants as are necessary in the administration and enforcement of this Judgement and Decree, provided that the appointment of the Watermaster shall be subject to the approval of the Court. Such Watermaster shall be appointed to 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 Ramon L. Torres was appointed by the Honorable Harl D. Byrd, District Judge, on September 18, 1995.

This is the 33rd Annual Report of the Watermaster's Office.

FEB. 4, 1935, EXTENSION DECLARED
 FEB. 13, 1940,
 JAN. 6, 1941,
 OCT. 1, 1942
 AUG. 21, 1946
 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



2 1 0 1 2 3 4 5
 SCALE IN MILES

STATE OF NEW MEXICO
 STATE ENGINEER OFFICE
 S.E. REYNOLDS, STATE ENGINEER

ROSWELL
 UNDERGROUND WATER BASIN

GENERAL

The Roswell Basin Watermaster administers the diversion of water under the Adjudication Decree in an area existing, 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 92.9% of the total water diverted. Municipal use of water accounts for about 5.6% and about 1.5% 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 (PVACD) 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. 20294 and No. 22600 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 Judge Harl Byrd served during the 1998 reporting period.

Personnel of the Watermaster Office at the beginning of the 1998 season consisted of Ramon L. Torres, Roswell Basin Watermaster; Rita Valdez, Secretary-Clerk, and David Thomas, Assistant Roswell Basin Watermaster. On April 13th, 1998, Dulce Renee Romero and Philip Fields transferred from the Water Rights Division to the Watermaster Office to assist during the irrigation season. On July 24th, 1998 Dulce Renee Romero left the Office of the State Engineer. Phillip Fields remained in the Watermaster's Office through December 31st, 1998 to assist with 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 Office of the State Engineer annually submits to PVACD, a budget for the operations of the Watermaster Office and the PVACD Board then moves the Court approve or modify the budget submitted. PVACD reimburses the Office of the State Engineer for monthly expenses incurred. The funds of PVACD are derived from a levy of lands within the district.

METERING PROGRAM

Three hundred and sixty two meters were found inoperative during the 1998 irrigation season. Based on a total of 1405 meters installed on irrigation, feed pen, dairy, and Hagerman Canal wells, this is 25.8% as compared to 23.9% found inoperative in 1997. Each meter was read an average of 8.0 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 1998 irrigation season, are listed as follows:

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MAKE OF          % OF          TOTAL          MAKE          % OF TOTAL
METER           TOTAL         TOTAL          IN-OP        IN-OP        INSTALLED
=====
MCCROM          1287.00      91.60          341.00      26.50        24.27
ROCKWELL        79.00        5.62           17.00       8.86         0.50
SPARLING        30.00        2.14           13.00      43.33        0.93
MISC.           9.00         0.64            1.00      11.11        0.07
TOTALS          1405.00     100.00         362.00
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Adjustments in amount of water diverted through in-operative meters for 1998 totaled 6656.8 acre-feet of which 5178.8 acre-feet was Artesian underground water and 1478.0 acre-feet of which was Shallow underground water diverted for irrigation use.

The problem remains of having a large percentage of the water meters inoperative at the onset of spring pumping.

Primary 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 1998 water year.

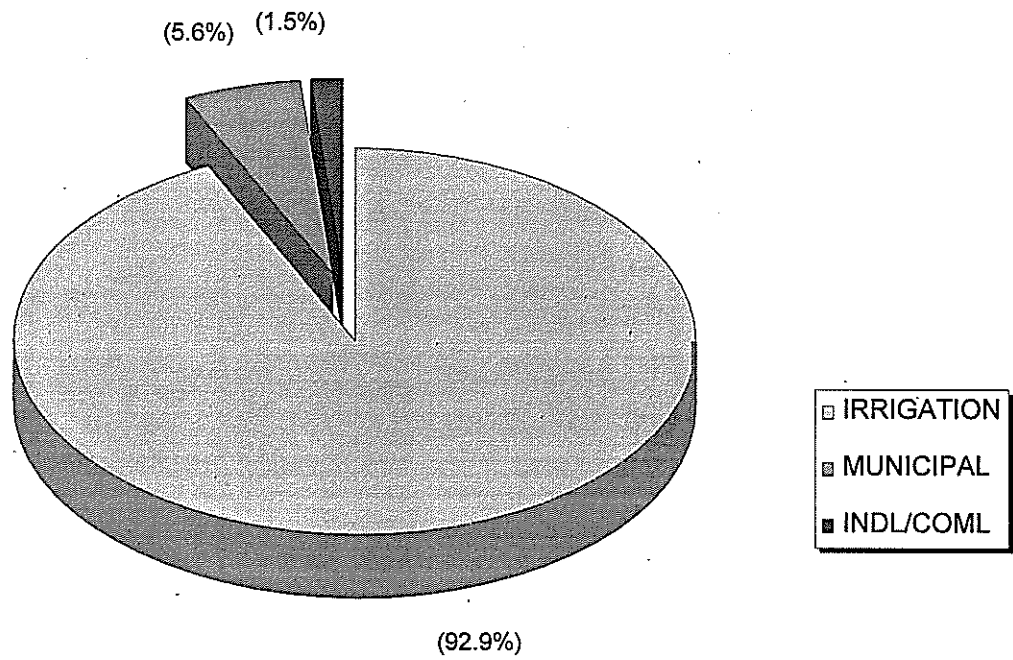
VIOLATIONS ACTIONS

There were not any instances of overuse in 1998

ACCOUNTING PROCEDURE REVISION

Beginning in 1998 total diversion of water shown for commercial and industrial use and percentages there of, will be based on "actual" diversions. In the past diversion amounts were multiplied by 1.43 or 1.67 where applicable, to compensate for carriage loss and/or lack of return flow. Although this is the amount charged against the water right it is not actual diversion amounts. This pertains to commercial or industrial operations that are farm connected.

PERCENT OF WATER USED IN 1998 FOR
IRRIGATION, MUNICIPAL, INDUSTRIAL & COMMERCIAL



USE OF WATER IN THE ROSWELL BASIN IN 1998

The total water diverted in the Roswell Ground Water Basin for the water year 1998 (November 1, 1997 - October 31, 1998) under the administrative jurisdiction of the Roswell Basin Watermaster, was 396,361.67 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 second year of the seventh five-year period was 1998.

Of the total diversion, 269,539.00 acre-feet (68.0%) was from the Artesian source, 113,789.3 acre-feet (28.7%) was from the Shallow source and 13,033.37 acre-feet (3.3%) was diverted from combined underground and surface sources primarily under the Hagerman Canal and the Rio Hondo.

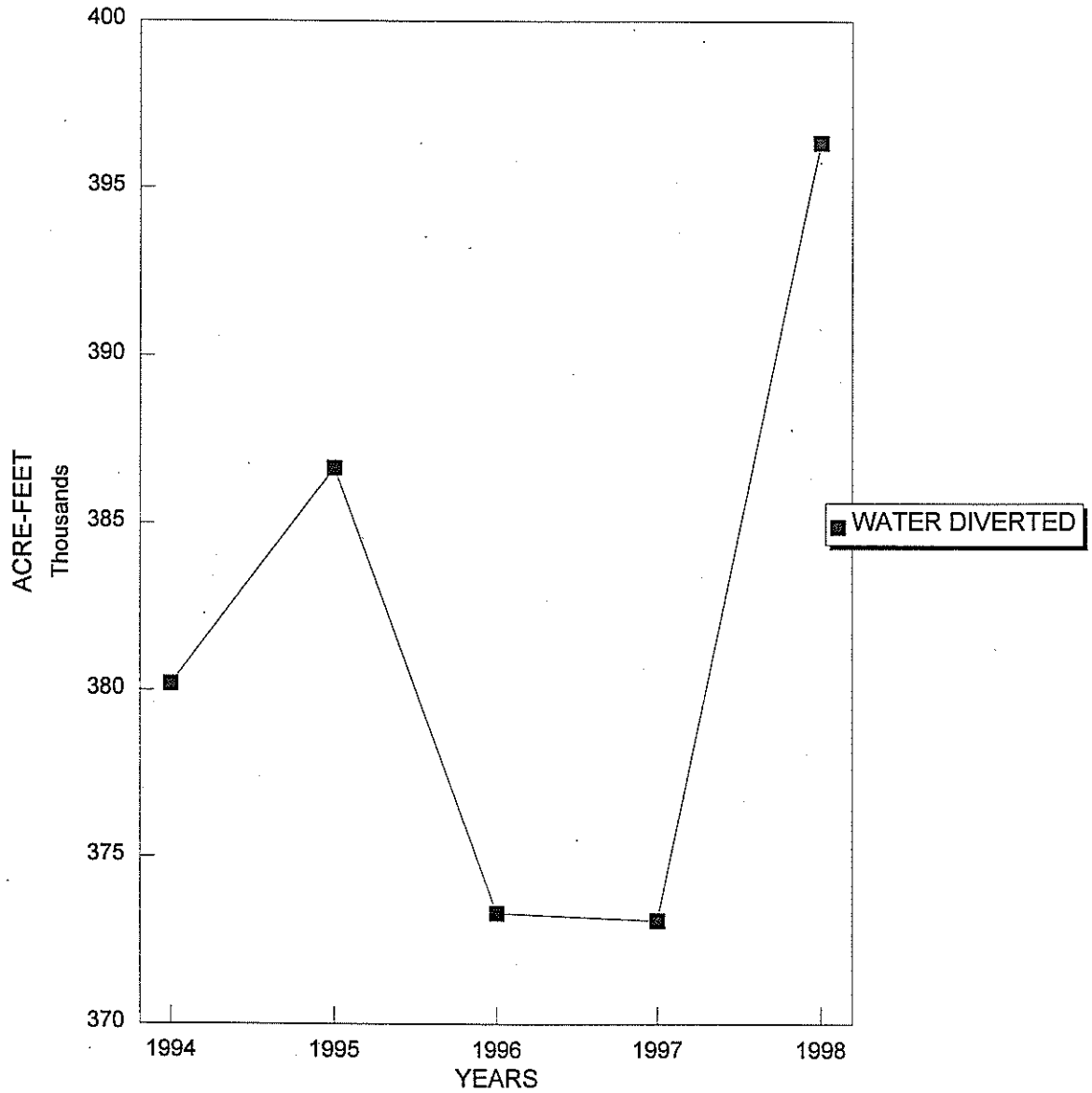
Irrigation use accounted for 92.9% of the total diverted, Municipal type use accounted for 5.6% and Miscellaneous, Industrial and Commercial uses accounted for the remaining 1.5%.

The irrigation use on 113,691.05 equivalent water right acres (acres as originally adjudicated) permitted an average diversion of 3.24 acre-feet per acre for the basin as a whole varying from a high of 3.52 acre-feet per acre in the Artesia area to a low of 2.33 acre-feet per acre in the Upper Rio Felix.

The equivalent acreage figures and diversion figures do not include unmetered stock and domestic uses of water right acreage retired from irrigation under the program of the PVACD. There are eight hundred and sixty eight farming units.

FIVE YEAR COMPARISON

TOTAL DIVERSION



TABULATION OF ANNUAL WATER DIVERTED

1967-1998

1967	371,250.60	130,132.70	2.85	14,528.30	1,582.60	387,361.50
1968	323,917.10	128,245.00	2.53	13,596.30	1,611.10	339,124.50
1969	345,087.10	128,330.60	2.69	15,586.90	899.10	361,573.10
1970	358,686.80	126,002.40	2.85	15,888.50	916.30	375,491.60
1971	384,228.10	126,121.00	3.05	16,439.60	3,082.00	403,749.70
1972	367,363.60	125,233.80	2.93	14,821.20	2,398.90	384,583.70
1973	386,288.80	125,293.00	3.08	15,335.00	2,983.00	404,606.80
1974	392,413.30	124,240.10	3.16	18,318.50	3,646.30	414,378.10
1975	368,512.60	123,740.70	2.98	16,145.90	3,083.90	387,742.40
1976	419,491.90	123,170.10	3.41	18,182.20	3,271.90	440,946.00
1977	387,858.00	122,703.70	3.16	18,422.70	3,071.40	409,352.10
1978	359,011.00	122,233.70	2.94	15,569.70	3,270.70	377,851.40
1979	355,163.80	122,002.40	2.91	16,181.90	2,853.00	374,198.70
1980	360,484.40	121,763.30	2.96	17,804.30	2,388.60	380,677.30
1981	317,225.20	121,530.00	2.61	14,558.10	2,340.80	334,124.10
1982	377,179.40	120,932.00	3.12	18,292.10	2,747.20	398,218.70
1983	356,836.00	120,277.70	2.97	19,312.30	2,818.30	378,966.60
1984	304,691.90	119,415.20	2.55	19,246.40	2,424.10	326,362.40
1985	293,465.10	119,333.30	2.46	17,494.40	2,863.70	313,823.20
1986	259,739.90	118,634.10	2.19	17,800.60	2,673.00	280,213.50
1987	285,389.60	118,324.90	2.41	15,775.50	2,892.50	304,057.60
1988	306,838.70	115,696.10	2.65	16,734.60	4,887.40	328,460.70
1989	364,436.70	115,088.00	3.17	17,771.40	4,566.50	386,774.60
1990	356,612.10	115,433.00	3.09	20,569.60	4,733.20	381,914.90
1991	314,893.30	115,378.30	2.73	18,887.10	9,768.90	343,549.30

1992	305,168.40	115,510.40	2.64	17,765.70	4,389.80	327,323.90
1993	356,286.10	115,456.10	3.09	23,841.70	6,215.90	386,343.70
1994	352,106.70	114,402.90	3.08	21,024.60	7,060.00	380,191.30
1995	356,806.30	114,507.90	3.12	24,009.90	5,827.80	386,644.00
1996	345,278.53	113,481.60	3.04	22,245.70	5,781.10	373,305.33
1997	346,681.00	113,568.02	3.05	21,076.10	5,316.80	373,073.90
1998	368,057.77	113,691.05	3.24	22,308.50	5,995.40	396,361.67
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2019						
2020						
2021						

MUNICIPAL, INDUSTRIAL & COMMERCIAL USE				
FOR 1998				
	PUMPAGE	IN	ACRE FEET	
MUNICIPAL & MUNICIPAL TYPE USE	SHALLOW	ARTESIAN	TOTAL	REMARKS
ROSWELL		13,192.20	13,192.20	
DEXTER	540.60	449.50	990.10	
HAGERMAN		532.60	532.60	
LAKE ARTHUR	7.60	64.70	72.30	
ARTESIA		4,386.60	4,386.60	
HOPE		59.40	59.40	
CO OPS		2,718.10	2,718.10	
DOMESTIC UTILITIES	58.10	199.30	257.40	
SCHOOL SYSTEMS	12.10	87.70	99.80	DEXTER & ROSWELL
TOTAL MUNICIPAL USE	618.40	21,690.10	22,308.50	
COMMERCIAL DAIRY & FEED PEN USE	SHALLOW	ARTESIAN	TOTAL	
FEED PEN OPERATIONS (N. F. C.)	2.90	112.60	115.50	Not Farm Connected
FEED PEN OPERATIONS (F. C.)	79.50	0.00	79.50	Farm Connected
DAIRIES (F. C.) **	7,757.10	23,279.80	31,036.90	**Included in IRR. Total
DAIRIES (N. F. C.)	654.40	613.10	1,267.50	Not Included in IRR. Total
TOTALS	736.80	725.70	1,462.50	
MISC. INDUSTRIAL & COMMERCIAL	SHALLOW	ARTESIAN	TOTAL	
CHAVES COUNTY	3,041.90	144.60	3,186.50	
EDDY COUNTY	53.60	1,292.80	1,346.40	
TOTALS	3,095.50	1,437.40	4,532.90	
TOTAL ALL COMM. & INDUST.	3,832.30	2,163.10	5,995.40	
TOTAL ALL COMMERCIAL & INDUSTRIAL USE	4,450.70	23,853.20	28,303.90	** EXCLUDES FARM CONNECTED DAIRIES

1998

AREA BREAKDOWN

DESCRIPTION	ACRE-FEET	PUMPAGE - - IN ACRE FEET				APP. RATE
		SURF	SHALLOW	ARTESIAN	TOTAL	
NORTHERN EXTENSION	29,666.63		0.00	24,303.20	24,303.20	2.46
ROSWELL - EAST GRAND PLAINS	102,768.98		27,525.00	79,242.00	106,767.00	3.12
DEXTER - HAGERMAN	88,873.32	4,707.97	38,495.20	50,689.10	93,892.27	3.17
NON SUPPLEMENTAL CANAL USE		8,325.40			8,325.40	
COTTONWOOD AREA	59,162.19	0.00	18,482.40	48,652.20	67,134.60	3.40
UPPER RIO FELIX	2,281.00	0.00	0.00	1,773.70	1,773.70	2.33
ARTESIA AREA	49,618.92		20,793.40	37,397.80	58,191.20	3.52
LAKWOOD - SEVEN RIVERS	8,702.10		4,042.60	3,627.80	7,670.40	2.64
TOTAL ALL AREAS	341,073.14	13,033.37	109,338.60	245,685.80	368,057.77	3.24

ROSWELL BASIN WATER MASTER
BUDGET FOR FISCAL YEAR 1999
JULY 1998 - JUNE 30, 1999

SALARIES:	110,010.00
BENEFITS:	43,065.00
GASOLINE & OIL:	2,500.00
VEHICLE MAINT. & REPAIR:	2,000.00
SUPPLIES:	350.00
POSTAGE:	800.00
RENT & UTILITIES:	17,000.00
COPIER & POSTAGE MACHINES	500.00
TELEPHONE:	1,500.00
TOTAL BUDGET	177,725.00

IT IS ANTICIPATED THAT OBJECT CODES WIL VARY, BUT THAT THE TOTAL MUST NOT EXCEED \$ 177,725
FOR FISCAL YEAR 99



JOHN W. GOELLER, DIRECTOR
ADMINISTRATIVE SERVICES DIVISION

SUMMARY

Metered use of water during 1998 resulted in an average use, for irrigation purposes, of 3.24 acre-feet per water right acre. The total quantity diverted for all uses was the second highest 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 satisfactorily.