

## 12.9. POPULATION YESTERDAY AND TODAY

### 12.9.1. Introduction

Population statistics play an important part in water planning. People use water in a variety of ways, all of which change water from a primal state. Trends can be noted. As discussed in other sections, until fairly recently land use in the region depended solely on surface water. Surface water users are sensitive to drought conditions, and must temper usage accordingly.

As New Mexico has changed from being overwhelming rural, water usage has changed as well. Prior to having the ability to drill deep, accessing deeper aquifers, groundwater depletion was not a factor in the overall water budget. However, beginning in 1960, groundwater has been declining in the Albuquerque basin. According to the City's Water Conservation Office's web site, the water table has declined 160' in some places.<sup>1</sup>

Except domestic well users, in order to pump more groundwater, since the pumping affects the surface water supply, groundwater users have to obtain existing surface water rights. The rationale is that the surface water will replenish the water being removed. For example, Rio Rancho relies on groundwater for its public water supply and Intel relies on groundwater for its industrial processes. Since all of the surface water has been allocated, surface water rights must come from other users and perhaps from elsewhere to meet additional needs. Population growth and new urban uses in these downstream areas then affect the water resource and thus water planning in the subregions.

Compiling population statistics for the subregion was difficult because the boundaries of the two watersheds do not coincide with the boundaries used by standard sources (ie., U.S. Census) for population data collection. This section provides a brief description of the gross historic and current population statistics for portions of this subregion. Further refinement of these numbers is recommended as a part of the next phase of the planning process – utilizing written surveys to resident households, analyzing permits issued by the Construction Industries Division, and other sources.

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<sup>1</sup>*Albuquerque's Aquifer and How We Meet The Challenge*, [www.cabq.gov/waterconservation/insert.html](http://www.cabq.gov/waterconservation/insert.html). In addition to being a factor now, the consequences of long-term pumping by urban centers such as Albuquerque and Rio Rancho are not completely known. The decline is the subject of a recent USGS report, summarized in a map report. Contours of recent water levels were mapped, along with the ranges of estimated water-level change. [Estimated water-level declines in the Santa Fe Group aquifer system in the Albuquerque area, central New Mexico, predevelopment (pre-1961) to 2002. By Laura M. Bexfield and Scott K. Anderholm, WRI 02-4233, January 16, 2003] USGS also studied the situation under three different scenarios. The maps tell the story. By using surface water, the decline in aquifer levels slows down so that after 40 years the water table is only down by 110' but under nearly all of Albuquerque. (Laura M. Bexfield Douglas P. McAda, Simulated effects of ground-water management scenarios on the Santa Fe Group aquifer system, Middle Rio Grande Basin, New Mexico, 2001-40. June 5, 2003, WRI 03-4040, 39 pages.)

### 12.9.2. Population Past and Present

Population statistics are most readily available for counties and incorporated communities. Six communities are incorporated in Sandoval County - Jemez Springs and San Ysidro are in the Río Jemez watershed, while Cuba is in the Río Puerco. The other three communities --Bernalillo, Corrales and Rio Rancho-- are found in the Río Grande valley. Most of the population in the Río Puerco and Río Jemez drainages reside within Sandoval County. The County includes unincorporated communities outside the subregion - both the Placitas area and the Rio Grande from Cochiti to Bernalillo have seen a substantial increases in population. Data from different sources may report differently, resulting in different data.

Use has been made of the data available from the US Census, UNM Bureau of Business and Economic Research (BBER), and Mid-Region Council of Governments. Of note is the "Demographic and Population Study for Regional and Statewide Water Planning Population Projections for 16 Regions - July 1, 2000 to July 1, 2060," by Dr. Adelamar Alcantara and Elvira Lopez, University of New Mexico, Bureau of Business and Economic Research (October 2003) and prepared for the Regional Water Planning Program, New Mexico Interstate Commission, and available at [www.ose.state.nm.us/water-info/NMWaterPlanning/population-report.pdf](http://www.ose.state.nm.us/water-info/NMWaterPlanning/population-report.pdf).

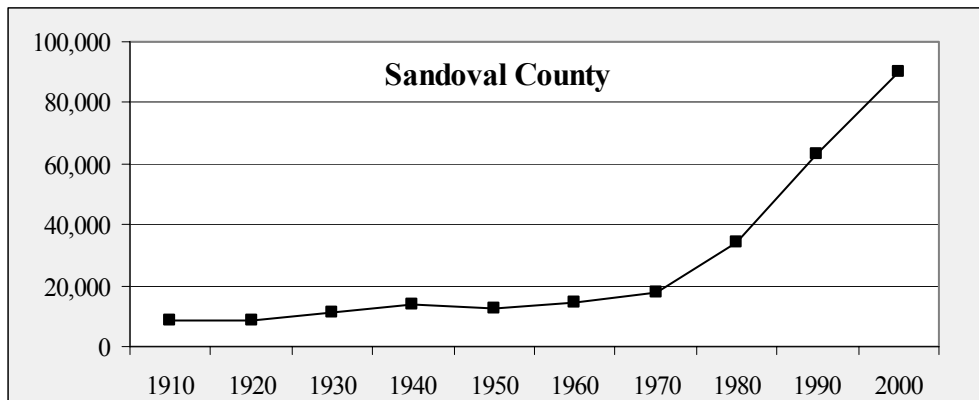
Table 12.9-1 shows growth within Sandoval County, as well as in the State. Figure 12.9-1 illustrates the growth trend, using the figures in the table.

**Table 12.9-1 Population Growth For The State and Sandoval County, 1910 to 2000**

	<b>1910 (April 15)</b>	<b>1920 (Jan. 1)</b>	<b>1930 (April 1)</b>	<b>1940 (April 1)</b>	<b>1950 (April 1)</b>
New Mexico	327,301	360,350	423,317	531,818	681,187
Sandoval County	8,579	8,863	11,144	13,898	12,438
	<b>1960 (April 1)</b>	<b>1970 (April 1)</b>	<b>1980 (April 1)</b>	<b>1990 r/ (April 1)</b>	<b>2000 (April 1)</b>
New Mexico	951,023	1,017,055	1,303,303	1,515,069	1,819,046
Sandoval County	14,201	17,492	34,400	63,319	89,908

Source: Bureau of Business and Economic Research (BBER), University of New Mexico

**Figure 12.9-1 Population Growth in Sandoval County, 1910 to 2000**



Río Rancho, located just south of where the Río Jemez enters the Río Grande, accounts for much of the sharp growth curve seen after 1970. Table 12.9-2 provides a comparison of growth for the incorporated communities in Sandoval County. According to US Census statistics, in 1980, Río Rancho accounted for 29% of the County's population, in 1990, it was 51% and in 2000 it grew to 58%. Together, the communities of Bernalillo, Corrales and Río Rancho accounted for 22% of the County's population in 1970, 46% in 1980, 69% in 1990 and 73% in 2000. In comparison, the population in the subregions was 11% of the 2000 County Census, but steadily increasing.

**Table 12-9.2 Population for Incorporated Communities in Sandoval County, 1950-2000**

Place	1950 (April 1)	1960 (April 1)	1970 (April 1)	1980 (April 1)	1990 r/ (April 1)	2000 (April 1)
Jemez Springs	na	223	356	316	359	375
San Ysidro	na	na	182	199	345	238
Cuba	na	na	415	609	750	590
Bernalillo	1,922	2,574	2,016	2,988	5,732	6,611
Corrales	na	na	1,776	2,791	5,503	7,334
Río Rancho		na	na	9,985	32,551	51,765

na Not available.

Note: Figures shown are decennial census figures.

Bureau of Business and Economic Research (BBER), University of New Mexico, Last Revised: 5/8/01

As shown in Table 12.9.3, 71% of Sandoval County's population growth has come from new comers. No distinction is made between who comes from another county, such as Bernalillo, as opposed to comes from outside the Middle Río Grande region or even from outside the state.

**Table 12.9-3 New Mexico and MRG Components of Change: 1990 - 2000**

	Census 1990	Census 2000	Total Change	Natural Increase	Residual or Net Migrant	Share of Migration in Total Change
New Mexico	1,515,041	1,819,046	304,005	158,212	145,793	48%
Bernalillo	480,577	556,678	76,101	44,770	31,331	41%
Sandoval	63,319	89,908	26,589	7,832	18,757	71%
Valencia	45,235	66,152	20,917	4,982	15,935	76%
<b>MRG</b>	<b>589,131</b>	<b>712,738</b>	<b>123,607</b>	<b>57,584</b>	<b>66,023</b>	<b>53%</b>

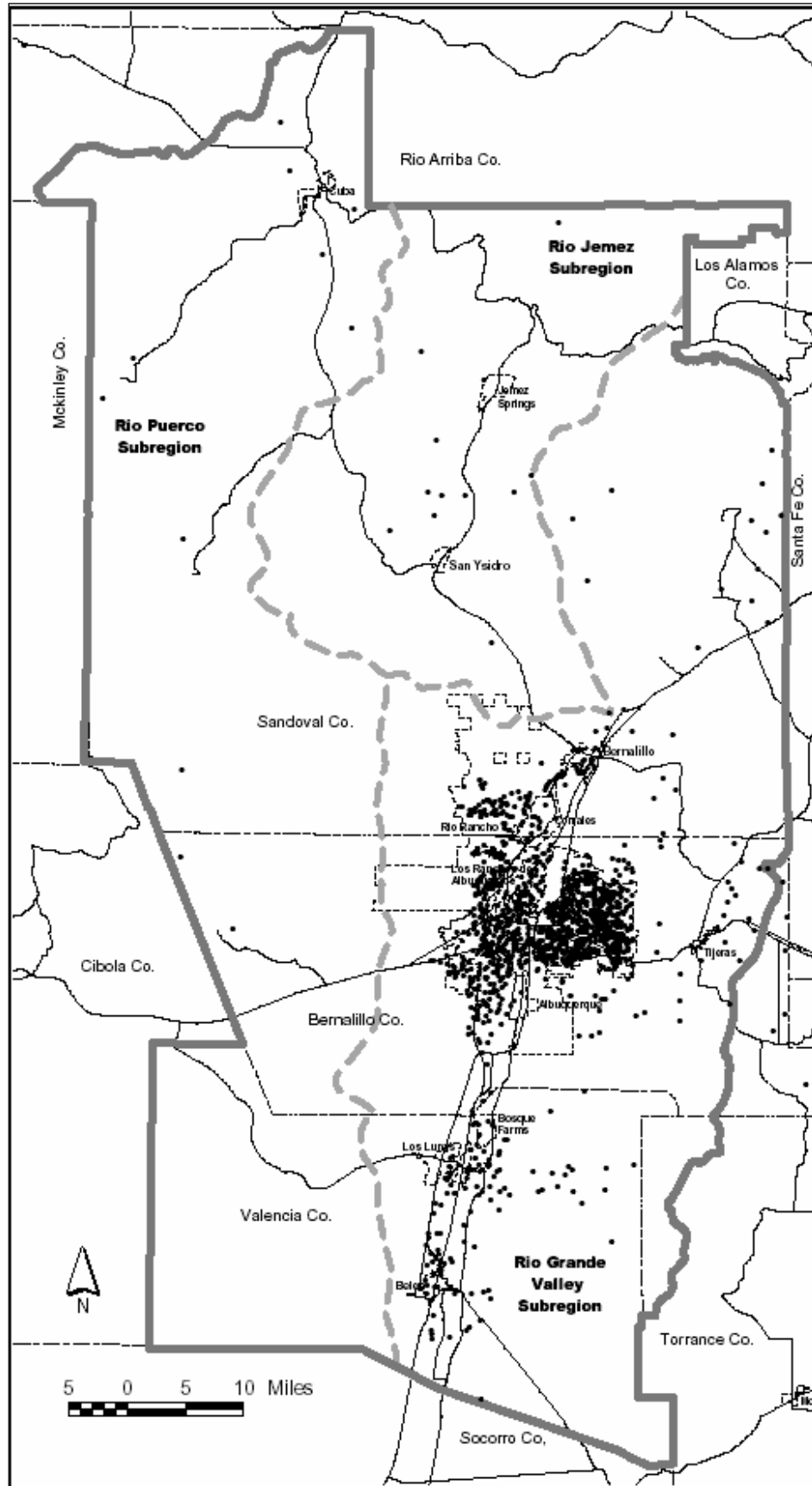
Source: University of New Mexico, Bureau of Business and Economic Research. Released August 2002.

The metropolitan areas continue to gain in comparison to the rest of the state. As shown in Table 12.9-4, approximately 57% of the State resides within the Metropolitan Statistical Areas (MSAs) of Bernalillo, Sandoval and Valencia counties, Doña Ana County, and Los Alamos and Santa Fe counties, compared to less than 40% in 1950. However, this may mask the ruralness within the MSA counties. Figure 12.9-2 shows the MRG 1995 population density on a map.

**Table 12.9-4 New Mexico, Metro and Nonmetro Population 1950 to 2000**

1950	1960	1970	1980	1990	2000
39.45%	45.73%	50.50%	51.78%	55.55%	56.90%

Source: BBER



**Figure 12.9-2  
1995 Population  
Dot Density Map**

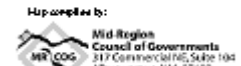
Legend: One Dot  
= 500 Persons

Population data for  
Sandoval,  
Bernalillo and  
Valencia Counties

Source: 1995  
Socioeconomic  
Estimates for Data  
Analysis Subzones  
in State Planning  
and Development  
District 3, TM-  
126, MRGCOG,  
1996.

Map Projection:  
Transverse  
Mercator  
Datum: NAD 83  
Date: 5/4/01

Map compiled by:



Certain tribal census data is available, shown in Table 12.9-5. To'hajiilee, a Navajo community located in the Bernalillo County portion of the Río Puerco, reports 1,727 inhabitants.<sup>2</sup> The Navajo Department of Water Resources includes the population for Torreon, Ojo Encino and Star Lake Chapter Houses in information provided in Section 9.9 of Region 2 Regional Water Plan. In the report, 1990 Census figures are used, showing the population to be 3,797.

**Table 12.9-5 Jemez and Zia Pueblos, Population change**

Geographic area	1990 <sup>1</sup>	2000
Jemez Pueblo, NM	1,750	1,953
Zia Pueblo and Off-Reservation Trust Land, NM	637	646
Santa Ana Pueblo**	593	487

\*\* No distinction is made between the population in the Río Jemez and the Río Grande valleys. Recently, the Army Corps reported that the population of the Pueblo of Santa Ana was approximately 850, with the majority residing in three communities along the east side of the Río Grande. *Final Environmental Assessment For The Proposed Construction Of A Low-Head Weir, Río Jemez, The Pueblo Of Santa Ana, New Mexico*, U.S. Army Corps of Engineers, Albuquerque District, August 2003

<sup>1</sup> 1990 census counts are as published in 1990 census reports and thus do not include any changes published subsequently due to boundary changes or to the Count Question Resolution program.

Source: U.S. Census Bureau, Census 2000 Redistricting Data, Summary File, Table PL1, and 1990 census.

Table Prepared by: Bureau of Business and Economic Research, University of New Mexico

Table 12.9-6 shows the population by data analysis sub-zones (DASZ), giving an indication of where the population is located, other than within the boundaries of an incorporated community. Figure 12.9-3 shows the location of the DASZs.

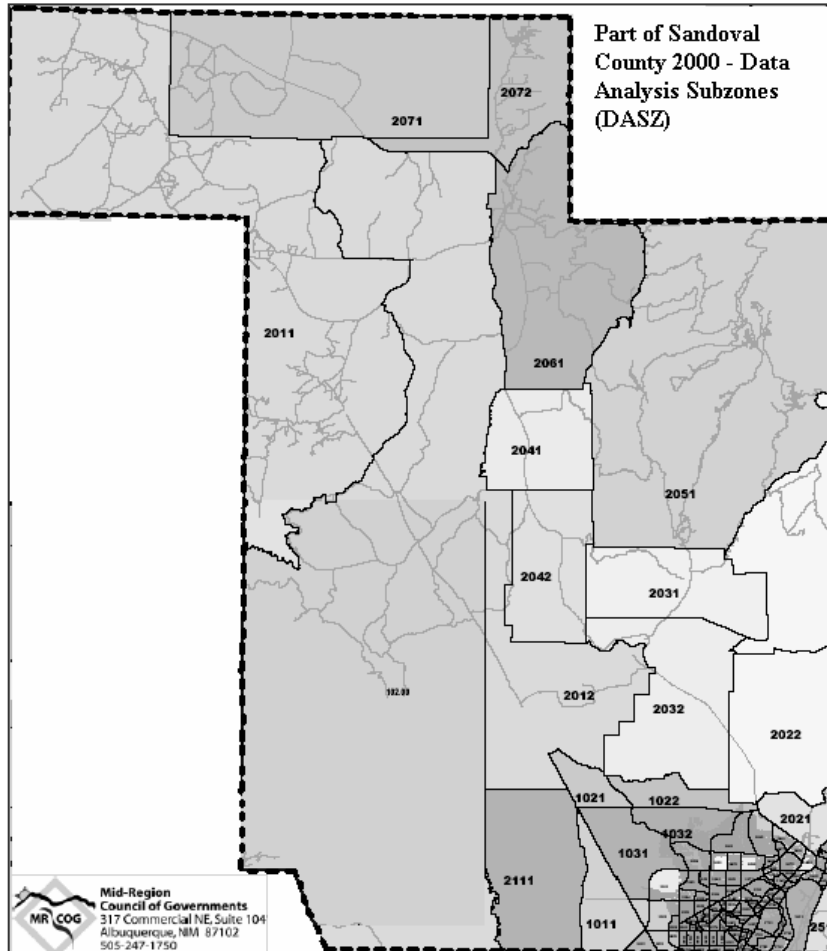
**Table 12.9-6 2000 Data For Data Analysis Subzones (DASZs)**

Geographic Name	DASZ	Total Acres	Total Population
Torreon	2011	302,665	2,958
San Luis	2012	572,404	115
La Ventana	2041	36,607	0
Cuba	2061	93,031	1,478
Jicarilla	2071	135,990	11
La Jara, Regina	2072	40,866	454
Western Rio Rancho	2111	62,124	17
		<b>1,243,687</b>	<b>5,033</b>
Western Rio Rancho	1011	16,265	103
Western Rio Rancho	1012	1,460	17
Cabazon	1021	7,943	0
Western Rio Rancho	1022	10,242	0
		<b>35,910</b>	<b>120</b>
Jemez	2031	43,254	1,958
San Ysidro & Zia	2032	62,082	891
Salado	2042	41,500	0
Jemez Springs	2051	303,312	1,956
		<b>450,148</b>	<b>4,805</b>

<sup>2</sup> The subregional water planning to date has been confined to Sandoval County.

Note: DASZ boundaries are generally bounded by major roads and other features that inhibit travel. In some cases, a major change in land use will be reason for a DASZ boundary. Generally, DASZs are subdivisions of Census Tracts. Western Rio Rancho is included as it is within the Río Puerco drainage. Source: DASZ Projections, Mid-Region Council of Governments--January 2003. DASZ information and projections courtesy Dave Abrams, MRCOG, 11-6-03

**Figure 12.9.3 Map of Data Analysis Subzones (DASZs)**



BBER reports that Sandoval County contains 3,712 square miles, with the subregions making up more than 75% of the area, while approximately 11% of the population reside there. The growth of Rio Rancho dwarfs the other incorporated communities in the County, and is a major factor in the options and alternatives available for future water resource management in the Río Puerco and Río Jemez subregions.

The DASZs reflect that not all of the population is located within incorporated communities. Nor is all of the water provided within such. Several Mutual Water Domestics provide service to unincorporated communities and water is allocated among *acequia parciales*. New subdivisions within the region may compete with traditional and tribal communities.

Many entities indicated that the growth they are experiencing is not reflected in the Census numbers. The Jemez Springs Water Cooperative issues a steady stream of new hookups. Yet the census information in only shows an increase of 26 people between 1990 and 2000 in Jemez Springs, and another 11 to July 2002. Likewise, in a recent proposal by the Pueblo of Jemez, it was stated that "The village of Jemez Pueblo is home to nearly 3,000 Jemez Pueblo members." (Environmental Assessment Of Environmental Quality Incentives Program For Pueblo Of Jemez Tribal Trust Lands GPA 2002.) The census shows 1,953.

Additional sources of data are necessary to provide an accurate picture of water usage today and trends for tomorrow. Further refinement of these numbers is recommended as a part of the next phase of the planning process – utilizing written surveys to resident households, analyzing permits issued by the Construction Industries Division, and other sources. A source of information would be the Domestic Water Association records of hookups (Cañon and Ponderosa indicated 600 people). Cross checking those figures with the Jemez Valley Electric Co-op hook-ups could show seasonal usage. Second home residents, for example, will not be shown with census tract data but are clearly a factor when water usage is considered.

### **12.9.3. Population growth in Rio Rancho and Albuquerque**

"The majority of people, businesses, industries, as well as agricultural fields are located within a few miles of the Rio Grande itself; therefore, the majority of water withdrawn and consumed is within the Middle Rio Grande Valley subregion." ("Historical And Current Water Use In The Middle Rio Grande Region," John Shomaker & Associates, Inc. & Pioneerwest, June 2000).

Even if population increase is not a factor within a region itself, increases elsewhere may well be a factor in water planning within the region. Population trends in the Río Puerco and Río Jemez may not fully indicate the stress that the resource is already under due to population trends in the region, nor what it might face in the future.

A clear example is the population growth of Albuquerque and Rio Rancho. Albuquerque grew from 11,020 in 1910 to 448,607 residents in 2000. Rio Rancho, which wasn't reported until 1980, grew from 9,985 to 51,765 in 2000. "The Middle Rio Grande Water Planning Region doubled its population in 30 years. In 1970, 353 thousand (or about 35%) of the state population lived in the Middle Rio Grande Region. In 2000, this number expanded to over 700 thousand people or about 40 percent of the state population. Between 1990 and 2000, the annual average population growth rate for the region was 1.9 percent compared to 1.83 for the state. For the same period, Sandoval County and Valencia County had even much higher growth rate than the region as a whole. The annual average population growth rate for Sandoval County was 3.57 percent and Valencia County was 3.80 percent." (Alcantara, 2003) Growth in Sandoval County has continued. BBER reports that between April 2000 and July 2002, the incorporated communities in Sandoval County grew by 5,378, 90% of which was in Rio Rancho.

Particularly, the Río Jemez watershed perceives the increase in population and water usage in the Rio Rancho - Town of Bernalillo area, and to a lesser extent the growth in Albuquerque, as a driving factor in their water plan. One example highlights why this is the case:

Rio Rancho on Wednesday set the stage for buying 196 acres of land and 172 acre feet of water rights in the Jemez Valley needed for future city growth and development.

The city two years ago was given permission by the state to double the 12,000 acre-feet of water it is allowed to pump annually, but only if water rights were paid for in advance.

"Rio Rancho Purchase of 196 Acres, Water Rights Clears Hurdle,"  
Arley Sanchez, Albuquerque Journal, Friday, March 28, 2003.

Rio Rancho's proposed transfer, currently under protest, would have an immediate impact upon San Ysidro, from where the water will come. The water represents 20% of what has been adjudicated to the users on the Ditch (see section 11 on Issues and Constraints), while it represents 1.67% of the water Rio Rancho is seeking. In order to recoup the \$1.9 million the City will spend for the water rights, the land may be leased or sold. The land will be fallowed when the rights are employed by the City as an offset to their pumping. San Ysidro then finds itself at a cross-roads. Wanting to stay rural, it has to manage the resultant changes another community imposes in its need of water for future growth and development. Such pressures may become the norm as water availability becomes scarcer. In order to double the amount of water allowed to pump, Rio Rancho will be seeking water wherever available. As it does, it will be competing with other water users all along the Rio Grande.