



CHAPTER II A PROFILE OF LA PLATA COUNTY¹

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 3. SOCIO-ECONOMIC DEMOGRAPHICS
- ENVIRONMENTAL PROFILE – *A Contribution from Tyler Scheid, Ecosphere Environmental Consulting Services*

1. SUMMARY

La Plata County has three major communities, the City of Durango (the county seat), and the Towns of Bayfield and Ignacio. Historically an area home to Native Americans and Latinos, La Plata County developed into a "traditional west" community in the late 1800's because of Anglo development of mining and land and cattle operations. Since the 1970s, La Plata County has been in transition from a traditional rural county to a more urban environment in which tourism is the number one industry. People moving in for quality of life issues drove population growth in the 1990s. The natural environment, and the amenities it provides, are behind much of the growth and have become the larger region's chief economic asset. The county supports a commercial airport, a two-year and a four-year college, a ski resort, casino, national forest, and natural gas and coal industries.

Land

The county is comprised of 1,083,085 acres (1,692 sq. miles). Of these, 43% are private lands, 16% are tribal lands (Southern Ute and Ute Mountain Ute), and 41% are state and federal lands. Agricultural land comprises 25% of the total land in the county.² The foremost issues that the county currently faces are population growth and coal bed methane development. Implications of such growth include increased demand for services; infrastructure needed to serve development; changes to the environment; loss of agricultural lands and open space; and impacts on the overall quality of life in the county. Planners (county, city, and tribal) are in the process of developing strategies to cope with these issues.

Population

In 2002 the county's population was 46,239. According to the 2000 Census the median age was 35.6. Males comprised 51% and females comprised 49% of the total population. The average household size was 2.43 people. Between 1990 and 2000, La Plata County averaged 3.13% annual growth, with most of the growth occurring in Durango and in the unincorporated areas of the county. The City of Durango grew by an average of 1.13% annually; in the Town of Bayfield there was 3.58% average annual population growth in the last decade. In the Town of Ignacio, population has been slowly declining but with the advent of casino gambling on the Southern Ute Reservation and other expanding tribal enterprises, growth is probably inevitable.

¹ Much of the information in this section comes from La Plata County CEDS Report & Operation Healthy Communities – Pathways to Healthier Communities Index (<http://www.operationhealthycommunities.org/path.html>) unless otherwise noted.

² La Plata County Tax Assessor's Office, 2005 figures.

2. CULTURAL DEMOGRAPHICS

Tri-Ethnicity

La Plata County, traditionally a land occupied by Native Americans and Latinos/as, was settled by Anglos in the 1880's when mining, homesteading and ranching operations began to appear and prosper. Anglos are currently the ethnic majority in La Plata County, constituting 87.3% of the population. Latino/as make up 10.4% of the population and Native Americans 5.8%. Asians account for 0.4% of the total population, African Americans 0.3%, and Pacific Islanders 0.1%.

Over time this regional blending of the three predominant cultures (Anglo, Latino/a, and Native American) created what is now commonly referred to as a 'tri-ethnic' racial dynamic.

3. SOCIO-ECONOMIC DEMOGRAPHICS

Although unemployment is low, (4% in 2002), it is dependent largely on low paying retail wages and service sector jobs in the tourist and resort industry. The service sector provides 35% of jobs and 35% of employment income. This includes health services, casino employment, amusement and recreation services and lodging. The trade sector accounts for 23% of jobs but provides the lowest average wage of all sectors. Construction is also an important sector, providing 10% of employment and 13% of employment income in 2001.

Tourism

Tourist spending in 2000 was \$171.9 million in La Plata County. The county, however, only retained 34.2% of that income.³

Agriculture

The Wilderness Society published an economic profile of La Plata County in 1997. This document illustrates how the community has changed economically over a 25-year period.⁴ As has happened in many areas of the country, they show that between the years of 1970 and 1997 agriculture has been in steady decline since its peak in 1975. "Agricultural-related income in the county as fallen from 5% of total personal income in 1972 to 0.4% in 1997, and agricultural-related employment has declined from a 10% high in 1970 to 4% of total employment in 1997." This decline is credited as a response to a decrease in agricultural commodity prices and the significance of agricultural income as other sectors of the economy such as service and retail, construction and trade have expanded.

Within the agricultural employment sector there has been an increase in employment in the agricultural services category. This encompasses off-farm, agriculturally related jobs such as machine repair, bookkeeping, administration, science, research and transportation.⁵

³ Magnan, N., Seidl, A. *The Economic Base of La Plata County, Colorado*. Colorado State University Agricultural Economics Publication: http://dare.agsci.colostate.edu/csuaecon/extension/docs/impactanalysis_edr04-04.pdf.

⁴ The Wilderness Society, in order to help citizens understand how the community has changed over the past 25 years, has published a series of economic profiles for Colorado counties. "Economic Profiles for Colorado Counties – La Plata County". (www.wilderness.org).

⁵ Magnan, N., Seidl, A. *The Economic Base of La Plata County, Colorado*. Colorado State University: Department of Agricultural and Resource Economics. June 2004-EDR 04-04.

Livable Wage Estimates for 2005, Operation Healthy Communities (OHC)

A livable wage, as defined by OHC, is “a wage that addresses the essential financial needs for basic living tools such as shelter, healthcare, childcare and nutrition.” Because the cost of housing (average home price and rent) in the area has increased dramatically in the past five years⁶ and wages have not, many residents struggle with the issue of affordable housing. The estimates below, determined by OHC in 2005, set a baseline for a livable wage in the county.⁷

Rural La Plata County:

Single Person, renting a one bdrm at \$605/month - \$9.81/hr

Single Parent, one child, renting 2 bdrm at \$775/month - \$18.18/hr

Family of 4, renting 3 bdrm at \$1050/month - \$25.44/hr

Durango:

Single Person, renting a one bdrm at \$675/month - \$10.21/hr

Single Parent, one child, renting 2 bdrm at \$900/month - \$18.91/hr

Family of 4, renting 3 bdrm at \$1150/month - \$26.02/hr

Bayfield:

Single Person, renting a one bdrm at \$550/month - \$9.49/hr

Single Parent, one child, renting 2 bdrm at \$875/month - \$18.78/hr

Family of 4, renting 3 bdrm at \$1050/month - \$25.44/hr

Ignacio:

Single Person, renting a one bdrm at \$605/month - \$9.81/hr

Single Parent, one child, renting 2 bdrm at \$575/month - \$17.03/hr

Family of 4, renting 3 bdrm at \$850/month - \$24.29/hr

Income

In 2001, Total Personal Income (TPI)⁸ in La Plata County was \$1,298,515,000 (adjusted). The largest proportion (65%) of TPI is generated through employment (farm and non-farm). In 2001 La Plata had a per capita personal income (PCPI) of \$28,013. This PCPI ranked 17th in the state and was 84% of the state average (\$33,455), and 92% of the national average (\$30,413). The 2001 PCPI reflected an increase of 4% from 2000. In 2000 an estimated 11.7% of the county population was living in poverty.

⁶ According to OHC, the median home price in Durango in 2003 was \$257,250. That year, 52% of families in Durango were unable to afford a home based on their annual income.

⁷ Note: The city of Durango has the highest livable wage estimate. Because Bayfield and Ignacio are rural communities the cost of living (rent) is not as high.

⁸ Total personal income is the sum of residents' wages, proprietors' income, government and business transfer payments, rents from land, and interest and dividends from financial assets, all less contributions to social security.

4. ENVIRONMENTAL PROFILE

A contribution from Tyler Scheid, Ecosphere Environmental Consulting Service & Chester Anderson, Bugs Consulting

Land Cover

La Plata County encompasses 1,083,085 acres (1,692 sq. miles). La Plata County is relatively rural with less than 1% of the county area comprised of high intensity urbanization. According to GIS data, approximately 25% (270,771 acres) of La Plata County is classified as agricultural and 11% (29,785 acres) of the agricultural land is irrigated.⁹ (Figure 1). Many rural and agricultural areas of the county, such as the Florida Mesa, are becoming increasingly suburban with low density developments replacing ranches and cropland.

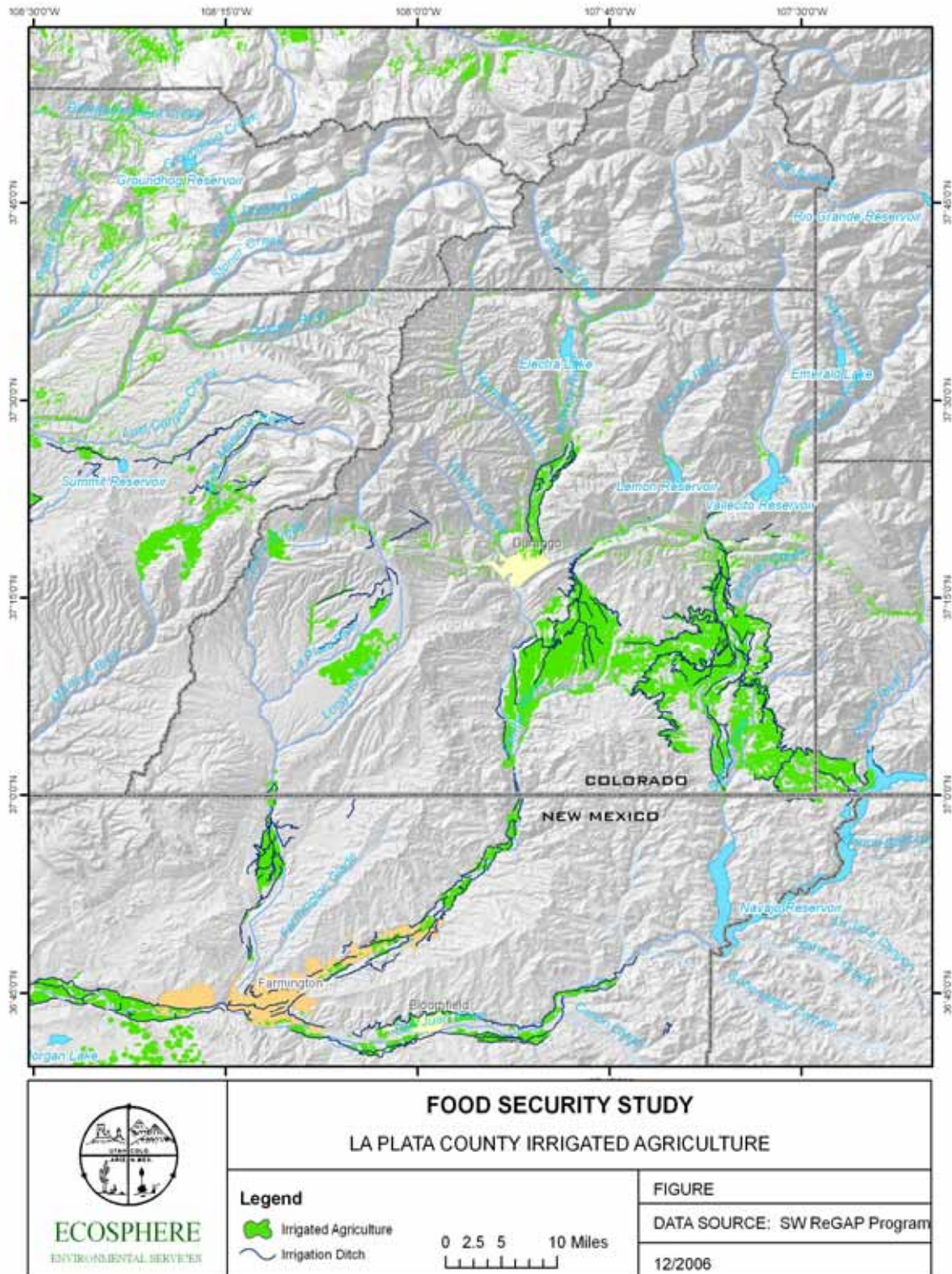
Close to 65% of the county is woodland¹⁰ where lower elevations grade from pinon and juniper woodland to ponderosa forest and spruce and fir forest as elevation increases. These woodlands provide essential habitat and seasonal migration corridors for productive deer and elk populations. The lower elevation winter habitat woodlands receive less protection than the spruce and fir forests because most private land and urbanization is taking place in these areas.

"We can grow most vegetables and many fruits to very high quality, including organic, because of abundant sunshine, and can grow great warm season and cold season crops. One hindrance and benefit is the unpredictable freezes and cold weather. This aspect of our climate produces stronger hardier crops and helps control pests, as long as it does not freeze the crops."

Greg Vlaming, Horticulture Agent, CSU Cooperative Extension, La Plata County

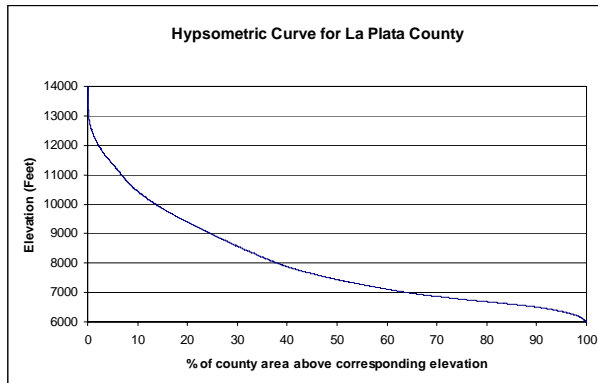
⁹ Southwest Regional GAP Program Landcover Dataset, 2005.

¹⁰ Southwest Regional GAP Program Landcover Dataset, 2005.



Climate

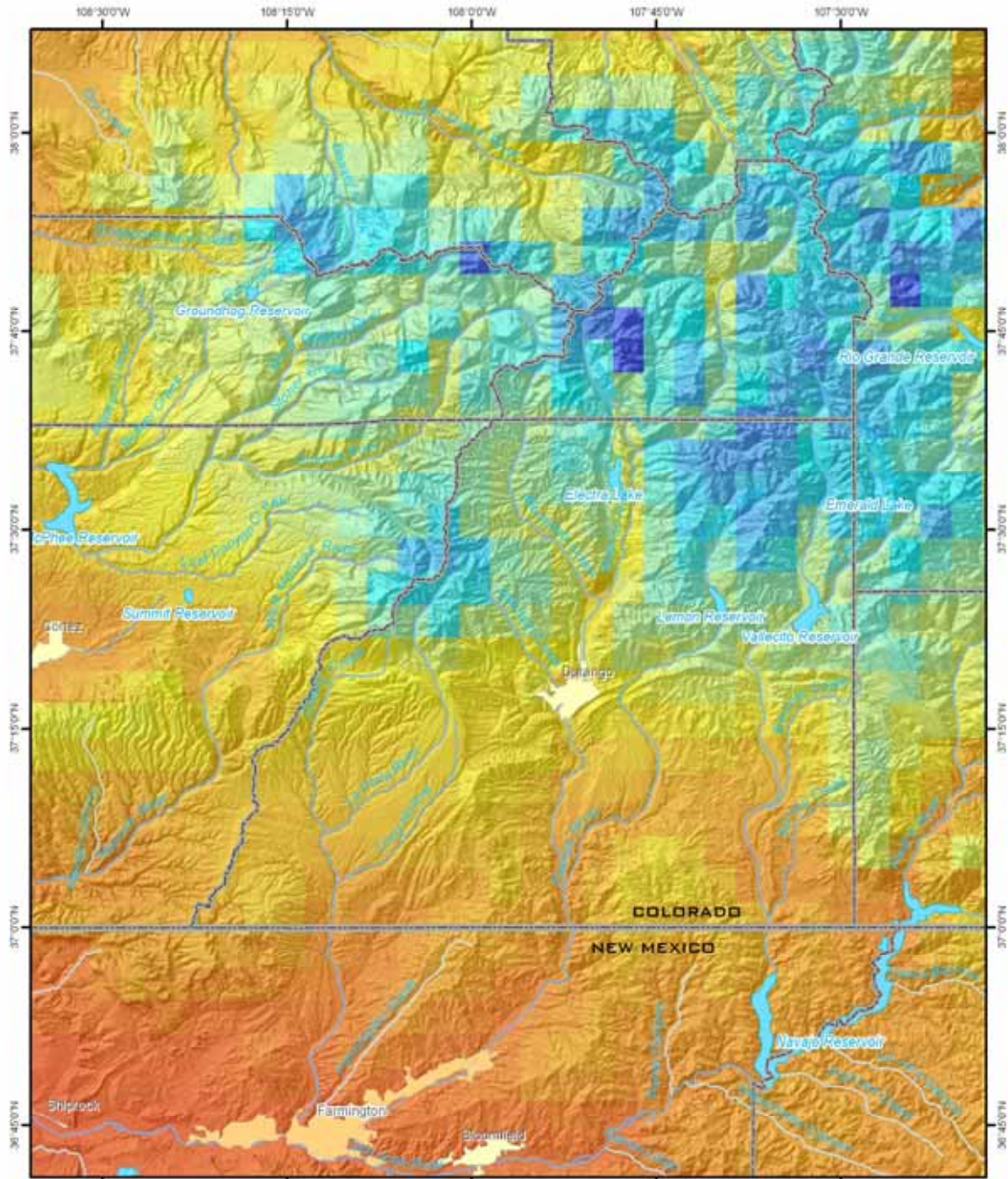
The climate in La Plata County is characterized by a steep gradient where average annual precipitation ranges from 44 inches in the highest elevations to 13 inches in the lower elevations of the county (Figure 2)¹¹. The following graph shows the relationship between elevation and land area of the county, where approximately 40% of the county is above 8000 feet. At that elevation and higher, the snowpack typically accumulates throughout late fall to early spring.


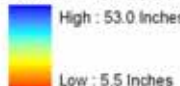



The growing season for these high elevation areas is often shortened by frost in the late spring and early fall. The 25% of the county that falls above 9000 feet can reach sub-freezing temperatures throughout the year. The growing season in the lowest elevations of the county, where most agriculture is concentrated, is approximately 100 days.

The primary sources of precipitation in the county are winter snowfall and late summer monsoonal thunderstorms. The winter snowpack is an essential element of water storage for crops, where the volume of water stored in the snowpack is typically far greater than agricultural demand and the storage capability of area reservoirs. A number of reservoir projects have been completed in order to store water after the snowmelt season, the largest of which are Lemon and Vallecito reservoirs.

¹¹ NOAA Annual Precipitation Dataset, 2005.



 <p>ECOSPHERE ENVIRONMENTAL SERVICES</p>	<p>FOOD SECURITY STUDY</p> <p>LA PLATA COUNTY ANNUAL PRECIPITATION</p>	
	<p>100 year average annual precipitation</p> <p>High : 53.0 Inches</p>  <p>Low : 5.5 Inches</p>	<p>0 3 6 12 Miles</p> 
	<p>FIGURE</p> <p>DATA SOURCE: NOAA 2005</p> <p>12/2006</p>	

Surface Water

The three main drainages in the county, in order of decreasing size, are the Animas River, the Pine River and the La Plata River. These drainages are sourced in the high alpine areas of the San Juan Mountains, where winter snowpack stores water that is released during spring and early summer peak flows.

Two reservoirs, Vallecito Reservoir on the Pine and Lemon Reservoir on the Florida River (a tributary of the Animas River), store winter precipitation and regulate water stream flows for agricultural purposes. An extensive network of canals and diversion structures brings water from each drainage and their tributaries to the irrigated lands of the county (Figure 1). The Colorado Division of Water Resources, through the authority of the State Engineer (and the Bureau of Indian Affairs within the Southern Ute Indian Tribe's Reservation), administers water rights and allocates water to these irrigation systems.

Almost all of the water in each stream is allocated to various agricultural users. Two small storage systems have been proposed that would increase available water, but the likelihood of these being built in the current political climate is small.

Water in Colorado is regulated by the Colorado Doctrine, which is also known as the Appropriative Rights Doctrine. Users with priority rights get *all* their water before those with less senior rights get *any* water. In drought years, such as was experienced in 2002, a number of agricultural users will only have water for a small part of the growing season. There also exists in Colorado what is known as water law “use it or lose it” provisions. These mean that if someone with water rights does not exercise those rights, they may lose them.

Given the poor state of the distributions system, the laws that regulate water and the means by which that water is administered to the land, there exists a substantial amount of room to improve efficiency and thus increase both the acreage and the productivity of acreage irrigated with the existing water resource.

Given the predictions for climate change for the Southwest – decreasing winter precipitation and increasing variability – food production will likely become more uncertain, as seen by the recent drought where a number of agriculturalists went out of business. Agriculturalists require a certain amount of predictability to stay in business from year to year, and with less winter precipitation, the current water storage system becomes less effective.

Water quality is generally thought of as good due to the proximity of the county to the source waters. However, acid mine drainage from the high elevations and nutrient discharges in the lower elevations of the county have caused concern for sustaining water quality in the long term. Point sources of nutrients include facilities that discharge organic material into the river. Non-point sources of nutrients include urban drainage and agricultural runoff. The agricultural runoff is primarily due to inefficient irrigation practices and poorly operated and maintained distribution systems. Impacts to the river system can also result in excess nutrients where the assimilative capacity of the river is compromised. Floodplain interactions with the river play an important role in mediating the nutrient cycle and biological

functioning of river ecosystems.¹² Therefore, nutrient enrichment can be seen as caused by the amalgamation of nutrients from point and non-point sources, as well as disruption of the assimilative capacity of the river system from channel modification or other disturbance to the floodplain.

Groundwater

Many residents of La Plata County get drinking water from private domestic water wells or water systems. In fact, most residential developments in the unincorporated areas of the county rely on groundwater wells. In La Plata County, there are over 7,000 well permits with groundwater as their source. There are 46 community water systems (63% of which have groundwater as the primary source), and 70 non-community water systems (78% of which have groundwater as the primary source).¹³

Rapid population growth in La Plata County has caused increased reliance on ground water as a source of supply for suburban and rural residents. In many developing areas, such as Florida Mesa, groundwater recharge is highly dependent on infiltration of irrigation water. As an example, Florida Mesa winter water levels in (domestic) wells generally are lower than summer water levels because of the lack of irrigation recharge during the fall and winter. As development occurs and agricultural land is taken out of production, there is a potential for groundwater to become depleted. Continued high rates of development in areas lacking central water systems increases the potential for dewatering aquifers and impact to existing wells.¹⁴

¹² Hauer et al. 2003. Landscapes and ecological variability of rivers in North America: factors affecting restoration strategies. American Fisheries Society. 81-105.

¹³ La Plata County Energy Council (Waterfacts website 2006, <http://www.energycouncil.org/waterfacts/groundwater.htm>).

¹⁴ La Plata County Energy Council (Waterfacts website 2006, <http://www.energycouncil.org/waterfacts/groundwater.htm>).