



Figure 19  
Water Resources and Management

Source: NM Office of the State Engineer, US Geological Survey, Middle Rio Grande Conservancy District, MRCOG.

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Valencia County residents rely on good quality ground water (underground water) as their primary source of drinking water. This source of water is found in aquifers which are water bearing layers of permeable rock, sand, or gravel beneath the surface of the land. Ground water becomes contaminated when contaminants move through soil and aquifers faster than natural processes can reduce them to acceptable levels (McQuillan, Parker, and Richards, 2000). The sources of ground water contamination are many, with the chief contributors being septic tanks, dairy and other animal wastes, commercial fertilizers, leaking underground storage tanks, and spills and leaks from above ground storage tanks, pipelines, and traffic accidents. The New Mexico Environment Department (NMED) has identified 65 past and current leaks from storage tanks in Valencia County that are either cleaned up or are currently being monitored or investigated. Storage tank leaks have been identified in Belen, Bosque Farms, Los Lunas, Jarales, and Peralta.

Septic tanks are especially problematic because in New Mexico they have contaminated more acre-feet of ground water and more public and private water supply wells than all other sources combined. An estimated 208,000 septic-tank systems and cesspools discharge about 78 million gallons of wastewater per day in New Mexico. Lot size is a critical factor in determining the amount of natural attenuation that occurs between the location where septic effluents are discharged, and the nearest down-gradient point of ground water withdrawal, and thus the potential for water well contamination. In New Mexico, residential developments with average lot sizes up to 0.84 acre (including roadways) have caused ground water contamination in excess of allowable standards (McQuillan, 2004).

The New Mexico Environment Department has recently tightened up regulations controlling septic tanks and other household sewage treatment and disposal systems. The new rules, approved April 6, 2005, apply a three-quarter acre minimum on undeveloped lots whose depth to ground water is less than 100 feet regardless of the plat date, and bring all undeveloped lots to current standards (Valencia County News Bulletin, 2005). Before the new standards were approved, regulations allowed septic tank installation on lots smaller than three-quarters of an acre if the lot was platted before February 1, 1990.

A map (Figure 20) showing Areas of Concern (AOCs) where waters of the State may be vulnerable to contamination from septic tank discharges has been compiled by the New Mexico Environment Department (NMED). This map shows areas in Valencia County with ground water less than 100 feet deep, and with 2000 mg/L or less Total Dissolved Solids (TDS). The County currently has no measures in the zoning or subdivision regulations that protect wellheads or recharge areas. The County should investigate adopting some regulations to protect the ground water.