

ROLE OF DOMESTIC WATER WELLS IN NEW MEXICO

NM Ground Water Association

“Water is fundamental for life and health. It is a prerequisite to the realization of all other human rights.”¹

Water for one in six households in New Mexico is provided by individual domestic wells rather than by Public Water Systems. Three quarters of those domestic wells supply households located in rural areas of New Mexico.²

Domestic wells number about 200,000 permits issued by the NM Office of the State Engineer (OSE) from 1956 to 2010 and growing at 5,000 per year. The growth indicates the level of on-going demand, primarily from new households outside city water systems.³

Domestic wells supplied 28,952 acre feet (AF) to NM households in 2010, which is less than one percent of the water used in the state.⁴

Self-supply from domestic wells is relatively affordable. A \$10,000 to \$20,000 well, pump and tank facility folded into a mortgage adds about \$50 to \$100/month to household expenses. Energy costs to pump water are seldom over a few dollars per month.⁵ The main distinction to the homeowner is that self-supply requires their attention for pump maintenance, freeze-up, sanitation, etc., whereas the public-supply customer’s responsibilities end at the meter box.

Domestic wells for self-supply are efficient users of the NM water resource. OSE reports 70 to 100 gallons per capita per day use by domestic wells, and considerably more for town and city use (Roswell 242 gpcd, Santa Fe 111 gpcd, Albuquerque 157 gpcd).⁶ Recognizing that city systems include more service to parks and schools etc., the household use rates are roughly equivalent. Cities are authorized to deny new domestic wells in their service area only if city water distribution lines are within 300 feet of the property line

¹ United Nations, Committee on Economic Social and Cultural Rights.

² New Mexico Office of the State Engineer, Water Use for Year 2010, Technical Report 54 (“OSE Technical Report 54”), tables 2 and 3; U.S. Census of Housing (1990).

³ Natural Resources Journal, Vol. 45, by Balleau and Silver (2005) (“Balleau and Silver”).

⁴ OSE Technical Report 54, , table 2.

⁵ 5 percent, 30 years, \$0.09/kWh.

⁶ OSE Technical Report 54, p. 8 and table 7.

and the homeowner's cost to hook on to city service is less than the cost of drilling a domestic well.⁷

Some domestic wells in NM are required by OSE or by the courts to be metered. The average water use from the metered records is 0.29 acre feet per year (AFY) per house, or 7900 gallons per month.⁸

Computer models by OSE cover most aquifers in the State. The drawdown from domestic wells ranges from 1 to 5 feet in 40 years. At that rate, there is no prospect of systematic interference with the yield of properly constructed adjacent wells.⁹

The computer models also show that about 30 percent of the water used by domestic wells, or about 10,000 AFY statewide, is derived from surface streams, including rivers with interstate compacts. Such impacts lie mostly on the Rio Grande where most domestic wells are located. Domestic well impacts are less than one percent of Rio Grande compact water flow.¹⁰ New Mexico is in surplus on Compact deliveries.¹¹

Domestic wells are administered by procedures set out in NM statutes and in the Administrative Code. The statutes authorize use of "the underground waters applied for," and the Administrative Code calls out a range of 0.25 (or less), 1.0, or 3.0 AFY for various permit conditions. The low amount is for a Domestic Well Management Area to prevent impairment of related surface water. However, no such area has been declared by OSE. The higher amount is available where domestic use is shown not to impair existing rights.¹²

The Legislature's rationale for permitting domestic wells "[b]y reason of the . . . relatively small amounts of water consumed" remains the fundamental principle throughout NM.¹³

The NM Supreme Court has found that "the Legislature codified this simpler permitting process as a policy choice," and that due process is respected absent evidence of impairment or deprivation of others' property rights from following the present procedure.¹⁴

Domestic well infrastructure incurs no public expense. In contrast, the gap in Public Water System infrastructure over 20 years is \$237 billion in 11 western states.¹⁵ Albuquerque and Santa Fe have spent \$600 million on recent

⁷ Section 3-53-1.1 NMSA 1978.

⁸ *State ex rel. State Engineer v. Aamodt*, No. 66cv06639 (D. N.M.), OSE Water Master Report (Apr. 25, 2005); Santa Fe County, Water Resource Inventory of the Espanola Basin, by A.C. Lewis (2013).

⁹ Balleau and Silver; U.S. Geological Survey, Water-Supply Paper 1536, by Robinson and Skibitzki (1962).

¹⁰ Balleau and Silver.

¹¹ NM Interstate Stream Commission.

¹² Section 72-12-1.1 NMSA 1978; Section 19.27.5 NMAC.

¹³ Section 72-12-1 NMSA 1978.

¹⁴ *Bounds v. State ex rel. D'Antonio*, 2013-NMSC-037, ¶¶ 40, 54.

¹⁵ American Water Works Association, Report to Congress, Water Infrastructure Challenge (2012).

infrastructure.¹⁶ Self-service by private wells reduces the load of such public expenditures.

The Department of Homeland Security¹⁷ identifies public water systems as critical infrastructure and vulnerable to risk from man-made and natural disaster. Domestic wells are more secure, distributed, not interconnected and have little vulnerability to incidents affecting large numbers. The majority of persons affected by outbreaks of water-borne disease are on public systems, not private wells.¹⁸

Domestic wells are among the most valued, safest and least harmful of all water uses in New Mexico.¹⁹

POSITION STATEMENT

Domestic wells are widely appreciated for their advantages to the citizens of New Mexico.

NMGWA supports an initiative to:

- improve well construction ;
- **require metering of domestic wells;**
- **limit withdrawals only on sound scientific data and public input**
- establish a minimum pump submergence (60 feet) for long service life ; and
- test water quality (coliform, TDS, nitrate, hardness, arsenic) and well performance (specific capacity, depth to water and pump setting) upon title transfer **by a licensed well driller or licensed pump installer**

The regulation for filing a change in ownership (§ 19.27.5.13 NMAC) could be enhanced to require performance and quality testing, including upon new construction. This would provide data for management in both the private and the public interest.

~~No other change in permitting or in administration is needed.—The~~

¹⁶ ABCWUA and Sangre de Cristo.

¹⁷ Homeland Security, Water Sector-Specific Plan,(2010).

¹⁸ Center for Disease Control. "The majority of outbreaks (75.8%) and outbreak-associated illnesses (79.4%) were linked to community water systems." MMWR Morb Mortal Wkly Rep. (2013).

¹⁹ Balleau and Silver.