Water in New Mexico

One of New Mexico's biggest challenges is water scarcity. New Mexico has the lowest water to land ratio of all 50 states (1), and climate change is only expected to intensify our water challenges. Water quality is also threatened by contaminants both artificial and natural. Arsenic, uranium, nitrate, fluoride, and bacteria are among the most problematic contaminants in the state (2). New Mexico surface water sources consist of six major river basins:
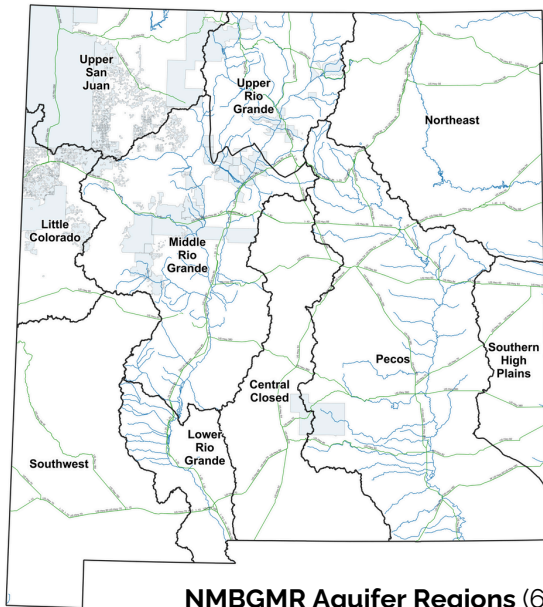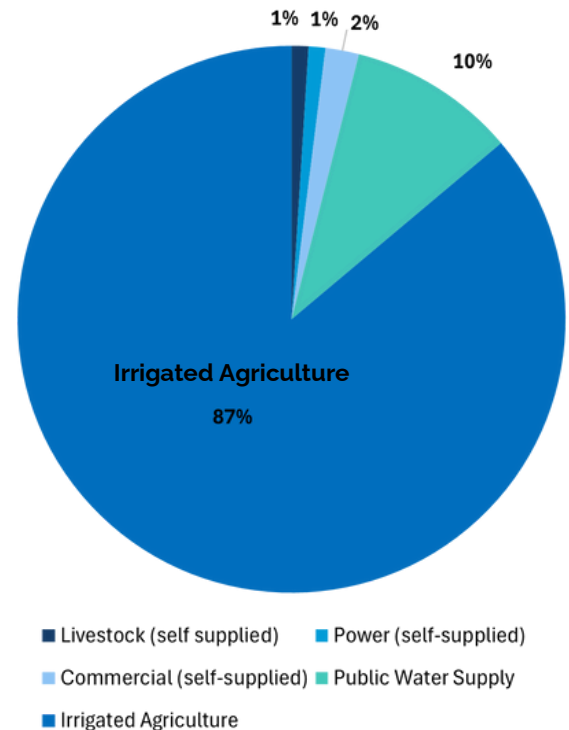

NMBGMR Aquifer Regions (6)

Arkansas-White-Red, Lower Colorado, Pecos, Rio Grande, Texas Gulf, and Upper Colorado (3). Despite the presence of numerous river basins, 78% of New Mexicans rely on groundwater for their drinking water (3). The New Mexico Environment Department (NMED) is responsible for managing water infrastructure systems and addressing water quality issues throughout the state (except on tribal lands), including the implementation and enforcement of the federal Safe Drinking Water Act (2). The Office of the State Engineer has authority over the supervision, measurement, appropriation, and distribution of all surface water and groundwater in New Mexico, including streams and rivers that cross state lines (4). The New Mexico Interstate Stream Commission investigates, protects, conserves, and develops New Mexico's waters including both interstate and intrastate stream systems (5). The New Mexico Bureau of Geology and Mineral Recourses Hydrology Programs (6) provide independent geologic mapping collaborative hydrologic research statewide, including the aquifer mapping program (left).
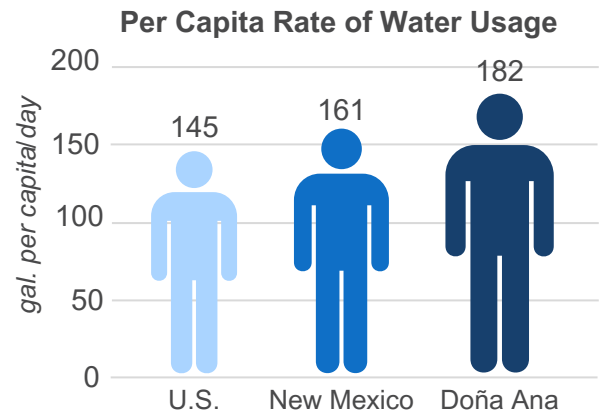
Water in Doña Ana County

Doña Ana County has an area of 3,808.2 square miles and a population of 219,561 (7). The Rio Grande River flows through the County, with storage at the Elephant Butte and Caballo Reservoirs. All the surface water allocation in the County is used for agricultural irrigation by the Elephant Butte Irrigation District (8). Surface water withdrawals equate to about 35% of total water withdraws of the county. The rest of the water supplied to the County comes from groundwater aquifers and is delivered by about 40 mutual domestic water suppliers, plus co-ops, private operators, and neighborhood water associations, totaling 110 systems. The county draws groundwater from the Mesilla, Jornada del Muerto, Hueco Bolson, and Rincon Valley basins (8). 80% of groundwater used in Doña Ana County goes to irrigated agriculture, while 15% goes to public water supply (3). The greatest concern for the County is flood management. New development and need for upgrades of existing flood prevention structures is increasing the county's susceptibility to flooding. Some developments are not adequately flood-proofed, creating an obstruction to water drainage from flood plains, exacerbating the issue (8).

1% 1% 2%

10%

Irrigated Agriculture
87%

■ Livestock (self supplied)   ■ Power (self-supplied)
■ Commercial (self-supplied)   ■ Public Water Supply
■ Irrigated Agriculture

Frequently Asked Questions

What are the water challenges faced by Doña Ana County?

- The county faces long-term pressure on groundwater supplies, since agricultural users have to make up shortages in surface supplies by pumping groundwater (8).
- Doña Ana County's groundwater is high in natural arsenic and salinity and may be subject to contamination from a significant number of sub-standard septic systems, as well as agricultural byproducts and other sources of contaminants (8).
- The per capita rate of water usage is high at 182 gallons per capita per day. This exceeds New Mexico's average at 161 gallons and the nation's average at 145 gallons (8).

Per Capita Rate of Water Usage

145 — U.S.
161 — New Mexico
182 — Doña Ana

(gal. per capita/day; scale 0–200)

How is Doña Ana moving towards sustainable water management?

Doña Ana County has set goals to meet future water needs in the county's Comprehensive Plan 2040 (8), including:

- Coordinate the Many Silos of Water Management: Prioritize coordination of the cross-agency efforts to capture and manage rainfall comprehensively.
- Assess the Scope and Prioritization of Flood Hazards: Proactively prohibit development in floodplains and arroyos and adopt policies to steer development away from hazardous areas.
- Harvest More Rainwater and Flood Flows: Work with partner institutions to use strategies such as green streets, joint-use agreements, flood control infrastructure, and agriculture/open space water management.
- Conserve Water: Conduct an enhanced water conservation program for homes, yards, offices, industry, government and agriculture. Set a goal to reduce per/capita water use to below 150 gallons per day by 2025.

What is the 50-Year Water Action Plan?

-25% NM water
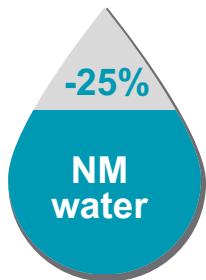
The New Mexico Office of the Governor has developed a 50-year water action plan to address the state's water challenges now and in the future. Over the next 50 years, it is predicted that New Mexico will have about 25% less water available in rivers and aquifers (9). Additionally, it is expected that Climate Change will make the state hotter and dryer, change precipitation patterns, and increase occurrence of fires, flooding, and drought. The plan proposes a series of actions to secure New Mexico's water supply through water conservation, new water supplies, and water and watershed protection.

Additional Resources

Statewide
1) NM 50-year water plan
2) 2018 New Mexico State Water Plan – Policies
3) 2018 New Mexico State Water Plan – Technical Report
4) 2018 New Mexico State Water Plan – Legal Landmarks

5) New Mexico Water Data
6) New Mexico Environment Department
7) Climate Change in NM Over the Next 50 Years: Impacts on Water Resources

Regional
1) Regional Water Planning
2) South Central Council of Governments

Countywide
1) County Economic Summaries & Data Profiles
2) Doña Ana County
3) Doña Ana County – Plan 2040 – Comprehensive Plan

References: (1) Drought in New Mexico **(2)** Water Resources & Management – NMED **(3)** New Mexico Water Use By Categories 2015 **(4)** Water Planning in New Mexico – OSE **(5)** Interstate Stream Comission **(6)** NM Bureau of Geology and Mineral Resources **(7)** Census Profile Dona Ana County, NM **(8)** Doña Ana County Comprehensive Plan - 2015 **(9)** 50-year Water Action Plan