

Fact Sheet: Historic and Current Water Demand

Compilation of historic and current water demand represents one facet of an overall regional water plan as prescribed by the New Mexico Interstate Stream Commission (NMISC) in the Regional Water Planning Handbook (NMISC, 1994).

Water use categories we employ in this study were adopted from those defined by the New Mexico Office of the State Engineer (OSE), and are comprised of:

- Public Water Supply (PS),
- Self-Supplied Domestic (DO),
- Irrigated Agriculture (IR),
- Livestock (LS),
- Commercial (CO),
- Industrial (IN),
- Mining (MI),
- Power Generation (PO),
- Riparian Evapotranspiration (RPET), and Reservoir Evaporation (RE).

The OSE regularly (every 5 years) inventories water use in the state and publishes the results in formal water-use technical reports (Sorenson, 1977; Sorenson, 1982; Wilson, 1986; Wilson, 1992; Wilson and Lucero, 1997). These reports also describe in detail inventory procedures they employ to obtain their water use estimates. We utilize these OSE reports to summarize historic uses.

For current water demand, we employ independent estimation procedures for the PS, DO, IR and RPET categories for comparison to the most recent OSE estimates.

The results of our demand study are summarized in Figures 1 through 4 which present historic use trends for each of the water use categories for the planning region from 1975 through present. Figure 4 illustrates the relative demand according to the use categories and the water supply source.

From these results, it is evident that evaporation off of Elephant Butte Reservoir and evapotranspiration from the Rio Grande Bosque (SSPA, 2000) comprise the largest depletions to our available resources. Irrigated agriculture represents the largest beneficial

human use (approximately 18% of total water use in the region). Domestic use (PS + DO) accounts for only 0.6% of water depletion in the planning region, as does livestock. All other water use categories combined use less than 0.5% of the total water depleted in the planning region.

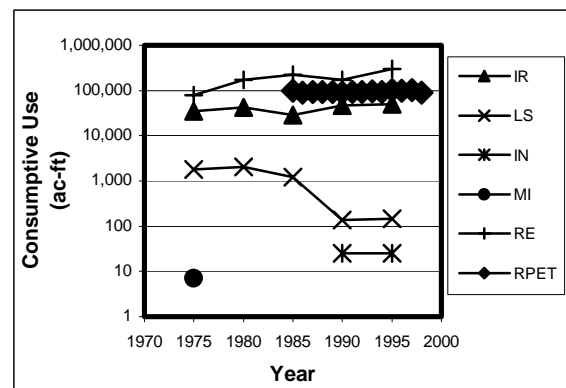


Figure 1. Total surface water depletion in the Socorro-Sierra planning region.

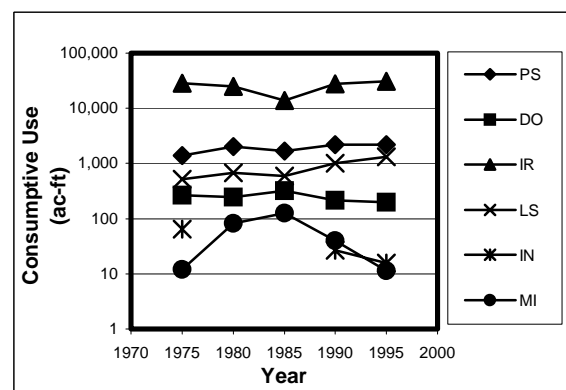


Figure 2. Total groundwater depletion in the Socorro-Sierra planning region.

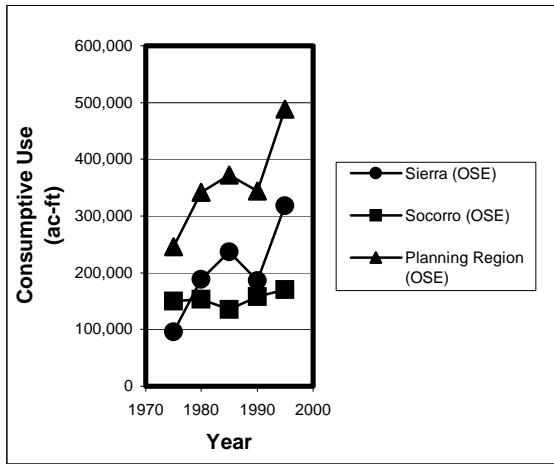


Figure 3. Total water consumptive use by county in the Socorro-Sierra planning region.

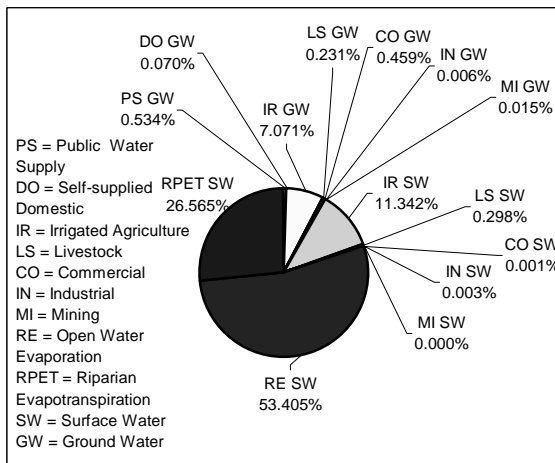


Figure 4. Average (1975 - 1995) total consumptive water use by category and source.

References

NMISC, 1994, *Regional Water Planning Handbook*.

SSPA (SS Papadopoulos and Assoc.), 2000, *Middle Rio Grande Water Supply Study*.

Sorenson, E. F., 1977, Water Use by Categories in New Mexico Counties and River Basins, and Irrigated and Dry Cropland Acreage in 1975: NMOSE Tech. Rpt. 41, 34 pp.

Sorenson, E. F., 1982, Water Use by Categories in New Mexico Counties and River Basins, and Irrigated Acreage in 1980: NMOSE Tech. Rpt. 44, 51 pp.

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Wilson, B. C., 1992, Water Use by Categories in New Mexico Counties and River Basins, and Irrigated Acreage in 1990: NMOSE Tech. Rpt. 47, 141 pp.

Wilson, B. C. and A. A. Lucero, 1997, Water Use by Categories in New Mexico Counties and River Basins, and Irrigated Acreage in 1995: NMOSE Tech. Rpt. 49, 149 pp.



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