Customer records were evaluated to study water use in Ada, Oklahoma during the drought years of 2011 and 2012. The City of Ada water system serves individual residential and commercial customers in Ada and Pontotoc County and three rural water districts (RWDs). Water use peaked at 32.8 million cubic feet per month in August 2011. Excluding the RWDs, residential and commercial water use was nearly equal for each month in the records. By assigning categories to business and residential customers, the groups which contribute to increased summertime water use were identified.

Residential water use was related to the Pontotoc County Assessor’s market values to link water use to an economic variable. In each class of market values ($50,000 increments from $0 to over $300,000), the distributions of water use were highly skewed, with a small number of customers using more water than average. This pattern intensified in the summertime, indicating a preference of some customers for summertime water use. Generally, average water use increased directly with increasing market value. For the lowest class of market value ($0 to $50,000) the average summertime water increased by a factor of two, while for the highest market value class (> $300,000) the increase was greater than a factor of five. The contribution to total water use, however, was highest by the lowest market value residences because of the higher number of residences in this class. Neighborhood water use can be forecast from the distribution of market values. For test neighborhoods, actual water use was found to closely match the forecasts.

Sewer charges are based on water use for most customers in Ada. A small number of customers have outdoor watering accounts in addition to their inside (water plus sewer) accounts. Current work focuses on determining the price elasticity of residential water demand from this price differential.