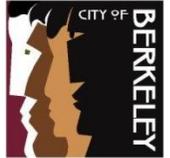




Berkeley Climate Action Plan: Tracking our Progress Adapting to a Changing Climate – Water Consumption



Goal: Make Berkeley resilient to the impacts of climate change

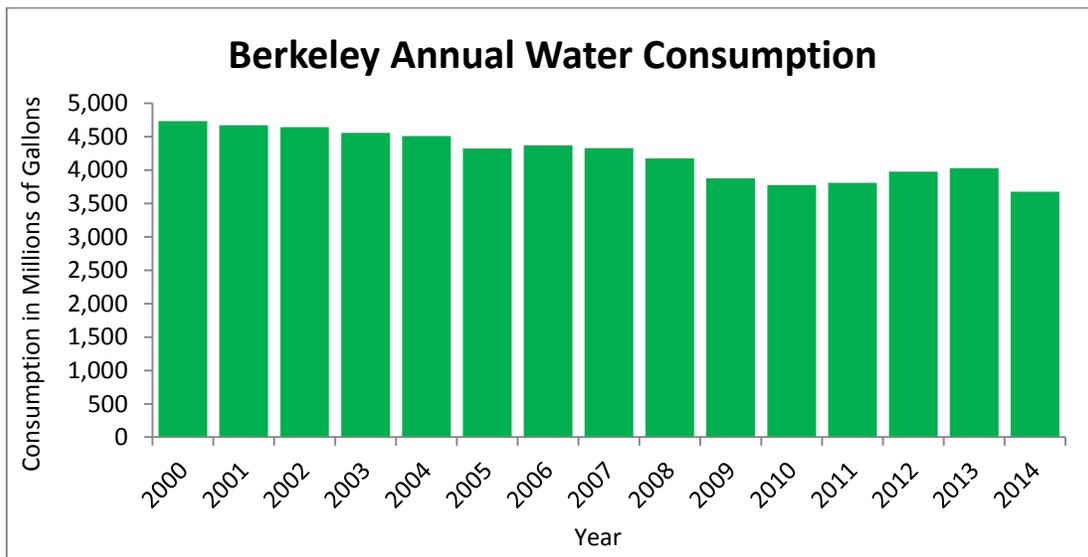
Performance metric: Annual community-wide water consumption in gallons. (Note: Water utilities measure and bill water consumption in cubic feet. One cubic foot contains 7.48 gallons of water.)

Status: In response to the historic California drought, water consumption is significantly decreasing in Berkeley and throughout the region. In Berkeley, community-wide water consumption in 2014 was the lowest it has been since the 2000 baseline, at 22 percent below 2000 levels and 8.8 percent lower than 2013. Per household water consumption decreased by 10 percent between 2013 and 2014. Water consumption in Berkeley decreased 38 percent since 1975, which is the first year data are available from the East Bay Municipal Utility District (EBMUD).

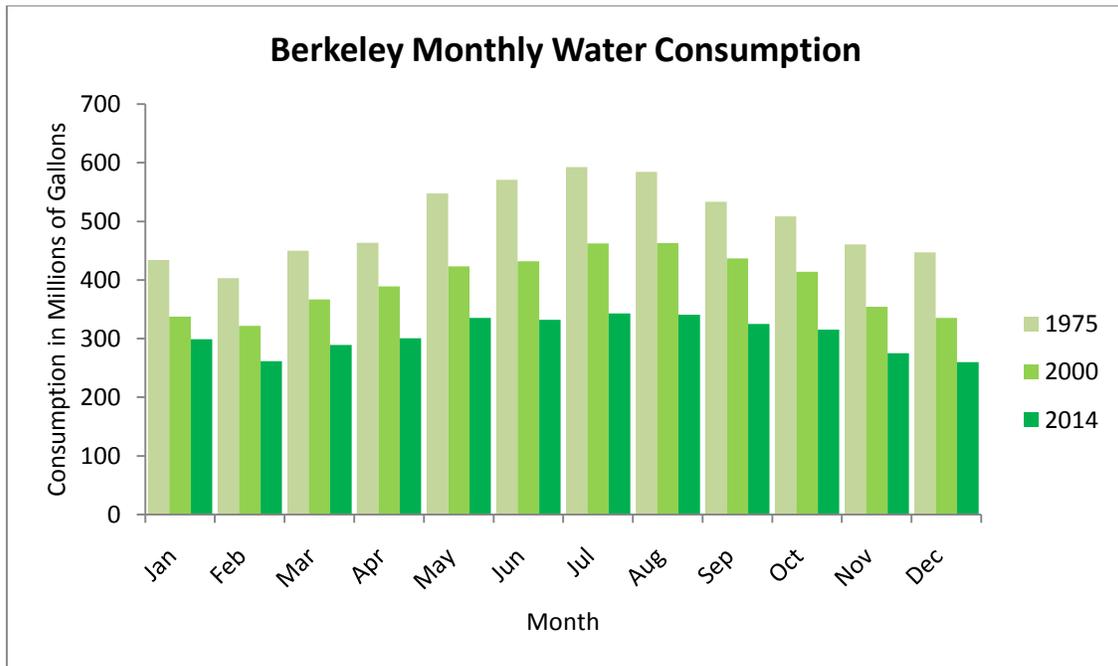
One way the Berkeley community has made progress in achieving water reductions is by making [water efficiency improvements](#) through upgrades such as low-flow toilets and showerheads, faucet aerators, and water-efficient clothes washers. Many residents and businesses are also reducing outdoor water usage by limiting irrigation and employing techniques such as drip irrigation, applying mulch, and choosing native, drought-tolerant plants. Water used for irrigation decreased by 20 percent from 2013 to 2014.

The City has also taken actions to reduce its own municipal water consumption, which accounts for approximately 2 percent of overall city-wide water consumption. In February 2014, the City committed to reduce municipal water consumption by 10 percent in 2014. As of April 2015, City water use in the months of April, May and June 2014 had fallen by 26 percent compared to averages in 2012 and 2013 for these same months. The City achieved these reductions through reduced irrigation, leak repairs, and water-efficiency improvements.

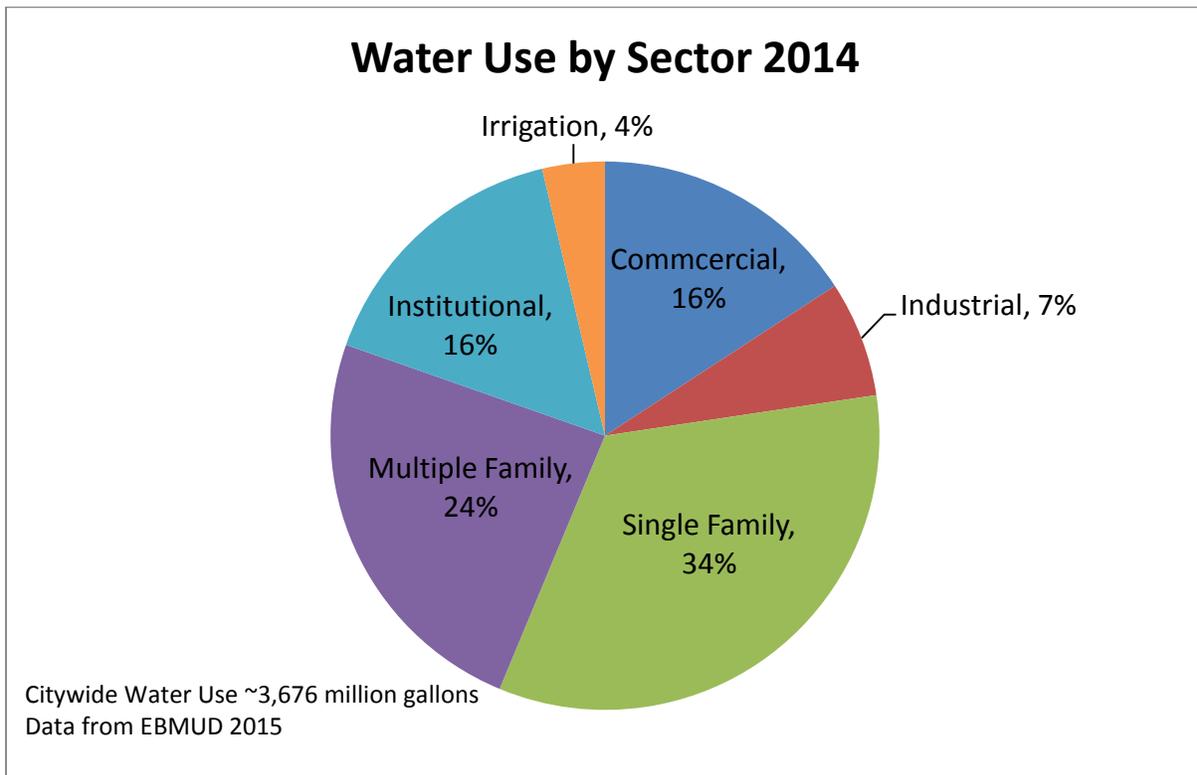
Water consumption in Berkeley is also affected by the changing economy. The local economy has shifted since the 1970s away from manufacturing, which is a relatively water-intensive market sector.



The monthly water consumption chart below depicts both the annual change between 1975, 2000, and 2014 and monthly water consumption for each of those years. Not only has annual consumption decreased significantly over time, but usage in peak summer months in 2014 has also flattened relative to previous years. Lower water usage in summer months suggests more efficient use of water for lawn and garden irrigation. Weather is also a factor.



The largest source of water consumption in Berkeley is water use in single-family homes. Total residential water consumption, including water use in single and multifamily dwellings, accounts for approximately 58 percent of community-wide water consumption. Over two-thirds of this residential water consumption is for indoor use.



According to 2009 EBMUD data, toilets, showers, sinks and clothes washers are the largest sources of water consumption in households. Notably, on average, 14 percent of water consumption is due to leaks. Residents can save hundreds of gallons of water per day by taking steps such as fixing leaky toilets, faucets and irrigation systems; installing a water-saving showerhead and faucet aerators; using a high-efficiency clothes washer, and washing dishes in an automatic dishwasher. Washing a full load of dishes in an automatic dishwasher is more water-efficient than washing dishes by hand.



Image source: EBMUD Study, 2009

Why is this indicator important?

Global warming increases pressure on California's water supply, which is already stretched by the demands of a growing economy and population. Decreasing snowmelt and stream flows coupled with increasing water demand could lead to increasing water shortages. Conserving water and using it more efficiently helps mitigate the growing stress on the state's water resources.

Increasing water efficiency also saves energy. Although much of EBMUD's water supply is transported from The Sierras by gravity rather than energy-intensive pumps, water use and treatment is a significant source of energy consumption statewide. The California Energy Commission estimates that water-related energy consumption represents approximately 20 percent of the state's electricity demand, 30 percent of the state's non-power-plant natural gas use, and 88 million gallons of diesel fuel. Energy consumption is required to pump and treat water; to treat, dispose, and reuse wastewater; and to operate machines and appliances that use water in homes and businesses. Most of the energy consumption associated with water results from urban use. Indoor use of hot water for uses such as showers and clothes washers is particularly energy intensive.

Resources and assistance for community members:

[Drought response](#): Learn more about the City of Berkeley's response to the drought, including water-saving tips.

[Residential Rainwater Harvesting & Graywater Systems](#): The City of Berkeley provides guidance designed to give residents an overview of graywater and rainwater irrigation systems, including information on systems that do not require permits.

[EBMUD WaterSmart](#): EBMUD's WaterSmart is an online resource center offering services, tips, rebates and information that help customers save water.

[Cal-Adapt](#): Cal-Adapt allows users in California to learn more about the impacts of climate change on the state's water resources.

Data sources and technical notes:

Data provided by EBMUD. Water-related energy consumption figures acquired from the California Energy Commission. Water consumption per household is arrived at by normalizing annual water consumption for the City of Berkeley by the total number of households for each corresponding year.

Tracking our progress: Review Climate Action Plan performance metrics at www.cityofberkeley.info/climate