

# Water Use—When Raw Numbers Don't Tell the Whole Story

## Gallons Per Capita Per Day

Gallons per capita per day (GPCD) is a measurement that estimates the average amount of water each person in a particular area uses daily. GPCD is helpful in estimating future water demand as well as tracking use and conservation achievements but should not be used in cross-jurisdiction comparisons to determine a community's water efficiency.

GPCD is calculated by dividing water use by the population, divided by 365 (the number of days in a year). But there isn't a national standard for how water use and/or population is determined so there are vast discrepancies in the numbers.

Some cities and states only report certain types of water use and/or apply a credit for water that is returned to the system; some calculate population by applying the average person per household to all residential units (rather than using U.S. Census Bureau population estimates). These practices decrease water use and inflate population to generate lower water use numbers—drastically altering the data.

In addition, GPCD does not account for the climate, demographic and economic differences of communities, which also significantly impact water use. For these reasons, water providers nationwide discourage the use of GPCD numbers to compare water use.

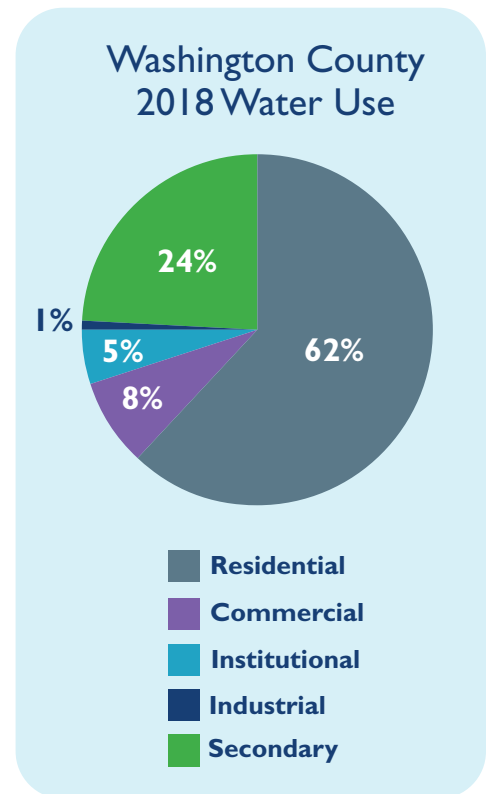
## How Utah Reports Water Use

Utah has one of the most comprehensive water use accounting practices in the United States. Unlike other cities or states, Utah includes all potable (treated water), secondary (untreated water) and reuse (treated wastewater) by all users (residential, commercial, institutional and industrial) in its GPCD, thereby reflecting complete water use information.

Utah uses the U.S. Census Bureau's estimated permanent resident population, adjusted to water provider service area boundaries. Many of Utah's counties, including Washington County, have a high number of second homes and are popular tourist destinations—seasonal residents and visitors are not included in the population.

## Water Use in Washington County

Tracking water use is an integral part of Washington County's comprehensive water plan and helps set local goals, improve watering practices and demonstrate accountability. The chart to the right lists the water use in Washington County according to the most recent data reported by the Utah Division of Water Resources.



## Washington County Leads Utah in Water Conservation

As the hottest, most arid county in Utah, water conservation is essential to Washington County's future. The Washington County Water Conservancy District (WCWCD) and its municipal partners have invested \$70 million in recent water conservation efforts. Washington County reduced its per capita water use from 2000-2018 by 30%, during which time the population nearly doubled. Washington County was the first county in Utah to implement a water conservation plan and meet the governor's statewide water conservation goal. Washington County is home to the state's most water-efficient landscapes, which have half the amount of irrigated area and grass compared to landscapes in northern Utah.<sup>1,2</sup>

Today Washington County uses less than 50,000 acre-feet of potable water a year to support nearly 200,000 permanent residents, more than 15,000 second home owners and more than 6 million visitors per year.

WCWCD's water conservation program was audited by a third-party nationally recognized water conservation expert, Maddaus Water Management. Maddaus concluded that the WCWCD conservation program is "on par with other notable programs in the western US and exceeds those of other entities of a similar size and customer base." The WCWCD Water Conservation Programs: A Comparative Evaluation compared the district's conservation program to that of 10 other similarly situated western water agencies with vigorous conservation programs.

Maddaus concluded that WCWCD's program budget, spending and staffing efforts equal or exceed those of several other similarly situated water agencies.

Washington County's conservation, rebate and education programs include:

- Universal metering
- Discounted impact fees for water wise landscapes
- Tiered water rates
- Landscape ordinances
- Time of day watering ordinances
- Requirement of a water conservation plan for municipal customers
- Water efficient landscape workshops
- Public information programs/school education
- System water audits, leak detection and repair
- Free outdoor irrigation efficiency audits for residences and businesses
- Smart controller irrigation technology
- Water Smart irrigation rebate program
- Water Smart commercial upgrades equipment rebate
- Training and certification of landscape training professionals
- Financial incentives for irrigation upgrades
- Large landscape conservation programs and incentives
- EPA WaterSense appliance rebates
- Statewide water-wise plant list and tagging program
- Public athletic fields conversion to artificial turf grant program
- WaterSense toilet/urinal rebates
- Multi-family high-efficiency washer rebate program
- Funding for local and statewide media campaigns

<sup>1</sup> 2018 Governor's Office of Management and Budget 2018 study

<sup>2</sup> Utah's Regional M&I Water Conservation Goals, August 2019