

Gallons Per Capita per Day (GPCD)

The intent of this document is to provide a description of the per-person water use (Gallons Per Capita per Day or GPCD) calculated for Regional Water Planning Water User Group (WUG) Utility, the Water Loss Audit, and the Annual Conservation Report.

Regional Water Planning Water User Group (WUG) Utility GPCD

The data is primarily collected through the Texas Water Development Board's annual survey of water use by an active community public water system and is stored in the Texas Water Development Board's water use database. A utility may be comprised of one or more public water systems.

Regional Water Planning Water User Group (WUG) Utility GPCD – Calculated by dividing the WUG Total Net Use (gallons) by the Population and divided by 365.

- Total Net Use - Intake total minus Sales total
- Intake – Volumes pumped, diverted or purchased from each water source
- Sales
 - Seller Volume – The water sales volume reported in an annual water use survey by the system selling the water. If the system did not return a water use survey, then the previous-year's reported sales are used as estimates.
 - Buyer Volume – The water purchase volume reported in an annual water use survey by the system/facility buying the water. If the system did not return a water use survey, then the previous-year's reported sales are used as estimates.
 - Sales Volume Used – If both the seller and the buyer returned the annual survey, then the buyer volume is used in the calculations. If the seller or buyer did not return an annual survey, then the volume reported by the other is used.
- Population - The annual population values include only permanent population and are estimated using 1) the population-served reported in returned water use surveys, 2) utility service area population estimated based on the U.S. Census block group data and utility service area boundaries, or 3) number of connections x average household size, depending on the data availability and quality. Then the population estimates are calibrated with county or state level annual population totals provided by the Texas Demographic Center.

Conservation and Water Loss Audit GPCD

Total GPCD (GPCD Input) - Calculated as the Total System Input Volume divided by the retail population served, divided by 365.

- The total system input volume is calculated as the corrected input volume plus corrected treated water purchased volume minus corrected treated wholesale water volumes. The treated purchased water and treated wholesale water sales volumes are pre-populated in the water loss audit and annual conservation report using values entered in the water use survey. The system enters a meter accuracy associated with each of these volumes to produce the corrected volumes. The input volume is entered by the utility and then corrected according to the meter accuracy value entered.

- Retail population served is the permanent population served by the water system. The population may reside in single-family or multi-family dwellings or in group quarters (nursing homes, prisons, group homes, etc.). It should include only those served directly by the system. It does not include wholesale customer populations. This value is pre-populated using the value entered in the water use survey.

Residential GPCD - Calculated as the volume of water metered to residential and multi-family connections, divided by the total residential population served divided by 365.

- The residential population is the total residential population of the service area; this population includes only single family and multi-family populations and uses the value entered in the water use survey. It should not include institutional populations, such as nursing homes, prisons, group homes, nursing homes, or on-campus college dormitories.

Water Loss GPCD - Calculated as the sum of Real Losses plus Apparent Losses, divided by the retail population, divided by 365.

- Real Loss is water lost through distribution system leakage and excessive pressure.
- Apparent Loss is water that was not read accurately by a meter; either as unauthorized consumption, including theft, or data analysis errors.

	Water Planning GPCD	Water Loss Audit (WLA) GPCD¹ Input and Water Loss GPCD²	Conservation Annual Report Total GPCD³, Residential GPCD⁴ and Water Loss GPCD⁵
Responsible Program Area	Water Supply & Infrastructure – Water Supply Planning	Water Science & Conservation – Conservation & Innovative Water Technologies – Municipal Water Conservation	Water Science & Conservation – Conservation & Innovative Water Technologies – Municipal Water Conservation
Water Data Collection	Public Water Systems self-reported use through the annual Water Use Survey (WUS)	¹ Treated purchased and treated wholesale sales volumes from WUS. Input (produced) volume from the Public Water System ² Using calculated values based on PWS entries into the WLA	Public Water System data pushed through WLA. If no WLA, pushed directly from WUS
Population Data Collection	Board-adopted population projections based upon: Public Water System self-reported connection data through annual WUS, service area estimates based upon census, or estimated connections and avg household size	Pushed from WUS	³ Pushed from WUS through WLA. If no WLA, pushed directly from WUS ⁴ Self-entered by Public Water System ⁵ Pushed from WUS through WLA. If no WLA, pushed directly from WUS (same value as ³)
Reporting Period for TWDB-Generated Estimates/Reports	1/1/20xx-12/31/20xx	1/1/20xx-12/31/20xx	1/1/20xx-12/31/20xx
Reporting Unit	Regional Water Planning Water User Group (Utilities >100 acre-feet per year, which may be composed of multiple Public Water Systems)	Public Water System	Public Water System

Requirement/Authority for Reporting	TWC§16.012, 31TAC§357.10(42). No statutory prohibition to report at PWS level; defined as utility in rule due to resource limitations	TWC §16.0121 31TAC §358.6(b)	TWC §15.106(b) 31TAC §363.15(g) (TWDB financial obligations) 31TAC §288.30(10)(D) (>3,300 connections or having certain surface water rights)
Water Use Included:	Municipal water use (single/multi family, commercial and institutional water use) + light industry	Total of Retail volumes metered, pushed from WUS, including Industrial, but excluding Reuse	Individual Retail volumes metered, pushed from WUS, including Industrial, but excluding Reuse
Website	http://www.twdb.texas.gov/waterplanning/waterusesurvey/index.asp	http://www.twdb.texas.gov/conservation/municipal/waterloss/index.asp	http://www.twdb.texas.gov/conservation/municipal/plans/Ars.asp