

## Water Consumption Report 2022

King Fahd University of Petroleum and Minerals provides inhabitants on campus with clean, safe water for drinking and household use. The water supply system provides service to four residential zones on campus, including faculty housing, student dorms, and academic buildings. The supply of water is provided for academic buildings in zone 2, faculty housing in zone 4, and student housing in zones 1 and 3. In zone 3, the university's water supply system also serviced the central kitchen, storehouse, workshops, and student mall. A stacked column chart (Figure 1) was constructed to depict the annual volume of water used in cubic meters for the four residential zones. As illustrated in stacked column, water consumption in zones 1, 2, 3, and 4 for domestic use is 346750 CM, 211700 CM, 985500 CM, and 821250 CM, respectively. For drinking purpose, KFUPM supplies safe and clean water for zone 3 and zone 4 with an annual volume of 109500 CM and 91250 CM. Residents in zones 3, 4, 1, and 2 used 42.7%, 35.6%, 13.5%, and 8.3% of the delivered water, respectively (Figure 2). Additionally, the domestic use of water accounts for 92.2% of the water supply and drinking use for 7.8%, as illustrated in the Pie chart (Figure 2). The annual water use per capita was calculated considering the total population of 18412 persons and the total volume of water 2007500 cubic meters. Therefore, the annual water use per capita at King Fahd University of Petroleum and Minerals is 109 CM/year. In comparison with national figures, the annual water uses per capita of Saudi Arabia in 2017 was 96.7 CM/year. Globally, in 2020, the annual water use per capita was 240 CM/year in the United States, compared to 103 CM/year in eastern Europe and 94 CM/year in western Europe<sup>2</sup>.

KFUPM values water as a vital resource and preserves it via research, education, and water security projects. KFUPM ensures the sustainable use of water across the campus and worked to keep this resource available for future generations. In addition, KFUPM's efforts to manage water sustainability ensure that there will always be a sufficient supply of high-quality water. For water conservation, KFUPM applied the regulations of the Ministry of Environment, Water, and Agriculture to minimize water usage through deploying water-saving equipment in households and providing educational public workshops and seminars on water security. In addition, KFUPM utilizes emails, posters, and social media to enhance community awareness of the significance of water conservation.

1. [https://www.stats.gov.sa/sites/default/files/per\\_capita\\_water\\_consumption\\_in\\_saudi\\_regions\\_en\\_0.pdf](https://www.stats.gov.sa/sites/default/files/per_capita_water_consumption_in_saudi_regions_en_0.pdf)
2. Chitonge, H. (2020). Urbanisation and the water challenge in Africa: Mapping out orders of water scarcity. *African Studies*, 79(2), 192-211.

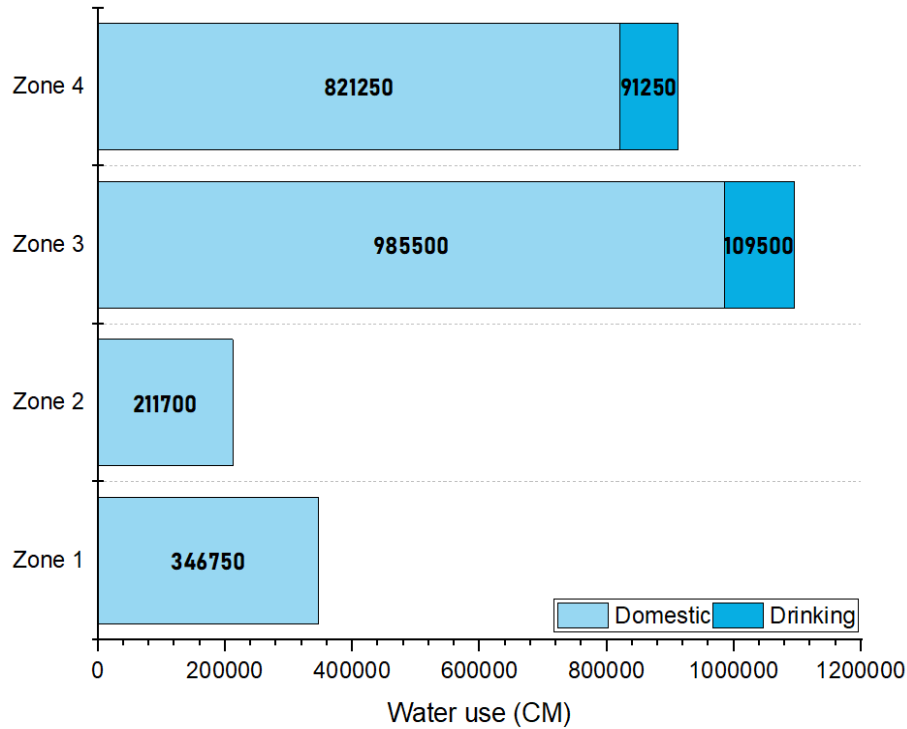


Figure 1: Water use in cubic meter for four residential zones.

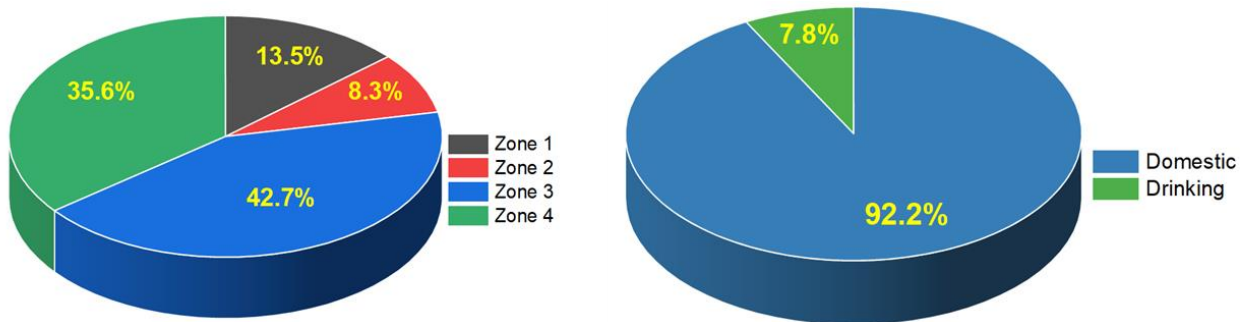


Figure 2: Water use percentage for residential zones and purposes.