

# UGA WATER PRIMER 2019

## WATER USE ON UGA'S MAIN AND HEALTH SCIENCES CAMPUSES FOR FISCAL YEAR 2019

### City Water

#### How Much

UGA purchased 486,746,893 gallons of water in FY19, up 7.1% from 10 years prior but down 14% from FY07.

#### What it Costs

This water consumption cost about \$2.84 million in consumption charges and \$2.7 million in sanitary sewer charges in FY19. In addition, water for irrigation cost about \$318,000, with no associated sewer charges.

#### Where it Comes From

UGA buys municipal water from Athens-Clarke County. The primary water source is the North Oconee River, but the water treatment plant on Barber Street also draws from the Middle Oconee River and Bear Creek Reservoir when the primary source is low.

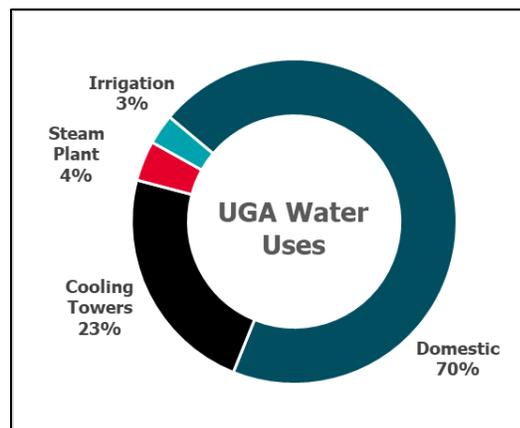
#### How it is Used

UGA primarily uses water for domestic purposes (toilets, sinks, drinking, showers, laboratories, etc.), cooling towers, steam generation, and irrigation.

The chart at right shows an approximate breakdown by end use. However, due to incomplete penetration of water meters this information is not completely reliable. As more meters are deployed in subsequent years the picture will become clearer, with a likely increase in cooling tower representation.

Cooling towers consume water through evaporative cooling, used to remove heat from chilled water systems that UGA uses to cool buildings. As water evaporates and leaves behind sediment in the cooling tower sump, some water is discharged to the sanitary sewer in a process known as "blowdown."

The UGA Central Steam Plant also consumes water through a similar blowdown process, and also loses some water through underground leaks in the steam condensate return pipes.



### Water Use Intensity

Water use intensity (WUI), measured in gallons per square foot of building space, is a convenient metric to compare water use in different buildings or track the progress of a campus that has grown 18.7% over the last 10 years. We include all metered potable water and all conditioned building square footage.

The WUI for FY19 was 33 gallons per square foot, which is down 10% from 10 years prior and 30% lower than FY07. Factors that contributed to this decrease include eliminating once-through cooling equipment in laboratories, minimization of landscape irrigation using native and drought-tolerant plants, metering cooling tower makeup water to detect leaks, and high-efficiency fixtures in new construction. Annual water use intensity (top chart, next page) is also highly dependent on the year's weather, and September is the most water intense month as occupancy and hot weather coincide (bottom chart, next page).

## Wastewater

Wastewater, or water that drains to the sanitary sewer, is piped and gravity-fed from the main campus to the Athens-Clarke County North Oconee Water Reclamation Facility off College Station Road, where it is treated and discharged into the North Oconee River. Wastewater from the HSC goes to the Middle Oconee WRF off Will Hunter Road, and is treated and discharged to the Middle Oconee River.

## Stormwater

Rainwater that does not infiltrate the ground runs along impervious surfaces (e.g. roofs, parking lots, roads) and is directed to nearby waterways through gutters, storm drains and culverts. Surface contaminants, including automotive fluids and litter, are carried with stormwater into natural waterways. UGA pays Athens-Clarke County about \$170,000 in annual stormwater fees, which the county uses to maintain and improve the stormwater utility.

## Who Pays

All utilities used in Resident Instruction (RI) facilities are paid for with state formula funding through the UGA Facilities Management Division Energy Services Department. Non-RI facilities (e.g. Athletics, Housing, and Auxiliary Services) use their respective budgets to reimburse Energy Services or pay utility bills directly.

