Water at UCLA

Sustainability at UCLA

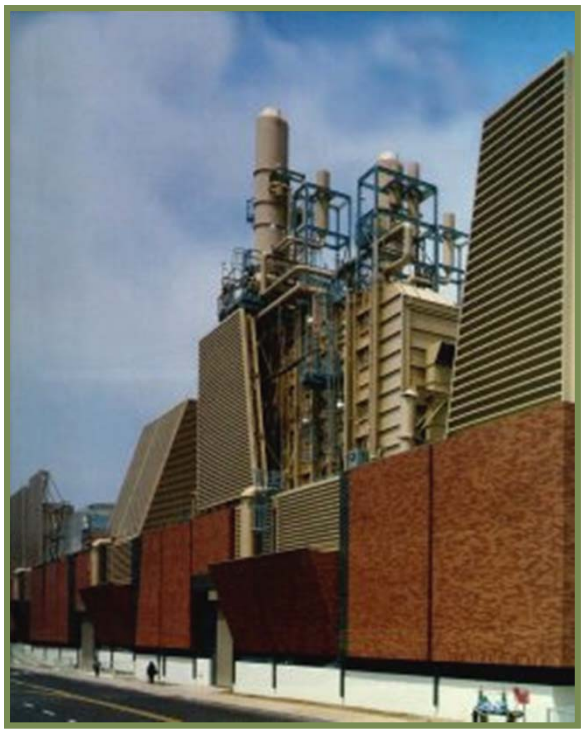
Academics and Outreach

- Undergraduate and graduate programs
- Research centers
- Extension programs
- Student groups
- Community outreach
- Partnerships

Sustainability at UCLA

Operations

- Climate Action Plan
- Transportation Programs
- Waste Management
- Housing
- Green Buildings
- Purchasing
- Water



UC Policy on Sustainable Practices

- Green Building Design
- Clean Energy
- Climate protection
- Sustainable Transportation
- Recycling and Waste Management
- Environmentally Preferable Purchasing
- Sustainable Foodservices

UC Water Policy

Policy Target: Reduce annual potable water consumption per user by 20% by 2020 from campus selected baseline (average of three years)

UCLA baseline: 1999/01- 2001/02 (3 year average)

User is weighted campus user (calculation from AASHE weights on campus residents highest, then full time students and staff, then part time.

Note: UCLA will be reporting med center and campus together, so our user calculation also includes patients (as estimated by adjusted patient day per working days)

Policy also asks for usage per GSF, but does not set the target by this measure.

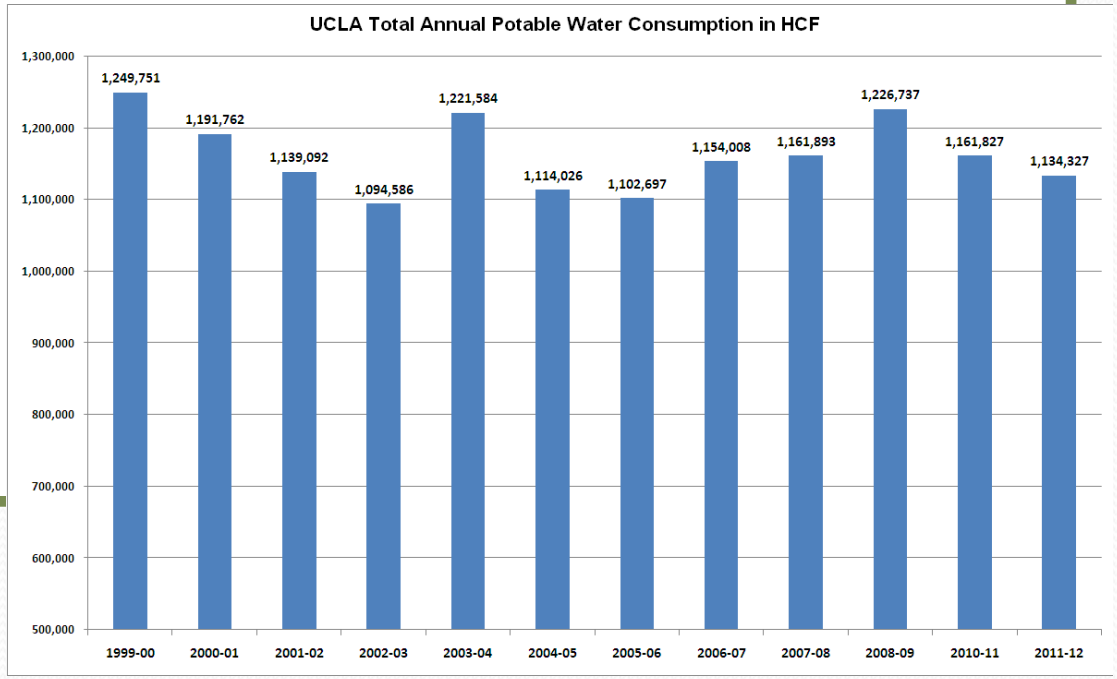
Policy requires campuses to prepare a comprehensive Water Action plan by 2013. Water Taskforce has begun this process

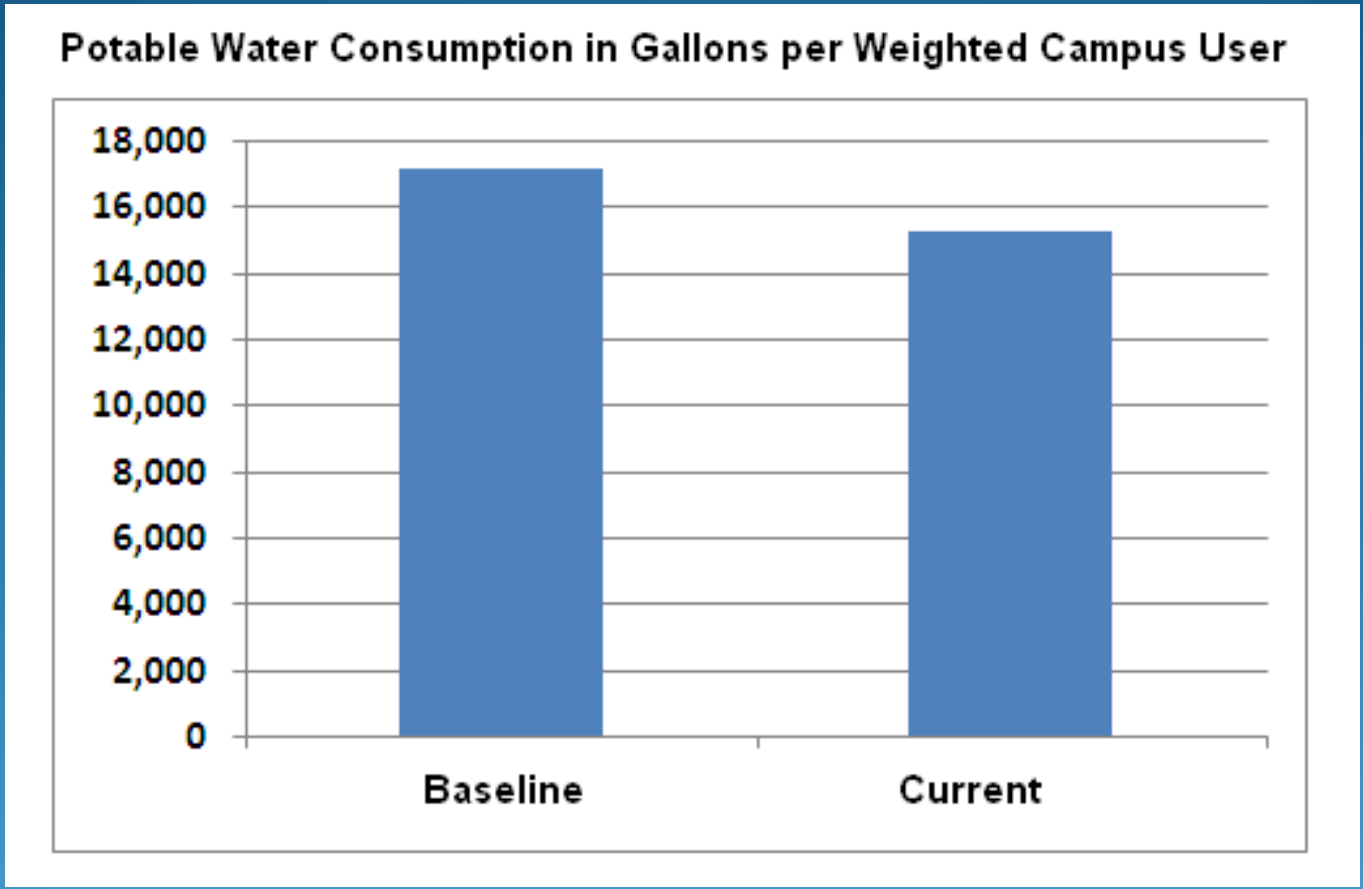
Water Conservation

Recycled water

- Groundwater from hospital
- Condensate
- Cogen

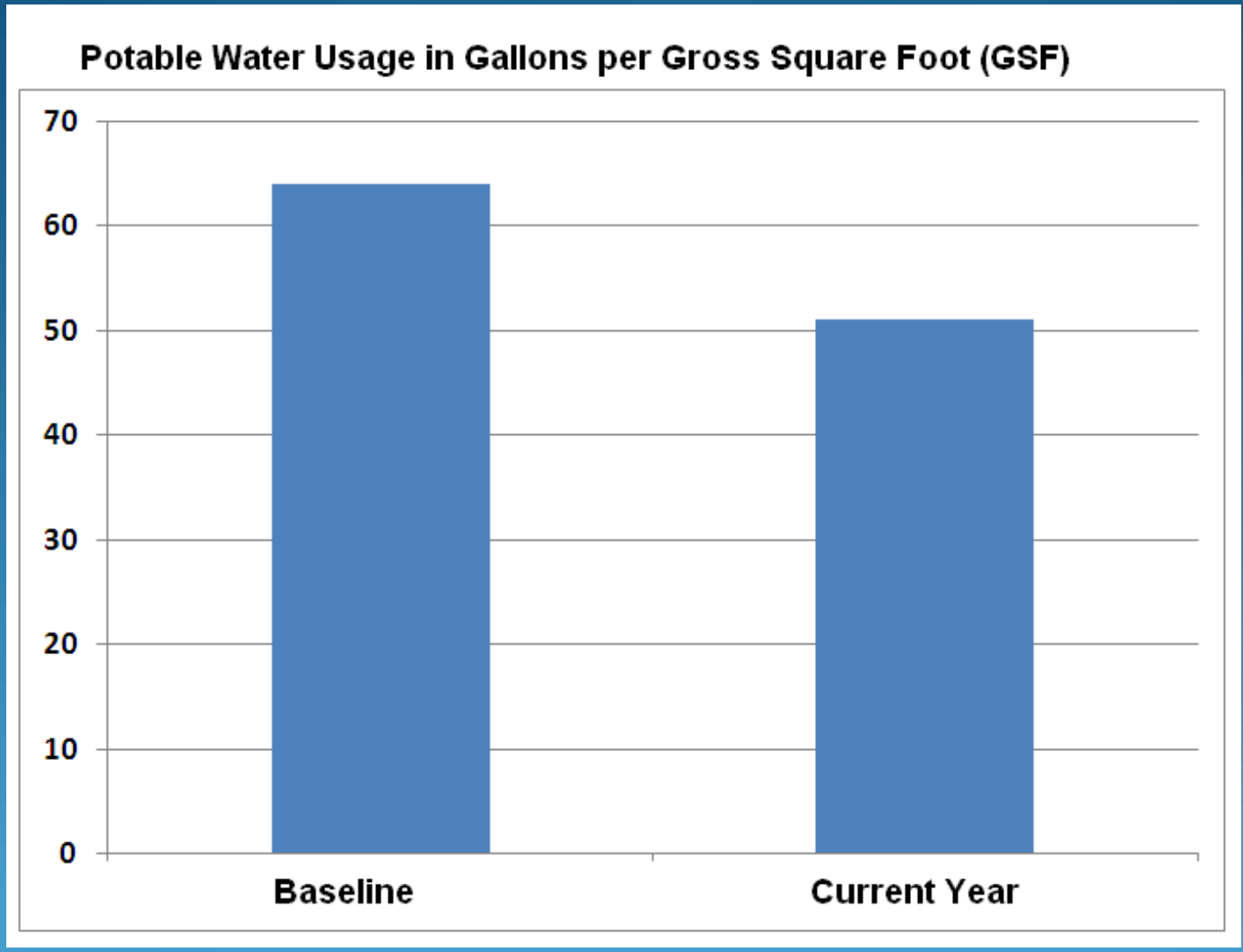
- Irrigation Management
- Plumbing retrofits
- Water taskforce





Current reduction from Baseline: 11%

Reduction from current year required to meet policy target by 2020: 10%

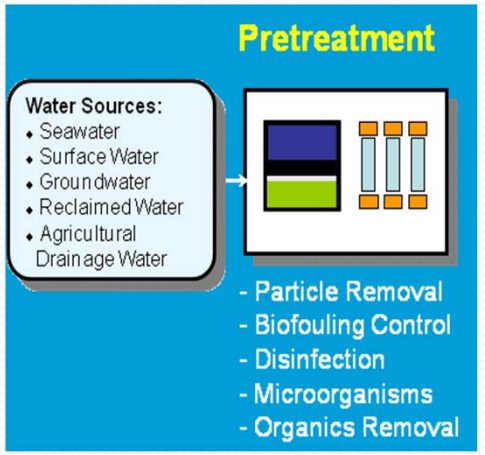


Current year reduction from baseline: 21%

The UCLA Water Technology Research Center

The water technology Research (WaTeR) Center focuses its research and development efforts on:

- Distributed smart water systems
  - Advanced water process monitoring
  - Advanced control and dynamic optimization of water treatment
- Integration of multi-stage membrane processes for water treatment & production
- Development of high performance membranes for water treatment & desalination
- Optimization of concentrate management strategies
- Water reuse technology (integration of RO and UF treatment, online membrane integrity testing, process monitoring, disinfection)



Training, technology transfer and collaborative projects with industry and water agencies are important WaTeR Center elements with a focus on the academic-industry-water vision of advancing technologies for water sustainability.

Com2RO

- Small size – designed under a grant from the Navy to fit into the watertight hatch doors of their ships
- Ultrafiltration (UF) and reverse osmosis (RO) modules of the system “talk” to each other. Com2RO is a smart system that allows the RO and UF to work seamlessly together.
- Ultra filtration steps in ahead of the osmosis to remove micro-organisms and other particles larger than salts.*

Com2RO Pilot at Cogen

- Cogen blowdown water becomes to concentrated to reuse, 80,000 gallons a day lost
- Pilot treated 60,000 gallons a day for reuse
- Grad students, faculty, and staff collaborating to test water saving measures for plant
- Seeking grant for permanent installation