



# WATER & STORMWATER

The University of Illinois has increased its water conservation efforts, with a potable water reduction target of 40 percent by 2025. Opportunities to utilize non-potable sources will be harnessed, including connecting the existing raw water system by 2020. Two goals are listed for campus water use: 1) reduce annual potable water use by 25% by FY20; and 2) capture and reuse 25% of campus stormwater by FY20. Rather than discharging stormwater, it could be used for irrigation across campus acreage, freeing up potable water for other campus uses. The campus will undertake a number of studies and pilot projects to better understand its water usage and plan for smarter consumption.

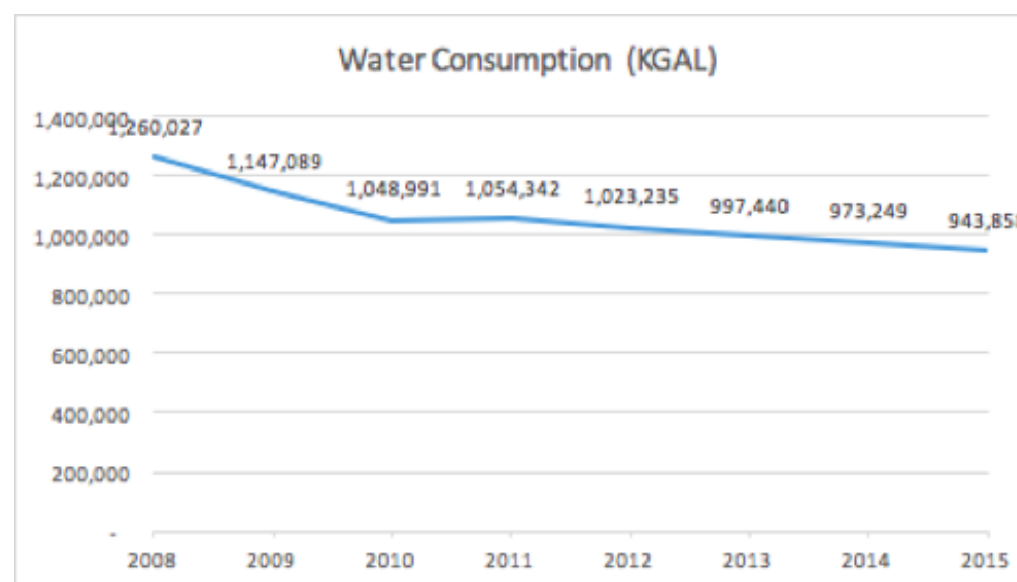
## OBJECTIVES

**1. Obtain and publicize more granular water use data by FY16, including water quantity and quality data where available.**



Status:  
In progress

- Water quality report can be found at <http://bit.ly/2draeEf>.
- Granular data is available from University Facilities & Services upon request.
- Individual monthly readings for granular water use data take place at Business Instructional Facility. Commitments have been made to get continuous readings.



**2. Improve the water efficiency of cooling towers by limiting the amount discharged to sewer to less than 20% of water intake for chiller plant towers, and less than 33% for stand-alone building towers, by FY20.**



Status:  
Complete!

- A pilot study at the State Regional Office Building on south campus has investigated softening, high pH, and a silica treatment regime.
- Water softening is an alternative water treatment to manage dissolved salt left behind from evaporated water in cooling towers while reducing water consumption and ultimately reducing the water discharges to the sewer to zero.
- After implementation of an operational regime at the test building, the discharge to sewers was zero.

**3. Perform a water audit to establish water conservation targets and determine upper limits for water demand by end-use, for incorporation into facilities standards by FY16.**



Status:  
Not complete

- Project requires funding to be completed. Looking for interns to perform audits.
- F&S has done a month of metering at the Business Instructional Facility, and the study proved promising.
- According to the meter, the building took 169,000 gallons of water during a one-month period.



**4. Inventory and benchmark campus' existing landscape performance by FY17.**



Status:  
In progress

- Undergraduate 2015-16 SWATeam member Scott Douglas completed a report of inventory and benchmarking performance of two areas on the south side of Boneyard Creek.
- The report focused on water drainage into Boneyard Creek, areas of concern on campus for water runoff, and overall stormwater performance.
- The study concluded that campus will have to implement a variety of strategies that are substantially different than current management practices.

Total Quantities of campus surfaces that drain to Boneyard Creek

Total to Boneyard Creek			
Total	SF	Acres	Percent
Parking	3,810,222	87.47	12.6%
Service Drive	432,893	9.94	1.4%
Sidewalk	3,533,343	81.11	11.7%
Building	5,381,826	123.55	17.8%
Street	3,029,897	69.56	10.0%
<b>Hardscape</b>	<b>16,188,182</b>	<b>371.63</b>	<b>53.6%</b>
Unpaved	14,005,890	321.53	46.4%
<b>Total area</b>	<b>30,194,072</b>	<b>693.16</b>	

**5. Through an open solicitation process, implement at least four pilot projects to showcase the potential of water and/or stormwater reuse by FY20, with the objective of implementing a broader program by FY25.**



Status:  
Not Complete

- One project would be studying the continuous use of non-potable water for buildings like the Business Instructional Facility and incorporating water recycling criteria into design standards.
- A full inventory and benchmarking performance report needs to be completed to identify more feasible projects.

**6. Investigate the water quality impacts of stormwater runoff and potential ways to reduce stormwater pollutant discharges by FY18.**



Status:  
Not complete

- Potential for student projects to investigate impacts — especially at the Boneyard Creek, which is the only campus-area body of water that is classified as "impaired."
- Next Steps: Encouraging further participation by students and staff to research particular areas.

## TEAM MEMBERS

