

# Kansas State University Sustainability



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**Environmental Sustainability is:** Making responsible decisions that support human well-being in the present and future, and that also preserve the viability and functionality of ecological services vital for human survival.

## Indoor Water

### What K-State does

- Steam Heat/Cooling System
- Repairing costly leaks
- Replacing outdated systems
- Usage Level Monitoring
- Reported Monthly by Facilities
- Currently ~\$950,000 a year in water
- New Construction
- Installing sustainable fixtures
- K-State 2025 Sustainability Plan
- Make plans for grey water use
- Improve the steam heat/cooling system.

TOTAL			
Projected	Actual	Projected	Actual
62,566	85,356	\$107,997	\$182,388
59,001	77,113	\$102,665	\$159,069
55,375	62,287	\$97,646	\$112,544
44,369	38,717	\$70,670	\$79,652
27,584	31,857	\$42,751	\$62,847
29,427	37,998	\$45,157	\$69,880
23,040	19,951	\$37,019	\$38,633
22,208	18,653	\$42,125	\$38,412
23,992	21,547	\$45,593	\$44,287
23,251	21,374	\$44,224	\$44,793
39,758	29,448	\$82,810	\$60,305
44,475	27,752	\$83,966	\$57,650
455,050	466,063	\$812,822	\$941,561

### What Others are Doing

- Installation of Low-Flow Sustainable fixtures
- Dual Flush Toilets
- Ultra Low-Flow Showerheads
- Waterless Urinals
- 0.5 Gallon per minute sink aerators
- Monitoring and Education
- Arizona State University has an interactive website for the public to check real time usage
- The facilities department at Guilford College saves 30% on water bills due to improvements
- Grey Water Usage Projects
- Used for watering landscape
- Used for irrigation

## Food

### What K-State does

- Composting at the Union & Dining Centers
- waste reduced by 39.8 tons in 2012<sup>1</sup>
- Local Foods
- meat & dairy from Call & Weber Halls<sup>1</sup>
- direct communication
- Arizona State University has an interactive website for the public to check real time usage
- leftovers re-used
- donations to Flint Hills Breadbasket
- New Dining Center
- dish machine with a pulping function<sup>2</sup>

### What Others are Doing

- Colorado State's Green Guard<sup>3</sup>
- official governance structure
- New Mexico State's Oxford Hunger Banquet<sup>4</sup>
- raise student awareness
- Guilford College's Compost Tea
- used as fertilizer on campus farm to cycle nutrients<sup>5</sup>
- Stanford University's Local Foods
- support 30 small farms within 250 miles<sup>6</sup>
- Arizona State's Seasonal Foods<sup>7</sup>
- reduce emissions from transport of exotic foods

## Retrofitting

### What K-State does

- New Construction
- Keeping up with sustainable standards in areas
- Remodeling Efforts
- Classrooms being remodeled for a design that is more useful and functional
- Energy efficient technology is being installed
- K-State 2025 Sustainability Plan
- Shows plans for retrofitting through multiple areas

### What Others are Doing

- Guilford College
- Replacing fixtures in restrooms
- Low flow sinks and showers
- Waterless urinals
- Dual flush toilets
- Efficient hand dryers
- LEED Certified Buildings



## Outdoor Water and Grounds

### What K-State does

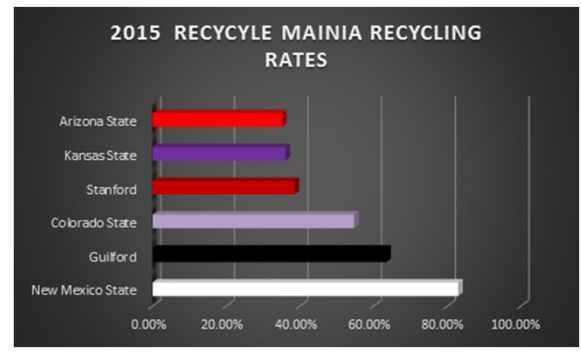
- Adopting a Native Plant landscaping policy
- Intend to replace lawns with productive community gardens
- Support student research in sustainable landscaping
- Have a campus-wide arboretum
- Plans to install bio-retention cells in critical storm water flow points
- Use permeable concrete in sidewalks and parking lots
- Investing in modern irrigation technology for controlled management

### What Other Schools Do

- Guilford college has a rainwater capture system that runs its grey water and uses lake water to irrigate their lawns
- Arizona State University has an expansive arboretum. All organic waste produced in landscaping is composted and used as fertilizer
- New Mexico State University Practices xeriscaping and utilizes an extremely efficient irrigation process



## Waste



K-State and the other five universities all participate in the national Recycle Mania competition. Recycle Mania is a friendly competition and benchmarking tool for college and university recycling programs to promote waste reduction activities to their campus communities. the table shows the current recycling rates as of week 8 2015(Recyclemania 2015).

## Conclusion

- K state Should expand their storm water management with rain gardens and rain water capture systems. Additionally, they should work on native landscaping techniques similar to the xeriscaping process.
- K-State should work to switch all of their restroom facilities to a low flow fixtures that don't jeopardize pressure. K-State should also look at installing waterless urinals in all men's restrooms to majorly cut down on water cost. Lastly the should focus on student education on water use, to help shave a large sum of money off the utility bills.
- K-State should form an official governance structure similar to that of Colorado State University. Additionally, they should work to involve students in the sustainable practices. An easy way to do this is start by using re-usable beverage containers & compostable service ware.
- K-State should look into utilizing their compost program to make a compost tea to help with grounds budget. We should also explore the use of reusable service wear in all dining options on campus.
- K-State should start exploring the most economical way to retrofit our aging buildings to maximize our sustainability footprint.

## Works Cited

<sup>1</sup>Arizona State University. *Sustainable Food*. Accessed 21 April 2015. <http://sundevildining.asu.edu/sustainability/greenthread/sustainablefood>

<sup>2</sup>Stanford University. *Food & Living Initiatives*. Accessed 21 April 2015. <https://sustainable.stanford.edu/solutions/food-living-initiatives>

<sup>3</sup>Guilford College. *Guilford Sustainability*. Accessed 21 April 2015. <http://www.guilford.edu/about/guilford-sustainability/index.aspx>

<sup>4</sup>New Mexico State University. 2014. *NMSU 'Hunger Banquet' highlights food insecurity across the globe*. Accessed 22 April 2015. <http://newscenter.nmsu.edu/Articles/view/10718/nmsu-hunger-banquet-highlights-food-insecurity-across-the-globe>

<sup>5</sup>Colorado State University Housing & Dining Services. 2013. *Green Dining*. Last Modified year 2015; accessed 21 April 2015. <http://housing.colostate.edu/green-dining>

<sup>6</sup>Jennifer Kennedy (Manager at Kramer Dining Center). 2015. Personal communication. April.

<sup>7</sup>Housing and Dining Services. 2013. EPA honors university's dining hall food composting programs for successfully reducing waste, promoting sustainability. Last modified 6 June 2014; accessed 20 April 2015. [http://housing.k-state.edu/resources/news/2013/epa\\_award.html](http://housing.k-state.edu/resources/news/2013/epa_award.html)

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