

MSU Sustainability

Building Operator Training

Sustainability at Mississippi State University

- Aversion vs. Diversion
 - Aversion: Preventing the generation of waste
 - Diversion: Preventing waste from going to the landfill
- What is our current Diversion Rate?
 - June 2015-July 2016 Average ~8.14%
- We have work to do as a University, and in order to do the work, we need the resources
 - Decrease our use of non-sustainable products on campus
 - Increase our diversion rate

Recycle or Landfill?







20 FL GZ (1.25 PT) 1011





NOT Accepted by Waste Pro, goes to landfill





Earth Day Recap: Recycling Audit

- Trash collected Monday morning April 18, 2016 (material reflects Sunday of Super Bulldog Weekend)
- Trash sorted Wednesday April 20, 2016.









24 Hours of Trash on Mississippi State Campus (Cans emptied Monday April 18 after Super Bulldog Weekend)

Most alarming: 81% of things thrown away are not recyclable.

Of the 18% (16.4 + 1.3 = 17.7) that is recyclable material we only recycle 6% of it.

Actions. 1) Change to more recyclable materials. 2) Divert more of the recyclables from the landfill.

Landfill and Recycling Tour-May 2016

















Mini Bin Pilot Program

- Mini bins were put into use on the 2nd floor of Lee hall in the English Department on July 5th.
- Update July 25: everything is going smoothly and staff are enjoying the new system.







Building Operator Training





Keys to Successful Energy Management



Campus Community	 GENERAL PUBLIC - Engaged Students, Faculty, Staff BUILDING OPERATORS – Liaison to Campus
CS Energy Management Team	 Identify and Execute Energy Projects Evaluate New Technologies and Methods Operate, Optimize and Maintain Equipment
Sustainability Committee	 Provides Input/Direction to Energy Program Identifies and Supports Projects/Efforts
Administration	Backing Policies and PracticesAuthorize Funding



Energy Successes



MSU's Primary Energy Sources (FY06)

- Electrical Usage ~ 138,266,507 kwh
- Natural Gas Usage ~ 4,756,657 ccf
 - 50/50 Electricity/Natural Gas

Energy Successes



MSU's Primary Energy Sources (FY16)

- Electrical Usage ~ 120,000,000 kwh
- Natural Gas Usage ~ 3,000,000 ccf
- Over \$42,000,000 Utility Cost Avoidance

Energy Successes



- Building Automation Systems
 - Centrally control/schedule HVAC equipment
 - BAS systems can save 20%-50% building energy when properly applied







- Central Plant Enhancements Chilled Water
 - ~ 40 Core Campus Buildings 4 Chillers
 - Ice Plant Installation Cheaper Power
 - Underground Chilled and Hot Water Lines
 - High Efficiency, Redundancy, Optimization





- Central Plant Enhancements Heating Water
 - High Efficiency Boiler Plant Upgrade
 - In-house Design-Build
 - ~40% Reduction in Gas Consumption
 - \$Millions in Avoided Gas Cost.





- Lighting Improvements
 - Energy, Performance, Environment
 - Major Lighting Technology Changes
 - Controls/Sensors
 - LED Only in Renovation and New Construction
 - 50%+ Reduction in Lighting Energy





Energy Successes Design Standards, Policies, Practices

- Energy & Sustainability Audit
- Design Standards & Reviews
- Climate Commitment
- Sustainability Policy
- Practices/Guidelines
 - Common Setpoints/Schedules
 - Setbacks and Shutdowns (Holiday)





Looking Ahead





How can you help?

• Energy

- Heating and Cooling Set Thermostats Back, Layer Up/Down
- Lighting OFF when not in use, Task-lighting, Daylighting
- Computer Power Saving Settings
- Plug Loads Keep unplugged when not in use, Use surge strips.





How can you help?

Sustainability

- Reduce your use of disposable items: paper plates, foam cups
- Reuse use reusable water bottles, shopping bags
- Recycle on campus: aluminum, cardboard, paper, plastic #1 and #2
- Refuse items that you don't need: straws when you go out to eat, plastic shopping bags for only a few items

Follow MSU Sustainability on Social Media!

- Facebook: @msstatesustainability
- Instagram: @msstate_sustainability
- Twitter: @msstate_green







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