

2016

University of Arkansas
Office for Sustainability



UNIVERSITY OF
ARKANSAS

MISSION

The University of Arkansas Office for Sustainability motivates, facilitates and coordinates innovation and progress through partnerships with students, faculty and staff across the U of A to create a culture of sustainability.

RECOGNITION



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LEADERSHIP TEAM



Eric C. Boles
Director

Marty D. Matlock
Executive Director

Cassandra Gronendyke
Administrative Specialist

INTERNS

GRADUATE STUDENTS

Marya McKee — Crop, Soil and Environmental Science
Brandon Wayerski — Business Administration

SENIORS

Chandler Buckingham — Environmental Soil and Water Science, Sustainability Minor
Lillian Hay — Graphic Design and Drawing
Grant James — Finance, Sustainability Minor
Brittany Jurgens — Biology
Madeline Meier — Chemistry
William Woodward — Mechanical Engineering, Computer Science Minor

JUNIORS

Eric Beitle — Chemical Engineering
Linden Cheek — Biological Engineering, Sustainability Minor
Lydia Campbell — Civil Engineering
Ryan Clark — Biological Engineering, Sustainability Minor
Yvonne Ngome — Biology

SOPHOMORES

Olivia Morgan — Psychology, Indigenous Studies Minor

FRESHMEN

Bianka Rios — Animal Sciences

ALL OFS INTERNS
ARE COMPENSATED ON
A SCALE STARTING AT
\$10/HOUR

FACULTY

The following list of more than 40 faculty members are engaged in sustainability research and education at the University of Arkansas. This is not a comprehensive list; in many ways the challenges of sustainability are core to the Land Grant University mission, engaging almost every faculty research and teaching program.

Dale Bumpers College of Food, Agriculture, and Life Sciences

- Kristophor Brye, Ph.D. Crop, Soils and Environmental Sciences
- Zola Moon, Ph.D. Sustainability Program and Human Environmental Sciences
- Lanier Nalley, Ph.D. Agribusiness and Agricultural Economics
- Jennie Popp, Ph.D. Agribusiness and Agricultural Economics
- Curt Rom, Ph.D. Horticulture
- Mary Savin, Ph.D. Crop, Soils and Environmental Sciences
- Thad Scott, Ph.D. Crop, Soils and Environmental Sciences
- Andrew Sharpley, Ph.D. Crop, Soils and Environmental Sciences
- Kate Shoulders, Ph.D. Agricultural Education, Communications and Technology

Fay Jones School of Architecture

- Noah Billig, Ph.D. Landscape Architecture
- Phoebe Lickwar, M.L.A. M.Ed. Landscape Architecture
- Carl Smith, Ph.D. Landscape Architecture
- Steve Luoni, MS-Arch Community Design Center
- Alison Turner, MS-Arch Architecture

School of Law

- Nicole Civita, J.D. School of Law
- Uché Ewelukwa, S.J.D. School of Law
- Sara Gosman, J.D. School of Law
- Janie Hipp, J.D. School of Law
- Don Judges, J.D. Ph.D., School of Law
- Christopher Kelley, J.D. School of Law
- Susan Schneider, J.D. School of Law

J. William Fulbright College of Arts and Sciences

- Myria Allen, Ph.D. Communications
- Robert Coridan, Ph.D. Chemistry and Biochemistry
- Jackson Cothren, Ph.D. Geosciences
- Ralph Davis, Ph.D. Geosciences
- Sean Dempsey, Ph.D. English
- Marlis Douglas, Ph.D. Biological Sciences
- Michael Douglas, Ph.D. Biological Sciences
- Michelle Evans-White, Ph.D. Biological Sciences
- Kevin Fitzpatrick, Ph.D. Sociology and Criminal Justice
- Rocio Gomez, Ph.D. Latin American History
- Warren Herold, Ph.D. Philosophy
- Kusum Naithani, Ph.D. Biological Sciences
- David Stahle, Ph.D. Geosciences
- J. D. Willson, Ph.D. Biological Sciences

College of Engineering

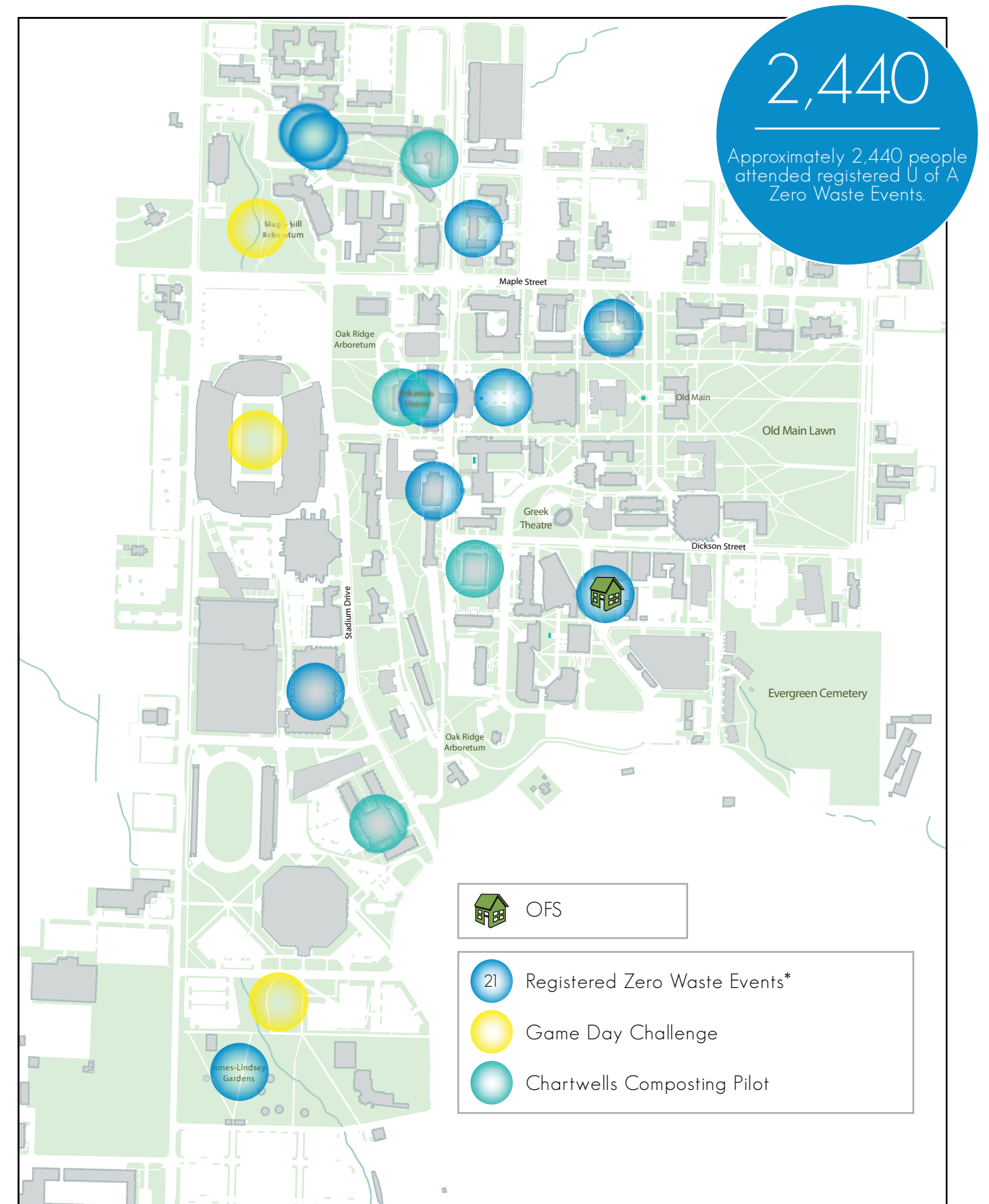
- Andrew Braham, Ph.D. Civil Engineering
- Brian Haggard, Ph.D. Biological and Agricultural Engineering
- Jamie Hestekin, Ph.D., P.E. Chemical Engineering
- Alan Mantooth, Ph.D., M.S.E.E. B.S.E.E. Electrical Engineering
- Marty Matlock, Ph.D., P.E., B.C.E.E. Biological and Agricultural Engineering
- Darin Nutter, Ph.D., P.E. Mechanical Engineering
- Scott Osborn, Ph.D., P.E. Biological and Agricultural Engineering
- Benjamin Runkle, Ph.D., P.E. Biological and Agricultural Engineering
- Greg Thoma, Ph.D., P.E. Chemical Engineering
- Wen Zhang, Ph.D., P.E. Civil Engineering
- Jun Zhu, Ph.D., P.E. Biological and Agricultural Engineering

Sam M. Walton College of Business

- Amy Farmer, Ph.D. Economics
- David Hyatt, Ph.D. Supply Chain Management
- Jon Johnson, Ph.D. Management
- Gary Peters, Ph.D. Accounting
- Mathew Waller, Ph.D. Supply Chain Management

ZERO WASTE

In 2016 the University of Arkansas developed and began implementing zero waste strategies to advance campus programs to achieve 90% diversion by 2021. The strategies not only considered different collection and disposal options to increase diversion of waste from landfills, but primarily focused on how changes in the procurement of items for our campus could reduce our overall waste. Purchasing only items of recyclable and compostable materials for on-campus sale and use, as opposed to disposable materials such as polystyrene, could increase the rate of diversion of waste from landfills. Highlights in 2016 include recycling efforts among our Greek Life, the Athletic Program's continued dedication to the Game Day Challenge competition, and the amazing food repurposing efforts of Razorback Food Recovery.



*To register your U of A Zero Waste Event, go to zerowaste.uark.edu

Razorback Food Recovery

Razorback Food Recovery (RFR) began in February 2014, and in 2016 has continued to be one of the University of Arkansas’ major methods of combating both food waste and food insecurity. RFR Volunteers work with Chartwells,the U of A’s food provider, to recover food both in the restaurants and cafeterias on campus. This food is then separated into individual, freezable meals that are then given to our community partner agencies who distribute it to the food insecure of our city. So far, RFR has recovered and distributed over 83,500 lbs of food. Not only has this food been prevented from going to waste, but it has been distributed - free of charge - to those in need. To get involved, go to service.uark.edu.

☒
Short-Term Goal

Establish a core group of stakeholders and develop a zero waste strategy.

☐
Mid-Term Goal

Opportunities to reduce or reuse have been implemented and recycling is the standard.

☐
Long-Term Goal

Achieve 90% or greater diversion from landfill by 2021



83,000

Razorback Food Recovery has recovered and redistributed over 83,000 lbs of food.

Zero Waste Events

The Zero Waste Events program registered 21 events in 2016. The OFS provided all of the necessary equipment, including up to 20 ClearStream recycling receptacles, signage, and a variety of weighing and measuring equipment. These tools are provided to U of A sponsored events free of charge. Zero Waste Events can be scheduled via a simple online form at zerowaste.uark.edu.

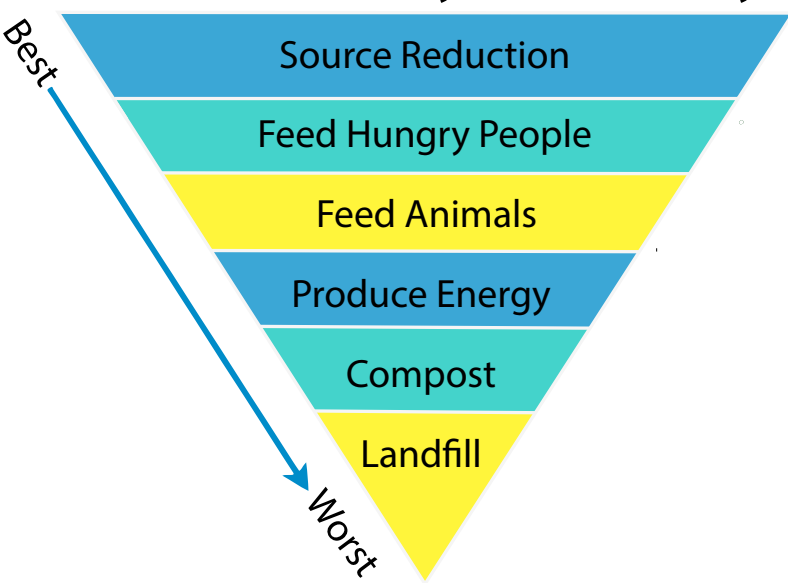
Chartwells Composting Pilot

In the Spring of 2016, Chartwells participated in a composting pilot facilitated by the City of Fayetteville. The City owns and operates a composting facility, but prior to the Pilot it was used only to compost yard waste. During the Pilot, food waste from Fulbright, Pomfret, Union, and Brough cafeterias that would usually have been tossed in the landfill was instead collected and composted into a valuable soil amendment. Over the 21 weeks, a total of 69.3 tons of food waste was collected from the University and other participants in Fayetteville. The Pilot not only reduced the amount of food going to the landfill, but increased awareness of food waste by students and members of the Fayetteville community. The City is considering using the Pilot as a blueprint for an ongoing program to be rolled out in 2017.

93 CY

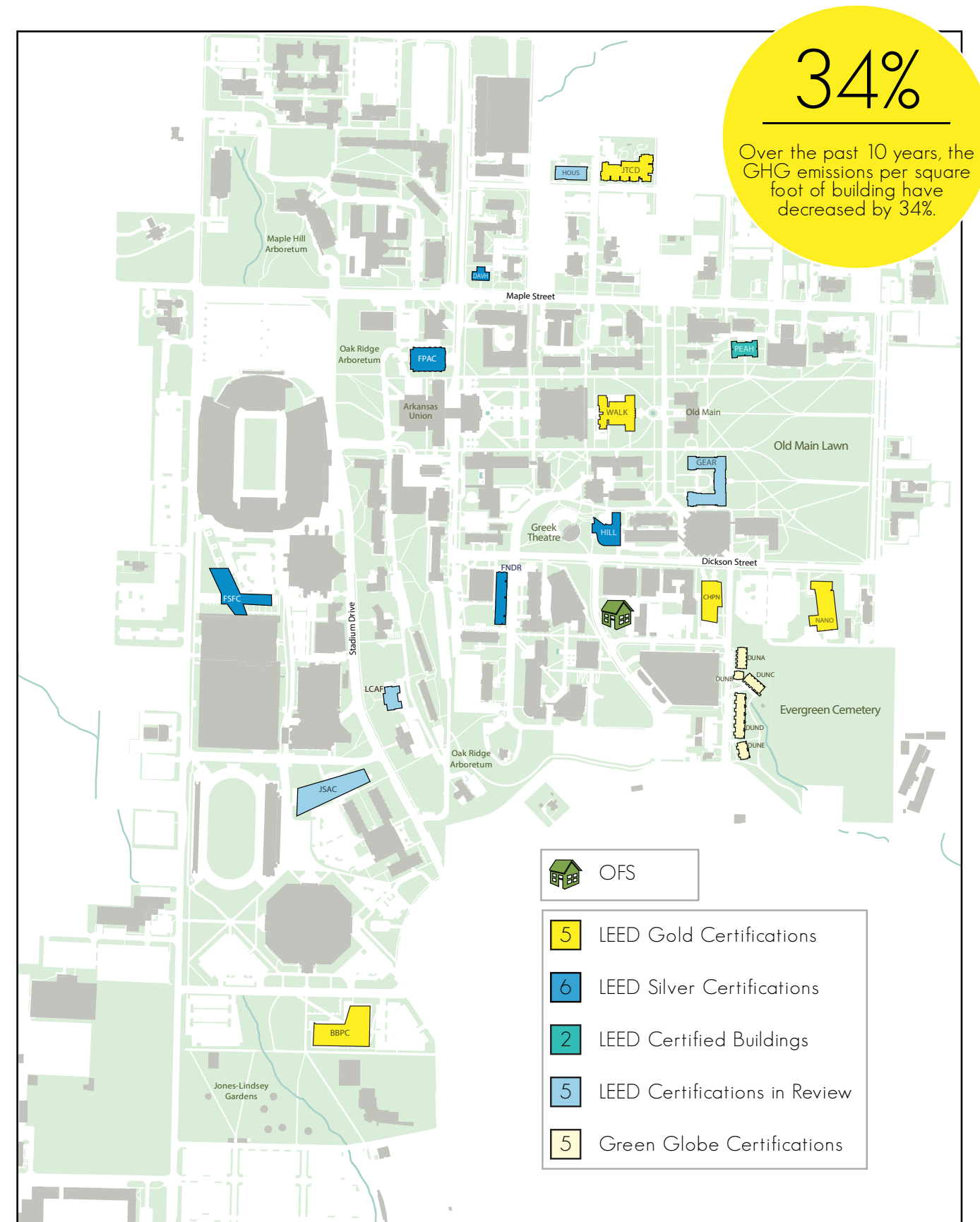
The U of A composted 93 cubic yards of food waste as part of the composting pilot.

Food Recovery Hierarchy



CARBON NEUTRAL

In December 2015, the University of Arkansas committed to the Second Nature Climate Leadership Commitment which encompasses both carbon and resiliency goals. This agreement re-asserted the U of A's 2007 signature of the American College and University Presidents' Climate Commitment which established a carbon neutrality by 2040 goal and continued leadership within this space. This commitment is formalized in the University of Arkansas Climate Action Plan version 2.0, which was approved by the U of A Sustainability Council in 2014. Achieving carbon neutrality at the University of Arkansas will require continued cooperation and support by students, faculty, and staff to be aware of their energy usage, waste habits, and transportation choices.



*LEED Silver and LEED Certified buildings at the UA Research Center are not within the map boundaries.



Short Term Goal

Reduce to 1995 Levels
by 2014; 163,000
metric tons



Mid-Term Goal

Reduce to 1990 levels
by 2021; 125,000
metric tons



Long Term Goal

Achieve net zero
carbon emissions by
the year 2040



Dramatic Emission Reductions

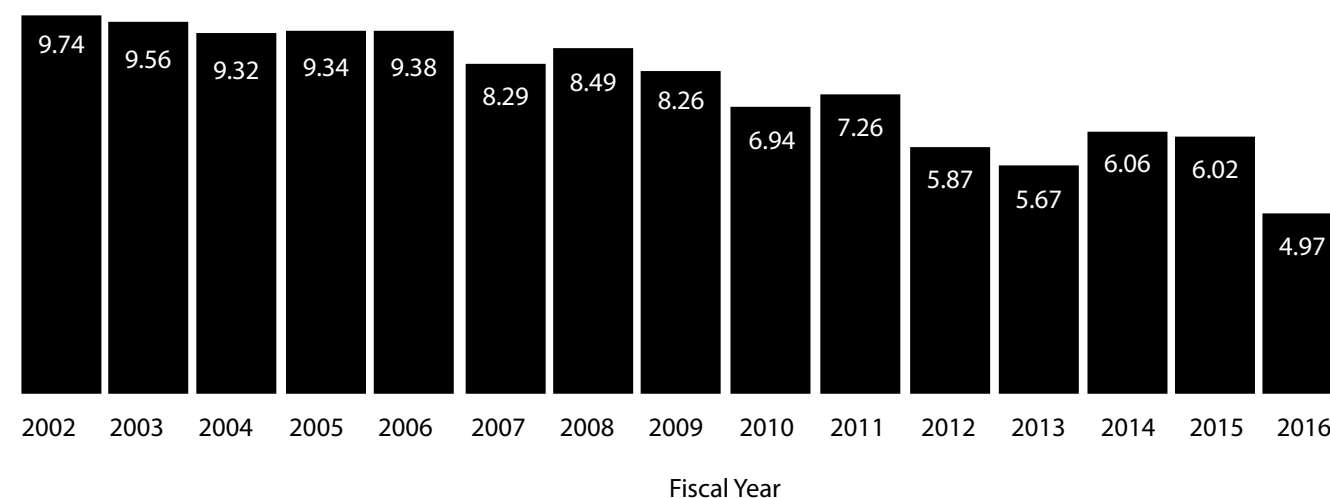
Despite steady enrollment and infrastructure growth, in 2016 the University of Arkansas has significantly reduced overall carbon emissions. A significant portion of this reduction can be attributed to Energy Savings Performance Contracts that have reduced emissions by approximately 30,000 metric tons, and saved around six million dollars over the past 10 years. In 2016, a 5 Mega-Watt Combined Heat and Power System came on line to provide heat while simultaneously providing hot water and power for the campus. These efforts further reduced emissions by about 22,000 metric tons of carbon dioxide equivalents (MTCDE), and more reductions are expected in 2017 as the system is optimized. This cost-effective project has allowed us to approach our 2021 mid-term emission goal five years ahead of schedule. Although burning natural gas on campus still has a carbon footprint, it is approximately half the carbon footprint of the equivalent amount of electricity purchased from coal-powered electricity.



2016 Bicycle Friendly University

As part of the effort to improve the quality of life for campus members and reduce scope 3 emissions, the University of Arkansas has been planning and deploying more pedestrian and bicycle friendly infrastructure and programming. This year, for the first time, the University of Arkansas was awarded Silver Bicycle Friendly University designation by the League of American Bicyclists.

GHG Emissions per Student (MTCDE)



Distribution of Emissions by Source

Scope

1

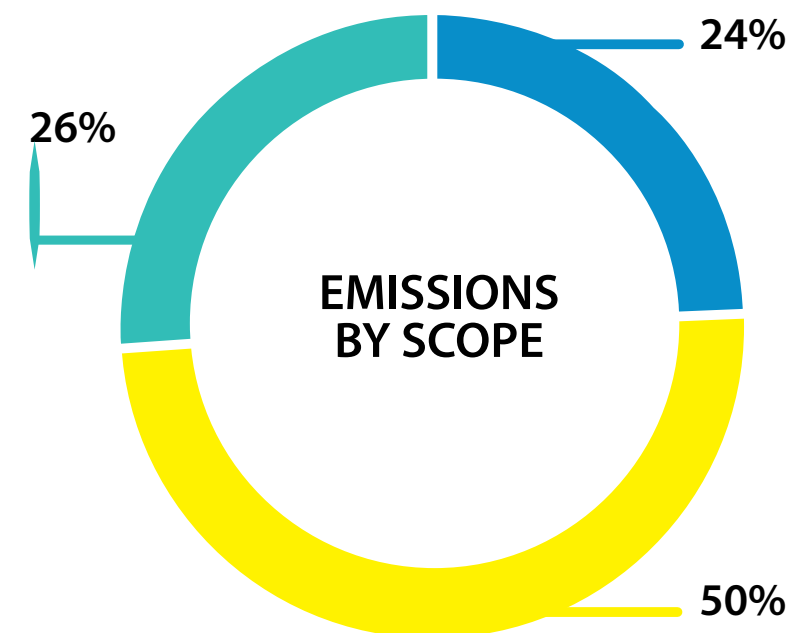
Combined Heat & Power
Other On-Campus Stationary
Campus Vehicle Fleet

2

Purchased Electricity

3

Commuting & Business Travel
Landfill Emissions
Paper Purchases



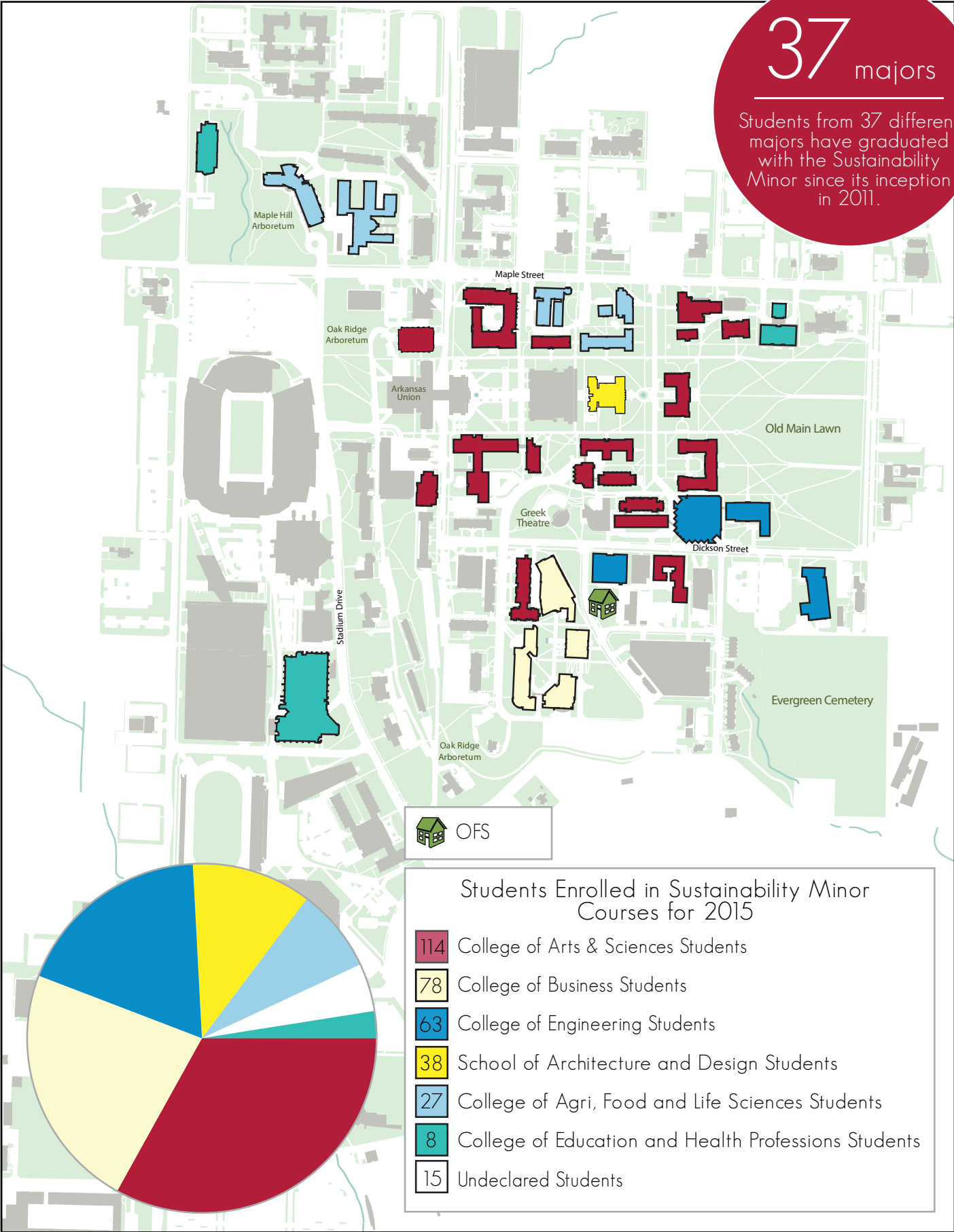
ACADEMIC PROGRAMS

Sustainability academic programs at the University of Arkansas are growing to accommodate the increased interest in sustainability issues across our economy. The goal of the University of Arkansas Sustainability Program is to become a global leader in sustainability education, knowledge generation, and outreach. The last five years have seen progress with the addition of the undergraduate minor, a graduate certificate, and a number of successful summer Research Experience for Undergraduate (REU) programs. The Sustainability Minor has become one of the top 10 undergraduate minors, as students from an ever wider collection of majors and disciplines choose to add a focus on sustainability to their academic path.



37 majors

Students from 37 different majors have graduated with the Sustainability Minor since its inception in 2011.





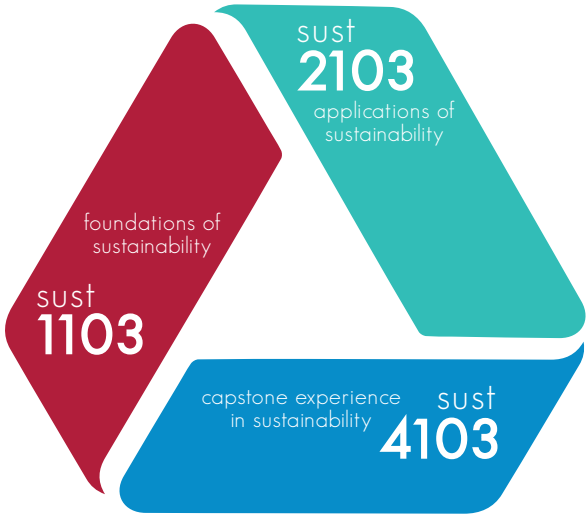
SUSTAINABILITY MINOR

Sustainability Graduate Certificate

The University of Arkansas Graduate Certificate in Sustainability is open to any student admitted to the Graduate School, and is achieved by completing one required course and four electives from a variety of disciplines. The Graduate Certificate was created in 2012 to provide an opportunity for graduate students and working professionals to expand their competency in the science of sustainability.

The three required sustainability minor courses are:

- SUST 1103
Foundations of Sustainability
- SUST 2103
Applications of Sustainability
- SUST 4103
Capstone Experience in Sustainability

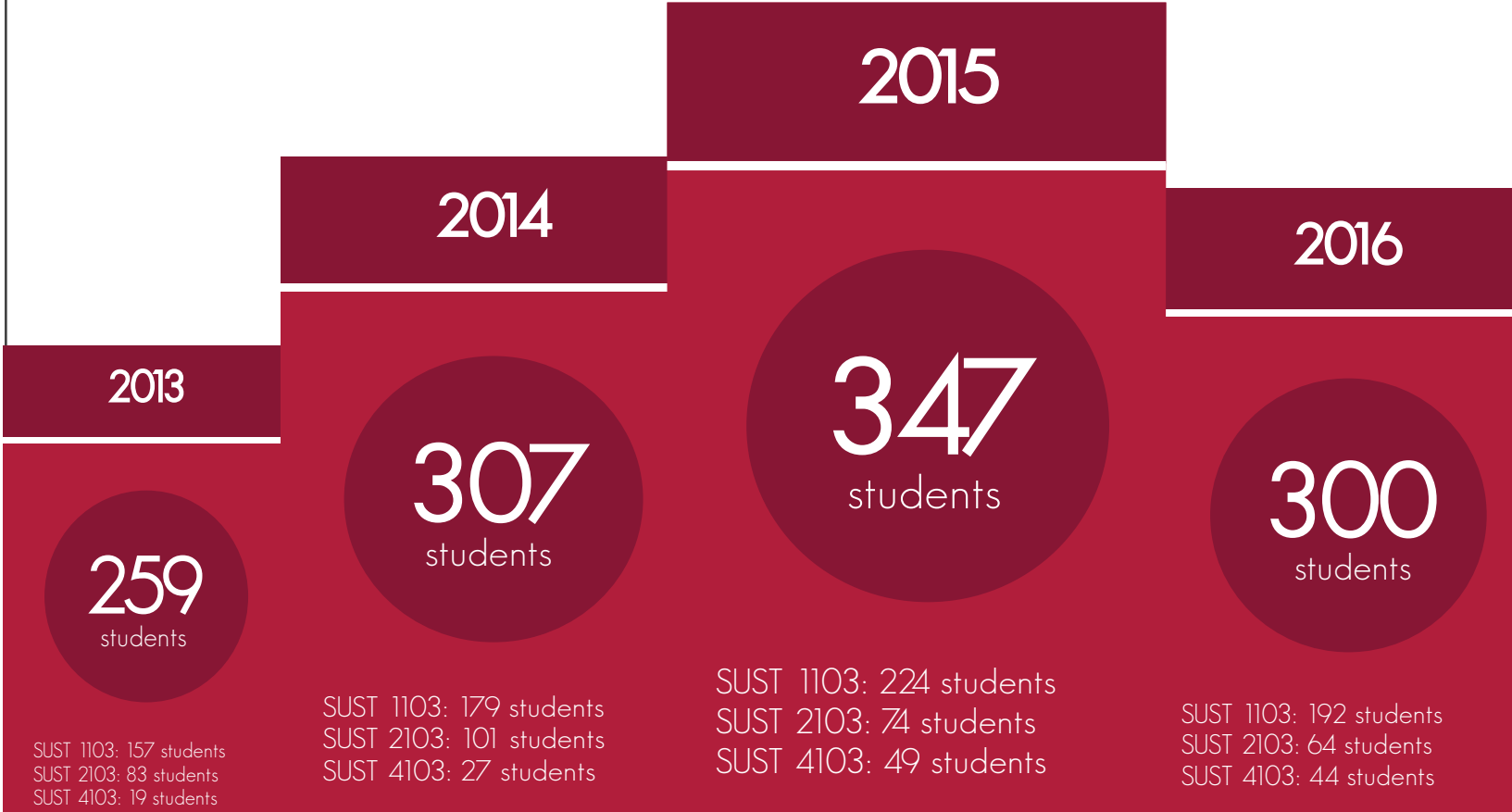


EcoREU Program

For the past eight years the U of A has hosted an Ecological Research Experience for Undergraduates (EcoREU) program. The program focuses on sustainable agricultural systems, funded by the United States Department of Agriculture (USDA), and sustainable management and assessment of ecosystem services, funded by the National Science Foundation (NSF). This summer, the EcoREU undertook a project in partnership with the University of Arkansas Community Design Center (UACDC) to meet the Hawaii Department of Agriculture’s Agribusiness Development Corporation (ADC)’s request for help in their Whitmore Food Hub. The agricultural facility in Whitmore, Oahu aims to transform the former Dole plantation facility into a high-tech facility to support local farmers. The EcoREU students laid a foundation which the UACDC has used to develop a Master Plan for the transformation of the Whitmore facility.

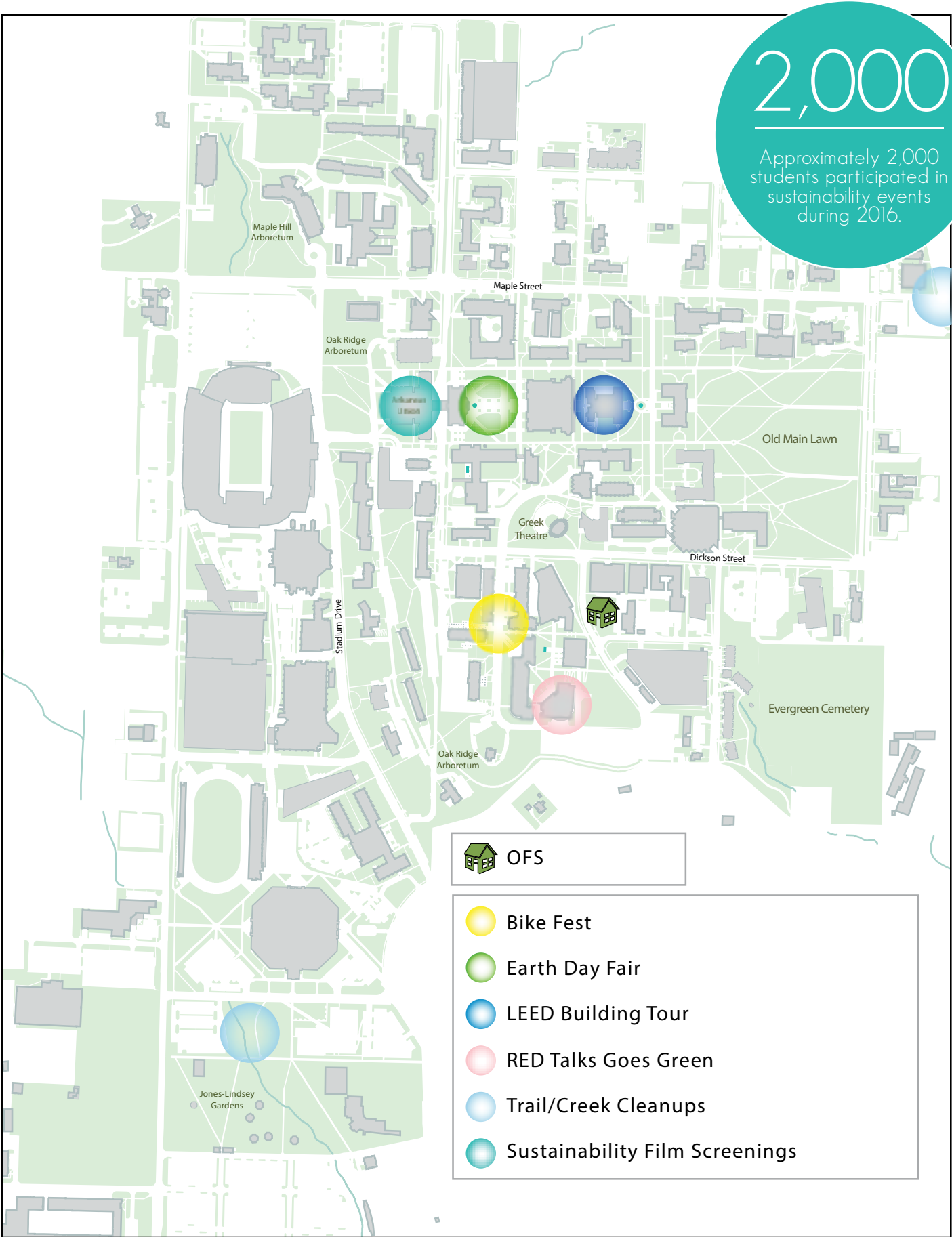
The U of A Sustainability Minor requires three courses in addition to three elective courses from a portfolio of almost 100 technical electives from a broad range of disciplines. The required courses provide a common body of knowledge for students, and include Foundations of Sustainability (SUST 1103), Applications of Sustainability (SUST 2103), and Capstone Experience in Sustainability (SUST 4103). Enrollment in the minor has steadily increased since it became available in 2011. In 2016 the Sustainability Minor was again ranked among the top 10 most popular minors at the University of Arkansas.

Student Enrollment



SUSTAINABILITY EVENTS

A truly sustainable and resilient campus can only be achieved by a united community effort that spans students, faculty, staff, and even the residents of Fayetteville. The Office for Sustainability (OFS) is dedicated to fostering and enhancing these vital connections within the campus and city community, and seeks to reinforce them through the events hosted on campus. Exploring new ways of thinking about common problems is essential to creating a culture of innovation. As such, the OFS hosts events that bring diverse groups of people together, focusing on integrating our social connections with education on the science of sustainability.



SPRING EVENTS



Earth Week

The 2016 Earth Week, from April 18th through the 22nd, was the most extensive sustainability event yet hosted at the University of Arkansas. The celebration was integrated into the entire week with different activities featured on each day. The activities were designed to reach a broad demographic, offering education, service, and entertainment opportunities.



Earth Day Fair

Earth Week culminated on Earth Day, with a sustainability fair on the Union Mall. The fair had booths set up for 23 different organizations. The event included representatives from the City of Fayetteville Department of Parks and Recreation, Fayettechill, CLIF Bar, the OFS, and many more. All the representatives, whether local business, government offices, or campus RSOs, divulged information and products focused on social and environmental responsibility. The Earth Day celebration continued late into the night with an Earth Day themed Friday Night Live Event held at the Union. Overall, hundreds of students and community members played an active role in celebrating our Earth through the events held by the OFS and others.



Green Building Tour

A tour of Vol Walker Hall, a LEED Gold certified building and one of the most innovative structures on campus, was led by Steven Reyenga of Marlon Blackwell Architects who designed Vol Walker. The tour provided a behind the scenes perspective of design elements and efficient materials that make Vol Walker truly sustainable. Vol Walker is home to the School of Architecture and provides daily inspiration to the next generation of architects.



Trail Cleanup

Two trail clean-ups, lead in partnership between the OFS, Recyclebacks, and the Beaver Watershed Alliance, were held during earth week. The first was located along the Dickson Street bike trail, and the second had volunteers collecting trash and recyclables along the Mullins Creek trail. These clean-ups were a way to encourage students to not only learn about sustainability and responsible living, but to apply these concepts in their own lives.



RED Talks Go Green

The ASG hosted a night of RED talks – the University of Arkansas' version of TED talks – focused on local sustainability. The talks included engaging lectures by a representative from Tri Cycle Farms, a local sustainable urban farm, as well from the U of A Center for Community Engagement Food Programs. The topics covered sustainability in the food system and were relevant to both local and global issues.

FALL EVENTS



The Office for Sustainability (OFS), by invitation of Association for the Advancement of Sustainability in Higher Education (AASHE), expanded the success of Campus Sustainability Day, historically held on the 4th Wednesday in October, to extend throughout the entire month of October. This was an opportunity to partner with other like minded groups on campus and host diverse events throughout October.



Project Clean Plate

Project Clean Plate takes place over a five-week span each year. This year, they had a big kickoff event with a chef takeover and film screening. During the first two weeks, Chartwells measures existing food waste to know exactly where the numbers stand for food waste on campus. Then, the publicity starts in the third week. Chartwells volunteers begin measuring total food waste each week in the same dining halls, comparing the average of those three weeks back to the original benchmark. This process shows the decrease in food waste that resulted from Project Clean Plate.

Bike Fest

October 5th was host to the University of Arkansas' Third Annual Bike Fest: an event dedicated to promoting bicycle use on campus as well as healthy living in general. The Event was a joint effort between UREC Outdoor and the Office for Sustainability. Bike Fest welcomed many contributors, including the U of A Police Department who answered questions about avoiding theft, the rules of the road, and bike etiquette, as well as local bike shops and organizations who taught students and community members about local trails, gear, and other biking information. The fest also featured delicious food and a bike giveaway - compliments of Clif Bar. The event attracted hundreds of students and community members, all of whom were encouraged to bike more and drive less, reducing their carbon footprint and increasing their quality of life.



Gameday Challenge

The Game Day Challenge is a friendly competition among colleges and universities across the nation to promote waste reduction at football games. The University of Arkansas Athletics Department, Office for Sustainability, Boston Mountain Solid Waste District and campus volunteers facilitate the program. In 2016 the U of A ranked 1st in the SEC conference for the fourth consecutive year for the highest diversion rate and 10th in the nation for the total pounds recycled with 25,620 pounds recorded.



Film Screenings

During National Campus Sustainability Month, the Office for Sustainability hosted a free on-campus screening of the 2014 award-winning documentary, DamNation. The film explored the change in our national attitude towards big dams, tracing the impact dams have on our nation's rivers and their ecology and how dam removal is now seen by many as a necessary and sustainable solution.

With a packed theatre on Dead Day Eve, the OFS hosted a free screening of the award-winning 2016 National Geographic documentary, Before the Flood. This documentary features Leonardo DiCaprio on a journey as a United Nations Messenger of Peace, traveling to five continents and the Arctic to witness climate change firsthand. Following the film, a panel of professors led a discussion with eager students.



NEXT STEPS

Through collaboration, the University of Arkansas has achieved key goals this past year. The Office for Sustainability’s promotion of zero waste and carbon neutrality has also led to the adoption of more effective policies by many on-campus groups, from small RSO’s to the entire UREC Outdoors’ department. The expansion of our recycling program to include all plastics, as well as the OFS’s continued efforts to encourage recycling during move-in, campus events, and throughout Greek Life, have significantly aided in the U of A’s Zero Waste goals. 2016 has also seen the foundations

laid for the University of Arkansas to become both more Bike and Pollinator Friendly, major steps in establishing a truly “sustainable” identity for our campus. Additionally, the Sustainability courses and minor continue to reach an ever broader demographic of students, representing disciplines from psychology to finance to engineering. The University of Arkansas’ commitment to continuous improvement encompasses every aspect of campus activities; our approach to sustainability is embedded in this philosophy.



HOW YOU CAN HELP

GO VOTE

public policy has a larger impact than individual

Tips: Voting goes beyond presidential elections. Get involved in midterm elections and local politics. Every purchase you make is a vote for what you care about.

Reduce

avoid unnecessary waste and impacts

Tips: Choose to reduce, repair or reuse rather than replace when possible.

CLEAN YOUR PLATE

eliminate food waste

Tips: Get less than you think you can eat at the dining hall. You can always go back for more.

CHECK YOUR THERMOSTAT

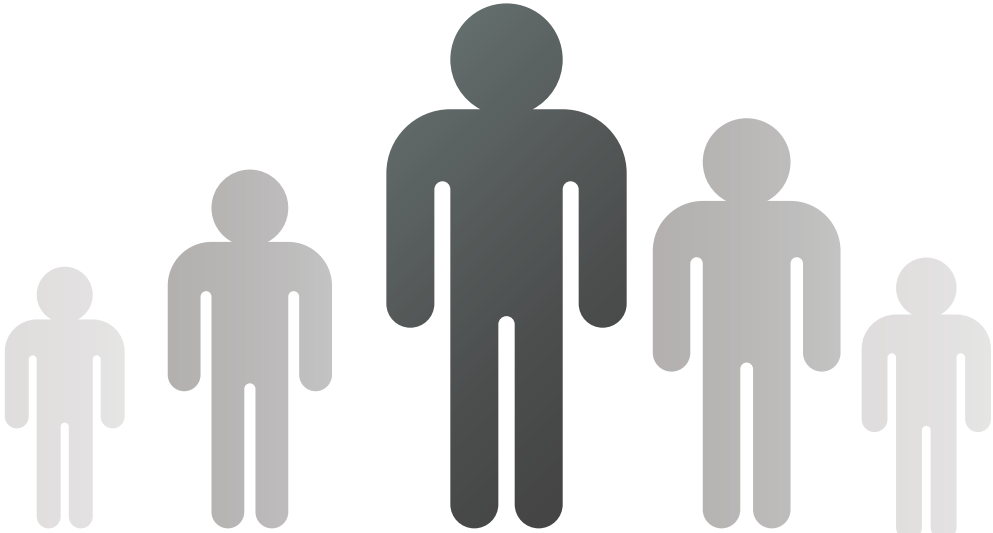
reduce heating and cooling emissions and costs

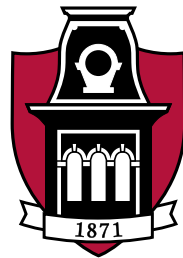
Tips: Turning down the intensity on nights, weekends, and holidays has a measurable impact.

HELP OTHERS

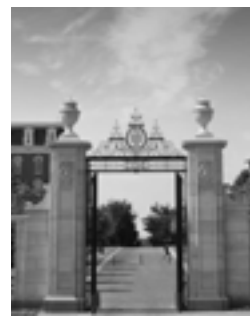
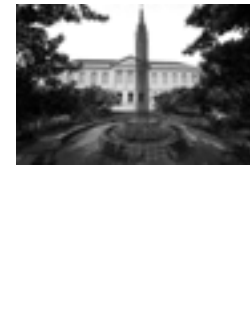
volunteering fosters empathy and understanding

Tips: Not everyone has the same opportunities. Lend a helping hand at <https://service.uark.edu>





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