



Evidence Document

for Higher Learning Commission Reaccreditation

Document Title: Office of Sustainability 2015 Annual Report

Office of Origin: Office of Sustainability

Document Summary:

More than 40 faculty members are engaged in sustainability research and education at the University of Arkansas. In December 2015, the UA committed to the American Campuses Act on Climate Pledge as part of the COP21 Paris Climate Conference, re-asserting the UA's goal of carbon neutrality and leadership on this issue. Other sustainability initiatives include the Game Day Challenge, Zero Waste Events, and Gamer 4 Good. Events include Know Tomorrow, Project Green Challenge, Bike Fest, and more.

2015

University of Arkansas
Office for Sustainability



UNIVERSITY OF
ARKANSAS



UNIVERSITY OF
ARKANSAS
Office for Sustainability

Contents

| | |
|-----------------------|----|
| Carbon Neutral | 6 |
| Zero Waste | 10 |
| Academic Programs | 14 |
| Sustainability Events | 18 |

Leadership Team



Michael Repovich
Program Director

Eric C. Boles
Director

Marty D. Matlock
Executive Director

Cassandra Gronendyke
Administrative Specialist

Interns

Eric Beitle
Sophomore
Chemical Engineering

Chandler Buckingham
Junior
Environmental, Soil, and Water
Science, Sustainability Minor

Linden Cheek
Sophomore
Biological Engineering
Sustainability Minor

Katharine DeRosette
Graduate Student
Higher Education Administration

Theresa Ehrlich
Graduate Student
Public Administration

Katie Ferran
Junior
Biology

Maranda Gerga
Junior
Architectural Design

Kate Hurlbut
Junior
Geology
Sustainability Minor

Grant James
Junior
Finance
Sustainability Minor

Brittany Jurgens
Junior
Biology

Angelica Makuch
Senior
Biological Engineering
Sustainability Minor

Marya McKee
Senior
Environmental, Soil, and
Water Science

Madeline Meier
Junior
Chemistry
Sustainability Minor

Jillian Schneider
Junior
Biological Engineering
Sustainability Minor

Summer Sherrod
Senior
Horticulture
Sustainability Minor

William Woodward
Junior
Mechanical Engineer

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

Sam M. Walton College of Business

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

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
Kusum Naithani, Ph.D. Biological Sciences
David Stahle, Ph.D. Geosciences
J. D. Willson, Ph.D. Biological Sciences

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

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
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



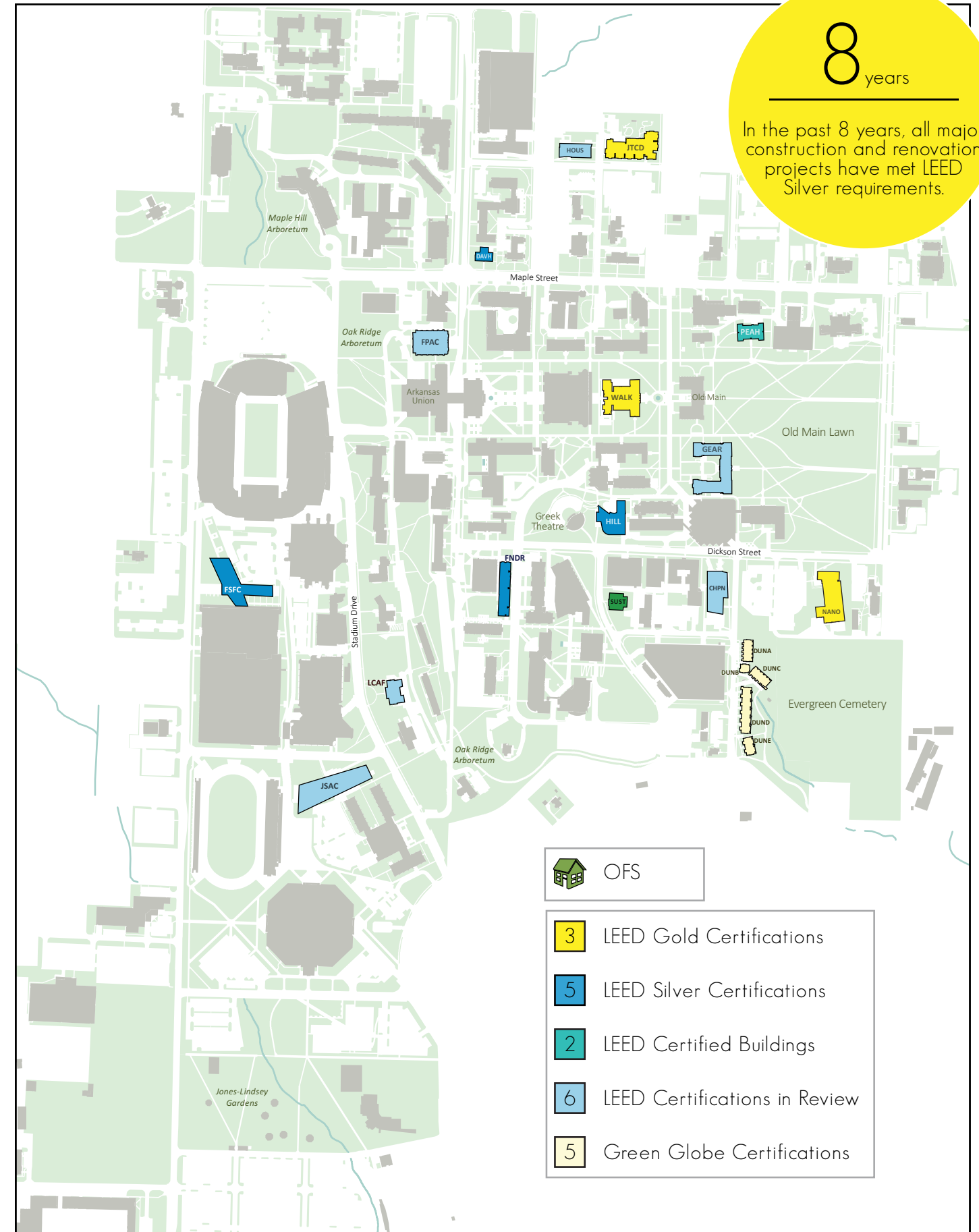
Carbon Neutral

In December 2015, the University of Arkansas committed to the American Campuses Act on Climate Pledge as part of the COP21 Paris Climate Conference. This agreement re-asserts the U of A's goal to strive toward carbon neutrality and demonstrates continued leadership on this issue. This commitment is part of The University of Arkansas Climate Action Plan Version 2.0, which was approved by the Sustainability Council in 2014. Achieving carbon neutrality by 2040 at the University of Arkansas will require continued effort and cooperation by students, faculty, and staff to be aware of their energy usage, waste habits, and transportation choices.



8 years

In the past 8 years, all major construction and renovation projects have met LEED Silver requirements.



*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

35,000

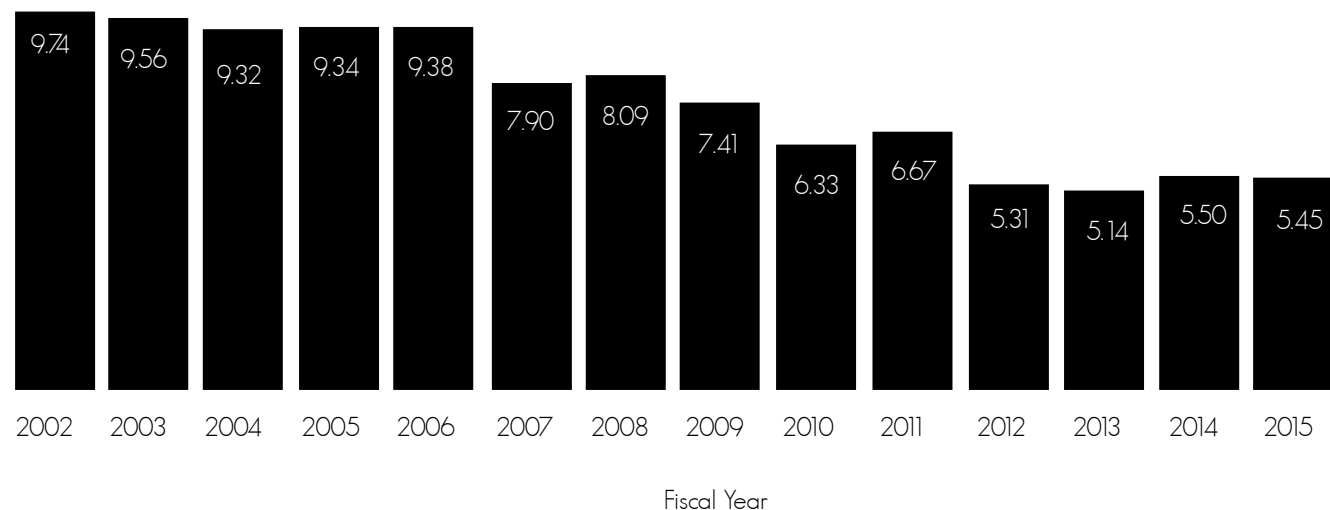
The Combined Heat & Power System reduces the U of A's carbon footprint by 35,000 MTCDE.

Becoming Carbon Neutral

Despite continued enrollment and infrastructure growth, in 2015 the University of Arkansas has reduced overall carbon emissions. Since 2002 enrollment has grown by 10,760 students, yet total emissions have been reduced by over 10,000 metric tons CO₂e (MTCDE). 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.

A 5 Mega-Watt Combined Heat and Power System has been installed and will come on line in 2016. We anticipate this will reduce emissions by about 35,000 MTCDE, allowing the university to heat buildings while simultaneously creating power. This project was outlined as a part of the mid-term goals in the Climate Action Plan 2.0 to make significant strides at reducing emissions to 1990 levels by 2021.

GHG Emissions per Student (MTCDE)

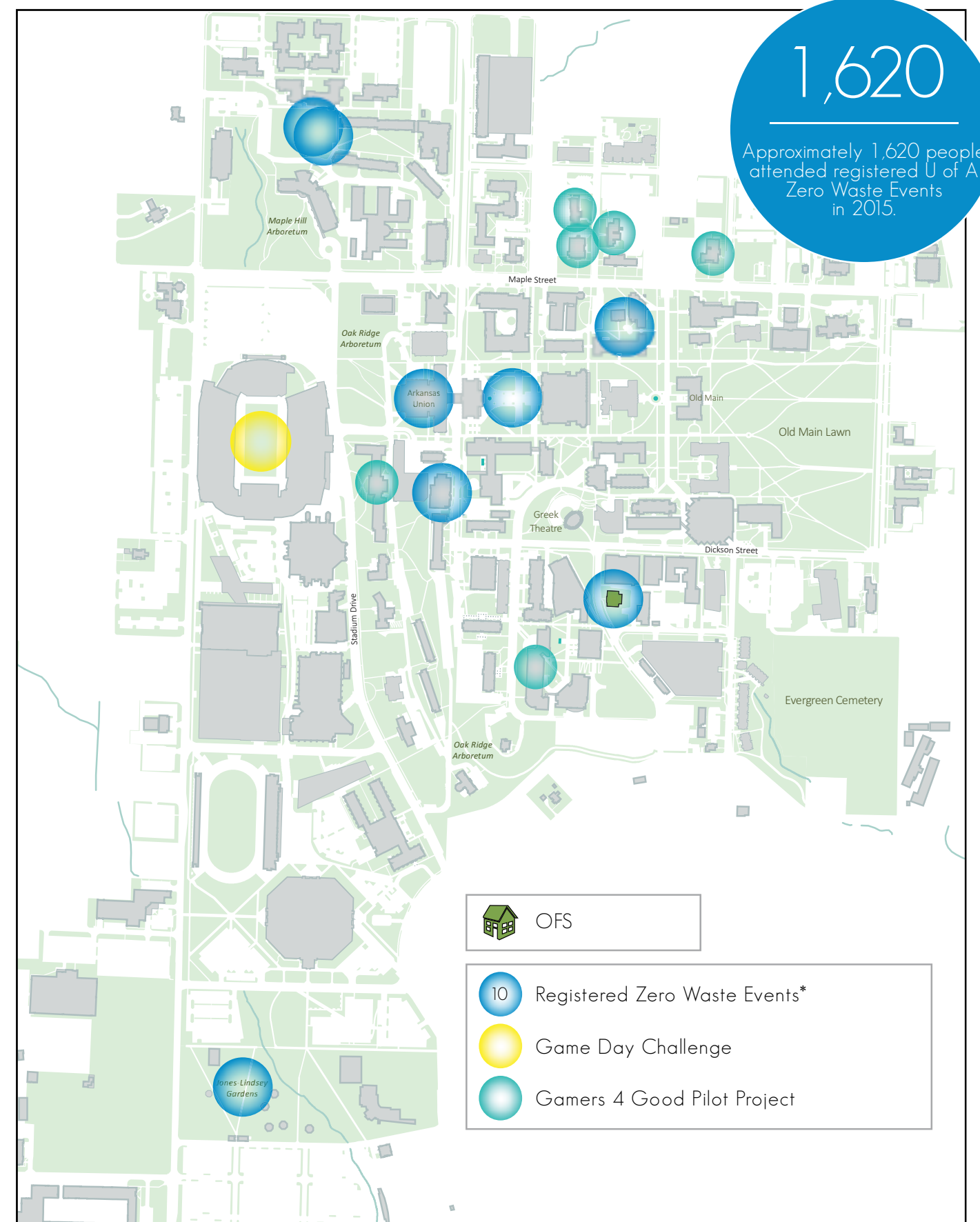


44%

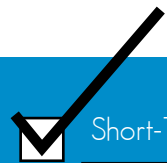
From 2002 to 2015 the carbon footprint per student was reduced by 44%.

Zero Waste

In 2015 we expanded our efforts towards reaching our goal of a 90% solid waste landfill diversion rate by 2021. We added a Zero Waste Program Manager to the Sustainability Leadership Team, expanded public outreach, and partnered with organizations to identify better options for managing our solid waste streams. Partners include Gamer4Good, the UA campus community, and the City of Fayetteville. We recognize that the biggest opportunities to save money while reducing environmental impacts are reducing and reusing resources. Too often the conversation skips those steps and moves directly into recycling efforts. Zero waste strategies require consideration of the entire life cycle of waste within our campus community, including procurement, use and disposal.



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



Short-Term Goal

Improve existing infrastructure by adding organics and increased recycling in housing.



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



1st

Game Day 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 leads this challenge with the help of the Office for Sustainability and volunteers across campus. In 2015 the U of A ranked 1st in the SEC conference for the third consecutive year for the highest diversion rate and 10th in the nation for the total pounds recycled with 25,620 pounds recorded.

Zero Waste Events

The Zero Waste Events program registered 11 events in 2015. The OFS provided all the necessary equipment, including up to 20 ClearStream recycling receptacles, signage, and a variety of weighing and measuring equipment. These tools are provided to UA sponsored events free of charge. Zero Waste Events can be scheduled via a simple online form at zerowaste.uark.edu.

Gamer 4 Good Pilot

The Office for Sustainability conducted two tests in collaboration with Gamer 4 Good, a company dedicated to reinventing recycling for the digital age. The experiment's main goal was to determine whether creating a competitive gaming platform for recycling would generate enough incentive for students at the university to increase recycling activity.



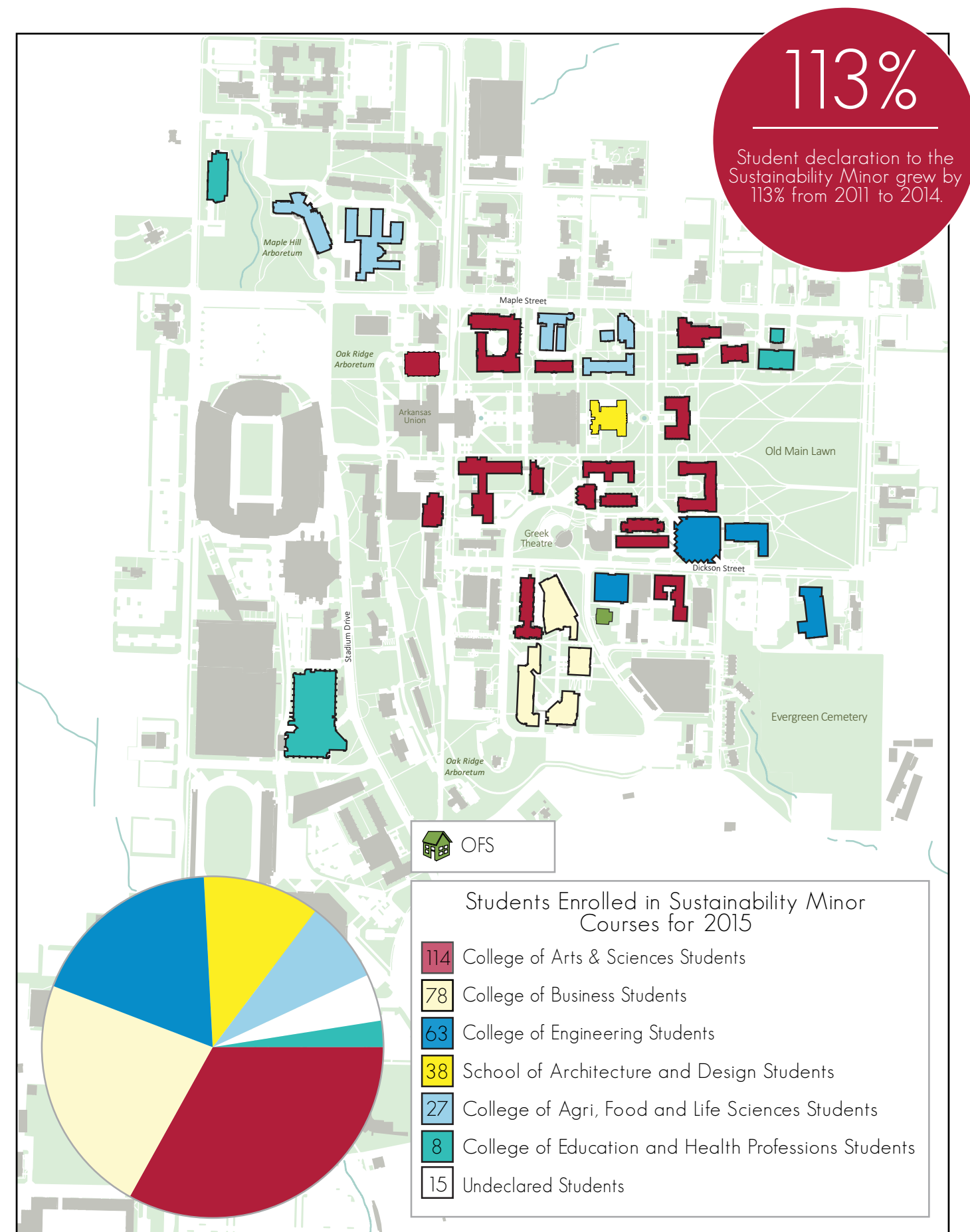
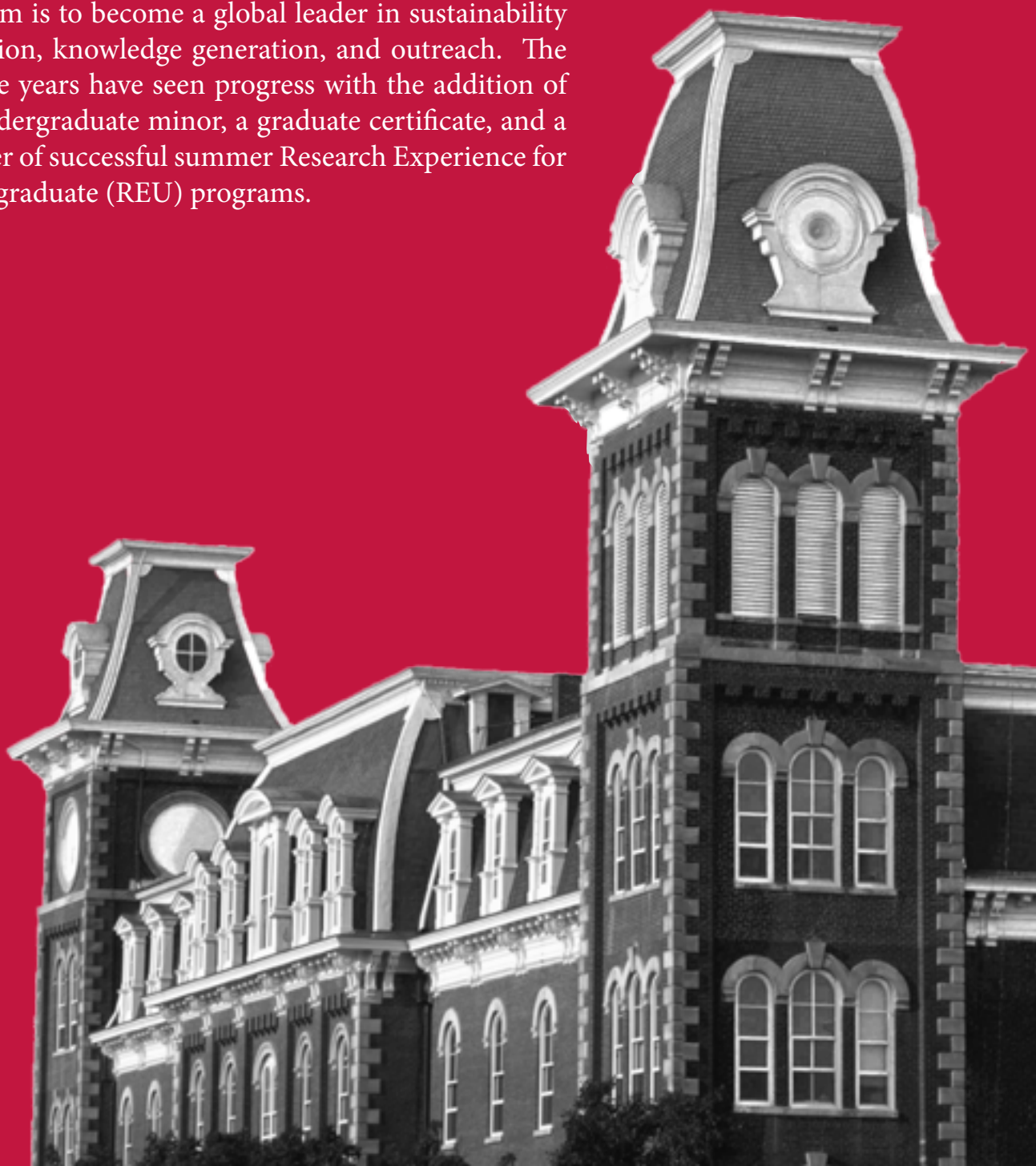
The Alpha test involved collaborating with 118 participants from three Honors Economics classes who recycled material during a 10-day period totaling at 292 pounds. This experiment increased the overall rate of can and bottle recycling for the month of October by seven percent. The Beta test focused on engaging Greek life on campus, which included eight houses. These students collected 2,423 pounds of plastics, aluminum cans, and cardboard over a two week period, representing what an average U of A student would recycle in 12 years.

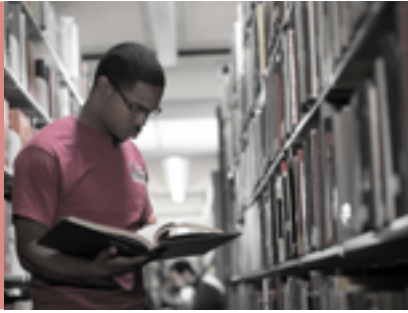
For the third year in a row, the U of A ranked 1st in the SEC conference for the highest game day diversion rate.

1.5 million
In 2015, over 1.5 million PET bottles were diverted by using water bottle filling stations.

Academic Programs

Sustainability academic programs at the University of Arkansas are growing to accommodate the increased interest in sustainability issues across campus. 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 three required SUST minor courses are:
 SUST 1103: Foundations of Sustainability
 SUST 2103: Applications of Sustainability
 SUST 4103: Capstone Experience in Sustainability

EcoREU Program

For the past seven years the U of A Sustainability Program has led the U of A's Ecological Research Experience for Undergraduates (EcoREU) program. The focus of this program includes sustainable agricultural systems, funded by the United States Department of Agriculture (USDA), and the sustainable management and assessment of ecosystem services, funded by the National Science Foundation (NSF).

During the summer of 2015, 18 undergraduate students from universities across the country came to the U of A campus as REU Interns. They started with a three-day immersion course in Exploration of Sustainability Ethics and Experimental Design followed by an eight-week research experience under the direct mentorship of faculty from across campus. The program concluded with a science communications symposium, where students presented their projects and project results to one another and their faculty mentors. More than 120 students from around the US have benefited from this program thus far.

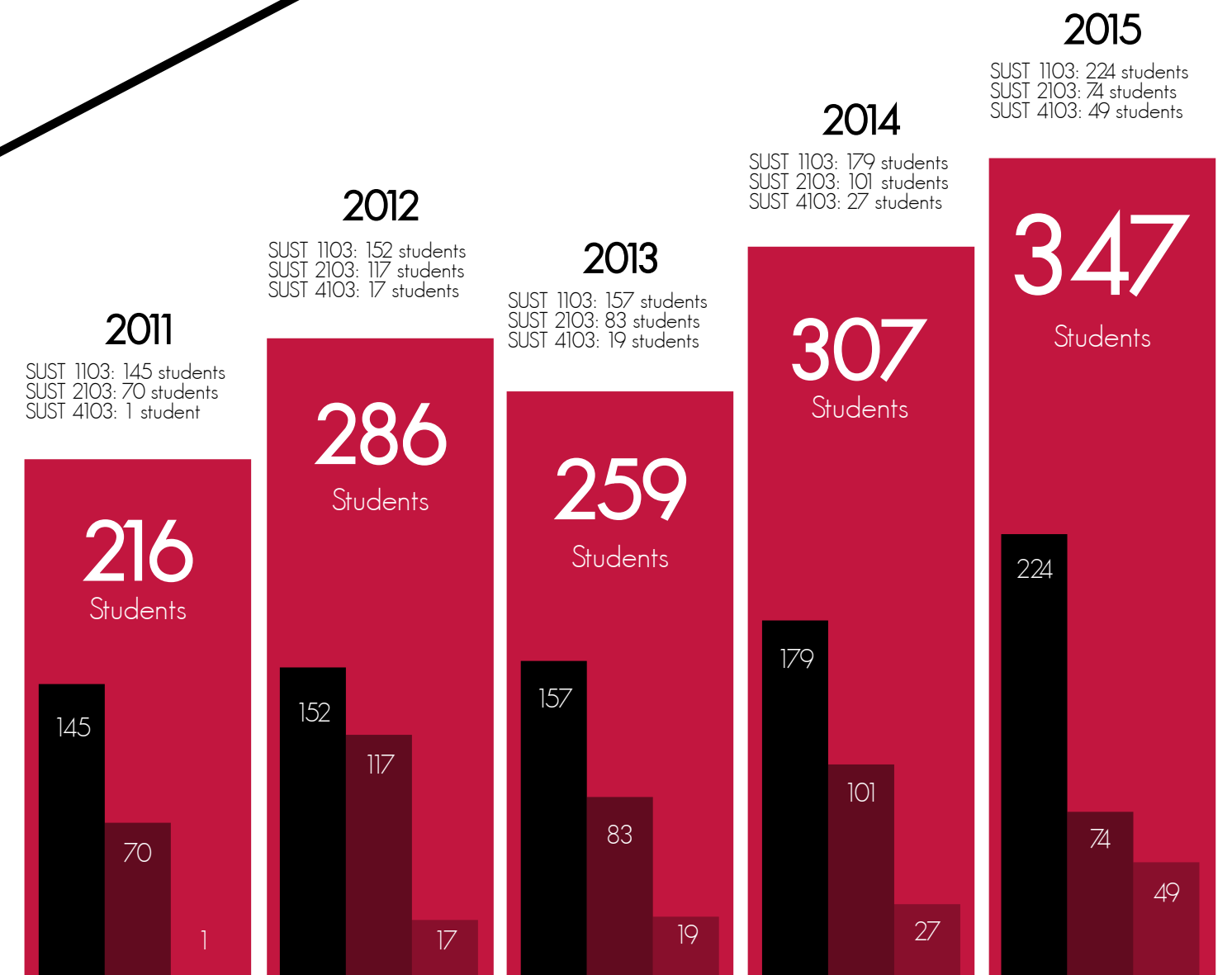
Sustainability Minor

The UA Sustainability Minor requires three core 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 2015 the Sustainability Minor was ranked among the top 10 most popular minors at the University of Arkansas.

Sustainability Graduate Certificate

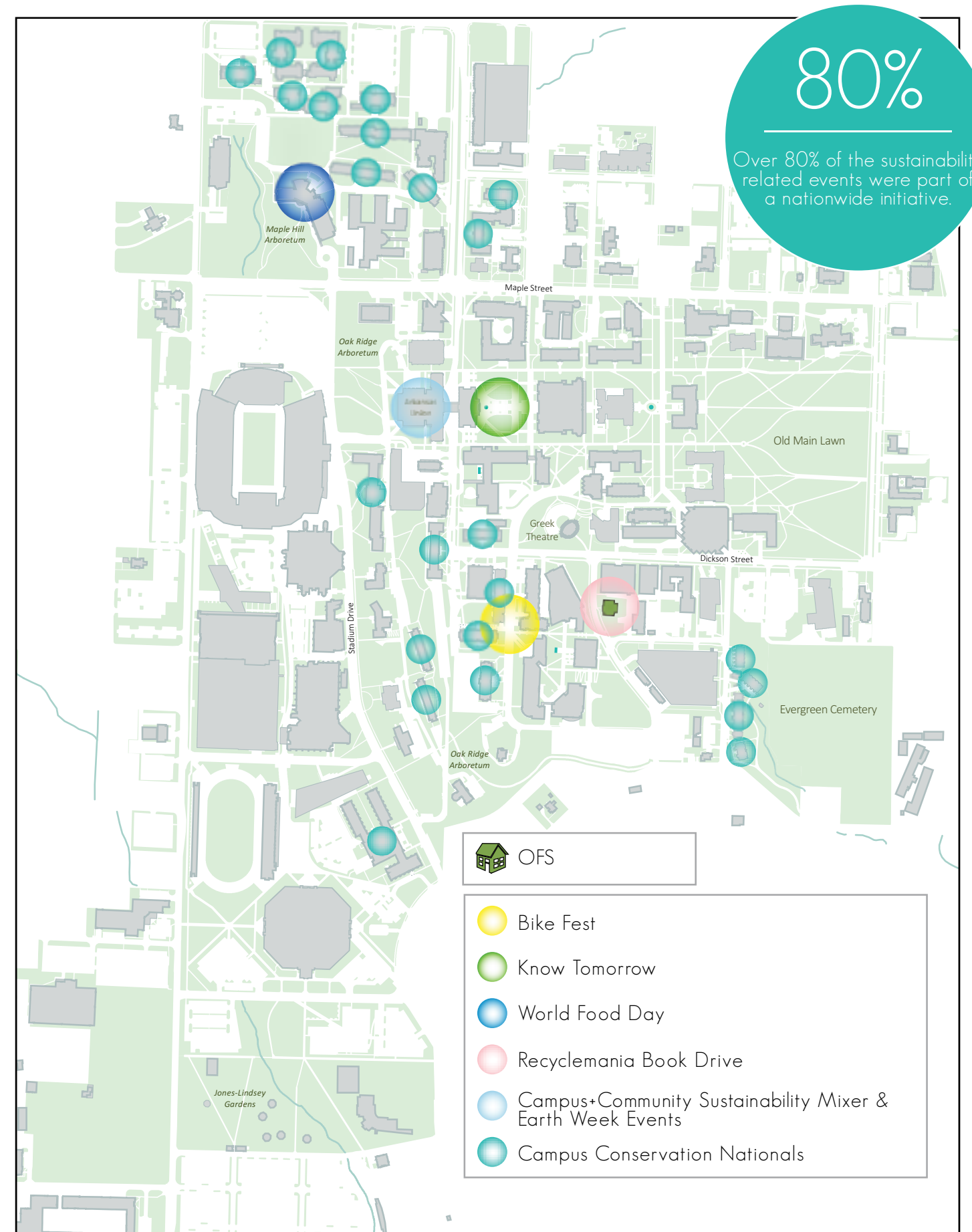
The University of Arkansas Graduate Certificate in Sustainability is open to any student admitted to the Graduate School, and requires one required course and four technical electives from a portfolio of courses across disciplines. The Graduate Certificate was created in 2012 to provide an opportunity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

Course Enrollment



Sustainability Events

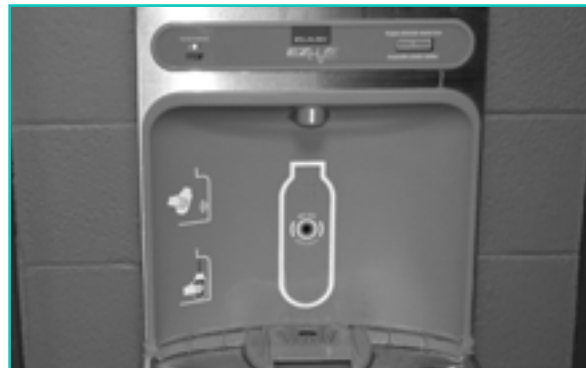
Sustainability goals and objectives can only be achieved by a strongly connected community. The Office for Sustainability (OFS) is dedicated to supporting and enhancing these connections within the campus community and throughout our city, region, state, nation, and world. Bridges between communities enhance understanding, which improve creativity in solving common problems. These bridges are built through relationships between people, which are reinforced during the events hosted by the OFS. Our Land-Grant Mission is to provide education and outreach to our community. Exploring new ways of thinking about common problems is the key to creating innovation. The events hosted by the OFS focus on integrating social networking with education on the science of sustainability.



Spring Events



Campus Conservation Nationals



Campus Conservation Nationals was a three-week competition between universities across the nation to see which residence halls could reduce their energy and water consumption the most. The Residents Interhall Congress hosted the competition between the 18 residence halls, including the Duncan Ave Apartments. The winning residence hall won a new hydration station.

RecycleMania

The U of A competed in the National RecycleMania competition for the 8th year in a row. The goal this year was to collect more than last year's total of 240,00 pounds of recycled material. Close to 400 Colleges and Universities competed in this years competition. The U of A finished out with a 17% diversion rate and the entire competition succeeded in diverting a total of 81.1 million pounds of recycled and composted material.

RecycleMania Book Drive

In March the Student Sustainability Club, in partnership with RecycleMania and Better World Books, participated in a month-long book drive. Better World Books, a company dedicated to reducing the impact of discarding unwanted books to landfills, sent collection boxes to distribute across the U of A campus for people to drop off any gently used books. Better World Books then donated, sold, or recycled all of the books that were collected. This money was used to support other sustainability programs.



Earth Week



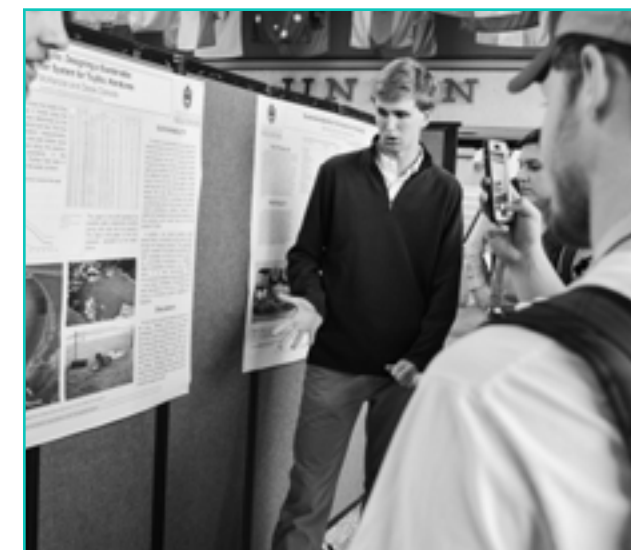
The University of Arkansas campus celebrated Earth Week from April 20th-24th this year. A number of organizations hosted a variety of events. The OFS hosted a Vendor Fair and a Sustainability Capstone Project Presentation.

Earth Day Information Fair



This year the Earth Day vendor fair was set up in the Arkansas Union Connections Lounge and included local organizations and businesses such as Ozark Natural Foods, City of Fayetteville Recycling, and Keep America Beautiful. Various other University departments and RSO's were also there to promote their environmental work by giving handouts and prizes to students. After the tables were put away, the Office for Sustainability partnered with Beaver Watershed Alliance and many volunteers for an afternoon cleanup of Mullins Creek.

Capstone Poster Display



Students pursuing a Sustainability Minor are required to complete a capstone project, and each year a posters are displayed in the Arkansas Union for Earth Day to present their work to students and the public. This year a reception was also held to celebrate the students' achievements. Students were present at the reception to discuss their projects and answer questions. The posters were on display in the union for all of Earth Week and students were encouraged to stop and review the projects in between classes.

Fall Events



The Office for Sustainability (OFS), by invitation of 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 the first year that the University organized a Campus Sustainability Month, and we look forward to its return in 2016.

Know Tomorrow



The OFS kicked off Campus Sustainability Month with passionate students at the Union Mall on October 2 for the Know Tomorrow event. On that day, students across the country participated in a day of action to raise awareness of the COP21 Paris Climate Conference in December. Organized by the Student Sustainability Club, Know Tomorrow was a nationwide call to all college students to understand the importance of climate change and show support for affirmative action against it. Know Tomorrow events were held across the nation as well as on the U of A campus.

Project Green Challenge

With the support of the OFS, The Student Sustainability Club competed in the Project Green Challenge, a 30-day eco-lifestyle challenge for students around the world to become more aware of sustainable practices. A team of two students earned a position in the top 16 and received an all-expense paid trip to San Francisco for Turning Green's Eco-Summit.



Bike Fest

On October 9th, UREC Outdoors and the Razorbikes Bicycle Sharing Program joined Office for Sustainability in hosting the second annual Bike Fest. The purpose of Bike Fest was to show students how easy owning a bike can be. Students were invited to register their bike through the university for free, get advice for any tune-ups or repairs from professionals, and enter a raffle to win a free bike. By highlighting the accessibility and fun associated with bike commuting, the OFS wants students to be inspired to bike more instead of driving in an effort to reduce their carbon footprints.

World Food Day

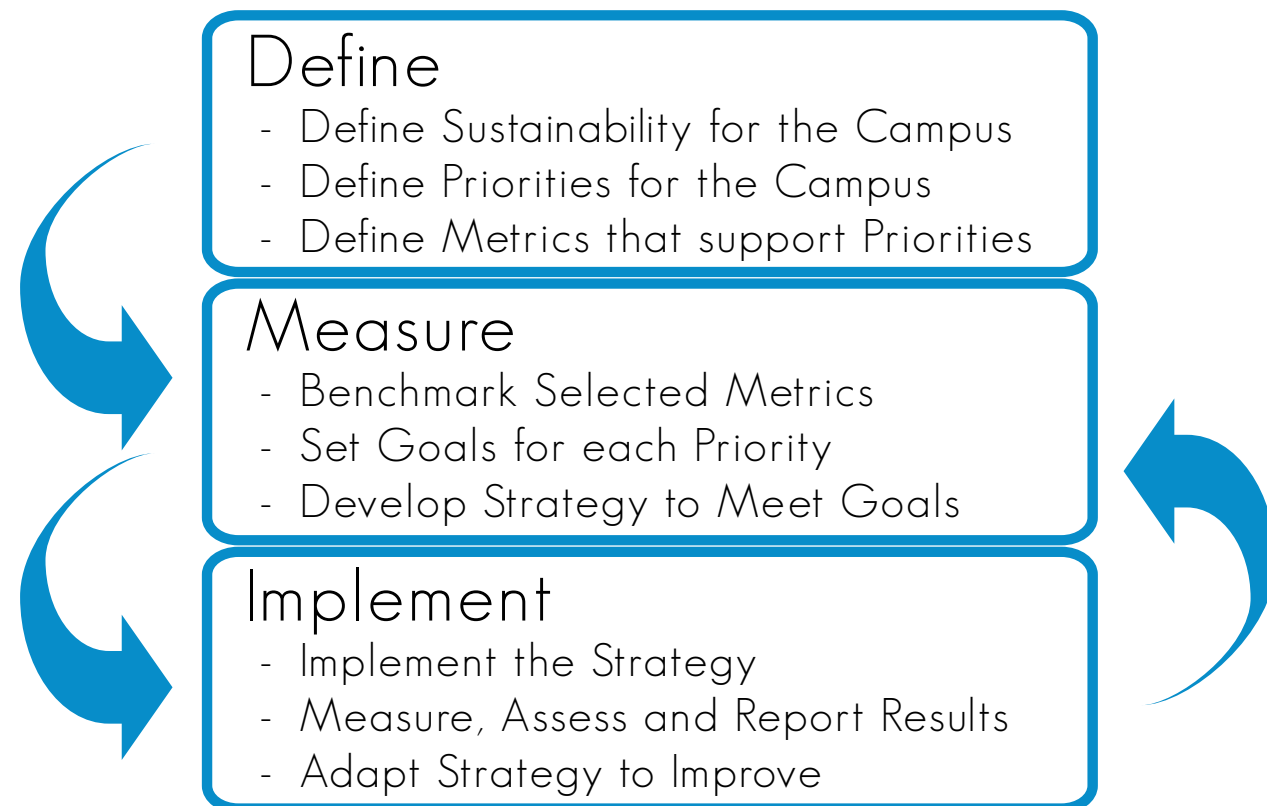


The OFS celebrated World Food Day on October 15th with a free screening of *Just Eat It*, a critically acclaimed documentary exposing the magnitude of food waste in North America. Razorback Food Recovery sponsored a discussion about food recovery efforts on campus, and the film was followed with a discussion to reflect on the local impact of food waste and hunger. The event was focused on raising awareness of the local and global crisis facing us in regards to our food and the mismanagement of it as a resource.

Next Steps

As we look towards 2016 with high expectations, we also recognize the many accomplishments made in 2015. Great strides were made to spread awareness throughout our campus community of our Zero Waste and Carbon Neutrality commitments. The installation of the Combined Heat and Power System was another huge success. This system will reduce emissions considerably and push us further toward our carbon neutrality goal. The steadily increasing number of students enrolling in the Sustainability Academic Program shows a growing interest among the student population.

The hard work of the U of A community through 2015 has set the stage for an even more exciting set of accomplishments in 2016. We will be focusing on expansion of our recycling efforts and the development of organic waste composting projects. Carbon neutrality will become a more attainable goal as more buildings on campus are constructed or remodeled as LEED certified buildings. 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

Reduce

The most significant reductions in cost and environmental impact can be achieved through selective procurement and reusing when possible. These actions can be as simple as walking or biking to campus one day a week to reduce your footprint and increase your wellbeing.

Look Before You Toss

In 2016, we will be installing more recycling infrastructure and need the campus community to pay attention to what items go in which bins. The U of A is making efforts to improve signage at the recycling bins, but we need you to take a moment to assess before you toss.

Check the Thermostat

Heating and cooling buildings on campus is the largest contributor to our GHG emissions. Turning down the intensity on nights, weekends, and holidays can have a measurable impact both on the campus carbon footprint and on off-campus apartments and houses.

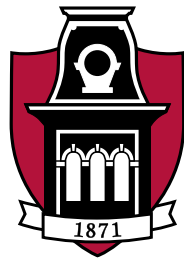
Go Vote

Often times, shifts in public policy have a much larger impact than the actions we take in our day-to-day life. No politician is perfect, but every election offers the opportunity to make your voice heard. It is your responsibility to vote for your priorities.

Clean Your Plate

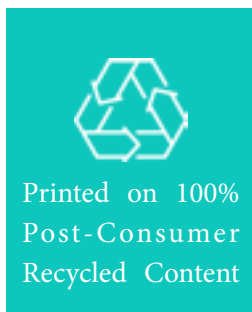
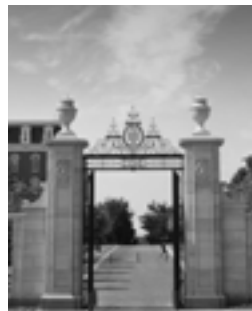
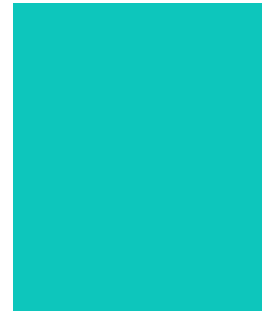
Wasted food actually has more negative externalities than most realize, since food requires so much labor, energy, land, and water to grow, pick, process, and transport it to your plate. You can help in reducing this waste by only taking as much food as you will eat.





UNIVERSITY OF ARKANSAS

Office for Sustainability



238 Harmon Ave.
479-575-3715
sustain@uark.edu
sustainability.uark.edu

