

# UNIVERSITY OF VIRGINIA SUSTAINABILITY

**ANNUAL REPORT**

**2015 - 2016**



**SUSTAINABILITY · UVA**  
*From the Grounds Up*





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# EXECUTIVE SUMMARY

## **The University of Virginia Sustainability Annual Report: 2015-2016**

The University of Virginia continually strives to be a global leader in sustainability across all aspects of the university – the curriculum, the student experience, research, practices on Grounds and engagement with the local community. Sustainability at UVA is closely connected to the University’s Cornerstone Plan, particularly with its emphasis on collaborative decision-making, student leadership, high-impact student experiences, and organizational excellence.

The University of Virginia Sustainability Annual Report: 2015-2016, issued by the University Committee on Sustainability and the Office for Sustainability, highlights sustainability progress over the past academic year. The progress in this report is the result of hundreds of students, faculty, and staff dedicating their time to seeking an even better UVA and a better world, with a robust balance of formalized programs and grassroots initiatives. Sustainability curriculum and research opportunities continue to expand, engagement in sustainability-related programs and events continue to increase,

and UVA’s environmental impact continues to decrease, despite growth.

However, as President Sullivan said in the August 2015 UVA Sustainability Retreat, “As we look forward to the future of sustainability at the University, we can be proud of our early achievements, but we’re not going to rest on our laurels. We’re going to keep going. We want to develop innovative solutions that affect the university and the global community.”

To continue advancing sustainability at UVA, UVA’s first pan-University strategic plan for sustainability, the UVA Sustainability Plan (2016-2020), was launched on Earth Day 2016, which puts forth ambitious long-term goals and targeted short-term actions across a myriad of focus areas. Like this progress report, the Sustainability Plan is framed around our core approaches: Engage (how we collaborate and interact with UVA and the broader community), Steward (how we steward our resources on Grounds), and Discover (incorporating sustainability into our curriculum, research, and using our Grounds as a learning tool for sustainability).

## SNAPSHOT OF OUR GOALS

# SUSTAINABILITY PROGRESS

## ENGAGE

### GOALS



Increase sustainability awareness within the UVA community.



Increase sustainability engagement beyond Grounds.



Cultivate healthy and equitable places for learning, living, and working.

### ACTIONS



80+ Events



2,000+ Event attendees



61,000 Fans participated in Game Day Challenge



21,334 lbs Donated goods



35+ University and Community Partners



9,000 Off-Grounds students supported in conserving energy



60+ Attendees at first LGBTQ clothing swap



700+ UBike riders



125+ Hoos Well wellness champions across Grounds

# STEWARD

In CY15, energy-related activities yielded more than \$4.6 million in avoided costs and almost 14,000 metric tons of avoided greenhouse gas emissions.

**Delta Force:** Since FY 2007-08, \$8.7 million has been invested in the Delta Force retro-commissioning program. With an avoided cost to date of nearly \$22.4 million, simple return on investment is 2.5:1 since the program's inception.

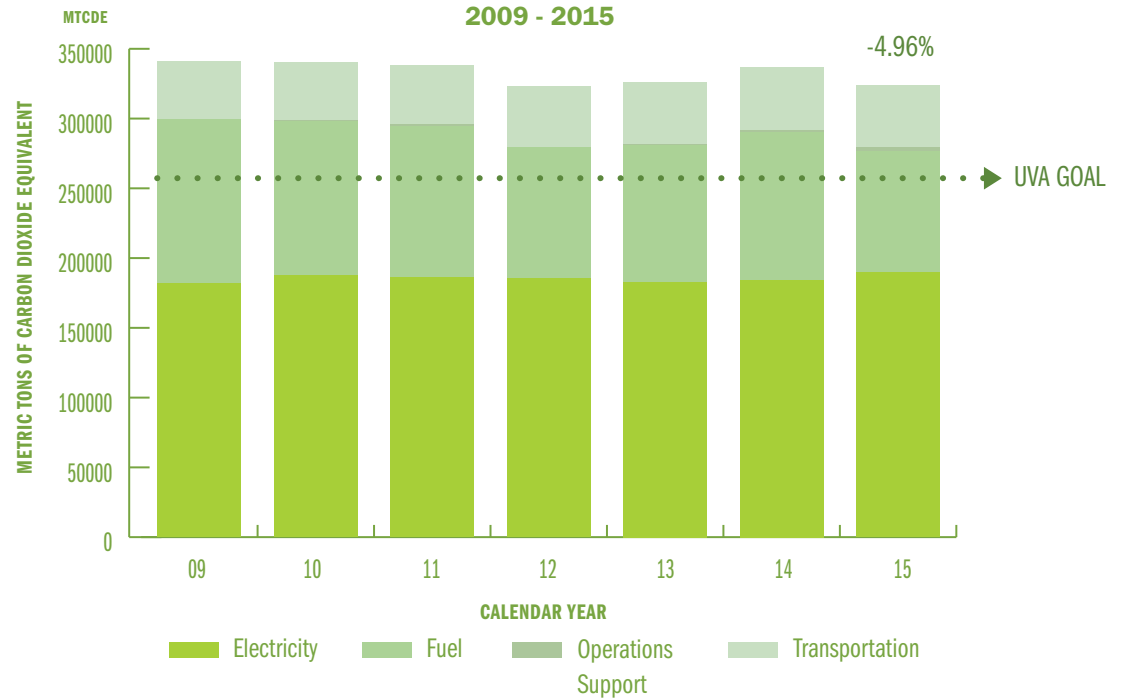
**Goal: Reduce greenhouse gas emissions 25% below 2009 levels by 2025.**

Greenhouse gas emissions have been reduced **4.96%** since 2009, despite **1.7 million** square feet in growth and a **6.3%** increase in population.

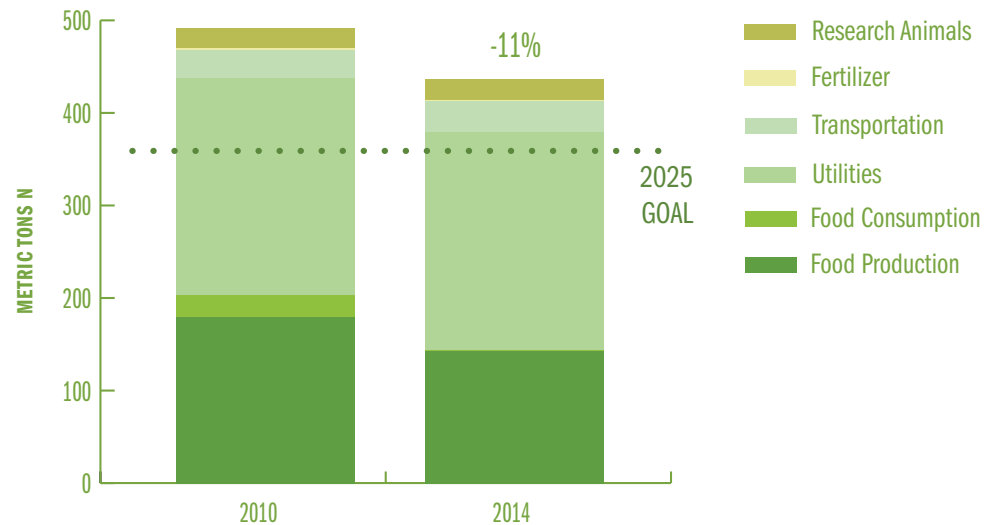


**Goal: Reduce reactive nitrogen losses to the environment 25% below 2010 levels by 2020.**

## TOTAL GREENHOUSE GAS EMISSIONS BY SOURCE

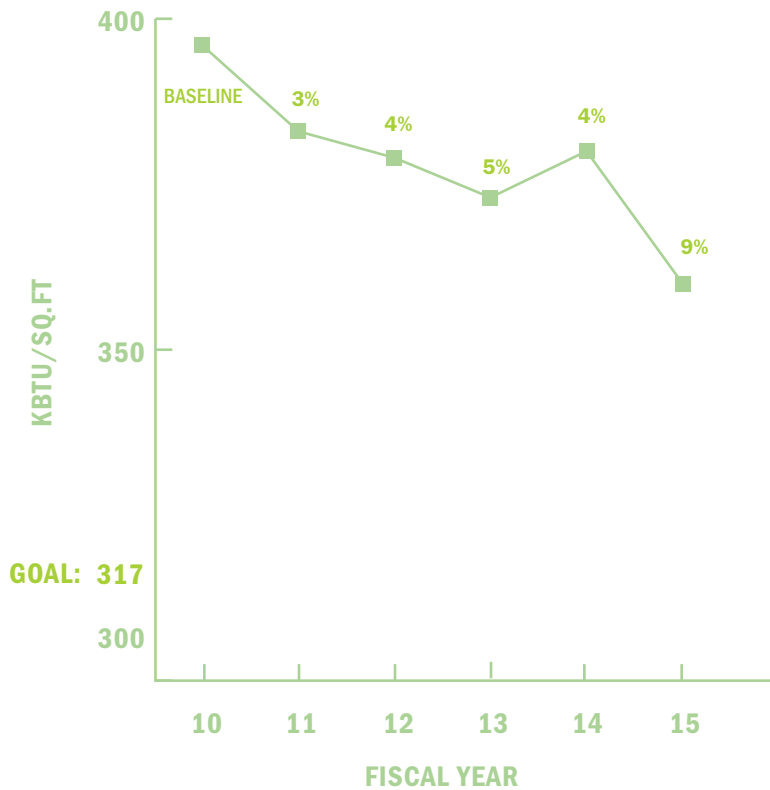


## NITROGEN FOOTPRINT RESULTS 2010 & 2014



## SOURCE ENERGY USE INTENSITY

PERCENT IMPROVEMENT FROM BASELINE



Goal: Reduce building energy use intensity 20% below 2010 levels by 2020.

## ENERGY REDUCTIONS OF BUILDINGS WITHIN THE DELTA FORCE PROGRAM

2009 - 2015



### BEFORE:

The total estimated energy consumption of 37 buildings from 2009 - 2015 without the Delta Force Program is **9,954,414 MMBtu**

### AFTER:

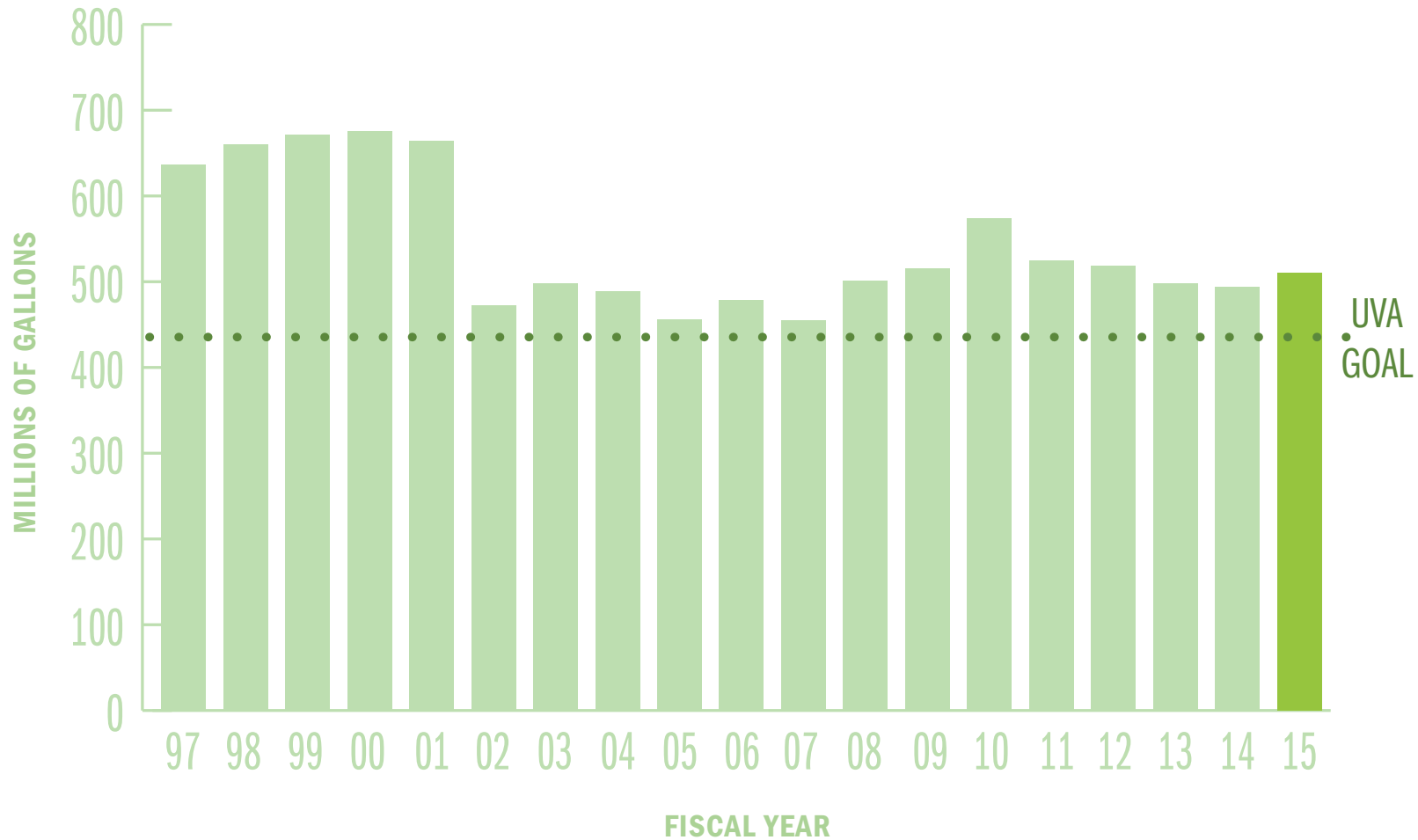
The total energy consumption of those same 37 buildings after undergoing retro-commissioning in the Delta Force Program is **8,854,322 MMBtu**

An **11%** reduction in total energy use, equivalent to over **\$22 million** in avoided costs.





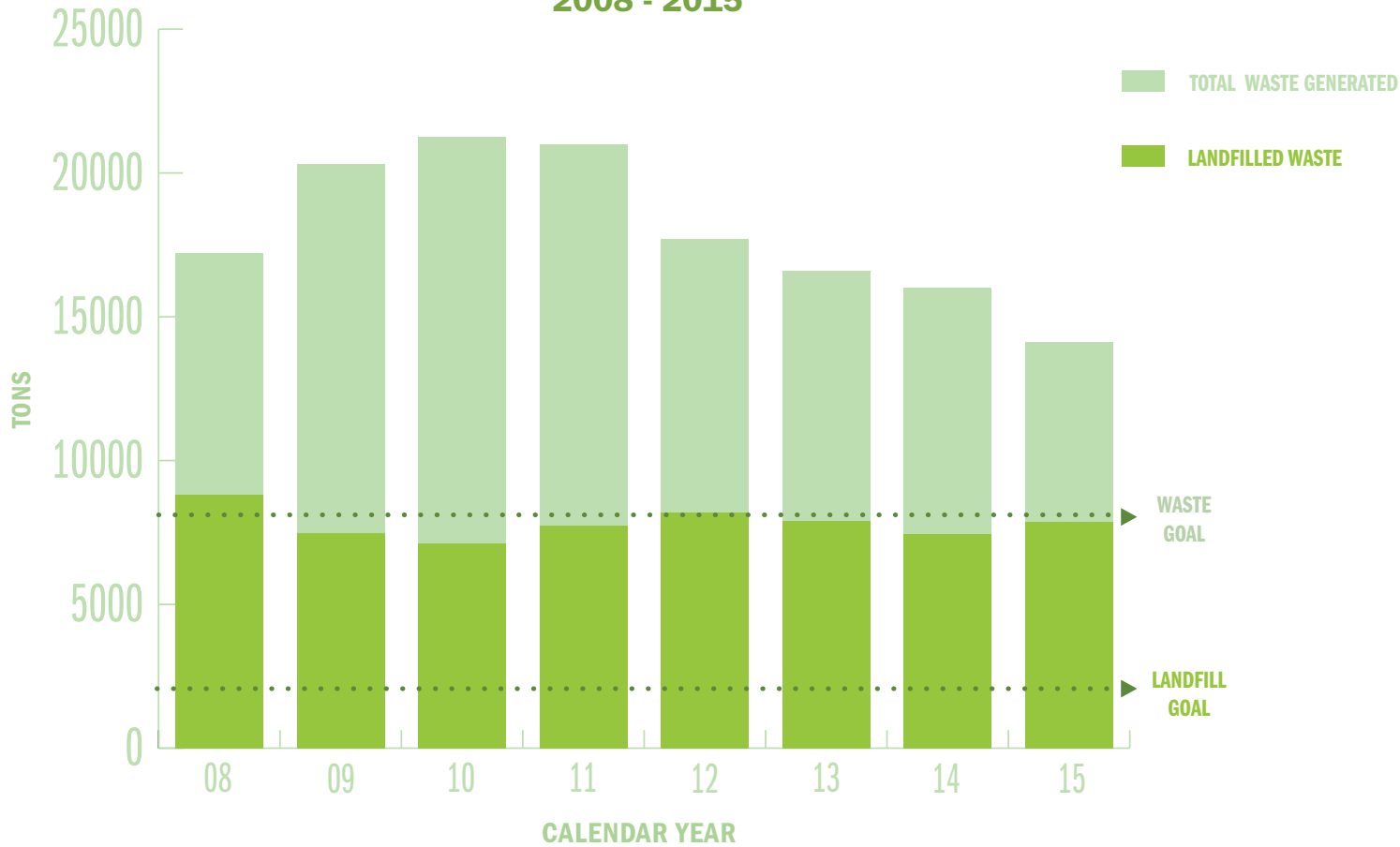
## TOTAL WATER USE 1997 - 2015



**Goal: Reduce potable water use 25% below 2010 levels by 2020.**

Water use has been reduced 11.1% (equivalent to 64 million gallons less) since 2010, despite an increase of 11.2% in building square footage and a 5.1% increase in population.

## UVA WASTE AND LANDFILL TONNAGE 2008 - 2015



**Goal:** Reduce the total tonnage of waste generated at UVA 50% below 2014 amounts by 2035.

*\*Includes all trackable waste streams, equivalent to generating less than 7,856 Tons of total waste*



**Goal:** Landfill less than 2000 tons of waste annually by the year 2035.

*\*Includes all waste streams, equivalent to diverting 87% of the 2014 waste stream, or approximately 75% of the minimized waste generated in 2035*

## GOALS



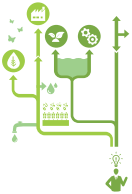
Enhance and expand the number of sustainable and meaningful sites and buildings.



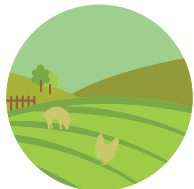
Annually increase the percentage of sustainable food and beverages available on Grounds.



Reduce food waste and single-use food serving items sent to landfill.



Increase student, staff, and faculty awareness of sustainable food systems.



Collaborate within UVA and with the region, bringing together faculty, staff, students, and dining operations to advance sustainable food systems in the broader community.

## ACTIONS



**44** LEED certified buildings have been implemented to reduce environmental impacts of major renovations and new construction.



UVA Dining is partnering with a non-profit student-run organization, Greens to Grounds to provide students access to local produce.



**180+** Tons of food waste were composted across all UVA Dining facilities, Darden, and the Health System in CY 2015.

**7,500** Reusable cup reuses via the Cupanion program

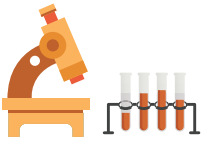


**10,000+** People served during the Health System Hospital Week's zero waste meals, featuring local sausage and squash dishes.



Established the Virginia Sustainable Food Coalition (UVA, Virginia Tech, George Mason and James Madison) to harness the intellectual, human and economic capital of colleges and universities to foster the emerging local food economy in Virginia.

# DISCOVER



Enhance sustainability research and UVA's reputation as a locus of sustainability.



**6** Environmental Resilience Research Awards

**6** Environmental Resilience Graduate Fellowship Awards granted by the Office of Vice President for Research

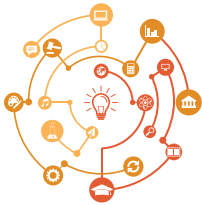
**\$3.56 million** Department of Energy grant for wind turbine research



Enhance sustainability-focused teaching and curricular development.



**160** Undergraduate and over **150** graduate sustainability-focused or sustainability-related courses



Utilize the Grounds as a learning tool through collaboration between operational and academic units.



**14** GIFT grants, totaling \$34,661, awarded for on-Grounds student projects

**300** Students, 60 sustainability projects, and 12 UVA staff mentors for Global Sustainability student projects



# **COLLABORATIVE GOVERNANCE**

**PROGRESS THROUGH PARTNERSHIPS**



# COLLABORATION AS A SOURCE OF INNOVATION

One of the Principles for Implementation in the UVA Cornerstone Plan is collaboration: “We will make collaboration an institutional hallmark. We will view collaboration not only as a technique to leverage our size to maximum advantage but also as a critical source of innovation.” Collaboration and progress through partnerships are of paramount importance to successfully advancing sustainability at UVA. To this end, the University actively seeks means of bringing together students, staff, and faculty to contribute their interests and expertise to advance sustainability-related initiatives, projects, and programs.

## Sustainability Retreat

In August 2015, sixty leaders from across the University of Virginia gathered to build upon sustainability progress to date and the two previous retreats – from building a vision, to articulating how we embody that vision, and now developing a framework for longer-term sustainability strategic planning. President Teresa Sullivan, Executive Vice President and Provost Thomas Katsouleas, Executive Vice President and COO Pat Hogan, and CEO of the Medical Center Pam Sutton-Wallace shared some of their ideas and visions for sustainability at UVA, with a strong focus on interdisciplinary collaboration. President Sullivan noted,



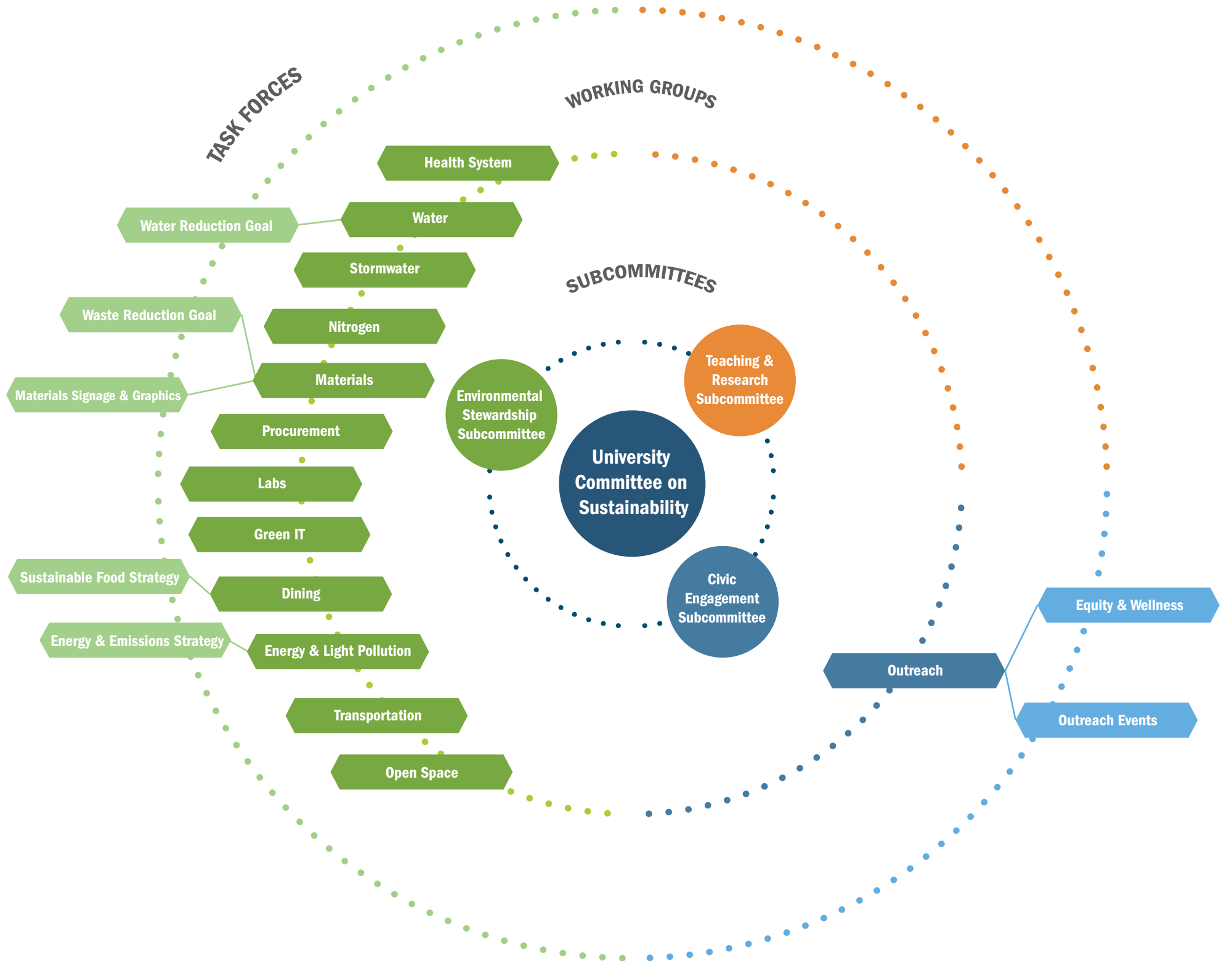
*President Sullivan giving the opening remarks to sustainability retreat attendees, along with the three executive vice presidents.*

*“As we look forward to the future of sustainability at the University, we can be proud of our early achievements, but we’re not going to rest on our laurels. We’re going to keep going. We want to develop innovative solutions that affect the university and the global community.”*

High-energy small group discussions on six topics were held after the panel. This was an opportunity for attendees to contribute their expertise, interests, and/or spheres of influence within research, curriculum, or operations to develop actionable recommendations in each topic area (Energy/Emissions, Water, Materials, Food, Land Use and Buildings, and Equity/Wellness) for the Committee on Sustainability and others to undertake in the next one to five years.

Some of the recommendations were incorporated into UVA’s first Sustainability Plan, while others informed priorities for the University Committee on Sustainability and its associated working groups and task forces. Videos and working session summary: <http://sustainability.virginia.edu/topics/civicengagement/retreat.html>

Two break-out sessions were held after the retreat: a student-sustainability staff working session, to coordinate communication efforts for the upcoming year, and a student-only session, for student organizations to coordinate plans for the upcoming year.





# SUSTAINABILITY PLAN AND COMMITTEE ON SUSTAINABILITY

The University Committee on Sustainability, co-chaired by Cheryl Gomez (Director of Operations) and Mark White (Associate Professor of Commerce, Director – McIntire Business Institute), advises the Executive Vice Presidents on all matters related to the University’s commitment to sustainability and how those impact the future of the University including interrelated environmental, financial, teaching, research, and social aspects.

The Committee’s major initiative this year, facilitated by the Office for Sustainability, was the launch of the Sustainability Plan, which incorporated recommendations from over 100 students, faculty, and staff. Other areas of focus included discussions on the role of carbon offsets, and a review of student-led sustainable investments recommendations.

Three subcommittees – Environmental Stewardship, Civic Engagement, and Teaching and Research – and dozens of working groups and task forces were active in implementing projects and strategic planning. Over 170 students, staff, and faculty are involved in these groups.



# CIVIC ENGAGEMENT SUBCOMMITTEE

The Civic Engagement Subcommittee (CES), co-chaired by Kristin Morgan and Nina Morris, works to expand and deepen sustainability into the UVA community, both on and off Grounds. This subcommittee seeks to promote, engage, and advocate for policies and practices that build an inclusive, safe, healthy, and equitable community aligned with environmental principles to advance the well-being of this and future generations to come. To this end, CES focused on two major strategies over the past year: strategic planning and sustainability-related services.

**Outreach Working Group:** The overall charge of the group is to build awareness of sustainability, promote initiatives, and host events to create sustainability literacy, as well as offer opportunities to engage in behaviors that will lead to sustainable change. There are three areas of work to meet this charge: identity, literacy, and behavior change. Co-chairs Dana Schroeder and Jen Natyzak led the group in creating a sustainability tour of Grounds with UGuides and trained all Summer Orientation Leaders in sustainability.

**Events Task Force:** Coordinated and hosted UVA Sustainability Day in the fall and Earth Week in the spring

**Equity and Wellness Strategy Task Force:** Developed recommendations for these aspects of the UVA Sustainability Plan

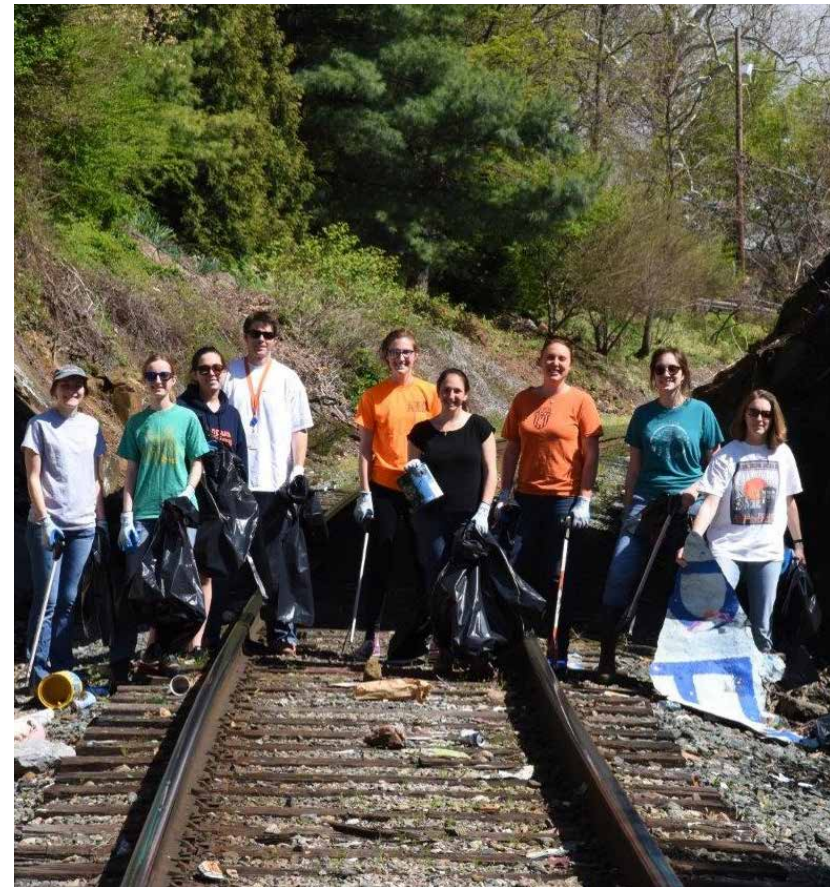


# ENVIRONMENTAL STEWARDSHIP SUBCOMMITTEE

The Environmental Stewardship Subcommittee, co-chaired by Don Sundgren and Andrea Trimble, consists of 12 working groups and 5 task forces, and promotes and enables environmental stewardship via student, staff, and faculty engagement and direct action on Grounds. Some highlights from the groups:



*Compostable to-go container collection set up in Clark Hall by the Materials Working Group*



### **MATERIALS WORKING GROUP**

- Developed an educational campaign on what can be recycled or not, such as straws, make-up containers, and plastic utensils, created and distributed informational graphics and flyers
- Led conversations on composting next steps for events, residences, and others
- Set up a compostable to-go container collection in Brown library
- Partnered with Green Dining on West Range Café composting

### **WATER WORKING GROUP**

- “Drink Local” campaign - created maps of all the water bottle refill stations on Grounds
- Distributed smart tags for reusable bottles to allow users to track their reuse via a barcode - the program has tracked over 1,200 reuses
- Completed a football water bottle refill program proposal

### **ENERGY AND LIGHT POLLUTION WORKING**

- Renewable Energy Town Hall
- Hosted the Virginia Pre-Power Dialog focused on the future of energy production in Virginia in partnership with University of Richmond and Virginia Commonwealth University
- Hosted a screening of “The City Dark,” followed by a tour of the McCormick Observatory

### **NITROGEN WORKING GROUP**

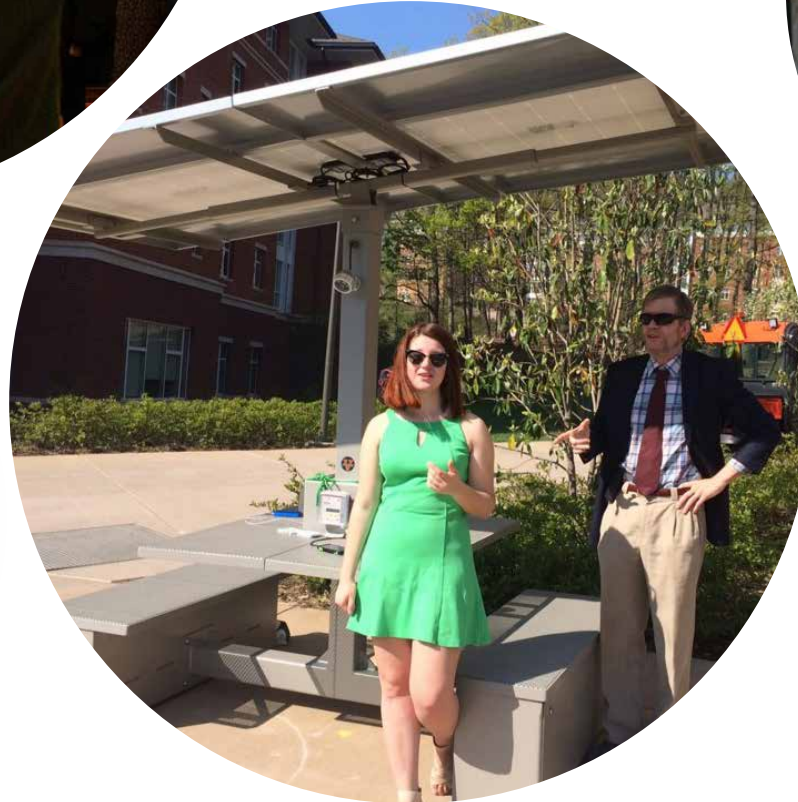
- Conducted an experiment to track purchasing behaviors by labeling each food item in Clark Hall Greenberry’s Cafe with a sustainability rating, and collecting data on how likely customers were to purchase products knowing their impact on the environment

### **STORMWATER WORKING GROUP**

- Downspout disconnect projects
- Beta Bridge paint locker
- Meadow Creek stream clean up at Beta Bridge - collected twenty-five bags of trash

### **OPEN SPACE WORKING GROUP**

- Partnered with a Global Sustainability student project to install a solar powered picnic table and electronics charging station
- Partnered with new Global Sustainability course projects- sustainable art, green infrastructure tour map, and open space survey
- Identified projects with an open space component



### **TRANSPORTATION WORKING GROUP**

- Added three new UBIke stations on Preston Avenue next to Blue Ridge Cyclery, and on North Grounds – behind the iLab and at North Grounds Recreation Center

### **SUSTAINABLE FOOD STRATEGY TASK FORCE**

- Developed the Food section of the Sustainability Plan
- Members participated in Virginia Sustainable Food Strategy Task Force and 4-VA Sustainable Food symposiums

### **PROCUREMENT WORKING GROUP**

- Developing paper and printing checklists/tips
- Inventorying environmentally preferable office supplies options within UVA's ordering system
- Working with America to Go to add zero waste filters and options to catering orders

### **GREEN DINING WORKING GROUP**

- Expanded vegetarian and vegan offerings, three successful vegetarian theme meals, weekly vegetarian tabling
- Green Dining and Materials partnership, student driven West Range pilot.
- New partnership with Greens to Grounds (G2G) to allow Plus Dollars to be used for the G2G weekly CSA (Fall 2016)
- Working to certify O'Hill Dining Room and Fine Arts Café as Green Restaurant Certified locations

### **GREEN IT WORKING GROUP**

- Tabled at move-in to help incoming first years update their computer energy-savings settings
- Created new outreach materials – a logo, and Green IT postcards, distributed information during Orientation
- Piloting a software program in FM that has developed an algorithm for adjusting computer power demand in real-time based on user activity

### **GREEN LABS WORKING GROUP**

- Developed a pilot Green Labs certification checklist and program
- Piloting the Green Labs certification in three labs

# TEACHING AND RESEARCH SUBCOMMITTEE

The Teaching and Research Subcommittee, co-chaired by Phoebe Crisman and Deborah Lawrence, developed research and curriculum-related goals for the UVA Sustainability Plan. The Subcommittee also began work on an inventory of sustainability-related courses and research at UVA, as a means for individuals to reach out to others with common interests.



# STUDENT COUNCIL SUSTAINABILITY COMMITTEE

The Sustainability Committee of Student Council works to connect and unify the 32+ sustainability-minded CIOs on Grounds, as well as implement its own projects and events. The committee facilitates the monthly “Sustainability Forums,” which bring together all sustainability-minded student organizations to share their initiatives, events, and opportunities with the rest of the community. During the past academic year, the Student Council Sustainability Committee focused much of its efforts on making student-led events “zero-waste,” including large events such as Pancakes for Parkinson’s and SpringFest.

## OFFICE FOR SUSTAINABILITY

The UVA Office for Sustainability (OFS) continues to refine, develop, and expand projects and programs to pursue its mission to engage our communities, steward resources, and discover ways to improve Grounds and beyond for generations to come. OFS, which consists of eleven full-time staff, 15-part time students, and 80 student volunteers, facilitated hundreds of meetings and dozens of events to enable strategic sustainability planning and to implement new initiatives in the built environment, energy, water, recycling and waste diversion, analysis, communication, and outreach. New staff members were brought onto the team to further increase the capacity of the Delta Force program, and to build a new Green Labs program. OFS also collaborates with other higher education institutions both regionally and nationally, via leadership in groups such as the Association for the Advancement of Sustainability in Higher Education, the US Green Building Council, APPA, the Department of Energy’s Higher Education Sector, the Southeast Sustainability Network, and the Virginia Association for Sustainability in Higher Education.







*Sustainable CIOs recruiting new members after the SustainaForum.*



# ENGAGE

**BUILD AWARENESS, INSPIRE ACTION**



## ENGAGING OUR COMMUNITY

The heart of UVA's sustainability community consists of over 32 sustainability-related student organizations (such as Green Grounds), the Student Council Sustainability Committee, the Committee on Sustainability's three subcommittees and 20 working groups and task forces, the Office for Sustainability, and other sustainability-focused students and employees across Grounds. Each is a generator of events, campaigns, programs, and projects that are rapidly weaving sustainability engagement and practice throughout the UVA community. This year saw unprecedented levels of engagement, with over 2,000 attendees at over 80 events and thousands of students, employees, and community members interacting with sustainability via participation in sustainability programs and events, zero waste events, and individual action.

## ENGAGING CHANGE AGENTS

# OUTREACH PROGRAMS

### STUDENT PROGRAMS



#### Sustainability Advocates

A new group within the SA program this year - the Off-Grounds Sustainability Advocates - launched with great success to help 9,000 students living off-Grounds develop sustainable practices in their residences. SAs were paired with property management companies to target communication and events to help their student residents conserve resources. For example, the Grad Court Energy Race reduced electricity consumption in a residential complex by 32% through a competition amongst residents.



#### Sustainability Student Employees

A highly selective program for students passionate about sustainability outreach and change, the Sustainability Student Employees are the main drivers for sustainability student events, programs and communication at UVA. Fifteen students worked 4-20 hours per week amongst four teams: Recycling, Energy & Water, Promotions, and Student Outreach. The student teams led major successes such as the Renewables Town Hall, Game Day Challenge Football and Basketball, the Sustainability Advocates Program, and SustainaMondays tabling.



### TREE Program

Last fall, Green Grounds, a student-run organization launched Teach Residents Everything Environmental (TREE), a Resident Advisor (RA) training program to introduce RAs to sustainability efforts & practices at UVA, such as green dorm tips, sustainable dining, reusable mugs, shower timers, how to recycle and how to conserve energy.



### RiVALry Cup

An innovative partnership between UVA and Virginia Tech’s sustainability students, the RiVALry Cup is a friendly sustainability competition to increase student engagement on both campuses. This year, the rival schools competed to see who could produce the least food waste in a dining hall, have the most volunteers at stream clean ups, donate the most goods during move out and take the most photos during Earth Week. It was a close race, with UVA finally pulling ahead with more donations made through the Chuck it for Charity program.



### Bike Ambassadors

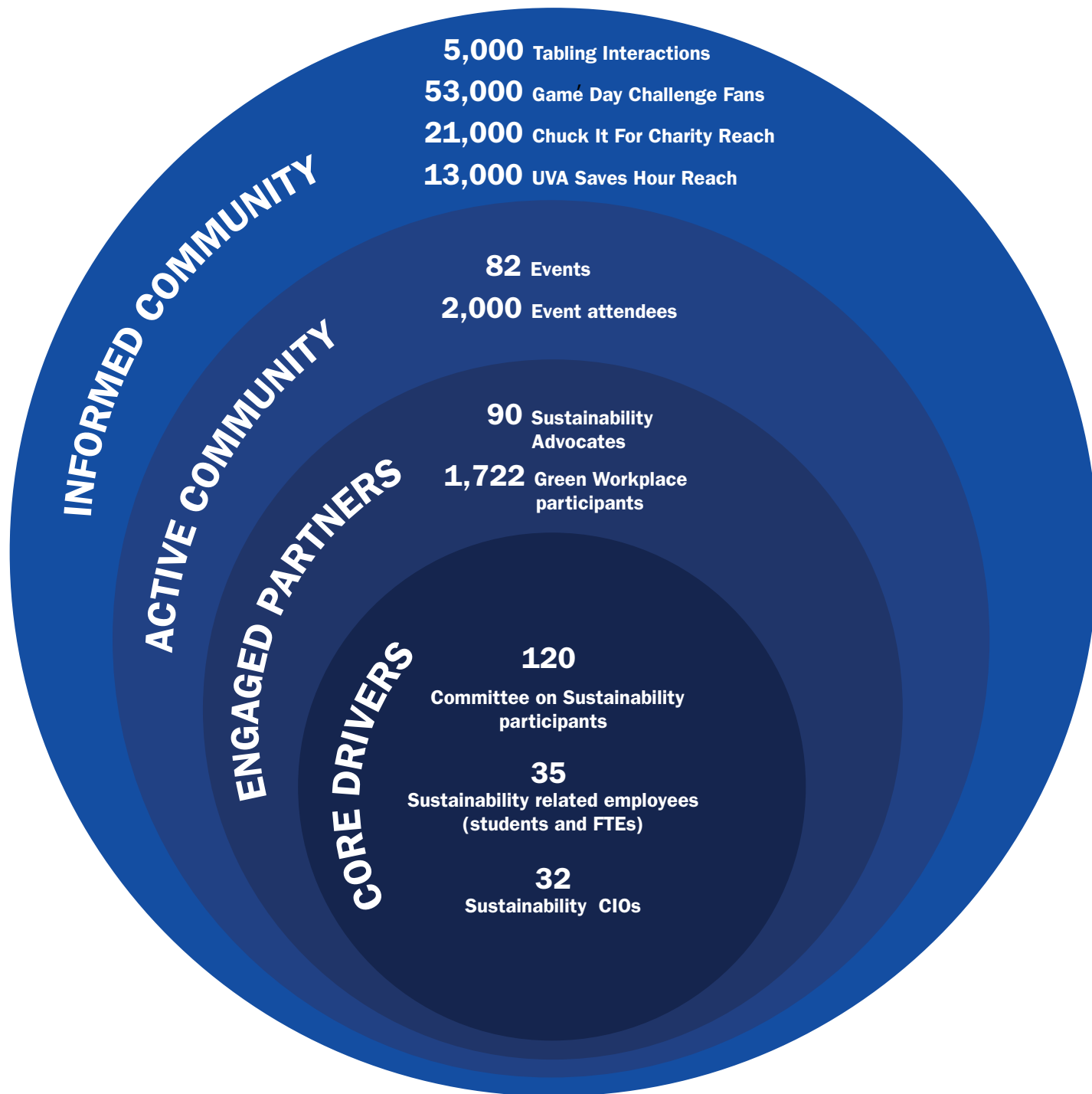
UVA Parking and Transportation’s Bike Ambassadors program is a team of 12 interns that are dedicated to promoting sustainable transportation across Grounds. Primarily focused on cycling as a low-energy impact commuting option, the Bike

Ambassadors encourage smart cycling through education, social initiatives, and partnerships with organizations such as BikeUVA and the Office for Sustainability. With the 2015 launch of UBike, UVA’s bike share program, the Bike Ambassadors have facilitated several Biking 101 workshops, bike commuting challenge, provided resources to students and UVA employees at various events, and even helped with BikeUVA’s Pop-Up Maintenance Workshops.



### Sustainability Dining Educators

The UVA Dining Sustainability Dining Educators provide one of the most effective venues for UVA Dining to engage students in matters of food sustainability. They are employees of Aramark and work directly for UVA Dining on dozens of events and outreach initiatives every semester. Sustainability Dining Educator peer-to-peer team reaches thousands of students who eat in residential and retail spaces across Grounds. They are responsible for the successful implementation and execution of theme meals like “All Vegetarian” and “Farm-to-Fork” to introduce students to the many social, environmental, and health benefits of sustainable dining.



## EMPLOYEE PROGRAMS



### Green Workplace Program

This year has seen the largest uptick in certified workplaces, with 6 Gold and 4 Silver certifications achieved. In total, 14 offices, representing 1,722 employees, are currently participating. Facilities

Management is the largest participating

workplace with 1,200 employees across nine Green Workplace offices.



### Sustainability Partners

As a means to actively engage UVA employees in sustainability practices and knowledge, Sustainability Partners focused on local sustainability heroes as a theme for the year. Each bi-monthly meeting focused on drawing inspiration

from community leaders in topic areas such as food and waste, to inspire new practices at work and at home.



## ENGAGING CHANGE AGENTS

# OUTREACH EVENTS

Sustainability events bring the UVA community together to build community and raise awareness. With over 80 events throughout the year and over 2,000 event attendees, sustainability topics are a high priority for the UVA community. Highlights from the year included events focused on renewable energy, experiential sustainability and exploring sustainability across diverse disciplines.





## Energize!UVA Month

As part of the Energize!UVA campaign, the Renewables Town Hall at Open Grounds brought together a full-capacity crowd of UVA students, faculty, and staff interested in the future of renewable energy at UVA, a topic of growing importance.



## UVA Sustainability Day

Held in November, UVA Sustainability Day included the Global Sustainability Student Poster Competition and a “Hoos Talking Green” Panel and Reception. The theme for Hoos Talking Green was “Unconventional Stories: Discovering Sustainability in Diverse Disciplines.” Each speaker spoke for seven minutes on how they have woven sustainability into their fields of study.



## Green Jobs and Internship Fair

In January, coinciding with UVA’s Annual Spring Job and Internship Fair, the UVA Career Center, in partnership with Green Grounds, Net Impact, the School of Engineering, and the UVA Office for Sustainability hosted the first ever Green Jobs and Internship Fair with over 1,000 participating students.



## 2016 GameDay Basketball

As part of Recyclemania, 100 volunteers pitched in to assist with composting and recycling at a sold-out home basketball game versus the University of North Carolina. The presence of ESPN’s College GameDay show increased overall waste generated, but thanks to the special efforts of volunteers, employees, and fans, UVA was able to achieve its best GameDay Challenge diversion rate ever: 81% of waste from the UNC game was diverted from landfills – a huge increase from last year’s 61% diversion rate. UVA won the national competition in the Per Capita category and was recognized at the Green Sports Alliance’s national conference in June 2016.

## Earth Week

This year's theme was "Experience Sustainability," to do more than just talk about global challenges and possible solutions and to allow participants to get their hands dirty creating positive change on Grounds, in the community, and globally. Between April 17 and April 23, 14 events directly taught attendees how to be a part of the solution. For example:

- Hundreds of seedlings were planted throughout the week to help people eat hyper-local herbs and veggies.
- 1,300 cubic feet of e-waste was collected and diverted from landfills at the two-day Tech Takeback event hosted by University ITS.
- 223 crowdfunding dollars were raised at Green Grounds' SustainaPitch Night to help support a student-led green building project.

At the 2016 Earth Week Expo, organizations tabling were tasked with sharing their missions in an interactive format. 23 different activities and workshops were set up across the Newcomb Ballroom, including DIY recycled jewelry and compost bins, and repurposed office supplies. One popular table was run by ecoGrounds, who taste-tested 50+ pour-overs with fair trade coffee while talking to sippers about responsible product sourcing.

Also featured at the Expo were 30 student poster projects from Professor Phoebe Crisman's Global Sustainability class. One of these projects even became an Earth Day event. The Sustainability Labyrinth group used 152 feet of repurposed cardboard walls to guide visitors through a maze of waste and recycling facts.



*A labyrinth built for Earth Week by students in the Global Sustainability class*





### Food Collaborative Film Series

The Food Collaborative held three film screenings and panel discussions – Seeds of Change, Food Change, and Just Eat It, to raise awareness about sustainable food systems.



### Chuck it for Charity

For 18 years, Chuck It for Charity has provided UVA students a chance to give back to their community while packing up during move out. This year saw the highest student donations in the past four years, with 23,556 pounds of materials collected.



*Sustainability student employees hosting a “Hang Out Day” event to raise awareness for energy conservation.*



**Black Bear**  
composting

**Black Bear**  
composting

Food & Compostables

COMPOST

RECYCLE

RECYCLE

RECYCLE

RECYCLE

RECYCLE

RECYCLE

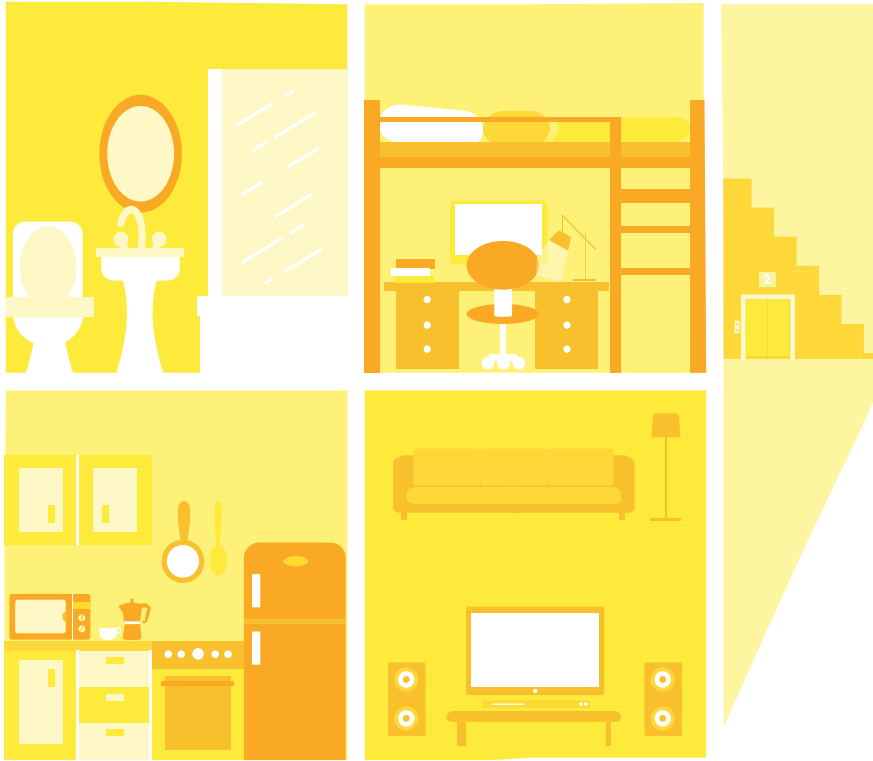
RECYCLE

RECYCLE

RECYCLE

# DORM ENERGY RACE

OCT 12 - NOV 09



GOOCH-DILLARD  
McCORMICK RD  
NEW DORMS

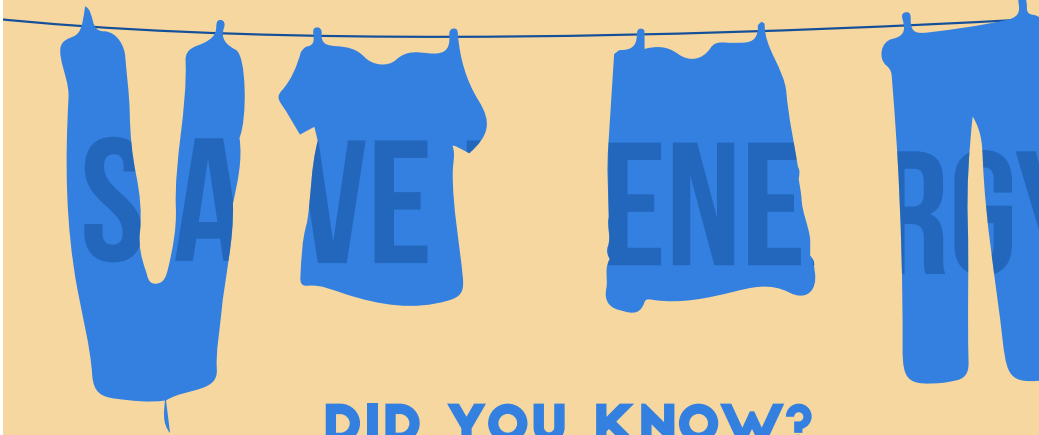
TAKE CHARGE  
&  
UNPLUG

# HANGOUT DAY

OCT 16 2 - 4 PM



SAVE MONEY



DID YOU KNOW?

MACHINE DRYING CLOTHES USES 3.3 KWH. THAT'S EQUIVALENT TO DRIVING A CAR FOR 5 MILES.

ENERGIZE UVA

DORM ENERGY RACE



SUSTAINABILITY.VIRGINIA.EDU

**OCTOBER 29  
OPEN GROUNDS  
4:30PM**



The Renewable Energy Town Hall will focus on ways U.Va. can reduce its carbon footprint through renewables and conservation. The event will include a break-out session. Refreshments will be provided.

[SUSTAINABILITY.VIRGINIA.EDU](http://SUSTAINABILITY.VIRGINIA.EDU)



# UVA SUSTAINABILITY DAY

**NOVEMBER 12**

**2015**



...STORIES: DISCOVERING SUSTAINABILITY IN DIVE

[SUSTAINABILITY.VIRGINIA.EDU](http://SUSTAINABILITY.VIRGINIA.EDU)



# WE ARE SUSTAINABILITY ADVOCATES

JOIN US

The mission of Sustainability Advocates is to use a peer to peer student network to instill knowledge, empower students, and create awareness of the impact of daily decisions.

The SA Program allows participants to develop an understanding of energy & water conservation, recycling and other green habits. They promote these issues in their residence area, throughout the University, and are a source of information for their peers.

**LEARN MORE & APPLY AT:**  
[sustainability.virginia.edu/programs/advocates.htm](http://sustainability.virginia.edu/programs/advocates.htm)

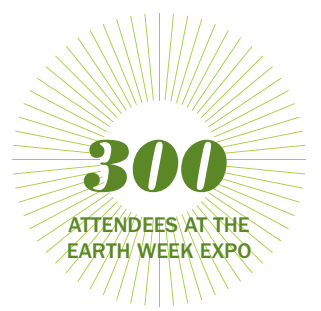


## BY THE NUMBERS

Earth Week is a UVA tradition that celebrates the planet we all share. Students, faculty, staff, and community members are invited to experience sustainability on Grounds and beyond. Below is a visual recap of the 2016 celebration.



The day with the most events was April 22 (Earth Day) which had **5** total events.



In total we estimate that on average there were **52** attendees at each Earth Week event!



This year, **10** new partners held celebrations and events. These include Madison House, UVA LGBTQ Center, Center for Contemplative Sciences, and the Frank Batten School.



It took over **10** meetings and **8** people to plan and execute the Earth Week Expo and to coordinate and promote the schedule of events for Earth Week.



# CHUCK IT FOR CHARITY

## RESULTS

### ..... On Grounds .....



**6,225**

POUNDS OF CLOTHES



**1,266**

POUNDS OF FURNITURE



**2,963**

POUNDS OF GENERAL  
HOUSEHOLD ITEMS



**1,756**

POUNDS OF MICROWAVES  
AND MINI-FRIDGES



**340**

POUNDS OF ELECTRONICS



**858**

POUNDS OF FOOD

**2,805**

POUNDS OF MISCELLANEOUS  
ITEMS

*\* These breakdowns do not include material collected from McCormick residences*

For 18 years, Chuck it for Charity has provided UVA students a chance to give back to their community while packing up during move out. Instead of throwing out items students no longer needed, convenient donation spots are provided in and around residence halls.

This year, students living on Grounds donated **21,334** pounds of materials

to local charities. Over the past three years, Chuck it for Charity has diverted over 63,433 pounds of usable goods out of landfills and into the hands of those who need it most in the Charlottesville region.

### ..... Off Grounds .....

**4,760**

POUNDS OF MATERIALS  
TO GOODWILL



TRUCK LOADS OF  
DONATIONS TO THE  
SALVATION ARMY



# ..... HAPPY BIKE MONTH

GREEN YOUR COMMUTE WITH THESE TIPS

Transportation has a big impact on our lives and an equally big impact on our environment. The transportation sector emits one quarter of energy-related greenhouse gas emissions worldwide. Do your part to lower emissions by opting for more sustainable forms of transportation. UVA offers students, faculty, and staff many low emissions transportation options.

#### BIKE



Biking to work can burn on average 20x the calories than if you drove to work. UVA offers UBIke memberships to faculty and staff for \$60 annually. Learn more by visiting the UBIke webpage.

**6,525**

MILES OF UBIKE TRIPS  
TO DATE

#### BUS



UVA employees can ride Charlottesville buses for free using their ID cards. The City recently added a "29 express" route from Forest Lakes/Hollymead area to UVA. Find out more by visiting [www.29express.org](http://www.29express.org).

**1,154**

UVA HOSPITAL EMPLOYEES  
RIDE BUSES FROM UHALL  
EACH DAY

#### CARPPOOL



Carpooling has many advantages. It can save you money on gas and car maintenance, lower traffic congestion on roads and reduces the need for road repairs. UVA offers Cavpool to all parking permit holders. The program provides discounts on permit prices, and premier parking spaces in select lots. Learn more on UVA's TDM website.

**169**

CARPOOL PERMIT  
HOLDERS

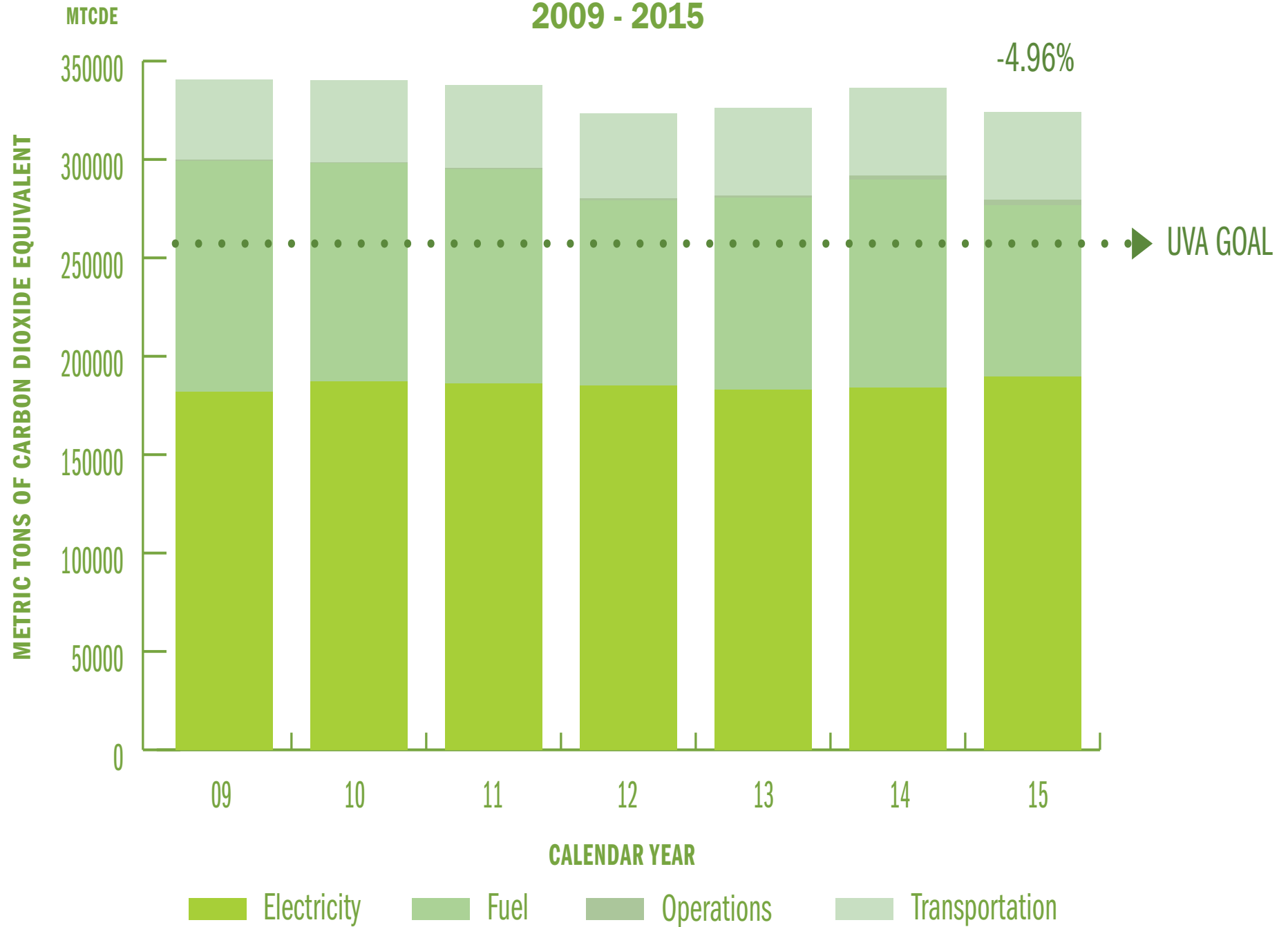


# STEWARD

RESOURCES & PEOPLE

# TOTAL GREENHOUSE GAS EMISSIONS BY SOURCE

2009 - 2015

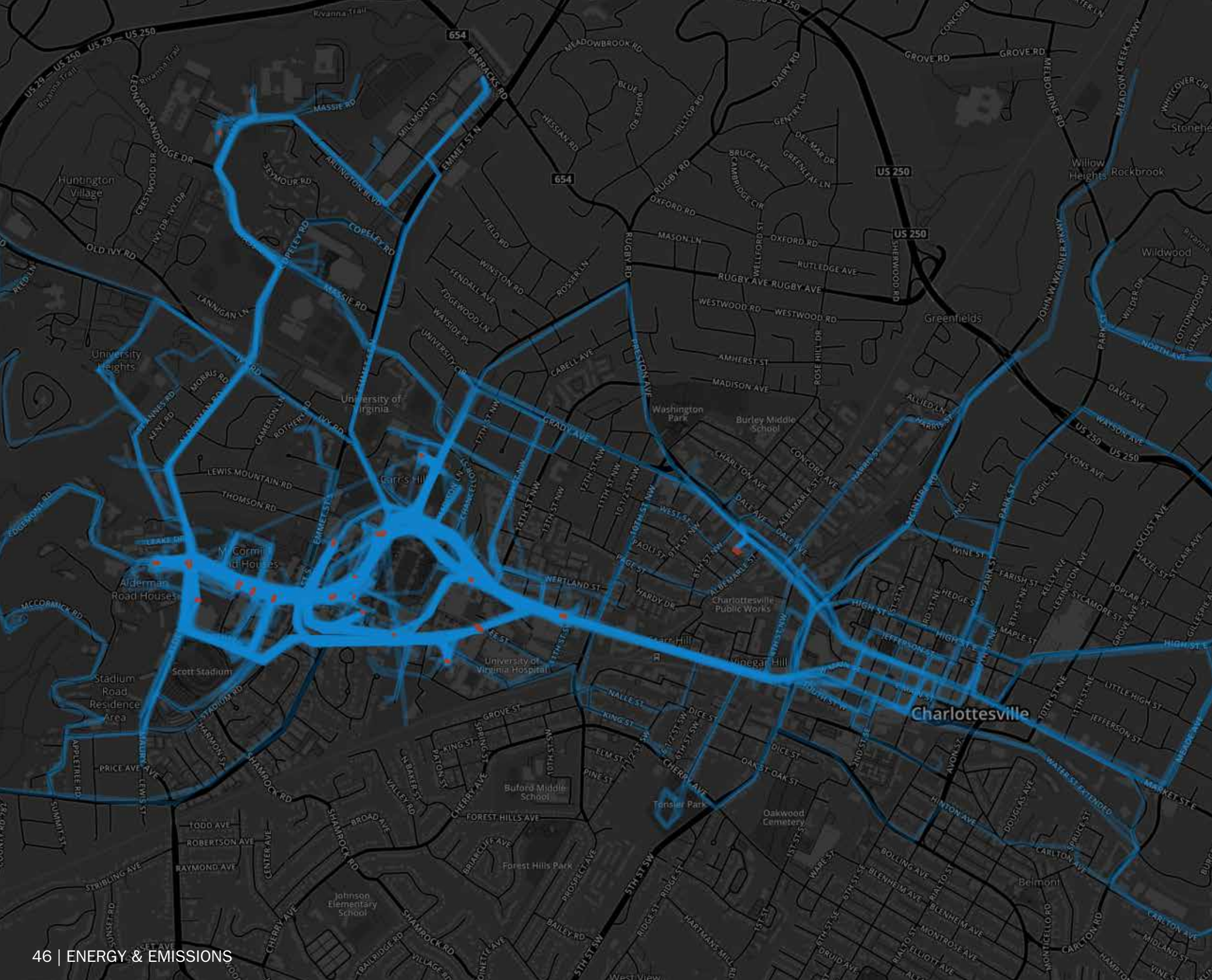


## **GREENHOUSE GAS AND NITROGEN**

# **ENERGY & EMISSIONS**

**Goal: Reduce greenhouse gas emissions 25%  
below 2009 levels by 2025.**

Growth in total square footage, population, and energy-intensive space types continue to make this a challenging goal. Since the 2009 baseline, UVA's population has increased by 6.3% and square footage has increased by 1.7 million square feet. Greenhouse gas intensity (metric tons of carbon dioxide equivalent per person or per square foot) continues to decrease. As of 2015, greenhouse gas emissions have been reduced by 4.96%, despite growth. Without growth attributable to square footage, UVA would have achieved a 14% reduction, which indicates that significant progress is being made, but highlights challenges of growth. For more detail, see UVA's 2015 Greenhouse Gas Report.



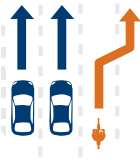
# TRANSPORTATION

UBike is an active system of over 700 members who have collectively reduced 6,300 lbs of carbon, and have ridden over 7,115 miles.

## RULES OF THE ROAD



Obey all traffic laws, signs, and signals



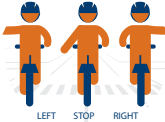
Ride with the flow of traffic



Stay off sidewalks



Wear a helmet\* and ride with bike lights



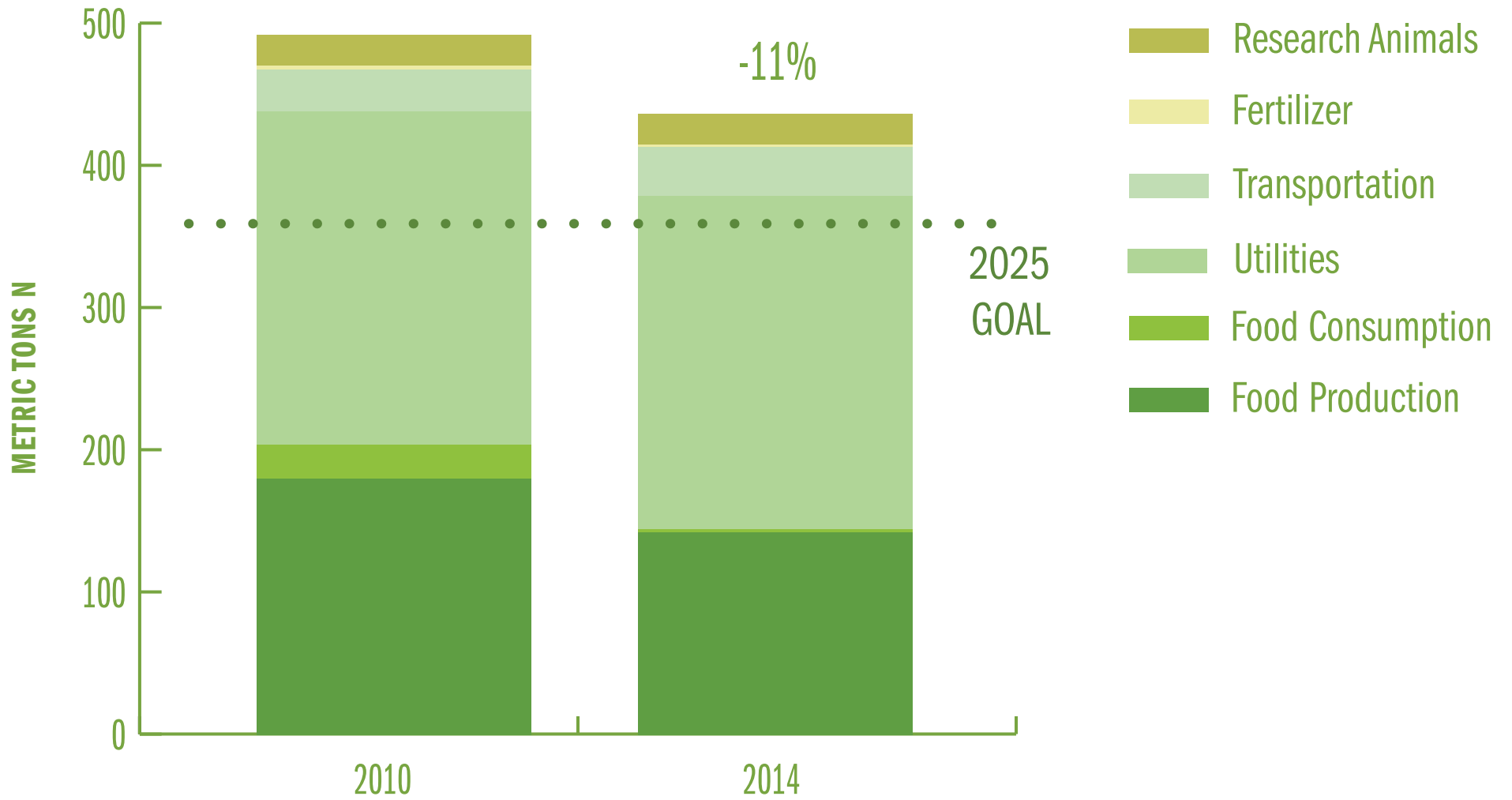
Be Predictable-signal when turning



Yield to pedestrians



# NITROGEN FOOTPRINT RESULTS 2010 & 2014





## NITROGEN



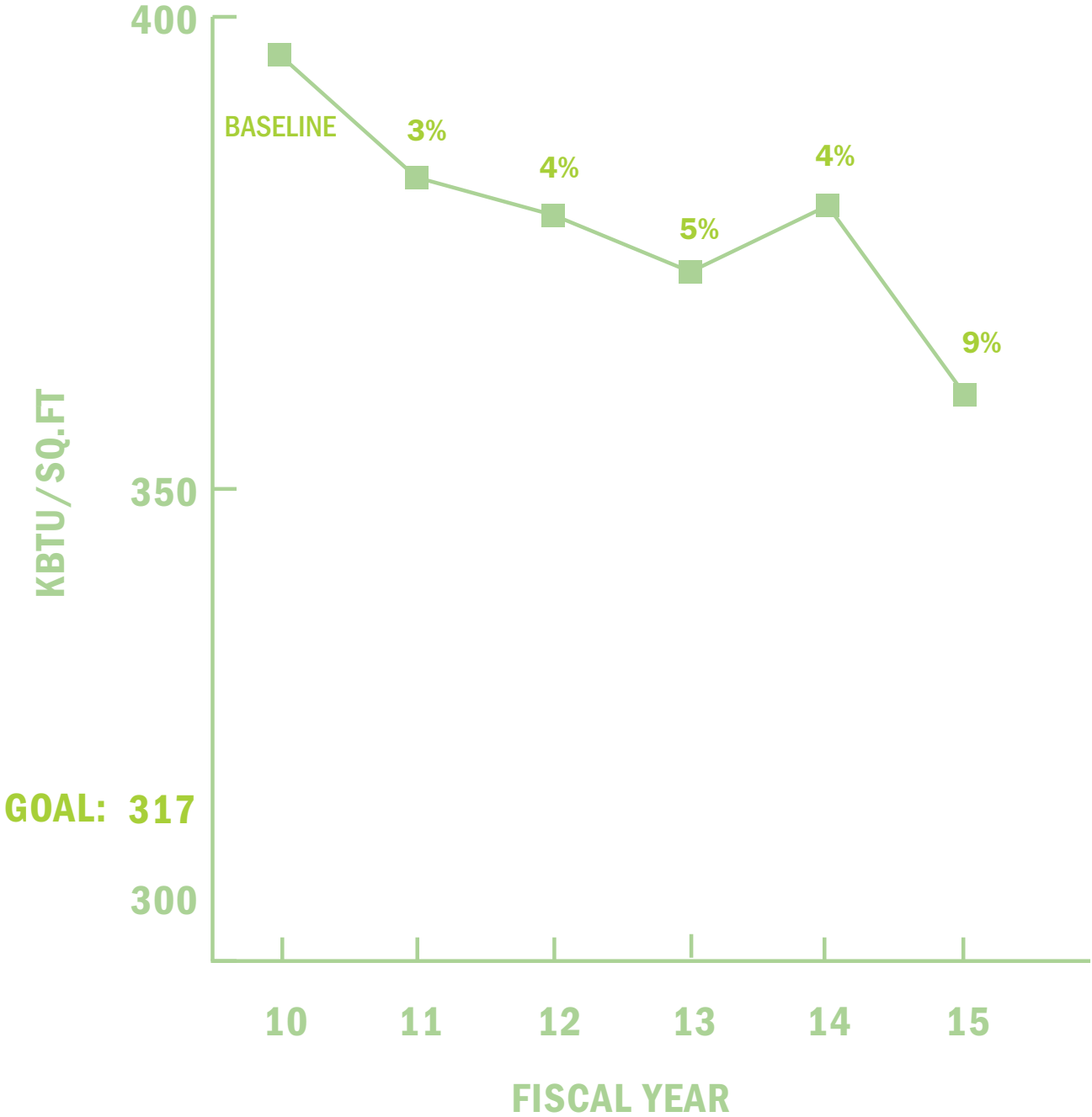
**Goal: Reduce reactive nitrogen losses to the environment 25% below 2010 levels by 2020.**



Nitrogen emissions are calculated using a scaling methodology every two years and a full calculation methodology every four years. As of calendar year 2014, nitrogen losses to the environment have been reduced by 11% compared to the 2010 baseline, despite increases in square footage and population. Reductions to date are primarily attributable to wastewater treatment improvements and food purchasing changes, as well as a refined and improved calculation methodology. For more detailed information, see the CY2014 UVA Nitrogen Footprint Report.

# SOURCE ENERGY USE INTENSITY

PERCENT IMPROVEMENT FROM BASELINE



**ENERGY REDUCTIONS OF BUILDINGS WITHIN  
THE DELTA FORCE PROGRAM  
2009 - 2015**



**BEFORE:**

*The total estimated energy consumption of 37 buildings from 2009 - 2015 without the Delta Force Program is **9,954,414** MMBtu*

**AFTER:**

*The total energy consumption of those same 37 buildings after undergoing retro-commissioning in the Delta Force Program is **8,854,322** MMBtu*

- An **11%** reduction in total energy use, equivalent to over **\$22 million** in avoided costs.

**Goal: Reduce building energy use intensity  
20% below 2010 levels by 2020.**



Testing fume hoods in Clark Hall to optimize the building's energy profile

As a Better Buildings Challenge Partner, UVA strives to decrease portfolio-wide source energy use intensity (EUI) and to increase the percent improvement compared to a set baseline. Since 2010, UVA has improved energy performance by 9%.

In CY15, energy-related activities yielded more than \$4.6 million in avoided costs and almost 14,000 metric tons of avoided greenhouse gas emissions. Since FY08, conservation activities at the University have presented over \$27 million in avoided utility costs.

# **BUILDING SUSTAINABILITY**

is a holistic approach to retro-commissioning, with a greater emphasis on occupant engagement and collaboration.

.....



3,300 energy efficient fluorescent lamps installed to date.



Upgrades to existing equipment in Clark Hall have resulted in over \$370,500 in savings to date.



145 building occupants have pledged to reduce energy.

**Delta Force:** Since FY08, \$8.7 million has been invested in the Delta Force retro-commissioning program. With an avoided cost to date of nearly \$22.4 million, the simple return on investment is 2.5:1 since the program inception.

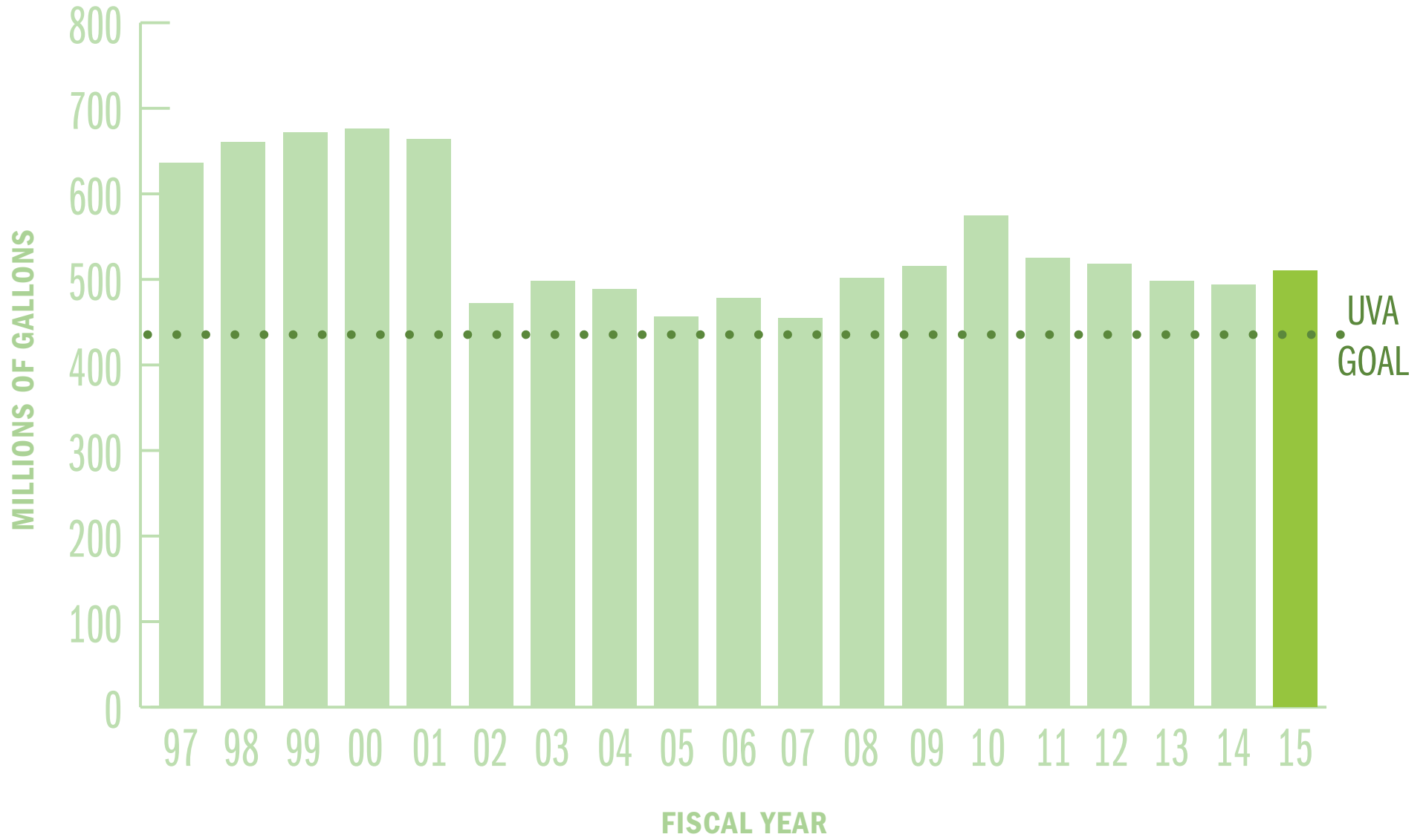
**Lighting:** Facilities Management, with the help of student workers, continues to identify and upgrade inefficient lighting fixtures throughout the University. This year, four facilities, including the John Paul Jones Arena, were selected for full building re-lamping. Additionally, 207 exterior pole lights, bollards and other exterior lights were converted to LEDs, for an estimated savings of over \$145,000.

**Renewables:** UVA's first building-mounted solar PV array, a 15 kW system, was installed on the FM Shop and Support Office Building. Three additional solar PV systems, totaling over 600 kW, are planned for installation in the coming year, on Clemons Library, Ruffner, and the Bookstore.



*Facilities Management installed a 15 kW solar array on the roof of their new office building.*

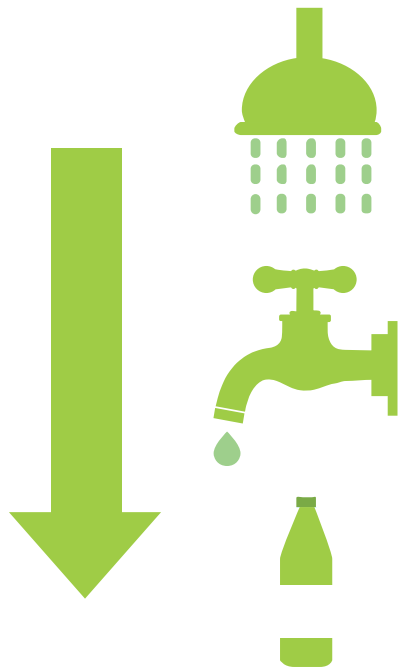
## TOTAL WATER USE 1997 - 2015



## POTABLE WATER USE

# WATER

The University's total water usage is down 11.1% compared to the 2010 baseline year, despite growth, a total of 64 million gallons less compared to 2010.

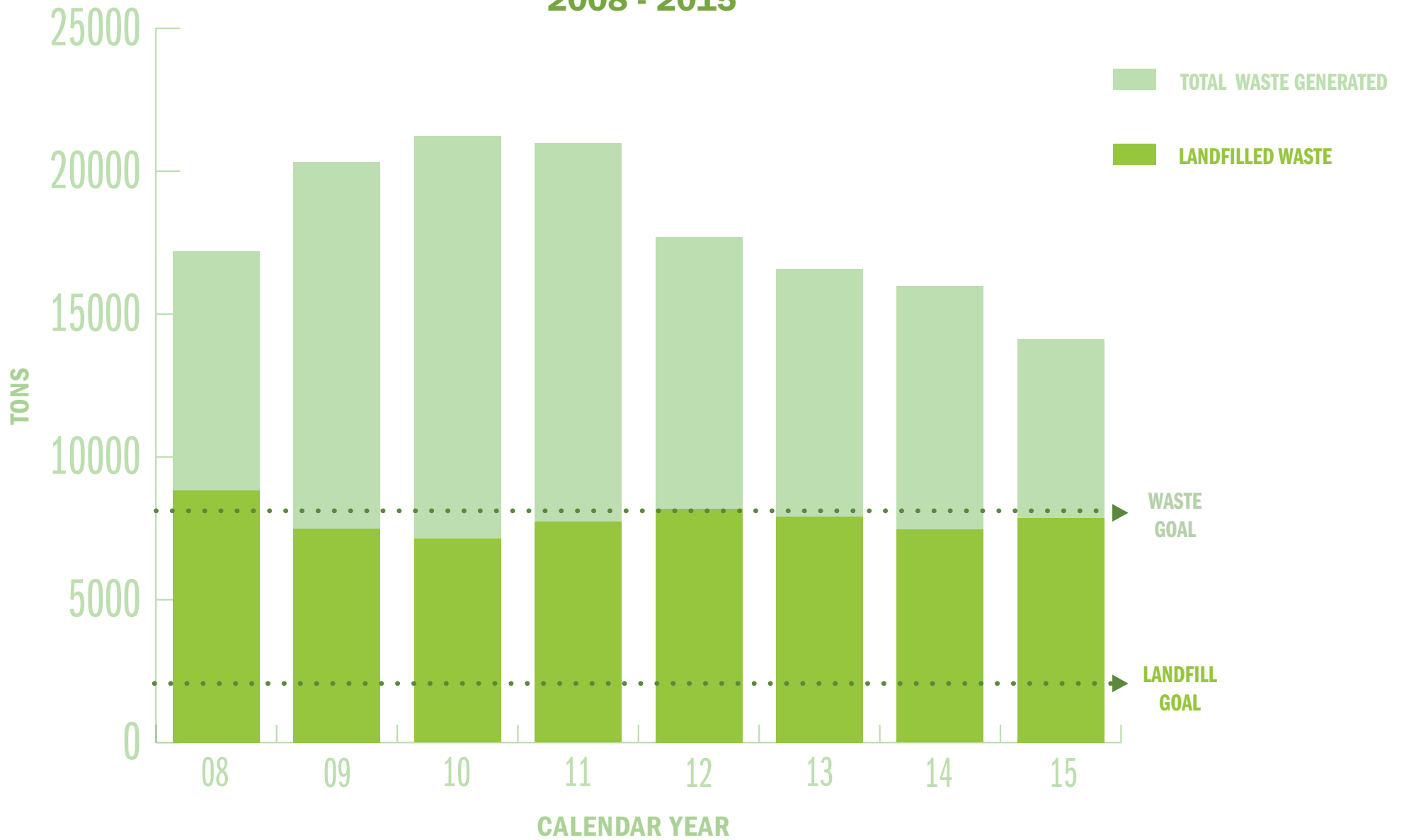


Goal: Reduce potable water use 25% below 2010 levels by 2020.



*Justin Callihan teaches middle school students about UVA's chiller plants, which are the biggest consumers of water on Grounds.*

## UVA WASTE AND LANDFILL TONNAGE 2008 - 2015





## **REDUCE, REUSE, RECYCLE**

# **MATERIALS & WASTE**

During calendar year 2015, the University recycled 2,503 tons of municipal solid waste (MSW). This yielded an MSW recycling rate of 25%. The University diverted an additional 3,748 tons of non-MSW material such as ash, tires, batteries, oil, and chemicals from landfills, bringing the total recovered materials to 6,251 tons, a total diversion rate of 44% percent when all materials that can be recycled or reused are considered. UVA continued food composting programs for all UVA Dining facilities, Darden, and the Medical Center. Combined, this yielded over 180 tons of compost in CY 2015. Although the total waste diverted has decreased, it is primarily due to a large reduction in coal ash generated.



**Goal: Reduce the total tonnage of waste generated at UVA 50% below 2014 amounts by 2035.**

*\*Includes all trackable waste streams, equivalent to generating less than 7,856 tons of total waste*



**Goal: Landfill less than 2000 tons of waste annually by the year 2035.**

*\*Includes all waste streams, equivalent to diverting 87% of the 2014 waste stream, or approximately 75% of the minimized waste generated in 2035*

## New or notable ongoing waste diversion projects:

- A Waste and Recycling Survey was distributed to a random sample of UVA students, faculty, and staff to gather information to improve UVA's waste diversion practices. Over 1,000 responses were received. Results from the survey will be important as UVA moves towards co-locating all interior recycling and trash bins, implementing consistent signage, and expanding composting options.
- UVA piloted a new approach to trash and recycling in Clark Hall, designed to increase diversion and simplify operations. The preliminary results are positive and a larger rollout will continue next year.
- The Reusable Office Supply Exchange (ROSE) program expanded beyond its Leake Drive location in a Mobile ROSE format, which provided free, used school and office supplies at temporary locations around Grounds every Monday and Thursday in October.
- The student-run Cans to Cans program has collected over 1,000 pounds of aluminum from off-Grounds Greek houses, and have donated the proceeds – over \$300 – to Loaves and Fishes.



## EAT LOCAL, MOSTLY PLANTS

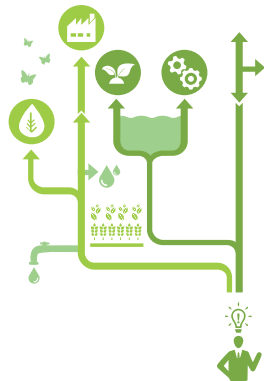
# FOOD

During Earth Week, a Farm to Fork meal brought together growers, suppliers, and chefs to create an amazing Virginia-grown meal in O'Hill dining room.

The Health System continued to hold a weekly Uteam Farmers Market in the summer. The Health System also held a zero-landfill, local sausage (Polyface Farm) and squash event, which fed over 10,000 individuals during Hospital Week.



Goal: Annually increase the percentage of sustainable food and beverages available on Grounds.



Goal: Increase student, staff, and faculty awareness of sustainable food systems and seek to translate this heightened awareness into informed choices.



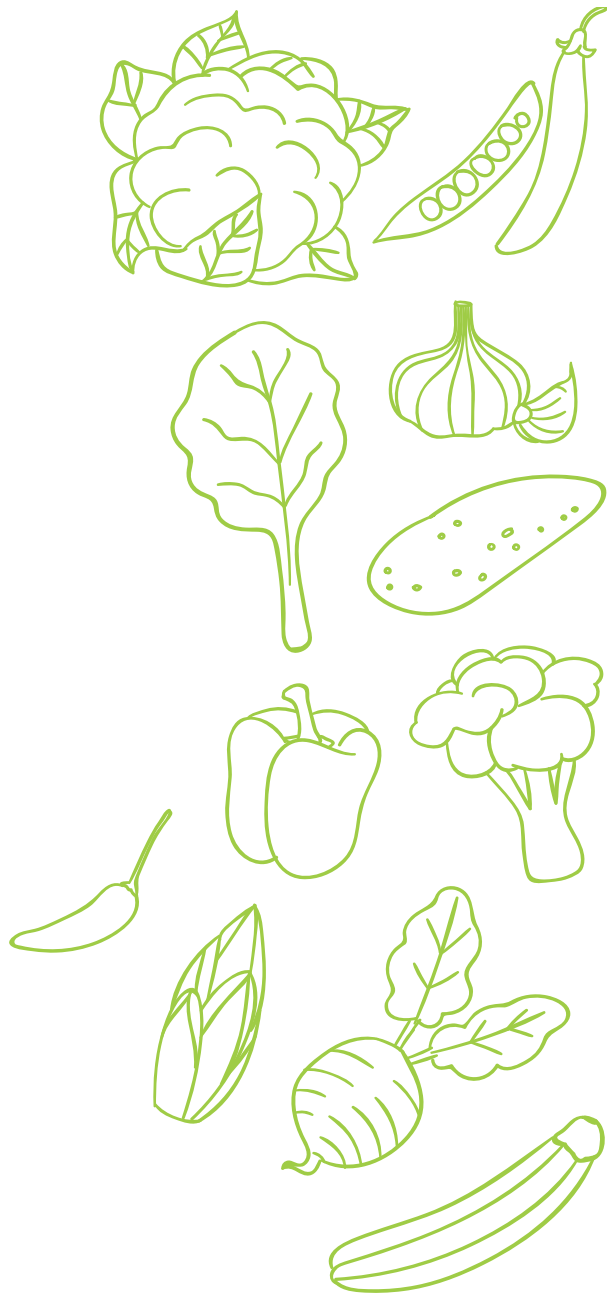


**Goal: Reduce food waste and single-use food serving items sent to landfill by 2030, in alignment with the overall UVA waste goals.**

Food composting programs for all UVA Dining facilities, Darden, and the Medical Center resulted in 180 tons of compost.

‘Cupanion’ launched in the fall, and over 7,500 single use cups have been diverted from the landfill. With continued reusable to-go box expansion, messaging, and tabling, hundreds of new students joined the program this year, lowering disposable to-go box waste across Grounds. This year, Green Dining students helped launch three “All Vegetarian” theme meals. These meals facilitated conversation on food footprints, health and wellness, and the joy of eating veggies.





The Sustainable Food Strategy Task Force was formed this year, which brings together UVA Dining (Aramark), Darden Dining, Health System Dining (Morrison's), members of the UVA Food Collaborative, and others, to collaborate on strategic UVA-wide sustainable food initiatives.

The Virginia Sustainable Food Coalition also formed this year, which is comprised of members from UVA, Virginia Tech, George Mason, and James Madison University. The mission is to harness the intellectual, human and economic capital of colleges and universities to foster the emerging local food economy in Virginia. The Coalition held a two-day Sustainable Food Systems Symposium, funded by 4VA, at Morven Farm. Panel discussions and workshops evaluated how to collaboratively drive change for university food sustainability. Attendees included faculty and staff from all four schools, as well as representatives from the Local Food Hub, Morven Kitchen Garden, Metropolitan Washington Council of Governments, Virginia Food System Council, Produce Source Partners, True & Essential Meats, Stone Barns Center, Sodexo, and Aramark.



**Goal: Collaborate within UVA and with the region, bringing together faculty, staff, students, and dining operations to advance sustainable food systems in the broader community.**

**RESPONSIBLY INVESTING IN OUR FUTURE**

# INVESTMENT ASSETS

Students Lia Cattaneo, Alex Russell, and Will Evans led a Sustainable Investments Working Group in drafting a resolution calling for “the establishment of an Advisory Committee on Sustainable Investment (ACSI) to receive recommendations from University stakeholders on the application of environmental, social, governance, and ethical (ESGE) factors to the University’s investment decisions, to develop associated guidelines for evaluating these issues, and to advise the administration on investment-related concerns raised by the University community and other stakeholders.” The Group advised that the Advisory Committee, if approved, undertake the following charge:

- In collaboration with University stakeholders, including the Board of Visitors, develop guidelines for the University community to raise ESGE issues pertaining to the investment of the institution’s endowment
- Evaluate issues raised by and proposals from the University community regarding ESGE investment
- Seek broad input from all relevant constituencies
- Synthesize results into recommendations to the Executive Vice-President and Chief Operating Officer for consideration by the President and the Board of Visitors



**Goal: Consider environmental, governance, social, and ethical issues in managing institutional investment assets.**







# DISCOVER

TEACHING, RESEARCH, AND CURRICULUM

## ***EDUCATING THE NEXT GENERATION***

# **CURRICULUM**

Interdisciplinary sustainability and resilience curriculum and research at UVA have wide-reaching global impacts. UVA currently offers over 160 undergraduate and over 150 graduate sustainability-focused or sustainability-related courses. The Office of Vice President for Research and the Associate VP for Research, Sustainability, and the Environment have further catalyzed UVA's sustainability and resilience research capacity.

*UVA students studying sustainable agriculture in Cuba*



## MAJOR in GLOBAL STUDIES – ENVIRONMENTS + SUSTAINABILITY (GSVS)

The inaugural class of 23 GSVS students graduated in May 2016. Currently there are 28 students in the rising 4th year GSVS class of 2017 and 31 newly admitted students in the class of 2018. The 2017 class includes 2 Echols Scholars and 11 students earning a second major. The 2018 class includes 5 Echols Scholars and 18 students pursuing complementary majors. Overall, 50% of students combine GSVS studies with a second major and many others pursue minors in diverse disciplines.

## GLOBAL SUSTAINABILITY COURSE

Global Sustainability is the required foundation course for the GSVS Major and Global Sustainability Minor programs. The course examines topics such as water, energy, food, health, architecture, urbanism, ethics and commerce as related to sustainability. The course meets twice per week for lectures by Professor Crisman and expert speakers on topics that build on class readings and films. Students write reading responses, complete a final exam, and collaborate on a semester-long Think Global/Act Local project. Over 1,200 students in a wide range of majors have completed the course since its inception as a University Seminar in 2009. Students from the College of Arts & Sciences comprise the majority of the class each semester, along with significant numbers from the Schools of Architecture, Engineering and Commerce. Students from Batten, Nursing and Education also enroll, along with Community Scholars. Typically 1st and 2nd year students comprise 60 – 70% of the course and this is an ideal time to introduce sustainability early in their education. The course is an important gateway to UVA sustainability programs.

## MINOR in GLOBAL SUSTAINABILITY (GS)

Students in the GS Minor are prepared to understand, innovate, and lead efforts to confront sustainability challenges. This integrated and interdisciplinary program provides foundational knowledge on the multifaceted aspects of both problems and solutions, and challenges participants to deepen their understanding of global sustainability issues by working collaboratively in their capstone course. As of May 2016, 189 students will have graduated with a GS Minor. Students from the School of Architecture and the College of Arts & Sciences comprise 81% of graduates. The goal has been slow and steady growth in the program due to funding limitations. The program exceeded the self-imposed cap of 30 graduates in 2013 and graduated 45 students in 2015 and 48 students in 2016.



**23**

GRADUATES  
MAJORING IN GSVS



**1,200**

ENROLLED IN GSVS



**189**

STUDENTS MINORING IN  
GLOBAL SUSTAINABILITY

**INNOVATING FOR THE FUTURE**

# RESEARCH

The Office of Vice President for Research and the Associate VP for Research, Sustainability, and the Environment awarded 12 Environmental Resilience Research Awards and Environmental Resilience Graduate Fellowships. The Graduate Fellowships further enable cross-disciplinary environmental resilience research – up to \$12,000 per grant – with faculty advisors from two disciplines and undergraduate student support.

*Mary Jane Gilliland and Gaby Santiago studied the role of “trash pickers,” in São Paulo, Brazil.*



## **2016-2017 Environmental Resilience Research Awards, Office of Vice President for Research**

- Adaptive Management of Urban Infrastructure for Addressing Recurrent Flooding Challenges in Coastal Cities
- Resilient Settlement and Productive Aquatic Landscapes: Framing Long-term Redevelopment Strategies for Virginia's Coastal Communities
- Norfolk Coastal Resilience Study: Planning for Sea-level Rise at Harbor Park
- Modeling Community Health Resilience for Healthy Cities
- Political Economy of Foreign Land Acquisition: The Role of Gender
- Engendering Local Stewardship through Citizen Science at Friendship Court

## **2016-2017 Environmental Resilience Graduate Fellowship Awards, Office of Vice President for Research**

- Creating a Machine Learning Algorithm to determine the Adaptation Behavior for point-of-use water cleaning Technologies
- In the face of global warming, increasing water shortages, and growing human populations, the development of distributed water treatment solutions that are inexpensive, effective, and socially acceptable will be a critical to creating a more resilient global human population
- Environmental Ethics and Ecologies of Violence
- A Hole in Global Environmental Policy: Comparing the Ozone Crisis & Climate Change
- Distributed water infrastructure as civic space
- Enhancing societal resilience to environmental change through human adaptation to CAM plant response to CO<sub>2</sub> and nitrogen fertilization

## Additionally, UVA researchers made notable progress – some highlights:

**Segmented Ultralight Morphing Rotor Wind Turbines:** A School of Engineering and Applied Sciences team was awarded a \$3.56 million federal grant from the U.S. Department of Energy’s Advance Research Projects agency to build a prototype of an innovative wind turbine. Professor Eric Loth (Chair of the UVA Department of Mechanical and Aerospace Engineering) will work with teams across the country to prototype a design concept that far exceeds current wind turbine capacity – up to 50 MW of power, made possible by ultralight blades that fold down in extreme weather.

**MAXNET Energy Consortium:** UVA and the eight Max Planck Institutes are collaborating on developing innovative and clean sources of energy.

**Global Programs of Distinction Grant:** Faculty Deborah Lawrence’s “Food, Fuel, and Forests” program continues to study the interconnectedness of energy, land, and the choices we make today that impact our future climate.

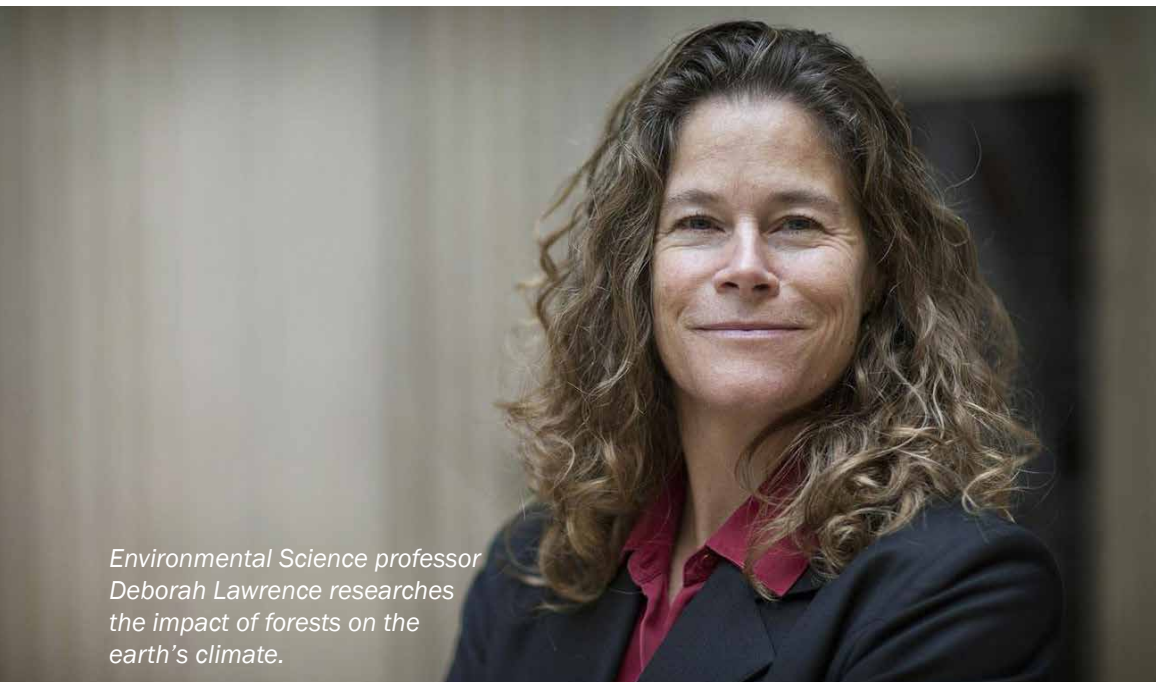


*Engineering professor Eric Loth was awarded a federal grant to design wind turbines.*

**Truman Scholar:** Third Year Materials Science Engineering and Nanoscience major Jill Ferguson was selected as a Truman Scholar and will research the development of effective and inexpensive solar photovoltaic cells.

**Nitrogen Footprint and N-Print:** Faculty Jim Galloway and the nitrogen footprint team continue to expand their research and tools to schools across the country.

**Biophilic Cities Network:** Tim Beatley’s Biophilic Cities Network added Washington, DC and Edmonton, Alberta as partner cities.



*Environmental Science professor Deborah Lawrence researches the impact of forests on the earth’s climate.*



*UVA environmental scientists study the health of coastal seagrass, a crucial habitat threatened by climate change.*

### UVA Food Collaborative Student Research Symposium:

Sponsored by the UVA Parents Fund and organized by the UVA Food Collaborative, students presented their research related to food on topics such as nutrition, agriculture, and sustainability.

**Dalai Lama Fellows and Growing for Change:** Graduate student Shantell Bingham and undergraduate student Artem Demchenko were two of 19 students in the world selected as Dalai Lama Fellows this year. They have worked with Westhaven residents and UVA student volunteers to design and install residential gardens.

**Learning from Recycling in Brazil:** With funding from the UVA Center for Global Inquiry and Innovation and the College of Arts and Sciences, students Mary Jane Gilliland and Gaby Santiago traveled to Brazil to learn from the hard work of catadores and Brazil's high recycling rates. They will write a paper on their findings.

**World Water Day:** Throughout the last week in March, speakers from across the country spoke on the importance of water. Events included Peter Brabeck-Letmathe, Chairman of the Board, Nestlé S.A. ("Water Challenges Ahead,") Daniel Shemie, Director of Water Funds, The Nature Conservancy's Global Water Team ("Watershed Conservation: Why and Where it Makes Sense for Cities,") Jampel Dell'Angelo, National Center for Socio-Environmental Synthesis, University of Maryland, Annapolis, MD ("Diagnosing the Global Water Grab Syndrome,") and a Stormwater Workshop.



*Students presented their research projects on food systems at the Food Research Symposium*

*Dalai Lama fellows built residential gardens in Charlottesville.*





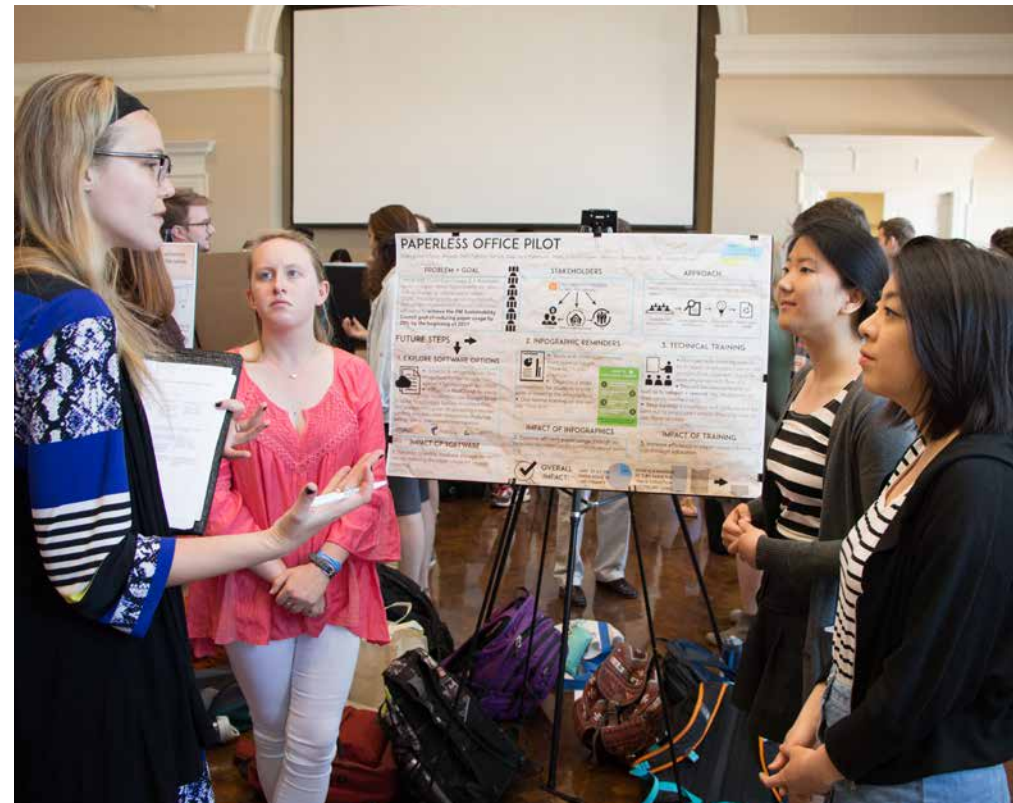
## LEARNING IN ACTION

# GROUNDS AS A LEARNING TOOL

**Global Sustainability Course Projects:** Throughout the years, several Global Sustainability student projects have been implemented on Grounds. Two installed this year were:

**Solar Table:** Fourth-year Engineering student Tatiana Sokolova worked with the Open Space Working Group to install the University's first solar table, which is located between O'Hill and Lile-Maupin. The table provides outdoor study space that can charge devices using solar power. The table was funded via the UVA Parents Fund, a GIFT grant, and Facilities Management.

**Compost Benches:** Second year student Elise Watt built her Global Sustainability project, compost benches, with help from her fellow students. One is installed in the UVA community garden and two others are in Johnson Elementary School's community garden. Funding was provided by the SpringFest pitch event and a GIFT grant.



**GIFT Grant:** The Green Initiatives Funding Tomorrow (GIFT) Grant is an exciting program that provides funds for student-led and sustainability projects on Grounds. The fifth round of GIFT projects were funded in fall 2015, totaling \$34,661:

- Bike Workshop
- Community Garden
- Bike Stair
- Solar Table
- Greek Composting
- Bike Fix-It Station
- Waste Vegetable Oil Furnace
- Kombucha Power
- Greens to Grounds
- Empower the Reuser
- Zero Waste Athletics
- Community Garden Compost Bench
- IRC Garden

**IDEA Student District Energy Video Competition:** To learn and to share knowledge about district energy on Grounds, a student team created a video; for the second year in a row, UVA won 1st place in the International District Energy Association Student Video Competition.



*The GIFT Grant funded a project to build a cold frame housing for UVA Community Garden.*

# RECOGNITION

SUSTAINABILITY ON GROUNDS

**Awards:** UVA's sustainability programs have received national recognition, particularly within recycling, facilities management, energy, diversity and affordability, environmental stewardship, and outreach and engagement. Recognition received this year:

- APPA Sustainability Award – University of Virginia Facilities Management
- International District Energy Association – International Student Video Competition, 1st Place
- Virginia Department of Environmental Quality, Sustainability Partner designation
- AASHE STARS Sustainable Campus Index, Top Performer, Diversity and Affordability
- Game Day Challenge – Basketball, Per Capita Recycling, 1st Place
- Game Day Challenge – Football, ACC Recycling Per Capita, 1st Place
- Game Day Challenge – Football, ACC GHG Reduction Per Capita



**Ongoing Recognition:**

- U.S. Department of Education Green Ribbon School
- AASHE STARS Gold
- Princeton Review 2015 Guide to 353 Green Colleges
- Building Services, Green Seal Certified



**Presentations at National Conferences on-Grounds Practices:**

- Greenbuild
- Smart and Sustainable Campuses
- Association for the Advancement of Sustainability (AASHE)
- National Association of College & University Business Offices (NACUBO)



# APPA

SRAPPA • THAPPA

ANNUAL

CONFERENCE

& EXHIBITION

## 2016

NASHVILLE, TN

# APPA 2016 Awards Reception

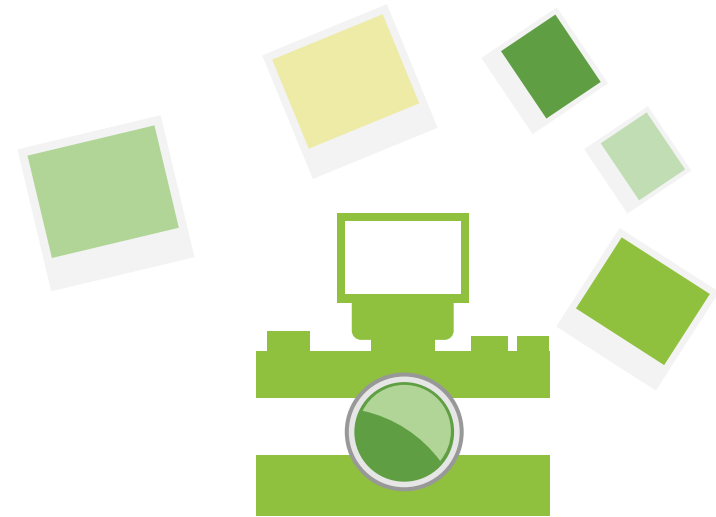


# PHOTO CREDITS

The photos in this report were provided by individuals from the following departments:

- UVA Communications
- Office for Sustainability - Staff & Students
- Facilities Management
- UVA Environmental Resources
- Parking & Transportation
- UVA Dining
- Department of Politics

To use any of these images and graphics or to identify the photographer, email [sustainability@virginia.edu](mailto:sustainability@virginia.edu).



# COMMITTEE ON SUSTAINABILITY

## 2015 - 2016

BRENT BERINGER <i>Director of Dining Services</i>	:	JULIA MONTEITH <i>Senior Land Use Planner</i>
REBA CAMP <i>Administrator, Medical Center</i>	:	KRISTIN MORGAN <i>Program Director, Diversity &amp; Equity</i>
LIA CATTANEO <i>Undergraduate Student</i>	:	NINA MORRIS <i>Sustainability Outreach &amp; Engagement Manager</i>
PHOEBE CRISMAN <i>Associate Professor of Architecture</i>	:	AMY MULDOON <i>Weldon Cooper Center for Public Service</i>
ANTHONY DE BRUYN <i>University Spokesperson</i>	:	SCOTT NORRIS <i>Director of Business Services</i>
BLAKE FOSTER <i>Graduate Student</i>	:	MATTHEW ORESKA <i>Graduate Student</i>
KEVIN FOX <i>Administrator, Medical Center FP&amp;C</i>	:	ALICE RAUCHER <i>Architect for the University</i>
JAMES GALLOWAY <i>Professor of Environmental Sciences</i>	:	ALEXANDER M. RUSSELL <i>Undergraduate Student</i>
DAVID GERMANO <i>Professor of Religious Studies</i>	:	GERALD STARSIA <i>Associate Provost for Academic Support</i>
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CHERYL GOMEZ <i>Director of Operations, Co-Chair of Committee</i>	:	DONALD SUNDGREN <i>Associate Vice President and Chief Facilities Officer</i>
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