



**NC STATE  
UNIVERSITY**

2011-2016 SUSTAINABILITY  
STRATEGIC PLAN  
**FINAL REPORT**





# Foundation for Advancing Sustainability

## NC STATE'S 2011-2016 SUSTAINABILITY STRATEGIC PLAN

**MISSION:** To engage the students, faculty members, staff and university partners in preparing for a more sustainable future.

**VISION:** To advance sustainability into the culture, mission and activities of the university and to become nationally recognized as a sustainable university.

**STRATEGIC GOALS:**

-  ACADEMICS AND RESEARCH
-  PURCHASING AND WASTE REDUCTION
-  COMMUNITY AND CULTURE
-  TRANSPORTATION
-  ENERGY AND WATER
-  GREEN DEVELOPMENT

Successful implementation of NC State University's first Sustainability Strategic Plan has positioned NC State as a national leader in sustainability. Special thanks to our outstanding students, faculty and staff – and in particular the Campus Environmental Sustainability Team – for their leadership and dedication in making this important work a success. As NC State continues bringing together some of the world's brightest minds to solve some of the world's greatest challenges, expect nothing less than a sustainable, more prosperous future for us all.



Randy Woodson  
NC State Chancellor

### FROM THE NC STATE SUSTAINABILITY COUNCIL

In 2011, NC State set forth a bold vision to advance sustainability into the culture, mission and activities of the university. Through the university's first Sustainability Strategic Plan, which guided efforts from 2011 through 2016, sustainability at NC State soared to unmatched levels of campus and community engagement.

This report highlights the cumulative impact of NC State's 2011-2016 efforts to advance sustainability in academics and research, community and culture, energy and water, purchasing and waste reduction, green development and transportation. Through these accomplishments, the university has emerged as a sustainability leader and recipient of numerous local and national sustainability awards.

Successful implementation of the 2011-2016 Sustainability Strategic Plan has been a true campus-wide effort, made possible only through the collaborative and innovative spirit NC State is known for. Thank you to all that contributed toward this progress and, in particular, the Campus Environmental Sustainability Team that initiated and led these efforts.

The accomplishments of the last five years are just the beginning. The momentum fueling NC State's second Sustainability Strategic Plan – which will guide the university's sustainability efforts from July 1, 2017 through June 30, 2022 – promises continued progress toward a more sustainable future for our campus, state, nation and world.

Jack K. Colby  
Co-Chair, Sustainability Council  
Assistant Vice Chancellor for Energy Systems  
Chief Sustainability Officer

Stephen Kelley  
Co-Chair, Sustainability Council  
Professor, Department of Forest Biomaterials

Tracy Dixon  
Director, University Sustainability  
Office

## SUSTAINABILITY-RELATED AWARDS AND HONORS

2011-2016

NC State achieved its first **Gold rating** in the Sustainability Tracking, Assessment and Rating System (STARS) offered by the Association for the Advancement of Sustainability in Higher Education (AASHE). At the time of rating, NC State was among only 96 universities worldwide to earn this designation.



NC State received the 2014 **APPA Sustainability Award** in recognition of excellence in campus facilities. NC State is the first public university in North Carolina to receive the award.



The Princeton Review named NC State in its **Guide to Green Colleges** (2012-2016).



From 2011-2016, the NC State community received 18 City of Raleigh Environmental Awards including the 2013 **Raleigh Environmental Stewardship Award**, the city's highest environmental honor.



### ADDITIONAL HONORS

**Sir Walter Raleigh Awards for Community Appearance** (2012-2014)

**Bicycle Friendly University** (2012-2015)

**Best Workplace for Commuters** (2010-2016)

Carolina Recycling Association's **Outstanding College Program Award** (2015)

**Net Impact chapter Gold rating** (2013-2015)

Food Service Director's **Grand Goldie Award** (2013)

N.C. Department of Environmental Quality's **Utility Savings Excellence Award** (2014)

National Association of College and University Food Services **Sustainability Award** (2013)

Silver Winner, **Green Cleaning Award** for Schools and Universities (2015)

**Leadership in Energy and Environmental Design** (LEED) certification for 10 campus projects

NC State's Lonnie Poole Golf Course named an **Audubon International Signature Golf Sanctuary**

NC State is the first university in the United States to earn **Healthier Campus** designation (2015)



## ACADEMICS AND RESEARCH

**119** SUSTAINABILITY-RELATED DEGREES

**350+** SUSTAINABILITY-RELATED COURSES

**600+** SUSTAINABILITY-RELATED RESEARCHERS

### CAMPUS AS A LIVING LAB

Through courses or Packlink, an online career resource, many students gained real-world experience by participating in campus projects that improved NC State's sustainability.

### COLLEGE-WIDE INTEGRATION

The Poole College of Management and the College of Design created college-wide sustainability programs: the Business Sustainability Collaborative and the Design for Health and Sustainability.

### INTERDISCIPLINARY RESEARCH

NC State launched the Chancellor's Faculty Excellence Program that includes several interdisciplinary faculty clusters focused on sustainability-related research.

### HIGH-IMPACT STUDENT EXPERIENCES

NC State integrated sustainability into the cumulative student learning experience through undergraduate research, global programs, events, service learning, internships and student leadership programs.

## ENERGY AND WATER

**DOWN 33%**  
Campus energy consumption since 2003

**DOWN 50%**  
Campus water consumption since 2002

**14** Campus solar installations  
**\$3+** Saved during winter break and summer energy initiatives  
MILLION SINCE 2005

### ACCELERATING EFFICIENCY AND SAVINGS

In addition to hundreds of energy conservation measures and maintenance, a campus recommissioning team was created in 2014, performing energy audits and repairs on 13 campus buildings that have generated \$1.95 million in energy cost avoidance. Students also organized periodic residence hall energy-saving competitions that resulted in avoided cost.

### GENERATING ELECTRICITY

An energy performance contract added cogeneration technology in 2012 to the Cates Utility Plant, enabling NC State to generate some of its own electricity and avoid millions in annual energy costs.



### SUSTAINABILITY SERVICE

Many NC State Alternative Service Break trips engaged students in sustainability-related service such as water access, education, community development and environmental issues.



The Green Brick campus sustainability awards expanded to an annual awards ceremony, honoring 19 individuals and organizations from 2012 to 2016.



137 campus events and 30 campus workplaces pursued recognition through Wolfpack Certified Sustainable, a program created in 2011 to encourage integration of sustainability.



Several programs, student trips and an Americorps volunteer position furthered vital campus partnerships between sustainability and diversity.



Communication about NC State sustainability grew during 2011-2016: 360,000 views of sustainability.ncsu.edu, 7,300+ social media followers, 5,000+ weekly e-newsletter subscribers and 420 mentions in media.

## TRANSPORTATION

**↑13%** Growth in annual Wolfline bus passenger boardings from fiscal year 2012 to fiscal year 2016, which topped 3.22 million.



4,438 total WolfTrails alternative commute program participants from fiscal years 2012-2016. Also added 8 ZipCars for campus car sharing.



NC State installed 22 electric vehicle charging station ports for campus use. The university's fleet also added its first electric cars.

NC State added bike maintenance stations, lanes, a student-run bike share at a residence hall and Wolf Wheels campus bike rental.



NC State's fleet incorporated a mix of alternative fuels, including flex fuel (E10 and E85) and biodiesel (B20).



**43,096** Total number of annual GoPasses issued during fiscal years 2012-2016 for student, faculty and staff use of regional transit.

## COMMUNITY AND CULTURE



Percent of incoming students in 2015 who said NC State's sustainability commitments influenced their decision to attend the university.



NC State's greenhouse gas emissions declined from 2008 to 2013.



Campus projects awarded \$308,000 in grants from the Sustainability Fund, which formed in 2012 when students voted to create a sustainability fee.



Total student participants in EcoVillage, an on-campus sustainability living and learning village that started in 2013.



Sustainability-related campus events during fiscal years 2012-2016.



NC State adopted a Sustainability Policy and Standard Operating Procedures in 2014 and formed a university-wide Sustainability Council in 2015.



ChangeYour State sustainability awareness campaign launched in 2013 on campus, resulting in dozens of outreach events and 104,000 views of the campaign's website.



Sustainability contributed to advances in wellness, which earned NC State the nation's first Healthier Campus designation from the Partnership for a Healthier America.



Students participated in the NC State Stewards sustainability leadership and ambassador program that started in 2013. Their impact includes removal of plastic bags from campus retail locations, cost-saving energy conservation competitions, outreach and installations of solar energy on campus.

## PURCHASING AND WASTE REDUCTION



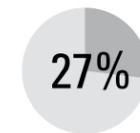
Highest annual landfill diversion rate of discarded campus material occurred in fiscal year 2015 through reuse, recycling and composting.



Students led the removal of plastic bags from campus dining and convenience stores in 2016.



Total amount diverted from landfill during Wolf Pack N Give, NC State's residence hall move-out waste reduction program, in fiscal years 2012-2016.



Average annual percentage of local food purchased by NC State Dining, including campus-grown food from the Agroecology Education Farm.



Tracking of reuse and recycling rates in campus construction projects began in 2013.



### DIVERTING WASTE THROUGH COMPOSTING

Compost collection added at dining halls, Talley Student Union, select administrative buildings and Carter-Finley Stadium's concourse during home football games. In residence halls, students composted more than 26,000 pizza boxes from 2014 to 2016.



## GREEN DEVELOPMENT



Amount of campus building space that is Leadership in Energy and Environmental Design (LEED) certified.

**83%** Percentage of campus buildings within a 600-foot walk of a courtyard, plaza or neighborhood street



Sustainability incorporated into campus Physical Master Plan and campus construction standards.

### STUDENT GARDENS

Students designed and installed gardens at Lake Raleigh, Honors Quad, College of Veterinary Medicine, Centennial Campus and at residence halls.



Join NC State in preparing for a more sustainable future.  
Get involved in helping implement the university's  
2017-2022 Sustainability Strategic Plan.

**[sustainability.ncsu.edu](https://sustainability.ncsu.edu)**

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