

The Sustainability Plan outlines an approach to embedding sustainability into the full range of campus life, including teaching, research, operations, and community engagement. The Plan builds on existing successes and proposes actions to achieve a campus-wide vision that aligns the University around a broad definition of sustainability — beyond environmental quality and including smart economic decisions and positive social change. The Plan is a roadmap for establishing organizational priorities and pursuing sustainability initiatives. Most importantly, the Plan is a call-to-action that asks the entire Carolina community to enact change in their daily lives.

The Plan is anchored by a vision to scale our positive impact from each individual action to world-focused research. The desire to achieve sustainability at all scales established the strategic direction for the Plan. Six focus area teams with members from across the Carolina community, representing both academics and operations, contributed to the development of the Plan. Each thematic focus area includes three goals with related actions.

The Sustainability Plan charts the course for the University to advance and embed sustainability into its policies, decisions, and actions. The success of the Plan will lie in the new organizational commitments, practices, and projects that, with the engagement of all Carolina community members, will carry the words on the page into action in the world.

LETTER FROM THE

# **CHIEF SUSTAINABILITY OFFICER**

Since its founding as the nation's first public university, UNC-Chapel Hill has been characterized by innovation and service to the people of North Carolina. In the past, this service has focused on supporting our local communities and working towards accelerating economic development across the state. Looking forward, we anticipate new and different needs for the state in the face of a changing world and a changing climate.

Sustainability is at the forefront of the challenges that the University will face in the decades ahead. We are ready to rise to that challenge by engaging our students, our faculty, and our staff in exciting and interdisciplinary efforts to transform our campus into a living laboratory for sustainability. We envision UNC-Chapel Hill as a "triple zero" campus, achieving neutrality in our greenhouse gas emissions, minimizing our landfilled waste, and reducing our water use to be in balance with the local hydrologic cycle. We further aspire to create a healthier, happier campus community able to anticipate and respond nimbly to future challenges.

Many people are not yet aware of Carolina's recent sustainability achievements. From interdisciplinary courses and pan-campus themes to investments in water infrastructure that have enabled us to reduce potable water use by 60% per square foot since 2000, we have already positioned Carolina as a leader among our peers. We are ready to embrace a host of new, sustainability-related opportunities by building upon UNC-Chapel Hill's unique culture of service and innovation.

Equipping our students, staff, and faculty with the skills and resources to contribute to solutions at every scale – from individual behavior to global impact – is essential. Every member of the Carolina community has an important role to play in defining our joint future. We want to empower every person who passes through UNC-Chapel Hill to carry their learning beyond our campus boundaries and to replicate our successes and lessons learned in communities across the state and the world. Much of this work has already begun, from the Carolina Campus Community Garden that supplies fresh produce to low wage workers to the Renewable Energy Special Projects Committee through which student leaders plan and fund energy-saving and renewable energy infrastructure across our campus.

Continuing to transform UNC-Chapel Hill into a living laboratory for sustainability will be a journey, and we're only just beginning. To advance our efforts further, Carolina will need each and every one of us to connect what we learn to what we do.

This sustainability plan contains ambitious goals for our campus and our community. Every step depends on your participation. While our responsibility for the world around us is collective, the actions we can take to scale our impact are individual. We need your unique skills, passions, and perspective to solve the problems that will be faced by Carolina and the world in the coming century. What positive impact will you make?

A. Bradley Ives
Chief Sustainability Officer

# PLAN AT A GLANCE

An overview of the vision, mission, and goals of the Sustainability Plan

### SUSTAINABILITY AT UNC-CHAPEL HILL

PAGE 6

Carolina is a recognized leader in sustainability.

- Gold rating through the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking Assessment and Rating System (AASHE STARS)
- Green college by the Princeton Review
- "Cool School" by the Sierra Club

This plan builds on existing successes and suggests how to further embed sustainability into teaching, research, operations, and community engagement.

### **VISION FOR SUSTAINABILITY**

PAGE 9

# SCALING OUR IMPACT

Together, we are on a journey to create a more sustainable environment, healthier communities, and improved economic opportunities by scaling the positive impact of our behaviors, educational activities, campus operations, and global stewardship.

PERSON

WORLE

### **SUSTAINABILITY AT ALL SCALES**

**PAGE 10** 

A commitment to making an impact at all scales - from each individual to the world.

# PERSON / BEHAVIOR / DRIVE BEHAVIOR CHANGE

We will empower our campus community to understand the impact of our actions here at the University and beyond.

# CLASS / LEARNING / INTEGRATE SUSTAINABILITY INTO CURRICULA

We will prepare our students for the challenges of today and tomorrow by integrating sustainability into our courses and curricula, thus enabling students to use sustainability as a lens throughout their education and careers.

# TEAM / COLLABORATION / EMBRACE CROSS-DISCIPLINARY COLLABORATION

We will form new partnerships, both internally and externally, to support interdisciplinary efforts and advance innovative, entrepreneurial technologies and solutions.

# CAMPUS / LIVING LAB / TRANSFORM CAMPUS INTO A LIVING LAB

We will make our campus a living lab where sustainability is part of daily life for our community, both inside and outside the classroom, and new ideas are integrated into our buildings, infrastructure, and business practices.

# TOWN / CONNECTIVITY / CONNECT WITH COMMUNITIES

We will work hand-in-hand with our closest community partners, and leverage our learning and experience to support triple-bottom-line sustainability efforts in Chapel Hill and Carrboro.

# STATE / SERVICE / SUPPORT ECONOMIC DEVELOPMENT AND SERVICE ACROSS THE STATE

We will support our students, staff, and faculty in outreach and service efforts across North Carolina and will apply our skills and knowledge to assist economic development and social entrepreneurship in our communities.

# REGION / STEWARDSHIP / DEMONSTRATE RESPONSIBLE STEWARDSHIP

We will reduce our environmental footprint, aiming for long-term waste, water, and carbon neutrality.

# WORLD / RESEARCH / ACCELERATE PATH FROM IDEA TO IMPACT

We will support cutting-edge student and faculty research, examine the impacts of our supply chains, and collaborate with industry and other partners to accelerate the transfer of ideas to practice.

FOCUS AREAS PAGE 15

Developing goals to achieve positive impact in key focus areas around campus.



#### INNOVATIONS FOR CHANGE

Aligning UNC-Chapel Hill for a changing world and educational landscape through innovations in sustainability

- Leverage Carolina's entrepreneurial culture to advance sustainability efforts on campus and beyond
- Utilize the University as a test bed to apply new technologies and practices designed to meet sustainability-related challenges
- Ensure UNC-Chapel Hill is resilient to future changes, from changes in higher education to an altered climate



#### **ENVIRONMENT + RESOURCES**

Creating a Carolina that contributes to the resilience, restoration, and sustainability of natural resources

- Integrate research, teaching, and practice about environmental and resource issues
- Improve education and awareness about sustainability issues at all levels, for all parts of campus
- Develop and implement new resourcing strategies, financing structures, and policies to strengthen and expand sustainable operations, staffing, and business practices



#### MATERIALS + WASTE

Moving towards a zero waste campus

- Refine and expand existing successes by pairing infrastructure enhancement and behavior change
- Advance campus-wide education and awareness of materials and waste issues and best practices
- Emphasize life cycle thinking beyond "reduce, reuse, recycle"



#### **HEALTH + WELLNESS**

Creating a happier, healthier campus for students, faculty, staff, and visitors

- Provide workplace and student wellness resources and activities
- Enhance and expand educational offerings related to health and wellness
- Foster health and wellness improvements in Universitycommunity collaborations and collaborations within the University



#### COMMUNITY

Enhancing the University community, town-gown relations, and communities across North Carolina

- Empower students, staff, and faculty to engage in community service efforts
- Enhance inclusivity and dialogue across the campus community and ensure UNC-Chapel Hill remains an affordable, accessible institution
- Formalize engagement with underserved communities to provide service and support



#### **POLICY + INVESTMENT**

Using policy and investment to guide sustainability achievements across scales and focus areas

- Develop innovative short- and long-term financing mechanisms to support sustainability initiatives
- Establish policies to reinforce sustainability as a core value within the University culture
- Identify conversation-changing big picture strategies for implementation

### **SUCCESS MEASURES AND PILOTS**

PAGE **28** 

Progress toward achieving the goals and actions defined by the focus areas will be evaluated using both quantitative and qualitative measures. Pilot projects will test concepts, serve as initial wins, and set the stage for future successes.

### **ENGAGEMENT ROADMAP**

**PAGE 30** 

Embedding sustainability actions, decisions, and knowledge into the daily life of the campus is key to the success of the Sustainability Plan. The roadmap highlights opportunities for involvement.

### **ACKNOWLEDGMENTS**

**PAGE 31** 

The project was led by an executive working group with leaders from across the University. The team was supplemented by a diverse group of representatives who built the six focus areas plus consultant teams from BuroHappold Engineering and brightspot strategy.

# SUSTAINABILITY AT UNC-CHAPEL HILL

It is a challenge for any entity – from the individual to the institution – to understand the full impacts of its actions on the world. From the food we eat to the ways we move between our homes, classrooms, and workplaces, we make thousands of decisions every day that contribute both directly and indirectly to the social, economic, and environmental conditions of our communities today and in the future. Some of these impacts can be tracked, such as energy and water consumption, waste sent to the landfill, and the greenhouse gases we emit. Tracking the degree to which sustainability is integrated into our courses, our research, and our culture is just as important.

Carolina is widely recognized for our sustainability initiatives to date. The University has been consistently ranked among the nation's greenest colleges by the Princeton Review and acknowledged as one of the Sierra Club's "Cool Schools." Carolina Dining Services and the Center for Sustainable Enterprise at the Kenan-Flagler Business School are among the campus entities to receive special distinction, respectively winning the National Grand Prize for excellence

### **EXISTING SUSTAINABILITY SUCCESSES AT UNC-CHAPEL HILL**

- · Reduced energy use 29% per gross square foot since 2003
- Reduced potable water use 60% per gross square foot since 2000
- Diverted 45% of waste from the landfill in FY 2015
- Manage an award winning 32MW cogeneration plant, five central chilled water plants, and a 5 million gallon thermal energy storage tank
- Reduced greenhouse gas emissions 19% since the 2008 peak
- Constructed 635,671 square feet of LEED buildings Certified, Gold, and Platinum
- Received \$793 million in research funding in FY 2014 to address the greatest problems of our times
- Offer majors, minors, graduate degrees, and concentrations that focus on sustainability
- 12% of total undergraduate and graduate course offerings incorporate sustainability themes or address sustainability challenges
- Named the "best value" in higher education for 15 years running with programs like the Carolina Covenant that help students from low-income families graduate debt-free
- Adopted "Water in Our World" and "Food for All" as the first two pancampus themes
- Offer multiple courses and workshops on entrepreneurship and provide incubator space and mentorship to help campus innovators launch good, new ideas
- Is the first public university in the United States and takes pride in serving the state of North Carolina and the world

in sustainable dining (NACUFS 2015) and third place ranking in Corporate Social Responsibility (Financial Times 2013). Perhaps most significantly, we achieved a Gold rating through the Association for the Advancement of Sustainability in Higher Education's (AASHE's) rigorous Sustainability Tracking, Assessment, and Rating System (STARS) program. This rating, achieved by less than a third of participating institutions, encompasses academics, research, operations, planning and administration, and engagement — with UNC-Chapel Hill's Gold rating reflecting existing successes in each of these arenas.

These and other acknowledgments are useful tools to communicate our wins and track our performance against our peers, yet they only tell part of the story. Harder to measure is the enthusiasm of students, faculty, staff, and administrators for solving global challenges. This excitement, awareness, and spirit of collaboration does not exist within the framework of STARS or any other rating or assessment system — yet, these pieces must come together to truly embed sustainability in our campus culture.

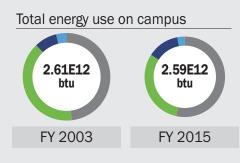
Transforming our campus into a living laboratory for sustainability will require all of us, working collaboratively, learning collectively, and advancing together. From a first-year student remembering an orientation module about turning off the lights to a senior capstone project that engages the community beyond the University in sustainability practices, an awareness of social, economic, and environmental impacts should be core to the student experience. Our staff and faculty deserve the same education. Through professional development opportunities and a range of resources to support sustainable behaviors at work, we can create a culture of stewardship and engagement that spans our campus community.

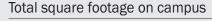
The Sustainability Plan is our effort to move Carolina towards that future, building upon the many efforts undertaken to date, communicating both today's successes and tomorrow's aspirations, and providing all members of our community with the tools and opportunities to get involved.

# **REDUCING OUR ENERGY IMPACT**

Reducing energy use per square foot as the campus expands

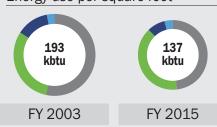
steam electricity chilled water natural gas







# Energy use per square foot



Total energy use has decreased while campus square footage increased by 41%. This reduced our energy use from 193 kbtu to 137 kbtu per square foot, a 29% decrease.



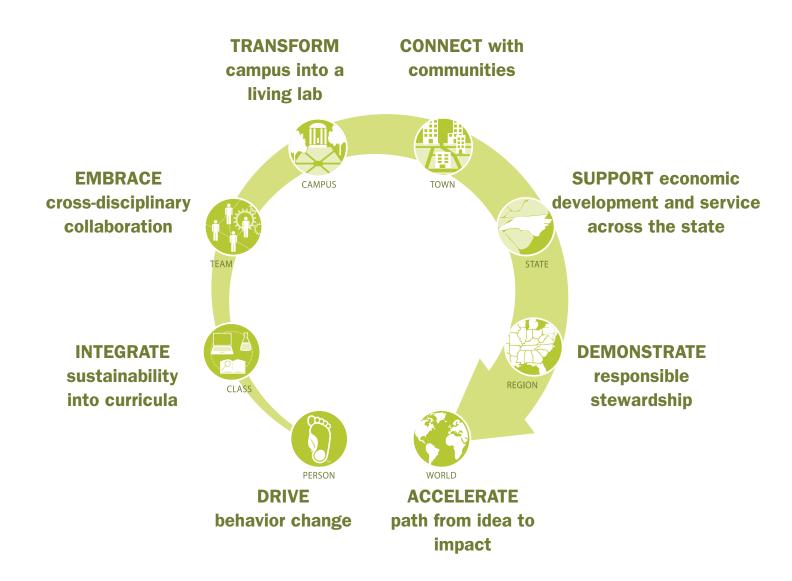


# SCALING OUR IMPACT

Together, we are on a journey to create a more sustainable environment, healthier communities, and improved economic opportunities by scaling the positive impact of our behaviors, educational activities, campus operations, and global stewardship.

# SUSTAINABILITY AT ALL SCALES

A commitment to making an impact at all scales — from each individual to the world



**ACHIEVING SUSTAINABILITY AT ALL SCALES** 

# PERSON / BEHAVIOR DRIVE BEHAVIOR CHANGE



We will empower our campus community to understand the impact of our actions here at the University and beyond.

As a learning institution, we have both the opportunity and the responsibility to educate our campus community about sustainability issues, from healthy lifestyle decisions to energy conservation. By doing so, we will empower people to understand the impacts of their actions here at UNC-Chapel Hill, as well as in their homes, cities, and communities throughout their careers and their lives.

Today, Carolina has a robust community of students, staff, and faculty engaged in sustainabilityrelated teaching, research, and operational improvements. Still, this population represents only a fraction of the 41,000 people that comprise our on-campus community. As we consider the impacts of individual behavior in relation to our sustainability goals for the University — as well as the need for increasingly sustainable behavior on a global scale — we will strive to ensure that all who pass through Carolina are aware of the positive and negative repercussions of their actions.

# CLASS / LEARNING INTEGRATE SUSTAINABILITY INTO CURRICULA



We will prepare our students for the challenges of today and tomorrow by integrating sustainability into our courses and

curricula, thus enabling students to use sustainability as a lens throughout their education and careers.

We believe that sustainability should not be one discipline among many that a student may choose to pursue, but rather a fundamental building block for all of the learning that takes place on our campus, from liberal arts to the sciences to professional education. Likewise, our faculty and staff should be supported with a range of professional development opportunities that emphasize systems thinking, which enables employees to understand the impacts of one action or behavior on other campus units, the University as a whole, and beyond.

Carolina already offers a wide variety of classes and courses of study focused on various components of sustainability, with more than 1,000 classes in 52 departments, eight schools, and the College of Arts and Sciences incorporating sustainability themes into their curricula. Looking forward, we envision sustainability learning incorporated into all of our 76 departments and 14 schools. Learning

opportunities outside the classroom abound as well. We look forward to further integrating sustainability into orientation programs, professional development, and other extracurricular activities. An emphasis on education about sustainability, both in the classroom and beyond it, was one of the requests heard most frequently from faculty, students, staff, and administrators throughout the process of developing this Plan.

# TEAM / COLLABORATION EMBRACE CROSS-DISCIPLINARY COLLABORATION



We will form new partnerships, both internally and externally, to support interdisciplinary efforts

and advance innovative, entrepreneurial technologies and solutions.

Advancing the University's ambitious sustainability goals in teaching, research, and practice will require new organizational structures and partnerships comprised of students, staff, faculty, and researchers from all corners of campus. These interdisciplinary efforts will help us to approach sustainability challenges from a whole-system perspective and to better understand how various disciplines can contribute to new approaches and solutions.

A number of interdisciplinary efforts have already seen great success at Carolina, including Arts@theCore, the Digital Humanities Initiative, and the pan-campus themes. It is important to view these initiatives as the first steps in a much further-reaching trend to bring together students, faculty, and practitioners with a diversity of perspectives and experience.

We see these new and expanded partnerships — and new solutions driven by creative and multidisciplinary thinking — as key to many of the goals identified in the Sustainability Plan. We will depend upon these new teams to find opportunities to utilize the University as a test bed for new technologies and practices and to develop new financing mechanisms and policy measures to support sustainability as a core component of Carolina's culture. These teams will also be needed to advance campus-wide education and awareness efforts.

# **CAMPUS / LIVING LAB** TRANSFORM CAMPUS INTO A LIVING LAB



We will make our campus a living lab where sustainability is part of daily life for our community, both

inside and outside the classroom, and new ideas are integrated into our buildings, infrastructure, and business practices.

To truly embed sustainability into the DNA of the University, we will transform our campus, our classrooms, and our offices into a living laboratory where sustainability informs our teaching, design standards, and operations decisions. Every employee, graduate, and visitor will be exposed to sustainability concepts via our buildings, landscapes, and activity centers.

Carolina is already home to a number of highly innovative sustainability features. However, the cutting-edge technologies and strategies employed in our infrastructure and building systems are often hidden from view. As a result, few members of our community are aware of them. We see many opportunities to regard the campus as an educational tool, enabling our students, staff, faculty, and visitors to influence and learn from the projects around them. Incorporating more transparency into University decision-making structures will also provide learning opportunities.

In the future, Carolina will be a testing ground for sustainability. Individuals exposed to the University will understand that the campus is on the leading edge of new ideas, strategies, and approaches. Our program offerings, building standards, and business practices should constantly adapt and evolve, incorporating new best practices and technologies, and responding to the changing needs of the world around us. These efforts should be clearly communicated and enable our community to live, study, and work in a setting that embraces innovation and teaches us lessons we can utilize at the University and beyond.

# **TOWN / CONNECTIVITY CONNECT WITH COMMUNITIES**



We will work hand-inhand with our closest community partners, and leverage our learning and experience to support

triple-bottom-line sustainability efforts in Chapel Hill and Carrboro.

Chapel Hill and Carrboro play a vital role in the life of UNC-Chapel Hill, housing more than 40% of employees and thousands of students. Additionally, both towns provide a wide variety of economic, cultural, and recreational opportunities for the Carolina community. The University plays a similarly vital role for the towns, bringing new residents and visitors and driving the growth of local businesses.

Looking forward, we envision a new focus on our connections with Chapel Hill, Carrboro, and towns across the region featuring partnerships that will enhance existing connections and facilitate joint planning efforts.

UNC-Chapel Hill and the Towns of Chapel Hill and Carrboro already participate jointly in a number of efforts: transit service and transportation planning, broadband internet, emergency response, and more. Carolina's Department of Family Medicine collaborates with the town to provide employee health clinics and risk screenings, and the UNC-Chapel Hill Foundation supports mixed-used development projects that respond to town needs for new commercial space and housing. The Town and University recently collaborated on new bicycle master plans and are currently working together to identify the best waste management strategies.

As we consider the future of Carolina, Chapel Hill, Carrboro, and other neighbors, we see a range of opportunities to capitalize on our close connections and to provide joint services and resources that can improve the quality of life within our University community and beyond our walls. Combining resources may result in lower infrastructure costs, opportunities for the University to build upon lessons learned and address similar challenges faced by neighboring communities, and more effective solutions to social, economic, and environmental challenges.

# STATE / SERVICE SUPPORT ECONOMIC DEVELOPMENT AND SERVICE ACROSS THE STATE



We will support our students, staff, and faculty in outreach and service efforts across North Carolina and will apply

our skills and knowledge to assist economic development and social entrepreneurship in our communities.

The University is dedicated to serving the people of our state by providing our residents an affordable, world-class education, providing a wide range of health and social services, and serving as an engine of economic activity — with every dollar invested in research at Carolina resulting in \$7 of economic benefits to the state. The social and economic elements of sustainability — encompassing diversity, public health, quality of life, affordability, and accessibility — are areas where we feel the University can focus service efforts.

Service already plays a major role in the life of the University, from community service projects pursued by our business and medical students to the support our students provide as Buckley Public Service Scholars and enrollment in APPLES Service-Learning courses and internships. The Kenan Institute for Private Enterprise helps towns identify new growth strategies, and the Institute for the Environment works in partnership

with community leaders at its field site locations on jointly defined environmental needs and projects.

Carolina is widely recognized as a national leader for embedding service into its culture. Engaging with and serving the many communities beyond the bounds of our campus and the Research Triangle is critical to expanding our sustainability impact.

# REGION / STEWARDSHIP DEMONSTRATE RESPONSIBLE STEWARDSHIP



We will reduce our environmental footprint, aiming for long-term waste, water, and carbon neutrality.

The relationship between the decisions we make on campus and the region's natural resources have become most clear during times of drought. UNC-Chapel Hill's responses to water shortages have had huge impacts, reducing campus potable water use by 60% per square foot. Investments in the reclaimed water system and innovative stormwater management have contributed to the overall environmental health of our region, making it more drought resilient in the face of rapid growth and a changing climate.

Our triple zero goals — to achieve waste, water, and carbon neutrality - are fundamental at all scales and have perhaps the greatest impact at the regional level. Communities across the southeast are affected by our energy choices and waste management practices. By demonstrating new approaches to managing resource use, we can limit the negative environmental impact associated with our activities and model new ways forward.

As we pursue new opportunities to scale up our positive impacts and reduce our environmental footprint, an understanding of how these local systems are nested within larger environments will be critical. Our energy, water, and waste flows are both dependent upon the surrounding environmental, economic, and political conditions and serve to influence them. Future decisions concerning strategies and solutions will be made with awareness of the opportunities and synergies of these systems.

# **WORLD / RESEARCH ACCELERATE PATH FROM IDEA TO IMPACT**



We will support cuttingedge student and faculty research, examine the impacts of our supply chains, and collaborate

with industry and other partners to accelerate the transfer of ideas to practice.

As a public research institution, we strive to generate new ideas that will someday play a role on the global stage. With an annual research budget of almost \$800 million, the University is working to have a positive impact on the world. From cures for AIDS to an enhanced understanding of agricultural practices, food intake, and health, Carolina is working to solve some of the world's biggest challenges. In the world of sustainability, those new innovations can't come soon enough. Moving forward, we will focus our efforts on accelerating the path from idea to impact.

Our research efforts already have a global footprint. From the Galapagos Islands to Thailand to Malawi, our students and researchers are devising new ways to approach biodiversity, marine conservation, and political ecology. These large-scale efforts are only one portion of UNC-Chapel Hill's contributions to the global dialogue. In addition to highly visible projects, we regularly pioneer smallscale innovations that have a ripple effect across their fields.

In considering how the Carolina community can contribute to global sustainability solutions, we — as individuals, teams, and as a campus — will look to new structures and strategies to support today's successes. We will draw on the University's entrepreneurial culture; elevate our conversations about sustainability of all kinds; and enable our students. staff, and faculty to bring their ideas to real-world impact as efficiently and effectively as possible.

# **FOCUS AREAS**

Developing goals to achieve positive impact in key focus areas



# **INNOVATIONS FOR CHANGE**

Aligning UNC-Chapel Hill for a changing world and educational landscape through innovations in sustainability



# ENVIRONMENT + RESOURCES

Creating a Carolina that contributes to the resilience, restoration, and sustainability of natural resources



# MATERIALS + WASTE

Moving towards a zero waste campus



# HEALTH + WELLNESS

Creating a happier, healthier campus for students, faculty, staff, and visitors



# COMMUNITY

Enhancing the University community, town-gown relations, and communities across North Carolina



# **POLICY + INVESTMENT**

Using policy and investment to guide sustainability achievements across scales and focus areas

# **SIX FOCUS AREAS**

The Sustainability Plan is organized into six key focus areas. Each area was developed and refined with the input from working groups representing a cross-section of the UNC-Chapel Hill community. Each topic includes three goals and a series of actions to pursue.

# INNOVATIONS FOR CHANGE

# ALIGNING UNC-CHAPEL HILL FOR A CHANGING WORLD AND EDUCATIONAL LANDSCAPE THROUGH INNOVATIONS IN SUSTAINABILITY

Supporting the Carolina community in developing creative, efficient, and effective solutions to social, economic, and environmental challenges

Today's great global challenges — from climate change to extreme poverty to universal health care and education — will require new tools, new approaches, and new ways of thinking. In the past decade, the University has focused on training students to tackle problems by fostering an ecosystem that supports creative, entrepreneurial thinking. This emphasis on innovation and entrepreneurship (I&E) has won acknowledgment from the Deshpande Foundation, the Global Venture Capital Investment Competition, and the Global Consortium of Entrepreneurship Centers.

Early in the development of the Sustainability Plan, it became clear that this force — the talent, intellect, and creativity of Carolina's entrepreneurial

community — could play a major role in advancing sustainability both on campus and beyond. The aim is to embed sustainability — along with innovation — into the culture of campus operations, administration, and a broader set of curricula. Explicitly featuring sustainability in existing entrepreneurship programs will also help to focus innovative thinking toward achieving sustainability goals.

The University actively supports students, faculty, and staff in pursuing new products, concepts, and business opportunities. From the CUBE at the Campus Y to Launching the Venture to the popular Minor in Entrepreneurship, the University has demonstrated the positive results of relationship-building with donors and alumni to support the pursuit of new ideas. In keeping with the spirit

of a living lab for sustainability, we envision the future of innovation and entrepreneurship to include UNC-Chapel Hill itself as an incubator for new products and processes that will engage all corners of the University, from liberal arts to medicine, and from Facilities to Student Affairs.

While working to embrace and cultivate innovative ideas in more of our classes and business practices, we will also seek to adopt a new emphasis on sustainability in our I&E courses, initiatives, and incubators and will provide more mentorship, financial support, and academic resources for student, staff, and faculty innovators who seek to tackle sustainability challenges.



# GOAL 1:

# Leverage Carolina's entrepreneurial culture to advance sustainability efforts on campus and beyond

- Engage the entire Carolina community in sustainability-related innovation and entrepreneurship activities
- Facilitate and support the development of new ideas and technologies by the campus community
- · Build upon existing innovation hubs and resources, including human capital
- Use UNC-Chapel Hill's expertise to support sustainability-related innovation beyond the University

#### GOAL 2:

Utilize the University as a test bed to apply new technologies and practices designed to meet sustainability-related challenges

- Make UNC-Chapel Hill a model for connecting classroom learning about new technologies and tools to real-world practice
- Champion innovation in support of the other focus areas and at all scales

#### GOAL 3:

Ensure UNC-Chapel Hill is resilient to future changes, from changes in higher education to an altered climate

- Identify future risks and complete resilience planning for key scenarios
- Integrate sustainability into online education and related non-traditional education initiatives

# ENVIRONMENT + RESOURCES

CREATING A CAROLINA THAT CONTRIBUTES TO THE RESILIENCE, RESTORATION, AND SUSTAINABILITY OF NATURAL RESOURCES

Empowering the Carolina community to mitigate the impacts of climate change and to ensure the long-term availability of clean air, water, and energy resources by creating a water-neutral, carbon-neutral campus

In 2015, Chancellor Folt announced her intention to expand the University's climate commitments and move towards a "triple zero" campus with the aim of achieving water, waste, and greenhouse gas neutrality. Achieving neutrality in any of these categories requires long-term commitment and effort.

This Plan, and particularly this chapter, provides a framework to guide both individuals and decision-makers in taking meaningful steps to move the University in the direction of those triple zero goals.

# WHAT IS CLIMATE NEUTRALITY?

A climate-neutral campus is defined by Second Nature (formerly the American College and University Presidents Climate Commitment) as having no net carbon (greenhouse gas) emissions. To achieve climate neutrality, an organization must both minimize GHG emissions as far as possible — through reductions in consumption, increases in efficiency, and sourcing from cleaner energy or renewable resources - and purchasing offsets or credits to mitigate the remainder.

A variety of organizations both on and off campus have already engaged large portions of the campus community in thinking about the opportunities and challenges associated with environmental degradation and resource consumption at Carolina and across the globe. These entities include many of the University's professional schools as well as interdisciplinary initiatives and institutes addressing specific facets of the environment, from the Center for Sustainable Enterprise and the Institute for the Environment to the Green Labs Committee and the Environmental Finance Center. Achieving greater successes will require galvanizing all members of our community and leveraging our specialized expertise.

Carolina's leaders recognize that climate change is arguably the greatest global challenge of our time; and Tar Heels don't just want to learn about it — they want to fix it. It will be critical to expand our dialogue about this issue to include all aspects of campus life, from football games to dining halls to homework, and from orientation

to alumni reunions. By making these conversations and, more importantly, this type of systems thinking part of our everyday lives at Carolina, we will facilitate the University's movement towards our "net zero goals" and empower our students, staff, faculty, and administrators to convey the importance of environmental and resource issues to other audiences.

# WHAT IS WATER NEUTRALITY?

While "water neutrality" doesn't have as vetted a definition as "climate neutrality." Carolina envisions achieving a natural balance between the water we use and the hydrologic system that surrounds us.

The University embraces reductions in consumption, capturing and harvesting rainwater for reuse, exploring ways to increase our already large use of reclaimed water, and seeking opportunities to reuse all water sources, such as the condensate from air conditioning systems. Together, these strategies will continue to reduce our purchase of potable water from OWASA, our local water utility. This will make our campus more resilient to future water shortages in the face of rapid regional growth and a changing climate.



#### GOAL 1:

# Integrate research, teaching, and practice about environmental and resource issues

- Integrate sustainability into operations decisions
- Locate facilities, resources, and test projects on campus to increase visibility and promote interdepartmental collaboration
- Create a central academic unit charged with coordination of interdisciplinary environmental education, research, and engagement across departments and schools

### GOAL 2:

# Improve education and awareness about sustainability issues at all levels, for all parts of campus

- Support staff, faculty, and leadership in making informed decisions about building operations
- Emphasize opportunities to utilize the University as a living laboratory that researches, teaches, and models best practices
- Expand academic offerings related to the environment and sustainable natural resource management

### GOAL 3:

Develop and implement new resourcing strategies, financing structures, and policies to strengthen and expand sustainable operations, staffing, and business practices

- Identify or establish funding streams for key improvement areas, including:
  - Developing strategic staffing plans for academic and operational sustainability efforts
  - Optimizing the use of existing resources through collaborative partnerships, grants, and business practices
- Pursue improvements to policy and financing mechanisms
- Structure incentives and promotions to support faculty and staff sustainability efforts
- Ensure design standards for new construction and all renovations include or exceed best practices in all resource areas

# REDUCING OUR GHG EMISSIONS

Reducing greenhouse gas emissions per square foot as the campus expands









CY 2007

CY 2013

# Total square footage on campus





CY 2007

CY 2013

# GHG emissions per square foot





CY 2007

CY 2013

Total GHG emissions have decreased by 10% while campus square footage increased by 16%. This reduced our GHG emissions from 35 metric tons per thousand square feet to 27 metric tons per thousand square feet, a 23% decrease.

# MATERIALS + WASTE

# **MOVING TOWARDS A ZERO WASTE CAMPUS**

Changing policies, practices, infrastructure, and individual attitudes to demonstrate a more responsible, less impactful use of resources, from source to disposal

The University has already taken significant strides towards becoming a Zero Waste campus. Led by the Office of Waste Reduction and Recycling (OWRR), the campus diverted 45% of its discards from landfills in 2015. Dining hall food waste that was composted, rather than trashed, represented more than 400 metric tons of avoided carbon dioxide emissions. These efforts, along with very successful programs to address waste from student move in/out, athletic events, and construction and demolition, have put Carolina at the leading edge of university-scale waste reduction efforts.

### WHAT IS ZERO WASTE?

The University move towards Zero Waste refers to our efforts to minimize our landfill contributions by 90% by diverting all compostable and recyclable materials, and by limiting non-recyclable/non-compostable materials that are purchased or used on campus. We recognize that some medical and chemical wastes are inherent to laboratory research and we are working with specialists on campus to identify appropriate strategies for these more challenging waste streams.

Our goal is to minimize the amount of waste produced on campus and to divert waste from the landfill. Considerable educational resources and significantly improved physical infrastructure will be needed to achieve the desired reductions.

Equally important will be efforts to minimize our materials consumption by keeping unneeded products, products with a short useful life, and excess packaging from reaching our campus. Moving forward, we will work with our business partners to discuss how their decisions impact the University and its sustainability goals. We will work to make sustainable options the default purchasing choices and expand our attention to the full life cycle implications of selected products. We will increase our requirements for recycledcontent materials from printer paper to construction materials and will select products that result in healthy workspaces. The University will go beyond "reduce, reuse, recycle," looking both at downstream impacts and at opportunities up the supply chain to minimize raw materials and embodied energy.

As we move towards Zero Waste, current efforts will need to be supplemented. The Office of Waste Reduction and Recycling, Housekeeping, Grounds, Facilities Operations, and Carolina Dining Services will need to collaborate to streamline services and make them more understandable to building occupants. These units will also need to connect to academic programming across a full range of disciplines and departments.

To engage every member of our community as a participant in our robust and growing efforts, we need to reach new students, staff, and faculty from orientation onward through informative signage and engaging social media campaigns. Working with faculty to produce waste management case studies, product life cycle analyses, and the rationale behind campus actions can move the conversation into the classroom. Students now engaged in clean-up days and volunteer efforts could be further motivated by inspiring, results-oriented research, internships, and service opportunities.



### GOAL 1:

# Refine and expand existing successes by pairing infrastructure enhancement and behavior change

- Implement additional benchmarking and analysis programs in addition to occasional waste audits
- Expand presence of recycling and composting infrastructure
- Improve the efficiency of campus waste management
- Emphasize recycling and management of specialized waste streams such as e-waste, lab waste, medical waste, and hazardous materials

#### GOAL 2:

# Advance campus-wide education and awareness of materials and waste issues and best practices

- Develop strong, consistent messaging about efforts and best practices, within Carolina and with local communities and partners
- Utilize zero-waste events (including athletics) as opportunities to educate and engage new campus and community audiences
- Facilitate waste reduction behaviors through incentives, competitions, and infrastructure
- Provide more learning opportunities (formal classes or otherwise) on materials and waste issues for students and staff

# GOAL 3:

# Emphasize life cycle thinking beyond "reduce, reuse, recycle"

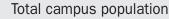
- Institutionalize materials reduction efforts, starting with procurement
- Prioritize "back of house" materials and waste reduction efforts
- Encourage reductions in consumption in campus daily life
- Facilitate materials swaps and recycling within campus community
- Enhance mechanisms for materials reuse by the broader community
- Strengthen standards for building and public realm materials selection

### **REDUCING OUR WASTE IMPACT**

Reducing waste per capita as campus population increases









# Waste per capita



Total waste production increased negligibly while the campus population increased by 18%. This reduced our waste sent to landfill from 382 pounds per person to 275 pounds per person, a 28% decrease.

# HEALTH + WELLNESS

# CREATING A HAPPIER, HEALTHIER CAMPUS FOR STUDENTS, FACULTY, STAFF, AND VISITORS

Providing environments, programs, policies, and services that enhance the social, mental, and physical well-being of the University community, the surrounding community, and vulnerable populations in North Carolina and beyond

Health and wellness are already spotlighted at Carolina through the inaugural pan-campus themes: "Water in Our World," 2012-2015, and "Food for All," 2015-2017. Opportunities to improve our personal health — and contribute to the wellness of our communities — present themselves every day, to every member of our campus. Carolina's programs in nutrition, health behavior, and health policy and management are among the most competitive in the country.

While neither theme encompasses the full spectrum of health and wellness issues, both have motivated the University community to consider the broader implications of our decisionmaking concerning personal and global health. This awareness, coupled with an existing emphasis on local and "real" food in campus eateries and dining halls, has resulted in increased understanding of issues and opportunities related to food, health, and wellness on campus and beyond.

UNC-Chapel Hill's Gillings School of Global Public Health is ranked second in U.S. News and World Report's 2016 edition, and is first among public university programs. The students and faculty within these programs possess the expertise to expand the reach and impact of our existing programs focused on nutrition, fitness, maternal health, and a variety of other subjects — all the while providing new experiential learning opportunities for the undergraduate and graduate students who will go on to become practitioners and leaders in their fields.

From the foods we eat to the ways we move between our homes, offices, and classrooms, these decisions have important outcomes for our own well-being, and for public health more broadly.

The University is committed to providing access to health and wellness resources for students, staff, and faculty — and to better integrating learning about health and wellness within both academic and administrative departments.

#### WHAT IS REAL FOOD?

Real food, as described by the Real Food Challenge, includes food that meets at least one of the following criteria:

- Local and Community-Based, fresh and seasonal, coming from locally owned farms and businesses
- Fair, meaning that those involved in the food's production and distribution work in safe and fair conditions and receive a living wage
- **Ecologically Sound**, coming from farms and businesses that are good environmental stewards and minimize pollution
- **Humane**, sourced from farms where animals are raised with access to natural environments and behavior



#### GOAL 1:

# Provide workplace and student wellness resources and activities

- Strengthen and expand existing programs and initiatives
- Improve communications strategies to raise awareness of existing health and wellness resources and support
- Establish new programs to supplement existing efforts and move towards integrating healthy decisions into everyday campus life
- Offer on-campus and virtual resources to promote physical and mental wellness, including preventive care
- Establish programs, incentives, and discounts to facilitate healthy decisionmaking and promote lifestyle change
- Put new structures in place to create a true culture of health and wellness
- Ensure University policies are aligned with national best practices in key areas
- Enhance occupational health and safety resources

# GOAL 2:

# Enhance and expand educational offerings related to health and wellness

- Supplement and expand academic program offerings for undergraduate and graduate students
- Expand non-academic educational opportunities and promote existing resources for all members of the campus community
- Actively educate the campus community through everyday interactions (marketing, events, signage, etc.)

# GOAL 3:

# Foster health and wellness improvements in University-community collaborations and collaborations within the University

- Formalize responsibilities for engagement around health and wellness
- Identify strategies for interdepartmental collaboration in efforts to win funding for health and wellness initiatives
- Renew focus on local/North Carolina health issues, in addition to devoting resources to global health efforts

### REDUCING OUR WATER IMPACT

Reducing water use per square foot as the campus expands

potable

nonpotable

### Total water use on campus





FY 2000

FY 2015

# Total square footage on campus





FY 2000

FY 2015

# Water use per square foot





FY 2000

FY 2015

Total water use has been reduced by 88 million gallons, with 27% coming from nonpotable sources, while campus square footage increased by 62%. This reduced our potable water use from 65 to 26 gallons per square foot, a 60% decrease.

# **COMMUNITY**

# ENHANCING THE UNIVERSITY COMMUNITY, TOWN-GOWN RELATIONS, AND COMMUNITIES ACROSS NORTH CAROLINA

Strengthening "service" as a pillar of a great public university by engaging all of Carolina's communities, expanding access, and building partnerships to support communities in the Triangle, the state, and potentially beyond

From the University's mission statement — serving North Carolina, the United States, and the world — to its track record in providing high-quality, affordable education accessible to students from all corners of North Carolina and beyond, community is a core value for UNC-Chapel Hill. Carolina works hard to remain accessible to all populations. Nearly 20% of undergraduates are first generation students. Now in its eleventh year, the Carolina Covenant program has enabled more than 2,500 high-performing, low-income students to graduate debt-free.

A sustainable future, especially for a public university, includes both environmental and social responsibility. Employing the most environmentally benign energy sources, reducing social barriers, and providing living wages for employees and contractors are all part of the mission. Serving North Carolina means providing superior educational opportunities and enhancing the quality of life for all members of the state. Last year alone, UNC-Chapel Hill students provided 1.7 million hours of service to the residents of our state.

The Sustainability Plan includes initiatives focused on three different aspects of community.

First, we will work to ensure Carolina remains inclusive and provides all members of our campus — students, faculty, and staff at every level — with equal access to University resources. We will work to better serve the many diverse populations that make up our community at UNC-Chapel Hill, including those who face special challenges, from working parents and military veterans to those who struggle with a variety of socioeconomic issues and learning challenges. The University already provides additional resources and support for many of these populations, from targeted recruitment and departmental diversity plans to the Carolina Campus Community Garden that provides fresh produce to lowerwage workers. We envision a future when the University can build upon these and other successful programs to elevate our conversations about a range of socioeconomic issues and expand programs related to physical and mental health, financial stability, and personal and professional growth.

#### WHAT IS COMMUNITY?

For the purposes of the Sustainability Plan, "community" refers to all students, staff, faculty, and visitors who interact with Carolina, as well as members of the more general North Carolina community that we interact with in Chapel Hill and beyond.

Second, we want to ensure that students, staff, and faculty have the necessary tools and opportunities to develop a sense of community grounded in sustainability both at the University and beyond. To truly embed sustainability in our campus culture and establish a living laboratory for sustainability requires empowering everybody to make informed decisions about best practices both as individuals and as members of University classes, labs, offices, and workplaces. Orientation, training, and enhanced opportunities to offer suggestions and to work on collaborative, interdisciplinary teams that advance sustainability are key components of expanding this shared culture. Bridging the gap between the academic and business sides of the campus is another



# GOAL 1:

# Empower students, staff, and faculty to engage in community service efforts

- Improve communications and publicize clear paths for community service and engagement
- Expand and replicate successful policies and programs linking UNC-Chapel Hill to its larger community

### GOAL 2:

# Enhance inclusivity and dialogue across the campus community and ensure UNC-Chapel Hill remains an affordable, accessible institution

- Establish communications and dialogue around the issues faced on campus
- Identify and provide services for underserved on-campus communities, including those aligned by need rather than demographics
- Provide resources for UNC-Chapel Hill students, staff, and faculty to promote professional development

# GOAL 3:

# Formalize engagement with underserved communities to provide service and support

- Improve funding and administrative mechanisms to support communityengaged research
- Utilize UNC-Chapel Hill student and faculty projects to provide technical support for local communities and the state
- Approach engagements with the goal of building long-term, in-depth relationships
- Shift focus to state and local community issues, to supplement existing work on national and international levels

key component of creating a more cohesive community grounded in a shared awareness of our social, environmental, and economic longterm future.

Third, the University will expand its role in serving North Carolina communities — including those in our own backyard, as well as across the state — by formalizing our processes for community engagement and incorporating service-based experiential learning into more of our classrooms. Carolina's graduate programs are already known for bringing a strong local and regional focus on issues of community development and affordable services. Moving forward, we will look for opportunities to further incorporate similar learning into undergraduate education.

# POLICY + INVESTMENT

# USING POLICY AND INVESTMENT TO GUIDE SUSTAINABILITY ACHIEVEMENTS ACROSS SCALES AND FOCUS AREAS

Enabling the University to push boundaries by adopting financial and policy approaches that help to achieve sustainability goals and leverage University resources and partner support

Carolina has already achieved a number of sustainability goals. Additional support from the University's leaders and administrators will be necessary in order to take those efforts from good to truly great. The University is committed to identifying new organizational strategies, funding mechanisms, and communications efforts that will support the implementation of new sustainability initiatives across scales and focus areas. Creating a new framework to advance the Sustainability Plan can provide the foundation to support future sustainability goals and initiatives that require innovative strategies to further the University's ambitions.

Although not highly visible to the vast majority of the campus community, policy and investment decisions can create significant, wideranging change. Moving forward, the University will need to evolve and embrace new ways of working. Partnerships with the private sector, decision-making that encompasses both the academy and the administration, and communityfacing initiatives that address challenges outside our walls will all help to bolster Carolina's positive impact on the world around us. These new approaches will help leverage our resources for the greatest good. They will build upon our reputation as a best-value university by maximizing efficiencies and modeling the most cost-effective ways of doing business that respect the triple bottom line of environmental quality, economic vitality, and societal well-being.

Policy initiatives and resource allocation decisions will also be key to facilitating the adoption of sustainability as a core value within the Carolina culture. Measures to engage new audiences in sustainability issues and increase the visibility and transparency of sustainability innovations to the broader campus community will be essential. While students already demonstrate a high degree of awareness and understanding of sustainability issues, new avenues are needed to more fully engage staff and faculty. Widespread impact is expected as the balance of the campus community engages with existing sustainability-related resources and participates in efforts such as sustainable sourcing, recycling, composting, and utilizing public transit.



# GOAL 1:

# Develop innovative short- and long-term financing mechanisms to support sustainability initiatives

- Formalize process of evaluating and prioritizing proposed sustainability investments and policy efforts
- Identify and attract investors and partners for funding vehicles and other strategies, including:
  - Assess and establish new funding strategies
  - Align capital investments with campus sustainability goals
  - Align endowment management, fundraising efforts, and investments with campus sustainability goals

#### GOAL 2:

# Establish policies to reinforce sustainability as a core value within the University culture

- Evaluate and expand sustainability course offerings and research opportunities
- Integrate sustainable behaviors into campus life
- Engage all audiences in sustainability initiatives
- Incorporate sustainability goals into standard operations and procurement procedures

# GOAL 3:

# Identify conversation-changing, big picture strategies for implementation

- Put organizational structures in place to ensure long-term support and execution of triple bottom line sustainability initiatives
- Develop realistic strategies for achieving zero waste, water, and carbon goals

### TRIPLE BOTTOM LINE

Triple bottom line sustainability encompasses environmental quality along with societal wellbeing and economic vitality. At UNC-Chapel Hill, we believe that this integrated three-pillar framework is essential for achieving prosperity, maintaining affordability and access, and improving our environmental footprint.



# SUCCESS MEASURES

### **DATA AND KEY PERFORMANCE INDICATORS**

A wide variety of metrics and performance indicators can be used to measure the impact and relative improvement resulting from the University's sustainability initiatives. The success of our efforts both within the six focus areas and across each scale of the Sustainability Plan will be evaluated. Many of the most useful metrics are already tracked as part of the University's participation in the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking Assessment and Rating System (AASHE STARS). Mechanisms are already in place to measure energy use, potable water consumption, and locally sourced food. More comprehensive, pan-campus initiatives are required to track the degree to which sustainability concepts are incorporated into courses, research, and learning outcomes.

Beyond the metrics in STARS, progress at Carolina will be aided by the development of new metrics and monitoring systems to gauge progress towards achieving the Plan's goals.

#### **SHARING SUCCESS STORIES**

Many current big wins, as well as new ideas and future successes, need to be better communicated to the University community. Both quantitative and qualitative success stories can engage the campus and raise the awareness necessary to inform smart decision making. Some of these stories have already been documented in the 2013 Campus Sustainability Report, in other campus publications, and on numerous websites. Moving forward, we aim to present these and other successes to a broader set of internal and external audiences, taking advantage of a variety of new media channels and other communication tools. Using a dynamic sustainability web portal and a range of social media strategies, we hope to increase awareness of Carolina's sustainability efforts, impact, and the individuals and initiatives that contribute to ongoing progress.

# PILOT PROJECTS

As members of the University community developed this Plan, they identified potential pilot projects that would quickly put the Plan into action. These projects were vetted using the following 12 criteria that were developed by the consultant team and the executive working group with additional input from the Chancellor's Office:

Feasibility	Short-term	Able to be implemented within one calendar year	
	Implementable	Feasible with respect to political and resourcing challenges	
Impact	Representative	Reaches multiple interest groups and campus communities (cross-cutting)	
	Scalable	Able to be replicated for greater impact in the future	
	Measurable	Able to be quantified or qualitatively reported upon	
	Reach	Number of students, employees, and visitors touched by the project	
	Path-breaking	Overcomes administrative obstacles and clears the way for future efforts	
Engagement	Relatable	Clearly understood by all audiences	
	Visible	Easily accessible or visible to students, employees, and visitors	
	Community-building	Unites viewers / participants around the project	
	Inspiring	Engages viewers / participants to pursue further learning or involvement	
	Fun	Excites viewers and evokes genuine interest and enthusiasm	

Using these criteria, the complete list of pilot projects was refined to the top 17, which were then ranked according to how well they achieve the objectives described above. Following further discussions about implementation teams, timing, and funding mechanisms, five projects will start moving forward in the spring semester of 2016. By overcoming obstacles and uncovering effective engagement tactics, these pilots will create initial wins, clear the way for expanded implementation, and set the stage for future successes.

# **ENGAGEMENT ROADMAP**

Embedding sustainability actions, decisions, and knowledge into the daily life of the campus is key to the success of the Sustainability Plan. Each member of the University community can make a difference in their sphere of influence. Students can model sustainable behaviors, engage their peers, and direct their learning and experiences. Faculty are knowledge leaders, mentors, and role models. Staff maintain campus operations and business practices and demonstrate institutional commitment to sustainability. Administrators set the course, establish and communicate priorities, and remove obstacles. Everybody has a unique and important role to play in advancing sustainability initiatives across campus.

	Making Personal Change and Staying Informed	Participating in Events and Contributing Input	Leading Initiatives and Developing Solutions
All Carolina Campus	<ul> <li>Reduce resource use and food waste</li> <li>Make healthy choices</li> <li>Purchase responsibly sourced products</li> <li>Donate money to sustainability efforts</li> <li>Keep track of sustainability issues and sustainability progress</li> <li>Join the sustainability listsery</li> </ul>	<ul> <li>Attend and participate in sustainability events</li> <li>Participate in community service projects</li> <li>Submit sustainability concerns</li> <li>Submit project proposals</li> <li>Apply to fund projects</li> <li>Post to social media campaigns</li> </ul>	<ul> <li>Join a focus area Working Group, Project Team or Pilot Team</li> <li>Develop and launch innovative solutions</li> <li>Be a champion for sustainability topics</li> <li>Lead by example and encourage others to pursue sustainable decisions</li> </ul>
Students	Make changes to your daily habits	Engage in sustainability research or courses	Work on a student outreach     campaign
Faculty	Stay informed on sustainability topics	Integrate sustainability into course topics	Lead sustainability research     and projects
Staff	Make improvements in your workspace	Flag opportunities for sustainable improvements	Share sustainability best practices
Resource	Dynamic resource with updates and tracking on sustainability progress	Portal for submitting ideas, communication and marketing of events	Platform and toolkits for organizing teams and supporting projects

# **ACKNOWLEDGMENTS**

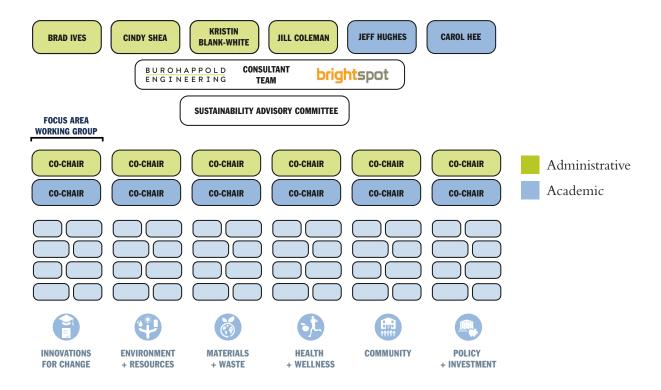
#### **PROJECT TEAM**

The project was led by an executive working group with leaders from across the University. They met weekly between March and October 2015 to guide the development of the Sustainability Plan.

Brad Ives	Kristin Blank-White	Jeff Hughes
Associate Vice Chancellor for	Sustainability Research and	Director, Environment
Campus Enterprises	Outreach Manager	Finance Center
Cindy Shea	Carol Hee	Jill Coleman
Sustainability Director	Research Director, Center for	Project Manager,
	Sustainable Enterprise	Facilities Planning

### **WORKING GROUPS**

The team was supplemented by a diverse group of representatives to build the six focus areas.



# DEVELOPING THE PLAN

Input from the University community drove the development of the Sustainability Plan. The Plan builds upon existing successes; responds to perceptions and behaviors of the campus community; integrates the input of students, faculty, and staff working groups; and aligns with organizational structures and planning efforts. An Executive Working Group with the support of a consultant team — BuroHappold Engineering and brightspot strategy — engaged the campus community in developing a plan that reflects the unique culture and organization of the University.

### 1. INITIATING THE PROJECT



The project team began by understanding existing sustainability initiatives and successes while acknowledging short-falls and challenges. The Plan was also considered in relationship to other plans, current and future, to ensure alignment.

### 2. ENGAGING THE CAMPUS





The campus community was engaged through interviews with high-level decision makers, town hall workshops, an online survey, and random intercept interviews at key locations in order to better understand the current state of sustainability awareness and involvement as well as the future potential for initiatives.

UNC-Chapel Hill has clearly made great strides in sustainability with higher awareness of and participation in physical programs such as composting, recycling, and water conservation. There is also a desire to embed sustainability into the culture at the University, which would require a bold vision, deeper commitment, and broader engagement. The challenges to achieving this "next step" involve creating shared, measurable goals to align all efforts of the campus; generating widespread commitment to actions beyond individual measures; and engaging the campus in the full range of sustainability issues — beyond environmental, to include social and economic.

The engagement phase yielded a wealth of ideas and strategies that informed the subsequent development of the Plan.

### 3. DEFINING THE FOCUS AREAS

# The second secon



Members from across the University participated over the summer in six working groups to develop goals and actions for the focus areas of the Plan — Health + Wellness, Community, Environment + Resources, Materials + Waste, Policy + Investment, and Innovations for Change. Two representatives of the campus community — an academic faculty member and an administrative staff member — chaired each working group.

The teams contributed remotely through online surveys, web-hosted workshops, and collaborative document editing. A shared definition and charge was developed to align the planning efforts within each area. Building on an understanding of the current initiatives, successes, and challenges in each focus area, each team developed multiple goals for achieving the charge. These goals were refined and distilled into three final goals per working group with supporting actions and strategies.

In addition to the focus areas, the intention to achieve "sustainability at all scales" guided the development of the vision, stretched the scope of the goals and actions, and served as a measure for identifying pilot projects.

### 4. DEVELOPING THE PLAN



The project team compiled and further developed the Sustainability Plan through an iterative process with input from the Executive Working Group, Working Group Co-Chairs, and Members. The Plan will live through its implementation.

More than the content in these pages, the Plan provides a strategy for creating the foundation needed to embed sustainability into the campus culture and an approach for achieving goals that will position the University of North Carolina at Chapel Hill at the forefront of sustainability.

# **PARTICIPANTS**

### **INNOVATIONS FOR CHANGE**

**Buck Goldstein** Professor of the Practice. Economics: Adjunct Assistant Professor, Business: Entrepreneur-in-Residence

Richard Harrill Director, Campus Y

Rob Bruce Director, Friday Center; Adjunct Assistant Professor

Chantarella de Blois Graduate Student. Business Administration

Mary Beth Koza Director, Environment, Health, and Safety

Mark Little Director, NC Strategic Growth. Kenan Institute of Private Enterprise

Steve May Associate Professor, Communication Studies

Gordon Merklein Executive Director, Real Estate Development

Charles Merritt Professor of the Practice, Business; Social Entrepreneur-in-Residence, Economics

Heather Payne Assistant Director, Center for Law, Environment, Adaptation and Resources

Jim Porto Clinical Assistant Professor, Health Policy and Management

Andrew Stowe Student. Business Administration

### **ENVIRONMENT + RESOURCES CONT.**

Jenna Hartley Graduate Student, Environmental Sciences and Engineering

Len Hoey Engineering Manager, NCDEACS Utility Savings Initiative

Sally Hoyt Stormwater Systems Engineer, Energy Services

Heidi Kim Assistant Professor, Literature

Jean Lin Student, Environmental Science and Geography

Kenneth Miskow Operations Manager, Carolina Union

Sharon Myers Environmental and Stormwater Compliance Officer, Environment. Health, and Safety

John Nichols Energy Analytics Specialist, Moseley Architects (UNC alum)

Susie Proctor Student, Environmental Science; Epsilon ETA

Trevor Sprague Graduate Student, English and Comparative Business Administration

> Damon Waitt Director, UNC Botanical Garden

Finance and

Mike Freeman

John Gorsuch

Richie Grimslev

Assistant Director,

and Management

Director, Finance

Training

Tony Liu

Licensing

Scott Mouw

Communications and

Student, Geography

Director, Trademarks and

Recycling Section Chief,

NC Department of

Environmental Quality

Derek Lochbaum

Director, Student Stores

Athletic Facility Planning

Services

#### **MATERIALS + WASTE**

Amy Cooke

Director, Undergraduate Studies and Lecturer, Environment and Ecology Administration

**BJ** Tipton of Waste Reduction and Recycling

Director, Sustainable Business, Burt's Bees

Aaron Bachenheimer Director, Fraternity & Sorority Life and Community Involvement; Janet Kelly-Scholle Clinical Instructor. Education

Debbie Bousquet Facilities Management Coordinator, Housing and Residential Education

Project Manager, Information Technology Services

Undergraduate Chemistry Laboratories Natalia Posthill

Office of Waste

Marketing Manager,

### MATERIALS + WASTE CONT.

Chris Payne Ph.D Student, Ecology; Orange County Waste Management

Martha Pendergrass Director, Procurement Services

Recycling Coordinator, Reduction and Recycling

Tom Reeves Carolina Dining Services

Herb Richmond Assistant Director, Training; Team Cleaning Project Manager, UNC Housekeeping

Anna Wu University Architect; Assistant Vice Chancellor, Facilities Operations, Planning & Design

#### COMMUNITY

Mai Nguyen Associate Professor, City Research Associate, and Regional Planning

Taffye Benson Clayton Associate Vice Chancellor, Diversity and Multicultural Affairs; Clinical Assistant Professor, Education

Taylor Bates Student, Public Policy and Economics; President, Residence Hall Association

Lynn Blanchard Director, Carolina Center Amy Preble for Public Service; Clinical Associate Professor, Health Behavior

Linda Convissor Director, Community Relations

Nick Didow Associate Professor and Program Coordinator, Kenan-Flagler Business School

Rachel Fherhard Graduate Student, City and Regional Planning

Jean Elia Associate Provost, Strategy and Special Projects

Megan Hoert Hughes Institute for the Environment's Environmental Resource Program

Lexi Kav Outreach Coordinator, Environmental Finance Center

Gary Nelson Professor, Social Work; Associate Director. Jordan Institute for Families

Recycling and Outreach Coordinator, Office of Waste Reduction and Recycling

Danielle Spurlock Assistant Professor, City and Regional Planning

Katie Turner Graduate Certificate, Journalism; Executive Assistant, Office of Faculty Governance

Megan Wooley Community Sustainability Planner, Town of Chapel

### **ENVIRONMENT + RESOURCES**

Jason West Associate Professor. Environmental Sciences and Engineering

Phil Barner Director, Energy Services

Mike Aitken Professor and Chair, Environmental Sciences and Engineering

Roberto Blanco Assistant Professor, Child and Adolescent Psychiatry

Harmony Bouley Student, Environmental Science; Renewable Energy Special Projects Committee

Charlie Egan Student, Business Administration and Environmental Studies; Renewable Energy Special Projects Committee

Matt Fajack Vice Chancellor. Finance and Administration

Chengliang Fan Student; Environmental Science and Economics

Victor Flatt Professor. Environmental Law: Director, Center for Law, Environment, Adaptation, and Resources

Greg Gangi Associate Director, Institute for the Environment; Senior Lecturer, Environment and Ecology

Dana Haine Science Educator, Institute for the Environment's Environmental Resource Program

Matt Fajack Vice Chancellor,

Program Manager, Office Director, Auxiliary

Paula Alexander

Terri Buckner

Lori Del Negro Supervisor.

### **HEALTH + WELLNESS**

Alice Ammerman Professor, Nutrition; Director, Center for Health Promotion and Disease Prevention; Cochair, Food for All Theme Julie Messina

Laura Linnan Professor, Health Behavior; Director, Carolina Collaborative for Research on Work & Health

Scott Myers Director, Food and Vending, Carolina Dining Brittany O'Malley Services

Bill Goa Director, Campus Recreation

Neasha Graves Community Outreach and Engagement Core. Center for Environmental Health and Susceptibility; Research Associate, Institute for the Environment's Environmental Resource Program

Kitty Lynn Fire Safety Professional. Environment, Health and Audrey Williams Safety

Claire Lorch Education Coordinator, Carolina Campus Community Garden

Lauren Mangili Associate Director, Campus Recreation: Director, Fitness

Director, Clinical Skills and Patient Simulation Center and Office of Continuing Professional Development, School of Medicine

Ashley Nicklis Senior Director, Benefits & Work Life Programs

Assistant Director, Student Wellness

Mary Beth Powell Senior Project Officer, Active Living by Design

Amanda Simmons Transportation Demand Manager

Laura Smith Graduate Student, Nutrition

Heather Socha **Business Services** Coordinator, Carolina Population Center

Manager, Courts Group, School of Government

Seonae Yeo Associate Professor, Nursing

# **POLICY + INVESTMENT**

Don Hornstein Distinguished Professor, Law: Lecturer. Environment and Ecology

Brad Ives Associate Vice Chancellor, Campus Enterprises

Alex Ashton Administrator, Real Estate Development

Elinor Benami Ph.D. Student, Environment and Resources, Stanford University (UNC alum) Bill Bobbitt Founder and CEO. Move Loot (UNC alum)

Stewart Boss Deputy Press Secretary. U.S. Senate Office (UNC alum)

**Tavey Capps** Sustainability Director, Duke University

Scott Hultman Professor, Surgery; Division Chief, Plastic and Reconstruction Surgery

### **POLICY + INVESTMENT CONT.**

Josh Kastrinsky Communications Specialist, Finance Communications and Training

Masaya Konishi Director, Facilities Planning and Design

Adam Lovelady Assistant Professor, Government

Meisha McDaniel Graduate Student, Business Administration; Professor, Business Chair, Net Impact

Henry McKoy Ph.D. Student. City and Regional Planning

# **ENGAGEMENT SESSIONS**

- Community Town Hall
- Student Town Hall
- Staff Town Hall
- Faculty Town Hall
- Thematic Town Halls
- Earth Day Town Hall

# **SESSION PRESENTATIONS**

- Sustainability Advisory Committee
- Sustainability Communications Working Group
- Health and Wellness Leadership Team / Working Group
- **Employee Forum**
- Deans Council

#### **INTERVIEW PARTICIPANTS**

Carol L. Folt

Jaye Cable

Larry Band

**Environment** 

Brian Vaughn Student, Environmental

Graduate Student, City

and Regional Planning

Student, Environmental

Studies and Geography;

Studies; Sierra Student Coalition

Josh Penn

Kathia Toledo

Leader, EcoReps

Christopher Wedding Adjunct Assistant

Chancellor

Director, Institute for the Jim Johnson

Chair, Curriculum for the Environment and Ecology Masaya Konishi

Bruce Cairns Professor, Surgery; Chair, Faculty Council

Peter Coclanis Institute

Judith Cone Special Assistant to the . Chancellor, Innovation and Entrepreneurship

Linda Convissor Director, Community Relations

Jim Dean

Executive Vice Chancellor Development and Provost

Jean Elia Associate Provost for Strategy and Special Projects

Barbara Entwisle Vice Chancellor for Research

Matt Fajack Vice Chancellor, Finance and Administration

Karen Gil Dean, College of Arts and Sciences

Kevin Guskiewicz Senior Associate Dean. Natural Sciences

Richard Harrill Director, Campus Y

Jonathan Hartlyn Senior Associate Dean. Social Sciences

Andy Johns Associate Vice Chancellor for Research

Professor, Strategy and Entrepreneurship, Kenan-Flagler Business School

Director, Facilities Planning and Design

Tammy McHale Senior Associate Dean,

Finance and Planning, Director, Global Research College of Arts and Sciences

Jay Noren

Senior Associate Dean. School of Public Health

Terry Rhodes Senior Associate Dean. Fine Arts and Humanities

David Routh

Vice Chancellor, University

Doug Shackelford Dean, Kenan-Flagler Business School

Carol Tresolini Vice Provost for Academic

Initiatives

Meredith Weiss Senior Associate Vice Chancellor, Finance and Administration

Anna Wu University Architect; Assistant Vice Chancellor, Facilities Operations, Planning & Design



# SUSTAINABILITY@UNC

CB 1800 Giles Horney Building 103 Airport Drive Chapel Hill, NC 27599

# sustainability.unc.edu

Follow us @sustainable\_unc

Like us at /uncsustainability

Follow us at sustainable\_unc