

**Develop the scholarship, including the courses, curricula and research needed for students to become literate about energy, environment and sustainability.**

- Outline approaches for assessing sustainability skills that add value (defined by employability and admissions to post-graduate educational programs) to a student's program of study. Sustainability skills will likely differ by degree.

Participated in national conferences to learn more about views of sustainability content in academic programs, with perspectives from those both in industry and academic institutions.

**Explore the concepts underlying sustainability in courses and curricula to build the case for sustainable practices.**

- Conduct a survey to assess student understanding and need for sustainability practices. The survey must have a robust statistical design, and be in a format produced and approved by survey experts.

The University Sustainability Office and Energy Management conducted a survey to determine student awareness and interest in sustainability and energy conservation.

**Engage in discussions for advancing sustainability to optimize the use of energy, water, buildings, land, transportation and existing space through participation in the Campus Environmental Sustainability Team (CEST) working groups.**

- Recruit students and faculty members to participate in CEST working groups and other CEST activities with the University Sustainability Office.

Additional faculty members, graduate students and undergraduate students were recruited to participate in activities with both CEST and the Sustainability Office.



### **Use the physical campus as a classroom and research facility to demonstrate and explore sustainability principles and practices.**

- Develop a framework for posting sustainability related research and internship activities within the university on a website. Ensure the website is accessible to faculty and staff members who seek student involvement. Ensure the website is accessible to students looking for research and internship opportunities within the university.

### **Promote research to advance sustainability, including the discovery of new technologies that advance sustainability, securing patents and employing new workers that align with a new energy economy.**

- Use websites for the Environmental Sciences academic program and the University Energy Council to list research opportunities for faculty members.
- Engage the Career Center and each college's career advisors in discussions about what is needed to prepare students for a green economy.

The beta version of Packlink is online and available, helping connect faculty and staff members with students interested in sustainability-related research and internships within the university. Students in several academic programs are engaged in such projects.

University Research Office staff forward all likely proposal opportunities to the Environmental Sciences and Energy Council staff who update the websites. The websites also post relevant news items and information about meetings, lectures and visitors to campus.

The Sustainability Office is working with the College of Agriculture and Life Sciences (CALS) Career Center to write a career guide to the green industry. The office is additionally working with the university's Career Development Center to ensure career counselors have the information needed to support students interested in green careers.

**Engage faculty researchers in sustainable practices to increase the resource use efficiency of research equipment and spaces needed to conduct state-of-the-art research.**

- The Energy Council will organize and sponsor annual open forums to create new approaches for faculty members to further sustainability.

The spring 2012 forum, “Smart Grid and Smarter Buildings: Development, Deployment and Demonstration at NC State University,” accelerated the discussion for using these technologies at NC State.

**Provide opportunities for service learning that bridge education, research and the practical application of sustainability.**

- Promote activities of the Wolfpack Environmental Student Association (WESA) and other student groups that engage in projects to advance sustainability within the campus and community.
- Continue the partnership between Center for Student Leadership, Ethics and Public Service and the University Sustainability Office to offer the Alternative Service Break trip to Costa Rica to study sustainability.
- Continue to provide sustainability-themed service projects as part of the Service Raleigh event.

WESA hosted several events such as the WESAcat race, a clothing swap and End of the World workshops, which included recyclable art crafts and how to tune a bicycle. WESA also continued work days at the SOUL garden, the first organic community garden on campus. Other student events can be found in the events section (page 47).

Offered the second annual alternative service break trip to Costa Rica to study conservation and sustainable agriculture.

200 people participated in the third annual Rubbage Ride, a litter pick-up on bicycles, which collected 543 pounds of litter (237 pounds of recycling, 37 pounds of compost and 270 pounds of trash).



### Adopt, promote and adhere to a sustainability policy.

- Identify policy coordination team and develop a draft of the policy.

A team of students, faculty and staff was assembled and is working toward a draft policy by the September 2012 meeting of the Campus Environmental Sustainability Team (CEST).

### Report sustainability information on a national scale toward becoming a national leader in sustainability.

- Report to Association for the Advancement of Sustainability in Higher Education's (AASHE) Sustainability Tracking Assessment and Rating System (STARS) as the primary sustainability reporting mechanism.

Submitted STARS information in April 2012 and became a STARS Reporter.

### Support opportunities to obtain funding for sustainability including grants, university campaigns, a student fee and seed money.

- Continue development of the student sustainability idea program, "Think Outside the Brick."

"Think Outside the Brick" continued in 2012 with rainwater collection for the community garden selected as the winning project. After further evaluation of cost and scope, the proposer pulled the project from consideration and the funds were reallocated to other campus priorities.

- Start conversation about a student sustainability fee with student groups.

Submitted draft fee proposal to the university's Budget Office by the June 1 deadline for continued conversation in summer/fall 2012.

- Pursue continued funding of the Energy Fellows Grant program.

Pursuing multiple avenues for funding, including grants and corporate sponsorships.

- Explore new ways to bring donations to the Sustainability Trust, which funds sustainability activities.

Sponsorships, fundraising, T-shirt sales and offsets from big campus events brought in \$10,950.

**Implement a comprehensive sustainability education and awareness program that utilizes peer-to-peer networks.**

- Complete application of “Change Your State,” a behavior change and awareness campaign, by distributing stickers and decals across campus.

Light switch sticker application is nearly complete with the final stickers going up in residence halls during fall 2012.

- Launch interactive components of “Change Your State” website.

Launched online tool with 360-degree interactive rooms that showcase energy saving opportunities in common university spaces (laboratories, classroom, kitchens, residence halls and offices). Additionally launched an online tool that illustrates the efficiency and operation of the combined heat and power installation at Cates Utility Plant.

- Develop plan for future iterations of “Change Your State.”

In progress. Starting in fall 2012, “Change Your State” has a new project manager.

- Establish a method for delivering talking points to key leaders and keeping them updated.

Not complete.

**Create a network among the local sustainability community that includes universities, governments, corporations and non-profits.**

Participate in the Triangle J Council of Government’s “Council for a Sustainable Triangle.”

The University Sustainability Office continues to participate in quarterly meetings.

Participate in monthly southeast sustainability coordinator conference calls and quarterly Triangle region sustainability meetings.

The University Sustainability Office participated in every monthly call in 2011-2012. Triangle sustainability coordinators have stopped meeting on a regular schedule.



## COMMUNITY & CULTURE STRATEGIC GOALS

## 2011-2012 PROGRESS

- Continue to act as a catalyst for regional collaboration such as Earth Day, Wake County Sustainability Task Force and Chapel Hill-Carrboro City Schools sustainability.

University Sustainability Office staff have represented NC State sustainability on 22 campus and community planning teams or advisory boards.

### **Grow the Campus Environmental Sustainability Team (CEST) as a cross-campus team of faculty, staff, students and community members engaged in campus sustainability.**

- Identify active roles to engage CEST members (funding, policy, communications, metrics, liaison to other groups, etc.)
- Identify areas of key participation needed and involve decision makers.

Created a policy subgroup to craft a sustainability policy with accompanying energy and procurement regulations.

Not complete.

### **Establish annual campus events to imbed sustainability as a part of the campus culture.**

- Continue coordinating NC State's Earth Day celebration.
- Continue coordinating Campus Sustainability Day with an energy theme.
- Supporting the integration of sustainability into existing events (athletic events, Wolfpack Welcome Week, etc.)

Rick Gardner, NC State's associate director of campus activities, served as the 2012 Earth Day chair and oversaw the following Earth Week events: Empower Film Series, Alternative Fuel Vehicle Showcase, Centennial Campus Field Day, Earth Day on the Brickyard and the Earth Day concert.

Campus Sustainability Day in 2011 was a fall fun festival with energy games, local pumpkin painting, a recycled costume contest and the announcement of the winning residence hall in the "Power Off" energy reduction competition.

Through a partnership with NC State Athletics, NC State will have its first "green" football game on Sept. 15, 2012. Sustainability is well represented in Wolfpack Welcome Week planning.

### Create incentives and provide recognitions and rewards to promote sustainability across campus.

- Identify mechanism and team to revamp the Earthwise Awards.

The Earthwise Awards were redesigned as the Green Brick Awards, resulting in a doubling of nominations received, an increase in prize amount and more representation from faculty and students. For the first time, the Green Brick was presented as part of an Engaged University community service presentation.

- Incorporate sustainability into new student and employee orientation.

In 2012 a team spearheaded by Waste Reduction and Recycling and the University Sustainability Office are working with the parents and families component of New Student Orientation to earn the designation "Wolfpack Certified Green." Additionally, sustainability groups will have tables at morning orientation sessions. The hope for 2013 is to scale the sustainability exposure and certification to the entire student orientation.

- Launch a green events program, "Certified Wolfpack Green."

Launched "Certified Wolfpack Green" and certified 12 events in the pilot phase.

- Create a plan, including incentives, for participating in the "Change Your State" behavior change awareness campaign.

Created a Facebook competition to increase awareness about energy conservation by encouraging students to visit the "Change Your State" website for more information. The contest resulted in a 52% increase in average monthly visits to the website.



### Achieve a 30% reduction in building energy consumption by 2015 against the 2003 baseline.

- Establish Building Energy Audit Team and complete 50 building energy audits of appropriations- funded buildings.

53 buildings have been audited.
- Install and commission two combustion turbines in the Cates Steam Plant by June 2012.

Scheduled to open in August 2012.
- Continue and improve the Intersession Energy Savings Initiative.

The results of three pilots to expand the intersession setback program suggest conducting the winter setback program only. This program will be revisited in 2014.
- Begin year one of the energy performance contract measurement and verification period for 13 buildings.

Three of the 13 buildings are complete and ready for measurement and verification. The remaining buildings are in the final project stages.
- Continue the implementation of the “Change Your State” behavior change and awareness campaign targeting a 5% reduction in electricity consumption.

Revamping of “Change Your State” is underway.
- Organize and implement the Phytotron self-performance energy conservation measures contract.

NC State has authorization from the North Carolina General Assembly to perform the work required. A designer and commissioning/measurement and verification agent was hired. The project is in the investment grade energy audit phase.
- Organize and implement a six building, self-performance energy conservation measures contract.

Scheduled for fiscal year 2013-2014.
- Upgrade general lighting in 24 campus buildings, including converting T-12 lamps to energyefficient T-8 lamps, plus occupancy sensors by December 2011.

Complete.
- Complete retro commissioning of Varsity Flex Lab by December 2011, including changing HVAC from outside air to plenum return as appropriate.

Complete.



## ENERGY & WATER STRATEGIC GOALS

## 2011-2012 PROGRESS

- Install premium efficient motors and variable frequency devices in Jordan Hall exhaust fan system.

Not complete.

- Refine building automation schedules based on actual use at Park Shops and Withers Hall.

Complete.

### **Achieve a 50% reduction in building water consumption by 2015 against the 2002 baseline.**

- Establish Building Energy Audit Team and complete 50 building energy/water audits of appropriations-funded buildings.

An auditor team was created and 53 building audits have been completed.

### **Improve energy data management capabilities and make data-driven decisions utilizing enhanced energy data.**

- Establish a process to document realized energy savings for North Carolina House Bill (HB) 1292 concerning university energy savings.

NC State was the first academic institution in the University of North Carolina System to create a process for documented energy savings for HB 1292. As a result, NC State's process is now the standard for all entities reporting these savings. Last year, NC State submitted \$1.6 million in energy conservation measures to the state of North Carolina to be returned to campus for additional energy conservation measures.

- Complete a utility meter long-range plan that will provide a roadmap for modernizing energy data collection on campus.

Phase I is complete, including rating all university meters in the utility tracking system based on criteria such as safety, functionality and communications ability.

### **Train and educate staff and building end-users to properly operate and maintain building systems in an energy-efficient manner.**

- Implement the “Shut the Sash” program to encourage energy savings in laboratories.

Instructional decals were applied on fume hoods concerning proper sash height for safety and energy. Additionally, awareness posters were displayed and lab occupant trainings were held to raise awareness of the energy used by campus fume hoods.

- Send 10 staff members to the Energy Management Diploma Series at McKimmon Center in 2011.

Complete.

### **Ensure a cost-effective and reliable energy supply by developing business scenarios and strategies for diversifying fuel sources.**

- Select a qualified energy risk management consultant to develop natural gas and fuel oil procurement strategies to ensure low cost and reliability by January 2012.

Hired an energy procurement consultant.

### **Evaluate utility financial structures that create incentives for saving energy.**

- Design a program to promote energy conservation through voluntary incentives to upgrade building equipment to the latest energy-efficient standards.

Six new freezers were installed on campus through the Ultra-low Freezer Rebate program. Additional funds will be sought in fiscal year 2012-2013 to continue the program.

### **Implement green standards and practices for information technology and computing.**

- Work with the Office of Information Technology (OIT) to form a subgroup around the issue of “green IT.”

During the last year, OIT’s governance structure underwent reorganization. Work is under way to include a green IT committee within this structure.



**Update the Campus Physical Master Plan to integrate and coordinate transportation, land use, utilities, buildings and storm water planning.**

- Begin Physical Master Plan update.

Designer and project manager focus group meetings were completed late spring 2012. The advisory team's first meeting will be in fall 2012. Outline schedule has been created. Campus precinct meetings scheduled for September and October.

**Adopt a sustainability vision statement and include it as part of the scope statement for all projects more than \$500,000.**

- Create a sustainability checklist for projects more than \$50,000.

Scheduled for completion in September 2012.

**Integrate sustainable strategies for all new construction and renovation projects including, publicly owned, privately owned, and leased or partnership properties.**

- Develop and implement construction waste management plan for all projects more than \$50,000.

Plan developed and was tested on a pilot project in July 2012.

**Exceed NC State's established minimum commitment to achieve LEED silver certification.**

- Disseminate actual energy consumption for comparison with modeled projections.

Energy Management is working to develop the energy dashboard, which will be implemented for the first time on the new Hunt Library building.

**Give priority to holistic building and property modifications that maximize efficient and effective resource use.**

- Tie energy efficiency/consumption data with Facilities Condition Assessment Program's (FCAP) deficiency data to indicate energy problems.

Energy audit information is being incorporated into the FCAP database as buildings are being audited by both internal staff and outside contractors.

**Design new buildings and utilize existing facilities as long-term resources through adherence to life cycle cost evaluations and total cost of ownership analysis.**

- Develop interior finish guideline for NC State's Design and Construction Guidelines.

Complete and available on the university's Facilities website.

**Enhance utilization and management of campus and building space to increase efficiency and to reduce the need for new construction.**

- Update the Research Space Standard to allow for more efficient use of space.
- Determine campus space needs based on 2020 enrollment projections.

A new Research Space Standard has been adopted.

The 2012 College Space Analysis began in March with the provost's approval of the 2020 Enrollment Plan, which projects student population to grow from more than 34,000 in 2011 to 37,000 by 2020. The Office of the University Architect has applied the space standards to the new total enrollment and met with the deans and the University Space Committee to review the amounts and types of space needed to accommodate this growth. Analysis was completed in August 2012 and will inform the Six-Year Capital Plan.

**Create pedestrian-friendly, mixed-use neighborhoods to reduce the distance between necessary services and to avoid single occupant vehicle use.**

- Complete Bicycle and Pedestrian Master Plan.

The Bicycle and Pedestrian Master Plan is complete and is being implemented. The following three projects from the plan have been funded: 1) missing walk on Dan Allen Drive south of Western Boulevard, 2) New stairs with bicycle through from Morrill Drive to Rocky Branch Greenway, and 3) supplemental way-finding signage on Rocky Branch Greenway.



## GREEN DEVELOPMENT STRATEGIC GOALS

## 2011-2012 PROGRESS

- Participate in Blue Ridge Road planning.

### Increase the acreage of campus open spaces.

- Complete Recreational Sports Master Plan.

- Initiate study for locations of fields on South Campus.

- Begin implementation of greenway along Walnut Creek.

### Increase the percentage of undergraduate students living on campus to 44% by 2020 to reduce transportation needs and to enhance retention.

- Continue planning for student housing at Centennial Campus (Wolf Ridge) and Greek Townhouses.

### Create and administer a Storm Water Master Plan for campus in conjunction with the NC State Storm Water Programs and the comprehensive Campus Master Plan.

- Improve storm water management practices by initiating a study with the storm water group as a steering committee.

NC State submitted comments to the City of Raleigh encouraging a more robust network of pedestrian paths in response to the Blue Ridge Corridor Study.

Completed the Recreation Sports Master Plan, which identified the need for approximately 23 acres of sport fields on South Campus and Centennial Campus. Further study is needed to determine the location on Centennial Campus.

Working on removing buildings along Varsity Drive to make way for recreation fields.

Completed design of 1.1 miles of new greenways along Walnut Creek. The project has two areas of construction that will be completed in one phase: 1) Main Campus Drive to Lake Wheeler Road and a spur to the Farmer's Market, and 2) from North Shores to the university's western property line. After approval from the N.C. Department of Transportation, bidding on the project will begin.

Wolf Ridge phase I is on target for completion in summer 2013 with phase II completion in summer 2014. The Greek Townhouse project is on hold.

There are currently storm water studies for Centennial Biomedical Campus and Centennial Campus. Future efforts will create a broader team, which will evaluate existing plans and coordinate and expand toward regional approaches.

## GREEN DEVELOPMENT STRATEGIC GOALS

## 2011-2012 PROGRESS

### Improve and enhance campus open spaces, natural areas and habitats.

- Increase the amount of natural areas on campus.

Grounds Management and Centennial Campus Development Office reduced mowing on Centennial Campus by 9.06 acres, allowing these areas, which are mostly adjacent to woods, to revert to their natural state.

### Strengthen Tree Reforestation Plan for campus.

- Initiate planning for Heritage Tree Program.
- Create Tree Conservation Plan for Greek Village.

Gathered precedents for Heritage Tree Program and established committee to create a policy and implementation plan.

The Tree Conservation Plan has been drafted but not yet submitted to the City of Raleigh for review.

### Develop Land Management Plan for Lake Raleigh Woods.

- Develop the Land Management Plan.
- Initiate study to remove invasive plants as part of a student multi-semester project.

A committee is formulating how the components of the General Management Plan can be accomplished through incremental student projects. Not only will this minimize resource requirements, but it will provide excellent student learning experiences.

### Employ best practices for sustainable operation of campus buildings and grounds such as integrated pest management, biodiversity, green cleaning, composting, recycling and water reuse.

- Work to include sustainability principles in operational agreements.

To be undertaken in 2012-2013.



**Instill the values of total cost of ownership and total life cycle costing into purchasing and project decision making.**

- Establish current confines of state legislation. Assigned as an intern project.
- Work with Utilities and Engineering and Building, Maintenance and Operations to capture what is already being accomplished with regards to life-cycle costing. Work to begin in future years.
- Utilize the Purchasing Department's Marketplace tool as a way to implement sustainable purchasing tactics. Guided by state and university mandates, the Purchasing Department will narrow purchasing options through Marketplace to reflect sustainability starting in late 2012.

**Achieve a 60% landfill diversion rate by 2015.**

- Implement self-service recycling and waste management in all university buildings. Completed through a partnership with Waste Reduction and Recycling and University Housekeeping.
- Further implement walkway recycling opportunities. Implementation is 80% complete and the program continues to expand. Walkway containers are standard for all new projects on campus.
- Further develop composting opportunities on campus. Composting is fully implemented in the university's dining halls. Future initiatives include implementing composting in catering venues and during special events.

**Implement source reduction and environmentally preferable purchasing initiatives to decrease waste before it occurs.**

- Ban plastic bag use on campus. Hired a student intern to look at feasibility of these programs. The project focus has been primarily dining-related waste reduction opportunities for the Atrium and new Talley Student Center. Work will continue in fall 2012.
- Consider paper bags, trays and/or compostable bags as an alternative to plastic. Hired a student intern to look at feasibility of these programs. Work will continue into fall 2012.
- Change font on e-mails to reduce ink consumption. Not started.



## PURCHASING & WASTE REDUCTION GOALS

## 2011-2012 PROGRESS

- Reduce packaging through purchasing practices including using less material and packaging and take-back options.

The draft of a Green Procurement Regulation to accompany the Sustainability Policy is in progress.

- Reducing phonebooks & Technician left-overs.

Not started.

- Develop repurpose/reclamation clauses for furniture and large purchases.

Developing bi-monthly workshops on waste reduction and purchasing topics, beginning in 2012-2013.

### Increase the amount of environmentally and socially responsible materials purchased.

- Provide goals and direction to foster sustainable purchasing.

The draft of a Green Procurement Standard Operating Procedure to accompany the Sustainability Policy is in progress.

- Develop a tracking system for sustainable purchases on campus.

Will be addressed in future years.

- Work with Marketplace vendors to highlight sustainable items on their electronic ordering sites.

- Create incentives for purchase of more sustainable products and services.

Several vendors have initiated this. Development of a widespread initiative will involve additional research.

### Implement sustainable purchasing standards.

- Help individual departments further develop the university's Sustainability Policy to focus on specific needs.

This process will follow the adoption of the Green Procurement Standard Operating Procedure and Sustainability Policy.

- Develop bid specifications that require vendors to provide sustainable options for their products.

This process will follow the adoption of the Green Procurement Standard Operating Procedure and Sustainability Policy.

Research is complete on what language, terms and conditions can be used for larger, current, buying consortiums. This information will be used for future bid specifications.

**Develop a comprehensive closed-loop program to capture organic waste (food waste, animal bedding, yard waste, etc.) for composting and utilize the composted product on campus.**

- Work with University Dining to determine materials and possible contaminants.
- Order collection containers based on University Dining's needs.
- Develop and submit request for proposals for the collection and composting of materials.
- Train staff and place containers.
- Educate campus community.

Complete.

**Develop a more extensive outdoor walkway recycling program to capture additional recyclable materials and remove them from the waste stream.**

- Determine bin type and materials to be collected.
- Purchase bins and develop educational materials.
- Determine bin locations and collection strategies.
- Place bins around campus and begin collection.

Complete. Commingled collection of glass, plastic, aluminum and paper is now standard for all outdoor walkway containers on campus.

Complete.

Complete.

Project is 73% complete. Currently, 220 sites have the bins in place with an additional 100 to be placed in 2012-2013.



## PURCHASING & WASTE REDUCTION GOALS

## 2011-2012 PROGRESS

**Utilize modern waste collection concepts and practices to streamline services, improve programs and increase operational efficiencies and customer service.**

- Work with University Housekeeping to streamline indoor recycling collections.
- Examine necessity of full-size trash cans for desk-side recycling.
- Begin commingling recyclables.
- Begin an education and marketing component of what's recyclable and why.
- Add news/bulletin boards at recycling locations.
- Add a message to vending machines about recycling (potential partnership with Coca-Cola).
- Enhance C-Store battery recycling program with a more attractive container.

University Housekeeping and Waste Reduction and Recycling now collaborate on the collection of materials.

Mini-bin pilot program will begin summer 2012.

Housing and Dining sites to become commingled in 2012-2013.

Ongoing.

Not started.

Not started.

E-recycling bins placed at all outdoor recycling sites.

**Increase the partnerships among NC State, local farmers, producers and manufacturers in North Carolina, resulting in more sustainable food purchases by University Dining.**

- Define sustainable food purchases.
- Establish baseline for sustainable food purchases.

University Dining will focus first on local foods defined as at least one of the following: grown, produced, manufactured or packaged in North Carolina. Dining will track other sustainable food purchases such as organic and third-party certified foods.

Focusing on local food purchases, the baseline for University Dining is 23% of the \$11 million in food purchases. For dining halls, local foods accounted for 28% of the \$4.5 million in food purchases.

## PURCHASING & WASTE REDUCTION GOALS

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- Work with food suppliers to identify local foods that can be integrated into menus.

## 2011-2012 PROGRESS

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A temporary purchasing specialist was hired to work with US Foods, the university's largest food supplier, to evaluate what foods can be incorporated into menu planning. University Dining began partnering with the state's Department of Agriculture and the "Got to Be NC" campaign to identify local companies and products that could be integrated into university menus.

- Determine new ways to educate campus and have the community connect with local foods.

Launched the "My Roots are NC State" campaign that shows connections between NC State alumni and campus food. Continue "All Carolinas" meals, featuring North Carolina grown foods. Established a commitment that every University Dining event has a sustainability component. Plans are underway to install a chalkboard at each dining hall listing the local companies from which campus food is purchased.



## TRANSPORTATION STRATEGIC GOALS

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## 2011-2012 PROGRESS

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**Develop a long-term campus vision addressing alternative transportation, parking, campus connectivity and congestion in coordination with the comprehensive Campus Master Plan.**

- Develop Campus Mobility Plan.
- Support development of Physical Master Plan update.

The Campus Mobility Plan has been completed recommending future transit services and related capital needs during 2012-2022.

This tactic is still in the beginning stages, coordinated by the Office of the University Architect with participation from the Transportation Office.

**Reduce the consumption of petroleum products in university and Wolfline fleets by increasing the use of alternative fuel and low-emitting vehicles.**

- Conduct best practices study of alternative fuel and low-emitting vehicles in use on other North Carolina college and university campuses to determine most cost-effective vehicles for the university motor pool and departmental fleets.
- Contract with a consulting firm attached to "Project Get Ready" to prepare a report on the potential size and growth of the electric vehicle (EV) market on campus over the next five years and the necessary charging infrastructure required to support the market.

No formal study initiatives in place. However, the university motor fleet remains subject to a state mandate to achieve a 20% petroleum reduction by 2016. Future attainments will be focused on fleet upgrades and investment in new technologies, including alternative-fueled vehicles and battery-powered transportation equipment.

No formal study initiatives in place. The Centennial Campus Development Office and the NC Solar Center continue partnering on EV station expansion. Public information on stations, locations and access restrictions are mapped by the Transportation Office.

**Increase Wolfline ridership and ensure that Wolfline continues to provide a high level of service that meets user needs.**

- Analyze semester and annual campus Wolfline ridership data and trends to identify transit service capacity, issues and needs.

A base system and needs analysis has been conducted as part of the Campus Mobility Plan. Staff will streamline the tracking of key performance measures associated with short- and long-term system route and service changes.

## TRANSPORTATION STRATEGIC GOALS

## 2011-2012 PROGRESS

- Monitor Centennial Campus facility construction, university staff and student levels, and private sector employment in relation to present and future Wolfline demands, especially inter-campus connectivity.

Bus service between main campus and Centennial Campuses has been adjusted to better meet projected rider growth and 24/7 activity levels, increased ridership along the Avent Ferry corridor, more diverse night service transit options, and park-and-ride capacity to the south of Western Boulevard.

- Market regional real-time transit information tools among students and staff to make travel easier and more convenient for commute and intra-campus trips by bus.

These tools have been and will continue to be promoted year-round via various campus media.

- Explore survey opportunities for employees and staff to best determine how transit is being used and how ridership can be increased.

The Regional “GoTriangle” brand is initiating consultations with NC State regarding a 2012-2013 mode pattern and preference survey of students and employees.

### Improve bicycle and pedestrian access on campus.

- Assist with Capital Area Metropolitan Planning Organization’s (CAMPO) Western Boulevard/Avent Ferry underpass study and advocate for bicycle/pedestrian access.

Transportation Office staff members are engaged on the study advisory team with CAMPO staff and consultants.

- Add sharrows, where appropriate, around campus.

Primary campus cycling roadways have been determined for sharrows replacement.

- Close Dan Allen Drive through-access for vehicles to improve bicycle and pedestrian safety along the corridor.

Planning for the daily closure scheme is progressing and will begin during the fall 2012 semester. Baseline traffic counts are underway on campus roadways.

