



**Sustainability at TNCC**  
**Report of the Sustainability Task Force**

**April 20, 2011**

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## Executive Summary

This report is the annual update (March 2010 – March 2011) in response to the recommendations for improved sustainability contained in the Chancellor’s report on sustainability which was produced and distributed September 2009. A copy of this report can be found at the following: ([http://www.vccs.edu/Portals/0/ContentAreas/Facilities/SUSTAINABILITY\\_Ecological\\_Commitment\\_to\\_Our\\_Future.pdf](http://www.vccs.edu/Portals/0/ContentAreas/Facilities/SUSTAINABILITY_Ecological_Commitment_to_Our_Future.pdf)).

Colleges were asked to review the list of recommendations and identify those they will implement. To respond, TNCC conducted a campus-wide survey in January 2010. Faculty and staff were asked about sustainability and conservation practices and office and personal behaviors that reduce energy consumption, as well as sustainability-improving efforts that TNCC might implement. The results of that survey constitute the majority of this report.

This report addresses the four items listed under paragraph 1 by identifying the steps taken to implement each recommendation. Additionally, this report expands upon the recommendations listed under paragraph 2.

### **1. Task Force recommendations which TNCC will continue to implement**

- #3. Identify gaps between existing college programs and industry needs and develop programs and scholarships to bridge these gaps.
- #4. Conform to LEED silver or Green Globes two-globe standards.
- #6. Establish (and regularly assess) an effective PM plan for HVAC, electrical, and other equipment to optimize energy efficiency.
- #10. Assess the use of new information technologies, such as virtual servers, digital imaging, electronic file sharing, and electronic signatures to find ways to further reduce energy consumption and paper waste.

### **2. Task Force recommendations TNCC commits to addressing in the future**

- #5. Develop a program for ensuring a healthy learning and work environment.
- #7. Establish a variety of transportation and parking options and incentives to reduce fuel consumption and carbon emissions.
- #8. Establish a sustainability committee.
- #9. Assess sustainability emphasis included in current procurement practices and identify areas for improvement.

- #11. Explore opportunities to engage community leaders in the development of an integrated sustainability program.

### **Responses by Recommendation**

This report documents current and planned efforts that contribute to a more sustainable environment at TNCC. Efforts are framed by the recommendations identified in the Chancellor's report.

Sustainability has long been practiced at TNCC and is a consideration in college decision making processes. Thus, TNCC is already implementing some of the recommendations proposed in the Chancellor's report. Recommendations of the Chancellor's Task Force on Sustainability were divided into three categories: Academics and Workforce Development Services (WDS), Facilities, and Fiscal and Administrative Operations. Recommendations below are presented within this framework. Current and future activities are presented by recommendation, as are a list of actions the college intends to take to achieve (or to continue to achieve) the recommendation. This report reflects the steps taken to implement these recommendations.

### **Academics and Workforce Development**

- #3. Identify gaps between existing college programs and industry needs and develop programs and scholarships to bridge these gaps.**

#### **CURRENT:**

September 14, 2010, was the start date for the Department of Energy Weatherization Training Center grant awarded to the Green Jobs Alliance (GJA) to establish a weatherization training pipeline with TNCC Workforce Development as a key partner. The pipeline program includes Work Keys assessments for the Governor's Career Readiness Certificate (and time in the Key Train tutorial lab as needed), the Work Keys assessment for Applied Technology to give participants the CRC+ designation, four non-credit courses with ENVR prefixes, Basic Construction, Weatherization Technician (using the Department of Energy curriculum), BPI Certified Weatherization Installer, and BPI certified Building Analyst (home energy auditor). Challenge exams will be available for experienced workers from the construction industry or local weatherization assistance programs to reduce their time from training to work. The pipeline supports the need for local governments to assess and evaluate low-income weatherization projects and for contractors to evaluate effectiveness of renovation/retrofitting for homeowners to qualify for energy incentive funding.

TNCC has identified specific academic courses that are 'green' oriented such as ENV 195, Green Building and Sustainable Design. BIO 275, Marine Ecology, has been offered in previous semesters.

**FUTURE:**

WDS will continue to seek grant funding for training that prepares workers for 'green' jobs. It will continue its efforts to be demand-responsive to the needs of business and industry, especially those that target 'green' jobs. Information will be shared across academic lines so that academic faculty can also benefit from knowledge of the demands of the field.

**ACTIONS:**

- TNCC will offer a wetland biology class during the summer 2011 term. A BIO 270 General Ecology class is being developed for the spring 2012 term. Additionally, Workforce Development is developing a solar installation and maintenance course for the fall 2011 term.
- WDS is working with local weatherization assistance providers to ascertain employment openings for trained weatherization technicians and assessing need for incumbent worker training to upgrade skills and add industry certifications.
- WDS is working with a multi-state consortium to prepare for new Dept of Energy proposals for 2012. Green Jobs Alliance continues to research grants and industry support for off-shore wind technology programs.

**Facilities**

**#4. Conform to LEED silver or Green Globes two-globe standards.**

**CURRENT:**

The master planning process adheres to the standards of the Governor's Executive Order 82 which requires conformity to LEED Silver or Green Globes two-globe standards. The renovation of the Hampton III building will exceed the LEED Silver standards. Hampton III includes 25 classrooms, a nursing lab, and office space for five separate office functions.

TNCC is committed to preserving green space and the preservation of the natural environment by planting drought resistant plants, shrubs and trees. In addition, all irrigation systems are now programmed to come on at the most efficient time of day to save water. Every irrigation system

now has a moisture meter included so they do not come on if the ground is already moist enough.

**FUTURE:**

TNCC continues to encourage maximizing use of natural day lighting in occupied rooms and choosing fixtures for task lighting controlled by individual occupants. We will continue to review and consider irrigation and water needs by planting native and adaptable species. In addition, as resources allow, bathroom fixtures will be updated to conserve water.

**ACTIONS:**

- Where possible, continue to replace standard plumbing fixtures with waterless or low-flush fixtures, and consider proximity-sensitive faucets and automatic flush valves for water savings. This is currently being done in the Hampton III Renovation.
- Continuing to upgrade offices and classrooms with energy efficient lighting and technology. The Welcome Center and 9 offices have been upgraded during the past year.
- Encourage the turning off of interior and exterior lights when not in use and install power strips that can be powered off to eliminate energy consumption when equipment has been turned off or is in stand-by mode.
- When replacing lighting, continue to put half of the lights on a separate switch so room will have full or half light as needed.

**#5. Develop a program for ensuring a healthy learning and work environment.**

**CURRENT:**

Ensuring a healthy learning and work environment is the responsibility of all departments. Plant Services has expanded the paper-only cycling effort into a single-stream program, which includes all plastic products, glass, and aluminum products. The hazard waste management program continues to ensure the removal of all hazardous waste.

TNCC conducted a print management study and awarded a contract to ESI to install multi-functional networked printers to conserve equipment, paper and energy, which has been very successful.

The Human Resources Department continues to promote the State's CommonHealth Program through the sponsoring of CommonHealth workshops and activities on campus. The Human Resources Safety Assistant works closely with the College's Safety Officer in monitoring the

college campus environment to ensure a safe and healthy environment for employees.

**FUTURE:**

TNCC is currently working toward a college intranet that will allow faculty and staff to access current information and college resources.

**ACTIONS:**

- Establish guidelines/recommendations that encourage use of an eco-friendly font that reduces ink production; print draft quality; print 2-sided or 2 pages per sheet, etc.
- Encourage more on-line courses.
- Consider alternative work schedules to include the feasibility of telecommuting. Telecommuting would mitigate traffic congestion and reduce emissions.
- Consider consolidating building use on weekends to reduce HVAC energy use.
- Encourage video and telephone conferencing, WebEx and webinar meetings, and electronic transmittals and communication in lieu of driving to meetings.
- Investigate the purchase and use of software that automatically powers down computers in off hours.
- Develop a 'green' web page that identifies 'green' practices, provides educational tips and best practices, and links to other relevant sustainability sites. Workforce Training maintains a website developed under a VCCS grant several years ago that could be expanded or updated to include sustainable tips and links. (<http://site.htgreenalliance.org>)
- Develop a program to measure recycling efforts college-wide to let all employees understand how this impacts the environment.

**#6. Establish an effective PMP for building HVAC, electrical, and other equipment to optimize levels of energy efficiency.**

**CURRENT:**

TNCC has a preventative maintenance program for HVAC, electrical and other equipment. In addition TNCC is currently automating the PM tasks into a software program that creates a work order and assigns it to the appropriate staff function. We have also upgraded several of our HVAC systems to include energy efficient chillers, condensers, and controls systems. TNCC is committed to following the State Energy Standards for heating and cooling temperatures.

From October 2006 to December 2010, the college recognized a savings of \$401,879.00

**FUTURE:**

Encourage maximizing use of natural day lighting in occupied rooms and choosing fixtures for task lighting controlled by individual occupants. As resources allow, bathroom fixtures will be updated to conserve water. Continue to do preventive maintenance, automate the PMs, and enforce the State Energy Standards.

**ACTIONS:**

Continue to do preventive maintenance, automate Preventive Maintenance programs, and enforce the State Energy Standards.

**#7. Establish a variety of transportation and parking options and incentives to reduce fuel consumption and carbon emissions.**

**CURRENT:**

There is a major local transit stop located on our Hampton campus which helps encourage and promote the use of mass transit by students and employees.

TNCC's current Capital Outlay Project (Hampton III Renovation) includes a shower for those who ride their bikes to work, and eight high energy efficient vehicle parking spaces next to the building.

**FUTURE:**

TNCC will continue to investigate telecommuting and ride sharing options. When the renovation of Hampton III is complete, there will be designated choice parking for high mileage vehicles.

**ACTIONS:**

- Consider providing preferred parking, reduced fees, or other incentives to promote carpooling and ride-sharing programs for faculty, staff, and students.
- Consider providing a bulletin board for ride-share postings.
- Consider providing preferred parking for low-emission vehicles and scooters.
- Consider installing more bike racks on campus.
- Consider purchase of low-emitting vehicles for the college fleet.



## **Fiscal and Administrative Operations**

### **#8. Establish a sustainability committee.**

#### **CURRENT:**

TNCC established the Environmental Sustainability committee in August 2010 to support the Chancellor's Sustainability Task Force report. The committee consists of representatives from Information Technology, Library, Faculty, Administration, Plant Services, Workforce Development, Human Resources, Plant Services, and students. All members are keenly interested in environmental sustainability.

#### **FUTURE:**

The committee will continue to identify, implement, and track relatively reasonable environmental sustainability measures for the TNCC campuses in compliance with the latest directives from the Governor. The Chancellor requires that progress be documented and reported annually to the President and then to the Chancellor.

Among the committee's tasks will be any of the following: investigating innovations in 'greening', generating ideas to optimize resources and suggesting steps that might be taken to become more sustainable. Increasing visibility in the broader community, and sharing best practices and links to resources will be disseminated via the 'green' website.

#### **ACTIONS:**

- Document and report annually committee progress to the President and the Chancellor.
- Seek membership in the VEEP program of the Department of Environmental Quality.
- Encourage membership and involvement in regional and local 'greening' groups.

### **#9. Assess sustainability emphasis included in current procurement practices and identify areas for improvement.**

#### **CURRENT:**

Procurement practices have been strong on sustainability in part due to the need to conserve resources. Finance and Information Technology have a contract with ESI which instituted a print management program, combining printing functions and also promotes savings by including service and supplies under one contract. Complete conversion to a paperless system, however, is limited by auditing requirements.

### **FUTURE:**

TNCC will continue to review procurement guidelines to increase sustainability in procurement practices such as specifying vendor requirements for diverting waste from landfills and incinerators, requiring recycling for construction waste, structured review of cost/benefit ratios for on-site or alternative energy sources, and encouraging 'green' requirements in RFPs and IFBs for auxiliary contacts. When possible, IFBs and RFPs for renovation/construction will include a recycling requirement.

The procurement office also will be encouraged to consider cooperative procurements and partnerships to reduce costs.

### **ACTIONS:**

- Enforce guidelines for 'green' requirements in RFPs and IFBs for auxiliary contacts such as vending, food service, custodial and bookstore contracts.
- Enforce guidelines for general operations including buying recycled paper, avoiding disposable materials where possible when meals are served - choose biodegradable or recyclable materials.
- Encourage use of Google docs to share documents.
- When feasible/possible buy local.

### **#10. Assess the use of new information technologies, such as virtual servers, digital imaging, electronic file sharing, and electronic signatures to find ways to further reduce energy consumption and paper waste.**

#### **CURRENT:**

TNCC implemented a print management system campus wide in the fall 2009 which replaced individual printers with networked printing capability. This standard is now operational in most offices in Hampton and Williamsburg.

The volume of TNCC publications traditionally provided in hardcopy has been reduced. The web and Blackboard have been used in lieu of hardcopy materials. The college schedule and the college catalog have been put online.

The administration is investing in additional Smartboards for classrooms to replace the chalk boards which caused unhealthy dust accumulation in the air and on the equipment and furniture.

A “pay for print” program for students has been implemented. This ensures students print only those copies needed for their classes and reduces paper waste.

**FUTURE:**

TNCC will continue to explore additional ways the academy and the administration can conserve resources.

**ACTIONS:**

The Vice President for Administration and Finance will work collaboratively to identify information technology purchases, short term and long term costs, anticipated savings, and the ramifications of these purchases.

**#11. Explore opportunities to engage community leaders in the development of an integrated sustainability program.**

**CURRENT:**

TNCC continues its partnership with the Peninsula Council for Workforce Development and The STOP Organization that manages the state weatherization funding for the City of Hampton.

TNCC also partners with the Hampton-based Green Jobs Alliance (GJA) to provide opportunities for integrating programs such as the new Electrical specialization within the Electronics Technology program conducted with the International Brotherhood of Electrical Workers (IBEW) apprentice program.

**FUTURE:**

TNCC will continue to be involved in sustainability efforts at its campuses and will capitalize on opportunities to work with area local governments and business and industry to consider the efficiencies of sustainability efforts like recycling or purchasing. TNCC will also seek strong speakers on sustainability and best practices.

All GJA community partners will be listed on weatherization training program materials and hands-on weatherization classes.

**ACTIONS:**

- Continue involvement in regional ‘greening’ initiatives and groups, such as GJA and Hampton Roads Green Building Council.
- The weatherization training classes will be taught at the Arc of the Peninsula because TNCC does not have any lab space available for this type of training.
- Seek speakers on this topic for the TNCC community and beyond.

- Seek opportunities for industry to use TNCC as a test bed for its 'green' products.

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