



Sustainability at TNCC

Report of the Sustainability Task Force

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Executive Summary

This report is the annual update (March 2012 – March 2013) 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

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 and:

- #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.
- #5. Develop a program for ensuring a healthy learning and work environment.
- #6. Establish (and regularly assess) an effective PM plan for HVAC, electrical, and other equipment to optimize energy efficiency.
- #8. Establish a sustainability committee.
- #9. Assess sustainability emphasis included in current procurement practices and identify areas for improvement.
- #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.
- #11. Explore opportunities to engage community leaders in the development of an integrated sustainability program.

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

- #1. Develop an environmental sustainability scholars program, and establish guidelines for modifying courses to include environmental sustainability components.

- #2. Provide annual funding specifically for professional development opportunities in sustainability.
- #7. Establish a variety of transportation and parking options and incentives to reduce fuel consumption and carbon emissions.

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 ACTION(S) 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

- #1. Develop an environmental sustainability scholars program, and establish guidelines for modifying courses to include environmental sustainability components.**

CURRENT:

For the spring 2013 term, TNCC is offering BIO 107 Biology of the Environment.

FUTURE:

- For fall 2013, BIO 270 General Ecology will be offered for the first time in five (5) years.
- Encourage faculty members to infuse environmental sustainability content into courses and to create new courses that focus on environmental sustainability. When appropriate, award release time for curriculum development.

#2. Provide annual funding specifically for professional developmental opportunities in sustainability.

CURRENT:

Funds have been approved in the FY 2013 budget for professional development, and faculty are encouraged to seek opportunities for professional development, including sustainability.

The Environmental Sustainability Committee partnered with TNCC's Classified Support Staff Association (CSSA) to host information sessions on environmental issues and recycling efforts on campus during CSSA's Professional Development Day held March 6th.

FUTURE:

- Seek opportunities for professional development, such as faculty internships, at appropriate industry and community locations.
- Invite environmental industries to TNCC to present hands-on training opportunities for the faculty.
- Continue partnership with CSSA to include environmental sustainability issues in their annual Professional Development Day program.
- Promote the availability of professional development funds among faculty members to incorporate sustainability within their curricula.

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

CURRENT:

In September, 2010, TNCC WD received Department of Energy grant, DE-EE00003786, in partnership with the Hampton Roads-based Green Jobs Alliance (GJA) to establish a Weatherization Training Center (WTC). From March 2012 to March 2013, the Weatherization program completed 196 enrollments in certification classes.

In 24 months, the program enrolled 265 individuals in 415 classes. Green Jobs Alliance-TNCC WD was approved as a certified Building Performance Institute (BPI) Test Center in fall 2012.

The unique aspects of our WTC are collaboration among the GJA partners for recruitment and outreach, training and job placement, a Green Jobs Fair held in July 2012, and production of mini-videos to give interested persons a view of weatherization jobs, impact on neighborhoods and employer perspectives. For 2013, TNCC WD signed an agreement with the Virginia WTC, based at CVCC to continue classes and access scholarships through the VA Dept of Mines, Minerals and Energy.

WDS also received in summer 2011 a small grant from the Greenforce Initiative (funded by the Bank of America Charitable Foundation and the Charles Stewart Mott Foundation) to add solar panels to power lights and battery-chargers in the motorcycle safety containers. Electrical Engineering Technology and CAD Design students researched power needs and design installation for the panels. The motorcycle safety program serves 1200-1300 participants annually who can see the small-scale solar application in use at TNCC.

TNCC offered ELE 176, Introduction to Alternative Energy Including Hybrid Systems in spring 2012. This 3-credit class introduces students to alternative energy with an emphasis on solar photovoltaic systems, small wind turbines technology, the theory of PV technology, PV applications, solar energy terminology, system components, site analysis, PV system integration and PV system connections, and small wind turbine technology site analysis.

With VCCS special funding, WDS offered two tracks of Healthcare IT for electronic health records in Spring-Summer 2012, HLTH 4500 and 4505. These new systems offer significant reduction in paper and storage needed for maintaining accurate health records.

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 disciplines so that faculty can benefit from knowledge of the demands of the field.

ACTION(S):

- The newly-expanded Green Jobs Alliance Board with TNCC WD membership is committed to pursuing grants and industry support for energy efficiency and renewable energy, including off-shore wind technology programs.
- The Motorcycle Safety containers will be fitted with solar-powered ventilation fans in spring of 2013.

Facilities

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

CURRENT:

TNCC and VCCS Capital Outlay engaged a consultant to evaluate renovation vs. new construction involving Harrison/Diggs/Moore Halls. The report was completed in December 2012, with the recommendation for new construction vs. renovation.

These existing buildings encompass approximately 60,000 sq.ft. TNCC's new Six Year Capital Plan includes their replacement. Our plan will be reviewed and compiled with other VCCS projects for submission for approval by the State Board for Community Colleges in April 2013.

Renovations to and the awarding of the LEED Silver recognition for the Hampton III building was recognized in the American School & University magazine's August 2012 issue.

FUTURE:

Future plans include the renovation or replacement of three major buildings on TNCC's Hampton campus. These buildings were originally constructed in 1967-68, being the first on the campus. Plans for renovation/replacement will adhere to the standards of the Governor's Executive Order 19 which requires conformity to LEED Silver or Green Globes two-globe standards.

#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.

The hazard waste management program continues to ensure the removal of all hazardous waste, with special emphasis on the Nursing, Dental and Automotive programs. The Nursing and Dental programs require disposal of bio-hazards, while the Automotive program needs to recycle/dispose of fluids.

TNCC continues utilizing the print management program ESI, which has installed multi-functional networked printers which has been very successful to conserve equipment, paper and energy.

TNCC's Physical Education continues to expand its program. Tennis is now offered on-campus, and golf is being offered during the 8-Week-2 session. Additional cardio-vascular programs are being offered as well; between 15 and 20 people use this equipment each day. Classes in yoga, pilates and self-defense are now included. A massage chair was purchased to help staff and students manage stress, averaging 3-5 users daily.

TNCC employees received workshops in March and October from *CommonHealth* presenters on diabetes prevention and promoting healthy eating. In 2012 *CommonHealth* sponsored their annual Lighten Up Weight Loss Challenge; this was open to all state employees. During March 2013, a "Growing Younger Program" was included in the College's Professional Development Day; approximately 60 employees participated. On average, 35 employees participate in the annual weight loss and walking challenges.

The Environmental Sustainability Task Force has requested to team with TNCC's Student Government Association (SGA) in their annual Spring Fest/Earth Day activities. The Task Force plans to promote the recycling of cell phones, laptops, and desktop computers, by using a local vendor authorized for the proper disposal of these items.

TNCC encourages the use of video and telephone conferencing, WebEx and webinar meetings.

FUTURE:

- Continue to establish more distance-learning classes.
- Promote the recycling of cell phones and laptops during annual Spring Fest/Earth Day program on April 16, 2013.

ACTION(S):

- 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.
- 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.
- 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.

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

CURRENT:

TNCC has completed automating preventive maintenance (PM) tasks into a software program which generates a work order and assigns it to the appropriate staff function. TNCC is committed to following the State Energy Standards for heating and cooling temperatures.

TNCC continues in its commitment to preserving green space and the natural environment by planting drought resistant plants, shrubs and trees.

FUTURE:

Continue to do preventive maintenance—and enforce the State Energy Standards. Encourage maximizing use of natural lighting in occupied rooms and choosing fixtures for task lighting controlled by individual occupants. As

resources allow, more bathroom fixtures will be updated to conserve water. Continue to put all exterior light fixtures on photo cells.

ACTION(S):

- Continue to do preventive maintenance, automate PMP, and enforce the State Energy Standards.
- 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 was recently done as part of the Hampton III Renovations.
- Continue to review and consider irrigation and water needs by planting native and adaptable species.
- Continue to upgrade offices and classrooms with energy efficient lighting and technology.
- 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.

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

CURRENT:

TNCC's local transfer spot handles three major bus routes in the Hampton/Newport News area. The original transfer spot was located next to a large student parking lot, which caused vehicular and pedestrian congestion. The buses also created extensive damage to the roadway. TNCC, in cooperation with Hampton Roads Transit, successfully relocated this transfer spot on the side of the campus to the main artery in front of the campus grounds. Relocating this stop to the main artery has eased vehicular/pedestrian congestion. The materials used in the actual construction should eliminate the need to repair the driveway frequently. The new transfer spot was completed in August 2012.

In addition to the three bus shelters, Hampton Roads Transit (HRT) also donated a solar-powered trash compactor.

TNCC has submitted a requisition to replace three (3) vehicles in its fleet. Two of these vehicles are Ford Fusion Hybrids. Powered by a combination high-voltage electric motor and 2.0L gasoline engine, these vehicles will use less fuel. An additional environmentally friendly aspect of the Fusion is found in the cloth seats, which uses 100% recyclable materials, with the seat cushions and head restraints using bio-based polyurethane foam derived from the oils of various plant seeds, such as soybeans. The third vehicle is a pick-up truck which uses flex-fuel.

TNCC encourages faculty and staff to ride-share when taking a fleet vehicle between the two campuses.

FUTURE:

- TNCC will continue to investigate telecommuting and ride sharing options.

ACTION(S):

- Consider providing preferred parking, reduced fees, or other incentives to promote carpooling and ride-sharing programs for faculty, staff, and students.
- Consider providing an online bulletin board for ride-share postings. Suggestions include a ride-share calendar on SharePoint, when made available, for faculty and staff to access possible ride-sharing between the two campuses.
- Consider expanding the preferred parking spots for low-emission vehicles and scooters.
- Install more bike racks on campus.
- Continue investigating the purchase of low-emitting vehicles for the College fleet.
- Revise TNCC's travel policy to recommend use of fleet vehicles when multiple staff attends a function off-campus.

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.

TNCC is a member of the Sustainability Education & Economic Development (SEED) Center and the American Association of Community Colleges (AACC). Both organizations support environmental sustainability efforts on college campuses across the nation.

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.

The committee will continue the following:

- Investigate innovations in 'greening';
- Generate ideas to optimize resources;
- Suggest steps that might be taken to become more sustainable;
- Increase visibility of TNCC's sustainable practices in the broader community;
- Share best practices and links to resources via a sustainability link on the TNCC website.

ACTION(S):

- 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. The Learning Resources Department recently purchased eighteen (18) Kindle eBook reading devices. These devices can be checked out to anyone in the TNCC community, and are pre-loaded with approximately two dozen books. The use of these devices saves on shelf space, cuts down on the use of paper, and is very cost effective, as the cost of digital books is less than their paper counterpart.

TNCC continues to encourage the use of electronic textbooks (e-texts). From March 2012 to February 2013, Follett Bookstore sold \$12,029 in e-texts.

Learning Resources will purchase four BookScan stations for student, faculty and staff use. The stations are designed so material can be scanned from a flatbed scanner onto a portable hard drive (i.e., flash drive, jump drive, etc.) or emailed to another computer. It is expected these devices will decrease the demand for copy machines in the libraries, thereby reducing the amount of paper, toner, etc., being consumed.

The Virtual Library of Virginia recently signed a licensing agreement with several eBook publishers. This new agreement will allow Thomas Nelson access to thousands of book titles electronically, reducing the amount of hardcopy items purchased.

FUTURE:

TNCC continues 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.

Continue to purchase electronically accessible materials, including books, recorded music and movies.

ACTION(S):

- Continue to enforce guidelines for 'green' requirements in RFPs and IFBs for auxiliary contacts such as vending, food service, custodial and bookstore contracts.
- Continue to enforce guidelines for general operations including buying recycled paper, avoiding disposable materials where possible when meals are served - choose biodegradable or recyclable materials.
- Continue to 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 has initiated GatorNet, the college intranet that allows faculty and staff to access current information and college resources, both on- and off-campus.

TNCC continues to add distance-learning (virtual) classes. Enrollment in distance-learning classes during the spring 2011 term was 855 (8.5% of total enrollment); during the spring 2013 term, a total of 1,059 students or 10.7%.

In collaboration with Information Technology (IT) and our Purchasing Department, the College has saved \$248,000 as it relates to IT purchases (short term/long term costs).

SharePoint continues to be implemented across campus. Administration and their assistants have attended training.

Enrollment Services has implemented an online student orientation program called Gatortation. This permits students to take this required course online instead of coming on campus.

TNCC continues to expand the contract with Shred-It, with additional bins placed on both campuses, for a total of 33 bins. During calendar year 2012, TNCC has saved 141 trees from destruction.

TNCC has created five (5) computer classrooms for the redesigned Developmental Math courses, with 30 thin client computing units in each computer classroom. This setup has saved the College over \$80,000. The thin client computing units utilize less electrical and HVAC energy.

TNCC has implemented an English Lab program. There are two new classrooms with 24 computers, for a savings of \$21,000.

eDOMA is a document sharing application that is used to scan student applications and financial aid applications, using a digital imaging process, thereby saving costs on paper and printing. The information is housed off site and is accessible through the web. The implementation of this application uses cloud technology which provides security and redundancy for disaster recovery purposes.

The Office of Institutional Research and Effectiveness is using WEAVE Online, an externally-hosted cloud application which requires no institutional IT support to maintain. This eliminates the need for servers and storage to house the installation reducing energy costs.

FUTURE:

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

ACTION(S):

The Vice President for Administration and Finance will continue to 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 Hampton-based Green Jobs Alliance (GJA) to conduct energy efficiency programs. Other partners include the Peninsula Council for Workforce Development; Youth Career Cafés; Peninsula Worklink WIA One-Stop System; the Urban League of Hampton Roads; the Office of Human Affairs; Laborers International Union of North America

(LIUNA); and the International Brotherhood of Electrical Workers. New GJA Board members include Old Dominion University, Newport News Shipbuilding, and Dominion Power utility provider.

The TNCC Weatherization Training Center leveraged resources, direct and in-kind, from the Virginia Weatherization Training Center (equipment, curriculum, instructor costs, and VA DMME scholarships); the Hampton Roads Sanitation District (space for conducting the lab portion of classes); City of Hampton (financial services to Green Jobs Alliance); and TNCC WD sponsored Energy and Environment Day with the Leadership Institute of the Virginia Peninsula Chamber of Commerce.

TNCC also integrates programs that can support wind and solar installations such as the 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 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 for college events.

Learning Resources will be changing the print management system currently in use in all libraries and open student computer labs on campus. The new system will still provide for on-campus printing from TNCC computers, but will also provide on-campus printing from student owned laptops and tablet devices.

ACTION(S):

- Continue involvement in regional 'greening' initiatives and groups.
- Seek speakers on energy efficiency for the TNCC community.
- Seek opportunities for industry to use TNCC as a test bed for its 'green' products.
- Broadcast an RFP concerning the purchase of a new print management system.

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