



The Peninsula's Community College

Sustainability at Thomas Nelson
Report of the Sustainability Task Force

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Executive Summary

This report is the annual update (March 2013 – March 2014) 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, Thomas Nelson 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 Thomas Nelson might implement. The results of that survey constitute the majority of this report.

This report addresses the 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 Thomas Nelson 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 Thomas Nelson commits to addressing in the future:

- #1. Research the viability of 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 Thomas Nelson. Efforts are framed by the recommendations identified in the Chancellor's report.

Sustainability has long been practiced at Thomas Nelson and is a consideration in college decision making processes. Thus, Thomas Nelson 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:

BIO 107, Biology of the Environment, was offered during the Spring 2013 and 2014 terms. GOL 105, Physical Geology, introduces local and global content on energy resources, groundwater resources, and land use management.

FUTURE:

- Offer BIO 270 General Ecology again to test its viability.
- Install groundwater monitoring wells on the Hampton and Historic Triangle campuses to be used by students in science courses, specifically Geology.
- Continue to encourage faculty members to infuse environmental sustainability content into courses and to create new courses that focus on environmental sustainability.
- Add sustainability topics to the annual faculty colloquium.

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

CURRENT:

Funds were approved in the FY 2014 budget for professional development, and faculty are encouraged to seek opportunities for professional development, including sustainability.

FUTURE:

- Seek opportunities for professional development, such as faculty internships, at appropriate industry and community locations.
- Invite environmental industries to Thomas Nelson to present hands-on training opportunities for the faculty.
- Continue partnership with College Support Staff Association (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:

Thomas Nelson offers ELE 176, Introduction to Alternative Energy; ENE 120, Solar-Power – Photovoltaic and Thermal; and ELE 178, Wind Turbine Technology.

Workforce Development continues its collaboration with the Green Jobs Alliance; Thomas Nelson holds a seat on the Green Jobs Alliance (GJA) Board. This year classes included: career information with the Environmental Career Center; OSHA classes with Laborers International Union (LIUNA) and weatherization basic with a community center.

FUTURE:

Workforce Development Services 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 Green Jobs Alliance Board will submit a grant proposal to EPA seeking funds for training to clear brownfields in our area and continues to pursue funds to support off-shore wind technology training.

- Workforce Development's weatherization classes will be moved to the Goodwill building in Hampton; lease agreement has been negotiated with VCCS and approval by City of Hampton is scheduled for May 2014.
- The Motorcycle Safety containers will be fitted with solar-powered ventilation fans in 2014.

Facilities

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

CURRENT:

Harrison, Diggs, and Moore Halls on the Hampton campus encompass approximately 60,000 sq.ft. Thomas Nelson's new Six Year Capital Plan includes their replacement. This project is currently in the top 5 list for the Virginia Community College System and is being reviewed by the State Legislature in February 2014 for design funds.

FUTURE:

Continue to adhere to the standards of the Governor's Executive Order 19 which requires conformity to LEED Silver or Green Globes two-globe standards for all future new or renovation projects.

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

CURRENT:

Thomas Nelson continues to ensure a healthy learning and work environment, as noted below.

The Safety Office monitors the hazardous waste management program to ensure the safe and timely removal of all hazardous waste with spot inspections within the Nursing, Dental, Science, and Automotive programs. The Nursing, Dental, and Science programs require disposal of bio-hazards, while the Automotive and Air Conditioning programs recycle/dispose of materials such as oil and Freon.

Thomas Nelson continues utilizing the print management program with Electronic Systems, Inc., which installed multi-functional networked printers. This program continues to be very successful in conserving equipment, paper and energy.

Thomas Nelson's Wellness Center has been expanded for the use of the students, faculty, and staff. The Wellness Center now has open hours every day to allow them to use the fitness equipment and cardio equipment. In addition, two (2) new ellipticals, three (3) new upright bikes, and one (1) recumbent bike have been added to the cardio room. The recumbent bike has been added to meet the needs of students who may have certain

physical disabilities. All of the strength training equipment has also been updated to provide overall better facilities.

Before the end of the academic year, new strength training equipment will be added to the Wellness Center at the Historic Triangle to replace the older equipment and provide better facilities for the students, faculty and staff at that campus.

The College now offers Zumba, two (2) additional online courses (PED 101 and 102), and Yoga II as additional PED courses. Tennis is also offered on campus with sections for the fall and the second 8 week sessions for the spring.

During the annual Spring Fest/Earth Day program held on April 16, 2013, students, staff, and faculty were provided the opportunity to recycle old cell phones, laptops and other electronic projects. The College teamed with Electronics Recycling of Virginia, located in Hampton.

Michelle Alexander, a faculty member in Health, has spearheaded an effort to develop a Student Health Advisory Council. The Student Health Advisory Council works to raise awareness on the health-related issue affecting our students (using our National College Health Assessment data). Through membership in the group, students will learn how to assess the health of the campus and their peers, make recommendations for a healthier campus, and raise awareness of health-related issues on campus. In Spring 2014, the students are focusing on Stress and Stress Management. They are planning information/education booths for the Hampton Spring Fest and the Historic Triangle Community Health Day.

Thomas Nelson continues to encourage the use of video and telephone conferencing, WebEx and webinar meetings.

FUTURE:

- Develop a web page using the College's intranet to share 'green' practices, provide educational tips and best practices, and links to other relevant sustainability sites.
- Continues to ensure a healthy learning and work environment.

ACTION(S):

- 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.
- Investigate the purchase and use of software that automatically powers down computers in off hours.

#6. Establish an effective preventative maintenance program (PMP) for buildings and grounds to optimize levels of energy efficiency.

CURRENT:

Thomas Nelson has in place an automating preventive maintenance (PMP) software program that generates a work order and assigns it to the appropriate staff function. Thomas Nelson is committed to following the State Energy Standards for heating and cooling temperatures.

Thomas Nelson continues in its ongoing commitment to preserve green space and the natural environment.

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.
- Continue to 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 will be done in Griffin/Wythe Halls.
- 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:

In 2014 Thomas Nelson replaced four (4) vehicles in its fleet with Ford Fusion Hybrids. Powered by a combination high-voltage electric motor and 2.0L gasoline engine, these vehicles will use less fuel.

Thomas Nelson continues to encourage faculty and staff to ride-share when taking a fleet vehicle between the two campuses and for travel to conferences.

Thomas Nelson's travel policy was amended to recommend use of fleet vehicles when multiple staff attend functions off-campus.

FUTURE:

Thomas Nelson 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 Office365, 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.

Fiscal and Administrative Operations

#8. Establish a sustainability committee.

CURRENT:

Thomas Nelson 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 Thomas Nelson 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 Thomas Nelson's sustainable practices in the broader community;
- Share best practices and links to resources.

ACTION(S):

- Document and report annually committee progress to the President and the Chancellor.
- 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 continue to be strong on sustainability in part due to the need to conserve resources.

Thomas Nelson continues to encourage the use of electronic textbooks (e-texts). From March 2013 to February 2014, Follett Bookstore sold \$30,545 (approximately) in e-texts. Between March 2012 and February 2013, e-text sales totaled \$12,455.

The procurement office considers cooperative procurements and partnerships to reduce costs. In collaboration with Information Technology (IT) and our Purchasing Department, the College has saved \$387,554 as it relates to IT purchases (short term/long term costs), which equates to an 18% savings. The savings are the result of the Purchasing Department requesting quotes from various vendors.

FUTURE:

Thomas Nelson 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 Requests for Proposals (RFPs) and Invitations for Bids (IFBs) for auxiliary contacts. When possible, IFBs and RFPs for renovation/construction will include a recycling requirement.

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.
- Encourage the use of Google Docs or OneDrive 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:

Thomas Nelson has migrated to Office365, the college intranet that allows faculty and staff to access current information and college resources, both on- and off-campus.

Thomas Nelson continues to add distance-learning (virtual) and hybrid classes. For Fall 2013, there were 5,972 credit enrollments (or 19.0% of the total) for distance-learning classes and 1,135 (3.6%) for hybrid classes. During Fall 2012, there were 5,662 credit enrollments (or 18.0%) for distance-learning classes, and 1,122 (3.5%) for hybrid classes. Fall 2012 enrollment, there were 5,662 credit enrollments (or 18.0%) for distance-learning classes, and 1,122 (3.6%) for hybrid classes.

Learning Resources has purchased 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. These devices will decrease the demand for copy machines in the libraries, thereby reducing the amount of paper, toner, etc., being consumed.

Learning Resources replaced its current print management system with a Cloud-based system that allows users to print from anywhere and from any kind of device, including cell phones and tablet computers. These devices do not have to be the property of Thomas Nelson. This allows students to freely use their own devices on campus. As there are no annual licensing fees and the vendor will provide the needed consumables, the Library will reduce its paper purchases. The way in which printing will be controlled by the new management system will further prevent excessive waste.

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

Thomas Nelson continues to expand the contract with Shred-It, with additional bins placed on both campuses, for a total of 33 bins. During calendar year 2013-14, Thomas Nelson has saved 184 trees from destruction. The material collected by Shred-It is then recycled into other products, which helps the environment.

FUTURE:

- Continue to establish more distance-learning classes.
- Host a paper recycling event on campus by partnering with Shred-It, and open this event to the College community.
- Continue to explore additional ways the academy and the administration can conserve resources.

Thomas Nelson is designing an Emporium in Diggs Hall to contain 80 thin client computing units for the redesigned Developmental Math courses, to be operational in Fall 2014. The thin client computing units will utilize less electrical and HVAC energy.

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:

Thomas Nelson's GreenStation Project was funded by Dominion Power with a grant of \$35,000. This project was awarded to Tom Pringle (Computer Aided Design Faculty) and integrated faculty from the Engineering and Technology programs. The final product was a 10-foot trailer that houses batteries and solar panels, providing up to 200 watts of AC power. A central aspect of the design for the GreenStation is its portability. The station can be moved across campus with a golf-cart and thus provide electrical power to outdoor activities on campus. The station has been included in the Thomas Nelson Emergency Response Plan. So far, the GreenStation has been used as a training aid for students in the Automotive program, Alternative Energy classes, CADD program, and Electrical classes, impacting up to 150 students each semester. The project is easily reproduced and therefore a viable test-bed project.

The Thomas Nelson Science Program hosts public lectures each semester, inviting scientists to provide our students with a better understanding of careers in science and the impact of these careers on environmental sustainability, natural resource management, and energy resources. To date, invited lecturers include scientists from local environmental consulting

companies, Exxon-Mobile, and NASA, as well as local and state government agencies.

FUTURE:

Thomas Nelson 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. Thomas Nelson will also seek strong speakers on sustainability and best practices for college events.

ACTION(S):

- Continue involvement in regional 'greening' initiatives and groups.
- Continue speakers on energy efficiency for the Thomas Nelson community.
- Seek opportunities for industry to use Thomas Nelson as a test bed for its sustainable products and practices.

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