



The Peninsula's Community College

**Sustainability at Thomas Nelson**

**Report of the Sustainability Task Force**

**May 8, 2015**

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## Executive Summary

This report is the annual update (March 2014 – March 2015) 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, 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 2014 and 2015 terms. GOL 105, Physical Geology, introduces local and global content on energy resources, groundwater resources, and land use management.

Installed groundwater monitoring well on the Hampton campus.

##### **FUTURE:**

- Offer BIO 270 General Ecology again to test its viability.
- Install groundwater monitoring well on the Historic Triangle campus 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 provided in the FY 2015 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.

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 at the Peninsula Workforce Development Center (PWDC) 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 continues to pursue funds to support off-shore wind technology and other training for "green" jobs.
- Workforce Development's weatherization components were moved to the Center for Building & Construction Trades in Hampton; lease agreement has been signed by Thomas Nelson and Goodwill Industries. The City of Hampton has approved a major facility retrofit that started in summer 2014. The certificate of occupancy was issued on March 20, 2015.
- The Motorcycle Safety containers were 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.

The College has established a program to conserve water by installing water bottle fill stations. Installation of these stations has begun, starting in areas most frequented by students on both campuses.

**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. VCCS is in the process of creating a more cost efficient standard.

Water bottle fill stations will be installed in all high use buildings to conserve water.

**#5. Maintain 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 at both campuses has been expanded for the use of the students, faculty, and staff. The Wellness Center continues to be open 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.

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

The College's Natural Science and Engineering Club conducted awareness activities at Spring Fest and Earth Day. During the College's Open House and Spring Fest, reusable water bottles were distributed to faculty, staff and students who completed a storm water pollution survey; 178 surveys were completed and additional pollution information packets were distributed. The College has established a new hot link on the College webpage ([www.tncc.edu/thinkgreen/](http://www.tncc.edu/thinkgreen/)) to promote and share "green" practices, and links to other relevant sustainability sites.

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 focused 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:**

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. Maintain 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.

The College renovated four bathrooms (2 in Griffin Hall and 2 in Wythe Hall); replacing standard plumbing fixtures with waterless or low-flush fixtures and proximity-sensitive faucets.

**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 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. The average miles per gallon is now 41.

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.

Preferred parking has now been established at the Hampton III building. Other considerations include; reduced fees, or other incentive to promote carpooling and ride-sharing programs for faculty, staff, and students.

**FUTURE:**

Survey other VCCS colleges concerning their efforts and initiatives regarding ride-share and telecommuting options.

**ACTION(S):**

- 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. Maintain 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 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). Totals sales from the past two academic years are shown below:

2013-2014	\$30,376
2014-2015	\$43,223

The procurement office considers cooperative procurements and partnerships to reduce costs. There is an increased use in paying via credit cards, which precludes the need to print and mail checks.

**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.

Edoma digital imaging system encompasses all of Student Enrollment, Financial Aid and TRIO's past and present records. The Edoma software scans paper documents to create an electronic image, and index documents to allow for electronic storage that is web based within a secure cloud software platform, review and/or print if needed.

Thomas Nelson continues to add distance-learning (virtual) and hybrid classes. Comparison numbers and percentages for the 2013 and 2014 fall terms are shown below:

	Distance		Hybrid	
	Number	Percent	Number	Percent
<b>Fall 2013</b>	5,969	19.0%	1,134	3.6%
<b>Fall 2014</b>	5,940	19.8%	1,040	3.5%

Learning Resources has purchased four (4) 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.

Wireless Everywhere Print Anywhere (WEPA), is a Cloud-based print management system adopted by Thomas Nelson. The system allows students to print from personal devices including cell phones and tablets as well as Thomas Nelson computers. In 2014, Thomas Nelson students printed over 220,000 prints. The cost to Thomas Nelson to print these documents was zero (0). WEPA provides the printer and toner. WEPA has proved to be very cost effective for the College, convenient for students, and has considerably reduced the amount of wasted paper.

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 47 bins. Between April 2014 and March 2015, Thomas Nelson has saved 177 trees from destruction. The material collected by Shred-It is then recycled into other products, which helps the environment.

SharePoint software was implemented in phases for each Department in creation of the GatorNet Intranet Site, which has been migrated from SharePoint 2010 to a cloud web based application. SharePoint 2013 is a browser based collaboration and document management platform from Microsoft. It is used to host web sites that access shared workspaces and documents, as well as specialized applications like wikis and blogs from a browser.

Thomas Nelson created a Math Emporium in Diggs Hall with 80 thin client computing units for the redesigned Developmental Math courses, which opened in Fall 2014. The thin client computing units utilize less electrical and HVAC energy.

**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.
- The Director of Learning Resources has been in discussions with all Division Deans, the Vice Presidents of Academic Affairs and the Vice President of Finance and Administration concerning feasibility and advantages of expanding WEPA beyond Learning Resources. These discussions are ongoing.
- All student historical paper documentation will be stored in Edoma.

- The goals of file management is to manage and integrate content data access with new trends in Social Media Web based application software to access documents and files on and off campus.

**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.
- Expand WEPA beyond the Learning Resources Centers, including the Historic Triangle campus. Sell WEPA pre-loaded print cards through the campus bookstores for students who do not have credit cards.
- Enrollment Services is in the last phase of transferring merged student paper documents into electronic documents. Continue scanning paper documents into Edoma for storage and recall.
- Continue training members of the Thomas Nelson community to develop their own sites within SharePoint and become proficient in managing applicable content.

**#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 Computer Aided Design Program 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.