



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 2017 – March 2018) 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 Virginia Energy Conservation and Environmental Standards (VEES) standards.
 - #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.

- 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.

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:

- Through the generosity of Dominion Energy, Langley Federal Credit Union, and the Thomas Nelson Community College Education Foundation Innovator Grants, the College purchased a brand new boat christened the *R/V Investigator* (R/V means Research Vessel) to be utilized by the Science program, primarily the Oceanography and Geology classes. The vessel is a 24' Carolina Skiff capable of taking 12 students out into our local rivers, bays, and creeks. It is equipped with tools for students to collect plankton and water samples, measure water chemistry, extract and study bottom sediment samples, and trawl for organisms that live on and near the bottom of the water. The maiden voyage was April 5, 2018, with plans for field trips each week until the end of the Spring 18 semester, weather permitting. During the Summer 18 term, students participating in the summer Oceanography class will participate in a project to learn about sedimentation rates and ancient climate recorded in a creek that starts in Williamsburg and flows into the York River (Queen Creek), the James River, and the Chesapeake Bay.

FUTURE:

- Offer BIO 270 General Ecology again.
- 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.
- Continue planning Science field trips using the *R/V Investigator* to allow students to experience studying marine ecosystems within the Tidewater region.
- Continue pursuing the feasibility of installing a groundwater monitoring well on the Historic Triangle campus to be used by students in science courses, specifically Geology

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

CURRENT:

Professional Development funds are budgeted annually for all faculty/disciplines. It is

incumbent upon each faculty member to investigate and submit to their respective Dean on how sustainability can be introduced and support the mission of the college.

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:

- Workforce Development continues to expand its program offerings. Some examples include:
 - The Marine Electrician Trainee: The Deck Electrician Trainee Program, a joint partnership between Newport News Shipbuilding, a division of Huntington Ingalls Industries, Workforce Development and several local Virginia Community Colleges, provides a candidate with the unique opportunity to build a career in shipbuilding. Trainees are prepared to perform the basic deck electrician skills necessary to work safely in a shipyard industrial environment. Trainees learn and practice basic electrical skills including understanding electrical terminology/principles, workplace safety, electrical safety, hand and power tools, wire ways, cable preparation, and electrical and equipment hook-ups. All candidates complete a Newport News Shipbuilding job application. If selected, they complete work keys testing and have an interview. Offers of employment will be given to those candidates selected to participate in this program. The offer includes several contingencies including drug screening and physical and background checks. Once the candidate has cleared the drug screen and physical they will be accepted in to the program. The training program will be for two (2) weeks from 7 a.m. to 3:30 p.m., Monday - Friday. Selected candidates complete the College's enrollment process and pay a \$250 tuition fee to the community college where the training will take place. Upon completion, along with meeting all other contingencies previously mentioned, the candidate will be given a start-to-work date through Newport News Shipbuilding. Once the employee starts to work, they will be reimbursed the \$250 (subject to tax withholding) by Newport News Shipbuilding.
 - Broadband Fiber Optic Technician: The Fiber Optic Association approved and U.S. Department of Labor recognized training course is appropriate for anyone interested in pursuing professional certification in Fiber Optics (CFOT) and Premises Cabling

- (CPCT). Presentations will consist of virtual classroom and hands on training. Ideal for IT related personnel, Premise Cabling Techs, Network Designers Fiber Optic Splicers and Technicians. Course topics include: Premise Cabling, UTP Cables, Termination 66 and 110 Blocks, VHO Coax, Terms, Plugs, UTP Testing, Scattering and Absorption, Dispersion, Laser Tube vs Tight Buffer, Fiber Types, Mode Field Diameters, Optical Fiber Parameters, Frequency and Optical Network and Safety.
- Computer Numerical Controlled Machinist (CNC): A CNC machinist is trained to maintain, operate and program machines used to shape, cut and bend metal parts. Coursework includes computer-aided design, operating and programming of lathes and milling equipment, blueprint reading and projects. The training emphasizes theory with extensive hands-on experience. Students will learn how to use precision instruments to set up and check work, interpret modern engineering drawing, safety rules and guidelines, program project and troubleshoot programs, how to accurately set-up the machinery, and how to use Computer Assisted Design (CAD) software. Successful applicants can also receive a nationally recognized certification from the National Institute for Metalworking Skills (NIMS).
 - The Marine Welder trainee program, a joint partnership between Newport News Shipbuilding, a division of Huntington Ingalls Industries, Workforce Development and several local Virginia Community Colleges, provides a candidate with the unique opportunity to build a career in shipbuilding. The course is three (3) weeks (120 hours) long, designed to prepare candidates to enter the welding school program at NNS. The course covers safety, an introduction to welding and welding skills, a validation of basic welder competencies, and an evaluation of employability skills. This program is designed to be 90% hands-on, focusing on a candidate's ability to follow verbal and written instruction, display manual dexterity consistent with the welding craft, accomplish specific tasks in a reasonable time, and perform all activities in a safe manner. All candidates are required to complete a Newport News Shipbuilding job application. Selected candidates complete work keys testing, and have an interview. Offers of employment will be given to those candidates selected to participate in this program. The offer will include several contingencies including drug screen and physical and background checks. Once the candidate has cleared the drug screen and physical, they will be accepted in to the program. The training program will be for three (3) weeks from 7 am to 3:30 pm, Monday - Friday. If selected, the candidate completes the College's enrollment process and pays a \$250 tuition fee to the community college where the training will take place. Upon completion, along with meeting all other contingencies previously mentioned, the candidate will be given a start-to-work date through Newport News Shipbuilding and hired as a Structural Welder. Once the employee starts to work, they will be reimbursed the \$250 (subject to tax withholding) by Newport News Shipbuilding

FUTURE:

- Plumbing. In response to industry needs Thomas Nelson Workforce Development is well on its way to developing a nationally certified Plumbing program utilizing the curriculum from the National Center for Construction Education and Research

(NCCER). The program will include a basic plumbing course as well as levels 1-4 which can qualify for apprenticeship. The plumbing program received unanimous support from Workforce Corporate Advisors Board. The Plumbing program has been submitted to VCCS for final approval to qualify for Fast Forward Funding in the future.

Facilities

#4. Conform to Virginia Energy Conservation and Environmental Standards (VEES) standards.

CURRENT:

- Replacement of Harrison, Diggs, and Moore Halls on the Hampton campus remains on Thomas Nelson's new Six-Year Capital Plan. This project remains in the top 5 list for the Virginia's Community Colleges. The 2016 General Assembly approved detailed planning funds for the replacement building for the Diggs/Moore/Harrison Hall. Interviews with A&E firms were conducted March 22, 2017; a finalist will be selected by the VCCS.

FUTURE:

- Adhere to the standards of the VEES, which encourages superior performance through environmental management systems and pollution prevention.
- Work with Hampton Roads Transit to extend bus routes between Hampton and Williamsburg to provide better options for students depending on public transportation.

Fiscal and Administrative Operations

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

CURRENT:

- Thomas Nelson has transitioned to the Shared Services Center. The benefits of this centralized system include:
 - Focus campus-based staff and management on core mission and higher value activities
 - Provide higher levels of service through process improvement
 - Deliver cost savings through:
 - Greater efficiencies
 - Reduction of manual efforts
 - Reduced errors
 - Leveraging of scale
 - Greater automation

- With the Fall 2017 term, Thomas Nelson introduced the IncludED program. This program delivers all required courses, both print and digital, to students as part of their tuition. The program facilitates delivery of digital course materials by auto-enrolling students into their digital content; however, if the student prefers not receive the digital material, there is an opt-out function and the student can purchase hardcopy materials. The following courses have utilized the IncludED program:
 - ACC 211 – Principles of Accounting I
 - ADJ 236 – Principles of Criminal Investigation
 - BIO 101 – General Biology I
 - BIO 102 – General Biology II
 - BIO 141 – Human Anatomy and Physiology I
 - BIO 142 - Human Anatomy and Physiology II
 - BUS 100 – Introduction to Business
 - BUS 200 – Principles of Management
 - CHM 101 – General Chemistry I
 - CHM 110 – Survey of Chemistry
 - CHM 111 – College Chemistry I
 - CHM 241 – Organic Chemistry I
 - CST 100 – Principles of Public Speaking
 - CST 126 – Interpersonal Communications
 - ELE 156 – Electrical Control Systems
 - ENF 2 – Preparing for College English I
 - HLT 138 – Principles of Nutrition
 - HLT 200 – Human Sexuality
 - HLT 230 – Principles of Nutrition and Human Development
 - MKT 100 – Principles of Marketing
 - MKT 110 – Principles of Selling
 - MKT 229 – Marketing Research
 - MKT 271 – Consumer Behavior
 - SOC 200 – Principles of Sociology
 - SOC 215 – Sociology of the Family
- Textbook sales and rentals for the Academic Year 2017 through 2018 indicate a total savings of \$1,632,912 for students. The total breaks down as follows:
 - Used books: \$50,911
 - OER (includes digital books and website): \$827,389
 - Renting textbooks: \$67,055
 - IncludED program: \$687,557

	AY 2016-2017	AY 2017-2018
Used books	\$85,418	\$50,911
OER	\$13,171	\$827,389
Rental	\$335,320	\$67,055
IncludED		\$687,557
Total Savings	\$433,909	\$1.632,912

FUTURE:

Thomas Nelson will continue to expand the use of etextbooks in AY 2018-2019.

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 to reduce printed materials.
- 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:

- Staff and faculty regularly receive the electronic CommonHealth newsletter, promoting a healthy lifestyle. A link to the CommonHealth site is available through the Human Resources homepage on the College's website.
- Thomas Nelson continues in its efforts to recycle paper and CDs. The College utilizes the services of ProShred CVA. For the period of this report, 55,480 pounds of material were collected; this equates to 27.74 tons processed. This translates to:

Quantity	Which Translates To	Financial Value
472	Trees Saved	\$118,000.00
194,180	Gallons of Water Saved	\$873.81
113,734	Kw of Energy Saved	\$9,098.72
1,664	Pounds of Pollutants Kept Out of Atmosphere	\$8,320.00
139	Cubic Yards of Landfill Saved	\$6,950.00
		\$143,242.53

- In January 2014, Thomas Nelson implemented the WEPA printing system for student printing within the libraries. WEPA provides monthly reports, allowing the College to track the number of pages printed by Thomas Nelson students and their printing preferences. Students can print in black & white or full-color, and 2-sided or single sided. Printing requests can be made from personal mobile devices such as a cellular phone, laptop or tablet computer or from traditional desktop computers located throughout the libraries. According to WEPA statistics, in 2017 students printed 182,436 prints using 153,185 pages of paper. Per page cost for black & white printing is 10-cents and color printing is 50-cents. If duplexing, students receive a 50% discount on the second page, thereby encouraging students to print more efficiently. In terms of profits to the College, Thomas Nelson receives a 10% profit on each pages printed. This profit is minimal, amounting to 1-5 cents per print.

FUTURE:

- Continue to establish more distance-learning classes.
- Continue to explore additional ways the academy and the administration can conserve resources.
- A suggestion has been made to place additional WEPA machines across the Hampton campus. Locations for these machines must comply with fire code and ADA regulations. Additionally, a review by the VCCS Capital Outlay Facility Management may be needed.
- The goal 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.
- Continue training members of the Thomas Nelson community to develop their own sites within SharePoint and become proficient in managing applicable content.