

Sustainability Implementation Plan Progress Report

October 2017

Cuyahoga Community College




Sustainability Implementation Plan Progress

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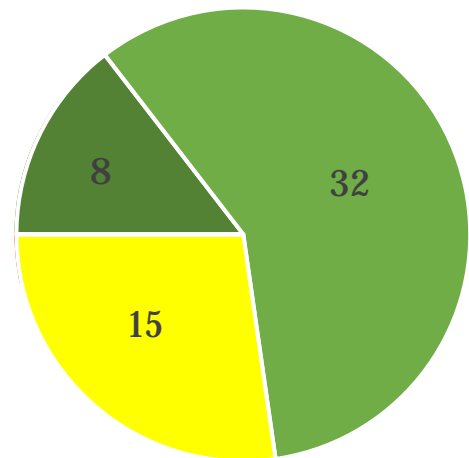
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Progress Report Overview

The work described in this progress report highlights some of the efforts that have helped Tri-C make progress toward the goals from our Sustainability Plan through strategies identified in our [Sustainability Implementation Plan](#) of 2014 (SIP). 

The SIP identifies 55 strategies, and as of the end of the 2017 fiscal year, progress has been made on all 55 strategies, with 40 of the 55 having made substantial progress or reached completion. Tri-C is moving toward the Sustainability Plan’s goals by utilizing the strategies identified in the SIP. Progress is broken out by goal category from Tri-C’s Sustainability Plan.

SIP Strategies Progress Summary



- Substantially Complete
- Significant Progress
- Progress Made
- Limited Progress

Academics and Workforce Training

Sustainability Resources for the Classroom

A critical aspect of getting the sustainability message out within the Tri-C community is that true sustainability requires social and economic systems to be in balance with the environment, and thus, sustainability connects with everyone. Developing an understanding that sustainability is about more than just the environment and that social, economic, and environmental systems interact with and effect one another in all aspects of life is the ultimate goal of academic sustainability efforts.

Sustainability resources available to faculty continue to become more robust. Additional information added to the Academic Sustainability Resources page of Tri-C's internal [Knowledge Web \(KWeb\) Sustainability page](#) helps communicate local examples of sustainability and sustainability resources available to faculty. Four faculty development sessions covering an overview of the concept of sustainability and resources available to faculty were held throughout the year, in addition to the faculty sustainability panel at Colloquium.

Classroom Sustainability Presentations and Activities

Sustainability information was brought directly to classrooms as well, with 17 class presentations, discussions, or activities taking place in the 2016-2017 academic year. These visits were to First Year Experience seminar classes as well as in subjects including Biology, Humanities, Accounting, English, Interior Design, Health, and English as a Second Language. All these classroom visits included reusable water bottle giveaways to students in attendance in the hope of encouraging reuse, saving students money, and reducing waste. While many of these classroom visits were presentations and discussions about sustainability, systems thinking, and understanding connections between social, economic, and environmental systems, one class participated in a hands-on activity demonstrating these connections.

An Intro to Humanities class taught by Assistant Professor Brad Lipinski looked at food systems and how food availability differs in different communities. To demonstrate food system connections between a variety of factors in social economic, and environmental systems, students created a yarn web showing the connections between factors such as: food availability; transportation options; food cost; food quality/nutrition; health and wellness, pollution, and food waste among others. Students stood in a circle and each had a factor related to food systems, and they explained the connection between their factor and the previous factor. The result of the activity was a visual representation of the connections between many factors in a food system, and that making a change in one area will likely have effects on a variety of different areas.



Assistant Professor Brad Lipinski (front left) with his Intro to Humanities class during the food system yarn web activity.

Academics and Workforce Training

Earth Day Events and Student Involvement

Events and presentations took place at several campuses in April in celebration of Earth Day. At Western Campus, English as a Second Language students researched and presented information about a variety of environmental issues and how these issues effect quality of life in their of communities, and Philosophy students participated in an environmental ethics debate. Eastern Campus students participated in a “Poetry and Prose” reading of environmental writings, with some students sharing their own original work. At Metro Campus, Honors Speech Communications students performed a reading of a sustainability-themed play written by a local playwright, and the College hosted presentations about the benefits of a vegetarian diet, connections between environmental pollution and public health in the Cleveland area, and from a local urban farm and education center.



English as a Second Language students with their sustainability-themed research project.



Honors Speech Communications students performing a public reading of a sustainability-themed play written by a local playwright as part of Earth Week celebrations at Tri-C.

Faculty Colloquium Sustainability Panel

As part of the Faculty Colloquium in January 2017, English as a Second Language professor Sara Clark, Speech Communications professor Derrick Williams, Humanities professor Brad Lipinski, and Business Administration professor Johnie Reed shared a broad range of approaches to bringing sustainability to their classes.

- Numerous classes taught by Sara Clark have researched and presented projects focused on either recycling or sustainability as a way of improving both written and oral communications in English.
- Derrick Williams created an assignment in which students prepared and delivered a persuasive speech about the Flint Michigan water crisis. The students learned about environmental issues related to water in the Cleveland area to help them make personal connections between their own environmental histories and those of the people of Flint, exposing them to new ways of thinking about connections between environmental issues and human needs.
- Brad Lipinski’s Intro to Humanities students discussed how food availability differs in different communities by participating in a hands-on yarn web activity exploring connections between social, economic, and environmental factors related to food systems.
- Several of Johnie Reed’s Business Administration classes have work on projects focused on recycling and energy efficiency from a business perspective.

Academics and Workforce Training

Faculty Leadership in Sustainability Award

Tri-C created the *Faculty Leadership in Sustainability Award* to recognize faculty who have demonstrated leadership by incorporating sustainability in their curriculum to help students understand the basic concepts of sustainability and effectively communicate those concepts to others in the community.

The 2017 winner of the *Faculty Leadership in Sustainability Award* was Dr. Henry Young, Associate Professor of Speech Communications at the Metropolitan Campus. A class of Dr. Young's students performed a dramatic reading of an original sustainability-themed play titled "Dr. Greenfield's Final Green Exam" on the Main Stage Theater during Earth Week at Metro Campus. The play, written by award-winning local playwright and City of Cleveland Arts and Culture Coordinator Cornell Calhoun III, focused on sustainability efforts at Tri-C and in the City of Cleveland. The performance was open to the public, and audience members included members of the Tri-C community, family members and friends of performers, and a number of City of Cleveland employees. Additionally, the City of Cleveland filmed the play for a later broadcast on TV20.

Dr. Young's Speech Communications students learned about sustainability efforts at Tri-C and in the City of Cleveland in a creative way while participating in the assignment. The partnership also strengthened connections between Tri-C and the City of Cleveland.

2017 was the fourth time Dr. Young and Mr. Calhoun have collaborated on this assignment, with the play having been updated several times to incorporate changing sustainability efforts. In addition to the sustainability play, some of Dr. Young's past classes have researched and delivered environmental-themed persuasive speeches, and Dr. Young has been involved with the Metro Campus Environmental and Recycling Committee for over 8 years.



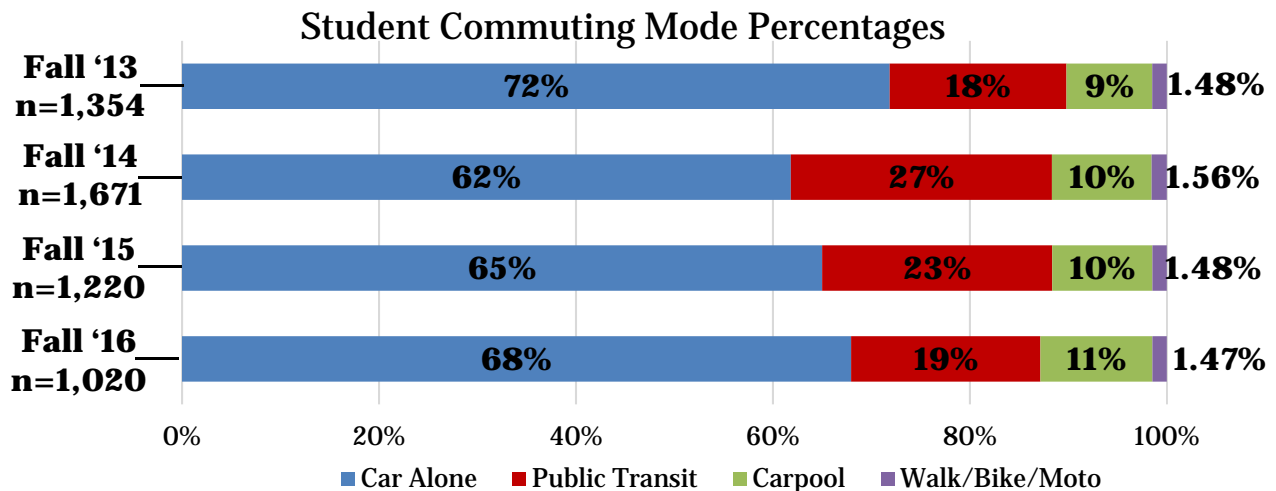
Dr. Henry Young with the *Faculty Leadership in Sustainability Award* and the *Excellence in Teaching Award in Honor of Ralph M. Besse*.

Energy, Climate, and Transportation

The Beneficial Impacts of RTA U-Pass on Student Commuting

Tri-C's free RTA U-Pass program for paid, credit students continues to help students get to campus using public transit, saving money and reducing pollution. Results of a student commuting survey in fall 2016 show an increase in student use of public transit to get to and from Tri-C compared to a similar survey in fall 2013 (just before the RTA U-Pass program began). However, the results of the fall 2016 student commuting survey show lower public transit use than a similar surveys in fall 2014 and 2015. Fall 2016 survey results compared to fall 2013 indicated the following changes:

- 1.3% increase in the percentage of students responding that their primary mode of commuting was public transit.
- 2.7% increase in the percentage of students carpooling.
- 4% decrease in the percentage of students responding that they primarily drive to campus alone.



One factor possibly contributing to the lower rate of public transit responses since fall 2014 is the price of gasoline, which has fallen significantly from the fall of 2014 to the fall of 2016. Despite the lower percentage of public transit responses, it is still estimated that the fall 2016 responses indicate an annual total increase of student public transit ridership of over 930,000 passenger miles compared to the fall 2014 results.

Tri-C's RTA U-Pass program remains an excellent example of sustainability due to the positive results it produces from economic, social, and environmental systems perspectives: in addition to meaningfully improving student accessibility to Tri-C (social benefit) by removing a financial barrier (economic benefit), Tri-C's U-Pass program also significantly reduces environmental impacts of student commuting (environmental benefit).

Student commuting surveys will continue annually in fall semesters to provide ongoing data on student commuting preferences.

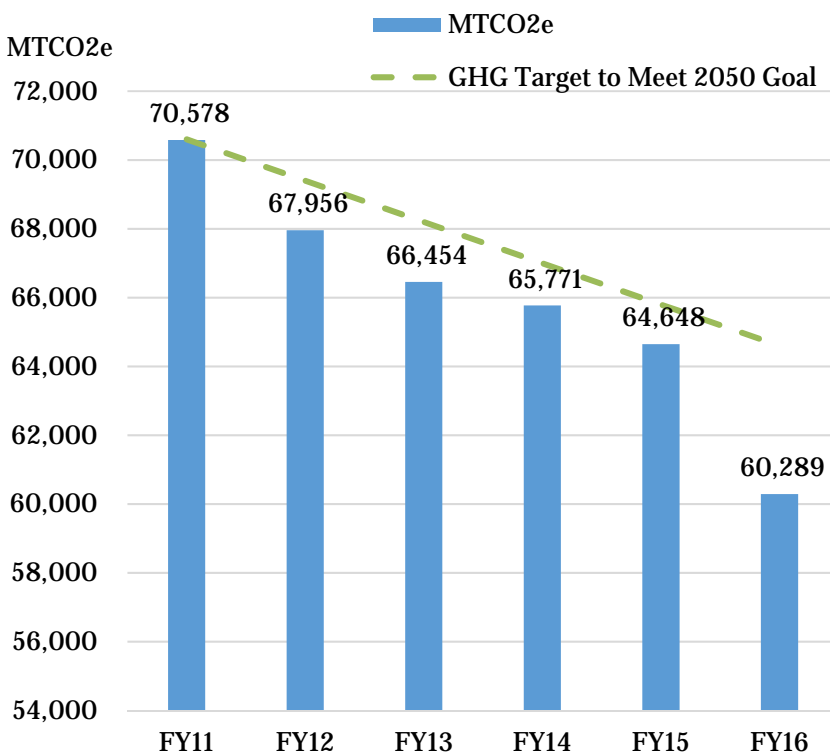
Energy, Climate, and Transportation

Greenhouse Gas Reduction

Cuyahoga Community College has been tracking annual greenhouse gas (GHG) emissions since the 2011 fiscal year to estimate and assess our College-wide operational impacts on the environment. Tri-C uses the Campus Carbon Calculator spreadsheet (a widely-used tool for colleges and universities) to estimate GHG generation based on inputs including: energy use; student, faculty, and staff commuting; solid waste generation; and

paper purchasing, among others. GHG emissions are measured in “metric tons of carbon dioxide equivalent” (MTCO₂e), the international standard for such measurements. Based on the time it takes to collect the data needed to calculate GHG emissions, the reporting time lags by several months after the fiscal year has ended and the information below is about FY16 GHG emissions.

Tri-C's GHG Trend, FY11 - FY16



Tri-C's FY16 GHG total was 60,289 MTCO₂e, down almost 7% from FY15 and down nearly 15% from the original FY11 total of 70,578 MTCO₂e. This decrease in GHG output keeps the College on pace for meeting our long term goal of becoming carbon neutral by 2050. The most significant changes leading to the FY16 reduction were from decreases in utility use compared to FY15. Improvements to energy efficiency and a milder winter in FY16 than FY15 resulted in significantly less natural gas use in FY16, while improved energy efficiency led to less electricity use despite a warmer summer. Emissions from student commuting fell as well, but much of this reduction was from a smaller student population.

Tri-C will continue to inventory GHG emissions annually to track our progress toward the carbon neutrality goal of 2050. The College recognizes that reaching true carbon neutrality will be a challenge, if not impossible given current technologies. However, we will continue to improve efficiencies and monitor ways to reduce environmental impacts while knowing some larger-scope societal changes will be a critical factor in allowing us to reach carbon neutrality.

Recycling and Waste Reduction

Waste Reduction, Diversion, and Recycling

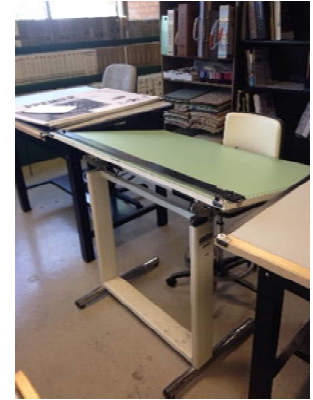
Continued efforts to reduce and divert waste and optimize dumpster hauling schedules have saved the College money on waste hauling costs, reduced the total waste produced, and increased waste diversion. Tri-C's overall waste diversion rate increased to nearly 41% in FY17 from 38% in FY16, helping us move toward our goal of 50% waste diversion by 2025.



Mixed recycling is collected at all Tri-C campuses and locations.



Scrap metal is collected for recycling at all Tri-C locations.



Old drafting tables that were no longer needed were donated to the Cleveland Municipal School District.

Key programs contributing to this increased diversion in FY17 include:

- The donation of old tables and chairs no longer needed by Tri-C to Cleveland Municipal School District. The tables and chairs were from the Metro Campus Center building before the Campus Center renovation project began.
- Nearly 75 tons of shredded paper recycled.
- The reuse of an estimated 75 tons of ground up asphalt from repaving roadways at Western Campus to improve access to a Grounds Maintenance storage area.
- Recycling of over 10 tons of scrap metal, over 11 tons of electronic waste, 12 tons of computer backup batteries.
- Composting of over 6 tons of food waste from the Hospitality Management Center, Eastern Campus, and Corporate College East.



Food waste being collected for composting at the Eastern Campus cafeteria



Eastern Campus Library employees with books set aside to be donated for reuse or recycling.

Green Buildings and Grounds

Metro Campus Center Renovation & Repurposing of Furniture

The renovation of the Metropolitan Campus Center building began in FY17, with LEED Silver certification from the US Green Building Council (USGBC) as one of the goals of the renovation. The LEED® (Leadership in Energy and Environmental Design) Green Building Rating System is the national benchmark for the design, construction and operation of high-performance green buildings, and provides a framework of requirements and options to improve the health and performance of new construction and major renovation projects. Like the four other LEED certifications Tri-C has achieved in recent years, the renovated Metro Campus Center will provide a healthy indoor environment, be energy efficient, take advantage of daylight, reduce storm water run-off, be frugal with water resources, and enhance student life on the Metro Campus.

Prior to the start of the renovation, Tri-C donated several large truckloads of tables and chairs no longer of use to the College to Cleveland Municipal School District for reuse. With the renovation now underway, LEED efforts have focused on training contractors about documentation and procedural requirements, collecting necessary documentation related to waste diversion, drafting green building education plans, and creating a recycling and waste handling plan for the building. As the Metro Campus Center project continues into FY18, additional documentation and planning work will take place as the project moves toward completion and its expected LEED certification.



Above: Construction progress on the Metropolitan Campus Center and courtyard in summer 2017

Right: A rendering of what the renovated Metropolitan Campus Center will look like from East 30th Street



Green Buildings and Grounds

Water Bottle Filling Stations

Tri-C Sustainability purchased several water bottle filling stations to retrofit or replace existing water fountains and give members of the Tri-C community an easier way to refill bottles or cups. The bottle filling stations have been installed at Western, Metro, Eastern, and Westshore Campuses. The goals of these stations are:

1. Save people money by reducing the need to buy bottled drinks;
2. Reduce waste generated by the purchase of bottled drinks.

Tri-C Sustainability hopes to support the additional rollout of more bottle filling stations to additional locations in the future. Tri-C is also giving reusable water bottles to students who participate in sustainability activities or class presentations in another effort to meet the goals mentioned above.



Employees install a water bottle filling station at the Eastern Campus

Ionized Water Cleaning Systems and Chemical Use Reduction

In FY15, Tri-C installed water ionizing systems at several campuses to replace a variety of cleaning products with solutions that clean and disinfect but only require water, salt, and electricity. Comparing cleaning product use in FY17 to that of FY14 (before the ionized water cleaning systems were installed), Tri-C used 46% fewer ounces of general cleaning chemicals and 60% fewer floor care products, for a total reduction of 56% fewer ounces of cleaning products.



Building Services worker Cornell Murray with the ionized water treatment system at the Eastern Campus

Water electrolysis creates a cleaning solution and a one-step cleaner-disinfectant which can then be used for a variety of cleaning tasks. These solutions displace more traditional cleaning products and save money and reduce exposure to chemicals and fragrances found in some cleaning products. The shift to ionized water for cleaning builds on Tri-C's commitment to move toward more environmentally healthy cleaning products that can clean as well as (or better than) the products they are replacing.

Sustainable Procurement

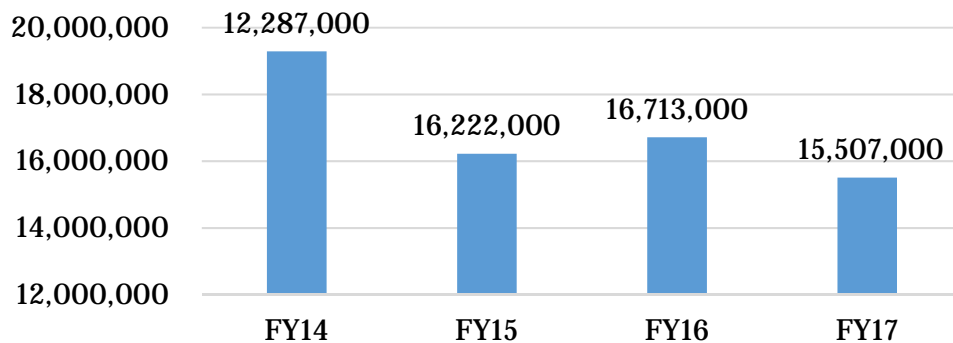
Paper Purchasing Reduction

Electronic information access through tools such as Blackboard (for students) and Knowledge Web (KWeb – for employees), along with departmental process changes to move to electronic records rather than printed records have allowed Tri-C to reduce the amount of paper purchased and used. FY17 paper purchases were down over 7% compared to FY16, and down nearly 20% compared to FY14.

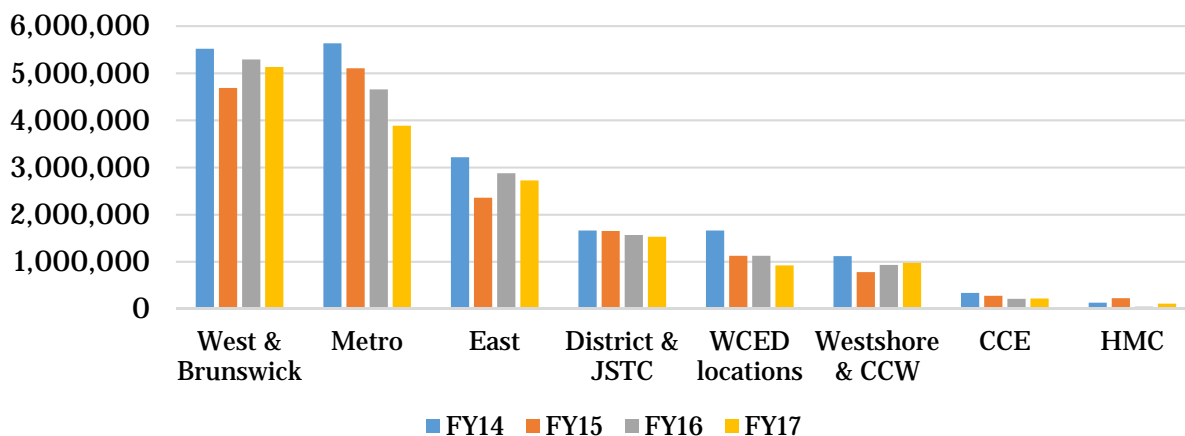
With Tri-C’s educational mission, there are still many needs for printing and Tri-C uses a lot of paper, but paper use has declined significantly. In FY14, Tri-C ordered nearly 19.3 million sheets of paper, but orders fell to 16.7 million sheets by FY16 and to 15.5 million sheets in FY17. The nearly 3.8 million fewer sheets ordered in FY17 compared to FY14 is equivalent to a n annual savings of over \$26,000 on paper orders.

Tri-C will continue to share best practices and examples of paper reduction success to continue the downward trend in paper ordering.

Total Sheets of Paper Ordered per Fiscal Year



Total Sheets of Paper Ordered by Location per Fiscal Year



Communications and Community

Sustainable Cleveland Involvement

Tri-C remains an active supporter of and participant in the City of Cleveland's Sustainable Cleveland 2019 initiative. In the last year, Tri-C remained active in the Sustainable Cleveland Summit, the Mayor's Stewardship Council, and the Zero Waste NEO working group. These connections help both Tri-C and the City of Cleveland work toward common sustainability goals and support each other's unique programs, such as Professor Henry Young's Earth Day play reading in partnership with the City of Cleveland and the Mayor's Office of Sustainability.



Tri-C's Earth Balloon served as a relevant prop for at the 2014 Sustainable Cleveland Summit.

Photo by William C. Rieter, City of Cleveland

Bike Share Station at Metro Campus

Following extensive planning work with UH Bikes, Bike Cleveland, and the Cuyahoga County Department of Sustainability, a UH Bikes bike share station was installed at Metro Campus in December 2016. Although the timing was not ideal for bike riding season, the December installation meant the bike share station was visible and ready to go once the weather warmed up in spring.



The bike share station is currently located on the plaza just north of the Metro Student Services building, but the long-term plan is to move the station closer to the intersection of Community College Avenue and East 30th St. once the work renovating the campus plaza and entrance is completed. Tri-C worked with UH Bikes on a discounted student membership price of \$8 per month for anyone registering with an email address ending with ".edu" meaning Tri-C faculty and staff are eligible for this rate as well.

In addition to the station at Tri-C Metro, UH Bikes has numerous stations in and around downtown, at Cleveland State University, and in University Circle. UH Bikes system users can ride a bike and then return it to another station close to their destination, or to the same station from which they picked it up.