



## Postsecondary Sustainability Award Nominee Presentation Form

### ELIGIBILITY CERTIFICATIONS

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#### College or University Certifications

The signature of college or university President (or equivalent) on the next page certifies that each of the statements below concerning the institution’s eligibility and compliance with the following requirements is true and correct to the best of their knowledge.

1. The college or university has been evaluated and selected from among institutions within the Nominating Authority’s jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
2. The college or university is providing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a compliance review.
3. OCR has not issued a violation letter of findings to the college or university concluding that the nominated college or university has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
4. The U.S. Department of Justice does not have a pending suit alleging that the college or university has violated one or more of the civil rights statutes or the Constitution’s equal protection clause.
5. There are no findings by Federal Student Aid of violations in respect to the administration of Title IV student aid funds.
6. The college or university is in good standing with its regional or national accreditor.
7. The college or university meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

### U.S. Department of Education Green Ribbon Schools Postsecondary Sustainability Award


Name of President/Chancellor: Dr. Anton R. Reece

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official College or University Name: West Kentucky Community and Technical College

(As it should appear on an award)

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

\_\_\_\_\_  \_\_\_\_\_ Date: 2-9-2021  
(President’s/Chancellor’s Signature)

#### Nominating Authority’s Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the college or university’s eligibility and compliance with the following requirements is true and correct to the best of the Authority’s knowledge.


1. The college or university has been evaluated and selected from among institutions within the Nominating Authority’s jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
2. The college or university meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.



Name of Nominating Agency: Kentucky Environmental Education Council

Name of Nominating Authority: Mr. Billy Bennett  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

\_Date: 2-24-2021  
(Nominating Authority's Signature)

## **SUBMISSION**

The nomination package, including the signed certifications, narrative summary, documentation of evaluation in the three Pillars, and photos should be submitted online according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509  
Expiration Date: December 31, 2023

### **Public Burden Statement**

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email [ICDocketMgr@ed.gov](mailto:ICDocketMgr@ed.gov) and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

## **Executive Summary**

West Kentucky Community and Technical College (WKCTC) in Paducah, Kentucky, is one of 16 comprehensive two-year, associate degree-granting community colleges comprising the Kentucky Community and Technical College System (KCTCS). The college was created in 2003 when Paducah Community College and West Kentucky Technical College consolidated. Unduplicated headcount fall 2019 enrollment was 6,389 (2,992 FTE), of which approximately two-thirds were part-time students; 22 percent nonwhite; 54.5 percent female, and 80 percent financial aid recipients (including 1,973 who were Pell Grant eligible). WKCTC's commitment to sustainable development and environmental education is found in its mission to foster "*...a campus culture advancing diversity and inclusion and promoting equity and global responsibility,*" and value statements "*economic, social, and environmental sustainability*" and "*inclusion, equity, respect, and global diversity.*" Rooted in its two parent institutions, one of which was a teacher training college for African Americans, WKCTC diversity, equity, and inclusiveness (DEI) is recognized for providing opportunities for low-income and disenfranchised students. Since 2011, the Aspen Institute has recognized WKCTC four times as one of the top 10 community colleges in the nation, twice as a finalist with distinction and currently as a contender for the 2021 prize. The Community College Futures Assembly has recognized WKCTC four times as a Bellwether Finalist. In 2019, WKCTC was named the #1 community college in Kentucky by BestColleges.com. The college received the 2020 Excellence in Community Partnerships award from the Kentucky Association of Environmental Education (KAEE) for its dedication and commitment to environmental education.

WKCTC leadership encourages college-wide environmental and sustainability education efforts. In 2009, the college formed its first Green Committee (now the Sustainability Committee). In 2013, WKCTC developed its first Sustainability Plan, which was updated in 2019 to cover 2020-2025. Starting in 2014, WKCTC leadership has supported American Association for Sustainability in Higher Education (AASHE) membership. In 2017, a biology faculty was given release time to fill a newly created Sustainability Project Coordinator position, and the college's 20-member sustainability committee added student, external community, and administrative leadership members. The college started a sustainability newsletter and created a public sustainability website ([Sustainability at WKCTC | WKCTC \(kctcs.edu\)](https://www.kctcs.edu/sustainability)), providing information about energy efficiency, recycling, living sustainably tips, and an interactive Sustainability Pledge. An internal intranet site, "WKCTC Sustainability" houses college sustainability news, minutes, plans, and external resource links for the college's internal community.

WKCTC has made strides in reducing its environmental impact and energy costs. The college has solar panels, improved R-values with new roofing and, most significantly, engaged in two rounds of energy savings performance contracting (ESPC). In 2008, the first ESPC achieved \$1.7 million (nominal) guaranteed energy and water savings. Building on the momentum of the first ESPC's early payoff, the Sustainability Committee formed an energy Efficiency Taskforce that provided the college's Engineering Technology students hands-on learning opportunities conducting energy audits. The students' work informed, in part, a second ESPC in 2014 which implemented 1) a public facing dashboard (The Kentucky Energy Dashboard <http://kyenergydashboard.ky.gov/>) that communicates the college's energy efficiency and greenhouse gas emissions and 2) a continuous retro-commissioning system via the Kentucky Commonwealth Energy Management Control System (CEMCS). Using the 2014 baseline, from January 2017 to December 2017 (the first year of measurement and valuation for the ESPC), about 3000 metric tons of

carbon were not released. Similarly, from January 2019 to December 2019 (Guarantee Year 3), WKCTC saved 3,886,130 kWh and 6,813 kW of electricity, 68,415 CCF of natural gas, 8,385 Hgal of water.

Waste management/reduction and recycling were among the first WKCTC sustainability initiatives. Building Recycling Leaders determine recycling bin locations, coordinate recycling pickup, and engage the college community in recycling. Waste reduction is achieved by reducing paper use through paperless meetings; defaults set to double-side print; and streamlined or paperless business processes for records, travel, time, payroll, and procurement. The Culinary Arts program achieves a 2 percent food savings by planning “products across the menu.” The program also composts food waste and contracts farmers to compost/reuse cooking oil. Hazardous waste management is coordinated by a Chemical Hygiene Committee that develops a Chemical Hygiene Plan. Annually a chemical audit is conducted, and a full chemical inventory is maintained online via the Flinn Scientific Chemventory. Science lab faculty are required to complete annual chemical management training.

Enhancing green space on campus is planned through joint activities of multiple college and community constituencies, WKCTC student groups, and an Environmental Education Leadership (EEL) Corps AmeriCorps member. Since 2018, the college has hosted an EEL Corps AmeriCorps member, who is assisting the college become a certified Arbor Day Foundation Tree Campus USA. The EEL Corps member and BIO 120 Human Ecology students are identifying and mapping trees on the 210-acre Main Campus. In addition, the EEL Corps member is working with student groups including the WKCTC Phi Theta Kappa (PTK) to revitalize a campus nature trail to connect the college’s Main Campus east and west sides.

To reduce the college’s transportation footprint, WKCTC installed bicycle racks, preferred parking for fuel-efficient vehicles, and purchased a hybrid car for the small college fleet. A mass transit bus stop is centrally located on the Main Campus. During summer months, the college switches to a four-day work week to reduce energy and transportation costs. To reduce student travel, the nature trail is being revitalized to encourage walking, and courses on a 3-day schedule were changed to an extended time 2-day schedule. WKCTC also offers a plethora of online courses.

WKCTC has student success initiatives that embrace the Whole School, Whole Community Whole Child Health model. To ensure a healthy and safe work learning environment, the college offers small dining and catering services that employ several WKCTC culinary arts graduates and host culinary interns. The Scholar House program provides low-cost apartments with utilities included and affordable onsite daycare adjacent to the Main Campus for students’ dependent children. A greenhouse on the Paducah School of Art and Design Campus provides hands-on learning that can culminate in a “Culinary Arts Farm to Table” certificate. To address student nutrition and food insecurity, WKCTC also has a campus food pantry. Student clubs sponsor clothing and family care drives.

Health and Wellness Initiatives for WKCTC employees and students provide resources and educational opportunities across a gamut of physical and mental/psychological health topics. One component of the employee wellness program is the “Stay Well” health engagement program, which encourages faculty and staff to be proactive with their mental and physical health via webinars, newsletters, and personal challenges. The KCTCS Employee Assistance Program (EAP) provides free counseling and helps employees and their household members with behavior, psychological, and mental health as well as financial, work-life, and legal issues. Four Rivers Behavioral Health is a

private non-profit agency located on the Main Campus that provides outpatient individual and group therapy services to WKCTC students and the community at large. Services are provided at no charge for individuals without a payer source. Throughout the year, Four Rivers Behavioral Health offers free webinars, lunch and learn seminars, and information sessions open to the college community. Health education also is provided through the college's academic programs such as culinary arts, nursing, dental assisting/dental hygiene, and physical therapy. The programs have service components entailing community seminars, lunch and learns, free/reduced cost health screenings (e.g., blood pressure checks), teeth cleaning, or other public service. A University of Louisville School of Dentistry partnership provides student clinical experience and dental services to the community at a WKCTC campus clinic.

WKCTC Maintenance and Operations is committed to the safety and health of the community and implements Integrated School Environmental Health Program strategies, starting with effective cleaning and maintenance. WKCTC uses a building automation system to ensure ventilation systems are properly circulating indoor air and maintaining humidity levels between 30 percent and 60 percent to prevent building mold and moisture and ensure air ventilation meets or exceeds ASHRAE standards. HVAC settings fit actual use schedules. On a monthly basis, staff assess buildings, HVAC, duct work, and building foundations.

Environmental and sustainability education has executive sponsorship by the college's president and other executive leaders, some of whom (Vice President of Operations, Vice President of Workforce Development, Director of Diversity and Inclusion, and Coordinator of Student Life) serve on the 20-member Sustainability Committee. Committed to providing students, employees and visitors with a safe and healthy environment, the college became a tobacco-free institution in 2015. To ensure faculty and staff are growing professionally and personally and to promote collegiality, sustainability-related professional development is offered via lunch-and-learns, health walks, all-day in-service sessions, and workshops. In 2019, the Sustainability Coordinator led a professional development session to educate faculty and staff about environmental/sustainability activities occurring across the KCTCS and to identify opportunities for WKCTC in the areas of Operations, Academics, Awareness, and Planning. Results were compiled and used to develop the college's Sustainability Plan 2020-2025.

Faculty and staff are committed to equipping students with learning opportunities that embrace the three sustainability pillars, and collaboration is the heart of the college's environmental and sustainable development education. One of the first faculty collaborations identified the college's sustainability-focused or sustainability-related courses. Using AASHE protocols, faculty identified approximately 100 WKCTC courses in over 50 subjects that are sustainability-focused or sustainability-related. Some courses, both within and outside the STEM fields, use environmental education assignments as the assessment measure. As a participant in the American Association of American Colleges and Universities Liberal Education and America's Promise (LEAP) initiative, the college's general education courses have personal and social responsibility learning outcome. In 2019, a sustainability module was implemented into the mandatory First Year Experience (FYE) 105, allowing students to do career exploration using online geospatial "Story Maps" that describe environmental, economic, and social sustainability. Two pathways have been created in collaboration with Murray State University (MSU) for WKCTC students wanting to transfer to MSU. One pathway is Environmental Science and the other is Sustainability, both in the Earth and Environmental Science department. Some technical programs incorporating sustainability learning outcomes include business,

early childhood education, automotive technology, culinary arts, advanced manufacturing, air conditioning technology, health, occupational therapy, marine technology, and engineering technology.

Students and Interdisciplinary Learning and Co-Curricular Opportunities in sustainability encompass engagement inside and outside WKCTC classes. Several programs, such as culinary arts, nursing, dental assisting/dental hygiene, and physical therapy, have service components. An ecology course requires students to do water sampling and data evaluation for the Kentucky Division of Water Watershed Watch program. Examples outside the classroom include field trips, nature hikes to study natural systems, and trips to built environments to learn about alternate energy and energy efficiency. Independent studies give individual students semester long environmental education analytical opportunities using scientific method topics. Student extra-curricular opportunities and student groups are instrumental in developing and implementing environmental and sustainability educational opportunities at the college.

Community involvement and family engagement are central to the college's mission. The college invites the community to Earth Week and Campus Sustainability Month initiatives. The annual Earth Week observance culminates in an Earth Day Celebration, where local, state, and federal agencies; nonprofits, and WKCTC faculty, staff, and students exhibit, engage, and educate attendees about the environment. In October, Sustainability Month activities promote environmental stewardship awareness and engagement.

## **Pillar 1 Narrative**

**Widespread campus involvement.** West Kentucky Community and Technical College (WKCTC) has a long commitment to sustainability and environmental education. It is committed to the triple bottom line of sustainability, that is, social, environmental, and economical needs and decisions to achieve a sustainable balance without negatively impacting future generations to obtain sustainable communities inside, across, and outside of the college. Multifaceted, WKCTC's sustainability approach touches every area of the college, as evident in its initial sustainability-related committee and current Student Green Club.

In 2009, an administrative advisory committee was initiated by WKCTC faculty interested in expanding environmental awareness and to initiate widespread recycling on campus. The first mission of the Green Committee (now the Sustainability Committee), consisting of 20 faculty and staff representing areas throughout campus, stated *"The Green Committee will develop and implement strategies to improve energy efficiency and conservation, as well as environmental awareness on campus."*

**Energy efficiency is a priority at the college.** In 2008, WKCTC engaged in its first Energy Savings Performance Contract, realizing \$1.7 million (nominal) guaranteed energy and water savings. The 2008 ESPC initiative replaced lighting in several buildings and installed water conservation tools. Building on the momentum and early payoff of the initial ESPC, the Green Committee formed an energy efficiency task force that resulted in the college's

Engineering Technology students conducting energy audits as part of their curriculum led by the ET Program Coordinator and member of the Committee. The students identified additional energy savings opportunities.

In 2014, WKCTC began a second round of energy performance contracting with \$7.1 guaranteed savings over the 14-year contract. Upgrades began in May 2015 and were completed in December 2016. Some of the conservation measures include:

- Replacing light fixtures with LED
- Installing occupancy sensors that turn off lights after 10 minutes of no motion
- Installing new boilers in four buildings and new chillers in two buildings
- Wrapping pipes and replacing equipment belts
- Replacing door seals and repairing joints
- Applying window film
- Implementing utility setbacks
- Reducing buildings and building hours in summer
- Installing 1.28 and 1.6 gpf toilet tanks
- Retrofitting urinals with .5 gpf kits
- Installing toilet dual flush handles and kits
- Changing to 2 gpm shower heads
- Retrofitting lavatory faucets with .35 gpm moderators (aerators)

As a result of its commitment to address energy efficiency and reduce its footprint, the college will avoid approximately \$504,000 annually in energy costs using a baseline of 2014 dollars/costs. The first year of measurement and valuation for this widespread college ESPC (January 2017 to December 2017), the college's estimated cost savings from electric, gas, water and sewer were \$555,525. About 3000 metric tons of carbon were not released in 2017. Similarly, from the most recent ESPC data, January 2019 to December 2019, WKCTC saved 3,886,130 kWh and 6,813 kW of electricity, 68,415 CCF of natural gas as well as 8,385 Hgal of water, resulting in total energy savings of \$595,076 and additional miscellaneous savings of \$823 for an estimated grand total savings for Guarantee Year 3 of \$595,899. An additional \$823,851 in energy savings occurred during the Construction Period and first two Guarantee years for a grand total of \$1,974,739 over the past 50 months.

Two added benefits of the second energy performance contract are 1) installation of a continuous retro-commissioning system (RCx) via the Kentucky Commonwealth Energy Management Control System (CEMCS) and 2) a public online dashboard ([Energy Dashboard \(ky.gov\)](https://energy.ky.gov)) that communicates the college's energy efficiency performance. An initiative of the Kentucky Finance and Administration Cabinet, CEMCS takes a whole building approach that includes submeters and automation systems that couple with building automation systems. CEMCS has four major components:

1. Utility Monitoring and Analysis including [a searchable web public accountability dashboard \(Energy Dashboard \(ky.gov\)\)](https://energy.ky.gov) giving public access to real-time energy and monetary savings down to the building-level
2. Building Automation Integration and Diagnostics
3. Automated Utility Bill Paying
4. Work Order Generation and Tracking

CEMCS focuses on retro-commissioning using Interval Data Systems' (IDS) EnergyWitness™ enterprise energy management system. EnergyWitness™ evaluates building performance using EnergyStar metrics, normalizes data to account for weather and can provide measurement down to a specific space. Equipment health and efficiency are evaluated 24/7 with calculations based on 15-minute intervals. The Kentucky Energy Dashboard shows estimates of energy usage, cost savings, and greenhouse gas emissions. The college has 19 buildings comprised of approximately 658,000 GSF in the continuous retro-commissioning initiative. Public access to the college's building level data is at [Energy Dashboard \(ky.gov\)](#) ("Search by Agency" for "KY Community Technical College System," and then scroll to "WKCTC").

Even though WKCTC has successfully implemented a second energy savings performance contract, it continues to look for ways to conserve energy and reduce its carbon footprint, such as increasing insulation and updating R-value from new roofing. A continuous analysis of class schedules and occupancy by zone determine building setbacks to conserve energy use. Solar panels were installed at the WKCTC Skilled Craft Training Center as part of a grid payback program and to model a renewable energy system for the region. Installation was cooperatively completed by the Air Conditioning Technology program and a local business.

To reduce the college's transportation footprint, WKCTC installed bicycle racks, created preferred parking for fuel-efficient vehicles, added a hybrid car to the college's small fleet, and is exploring installing EV level 2 charging stations. During summer months, the college switches to a four-day work week to reduce energy and transportation costs. A mass transit bus service stop is located centrally on campus. WKCTC is exploring ways to increase mass transit use (perhaps incentivize usage) by the college community, especially students. Regarding reducing impact from student transportation, in 2019 the WKCTC Student Government Association (SGA) met with administrators to address travel across the 210-acre Main Campus. Nature trail revitalization was identified as a way to reduce travel, increase accessibility, and encourage walking. Student Support works with students with on-campus transportation to arrange more efficient individual transportation across the Main Campus. Additionally, courses on a 3-day schedule were changed to an extended time 2-day schedule (50 minutes changed to 75 minutes) with as needed exceptions. WKCTC also offers a plethora of online courses, which reduces student transportation costs and impacts.

**Waste reduction** was one of the 2009 Green Committee's first initiatives driven by students. The committee wanted an inclusive recycling program that shared responsibility and avoided adding work to maintenance and operations (M&O) staff. The strategy is for each campus building to have volunteer Building Recycling Leaders working cooperatively with M&O staff. Often, buildings have recycling co-leaders consisting of faculty, staff, and students. Each leader is responsible for the following:

- Determining recycling bin locations
- Coordinating with M&O to identify a single and central recyclable pickup location
- Involving students when possible
- Engaging the college community in recycling

The first year of recycled materials weighed 17,871 lbs. as measured weekly by students during academic year 2009-10. In 2017 as the City of Paducah initiated a curbside recycling and single-stream recycling center, WKCTC supported efforts by hiring Dream Green, a women-owned business, to transport recyclables from campus to recycling centers. Recycling efforts expanded on campus with the addition of bins, single-streamed recycling



implementation, and an October 2018 “Focus on Recycling” campaign during Campus Sustainability Month (see Figure 1). Part of the special Sustainability Month project was provided by Dream Green, which measured recycled materials for that month as 0.82 tons (1,640 lbs.) for an estimated extrapolation of over 21,500-24,500 lbs./annually using baseline October data. After observing building recycling leaders and student diligence and dedication over several years, maintenance managers and M&O staff have enthusiastically committed to widespread campus recycling.

Reducing wasted food and food waste going to landfills are other waste goals. To reduce food waste going to landfills, WKCTC food services works with farmers to compost cooking oil, and the Culinary Arts Program composts food. The Culinary Arts Program plans “products across the menu” to reduce wasted food. Planning food use for multiple menu items results in estimated savings of 2 percent. The program also maintains an herb garden on campus.

Cutting across all departments is an initiative related to reducing paper use. Printers and computers have been set to print both sides as defaults where feasible. All bulk paper purchased by the college contains recycled paper content. The business office developed a “green” vendor list with reduced pricing as part of state online contracts. In addition, the college has reduced paper documents, such as the annual Campus Phone Book, moving the information to an online version. Paperless meetings have become a part of the WKCTC culture as well as paperless business processes, such as travel, time, payroll, and procurement.

Hazardous waste management is a shared responsibility. A “Chemical Hygiene Committee,” coordinates the college’s chemical hygiene plan. From purchase to disposal, committee members have direct involvement with or knowledge of chemical management at the college. The plan includes a chemical spill control policy and requires staff training for chemical management, purchasing, use, storage, and spills. Annually the college conducts a chemical audit and compares the results to the Kentucky Community and Technical College System's (KCTCS) Environmental Health and Safety Guidelines. Safety Data Sheets (SDS) are available and up to date for all chemicals and chemical products. A full chemical inventory is maintained online via the Flinn Scientific Chemventory and regularly reviewed to identify unused, unneeded, degraded, and unknown chemicals. Outdated chemical and other chemical dispositions follow guidelines. Hazardous chemicals in need of disposal are removed by a qualified third party.

The college’s Hazard Communication Plan includes contact information; acquisition, maintenance, and SDS access procedures; updated chemical inventory; employee training provisions, and chemical labeling requirements. Science lab faculty are required to complete chemical management training pursuant to the Occupational Safety and Health Administration's laboratory safety standard. Similarly, lab students are required to read lab safety protocols at the beginning of each semester and complete online webinars related to chemical safety; after which, they must sign a document indicating that they understand the safety rules. While faculty strive to conduct labs with the safest chemicals possible, the college does have laboratory reagents containing mercury, however, alcohol thermometers are used.

**Enhancing green space** on campus is planned through joint activities of multiple college and community constituencies, including faculty professional development, WKCTC Student groups, and an Environmental

Education Leadership (EEL) Corps AmeriCorps member. Since 2018, the college has hosted an EEL Corps AmeriCorps member on campus. The member promotes environmental education in the community and engages WKCTC students in environmental education activities and establishes relationships with internal and external community groups (see Figure 2). One focus of the member's work is assisting the college to become a certified Arbor Day Foundation Tree Campus USA. The requirements for WKCTC to be recognized as a Tree Campus include student participation and an advisory board. BIO 120 Human Ecology students along with the EEL Corps member have been identifying and mapping trees on the 210-acre main campus.

In addition, the EEL Corps member is working with campus student groups to promote green spaces to give the campus community the setting to enjoy the outdoors with others or on their own as well as involving students in service learning projects. One such green space is a campus nature trail. The WKCTC student chapter of Phi Theta Kappa (PTK) has adopted establishing the campus nature trail as a multi-year student group project. The chapter members are developing plans related to the campus wooded area between the east and west sides of campus which include developing a historic video of the original campus site, marking a new nature trail, installing outdoor exercise equipment, bee garden, and identification/description of trees.

To involve the college and community in the work to enhance green space, a "Greening the Campus and Health" session was held during an all-day professional development conference for faculty and staff in early 2020. During the walk-about campus, faculty, staff, students, and a community member listed ideas for the physical campus. The list, given to the Vice President of Operations included placement for outside benches/tables; nature trails; gardens; arboretum, and landscaping. The list helped inform the Green Student Club's goals and the college's overall sustainability planning.

## **Pillar 2 Narrative**

### **Whole School Whole Community, Whole Child Health**

WKCTC has established a number of important student success initiatives through collective efforts of the campus community. The following describe programs which were implemented to support the health of individuals and our community.

**Healthy and safe work learning environment.** WKCTC established a campus food pantry to address student nutrition and food insecurity. Through grants and student club donation drives, the food pantry provides food and other items, such as personal hygiene supplies, to students in need. Student clubs also sponsor clothing and family care drives for local community charities. WKCTC and community organizations initiated and built The Scholar House for full-time students with dependent children. The program is designed to help students succeed by providing low-cost apartments (with utilities included) and affordable onsite daycare at a location adjacent to the Main Campus. College food services provide meals for Scholar House Head Start students. The college offers small dining and catering services that employ several WKCTC culinary arts graduates and host culinary interns as often as possible. Cafés are available on the Main Campus, the Paducah School of Art and Design (PSAD) Campus, and at the

Scholar House. WKCTC received Perkins funding to establish a greenhouse for the PSAD Campus and Culinary Arts program. The greenhouse provides hands-on teaching and learning opportunities that can culminate in a “Culinary Arts Farm to Table” certificate.

**Health and Wellness Initiatives** for WKCTC employees and students provide resources and educational opportunities across a gamut of physical and mental/psychological health topics. One component of the wellness program is the “Stay Well” health engagement program. Stay Well encourages faculty and staff to be proactive with their mental and physical health via webinars, newsletters, and personal challenges. Another wellness program is the KCTCS Employee Assistance Program (EAP) which helps employees and their household members with behavior, psychological, and mental health as well as financial, work-life, and legal issues. The EAP is offered at no cost to eligible employees and their family members. Employees are allowed three free counseling sessions with EAP approved providers. Employees can receive 24/7 assistance for some issues such as emotional well-being; stress or anxiety; family relationships; alcohol and drug addictions; childcare and elder care; financial and legal concerns, and referrals for needs like education, adoption, travel, and pet care.

WKCTC collaborates with Four Rivers Behavioral Health, a private non-profit agency, through an on-campus Student Health and Wellness Center to provide outpatient individual and group therapy services to WKCTC students and the community at large. For individuals without a payer source, services are provided at no charge. Throughout the year, Four Rivers Behavioral Health offers free webinars, lunch and learn seminars, and information sessions open to the college community. Sessions are led by certified prevention specialists, certified social workers, and clinical practitioners. Types of counseling provided include the following: stress, anxiety, depression, grief/loss, trauma, divorce, relationship, self-awareness, sexuality identity self-care, health counseling including alcohol and drug abuse, eating disorders, battery-domestic violence, addictions, self-esteem/image, and smoke cessation assistance. Online Stress Relief Resources are also available from the college’s Matheson Library that contain helpful books, links, articles, videos, relaxing music, exercises, coloring pages, puzzles, and other items that can help relieve stress and anxiety.

**Health education** opportunities are available to college constituents and the wider community in a variety of ways. One is through the college’s academic programs including, and not limited to, culinary arts, nursing, dental assisting/dental hygiene, and physical therapy. The programs’ service components entail community seminars, lunch and learns, and free/reduced cost health screenings, such as blood pressure checks, teeth cleaning, or other public service. A college partnership with the University of Louisville School of Dentistry will provide dental services to the community through a WKCTC campus clinic and provide both institutions’ students valuable clinical experience. Throughout the year, opportunities are provided to learn about the dangers of tobacco, alcohol and other drug abuse. All faculty, staff, and students complete mandated educational webinars related to drug and alcohol policies, sexual harassment, and battery-domestic violence. The webinars include information about who to contact for assistance with alcohol and drug abuse and tobacco cessation as well as who to contact if you or you know someone who is a victim of harassment or violence. Health education and well-being classes, such as yoga, walking, and dancing, are offered each semester. The classes are free for students 65 and older.

**Embracing physical activity and outdoor activities.** WKCTC offers student club sports such as basketball and cross country running with competition with other colleges. The Main Campus sponsors a communitywide 5K marathon

annually, and the WKCTC Challenger Learning Center hosted a second marathon, *Space Race 2020* which included a virtual one mile "Run to the Moon" walk/run and a 5K "Run to Mars." Campus outdoor tennis courts and a baseball field are used by the community. The adjacent area has a Nature Trail, and student groups are supporting and developing plans to expand and revitalize the trail as a multi-year project. The project plans include gardens, tree identification, and outdoor exercise equipment to facilitate employee and student health and mental well-being. Student Clubs have hosted Sustainability Scavenger Hunts, participated in faculty led hikes in the nearby Shawnee National Forest, and assist with a Tree Inventory to identify and digitally map trees on campus.

**WKCTC diversity, equity, and inclusiveness** (DEI) has a rich history of commitment from its two parent institutions: Paducah Community College and West Kentucky Industrial College. The latter was established in 1909 as a teacher training college for African-Americans. In 1990 WKCTC was Kentucky's first community college to establish a minority affairs position. Today, the WKCTC President is an underrepresented minority and the person who filled the minority affairs position in 1990. The Office of Cultural Diversity and Inclusion strives to enhance the academic, cultural, and social needs of minority students at WKCTC by providing opportunities for multi-cultural education and assisting in the development of a campus culture where diversity is respected and valued. To achieve the college's diversity, equity, and inclusion goals, **WKCTC established the Diversity and Inclusion/Campus Climate Environment Committee**. Another component of WKCTC's inclusiveness is its accessibility initiatives. The Accessibility Services Office at WKCTC is responsible for promoting accessible campus environments for students with disabilities, working with students and others to identify reasonable accommodations that remove barriers to access and ensure that accommodations determined to be reasonable are provided and effective. The Accessibility Services Office is committed to recognizing disability as a valued aspect of diversity through discussion and collaboration. Recently, WKCTC was the recipient of a \$15 million donation by philanthropist MacKenzie Scott, who praised the college's work on DEI initiatives that further opportunities for low-income and disenfranchised students. At the same time, WKCTC President Anton Reece was recognized for his leadership in advancing DEI at the college and his commitment to increase student success through student support and faculty and staff professional development.

### **Integrated School Environmental Health Program**

WKCTC Operations Department prioritizes the safety and health of the community and is integral in implementing campus strategies to maintain and improve practices to achieve high quality standards for constituents. The following narrative details maintenance and operations practices at WKCTC.

**Effective cleaning and maintenance.** Maintenance records are ongoing. Building professionals inspect sprinklers, fire alarms, elevators, boilers and other heating, ventilation, and air conditioning (HVAC) equipment annually. Roofing is inspected for leakage biannually. Monthly, staff assess buildings, checking building envelopes, ceilings, duct work, and HVAC linings. Building foundations are inspected for cracks, decay, and water infiltration. Windows and doors are caulked, weather stripping is replaced as needed.

Facilities and custodial staff receive annual training on cleaning practices and policies, as well as procedures for handling chemical spills. During each fiscal year, cleaning products are inventoried including disposal of outdated, unknown, or unneeded products. Bulk cleaners with high dilution rates are purchased and concentrates diluted onsite. Products containing strong odors that might trigger asthma symptoms are avoided to the extent possible.

Microfiber cleaning cloths are sprayed with product rather than the surface to be cleaned. Buildings are cleaned when unoccupied using appropriate equipment and products according to labels. Approximately 50% of the college's vacuums and filters are high efficiency with low efficiency models dropped from service and replaced with higher efficiency ones. The college purchases building materials that are easily maintained using the same cleaning products used throughout the school building. Each public entrance has walk-off mats. Food areas, including kitchens and cafeterias, are thoroughly cleaned.

**Mold and Moisture Prevention.** On a daily basis WKCTC uses a building automation system to ensure ventilation systems are properly circulating indoor air and maintaining humidity levels between 30% and 60% to prevent building mold and moisture. The system is checked monthly to ensure proper operation. As part of the monthly building walk-through assessment, staff looks for water damage, visible mold on interior surfaces, and any potential moisture issues. Wet areas inside buildings are dried within 24-48 hours. Carpets are cleaned with extraction cleaners and not installed in areas with plumbing. Moisture-generating appliances are vented to the outside along with vents for areas that use large quantities of water. The college purchases furniture and carpeting made from mold-resistant materials. Priority is given to fix leaking plumbing or roofs. Steps are in place to prevent water from ponding within 10 feet of building foundations. Downspouts drain to storm sewers or are graded away from buildings. Downspouts, scuppers, and storm drains are maintained to be properly connected and obstructions and debris removed.

**Chemical and Environmental Contaminant Hazards.** WKCTC is a tobacco-free campus. The WKCTC Chemical Hygiene Committee coordinates the college's chemical hygiene plan. From purchase to disposal at the college, committee members have direct involvement and/or knowledge of chemical management. The plan includes a chemical spill control policy and requires staff training for chemical management, purchasing, use, storage, and spills. The Hazard Communication Plan includes contact information, up-to-date acquisition, maintenance, Safety Data Sheets (SDS) access procedures, updated chemical inventory, employee training provisions, and chemical labeling requirements. Annually the college conducts a chemical audit and compares the results to the KCTCS Environmental Health and Safety Guidelines. A full chemical inventory is maintained online via the Flinn Scientific Chemventory and regularly reviewed to identify unused, unneeded, degraded, and unknown chemicals. Outdated chemical and chemical dispositions follow guidelines and hazardous chemicals in need of disposal are removed by a qualified third party. To prevent accumulation, chemicals are reordered only when needed with no more than a 5-year supply purchased at any time. Chemicals are stored in designated rooms and cabinets with operable locks and stable shelving. Storage areas are visually inspected to ensure chemicals are clearly labeled in undamaged containers and according to chemically compatible families. A chemical purchasing policy is also in place. Employees are prohibited from bringing in chemical products and art supplies that are unauthorized or contain toxic ingredients. Science lab faculty are required to complete chemical management training pursuant to the Occupational Safety and Health Administration's laboratory safety standard. Similarly, students are required to read lab safety protocols and complete online webinars related to chemical safety; after which, they must sign a document indicating that they understand the safety rules. While faculty strive to conduct labs with the safest chemicals possible, the college does have laboratory reagents containing mercury; however, alcohol thermometers are used. Equipment and lighting containing chemicals are screened and properly managed. Most lighting has been switched to LEDs with ballasts manufactured through 1998 replaced. In the event that a ballast manufactured in 1998 or before is found, it would be disposed of according to federal requirements.

**Healthy Ventilation.** The college routinely integrates new cleaning, filtration, and ventilation technologies. An HVAC maintenance plan stipulates that systems are inspected and high efficiency filters installed quarterly. With each filter change, condensate pans are cleaned and drainage checked. Air supply diffusers are cleaned as needed along with return registers, outside air intakes, ducts, and the interior of air-handling units or unit ventilators. Unit ventilators are isolated from book storage and kept clear of papers and other items. Ground-level and roof intakes are checked for pollutant sources. The maintenance room is inspected for unsanitary conditions, leaks, and spills and free of trash, chemical products, and supplies. Kitchens have carbon monoxide detectors near combustion sources.

WKCTC measures the environmental efficiency of HVAC systems through its building automation system and the Commonwealth Energy Management Control System (CEMCS). The building automation system monitors ventilation system set points ensure outdoor air ventilation meets or exceeds ASHRAE 62.1-2010 and the Exit IAQ Procedure standards. HVAC settings fit actual use schedules, including nights and weekends for efficiency. Air intakes are located away from high vehicular traffic areas, plumbing and exhaust stacks, and heating system chimneys. CEMCS is an advanced enterprise-wide Energy Management Information System using a continuous retro-commissioning (RCx) strategy that takes a whole building approach using submeters and automation systems. CEMCS monitors building performance at the meter-level through ongoing measurement and verification. Monitoring at the equipment-level includes building automation system trending, fault detection and diagnostic tools, and automated system optimization software. The college has 19 buildings comprised of approximately 658,000 GSF in the continuous retro-commissioning initiative (<http://kyenergydashboard.ky.gov/>).

**Pest Management Practices and Pesticide Exposure Reduction.** The college-wide pest management practices are applicable for entryways, classrooms, offices, food preparation areas, rooms and areas with extensive plumbing, and maintenance areas. Doors to the outside have weather stripping and are shut when not in use. Openings in walls are caulked and sealed as needed. Dripping faucets and leaks are fixed. Screens are on vents, windows, and floor drains to keep pests out of ducts and vents. Protocols are in place to reduce food and water availability for pests and to keep counters, sinks, tables, and floors clean and clear of clutter and moisture. Food preparation equipment is cleaned after use and grease accumulation removed from vents, ovens, and stoves. Garbage is placed in trash cans with secure lids and removed daily from buildings. Food and beverages are contained in designated areas and stored in airtight containers. Food crumbs, liquid spills, and dirty dishes are cleaned immediately.

### **Pillar 3 Narrative**

For its dedication and commitment to environmental education, Community and Technical College (WKCTC) received an Excellence in Community Partnerships award from the Kentucky Association of Environmental Education in September 2020. KAEE is the Kentucky Affiliate for the North American Association for Environmental Education. Following is a description of some of the college's work that contributed to the accolade.

**Sustainability Coordinator Position.** In 2017, a biology faculty was given partial release time to serve in the newly created Sustainability Project Coordinator position and chair a 20-member sustainability committee comprised of faculty, staff, students, and senior leadership, including the Vice President of Operations, Vice President of Workforce Development, Director of Diversity and Inclusion, and Coordinator of Student Life. The Sustainability Committee, formerly the Green Committee, revised its mission statement to support the WKCTC Value of *"economic, social, and environmental sustainability."* To communicate with the college's internal and external communities regarding environmental education and sustainable development opportunities, the college implemented and continues the following:

- Distributes a sustainability newsletter highlighting campus environmental education and sustainability initiatives
- Created a public sustainability website (Sustainability at WKCTC | WKCTC (kctcs.edu), providing information about energy efficiency, recycling, living sustainably tips, and an interactive Sustainability Pledge
- Developed an internal "WKCTC Sustainability" intranet site housing college sustainability news, minutes, plans, and external resource links

**Environmental Education AmeriCorps Host.** In 2018 the college became an AmeriCorps host for a Kentucky Environmental Education Council Environmental Education Leadership (EEL) Corps member. Since the initial member in 2018, the college's AmeriCorps member has worked with faculty, staff, students, and the at-large Paducah community to increase environmental education awareness (see Figure 2). The EEL Corps member assists with organizing the weeklong Earth Day celebrations, including community festivals, co-curricular events focusing on environment stewardship, and professional development opportunities for faculty and staff. In 2020-21, the EEL Corps member is developing online environmental and sustainable development learning opportunities. The member attends SGA meetings and establishes relationships with internal and external groups to advance environmental education. One of the member's responsibility is working to obtain Arbor Foundation Tree Campus USA designation for WKCTC. Achieving the designation requires working with the campus community to develop a tree maintenance plan, a task force, and student service learning opportunities related to this initiative. The member held tree identification and mapping sessions, including developing an online video for students. Additional environmental education projects EEL members initiated include establishing an annual online Sustainability Scavenger Hunt for individuals to post sustainability photos on the WKCTC Sustainability Facebook page, campus litter clean-up days, and networking with the county library and Paducah Tree City, USA Board members. The EEL Corps member was instrumental in organizing and working with SGA for a donation drive during Sustainability Month to the campus food pantry for students in need.

**Professional Development.** Professional Development (PD) examples include lunch-and-learns, health walks, all-day in-service sessions, and workshops. Experts in the areas of geographic information systems applications, climate change literacy, and national sustainability assessment have led PD focused on environmental stewardship skills and tools. The Sustainability Coordinator has led professional development sessions to educate faculty and staff about environmental/sustainability initiatives occurring across the 16 colleges of the Kentucky Community and Technical College System and to rank potential sustainability initiatives for WKCTC. Attendees were grouped and asked to discuss and select sustainability initiatives from those presented or identify others then rank their top three initiatives for WKCTC in four separate categories: Operations, Academics, Awareness, and Planning. During a WKCTC

Leadership Retreat of more than 50 campus-wide representatives, the process was repeated. Results were compiled and used to help focus the “Sustainability Plan 2020-2025,” a five-year sustainability plan/blueprint for the college, updated from 2013.

**Faculty Curricula Collaborations.** In 2019, WKCTC submitted a National Science Foundation grant proposal to initiate 1) sustainable development as a campus theme, and 2) faculty professional development and implementation of research-based pedagogy, including targeting mindsets and self-efficacy to increase student diversity and success. Although the grant was unfunded, faculty in both science and humanity departments committed to develop sustainability modules within their courses and to work collaboratively to advance environmental and sustainability education across the curriculum. One collaborative example is a sustainability module implemented into the mandatory First Year Experience (FYE) 105 course. The collaboration between the FYE 105 Achieving Academic Success Coordinator and the Sustainability Coordinator produced a FYE 105 sustainability module that promotes environmental education and STEM education as part of student career exploration. In the FYE 105 sustainability module, students explore both personal and wider social concerns using online geospatial “Story Maps” describing environmental, economic, and social sustainability. Story Maps provide current, visual representations of regional and world issues, allowing students to investigate the repository of Story Maps and other online sources related to career interests as part of a written class assignment. Implemented in six sections as a pilot in spring 2019, the sustainability module was increased to all face-to-face FYE classes in the 2019-20 academic year.

Another collaborative interdisciplinary effort was led by WKCTC biology, sociology, and engineering technology faculty and identified sustainability-focused or sustainability-related courses at the college. Sustainability-focused courses concentrate on the concept of sustainability, including its social, economic, and environmental dimensions, or examine an issue or topic using sustainability as a lens. Sustainability-related courses incorporate sustainability as a distinct course component or module or concentrate on a single sustainability principle or issue. Using the American Association of Sustainability in Higher Education protocols as a foundation, WKCTC developed the following rubric to classify courses that are sustainability-related or sustainability-focused. If a course meets at least one of the Student Learning Objectives below, it can be identified as a sustainability-related course. If all three of the learning objectives are accomplished in a course, it can be identified as a sustainability-focused course.

AASHE Learning Outcome	WKCTC Criteria Requirement
Students can describe the importance of environmental protection in terms of efficient natural resource use, pollution prevention, conservation, and preservation of ecosystems.	Environmentally robust, generationally sensitive, capable of continuous learning. Environment includes, but is not limited to, natural capital, including natural resources (food, water, metals, wood, energy), ecosystem/services (soil, water, filtration, outdoor air quality, indoor air quality), and nature (mountains, animals, shorelines, sunlight, forests, birds, etc.).
Students can describe sustainable economics as they relate to environmental protection and social justice.	Economically sustainable, technologically feasible, operationally viable. Economics includes, but is not limited to, built capital/human made (buildings, equipment, information, infrastructure).
Students can describe social justice as they relate to environmental	Socially desirable (equitable), psychologically nurturing, culturally acceptable. Social justice includes, but is not limited to, human (people) or



protection and sustainable economics.	social (connections) capital (skills, health, abilities, education, family, neighbors, community, government).
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**Curriculum.** Based on AASHE’s three learning outcomes and the college’s required classification criteria, WKCTC identified approximately 100 courses in over 50 subjects that are either sustainability-focused or sustainability-related. Faculty from other KCTCS Colleges are using the WKCTC course analysis as a shared resource.

**Select Subjects Offering Sustainability-Related or Sustainability-Focused Courses**

- Advanced Industrial Integrated Technology
- Agriculture
- Air Conditioning and Refrigeration
- Anthropology
- Applied Engineering Technology
- Apprenticeship Studies
- Architectural Technology
- Biology
- Business Administration Systems
- Computer Information Technology
- Construction/Carpentry
- Culinary Arts
- Economics
- Energy Management
- Energy Systems
- Energy Technologies
- English
- Environmental Science Technology
- Environmental Technology
- Fire Science Technology/Fire-Rescue Training
- General College Studies
- Geography
- Geological Sciences
- Health Physics
- Historic Preservation Technology
- History
- Honors
- Horticulture
- Human Services
- Humanities
- Industrial Chemical Technology
- Interdisciplinary Early Childhood Ed
- Kinesiology and Health Promotion
- Logistics and Operations Mgmt
- Marine Technology
- Marketing
- Mathematics
- Mining Technology
- Nursing Integrated Program
- Occupational Therapy Assistant
- Philosophy
- Physics
- Plumbing
- Political Science
- Psychology
- Quality Mgmt Systems
- Real Estate
- Religious Studies
- Safety and First Aid
- Social Work
- Sociology
- Women’s Studies

As a participant of the American Association of American Colleges and Universities Liberal Education and America’s Promise (LEAP) initiative, all WKCTC general education courses include personal and social responsibility as a measured learning outcome. Since 2014, the outcomes are assessed annually in general education courses by instructors and departments, and select courses are used in collegewide assessments for accreditation. Courses both within and outside STEM fields use environmental education assignments as the assessment measure. For example, an introductory English class uses environmental issues for the required compare-and-contrast paper. Some courses, including technical classes, have additional environmental learning outcomes in their curricula. Two specific examples are physics and manufacturing technology emphasizing energy efficient.

Technical program faculty are implementing sustainability-related learning outcomes in business, early childhood education, automotive technology, culinary arts, advanced manufacturing, air conditioning technology, and engineering technology programs. Coordinators of these programs are on the Sustainability Committee as active members. For example, a model house was constructed to demonstrate energy efficiency audits and other energy efficiency technologies and is used to train students in sustainability-related courses in technical programs, such as air conditioning technology, electrical technology, and welding. Part of the building is a finished home for training

while the other part is unfinished so that students can practice installation such as wiring and rewiring a home.

Other curricular examples include:

- A Murray State University (MSU) collaboration for WKCTC transfer students resulted in a Sustainability degree and Environmental Science degree pathway in the Earth and Environmental Science Department for Bachelor of Science degrees
- Alternate energy track offered in the Engineering Technology program
- Professional development sessions provided on climate literacy, water quality sampling, and geospatial technology
- Faculty PD includes external sustainability courses in engineering and air conditioning technology to inform curriculum development

**Students and Interdisciplinary Learning and Co-Curricular Opportunities** in sustainability encompass engagement inside and outside WKCTC classes. Several programs, such as culinary arts, nursing, dental assisting/dental hygiene, and physical therapy, have service components. To fulfill the service requirement students, lead or participate in community seminars, lunch and learns, free/reduced cost health screenings, such as blood pressure checks, teeth cleaning, or other public service. Classroom examples include field trips, Earth Week teams, and campus recycling. A specific example from an ecology course requires students work with the Watershed Watch program to provide water samples and evaluate data for the Kentucky Division of Water sponsored program. BIO 120 Human Ecology students work on environmental awareness projects, including identifying and mapping trees on the college's campus. A greenhouse built using Perkins funding at the Paducah School of Art and Design Campus provides Culinary Arts students hands-on learning opportunities that can culminate in a "Culinary Arts Farm to Table" certificate. External examples outside the classroom include field trips such as nature hikes to study natural systems (see Figure 4), sustainable food preparation (see Figure 5), and trips to built environments to learn about alternate energy and energy efficiency. Independent studies give individual students semester long environmental education analytical opportunities working closely with faculty. Previous environmental studies were entitled: *Examining Student Attitudes and Knowledge of Sustainability; Targeting Sample Sites using Multivariate Clustering Analysis; High vs Low Flow Stream Habitat Assessment; and Frog Distribution and Stream Habitat Assessment in Western KY.*

**Extra-Curricular Opportunities.** WKCTC student groups are instrumental in developing and implementing environmental and sustainability educational opportunities at the college. In 2009, students initiated recycling on campus, including picking up recyclables from buildings and taking the recyclables to central campus locations. After observing the students' diligence and dedication over the years, maintenance managers expressed M&O commitment to campus recycling. Other student groups have sponsored sustainability related activities, such as hosting a Hispanic Heritage Celebration and International Potluck Thanksgiving to raise awareness of multiculturalism. Groups also sponsor community drives for non-profits. For example, the WKCTC Kentucky Association of Nursing Students collected donations of clothing as part of community service.

One of the most prolific student organizations is the WKCTC Student Government Association (SGA). Comprised of representatives from 24 student groups, including one from the interdisciplinary Student Green Club, the SGA has sponsored numerous sustainability related activities. One specific SGA activity was a WKCTC Sustainability Pledge Drive. The pledge states, *"I pledge to expand my local and global awareness and my personal efforts in environmental, social, and economic issues related to sustainability including: Recycling and reducing use of environmental resources; Respecting multiculturalism and social diversity; Supporting economic development with*

*future generations in mind.*" In 2020 the SGA initiated discussions about connecting the east and west sides of campus and solicited input and support from the Vice President of Operations and Sustainability Program Coordinator. Students and the Sustainability Coordinator discovered a path through the wooded area connecting the east and west sides of campus which was part of a campus Nature Trail. Subsequently, the WKCTC Chapter of Phi Theta Kappa adopted the nature trail/campus connection initiative as a multi-year student group project. The group plans to develop a historic video, trail designation signage, and incorporate exercise equipment and gardens.

**Community Environmental Education.** Community involvement and family engagement is at the heart of the college's mission. Perhaps the best community example related to environmental education is the annual Earth Week that culminates in a one-day Earth Day Celebration with WKCTC students educating the larger community on sustainability issues (see Figures 6 and 7). For more than a decade, WKCTC has celebrated Earth Day. Various sustainability and environmentally related agencies exhibit at the celebration, educating attendees about the environment and environmental stewardship. Earth Day events are open to the public and families are encouraged to attend. Expanding participation of high school students and additional community groups was the focus of the 2019 Earth Day Celebration, which was highlighted in the local newspaper, *The Paducah Sun*, on the top of the first page with a page two story and photos. In 2019, approximately 120 students from two high schools were invited along with community members and college students to the Earth Day celebration (see Figures 8). Regional organizations, such as the U.S. Forest Service; Watershed Watch; Clarks River Wildlife Refuge; and WKCTC faculty, staff, and students hosted booths and led activities to educate people about the environment (see Figures 9). Educational activities, demonstrations, or discussions included crafts from reusable material, a Farm to Table cooking demonstration, invasive Asian Carp discussions, learning about hybrid vehicles, bee keeping how-to, animal conservation, carbon dioxide chemistry and climate change, solar panel energy exhibits, watershed community models, and student ecology issues photo displays. Over 30 campus and community groups were scheduled to participate in the 2020 Earth Day Celebration, including local bands, but the celebration was cancelled due to COVID-19 mandates.

In October, Sustainability Month is celebrated with community activities sponsored by WKCTC. Examples of environmental education community events include: Paducah City Manager presentation on sustainability and plans for the city, Murray State University researcher presentation on cyanobacteria and harmful algal blooms, Watershed Watch Training, University of Kentucky College of Engineering Student Sustainability projects, Local to Global Sustainability from Kentucky to South Africa, Land Between the Lakes Raptors, Happening –A Green Energy Revolution documentary, Hiking Shawnee National Forests (see Figure 10), and 4H-Animals on Campus.