

Temple University

Sustainability Annual Report

2020-2021



A Letter from the Senior Vice President

Resilience in the Face of Adversity

The 2020–2021 academic year brought with it unprecedented challenges for our community, the commonwealth, the nation and the globe. More than ever before, it illustrated the importance of building a sustainable and equitable university and the need to cultivate a learning environment that inspires action and also provides the skills needed to address social and environmental inequities.

Climate change is a very real challenge, and the Temple community felt its effects firsthand this year. In September 2021, a tornado touched down on Temple Ambler campus, causing significant damage to buildings as well as the natural environment. While the destruction was devastating, it provided Temple with an opportunity to build a resilient and climate-ready campus and will provide educational and research opportunities for years to come.

Our progress towards carbon neutrality has been significant, driving down emissions by 40% since 2006. Our continued investment in systems that support low, and no-carbon operations will allow us to meet our carbon neutrality goal in the future and create a resilient campus even in the face of adversity.

Continuing this important work within higher education presents tremendous opportunities for the Temple community. I am proud to present the 2020–2021 Sustainability Annual Report and look forward to continuing a dialogue to inspire future success.



Sincerely,

Ken Kaiser

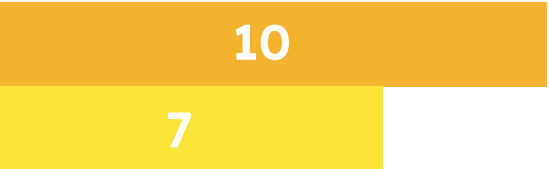
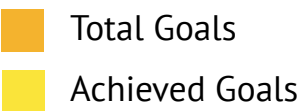
Senior Vice President and Chief Administrative Officer

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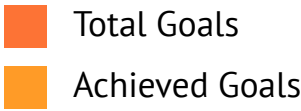
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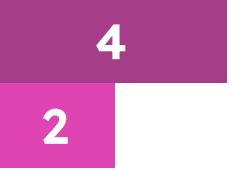
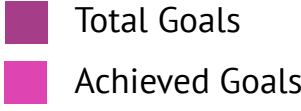
Academics & Research



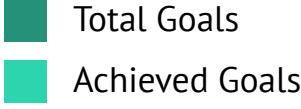
Culture



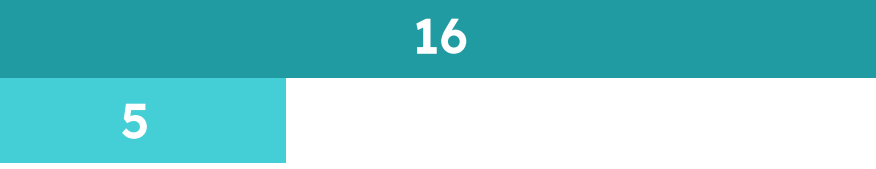
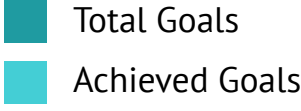
Design



Energy



Operations



Temple’s climate commitment began in 2008 when it pledged carbon neutrality by 2050.

Temple established a baseline year of 2006 and began reporting on progress towards carbon neutrality annually. Temple reports all scope 1, and 2 emissions defined in the Greenhouse Gas Protocol. Temple also reports scope 3 emissions from commuting, university financed travel, waste disposal, and transmission & distribution losses.

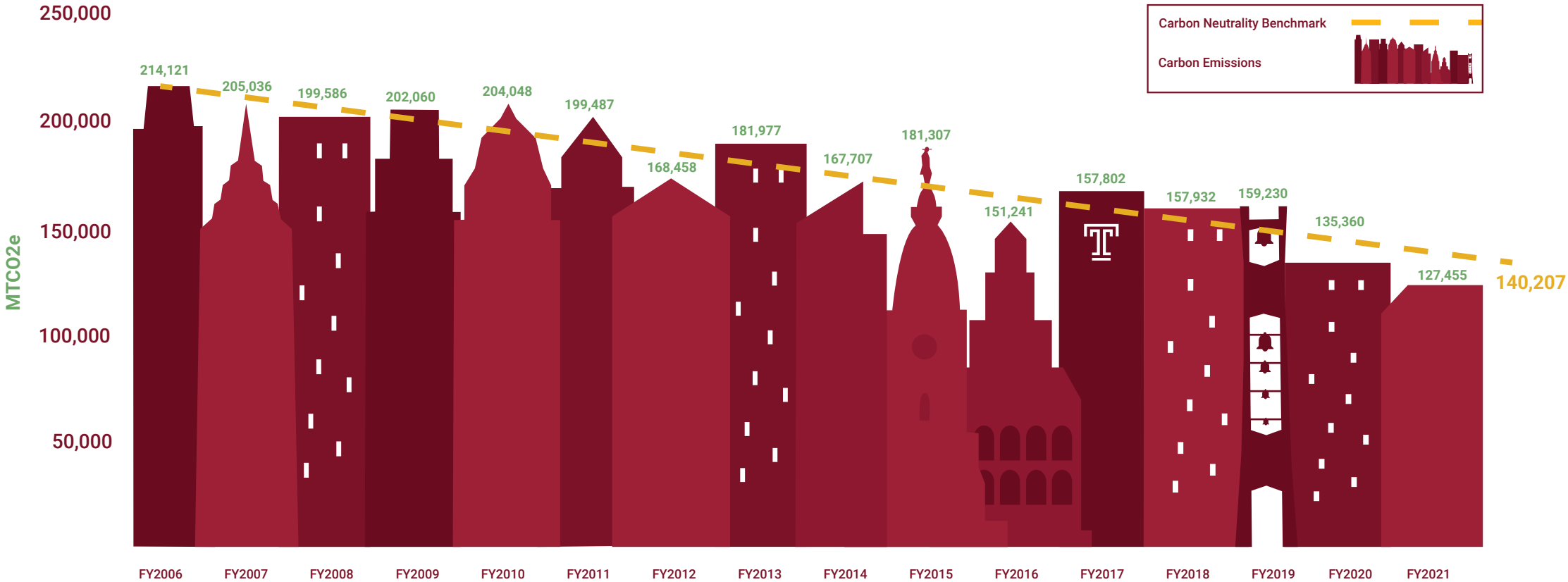
The University’s primary emissions sources are purchased electricity (47%), stationary fuel combustion (44%) and student, faculty and staff commuting (5%).

Since 2006, Temple has reduced gross emissions by 40% even while increasing the physical space of the University by more than 35%. Strategies for reducing emissions include efficient operations, investing in new carbon reducing technology, sourcing renewable energy, and engaging Temple students, faculty, and staff to support our efforts.

Temple is on track to meet the goal of carbon neutrality by 2050. Our continued success would not be possible without the support of a multitude of campus partners.

Road to Carbon Neutrality

Greenhouse Gas Emissions



Climate Action Milestones

- April 2008- Signed the American Colleges and Universities’ Presidential Climate Commitment (ACUPCC)
- July 2008- Implemented two tangible actions
- May 2009- Completion of baseline Greenhouse Gas Inventory
- April 2010- Held public forums to review and comment on Climate Action Plan
- May 2010- Published 2010 Climate Action Plan
- November 2015- White House’s American Campuses Act of Climate Pledge signed
- April 2016- Signed the Climate Leadership Statement
- April 2019- Published the 2019 Climate Action Plan
- October 2019- Temple University joins the Climate Collaborative of Greater Philadelphia

COVID-19

THE GLOBAL PANDEMIC'S IMPACT ON TEMPLE'S CARBON EMISSIONS

Climate scientists have closely monitored the impact the COVID-19 pandemic has had on global carbon emissions. Their findings show that global carbon emissions fell slightly as economic and social activities were halted. At Temple University, we have also monitored the impact that the pandemic has had on emissions. Not unlike global trends, gross greenhouse gas (GHG) emissions in the 2020-2021 fiscal year (FY) were impacted by the global pandemic.

This two-page spread provides a deeper explanation about the effects that COVID-19 had on Temple University's gross GHG emissions. Our challenge moving forward is to understand the long-term opportunities and challenges the pandemic has had on Temple operations so that we continue to reduce our environmental impact in a post-pandemic world.

Impact to Scope 1 Emissions

The United States Environmental Protection Agency (US EPA) defines scope 1 emissions as direct GHG emissions that occur from sources that are controlled or owned by an organization (e.g., emissions associated with fuel combustion in boilers, furnaces, vehicles).

Temple's largest source of scope 1 emissions is from stationary sources fuel, burned on-site to provide heat and hot water in buildings. With most classes being held virtually, building occupancy was greatly reduced and HVAC operations were able to be curtailed with minimal impact on the students, faculty and staff. As a result, natural gas consumption in FY 21 was 20% lower than FY 19, the most recent year that COVID-19 did not impact operations. However, emissions from stationary sources increased by 2% due to a large delivery of heating oil. Heating oil is used as a source of back-up power.

The second largest source of scope 1 emissions, fuel used in Temple owned or leased vehicles, was reduced by 27%. Vehicle miles traveled decreased due to the shift to virtual instruction and events.

Impact to Scope 2 Emissions

The US EPA defines scope 2 emissions as indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling. Although scope 2 emissions do not physically occur at the facility where they are generated, they are accounted for in an organization's GHG inventory because they are a result of the organization's energy use.

Electricity use (kWh) decreased by 8% in FY 2021 compared to FY 2019 – the most recent year that COVID-19 did not impact operations. The decrease was the result of energy efficiency improvements to building systems.

When comparing emissions from electricity use in FY 2021 to FY 2019, there is an increase of 16%. This is a result of an investment in renewable energy credits (RECs) to offset 45,658,000 kWh of electricity consumption in FY 2019. Temple University has committed to investing in RECs to meet annual carbon reduction commitments.

Like electricity, steam use also decreased compared to FY 2019 as a result of energy efficiency improvements.



Impact to Scope 3 Emissions:

Scope 3 emissions include all sources not within an organization's scope 1 and 2 boundary. The US EPA defines scope 3 emissions as emissions that are the result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value chain. At Temple, we account for commuting emissions resulting from student, faculty, and staff traveling to and from campus, as well as emissions resulting from university-financed travel.

COVID-19 had the most significant impact of scope 3 emissions. Commuting emissions from students, faculty, and staff were 88% less in FY 2021 as compared to FY 2019. During the 2020-2021 academic year, 75% of classes offered through Temple Ambler, Main Campus, and Health Science Campus were virtual, while the remaining classes were either a hybrid model (10%) or in-person (15%). Virtual classes no longer necessitated students and faculty to commute to campus to learn or to teach, therefore contributing to a significant reduction in scope 3 emissions.

Additionally, with travel restrictions, the need and opportunity for individuals representing Temple University to travel were significantly reduced, resulting in a 97% reduction in emissions from university-financed travel.

Staying Focused on Temple's Long-Term Carbon Reduction Strategy

While Temple's FY 2021 gross GHG emissions exceeded the annual carbon neutrality benchmark goal, the most significant driver of the emission reductions (avoided commuting emissions) is not a sustainable long-term mitigation strategy. Supporting and incentivizing no or low-carbon forms of transportation is the most sustainable long-term strategy to reduce scope 3 emissions. Additionally, a continued investment in energy efficiency and the migration to clean energy sources will further drive down scope 1 & 2 emissions.

Academics & Research

Temple University understands it has a responsibility to shape a sustainable and resilient future through curriculum, instruction, and support for climate-related research. By expanding opportunities for students to learn about environmental sustainability, social equity, environmental justice, and climate action; students will graduate with the tools necessary to build a just and sustainable climate future. By supporting faculty research, Temple University will continue to be the competitive research institution it is today.

The Office of Sustainability supports the development and promotion of courses and research that focus or include themes of sustainability. In tracking and supporting sustainability curricula across departments, the Office of Sustainability ensures Temple continues to prepare the next generation of sustainability and climate change practitioners, entrepreneurs, researchers, and scholars.



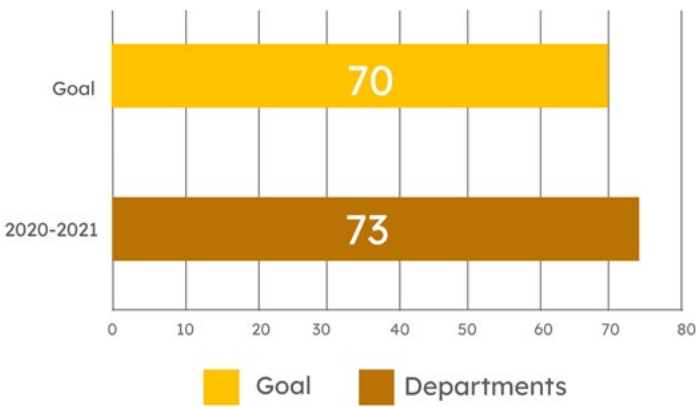
Funding Student Sustainability Research

GRASP Awardee Austin Martin

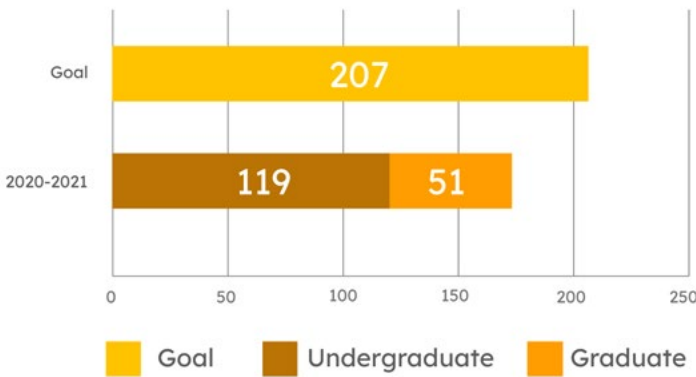
The Office of Sustainability supports student sustainability research through the Graduate Research Award Sustainability Program (GRASP). The award provides funding to a graduate student research project focused on sustainability. The 2020-2021 GRASP recipient was Austin Martin, a PhD student in the Geography and Urban Studies program. More information about his research project “Urban Honey Bees and Forage: The Ecological Dimension of Disinvested Neighborhoods in Philadelphia, USA” can be found on Temple’s Office of Sustainability website.



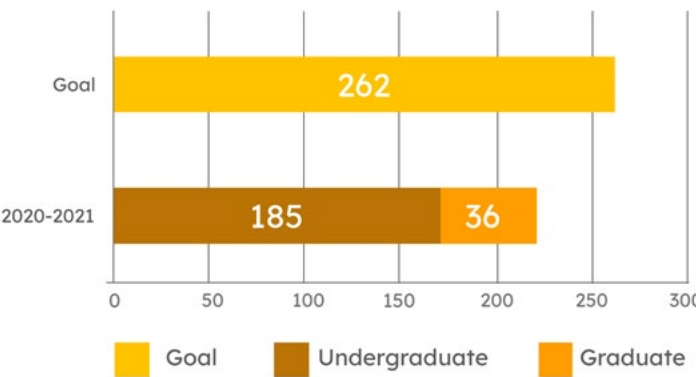
Featured Goals



Increase the number of departments with sustainability course offerings by two (2) departments from an October 2017 baseline by June 2022.



Increase the number of undergraduate/graduate sustainability courses by ten (10) courses from an October 2017 baseline by June 2022.



Increase the number of undergraduate/graduate courses that include sustainability by twenty (20) courses from an October 2017 baseline by June 2022.



Campus as a Living Laboratory

Civil Engineering Senior Design Studio

A partnership between the Office of Sustainability and Beasley School of Law laid the foundation for the development of a unique senior design studio challenge for College of Engineering students studying Civil Engineering.

The senior design students investigated the feasibility of installing a green roof on Klein Hall. As part of the class research, the students toured the elevated green space between Anderson Hall and Gladfelter Hall for design and engineering inspiration. The Office of Sustainability also coordinated informational interviews with campus partners to provide students with opportunities to gain technical knowledge and industry best practices. This is one example of how Temple University collaborates to provide valuable professional experiences for students and ensures students understand how climate change influences design and construction.

Supporting Climate Activism Through Project Based Learning

Heat Response and Community Arts Practice at Tyler

Community Arts Practices (CAP) at the Tyler School of Art and Architecture is a unique interdisciplinary certificate that combines artistic disciplines with skills and knowledge in community organizing; positioning students for an expanded civic role in the 21st century. This year, CAP members focused on issues of urban climate justice and extreme heat with “Addressing the Interlocking Crises of Race, Climate, Economy and Pandemic,” an advanced research and planning workshop. An interdisciplinary cohort of students supported Trust for the Public Land’s Heat Response Project working alongside a team of artists and community leads to creatively amplify their lived experiences and drive policy change to achieve equity across Philadelphia neighborhoods in response to rising temperatures.

The Office of Sustainability teamed up with CAP to offer a series of events including an Open Studio, showcasing the work of the artist and student teams, and community workday and teach-in at three Philadelphia neighborhoods hardest hit by excessive heat. The Office of Sustainability was able to expand the project’s impact and scope by deepening students’ understanding of the social dimensions of extreme heat and the role Temple and public agencies have in modeling climate leadership..



Two students, Holly Hazell (BA '22) and Kenza Bouseloub (BA '20), wrote and illustrated a graphic climate justice novella/ coloring book based on neighborhood stories and poetry from the Fairhill neighborhood close to Tyler.



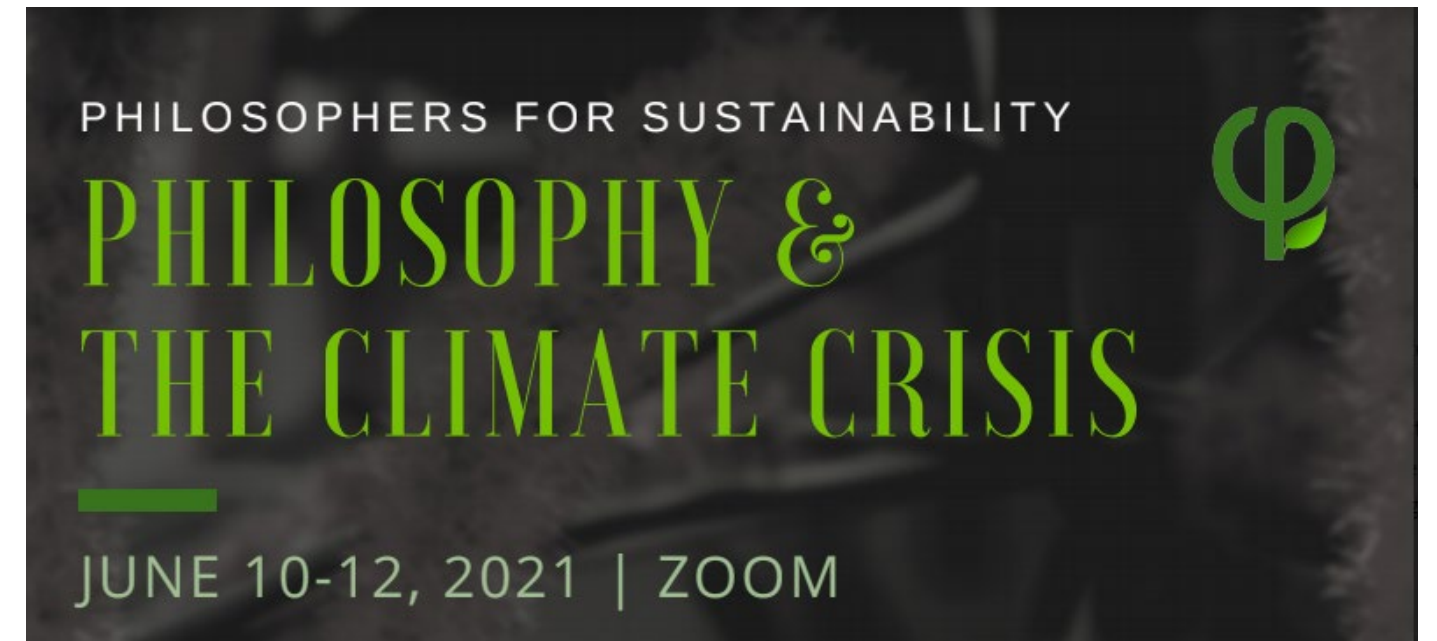
Deepening Community Engagement Through Learning

College of Liberal Arts Office of Community Engagement

Community-engaged learning courses, teaching and instruction are integral to the realization of Temple's urban mission. The College of Liberal Arts' Office of Community Engagement was founded to provide planning and support for collaboratively designed, community-based projects and serve as a hub for the exchange between the local community and faculty, staff, and students.

This year the Office of Sustainability collaborated with the Office of Community Engagement to deliver an asset-based community development workshop focused on environmental justice and contemporary issues in urban sustainability with the environmental justice-themed Service Immersion Program.

The Office of Sustainability will continue to work with the Office of Community Engagement to leverage Temple's academic resources and innovative teaching and instruction to deliver climate solutions for North Philadelphia and enrich student learning and professional development through meaningful community-based experience. Model collaborations include project-based learning and student research in Environmental Studies Senior Research Seminar and the Urban Environment at the undergraduate level and Public Policy for Urban Regions graduate course.



Climate Action Thought Leader and Advocate

Dr Eugene Chislenko, Temple Philosophy and Co-Founder of Philosophers for Sustainability

Dr. Eugene Chislenko is an Assistant Professor of Philosophy, specializing in ethics and moral psychology. In 2019, Dr. Chislenko co-founded a unique professional association and advocacy organization, Philosophers for Sustainability, an international group of philosophers working together to encourage their profession to take leadership on climate change and environmental sustainability.

The group has members in 17 countries working on a diverse array of projects ranging from successfully advocating for the American Philosophical Association (APA) to include sustainable practices in their professional guidelines to on-campus advocacy efforts, climate strike support, a monthly Sustainability in Philosophy forum series, a resources page, and a growing social media presence.

In June 2021, Temple University was the host institution for Philosophers for Sustainability's "Philosophy and the Climate Crisis" Conference. The 3-day conference brought together 200 scholars and climate organizers in sessions on structural change, climate action, teaching the climate crisis, and more, including a keynote from famed climate activist and 350.org founder, Bill McKibben. Learn more about the conference in the American Philosophical Association's Climate Matters blog.

Eugene's work organizing his discipline, building community, and delivering resources to integrate sustainability into teaching, research, and service is a powerful and effective example of how academics can leverage their skills, talents, and professional networks as thought leaders and advocates for climate action at the institutional level and within their discipline.

Goal Progress

Restructure the Undergraduate Certificate in Sustainability and the Interdisciplinary Undergraduate Certificate in Sustainability Committee (University College) by June 2019.	✓ ACHIEVED: The restructured Undergraduate Certificate in Sustainability was approved in Spring 2021. The new format will be launched Fall 2021.
Increase the number of undergraduate/graduate sustainability courses by ten (10) courses from an October 2017 baseline by June 2022.	IN PROGRESS: In the 2020-2021 academic year the number of undergraduate/graduate sustainability courses decreased by fourteen from a 2016-2017 baseline.
Increase the number of undergraduate/graduate courses that include sustainability by twenty (20) courses from an October 2017 baseline by June 2022.	IN PROGRESS: In the 2020-2021 academic year the number of undergraduate/graduate sustainability courses decreased by twenty from a 2016-2017 baseline.
Increase the number of departments with sustainability course offerings by two (2) departments from an October 2017 baseline by June 2022.	✓ ACHIEVED: In the 2020-2021 academic year the number of departments with sustainability course offerings was seventy-three. This is an increase of five departments from the 2016-2017 academic year baseline.
Partner with the Center for the Advancement of Teaching (CAT) to create professional development opportunities for faculty that promote interdisciplinary, inter-college sustainability courses and teaching methods for undergraduate and graduate degree programs, to be offered by spring 2020.	✓ ACHIEVED: In Fall 2020 a Faculty Learning Community on Green Pedagogy was offered through CAT.
Coordinate with the University College Office of Digital Education (ODE) to create an online format for sustainability courses by June 2020.	✓ ACHIEVED: The shift to virtual learning resulted in the creation of an online format for sustainability courses.
Create an online repository for existing and future sustainability exercises and course material to assist faculty in integrating sustainability into their courses by June 2020.	IN PROGRESS: The Office of Sustainability is working with Temple University Libraries to create an Office of Sustainability collection on TU Scholar Share. Anticipated publication of the collection is early 2022.
Develop a strategy for co-curricular sustainability education that integrates academic courses and non-credit learning experiences that are connected to or mirror the academic curriculum. The strategy is to include a process for collecting data regarding co-curricular sustainability education and an assessment tool by June 2020.	✓ ACHIEVED: The Office of Sustainability partnered with the Clean Air Council to launch a Walk Audit certification Program in Fall 2020.
Secure designation of the 187-acre Ambler Campus/Arboretum as a research field station providing facilities and a diverse ecosystem that support both basic and applied research in sustainability disciplines by June 2019.	✓ ACHIEVED: Ambler Campus received field station designation in 2020.
Identify, validate and amplify current sustainability research using the Electronic Research Administration (eRA) database to document sustainability research.	✓ ACHIEVED: The Office of the Vice President for Research generated a list of sustainability research which is an important tool to assist the Office of Sustainability in promoting faculty sustainability research.



Ambler Field Station

Ambler Campus was officially designated as a field station by Temple's Office of the Vice President for Research in 2020, achieving a goal outlined in our Climate Action Plan. The Field Station, located on the 187-acre campus and arboretum, provides access to a diversity of natural areas and research and educational support facilities, including laboratories, instructional classrooms and meeting spaces, a technology center, outdoor research array, and greenhouse.



Documenting the Impact of Climate Change on Plant and Animal Life

PhenoCam Network

In April 2020, Temple Ambler Field Station joined a worldwide effort to collect data to be used for scientific studies of phenological processes via the PhenoCam Network. Phenology is the study of cyclic and seasonal natural phenomena, especially in relation to climate and plant and animal life.

To participate in the PhenoCam Network, a camera was installed to monitor the Conservation Forest. Photos are taken every 30 min and are uploaded in near real-time to University of New Hampshire, who makes them publicly available. Over time, we will be able to see how the phenology of our forest changes, and compare our phenological patterns with other forests around the world.



Partnering with Smithsonian Institution's Forest Global Earth Observatory

Studying the long-term dynamics of forest recovery

Temple Ambler Field Station is collaborating with Smithsonian Institution's Forest Global Earth Observatory (ForestGEO) to establish the Temple Forest Observatory.

The Temple Forest Observatory will include two 4-ha research plots in an older growth forest and a secondary forest, providing an opportunity to study the long-term dynamics of forest recovery. Together, these plots will serve as a platform for integrated research and education, supporting faculty research, student internships, undergraduate course modules, and publicly available educational materials.



Creating Access through Engagement

Ambler Arboretum and EarthFest

In an effort to diversify participation in the sciences, a priority of the Field Station is to provide access and opportunities to students from populations under-represented in science. Through partnerships with the Ambler Arboretum and EarthFest 5,000 people ages 4-80 and nearly 100 schools enjoy educational programming annually.

Many populations of students, particularly those in urban centers, lack proximity to field stations and natural environments that can serve as a platform for education, thereby limiting their access to advanced field-based training. By leveraging the strengths of the Temple Ambler Field Station's location and assets, we are actively establishing undergraduate research and K-12 educational opportunities that promote diversity in environmental fields.

Culture

Temple University understands the importance of strategic partnerships, leadership development, and interdisciplinary collaboration in creating an inclusive and sustainable culture on campus.

The Office of Sustainability collaborates with campus partners to develop strategies that integrate sustainability into all aspects of campus life - connecting environmental sustainability and public health, environmental and racial justice, food sovereignty, wellness, access, and inclusion. Truly sustainable campus culture exists when the entire community is engaged in education, advocacy, and actions aimed at fostering sustainable change.

TEMPLE
VOTES
CLIMATE

Student Leaders Advocate for Voter Registration

Temple Votes Climate

In 2020, Temple was named a Voter-Friendly Campus by the National Association of Student Personnel Administrators (NASPA) and Campus Vote Project for its democratic engagement action planning and electoral participation. The exemplary turnout can be attributed to highly successful voter registration, and education and mobilization campaigns

The Office of Sustainability supported the nonpartisan initiative of the Division of Student Affairs with a complementary digital media campaign, "Temple Votes Climate." Temple Votes Climate gave student leaders a platform to inform their peers about voting with climate in mind. Students featured on the Office of Sustainability social media pages garnered engagement by delivering key resources. This series, one of the most successful last year, illustrates the importance of climate policy advocacy and civic engagement when cultivating a culture of sustainability and environmental activism on campus.

Featured Goal

Create a student educator program to build student awareness on campus by 2020.

Temple University's EcoReps program was launched in Fall 2020 and includes a diverse student population. The 2020-2021 EcoRep cohort were active participants in Temple's climate action movement.



Total number of EcoReps



Total number of unique majors



Total number of EcoRep events

Connecting Around Environmental Policy

EcoReps Policy Newsletter

The Sustainability Policy Partnership Initiative, a collaboration between the Higher Education Associations Sustainability Consortium and the Disciplinary Associations Network for Sustainability, strives to connect university communities to opportunities in climate policymaking and governance through the creation of monthly policy updates.

In 2020, Temple University's Office of Sustainability signed on to the Sustainability Policy Partnership Initiative. To meet the commitments of the initiative and provide student leadership opportunities, the Office of Sustainability hired a student leader and has since published biweekly policy newsletters focused on local, state, and federal climate policy. Political literacy is crucial to a sustainable campus culture and achieving Temple's Climate Action Plan goals.

To sign up for the Policy Partnership newsletter visit: sustainability.temple.edu/about/sign-our-newsletter



Stewardship

The Office of Sustainability hosts several stewardship events each academic year to give students opportunities to foster relationships, model sustainable leadership and make our neighborhoods, public spaces, natural lands cleaner, healthier and happier places.



Leveraging City Programming to Provide Stewardship Opportunities

Clean, Green, and Love Your Park

The Office of Sustainability coordinates groups of students to participate in Love Your Park every November. Love Your Park, a collaboration between Fairmount Park Conservancy, Philadelphia Parks & Recreation, and Philadelphia’s Park Friends Network, works to support communities in activating Philadelphia’s parks and other natural areas. In November 2020, Temple student leaders joined Park Friends groups at both Sedgley Woods Disc Golf Course in East Fairmount Park and at Norris Square Park in nearby Kensington and cleaned, greened, and celebrated these iconic Philly parks by collecting leaves for compost, planting trees and flower bulbs, and cleaning up after a very busy summer.



Green Grant in Action

Adventure Bound Leads Leave No Trace Course and Certification

The Student Green Grant builds upon Temple University’s commitment to sustainability by funding projects led by students that focus on advancing the mission of the Office of Sustainability and have a positive, sustainable impact on the local environment and community.

Green Grant funds were used for Adventure Bound leadership’s Center for Outdoor Ethics Leave No Trace trainer course and certification and camping equipment compliant with sustainable procurement principles

To learn more about the Green Grant visit: sustainability.temple.edu/participate/students/green-grant

Goal Progress

Create a student educator program to build student awareness on campuses by 2020.	✓ ACHIEVED: Temple University’s EcoReps program was launched in Fall 2020.
Increase student sustainability engagement through the development of a student green fund by 2019.	✓ ACHIEVED: The Green Grant was first awarded in 2019.
Create sustainability certificate program through Temple’s Continuing Education program by 2023.	IN PROGRESS: The Office of Sustainability began to author a case study to summarize best institutional practices and existing programs. This information will inform recommendations for the structure of the Sustainability Certificate.
Conduct an assessment on sustainability culture by 2021.	IN PROGRESS: The sustainability culture survey will be conducted in Spring 2022.
Work with Residential Life to incorporate the responsibility of sustainability engagement with students in the residence halls into an existing staff member’s essential duties by 2020.	IN PROGRESS: Residential Life is piloting the role of a Campus-Wide Sustainability Rep to support current sustainability programming with the intension of formalizing the role by the end of 2021.
Establish a housing and dining services/academic working group to identify opportunities for collaboration and cooperative programs by 2020.	IN PROGRESS: In response to student input, the Office of Sustainability partnered with Aramark to develop a post-consumer food waste capture program.
Begin to address food insecurity at Temple by 2019.	✓ ACHIEVED: Temple Business Services and Sustainability donated the revenue made through the recycled graduation gown program to the Cherry Pantry.

Engagement by #s



EcoReps

Temple recognizes the important role that students play in building a sustainable campus from the ground up. EcoReps is a peer education program which trains and develops leaders to embody, promote and lead sustainable change and climate action on campus.

The EcoReps program is for all students who care about sustainability. EcoReps help Temple achieve carbon neutrality via Office of Sustainability programming, outreach, service, communication, leadership and service opportunities. Students who participate in the program gain career competencies and transferrable professional skills preparing them for their time after Temple.

EcoReps are part of the greater sustainability team; without them Temple could not achieve goals outlined in the Climate Action Plan.

Organizational Leadership: Thrift and Flop and Sustainable Fashion

Thrift and Flop, a sustainable student organization and past winner of the Temple Sustainability Green Grant, were featured EcoChampions at one of our Sustainable Fashion Stories of Sustainability events. Miya and Alison modeled EcoReps peer leadership during this event when they discussed their organization's activities: group trips to area thrift stores, zero waste photoshoots and education campaigns, and collaborative, creative reuse projects. EcoReps led an at-home DIY upcycling project to repurpose a t-shirt as a pillow via Zoom for over two dozen other students.



Sustainability and Global Citizenship

EcoRep and student leaders for the International Student Advisory Board, Fernando Gaxiola, led discussion with his International Student Affairs peers and other sustainability student leaders about international students' contributions to the sustainability movement in the States and in their home country. Grounded in personal stories and reflections on individual experiences, this event created a space for celebrating the important role of diverse global perspectives in climate action on Temple's campuses and provided crucial context and support for student leaders in their own sustainability movement making at home and abroad.

Green Living (At Home)

EcoLead Tristan Fuentes led an 8-week interactive challenge to help students green their lives – remotely! Eleven students living both on and off-campus earned a Green Living Certification by taking action steps to reduce their waste and carbon footprint. Each week, Tristan built community through a virtual, interactive information session which allowed students to share challenges and best practices. One special session featured a collaboration with partners in Student Affairs and Temple Student Government as well as the Hope Center for College, Community and Justice, and Sharing Excess. The Green Living community discussed the relationship between climate and waste justice and advocates, staff and community members generated innovative solutions to end food insecurity on Temple's campus and in our surrounding community.

Digital Storytelling: Voices of a Movement

Jessette Long, EcoLead for Digital Media, developed a special social media campaign to highlight the work of climate activists and give a platform to the "voices of a movement." This series offered student leaders an opportunity to practice digital storytelling with engaging social content through recognition of the contributions of two communities of changemakers: Latinx advocates in conjunction with National Hispanic Heritage Month and student activists in the run up to 2020 General Election, celebrating the power of youth and diverse experiences to inspire climate action and social justice movement making on campus and beyond.



Environmental Stewardship and Education

As part of our Birds, Bees and Trees Stories of Sustainability series about urban ecology, EcoReps headed to some of Philly's favorite parks to volunteer for Love Your Park and then shepherded students to the Audubon Discovery Center via bicycle and public transit. At the Discovery Center, student leaders helped facilitate a bird walk around the reservoir, incorporating key environmental stewardship and education initiatives of Audubon including their freshwater mussel growing project and better understanding the impact of climate change on local bird populations.

Feet First Philly: Student Pedestrian Advocates

Temple Sustainability EcoRep and Walk Audit Certification Training Course graduate, Gianna Colantuono (TYLER, '21), continued on her pedestrian advocacy journey, and applied her experiential learning and sustainability knowledge by joining Clean Air Council's Feet First Philly and their Events Committee. Gianna sat on a Safe Routes to School panel discussion in Spring 2021 and represented the university student perspective on commuting to campus. Through EcoReps and the Walk Audit, Giana joined a coalition of stakeholders and participated in critical dialogue about sustainable transportation solutions for Philly's youth populations. Gianna now works for the City of Philadelphia's Office of Community Empowerment and Opportunity as a member of the Serve Philadelphia Americorps VISTA Corps.



Design

More than 70% of Temple’s greenhouse gas emission are attributed to its built environment. Since 2006 Temple has added more than 3,000,000 square feet of new building space but has reduced greenhouse gas emissions in part through energy efficient design. To achieve Temple’s carbon neutrality goal by 2050, we must continue to improve the efficient use of Temple’s existing buildings and incorporate innovative design and technology strategies.



Temple LEEDs in Green Design

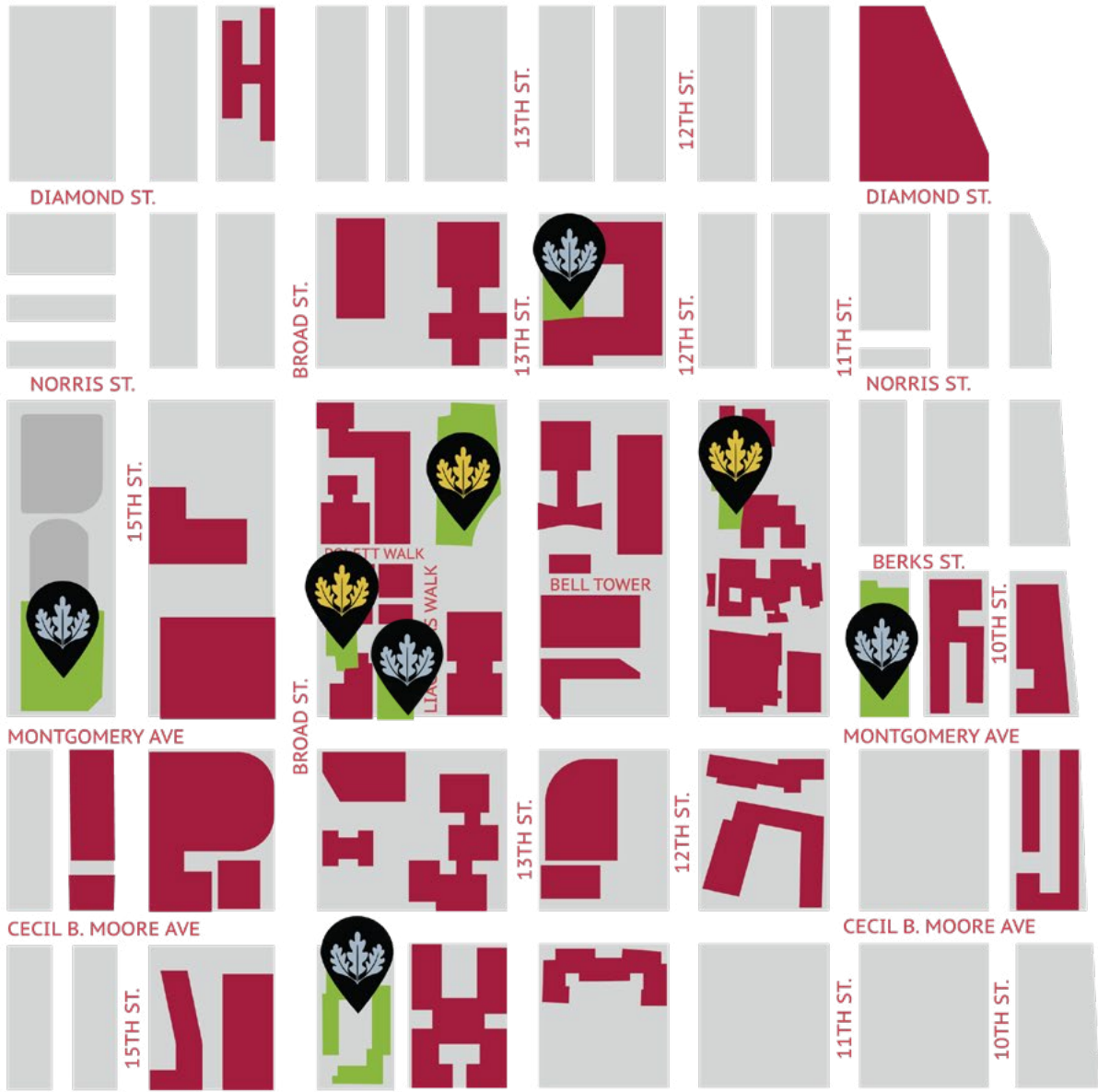
Charles Library Awarded LEED Gold Certification



Charles Library was awarded LEED Gold Certification during the 2020 -2021 academic year. LEED, Leadership in Energy and Environmental Design, is a widely accepted green building rating system. Charles Library was designed and constructed with sustainability in mind. Energy efficient lighting, day lighting strategies, sustainable materials and a large green roof earned Charles Library LEED Gold.

Featured Goal

Incorporate green building standards for renovation, new construction, and landscape projects into the university’s adopted green building policy by 2019.

LEED Buildings on Temple University’s Main Campus



 LEED Silver Certified Buildings	 LEED Gold Certified Buildings
Architecture Building (Norris & 13th) ASTAR Complex (Montgomery & 15th) Montgomery Garage (Montgomery & 11th) Morgan Hall (Broad & Cecil. B Moore) 1810 Liacouras Walk (Liacouras & Montgomery)	Science and Engineering Research Center (12th & Norris) Charles Library (Polett & 13th) Wachman Hall (Broad & Montgomery)



Adding Green Space to Campus

Mazur Terrace

The area between Anderson Hall and Gladfelter Hall was transformed into a beautiful green gathering place on campus. Open to the public in the spring, it immediately became a haven for students, faculty, staff, and community members. The inviting design transformed an impermeable area to a space that mimics the natural environment. The grass quad and landscaping beds provide sustainable stormwater management infrastructure as well as mitigation of the urban heat island effect.



Increasing Zero Emission Transportation Options Near Campus

Expanding Indego in North Philadelphia

Temple University met with the City of Philadelphia's Office of Transportation, Infrastructure, and Sustainability (oTIS) and Indego to identify locations for additional bike-share stations on and around Main Campus. Indego stations are selected based on proximity to community resources, employment centers, bike and transit infrastructure, community groups, and public feedback. Temple is committed to working with oTIS and Indego to support and expand the system to better serve all Philadelphians and bring convenient, zero emission bicycle resources to North Philadelphia.

Goal Progress

Incorporate green building standards for renovation, new construction, and landscape projects into the university's	ACHIEVED: Many Green Building Standards are being incorporated into Temple Design Standards. New construction and major renovation projects set LEED Silver minimum as the goal.
Develop Temple standards for new and existing building design and campus infrastructure that incorporate sustainability and climate resilience by 2020.	ACHIEVED: All new major capital construction projects and renovations will be designed to meet or exceed LEED silver. All campus infrastructure and systems will be designed to ASHRAE 90.1- 2019.
Develop and adopt technical specifications for all projects that incorporate its sustainable design framework by 2021.	IN PROGRESS: Technical specifications for plumbing have been developed for all projects. Technical specifications for mechanical and electrical systems are being developed for publication by 2022.
Complete the full implementation of the Verdant Temple Landscape Master Plan by 2030.	IN PROGRESS: Temple University has completed many iconic projects including the transformation of significant portions of Polett and Liacouras Walk. Both projects integrated sustainable stormwater management.



Understanding the Impact of Sustainable Landscape Design

Measuring Ecosystem Services of Trees on Main Campus

Landscape architecture is an important part of sustainable design in an urban environment. Trees help maintain balance and provide many benefits to humans, wildlife, and the natural environment. These benefits are called ecosystem services.

To track the progress of goals outlined in Verdant Temple Landscape Master Plan and to quantify the ecosystem services of trees on Main Campus, EcoReps were employed by the Office of Sustainability to inventory trees over a three-month period. The data they collected will be used to calculate biodiversity, stormwater management, and carbon capture. As part of Temple's commitment to utilizing the campus as a living lab, all data sets will be made available to the public.

STORIES OF SUSTAINABILITY

Accomplishing the goals outlined in the Climate Action Plan requires us to build a coalition of climate leaders from every corner of campus. In preparation for the 2020-2021 academic year, Temple Sustainability designed a programming series to amplify Temple faculty, staff and student climate activists – Stories of Sustainability. Each session highlights the innovation of our champions of research and operations, superstar students or our community partners and changemakers. With Stories of Sustainability we hope to give a platform to share best practices and foster dialogue to discuss the latest topics in sustainability and fuel climate action on campus.

BIRDS, BEES AND TREES

Temple Sustainability tackled urban ecology and sustainability in the city through different disciplinary lens with our event series, *Birds, Bees and Trees*.



EcoChampion: Timothy Swartz, PhD candidate in Department of Biology, College of Science and Technology

What Does “Sustainability” Have to do with Urban Birds?

A field biologist, Timothy Swartz’s research investigates the role of birds in providing benefits to urban residents. Timothy’s goal has been to investigate how people can return the favor by ensuring that urban green spaces have the trees and other plants birds need to thrive. Timothy’s findings could help fuel solutions to the growing problems of litter, tree canopy loss, and the widening gap between people and nature in Philly neighborhoods.



EcoChampion: Austin Martin, PhD candidate in Department of Geography and Urban Studies, College of Liberal Arts

Urban Honey Bees and Forage in Philadelphia

The distribution of pollen-producing flora around the city of Philadelphia is a question immediately relevant to both beekeepers and entomologists. Research tells us that cities can act as havens for declining bee populations, yet the interplay of these social and natural systems, as well as their relevance for neighborhoods and communities, are understudied. Austin uses GIS techniques to analyze the urban built environment, demographics, and how these factors affect the flow of pollen in one of the United States’ biggest cities.

SUSTAINABLE FASHION

For Campus Sustainability Month, we explored the topic of sustainable fashion with campus and community leaders at the forefront of innovation; unpacking the fashion industry’s ecological and social impact and building zero-waste culture and community.



EcoChampions: Allison Altobelli '21 and Miya Wagner '21, Founders of Thrift and Flop

Supporting a Waste Conscious Community

Being zero waste, is not just recycling but it’s repairing, reusing, and rethinking fashion. Temple Student Organization Thrift and Flop offers a solution: upcycling clothing. Allison and Miya inspired students to think more critically about fast fashion and shared ways to alter or repair garments to create unique, beautiful pieces of clothing.



EcoChampion: Zimri Hinshaw '20, Founder and CEO of Bucha Leather Inc.

Bucha Leather Building a Triple Bottom Business

Grant Blvd uses sustainable fashion by designing inclusive pathways and creating employment opportunities. Kimberly McGlonn, CEO and Founder of Grant Blvd, uses her platform and business to bring attention to the challenges of mass incarceration and need for prison reform. Grant Blvd and Kimberly propose a solution to addressing the larger global crises and social problems stemming from climate change and poverty.



EcoChampion: Kimberly McGlonn, CEO and Founder of Grant Blvd

Grant Blvd Sustainable Fashion and Social Impact

Grant Blvd uses sustainable fashion by designing inclusive pathways and creating employment opportunities. Kimberly McGlonn, CEO and Founder of Grant Blvd, uses her platform and business to bring attention to the challenges of mass incarceration and need for prison reform. Grant Blvd and Kimberly propose a solution to addressing the larger global crises and social problems stemming from climate change and poverty.



ACT ON CLIMATE

Co-sponsored with the Department of Geography and Urban Studies, *Stories of Sustainability* connected the Temple Community with local community voices, scholarship, and policy to explore different strategies to organize and govern for a just climate future and seek to fulfill Temple's urban mission.



EcoChampions: Billy Yalowitz, Program Director, Community Arts Practices, Tyler School of Art and Architecture and Cheyenne Flores, Resiliency Fellow, Office of Sustainability, City of Philadelphia and CLA GUS Alum

Heat Response & Creative Action for Philly's Rising Temps

Through Temple's engagement with Heat Response and this Office of Sustainability event, we listened to community voices and helped creatively amplify local populations' lived experiences to drive policy change and achieve equity across Philadelphia neighborhoods in response to rising temperatures. Participants gained an understanding of the socialjustice dimensions of extreme heat and urban climate change and joined a conservation with student leaders to create a space to imagine a just and abundant future with insight and tools from the City of Philadelphia's Office of Sustainability equity framework, community wisdom, the creative arts and cultural practice.

ICLEI & Local Climate Action Planning in the Commonwealth

We spotlighted not only Pennsylvania's Department of Environmental Protection's Local Climate Action Program, but the experiences of the students participating in ICLEI – Local Governments for Sustainability internship program. The event gave attendees a sense of the function of the 2018 Pennsylvania Climate Action Plan as a critical piece of climate policy and what it looks like in practice in local municipalities across the Commonwealth.

EcoChampions: Heidi Kunka and Mark Costanzo, Jada Ackley, and Nicole Somers

Struggle Space to Green New Deal

Tina, Megan, and Russ reconciled and remembered the past, worked to address environmental, racial, and social injustice, and planned for climate justice by connecting present and future community needs with the Green New Deal framework. Our speakers' collective scholarship, critical perspective, and organizing skill explained and informed policy and activist responses to the climate crisis, meeting this moment and prioritizing the most vulnerable and marginalized communities.

EcoChampions: Dr. Christina Rosan, Associate Professor of Geography and Urban Studies, Temple University; Dr. Megan Heckert, Associate Professor of Geography and Planning, West Chester University of Pennsylvania; Russell Zerbo, Organizer, Clean Air Council

RACE TO ZERO WASTE

Temple Sustainability highlighted zero waste strategies from EcoChampions on and off campus. We featured campus operations experts to dive deep into the challenges of waste management, student leaders shaping zero waste culture in their organizations, and business innovators reimagining zero waste commerce.



EcoChampion: Jonathan Latko, Director, Temple University Computer Recycling Center



EcoChampion: Emily Rodia, Co-Owner of Good Buy Supply



EcoChampion: Brandon McCleene '24, Christina Trezza '22, Issa Kabeer '21 and Nadia Ramos '22

Electronic Waste and Digital Equity

Jonathan, longtime champion of sustainable operations at Temple, delivered primer on e-waste -- the market, its challenges and Temple's strategy and solutions. Jonathan also connected the Computer Recycling Center's work to institutional sustainability and climate action, including critical discussion of the digital divide and tech equity and access in North Philly.

Philadelphia's First Low-Waste Store Front

Living sustainably doesn't have to be complicated or expensive. Good Buy Supply co-owner, Emily Rodia encouraged Temple students to use a voice for change by advocating for better wages and responsibility to be put on manufacturers. Simply, if people were paid more, then they would be able to live more responsible lifestyles.

Shaping Zero-Waste Culture on Campus

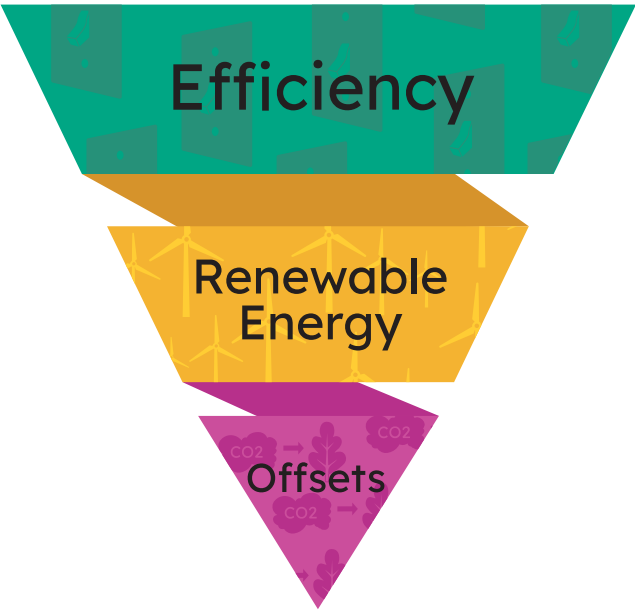
Since day one, Adventure Bound takes the utmost responsibility for their ecological footprint. As their mission spreads across campus, their conversations are an example of the zero-waste culture Temple students aspire to cultivate. Adventure Bound shared the Leave No Trace philosophy with Temple students.

Energy

The need for a new approach to energy use and sources is inherent in Temple’s climate commitment. Temple is committed to implementing a balanced three-pronged approach to reducing greenhouse gas emissions. The approach focuses first on efficient systems, second on sourcing less carbon intensive forms of energy and, as a last resort, purchasing carbons offsets. This strategy has been successful and has helped Temple to achieve progress towards carbon neutrality year after year.

Temple’s approach to eliminating carbon emissions from energy sources.

- 1. **Efficiency:** using equipment or technology that requires less energy to perform the same function.
- 2. **Renewable energy:** energy from a source that is not depleted when used, such as wind or solar.
- 3. **Offsets:** are a form of trade. When you buy an offset, you fund projects that reduce greenhouse gas emissions.



Achieving Carbon Reductions through System Optimizations

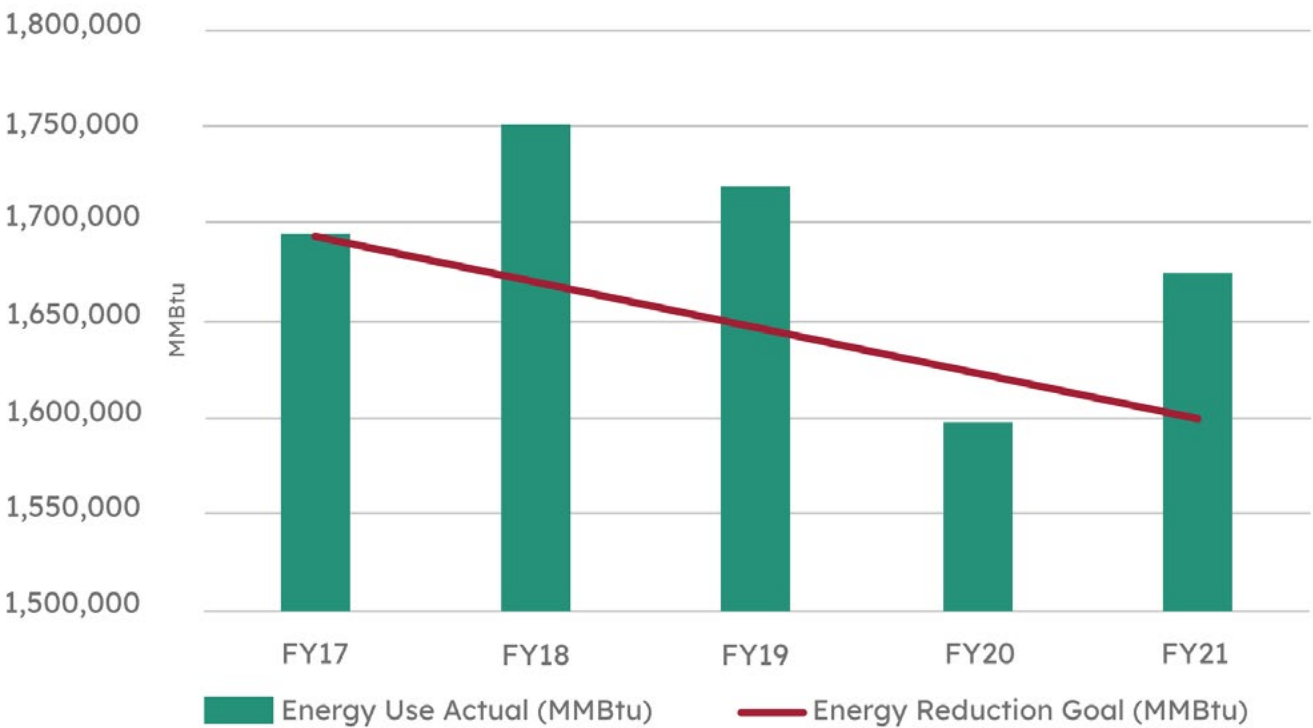
Energy Efficiency Upgrade for a Central Chilled Water Plant

Temple University has several central chilled water plants which maintain comfortable temperatures for building occupants. The chilled water from the central plant moves heat entering the buildings back to the central plants which then rejects the heat to the environment. An optimization project at the Barrack Central Chilled Water Plant (CCWP) improved efficiency by 12% - an annual energy savings of more than 2,500,000 kWh. This project served as Temple’s pilot project for the Green Revolving Fund. High value efficiency projects like the one at Barrack CCWP help Temple achieve our carbon neutrality commitment.

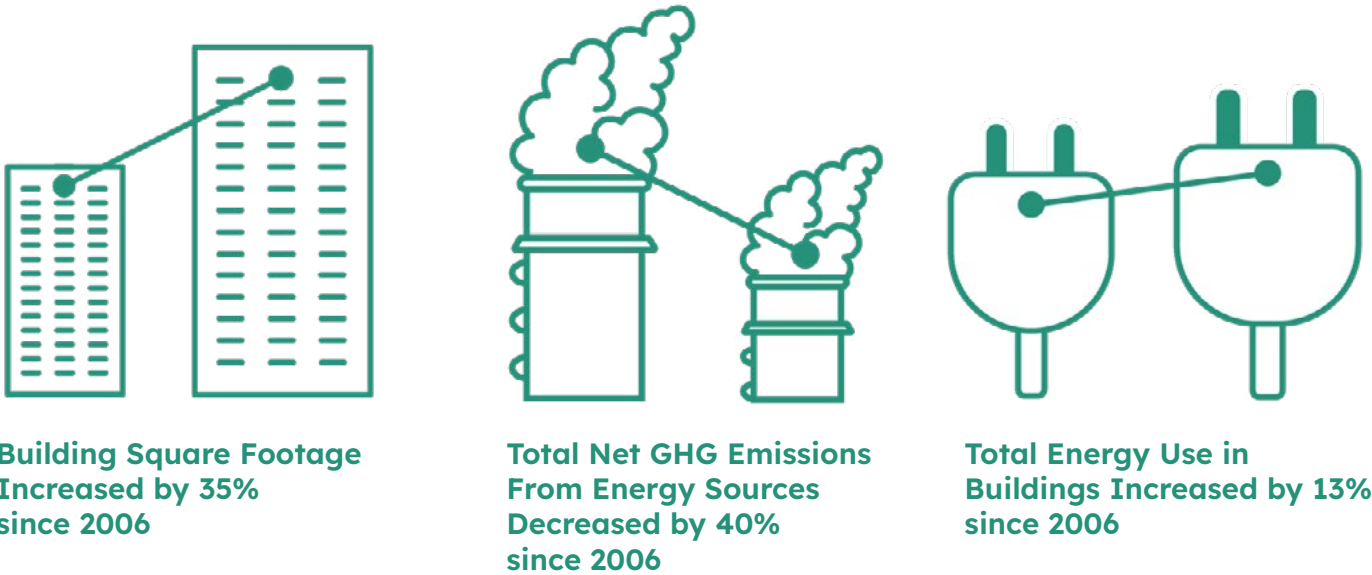
Featured Goal

Featured Goal Reduce energy use in existing building stock by 18% from a FY2017 baseline by 2030.

Since FY17, energy use in existing buildings have been reduced by 1%.



Energy by #s



Goal Progress

Reduce energy use in existing building stock by 18% in a typical climatic year by 2030.

IN PROGRESS: Temple has reduced energy use in existing building stock by 1% since a FY 2017 baseline.

Continue to invest in energy efficiency projects, starting in 2020 through the allocation of initial seed funds. Completion of additional projects will be contingent on verified savings.

IN PROGRESS: Seed funding has been identified. Projects are currently being evaluated.

Create a Green Revolving Fund in 2018 to direct the actual energy cost savings into additional energy projects.

IN PROGRESS: An internal accounting mechanism for a Green Revolving Fund was created. Projects are currently being evaluated.

Adopt mechanical, electrical, and architectural standards for renovation and new building projects which limit dependency on fossil fuels and promote established sustainable practices by 2020.



ACHIEVED: Temple follows ASHRAE 90.1 - 2019 and LEED Silver guidelines. Both ASHRAE and LEED promote established sustainable practices which limit dependency on fossil fuels.

Create requirements for the designers of projects of a certain size to collaborate with the energy team to incorporate energy implications in design decisions by the end of 2018.

IN PROGRESS: This goal is in progress.

Sign another Power Purchase Agreement (PPA) by end of 2021.

IN PROGRESS: Temple University released a Request for Proposals from renewable energy developers in 2019. This project was temporarily put on hold due to market uncertainty resulting from the COVID-19 pandemic.

Sign another Power Purchase Agreement (PPA) by end of 2021. Develop at least 100+ kW of renewable energy systems at Temple's facilities by 2022.

IN PROGRESS: Temple University is investigating opportunities to develop small scale renewable energy systems on campus.



Investing in Systems that Yield Energy Savings

Central SCADA Center

A supervisory control and data acquisition (SCADA) center was created to enable holistic monitoring of Temple's building systems. The new SCADA center presents plant information to operating personnel graphically. This provides greater visibility of system performance and therefore yields more opportunity for optimization and efficiency.



Uncovering Efficiency Opportunities at Tyler School of Art and Architecture

Faculty take the lead to reduce emission and support students

Faculty of the Tyler School of Art and Architecture are committed to drawing attention to their role in the climate crisis. Through instruction and collaboration efforts with students and peers, faculty have identified opportunities to modify behaviors and increase the efficiency of program operations to reduce negative impacts on the climate.

During the 2020 spring semester faculty and staff representatives from Tyler's Climate Action Committee audited the Glass and Photography studios with the Director of Energy and Utilities and the Office of Sustainability to identify opportunities to reduce reliance on fossil fuels through energy efficiency operations and industry best practices.

Tyler's commitment to climate activism and innovation will create a lasting impression on students by providing examples of what it means to create a just climate future.

Increasing Energy Efficiency of an Existing Building

Ritter Hall Redesign

Increasing the efficiency of an existing building is not without challenges, however, through Temple's collaborative design and construction approach, opportunities to increase efficiency are consistently identified.

The Ritter Hall Renovation Project transformed nearly 70,000 interior square feet of office, administrative, faculty and support space for the College of Education & Human Development. The interior design and space planning relies on circulation with open office spaces lining the exterior window walls. Office spaces can take advantage of borrowed light or LEDs throughout the building. Lighting and design improvements combined with new insulation in all perimeter walls makes the building more energy efficient.

Additionally, exposed ceilings will reduce product manufacturing and construction waste. Renovations to water closets, urinals, and low-flow faucets will reduce water consumption by 30%. Flooring now includes Interface LTV (a carbon neutral life-cycle product) and Shaw Carpet which is 90% cradle-to-cradle. In support of Temple's Indoor Air Quality goals, low emitting materials and adhesives were used. Finally, throughout the construction process, contractors met all institutional construction and demolition waste management and indoor air quality plans.

Temple Sustainability and the Urban Mission

As an urban institution that is deeply engaged in the community, Temple University's commitment to sustainability can have a profound impact on the health and quality of life of a large and diverse population within Temple and its surrounding community.

The university is committed to demonstrating the value of those principles through its own example and through the activities it sponsors in the community. Temple aims to serve as a model for similar urban institutions and to burnish its national reputation for excellence and commitment to principled policy and action.



Farms to Families

Addressing Food Insecurity with the Center for Urban Bioethics

Temple University Lewis Katz School of Medicine's Center for Urban Bioethics is committed to eliminating health disparities through education and research. The Center for Urban Bioethics' community-driven research influences structural change to impact medical care sectors and beyond. One such innovative, evidence-based program, Farms to Families, exemplifies the integration of sustainability into the work of Temple Health researchers and clinicians as they address the availability and affordability of fresh food in underserved communities throughout the Philadelphia area.

Farms to Families addresses chronic disease related to poor diet and physical inactivity through access to fresh produce and foods. With low-cost options, including a FreshRX "prescription" from a Temple physician, families buy fresh, organic produce year-round at a reduced price – helping to build capacity for healthier eating habits. Temple University Hospital and Lewis Katz School of Medicine partner with the St. Christopher's Foundation for Children and the Lancaster Farm Fresh Cooperative to source, package, and deliver fresh food to community food hubs.



Philly Community Wireless

Internet for the Community, By the Community

Philly Community Wireless (PCW) is a group of community organizers, technologists, and researchers building community-owned infrastructure and working to provide free, net-neutral Wi-Fi to residents in North Philadelphia in the wake of the coronavirus pandemic. Members of the Temple Community, including staff at the Charles Library, the Health Science Library, Information Technology Services, and the College of Liberal Arts, are working directly with community organizations and leaders to outline a sustainable vision for addressing inequity in internet access rooted in local control and autonomy.

The Philly Community Wireless project is currently seeking to connect homes within a one-mile radius around Norris Square Park in North Philadelphia to free, net-neutral broadband for at least the next decade. They strive to offer an alternative model for Internet access and to help cities and communities reframe the Internet as a public utility and involve users in the construction of the network.

The goal is to help communities reclaim power through critical digital literacies. Teaching and outreach on the basic principles of network engineering and digital literacy remain critical elements of sustainable practice and ensure a more just, circular digital economy enabling neighbors to be stewards of the technology, rather than merely recipients.





Stewardship Education and Action

It is Temple's priority that students feel integrated into the rich fabric of the diverse North Philadelphia community and make a positive contribution to it as responsible stewards and good neighbors. This year Temple Sustainability staff designed and led an hour-long workshop on stewardship in urban environments. This event featured a primer on our Good Neighbor Policy, an introduction to waste justice and asset-based community development strategies, and essential tools and resources for hosting a successful block cleanup from Temple Sustainability and the City of Philadelphia.

This event also spotlighted the work of exceptional student researchers and campus leaders including Kyle Cruz, CLA '21 who developed a GIS StoryMapping tool and worked directly with the Clean Air Council and community members to record illegal dumping in the greater North Philadelphia community. Kyle, alongside Mimi Alonso, CLA, KLN, '21, also delivered video and other digital media resources about how to utilize the city's 3-1-1 app for waste removal and vacant lot toolkits, a key tool in an urban steward's toolkit. These resources are essential in activating student residents as engaged citizens in their neighborhoods and a chance to apply their environmental sustainability skills and knowledge to solve the real-world challenges of littering and facilitated action to green urban public spaces.



Service Immersion Program

The Service Immersion Program (SIP), a project of the Office of Student Activities at Temple University, is designed to actively engage students in meaningful experiences that foster cultural awareness and social responsibility through service-learning. The COVID-19 epidemic posed significant challenges to SIP's traditional model of traveling to work in community with partners such as the Oglala Lakota Nation in Pine Ridge, South Dakota and organizations supporting immigrant communities in El Paso, Texas. This shift in geography, scope and scale afforded an incredible opportunity to instead turn our attention to hyperlocal community partners and tackle social issues right here in Philadelphia.

Two of the five Service Immersion programs focused on issues of environmental justice and climate change. The Climate Change SIP partnered with the Schuylkill Center for Environmental Education and the Philly Goat Project. The Office of Sustainability co-lead and assisted in the design, facilitation and curation of the Environmental Justice SIP and engaged the following partners: Bartram's Garden, Share Food, and Temple University's Computer Recycling Center and the College of Liberal Art's Office of Community Engagement.

Service Immersion Program by the Numbers

- **5** Service Immersion Program Experiences
- **8** Staff Advisors
- **9** Experience Leaders
- **14** Community Partners
- **27** Participants
- **180+** Hours of Service Learning
- **93%** strongly agreed SIP helped them to think more critically about their SIP focus area
- **86%** strongly agreed SIP gave them tools to make a difference in their community
- **100%** strongly agreed enjoyed their SIP experience and would recommend it to others



Operations

Temple has a strong history of integrating sustainability and resilience into its campus operations. To fully meet Temple's climate commitment, the university needs to continue to innovate campus operations while incorporating sustainability into decision making processes.

In order to advance sustainable and resilient operations, Temple must not only develop sustainable best practices and operational policies, but individuals from the Temple community must have the opportunity to easily support and participate in the development of a more sustainable campus environment.

Operations goals play an important role in achieving a sustainable campus environment for students, faculty, staff and the community. They are organized into six subcategories .



Dining



Waste Minimization
& Recycling



Transportation



Air Quality



Grounds



Sustainable IT



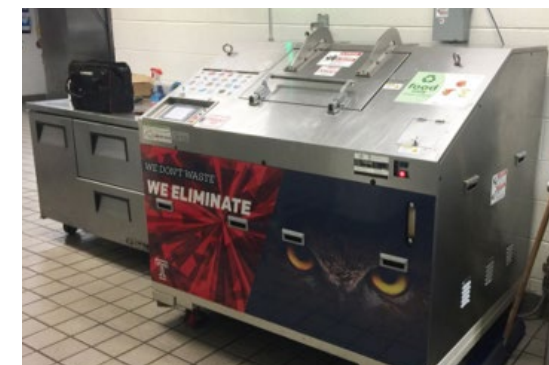
Dining

Dining goals and initiatives strive to integrate sustainable sourcing and waste minimization strategies into dining services.

Featured Goal

Temple University will require its dining services provider to submit annual procurement reporting consistent with the STARS assessment program by 2018.

During the 2020-2021 academic year, Aramark's total annual food and beverage expenditures included



Tackling Food Waste

Biodigesters Divert Organics from the Landfill

One way Temple reduces food waste from being disposed of as trash is through the installation of commercial biodigesters in kitchens located in residence halls and the Howard Gittis Student Center. Microbes and other bacteria break down organic materials in the biodigester, helping to reduce disposal costs and support a more sustainable method of disposal.

Goal Progress

Temple University will require its dining services provider to submit annual procurement reporting consistent with the STARS assessment program by 2018.



ACHIEVED: Aramark, Temple University's dining service provider, has submitted annual procurement reporting consistent with STARS assessment program for FY 2019, FY 2020, and FY 2021.

Temple University's dining services will ensure that a minimum of 20% of its procurement spend is used on food that meets STARS definition of locally sourced by 2020.

IN PROGRESS: Less than 1% of dining services procurement spend was used on food that meets STARS definition of locally sourced.

Temple University will reach a 50% food waste diversion target by 2022 in its four largest dining facilities (J&H, Morgan Hall Food Court, Morgan Hall Dining Center, and Student Center).

IN PROGRESS: 69% of food waste Aramark generated from production, service and storage in Morgan Hall was diverted from the landfill. A method for tracking food waste diversion in J&H and the Student Center is being finalized.



Air Quality

Indoor Air Quality goals and initiatives strive to improve the indoor air quality of Temple's buildings.

Temple University will ensure that 100% of its paint, adhesives and sealers are third party verified as VOC free by 2019.

IN PROGRESS: Temple University paint standard specifies that all paint is third party verified as VOC free.



Waste Minimization & Recycling

Waste Minimization & Recycling goals and initiatives strive to create zero-waste operations that embrace the four R's: Rethink, Reduce, Reuse and Recycle.

Featured Goal

Achieve a 50% **diversion rate** by 2020:



Increase **core recycling** to 30% by 2020:



Supporting Vulnerable Community Members Through Upcycling

Temple University Partners with Integrate for Good

In Spring 2021 the Office of Sustainability teamed up with Temple Ambler Campus, and local organization, Integrate for Good, to offer a virtual event for a good cause. Participants were taught over Zoom how to create "plarn" (plastic yarn) out of plastic shopping bags. Integrate for Good upcycles the plarn to create sleeping mats that are donated to those experiencing homelessness.

To read more about Integrate for Good and their "Sleeping Mat Project" visit: integrateforgood.org.



Quantifying Environmental Impact of Textile Waste

Student Volunteers Collect Data during Give + Go Green

The Office of Sustainability collaborated with Residential Life to collect clothing and non-perishable food from students living in the residence halls during spring move out. This year, the number of students living on-campus was reduced due to COVID-19. The reduced donation volumes allowed the Office of Sustainability to train student volunteers to inventory the clothing items and collect data related to the textile blend, the origin of manufacturing, and the brand. This provided a rich data set that allowed us to quantify the environmental impact of fashion. Most of the clothing that was collected and inventoried was sold at Temple Thrift in Fall 2021. Proceeds from the sale are donated to the Cherry Pantry.

Goal Progress

Develop a comprehensive Materials Management plan and implementation schedule to achieve City of Philadelphia's Zero Waste partner status by 2020.

IN PROGRESS: A draft Materials Management Plan was completed and will be submitted the plan as part of Temple University's Zero Waste Partnership application.

Achieve a 50% diversion rate by 2020.

IN PROGRESS: In FY 2021, Temple achieved a diversion rate of 42%.

Increase the core recycling rate to 30% by 2020.



ACHIEVED: In FY 2021, Temple's core recycling rate was 34%.

Dedicate a staff person in university housing to achieve compliance with the university's waste minimization and recycling initiatives by fall 2019



ACHIEVED: The Office of Sustainability has been working with dedicated staff in university housing to achieve compliance with the university's waste minimization and recycling initiatives.



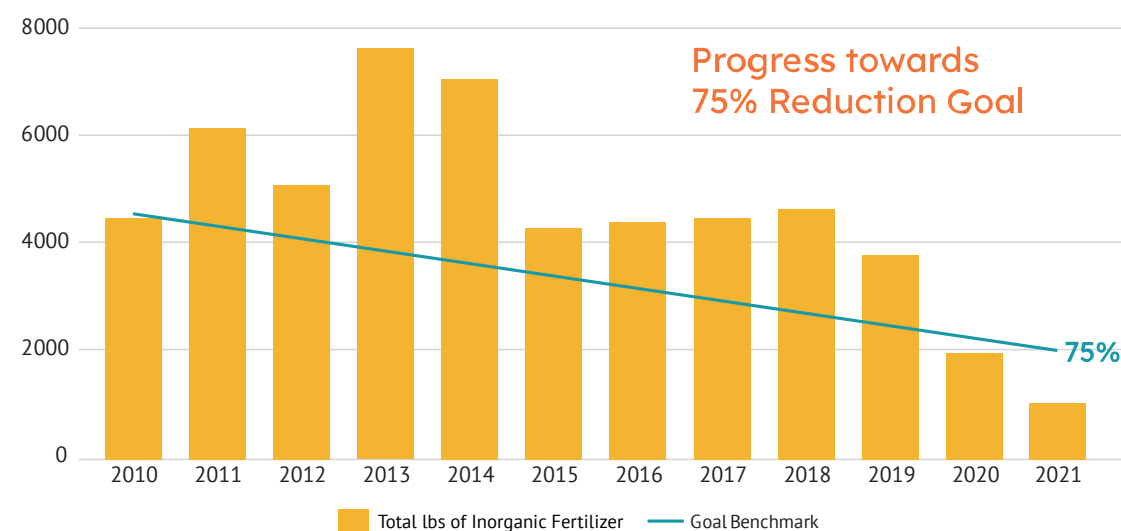
Grounds

Grounds goals and initiatives build upon Temple University's sustainable landscape management best practices.

Featured Goal

Reduce the use of inorganic fertilizers and chemical pesticides, fungicides and herbicides by 75% by 2025 from the 2010 baseline.

During the 2020-2021 academic year, inorganic fertilizers and chemical pesticides, fungicides and herbicides were reduced by 78%.



Goal Progress

Develop and implement a plan for sustainable landscape management that builds on recommendations in the Verdant Temple Landscape Master Plan and incorporates plantings, soil management, water conservation, and integrated pest management by 2022.

IN PROGRESS: The Office of Sustainability is working with Grounds to develop a sustainable landscape management plan. Anticipated publication is Spring 2022.

Reduce the amount of water required for landscape management by 25% by 2025 from the 2006 baseline.

IN PROGRESS: Irrigation meters were installed to provide more accurate data regarding water use on campus. Temple will use this data to baseline and reevaluate our water use goal.

Reduce the use of inorganic fertilizers and chemical pesticides, fungicides and herbicides by 75% by 2025 from the 2010 baseline.



ACHIEVED: In FY2021, Temple University reduced inorganic fertilizers and chemical pesticides, fungicides and herbicides by 78% from the 2010 baseline.

Investing in Systems to Promote Responsible Natural Resources Management

Upgrading Landscape Irrigation Systems on Main Campus

Responsible natural resource management is necessary to prepare for the worst effects of climate change. Temple's Grounds Department and the Office of Sustainability agree that investments in irrigation flow meters are needed to identify opportunities to reduce potable water use for irrigation.

The Office of Sustainability worked with the Grounds Department to determine a scope of work to install irrigation flow meters on existing irrigation systems on Main Campus. Temple invested in 15 flow meters that allow us to monitor water used for irrigation. Prior to the installation of the irrigation flow meters, potable water use was meter at the building level. The use data we receive from the flow meter will allow Temple to establish an accurate baseline to track progress and identify opportunities to increase efficiency. Additionally, the Grounds Department and the Office of Sustainability coordinated with Temple Project Delivery Group to ensure future capital projects include irrigation submeters in the design scope.

Designing Outdoor Experiential Education Spaces

Architecture Students Design an Outdoor Classroom



A core course in the undergraduate Landscape Architecture Program is the Landscape Architecture Design-Build Studio IV, scheduled in spring of Junior Year. Typically, students plan and build a show-stopping Philadelphia Flower Show exhibit. However, COVID-19-related changes to the Flower Show date and format prompted Associate Professor Rob Kuper to search for an impactful project that would provide a meaningful experience for the students.

Under the direction of Adjunct Assistant Professor Michael LoFurno and Assistant Professor of Instruction Kate Benisek with Kuper, the students studied a grassy area next to Tyler School of Art + Architecture's Greenhouse Education and Research Complex at the Temple Ambler Campus for an outdoor classroom. Students documented and analyzed existing conditions, visited nearby precedents, conducted case studies, and interviewed campus stakeholders including faculty in the Landscape Architecture and Horticultural Programs, the Director of the Temple Ambler Field Station, the Director of the Ambler Arboretum of Temple University, and proposed a thoughtful, multi-faceted design.

Using a hexagonal array as an organizing structure, students worked in groups to develop designs for an outdoor structure around or under which primary instruction would occur; a "council ring," which would be a smaller space used for secondary instruction; a "Discovery Hall," a space for self-exploration and discovery; and gateways to the area. While the project was not built, the students astutely advanced conversations about outdoor learning spaces at the Temple Ambler Campus, which lends itself to outdoor experiential education.



Sustainable IT

Sustainable IT goals and initiatives focus on reducing the environmental impacts associated with the operations of IT equipment and services.

E-Waste and Digital Equity

Temple Tech for Philly

Temple University's Computer Recycling Center (CRC) is an award-winning operation that gathers surplus computer and electronic equipment from around the university, and either refurbishes the equipment for redeployment or donation, or disposes of unusable equipment in a secure manner.

Temple Tech for Philly is an initiative of Temple's Computer Recycling Center, working to bridge the digital divide by partnering with community organizations such as the Philadelphia Housing Authority, Esperanza, Congreso de Latinos Unidos, and Asociación Puertorriqueños en Marcha (APM) delivering refurbished technology directly to underserved, under resourced communities. Temple Tech for Philly's Digital Equity Center, offers, in conjunction with the Lenfest Center for Community Workforce Partnerships OWL Hub, a desktop computer, basic computer training and tech support for households that need a computer to use their new internet connection.



Integrating Sustainability Standards into Vendor Agreements

HP Printer Services Contract

In the 2020-2021 academic year Temple University sought competitive bids to manage a university wide printer services contract. To ensure that the scope of work reflected the needs of the Temple Community, a committee was formed with representatives from across Temple's schools, colleges, and business units. Through the collaborative process, a strong scope of work was created that integrated sustainability standards that reflect Temple's climate action commitment.

Goal Progress

ITS team will develop a comprehensive strategic plan for sustainable IT at the university by the end of 2019 and begin to implement its recommendations by 2020. The plan will look at procurement, operations and engagement.

IN PROGRESS: Opportunities to improve sustainable IT at Temple University have been identified. A steering committee made up of individuals in IT and the Office of Sustainability are in the process of determining priorities and next steps.

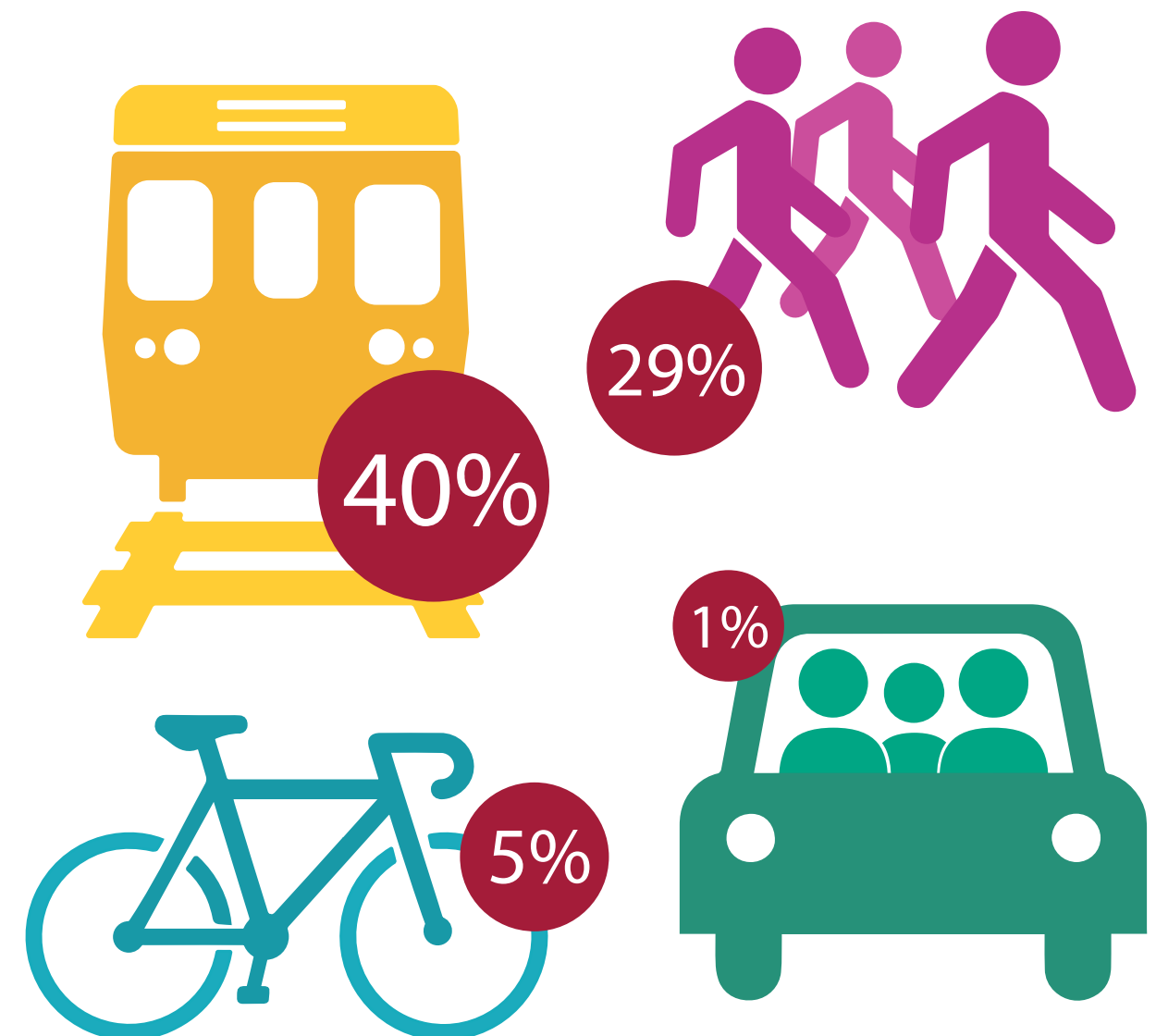


Transportation

Transportation goals and initiatives promote sustainable transportation and transitioning Temple's fleet towards less carbon intensive vehicles, and transitioning Temple's fleet towards less carbon intensive vehicles.

Featured Goal

Increase the number of commuters who utilize a sustainable form of transportation to the campus to 75% by 2025.



75% of Temple student, faculty, and staff utilized a sustainable form of transportation to campus during the 2019 -2020 academic year.



Experiential Learning Opportunities Focused on Equitable, Healthy, and Climate Resilient Communities

The Walk Audit Training Certification Program

Temple Office of Sustainability partnered with local legacy environmental non-profit Clean Air Council and their pedestrian advocacy organization, Feet First Philly, to develop a service-learning opportunity, the Walk Audit Training Certification program.

The Walk Audit Training Certification curricula gives Temple students experiential learning opportunities in planning equitable, healthy and climate resilient communities – connecting themes of asset-based community development, community organizing, engaged urban stewardship, and walking as a model for sustainable behavior change. Additionally, the Walk Audit has produced a pipeline of pedestrian advocates who are trained to engage in local policymaking and organizing efforts to end traffic violence in Philadelphia.

By connecting this program to Temple University's overall sustainable transportation goals, the Walk Audit program is an essential step forward in reducing our commuting emissions and instigating adoption of low-carbon transport on and off-campus.

Collaborating to Achieve Vehicle Focused Climate Goals

Alternatively Fueled Vehicle Fleet Integration

An alternative fuel vehicle is a motor vehicle that runs on an energy other than traditional petroleum fuels (gasoline and diesel); and also refers to any technology of powering an engine that does not involve solely petroleum (e.g. electric vehicles, hybrid electric vehicles).

Temple has invested in alternative fuel vehicles, in part, to help reduce emissions. Temple currently operates a bus fleet that is powered by alternative fuel sources. Additionally, Temple's fleet of electric low speed vehicles provide an alternative to traditional gas-powered vehicles for employees responsible for maintaining campus infrastructure.

During the 2020-2021 academic year, the Office of Sustainability worked with campus partners to identify opportunities to integrate alternative fuel vehicles into their future lease and vehicle procurements. Strategic planning efforts focused on vehicles will help Temple achieve multiple sustainability goals.



Promoting Sustainable Transportation through Skill Sharing

EcoRep Led Fix-It Pop-Ups and Bicycle Apprenticeship Program

According to Temple's 2019 Transportation Survey, 4.5% of the trips taken to campus by students, faculty, and staff are done on a bicycle. In order to support the Temple Community as well as leverage existing resource investments, the Office of Sustainability piloted skill sharing sessions at the bicycle fix-it stations on campus. The sessions were led by a Transportation EcoLead and were attended by students, faculty, and staff. Sessions provided attendees with an overview of how to use the fix-it stations as well as provided attendees with a safety check of their bicycle. The Pop-ups were well received and will be integrated into the Office of Sustainability's reoccurring engagement opportunities.

Additionally, the Office of Sustainability created the Bicycle Apprenticeship Program in response to student feedback and interest in bicycle mechanic skills. Beginning in June 2021, three EcoReps studied under a professional bicycle mechanic. The EcoReps not only repaired abandoned bike to be sold at the Secondhand Bicycle sale but learned skills necessary to hold repair fairs for Temple Community members. The first Repair Fair will be held in October 2021 during Temple's Campus Sustainability Month.

Goal Progress

Increase the number of commuters who utilize a sustainable form of transportation to the campus to 75% by 2025.



ACHIEVED: According to the results of the 2019 Transportation survey, 75% of Temple students, faculty, and staff utilize a sustainable form of transportation when traveling to campus.

Reduce fleet-based emissions from 2006 baseline by 20% by 2030.

IN PROGRESS: In FY 2021, fleet-based emissions from Temple's vehicles have increased by 1% since a 2006 baseline.

Reduce the number of single occupancy vehicles on campus by 10% by 2025.

IN PROGRESS: Temple is unable to report on the progress of the single occupancy vehicle goal in FY 2021.

Increase the percentage of the university's fleet that is alternatively fueled to 50% by 2030.

IN PROGRESS: In FY 2021, 24% of Temple's fleet was alternatively fueled.



Temple University Greenhouse Gas Inventory Greenhouse Gas Emissions Summary FY 2006-2021

Prepared by the Office of Sustainability

	Emissions Source	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	%Change FY06 to FY21
Scope 1 Emissions (MT CO ₂ E)	Stationary (oil, natural gas, propane)	57,182.	55,540	47,012	61,999	57,005	52,457	47,684	55,570	54,983	57,777	52,532	49,308	55,623	54,810	51,795	56,076	-2%
	Mobile (University Fleet)	622	642	622	885	849	898	859	929	894	851	840	843	1,041	874	724	636	2%
	Refrigerants & Chemicals	1,764	1,702	1,682	2,301	2,295	2,288	2,284	2,283	2,283	2,294	114	150	123	763	432	1,205	-32%
	Fertilizer	8.58	6.65	7.48	3.75	2.21	3.88	2.73	3.62	2.95	2.14	1.86	1.94	1.99	1.55	2.83	1.72	-80%
	Total Gross Emissions Scope 1	59,577	57,891	49,324	65,189	60,150	55,646	50,830	58,786	58,163	60,923	53,488	50,303	56,790	56,448	52,954	57,919	-3%
Scope 2 Emissions (MT CO ₂ E)	Purchased Electricity	104,552	97,914	101,461	90,265	60,150	98,173	84,661	82,839	71,346	83,440	53,506	61,053	52,558	50,090	44,279	60,039	-43%
	Purchased Steam	278	318	330	360	353	349	294	435	366	1,029	1,126	1,074	6,699	694	694	628	126%
	Total Gross Emissions Scope 2	104,830	98,232	101,792	90,625	98,568	98,523	84,955	83,274	71,712	84,469	54,631	62,128	59,257	50,784	44,973	60,667	-42%
Scope 3 Emissions (MT CO ₂ E)	Faculty Commuting	2,164	2,101	2,134	2,220	2,298	2,283	2,307	2,218	2,276	2,341	3,780	2,750	2,746	5,871	2,064	781	-64%
	Staff Commuting	3,939	3,928	3,933	3,983	3,799	3,637	3,672	5,354	5,046	6,206	8,337	7,149	7,659	12,052	8,902	2,499	-37%
	Student Commuting	12,268	12,261	12,592	13,329	14,057	14,408	14,124	13,099	13,533	13,749	17,842	18,647	18,807	22,863	17,162	2,276	-81%
	University Financed Travel	5,580	6,029	5,884	6,017	6,697	7,437	386	7,660	8,506	6,334	6,556	9,582	9,239	7,877	6,251	231	-96%
	Solid Waste	15,411	14,682	13,675	11,770	12,408	11,485	3,636	3,222	4,321	2,918	3,018	3,658	0.81	0.64	0.55	0.24	-100%
	Transmission & Distribution Losses	10,353	9,912	10,252	8,927	6,070	6,068	8,548	8,364	4,149	4,366	3,589	3,586	3,434	3,335	3,054	3,082	-70%
	Total Gross Emissions Scope 3	49,714	48,913	48,470	46,246	45,330	45,318	32,673	39,916	37,831	35,915	43,121	45,371	24,960	51,998	37,433	8,869	-82%
Scope 1-3 Gross Emissions (MT CO ₂ E)	Total Gross Emissions	214,121	205,036	199,586	202,060	204,048	199,487	168,458	181,977	167,707	181,307	151,241	157,802	141,007	159,230	135,360	127,455	-40%
	Gross Square Footage (GSF)1	8,266,175	8,271,765	8,271,765	9,171,147	9,353,107	9,353,107	9,245,532	9,644,403	10,821,557	10,495,580	10,466,730	10,093,702	10,696,566	10,908,684	11,190,980	11,167,209	35%
	Full-Time Equivalent Students (FTE)	27,055	27,560	28,535	29,901	31,363	32,251	31,939	31,811	33,563	33,955	34,450	35,750	36,397	36,423	35,641	34,069	26%
	Total Gross Emission Intensity/1000 GSF	25.90	24.79	24.13	22.03	21.82	21.33	18.22	18.87	15.50	17.27	14.45	15.63	13.18	14.56	12.10	11.41	-56%
	Total Gross Emission Intensity/FTE	7.91	7.44	6.99	6.76	6.51	6.19	5.27	5.72	5.00	5.34	4.39	4.41	3.87	4.37	3.80	3.74	-53%
Scope 1-3 Net Emissions (MT CO ₂ E)	Offsets (On-site Compost)	(3)	(5)	(16)	(15)	(15)	(10)	(12)	(12)	(19)	(14)	(14)	(14)	-	-	-	-	-100%
	Total Net Emissions	214,118	205,030	199,570	204,033	204,033	32,251	168,446	181,965	167,687	181,293	151,227	162,207	141,007	159,230	135,360	127,455	-40%
	Total Net Emission Intensity/1000 GSF	25.90	24.79	24.13	22.03	21.81	21.33	18.22	18.87	15.50	17.27	14.45	15.63	13.18	14.56	12.10	11.41	-56%
	Total Net Emission Intensity/FTE	7.91	7.44	6.99	6.76	6.51	6.19	5.27	5.72	5.00	5.34	4.39	4.41	3.87	4.37	3.80	3.74	-53%

Academics & Research
Progress to Goals



Increase the number of undergraduate/graduate sustainability courses by ten (10) courses from an October 2017 baseline by June 2022.

- The Office of Sustainability will provide a complete list of courses upon request.



Increase the number of undergraduate/graduate courses that include sustainability by twenty (20) courses from an October 2017 baseline by June 2022.

- The Office of Sustainability will provide a complete list of courses upon request.



Increase the number of departments with sustainability course offerings by two (2) departments from an October 2017 baseline by June 2022.

2020-2021 Departments

Adult & Organizational Development Advertising Africology/African American Studies Anthropology Architecture Art History Asian Studies Biology Botany Business Administration Chemistry City and regional Planning Civil Engineering Comm Management Comm & Social Influence Community Development Computer & Information Science Construction Mangement Technology Counseling Psychology Criminal Justice	Dance Dental Public Health Sciences Disability Studies Economic Education Educational Administration Earth & Enviromental Science Economics Engineering English Environemtal Engineering Technology Environmental Health Environmental science Environmental studies Epidemiology and Biostatistics Film and Media Arts Finance Gender, Sexuality & Womens Studies	Geography & Urban Studies German Graphic & Interactive Design Health related Professions history Horticulture Human Resource Management Intellectual Heritage Italian Jewish Studies Journalism Juris Doctor Landscape Architecture Latin American Studies Legal Studies LGBT Studies Marketing Mechanical Engineering Media Studies & Production Nursing	Philosophy Physics Political Science Public Relations Religion Social & Behavioral Sciences Social Work- Graduate Social Work- Undergraduate Sociology Spanish Sport, Tourism & Hospitality Management Strategic Management Urban Biothics Urban Education
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Culture
Progress to Goals



Office of Sustainability Green Grant
Increase student sustainability engagement through the development of a student green fund by 2019.

Academic Year	Green Grant Recipient	Outcomes	Award Amount
2018-2019	Temple Student Government	Started and off-campus compost collection service	\$1,500.00
2019-2020	Bucha Leather	Received funds to set up research and development space for their start-up, Bucha leather	\$1,000.00
2019-2020	Thrift and Flop	Received funds to purchase materials for Thrift & Flop workshops focused on reuse	\$1,000.00
2020-2021	Adventure Bound	Received funds for Leave No Trace (LNT) certification and equipment to support LNT and sustainable camping.	1,223.00
2020-2021	Community Garden	Received funds for seeds to plant a pollinator and edible garden.	\$215

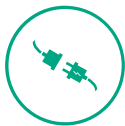


Temple University Cherry Pantry Donations
Begin to address food insecurity at Temple by 2019.

Monetary Donation generated from Thrift Sales

	Temple Thrift Sales- Monetary Donations	Give & Go Green- Food Donations (lbs)	Other- Monetary Donations	Clothing Collected For Sale/Recycling (lbs)
2019-2020	\$5,143	1,946	N/A	5,525 (estimate)
2020-2021	Canceled Due to COVID-19	1,200	690	1,220 (actual)

Energy
Progress to Goals



Building Stock

Reduce energy use in existing building stock by 18% in a typical climatic year by 2030.

Energy Type	FY 17	FY 18	FY 19	FY 20	FY 21
Natural Gas (MMBtu)	919,104	1,027,252	1,025,445	974,442	1,037,007
Purchased Steam (MMBtu)	14,729	9,577	9,509	10,257	8,610
#2 Oil (MMBtu)	1,119	8,100	1,055	910	13,839
#6 Oil (MMBtu)	5,778	6,718	3,958	0	0
Electricity (MMBtu)	752,115	698,417	678,341	610,778	614,127
Energy Use Actual (MMBtu)	1,692,845	1,750,064	1,718,307	1,596,397	1,673,583
% Change from FY17	0	3%	1%	-6%	-1%

Operations
Progress to Goals



Waste Minimization

Achieve a 50% diversion rate by 2020.
Increase core recycling to 30% by 2020.

	2019	2020	2021
Basic Materials	Tons	Tons	Tons
Mixed Office Paper ¹	469.42	260.13	65.12
Corrugated Cardboard	85.26	66.15	35.46
Single Stream Recycling	1,587.16	1,042.92	265.31
Municipal Solid Waste (MSW)	3,933.83	2,757.69	720.91
Subtotal - Basic Materials (Recycling)	2,141.84	1,369.20	365.88
Subtotal - Basic Materials (Trash)	3,933.83	2,757.69	720.91
Secondary Materials			
Biodigesters	80.15	45.36	17.54
Fryer Oil ²	23.61	4.20	3.92
Vegetation Compost ³	9.18	2.84	0.36
Construction & Demolition (Recycling)	135.06	176.08	33.35
Construction & Demolition (Trash)	40.01	97.10	31.73
Subtotal - Secondary Materials (Recycling)	112.94	52.39	21.82
Subtotal - Secondary Materials (Trash)	40.01	97.10	31.73
Special Materials			
Computer Equipment - Reused/Recycled ⁴	4.66	2.93	51.55
Universal & Chemical Waste (Recycled)	0.00	9.26	31.80
Incinerated Chemical Waste	68.56	55.44	23.52
Scrap Metal ⁶	118.49	56.75	63.00
Surplus Sales ⁷	0.00	92.50	0.00
Residential Give & Go Green ⁹	0.00	0.97	1.21
Subtotal - Special Materials (Recycling)	123.15	162.41	147.56
Subtotal - Special Materials (Waste)	68.56	55.44	23.52
RECYCLING Campus Totals	2,377.93	1,584.00	535
WASTE Campus Totals	3,911.25	2,910.23	752.64
Total Recycling %	38%	35%	42%
Core Recycling %	36%	33%	34%



Grounds

Reduce the use of inorganic fertilizers and chemical pesticides, fungicides and herbicides by 75% by 2025 from the 2010 baseline.

Fiscal Year	Total lbs Inorganic Fertilizer	% Reduction
2010	4,510	N/A
2011	6,176	-37%
2012	5,123	-14%
2013	7,663	-70%
2014	7,125	-58%
2015	4,325	4%
2016	4,425	2%
2017	4,475	1%
2018	4,625	-3%
2019	3,775	16%
2020	1,906	58%
2021	1,007	78%



Dining

Temple University will require its dining services provider to submit annual procurement reporting consistent with the STARS assessment program by 2018.

Sustainably or ethically produced food and beverage : purchases met one of the following sustainability standards	
Rainforest Alliance Certified (SAN Standard of Sustainable Agriculture)	
USDA Transitional Organic	
Fair Trade Certified (Fair Trade USA)	
MSC Certified Fisheries	
American Humane Certified (Cage Free and Enriched Colony Eggs)	
Total Spend	\$ 34,661

Plant-based food and beverage : includes food meeting one or more of the following categories	
Fruits	Soy foods
Vegetables	Nuts and seeds
Whole grains	Pant oils
Beans	Herbs and spices
Other Legumes	Vegetarian/vegan alternatives to meat and dairy
Total Spend	\$279,195

Transportation



Reduce fleet-based emissions from 2006 baseline by 20% by 2030.

Fiscal Year	Fleet Based Emissions (MTCDE)	Emissions Goal (MTCDE)	% Increase Actual	% Decrease Goal
2006	624.88	624.88	N/A	N/A
2007	644.97	619.67	-3%	1%
2008	621.33	614.47	1%	2%
2009	886.39	609.67	-42%	2%
2010	849.40	604.05	-36%	3%
2011	898.15	598.84	-44%	4%
2012	859.80	593.54	-38%	5%
2013	930.22	588.43	-49%	6%
2014	895.34	588.43	-43%	7%
2015	851.67	578.01	-36%	7%
2016	841.20	572.81	-35%	8%
2017	843.64	567.60	-35%	9%
2018	1,041.21	562.39	-67%	10%
2019	875.04	557.18	-40%	11%
2020	649.55	551.98	-4%	12%
2021	631.07	546.77	-1%	12%



Increase the number of commuters who utilize a sustainable form of transportation to the campus to 75% by 2025.

	2016	2019
Bus	7.0%	8.0%
Cars	27.6%	23.2%
Taxi, Uber, Lyft	0.7%	1.7%
Subway	16.7%	18.1%
Regional Rail	14.1%	13.8%
Bicycle	5.3%	4.5%
Walk	25.3	29.3%
Carpool	3.3%	1.4%



50% of the university's fleet will be alternatively fueled by 2030.

	FY 2020	FY 2021
Gas	130	132
Diesel	42	42
CNG	11	11
Electric	32	32
Propane	8	8
Hybrid	0	4
TOTAL VEHICLES	223	229
TOTAL ALT. VEHICLES	51	55
% ALT. VEHICLES	23%	24%



Credits

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Sustainability Annual Report Temple University
2020-2021



<https://sustainability.temple.edu/>



TempleEcoOwls



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