

UNIVERSITY OF MARYLAND, BALTIMORE SUSTAINABILITY



Fiscal Year 2024 Report



UNIVERSITY of MARYLAND
BALTIMORE

OFFICE OF SUSTAINABILITY

umaryland.edu/sustainability

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SUSTAINABILITY AT UMB

Office of Sustainability

University of Maryland, Baltimore (UMB) leaders understand the importance of reducing our impact on the environment in a holistic way while carrying out our mission to improve the human condition and serve the public good of Maryland and society at-large. To achieve this, the [Office of Sustainability](#) was created by President Bruce Jarrell in 2021 to move UMB toward a more sustainable future.



“We care about the welfare of our people, planet, communities, and University.”



UMB'S CORE VALUES

RESPECT *and* INTEGRITY

WELL-BEING *and* SUSTAINABILITY

EQUITY *and* JUSTICE

INNOVATION *and* DISCOVERY

In August 2021, the University revised its core values to include well-being and sustainability. Being a catalyst for well-being and sustainability means:

- Supporting work-life harmony
- Promoting healthy behaviors
- Protecting the environment
- Using resources responsibly
- Planning for the future

Updates to the Strategic Plan

The UMB Sustainability Strategic Plan was finalized in February 2022. Within the plan are goals and tactics to guide the University on various commitments and regulatory requirements. These are revisited twice a year and status updates are made on the [Sustainability Strategic Plan website](#).



Legislative Impacts

UMB monitors and responds to the impacts of proposed bills each year during the legislative session. The Office of Sustainability is asked for input on bills that may impact green buildings and infrastructure, landscaping practices, energy and water conservation, and anything related to campus sustainability and operations.

The 2024 Maryland General Assembly Legislative Session passed two bills that impact UMB as it relates to the environment and/or sustainability. The Energy Conservation and Greenhouse Gas Emissions Reductions bill, SB0258/HB0130, requires UMB to reduce its energy consumption in state-owned buildings by 20% by 2031 compared to a 2018 fiscal year baseline. The Brighter Tomorrow Act, SB0783/HB1435, provides incentives to solar generating systems which will impact how the University proceeds with its current solar canopy project. Learn more about this past session's passed bills with the Office of Sustainability's [2024 Legislative Session Environmental Impact Summary](#).

FY 2024 MILESTONES

Living UMB's Core Values: Sustainability Designations, Awards, and Achievements

At UMB, our journey toward sustainability is an ongoing and iterative process. Our achievements may take us down different paths to reach our goals. This year, we're proud to highlight the following milestones and awards that help us get closer to those goals.



CONTINUING OUR PROGRESS

Achieving Sustainability at UMB Through Collaborative Efforts

Apart from receiving awards and recognition, UMB's sustainability team is actively engaged in various working groups, cross-campus partnerships, and external committees. Through these initiatives, the Office of Sustainability at UMB is effectively transforming the university's sustainability goals into tangible and impactful outcomes.



The next few pages detail the progress the University has made on various projects and initiatives through cross-campus collaboration. As a small team, the Office of Sustainability relies on these partnerships to promote sustainable practices and reduce the environmental impact of UMB's operations. These efforts have not only contributed to a more sustainable future for the University, but have also inspired others to adopt more sustainable practices in their own lives.



Strategic Plan Progress

Self-Service Waste Program

All thirty-six UMB-owned buildings had been converted to the [Self-Service Waste Program](#) as of January 2024. This program updated waste-signage, right-sized bins placed throughout campus, and implemented a triple-bin system to create a cohesive message of how to properly sort the University's waste stream. The sustainability team worked with Environmental Services and building managers to implement this campus-wide initiative.



LED Lighting Project

LED upgrades restarted in 2022 with the goal of converting all older, less efficient lighting fixtures to LED fixtures. By the end of FY24, the project was at 55% complete and could not have been possible without the work of UMB's Operations and Maintenance team working across shops and with building managers and occupants to ensure a smooth installation with minimal disruption to in office work. The project is estimated to [save 5.3 million kilowatt hours \(kWh\) per year upon completion](#), the equivalent to taking 817 gas-fueled vehicles off the road.



Design and Construction Standards

UMB's Office of Design and Construction is actively working with the Office of Sustainability and other stakeholders to update its current design standards and specifications. These updates include specifications directly related to campus sustainability like bike parking infrastructure, bird-friendly considerations, tree protection and replacement standards, and more. Additionally, a [Legislation page](#) was created to list any relevant legislation or requirements that are environment or sustainability related and impact UMB.



Fleet Vehicle Purchasing Policy

UMB's Office of Strategic Sourcing and Acquisition Services worked with the sustainability team to create a [Fleet Vehicle Purchasing Policy](#) due to the passing of 2022's Climate Solutions Now Act (CSN). This policy follows CSN and requires all new UMB vehicle purchases to be zero emissions vehicles.

Interprofessional Education Elective

Faculty members worked together from multiple schools, programs, and University System of Maryland institutions to receive a [Health Equity Seed Grant](#) to create an interprofessional elective called [Climate Change, Health, and Society \(CIPP 650\)](#), which was offered for the first time during the Spring '24 semester. This collaborative initiative also includes summer internships, a speaker series, and a symposium.



Reduction Working Group



Data Dashboard Launched

WHAT:

Interactive dashboard to display data on energy use, greenhouse gas emissions, waste and recycling, and other metrics.

EUI calculated for each building on campus.

Shows green spend data across many areas of materials procurement.

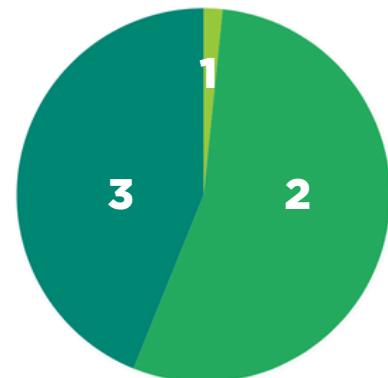
FY23 Greenhouse Gas Inventory Submitted

WHAT:

Report out on Scopes 1, 2, and 3 emissions for Second Nature Climate Commitment.

41.2% reduction in net MTCDE from previous reporting period.

First full fiscal year accounting for 100% renewable electricity.



In FY24, UMB added 173 students to its UMB FREE listserv and was able to divert wasted food from 42 events.

ANNOUNCED

1ST

SOLAR
PROJECTS

to be built on campus



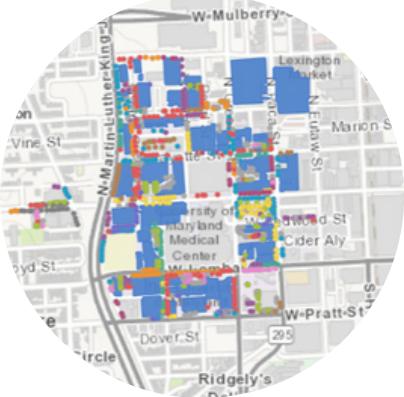
COMPLETED

36 BUILDINGS



for Self-Service Waste

Resilience Working Group



Tree Inventory Completed

WHAT:

GIS-based inventory of all campus trees both in the main campus boundaries and the BioPark campus.

Over 900 trees identified.

Dashboard created to filter native and non-native tree species.

Community Compost Pilot Launched

WHAT:

Baltimore City partnership on composting grant to bring food scrap collection to west Baltimore.

24/7 collection sites at the Community Engagement Center and SMC Campus Center.



Weather Station Installed

WHAT:

Weather monitor that collects live data on temperature, wind speed, precipitation, and other metrics.

Data collected from February 2024 to present; time-lapse video of weather current weather conditions.

PLANTED

13 NATIVE TREES



throughout campus

COMPOSTED

7k+ LBS OF FOOD SCRAPS



from compost pilot

Engagement and Education Working Group

Sustainability Leadership Micro-Courses



WHAT:

Three asynchronous courses available to anyone with a UMB ID.

Each individual course results in a micro-credential. Take all three courses to receive a Sustainability Leadership mega-badge.

Campus Sustainability Month '23

WHAT:

Held every October; an international celebration of sustainability in higher education.

5 events throughout October, including a What's the Buzz event.

Let's Grow Together event for office plant care with giveaways.



Earth Month '24

WHAT:

Held every April; a time to raise awareness and create consciousness around the issues that affect mother nature.

5 events throughout April, including bike tune-ups with SON.

ECO-Fest as a Zero-Waste Event at HSF3 with over 150 attendees.

REMOVED

200+ LBS OF LITTER



During Clean-Ups

RECYCLED

650+ LBS OF E-WASTE



during April collection

Green Labs Working Group



Freezer Practices

WHAT:

Tips for labs to save energy and money as well as extend the life of their ULT freezers

"Chilling up" freezers from -80 to -70°C.

Conducting periodic defrostings and cleanouts of old materials.

Green Labs Checklist

WHAT:

Program for research labs to improve green practices within their labs via a pre- and post-implementation checklist.

Asks labs to identify at least 5 new actions to implement.

Incentivizes labs with BRIORESCO Credit up to \$100



Green Spend Data Analysis

WHAT:

Data from major lab vendors allowed the Office of Sustainability to quantify UMB's general lab green spend.

Received green spend data from 2 of the top 5 research supply vendors. 12% of spend with VWR in Calendar Year 2023 was on Environmentally Preferred Products (EPPs).



ADDED

2 NEW RESEARCH LABS



to Green Labs Program

GRANTED

\$2k IN REBATES



for efficient freezers

RESOURCE DEVELOPMENT

Here are some of the resources the UMB Community can take advantage of that the Office of Sustainability have created in FY2024 as well as other existing resources we'd like to continue to highlight!

26
learners

Microcredentials

Foundations of Sustainability, Making Sustainable Change, and Environmental Justice and Community Action courses. When all are taken, learners receive a separate Sustainability Leadership mega-badge.



Tree Inventory Dashboard

An interactive dashboard that can be used to filter native, non-native, or invasive trees on campus. Individual trees can be clicked on and additional details like species, common name, tree height, and a photo of the tree are available.

900+
trees

over
950
views

Construction Map

Created to highlight ongoing campus projects that may affect car, cycling, or pedestrian traffic.



UMBuy Nothing Microsoft Team

A place for UMB students, faculty, and staff to find new homes for personal items in usable condition.

over
200
members

LabShare and Office Supply Swap Channels Added

over
260
members

UMB FREE

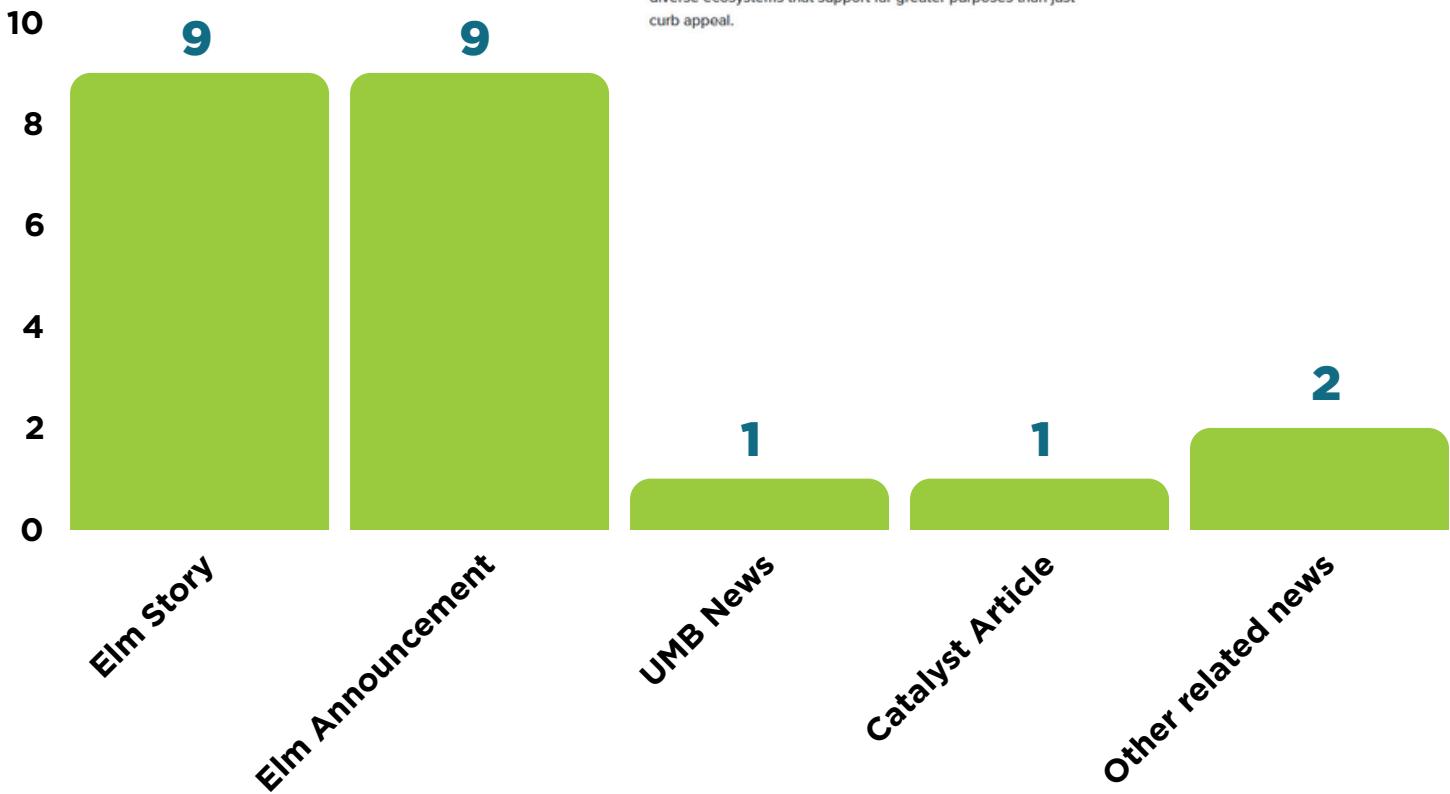
Food rescue alert system for students that reduces wasted food. Event planners send out an alert via email about leftover food post-event.

A UMB FREE EVENT
(FOOD RECOVERY + ENVIRONMENTAL EATING)
An OFFICE OF SUSTAINABILITY Initiative
UMARYLAND.EDU/SUSTAINABILITY

COMMUNICATIONS

Sustainability News

The Office of Sustainability has been hard at work, updating the UMB campus community with the latest sustainability news. A total of 37 write-ups, including individual stories by the office and UMB's Communications and Public Affairs team, campaign summaries, sustainability series, and other announcements have been published, covering a range of sustainability-related topics.



The Elm is a publication of the University of Maryland, Baltimore

The Elm ELM STORIES

TOPICS ▾ SCHOOLS ▾ CALENDAR

Getting Into the Weeds: Ecological Landscaping at UMB

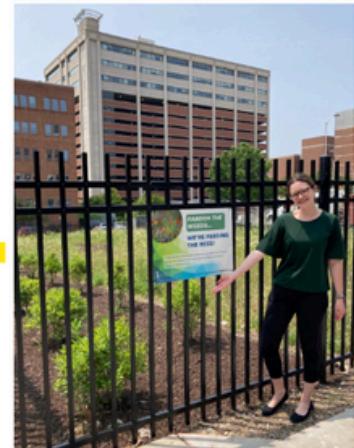
July 10, 2024 | Meredith Dilio

Learn about our intentional landscape design principles on campus and ways you can implement sustainable practices in your own garden or yard.

Photo: Elizabeth Main, MPA, director of sustainability and special projects, poses near a sign explaining the native plantings.

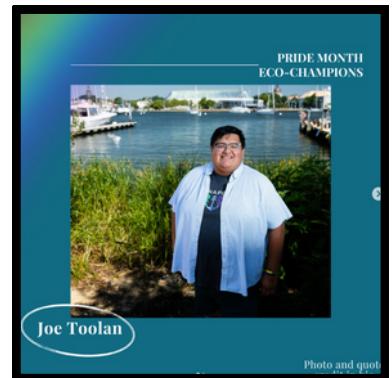
Have you noticed some green areas around the University of Maryland, Baltimore (UMB) campus that look a little less polished than others? These aren't overgrown weeds, but are intentional areas where UMB has shifted to more native plantings.

While traditional plantings like grass lawns and annual flowers are visually attractive, ecological landscaping promotes biodiversity, attracts pollinators, reduces water and air pollution, and creates habitable ecosystems in our urban environment. Ecological landscaping moves past the idea that landscapes are solely for our viewing purposes, but rather they are growing, diverse ecosystems that support far greater purposes than just curb appeal.



Social Media

UMB's Office of Sustainability uses various social media platforms such as [Facebook](#), [Instagram](#), and [X](#) (formerly known as Twitter) to reach out to the community and share information. These channels enable the office to disseminate news from the office and its partners, as well as other community organizations outside of the office.



8

CAMPAIGNS

178

POSTS

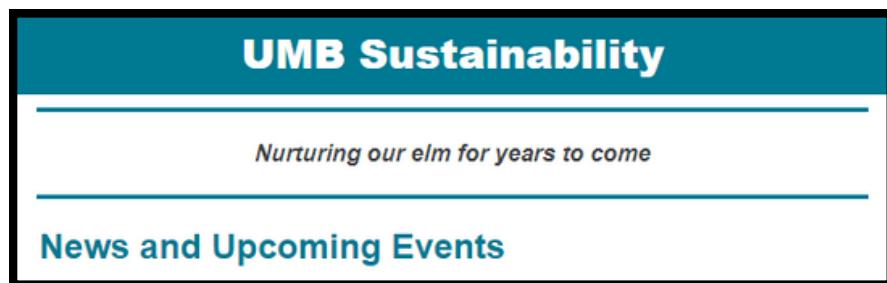
Newsletter

The monthly [Sustainability Newsletter subscription list](#) has grown by 36% since last fiscal year.



543

NEWSLETTER
SUBSCRIBERS



44%

OPEN
RATE

PARTNERSHIPS

Campus Cleanups

With its inaugural event in April 2023, UMB Campus Cleanups have grown to be a reoccurring event allowing UMB faculty, staff, and students to volunteer their time to clean up litter. With the establishment of the EVS Clean Campus Ambassadors program, cleanup tasks have become lighter for volunteers. Occurring each April and October, 74 volunteers were able to clean up over 214 pounds of litter on campus this fiscal year.



Howard EcoWorks

The Office of Sustainability partnered with Howard EcoWorks, a nonprofit based in Howard County, MD, to plant 13 native trees on campus. Sustainability worked Environmental Services and Howard EcoWorks to find appropriate sites on campus for each tree. Tree species that were planted: American hornbeam, eastern redbud, serviceberry, and sweetbay magnolia.

MPH Students

In FY24, the Office of Sustainability began serving as an Experiential Learning partner with the Master of Public Health (MPH) Program, matching with three students to engage them in hands-on experiences during their time at UMB.



PARTNERSHIPS

Recycling Center

Environmental Services and Design and Construction worked with Sustainability to host a Recycling Center Open House during Campus Sustainability Month. Attendees learned about how the new building is a hub for collecting the University's cardboard, which is separated, baled, and sold to a local vendor. Attendees also heard about how the building serves as an electrical substation for campus, including raised utility infrastructure which provides resilience for campus operations.



Community Compost Dropoff

Through a USDA grant with Baltimore City's Department of Public Works, UMB started a community composting dropoff pilot in September 2023. SMC Campus Center and the Community Engagement Center have collected over 7,000 pounds of food scraps in FY24. The Office of Sustainability was able to host two Compost 101 workshops for community members and provide free bags of compost to them through this program.

NexTrex Challenge

From July 1, 2023 through January 1, 2024, UMB participated in the NexTrex Challenge to collect 500 pounds of plastic in a 6-month timeframe. The University was able to collect 568 pounds of plastic bags and films with the help of volunteers checking 9 different collection locations on campus. These bags are recycled through Trex to make decking and other plastic composite materials. After meeting the goal, UMB received its very own bench made of Trex recycled materials.



MSTF Community Garden

The Office of Sustainability worked with the University Student Government Association and Medical Students for a Sustainable Future to fund a community garden on the second floor terrace of the Medical School Teaching Facility (MSTF). Two raised beds and several felted planters were placed at MSTF in May 2024. A growing list of volunteers have signed up to tend to the garden and harvest the herbs and vegetables grown there.

SUSTAINABILITY STAFF

Staffing Changes

In September 2024, Elizabeth Main became UMB's new director of sustainability and special projects. The office also hired Meredith Diloia to join the sustainability team as a sustainability and effectiveness specialist.



Meredith Diloia graduated from the University of Aberdeen with an MSc in Sustainability Transitions as a Rotary International Global Grant Scholar. She also has a BA in Global Studies: Environments + Sustainability from the University of Virginia. Meredith works on community engagement and marketing for campus sustainability initiatives.

Fellows

The Office of Sustainability employed one student fellow from UMB and two Climate Corps Fellow through SEI, Inc. All fellows had roles assisting with the implementation of UMB's Self-Service Waste Program.



Ben Eglash completed his MS in Energy and Sustainability at Northwestern University and comes to UMB from the SEI Climate Corps program. Ben began in the office in March 2024 and is working on AASHE STARS data reporting and waste and recycling efficiencies. He has a passion for circular economy, food equity, and waste reduction.



Olivia Rosser, an MSW student, began in the office in March 2023 as the office's waste reduction fellow until her graduation in May 2024. Her work mainly revolved around composting, waste reduction initiatives, education and engagement, communications, and social media content creation.



Alex Skowron, a recent graduate from Washington and Jefferson College, worked as a data fellow through the SEI Climate Corps program. Alex started in January 2023, and began working on the University's tree inventory, a sustainability dashboard, and other field data collection and analysis.

SUSTAINABILITY WORK IN FY 2025

Here is a snapshot of some things we're excited to report on for FY 2025!

Bike to Work Week
Zero-Waste Events
Tree Signage
Swag Guidelines
Rooftop Solar
Sustainable Lab Purchasing Guidelines
Climate Anxiety Resilience Hub
Community Compost
AASHE STARS
Know Before You Throw Tool
Decarbonization Planning
Clothing Swap

THANK YOU!

The work that the Office of Sustainability accomplishes relies on collaboration with cross-campus partners and organizations outside of UMB. We'd like to list just a few of our partners and sustainability stakeholders in their collaborative efforts, and hope to continue working with them and expand our network in the years to come.

Community Engagement Center

Design and Construction

Enterprise Risk Management

Environmental Health and Safety

Environmental Services

GreenSON

IPE Climate Change, Health, and Society Consortium

Medical Students for a Sustainable Future

Office of Emergency Management

Operations and Maintenance

Parking and Transportation Services

Real Estate, Planning, and Space Management

Strategic Sourcing and Acquisition Services

Sustainability Working Group Members

URecFit and Wellness

University Student Government Association

... and many more!

DEFINITIONS

Carbon Dioxide Equivalent (CO₂e/CDE)

Also written as CO₂e, CDE, or MTCDE for metric tons carbon dioxide equivalent. This considers all greenhouse gases' impacts on the climate in the context of its global warming potential.

Carbon Neutrality

An effort to decrease greenhouse gases such as carbon dioxide (CO₂) in the atmosphere. Greenhouse gases are the result of human activities such as deforestation, land use change, and fossil fuel burning.

Co-Located Bins

Waste bins that are placed in a centralized locations or common spaces to create a station of bins. Co-located bins collect a different waste stream per bin.

Dual-Stream Recycling

Recycling that has two waste streams. At UMB's campus, the University's recycling stream is separated by mixed paper and cardboard and mixed plastics, glass, and metal. This is different from single-stream recycling, where all recyclable materials go into one container.

Geographic Information System (GIS)

A system that creates, manages, analyzes, and maps all types of data. GIS connects data to a map, integrating locational data (where things are) with all types of descriptive information (what things are like there). GIS helps users understand patterns, relationships, and geographic context.

Global Warming Potential (GWP)

A measure of how much energy the emissions of 1 ton of gas will absorb over a period of time. Gases with a higher GWP absorb more energy, per pound emitted, than gases with a lower GWP, and thus contribute more to the warming of Earth.

Greenhouse Gases

Gases that trap heat in the atmosphere. These include: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases (such as hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and other synthetic gases). Each gas has a different magnitude of potency known as global warming potential

Net Zero Emissions

Achieving an overall balance between greenhouse gas emissions produced and greenhouse gas emissions taken out of the atmosphere.

DEFINITIONS

Renewable Energy

Energy collected from resources that are naturally replenished on a human timescale. Types of renewable energy include: solar, wind, hydropower, geothermal.

Scope 1 Emissions

Direct greenhouse gas emissions that occur from sources that are controlled or owned by an organization.

Scope 2 Emissions

Indirect greenhouse gas emissions that are associated with the purchase of electricity, steam, heat, or cooling. Although scope 2 emissions 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.

Triple-Bin System

A waste station with three separate containers to capture different waste streams.

Waste Stream

Different categories of solid waste to be disposed of. Waste streams on campus include: mixed plastics, glass, and metal recycling, paper and cardboard recycling, regular trash, biohazardous waste, broken glass, etc.

Zero-Emissions Vehicle

Vehicles that produce zero tailpipe emissions.