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## **ANNUAL HIGHLIGHTS**

March 15th, 2022 ○

#### Sustainability Plan Workshop Series

Over 1,500 JHU and community participants provided feedback on the Climate Action & Sustainability Plan priorities through a Town Hall, survey, and workshop series.

July 1st, 2022 **○** 

#### Launch of Hopkins Dining Program

Hopkins Dining transitions to a self-operated dining model at Homewood and Peabody and seeks to implement ambitious sustainable practices.

August 10th, 2022 ○

#### New Sustainability Website Launch

New JHU Sustainability website launches to increase visibility of cross-divisional sustainability initiatives at Hopkins.

### Commuting Habits Survey

JHU launches first commuter survey to better understand the commuting patterns of students, staff, and faculty and inform future multi-modal transportation services.

**57%** reduction in JHU's carbon emissions since 2008

**33%** waste diverted to be recycled or composted

#### 1,500+

people engaged in sustainability plan development process - June 30th, 2022

### JHU Achieves Climate Action Goal

JHU reaches first climate action goal, reducing greenhouse gas emissions 51% three years ahead of 2025 target.

→ August 3rd, 2022

#### Solar Facility Completed

The Skipjack Solar Center is completed, producing 250,000 MWh of power for JHU each year and providing renewable power for two-thirds of the university's annual electrical consumption.

September 28th, 2022

## SLC Environmental Justice Committee

Sustainability Leadership Council (SLC) establishes an Environmental Justice Committee to increase focus on equity and environmental impacts on marginalized communities.

**250,000** mwh of solar power produced for JHU at the Skipjack Solar Center

129 volunteers served on the Sustainability Leadership Council



## **LETTER FROM LEADERSHIP**

#### **Dear JHU Community,**

Each year, Johns Hopkins University continues to demonstrate its growing commitment to confronting and addressing the pressing global environmental challenges of our time. Therefore, it is with great pleasure that we highlight and celebrate the progress that we have made this year, as we also look to the future. Most notably, the university achieved a historic milestone in 2022, reaching a 51% greenhouse gas emissions reduction goal three years ahead of 2025. This goal was set as part of the university's Climate Change Implementation Plan in 2009, and our early achievement is a testimony to the institution's commitment to taking action on climate change and addressing our sustainability goals through innovation and stewardship.

However, while we celebrate our collective achievements, we recognize that our work is far from done. As one goal is surpassed, we must redouble our efforts to advancing progress, which is why the university has embarked on the development of a new Climate Action and Sustainability Plan looking to 2030 and beyond. This updated framework will set new university-wide goals and chart a path towards a sustainable future focusing on both our academic and research missions, as well as operational excellence. Led by the Office of Sustainability, contributors have included individuals throughout the Sustainability Leadership Council, and countless students, faculty, and staff from all schools and divisions.

Beyond our own campuses, the growth of our sustainability efforts has also included increased engagement and partnerships with the Baltimore community. This has taken shape through the insight and counsel of a dedicated Community Advisory Group and many community-based projects aimed at strengthening collaboration and responding to regional priorities. Such community-oriented efforts are essential to ensuring that a vision for the future sufficiently addresses the needs of our most vulnerable residents with an eye towards lasting and equitable solutions.

We invite you to reflect upon and appreciate the work of every member of our university that has contributed to our shared success over the past year and to consider opportunities to immerse yourself in the vibrant community of advocates and stakeholders helping to pave the next generation of sustainability progress across our institution.



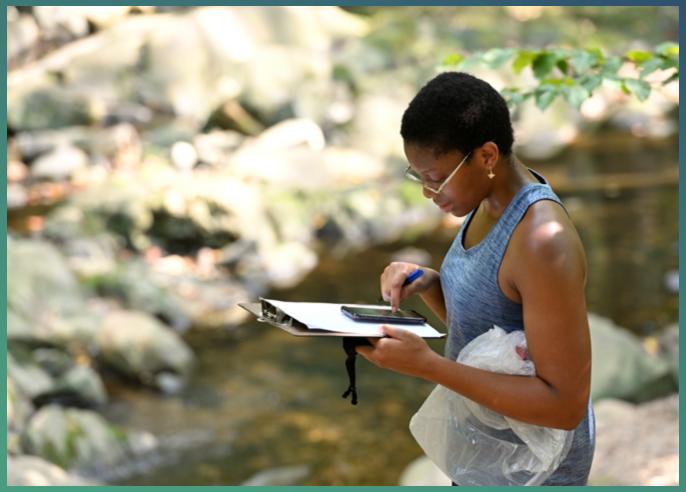
**Sunil Kumar**Provost and Senior
Vice President for
Academic Affairs



Laurent Heller
Senior Vice President
for Finance and
Administration



# RESEARCH, TEACHING, & SCHOLARSHIP



KSAS student conducting biology field research in Professor Pearlman's course

## **METRICS**

148 researchers profiled in the Sustainability Research Directory

**+500** Climate Research Network Members at the Applied Physics Lab **\$24.8 million** DOE grant to study equitable climate resilience in Baltimore

As a global leader in higher education, sustainability pedagogy and research at JHU has a profound impact on our future by training skilled students and contributing to scalable solutions. As the university develops a new Sustainability Plan, a core focus is for JHU to serve as a leading source of solutions in the transition to a low-carbon, healthy, and resilient future. Such efforts are not only planned—but

already underway—with significant growth and progress occurring across JHU's schools and divisions. Researchers are applying their expertise towards this mission both globally and locally—on our campuses and in the greater Baltimore area. While select projects and initiatives are highlighted below, further research and academic efforts can be found throughout many departments and programs across the university.

#### **New Center for Environmental Justice and Health**

A new JHU community-engaged research center, CHARMED standing for "Community Health: Addressing Regional Maryland Environmental Determinants of Disease" was formed in Fall 2022 within the Department of Environmental Health & Engineering. CHARMED focuses on exploring the linkages between environmental burdens and adverse health impacts in the Maryland region. Granted \$5.6 million in funding from the National Institute of Environmental Health Sciences and led by Dr. Marsha Willis-Karp, the Center explores health and environmental justice issues by building research partnerships with local communities. In addition,

the Center hosts monthly Environmental Justice Partnership Board meetings open to all faculty and offers pilot project grants to support community-engaged research.



Meeting held by the new CHARMED Center with Baltimore community members

### Research Team to address Climate Change in Baltimore City



Baltimore Social-Environmental Collaborative Kickoff Meeting

A multi-institution research team led by Dr. Benjamin Zaitchik in the Department of Earth and Planetary Sciences received a \$24.8 million federal grant from the US Department of the Environment to create a model for equity-oriented

climate change adaptation and resilience in Baltimore. The Baltimore Social-Environmental Collaborative is a newly formed partnership of universities, local government agencies, community associations, NGOs, and Department of Energy National Labs. The initiative seeks a people-centered, interdisciplinary approach to climate action and is hosted by JHU's 21st Century Cities Initiative. Research began in Fall 2022 with the goal of supporting Baltimore in addressing interconnected challenges of aging infrastructure, increased heat and flood risk, and

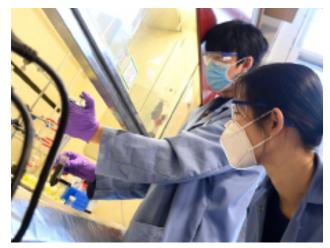
inequitable burdens of air and water pollution. The multidisciplinary team of researchers works with city officials and community groups to enhance resilience to extreme weather, flooding, urban heat islands, and air and water pollution and to advance plans for decarbonization that

prioritize equity and environmental justice. The project is expected to enable the city to adopt equitable energy and climate solutions to overcome challenges of climate change in urban areas while focusing efforts on historically underserved communities.

### Sustainable Energy Institute Making an Impact

Founded in 2021, the Ralph O'Connor Sustainable Energy Institute (ROSEI) brings together the extensive energy-related research efforts underway at the university with the goal of transforming the energy sector to help address climate change.

An accompanying mission of the institute is to educate future energy leaders. The establishment of SEE, the Sustainable Energy Education program, embodies this goal. SEE is a fourweek intensive summer course on all things sustainable energy engineering related, which will welcome its first group of high school students in 2023. ROSEI also aims to further strengthen the energy community at JHU by hosting events such as the first ever Summit for Sustainable Energy Research at JHU which featured over 70 presenters from five divisions.



Researchers from the Ralph O'Connor Sustainable Energy Institute

Additionally, ROSEI recently developed three key research initiatives:

- Converting carbon dioxide to pure carbon:
   Two professors from the Whiting School of Engineering, Jonah Erlebacher (Materials Science and Engineering) and Chao Wang (Chemical and Biomolecular Engineering), collaborated on a research project focused on extracting harmful carbon dioxide gas from the air and converting it into a form of solid carbon useful in applications ranging from farming to construction.
- Expanding solar energy use: Developed in 2022 by JHU faculty and staff Jeff Maranchi (APL), Sara Thoi (Chemistry), and Susanna Thon (Electrical and Computer Engineering), the Light-Integrated Technology for Energy Storage initiative explores new solar power solutions through the creation of lightweight, light-absorbing, and energystoring materials to make solar-powered cars, self-charging cell phones, and other off-grid technologies.
- Increasing accessibility to windfarm
   simulations: Dennice Gayme and Charles
   Meneveau, faculty in the Department
   of Mechanical Engineering, initiated the
   creation of a public database of windfarm
   computer simulations allowing researchers
   across the globe to maximize the potential
   of wind energy.

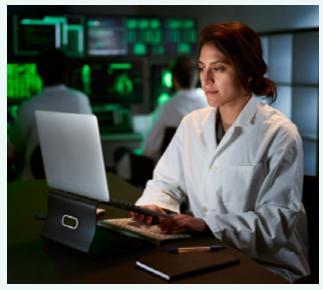


## **APL EXPANDS ITS CLIMATE RESEARCH PORTFOLIO**

As climate change alters Earth's landscape and environment, it introduces unprecedented threats to national and global security. The Johns Hopkins University Applied Physics Laboratory (APL) has been applying unique skills, technologies, and expertise to mitigate the effects of this threat. According to Bobby Armiger, principal staff engineer at APL and leader of the Exploratory Science Branch, APL is focusing on its contribution to the climate crisis in three main ways: climate intelligence, operational resilience, and mitigation efforts.

This climate intelligence work focuses on developing tools for enhanced global locational awareness of carbon dioxide emissions, specifically in vulnerable areas. A major project within this focus area is the Climate TRACE (Tracking Real-time Atmospheric Carbon Emissions) initiative, an international coalition backed by Al Gore that innovatively tracks greenhouse gas emissions. The project, led by Dr. Marisa Hughes, assistant program manager for Advanced Science and Technology Development, utilizes artificial intelligence and machine learning as well as satellite, population, and road network data to characterize transportation emissions from the top 500 cities across the globe. Additionally, APL researchers and JHU Professors Anand Gnanadesikan (Earth and Planetary Sciences) and Ioannis Kevrekidis (Chemical and Biomolecular Engineering), in partnership with NASA and NOAA, are using AI models to forecast air quality and patterns of the Atlantic Meridional Overturning Circulation (AMOC).

Another group of scientists at APL, alongside team members at NASA's Goddard Space Flight Center and other international partner organizations, have developed a physical



Research Scientist at the Applied Physics Laboratory

prototype of the Compact Hyperspectral Air Pollution Sensor. The device will view air pollution sources at roughly half a square mile resolution from low Earth orbit, tracking air pollution at a level never before possible. The prototype is now in its final stages of development.

As climate change creates more extreme environments for national service members, APL explores solutions through operational resilience. "We must provide them the tools to either rapidly restore degraded areas to a level of function, or to prevent degradation in the first place," says Armiger. APL is researching coastal resilience to mitigate coastal damage and extreme weather and is partnering with the University of Miami to research rapid coral regrowth and novel hydrogels that act as glue and a food source for corals. Beyond this, Dr. Hughes and APL colleagues are working alongside professors at the JHU ROSEI to manufacture "from air" nutritional and flavorful food products that can be used in emergency relief and disaster response scenarios.

APL's mitigation efforts focus on researching carbon sequestration through novel materials. A green concrete project that achieves carbon storage and fixation is currently underway, alongside a reassessment of carbon footprint in military system designs, and AI research related to improving heating and cooling efficiency in buildings.

Over the course of this year, each of these projects focused on climate security has expanded APL's global impact. According to Hughes, increased collaboration with the academic community and government sponsors has accelerated APL's leadership role in the climate security space. Internally, APL's Climate Network, composed of members across all divisions, has grown to over 500 members since its founding in 2019 and continues to foster collaboration across the institution. "Here at APL, we are trying to make critical contributions to critical challenges," says Armiger. By addressing the threat of climate change to national security, APL is committed to finding solutions.

## New Multidisciplinary Energy Minor Established

This fall, the first cohort of students enrolled in JHU's new interdisciplinary undergraduate Energy Minor program, offered through the Whiting School of Engineering and Krieger School of Arts and Sciences. Developed and proposed through a working group of the Sustainability Leadership Council that began in 2020, the minor was launched for the 2022-2023 academic year. The minor provides a multidisciplinary learning approach that aims to prepare students for success in the energy field. It is jointly administered by the Department of Electrical and Computer Engineering and the Department of Earth and Planetary Sciences, while the Ralph O'Connor Sustainable Energy Institute provides support and co-curricular opportunities. The minor's development was spurred by several key motivations: the impact energy has on urgent societal challenges such as climate change, standards of living, and health; the desire to combine the expertise in energy from multiple JHU schools and departments; and demonstrated demand from JHU students.

## EHE Launches New Product Sustainability Certificate Program

The products we use every day have multifold impacts throughout their life cycles- from resource extraction to manufacturing, from shipping to packaging, and, ultimately, to disposal. As demand for more sustainable products grows, so does the need for professional expertise in this area. Addressing this need is the new Product Stewardship for Sustainability Certificate Program in the Department of Environmental Health and Engineering at the Bloomberg School of Public Health (BSPH). Established in 2022, this certificate was created to enable professionals to promote responsible design, development, and management of products throughout their life cycles. The program is designed for professionals, as well as masters and doctoral degree students and postdoctoral trainees interested in the development of products that prioritize ecological impacts and protect human health.

## CLIMATE ACTION



Students in Professor Susanna Thon's "Introduction to Renewable Energy Engineering" course tour the Recreation Center rooftop solar array.

## **METRICS**

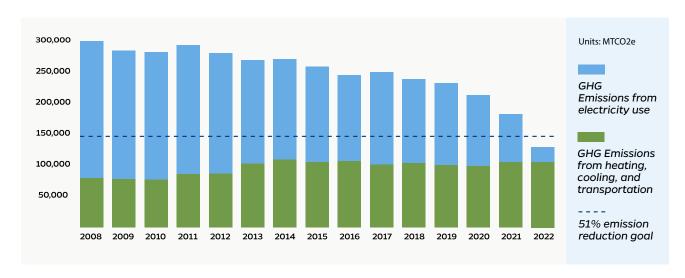
**30% reduction** in GHG emissions from 2021 to 2022

**5** pathways to net-zero emissions studied as part of the Sustainability Plan development process

Since the launch of JHU's initial President's Task Force on Climate Change in 2008, the university has demonstrated an unwavering commitment to mitigating greenhouse gas (GHG) emissions. At that time, a formalized goal of reducing the university's emissions 51% by 2025 was set by an engaged group of university and community stakeholders. In 2022, JHU met this goal three

years ahead of schedule, thanks to a 15-year Solar Agreement coming into effect. With this milestone achieved, JHU is currently in the process of setting a new, ambitious GHG reduction goal, looking to 2030 and beyond, as well as starting to plan for the impacts of a changing climate on its infrastructure and services.

#### **JHU Reaches its Greenhouse Gas Emissions Reduction Goal**



#### **Climate Achievements**

#### **Defining a Path Towards Net-Zero**

In 2022, a working group composed of staff, students, and faculty worked alongside JHU's Sustainability Plan consultant, Introba, to set new



The Skipjack Solar Center

goals for limiting the university's GHG emissions and to define technically and economically feasible pathways to achieve those goals, with a focus on on-site decarbonization of the university's energy infrastructure. The study was based on extensive analysis, as well as interviews with facilities teams on all campuses. The main solutions explored included:

- Reducing GHG emissions by requiring new buildings be all-electric or electric ready
- 2. Ambitious energy efficiency measures
- Transitioning existing energy systems away from fossil fuels and replacing them with low-carbon alternatives

The working group explored multiple pathways combining these solutions and analyzed the estimated impacts to GHG emissions. Using the results of the study, a new climate goal will be determined and announced as part of the Sustainability Plan. Once this goal is established, university teams will focus on more detailed site-specific decarbonization studies to determine the feasibility of various technologies and implementation over time.

## Identifying Climate Risks and Defining Adaptation Strategies

From warmer temperatures to more severe storms and flooding, the Mid-Atlantic region continues to experience the effects of climate change. JHU is proactively assessing and addressing the impact of the climate crisis in our region by prioritizing institutional sustainability. A Sustainability Plan working group, led by Jon Links, Vice Provost and Chief Risk Officer, and a Professor in Environmental Health and Engineering, as well as Benjamin Zaitchik, Professor in Earth and Planetary Sciences, completed a climate risk assessment looking at how climate change will impact the university through 2080. The resulting Climate Adaptation Report identified potential risks that future climate conditions could pose to JHU's built and natural environment and community. along with climate adaptation strategies to address those risks.

Addressing a breadth of environmental hazards, suggested adaptation strategies range from installing backup power systems to increasing the tree canopy and permeable surfaces on campus. "Understanding how climate hazards are projected to become more severe in the future allows the university to take a science-and values-informed approach to identify highest priority areas to prepare for and mitigate

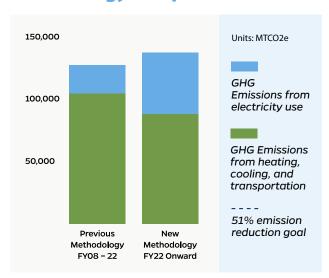
hazards before they occur," according to the Climate Adaptation Report. To ensure equity throughout the planning process, populations and assets in highly vulnerable regions were kept at the forefront of consideration.

#### **JHU's GHG Inventory Expanded**

Previously, JHU accounted solely for GHG emissions from buildings owned by the university, which is an accounting methodology established as part of the 2009 JHU Climate Change Implementation Plan. Starting this fiscal year, the university's GHG inventory will cover all buildings occupied by the university, regardless of their ownership status. As a result, all buildings where JHU leases space will be included moving forward. This represents almost 3.5 million additional square feet of space, totaling 17% of JHU's GHG emissions in Fiscal Year 2022. This shift will allow JHU to track and manage the GHG emissions of JHU's leased building portfolio more closely and accurately.

Additionally, as part of the university's due diligence in GHG accounting, JHU is one of only

## JHU GHG Inventory: Methodology Comparison



**3.5 million sq. ft.** of leased buildings added to JHU GHG Inventory

+17% GHG emissions from Leased Buildings

19 universities to join The Climate Registry, a nonprofit organization dedicated to data consistency in GHG reporting, and had its emissions inventory verified by a certified third party for the first time this year. Verification ensures that JHU's GHG inventory aligns with global standards and that the university's data is consistent and publicly transparent over time. This step provides assurance that JHU's reported GHG emissions represent a faithful account of our climate impact.

#### **Resource Conservation in JHU Labs**

Laboratories are among the most resourceintensive spaces on JHU's campuses, utilizing large quantities of energy and water and generating hundreds of tons of waste each year. To help improve their environmental impact and foster a culture of sustainability within the lab community, JHU announced a partnership with My Green Lab, a nonprofit organization dedicated to increasing the sustainability of private and academic research sectors. A major focus of the partnership is to increase participation in JHU's Green Lab certifications; a comprehensive process that provides labs with personalized feedback for immediate and future improvements to make their labs more sustainable through behavior changes that conserve energy, water, and material resources.

In 2022, the Office of Sustainability hired KSAS PhD alumnus, Ryan Weeks, as the university's first Green Labs Specialist. Weeks aims to

provide guidance and institutional resources to both research and teaching labs as they seek to incorporate a culture of sustainability within their work. With this new position, the Green Labs initiative has been solidified in the Office of Sustainability and will benefit from a point-person dedicated to the work. Weeks first



Ryan Weeks, Green Labs Specialist

became involved with the SLC Green Labs Working Group as a student and has remained excited to continue to work with researchers at JHU to propose new, impactful initiatives in one of the university's core functions.

**30** labs accounting for over **350** researchers have completed or are currently taking the Green Lab Certification

13 labs competed in the International Freezer Challenge in 2022.

#### **Assessing JHU's Scope 3 GHG Emissions**

Since 2007, JHU has been actively measuring and disclosing its direct GHG emissions associated with on-site fossil fuel combustion, known as scope 1 emissions, and its indirect emissions associated with the purchase of electricity, steam, or cooling, known as scope 2 emissions, which are the predominant sources comprising most organizational GHG accounting. In the last year however, JHU began the process of analyzing its value chain or scope 3 GHG emissions, resulting from activities not directly owned or controlled by the university. These

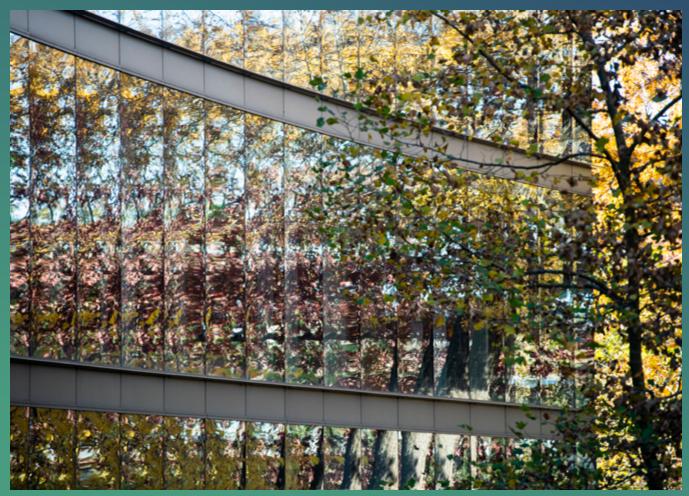
emissions typically originate from purchased goods and services (food, office supplies, business services); capital goods (construction materials, vehicles, equipment); business travel (air, train, car); and employee commuting. Due to the complexity of these categories, the historic focus on scope 1 and 2 emissions, and the limited control the university maintains over these sources, measuring and reducing scope 3 emissions is a challenging task.

In 2022, the Office of Sustainability started the process of quantifying scope 3 emissions for

some of these categories, using the Greenhouse Gas Protocol's methodology. Undergraduate intern Kathy Cao, a student in the Whiting School of Engineering, created a custom computation tool to measure emissions from university-sponsored air travel. Similarly, graduate intern Vaidehi Sunil Zanwar used a scope 3 estimation tool to measure emissions from food purchases at JHU for the first time. The long-term goal for JHU is to continue to measure and assess emissions from scope 3 sources and establish a protocol and reduction initiatives as part of the new Sustainability Plan.



## BUILT AND NATURAL ENVIRONMENTS



The Undergraduate Teaching Labs on the Homewood Campus

## **METRICS**

**100+** people involved in the development of the High-Performance and Healthy Building Requirements

**23,558 MT** of CO2 reduction potential assessed as part of a Building Portfolio Analysis

**3 miles** of trail and path targeted in the Lower Stony Run Strategic Plan

Integrating sustainability into the planning, design, and operations of JHU's built environment is essential to supporting the next generation of campus-wide climate and environmental goals. JHU has long been committed to designing exemplary new buildings, and several are currently underway. Additionally, through the development of new High-Performance and Healthy Building Requirements, JHU is currently reexamining and

codifying green building practices that will be applied systematically to buildings projects at all scales. These requirements were developed alongside a working group of staff, faculty, and students and will be published this year. In addition to the built environment, expanding access to green space and improved ecosystem services remains an area of increased planning and attention for the university.

#### **Energy and Buildings Achievements**

## Development of High-Performance and Healthy Building Requirements

The SLC High-Performance Healthy Buildings Working Group, consisting of JHU staff, faculty, and students developed a set of requirements for new constructions, major renovations, and modifications to be applied at all JHU campuses in accompaniment with the adoption of a new JHU Sustainability Plan. This set of green building policies will ensure that all building projects are aligned with JHU's long-term sustainability goals, especially as they pertain to decarbonization, energy, and occupant well-being.

Going forward, sustainability will be embedded in the design process of all construction projects, starting with a charette to set sustainability goals as applicable to the project's scope and specificity, followed by studies and documentation at major milestones to ensure accountability and follow-through. The technical requirements will be based on LEED (Leadership in Energy and Environmental Design) Certification, the leading global green building certification, to ensure that each project tackles sustainability holistically, advancing strategies including and beyond energy and carbon—such as water conservation, stormwater management, ecosystem impacts, building materials, occupant

well-being, and community impacts. In addition to pursuing LEED Certification, the Requirements will include certain mandatory credits and additional performance requirements to ensure impactful outcomes. Several new construction projects are already piloting the implementation of these requirements, which will have a transformative impact on JHU's buildings in the years to come.

#### **Building Portfolio Analysis Completed**

Reducing energy consumption is a fundamental strategy to mitigating GHG emissions. To identify and prioritize energy efficiency measures for specific university buildings, JHU partnered



Decarbonization potential for a sample of buildings on the Homewood Campus, as estimated through the Building Portfolio Analysis.

with consultants at Introba to conduct a university-wide Building Portfolio Analysis. Using algorithmic methods and building utility data, Introba produced energy models to determine current performance characteristics of each university building and the impact of various energy efficiency measures including strategies such as electrification, heat recovery ventilation, retro-commissioning, envelope upgrades, and more. According to the results of the analysis, if each of the interventions were to be applied to all buildings on the Homewood Campus, the annual GHG savings could reach approximately 23,558 metric tons of carbon dioxide equivalent per year- equivalent to the energy use of nearly 3,000 homes annually. The results of this study will allow JHU to better plan for building efficiency and carbon reduction, while improving occupant well-being.

## First Full-Time Sustainability Manager Hired at APL



Elizabeth Egan, APL's first sustainability manager

Elizabeth Egan was
named the first full-time
sustainability manager
at the Johns Hopkins
Applied Physics Laboratory
(APL) in June of 2022.
Egan was formerly APL's
environmental manager,
ensuring that the Lab
complied with all local,

state, and federal environmental regulations. "In this new role, we are looking at targets and strategies that go beyond regulation" says Egan. As sustainability manager, Egan will lead APL's strategy to establish an official sustainability program. Egan will work with colleagues in developing more robust communications, as well as creating a centralized database for all sustainability-related metrics at APL, including water usage, waste generation, and GHG

emissions. "We will then utilize this data," says Egan, "to make data-informed decisions and implement programs that drive sustainability forward."

In recent years, APL has undertaken a number of energy efficiency projects, including reducing GHG emissions from electricity by 95% as a result of the university's Solar Agreement. Additionally, APL is currently looking to implement a robust composting program, is studying a potential fleet electrification conversion of all APL-owned vehicles and is constructing a new building—Building 28– to attain LEED Gold certification. There is room to grow, and Egan is helping to lead the charge.

#### JHU Partners With Community Organizations to Develop the Lower Stony Run Strategic Plan

The Friends of Stony Run, a local volunteer-based organization, partnered with Johns Hopkins
University and Baltimore City Recreation & Parks to develop the Lower Stony Run Strategic Plan
– "a community-driven master planning effort to provide a long-term vision to protect and enhance the beloved Stony Run Walking Path, the Stony Run stream valley, and its associated park spaces," according to the Plan website.

Sponsored by JHU and led by the planning firm Mahan Rykiel Associates, the Lower Stony Run Strategic Plan targets nearly three miles of stream and path from Overhill Road to the north,



Lower Stony Run

to East 29th Street and the Jones Falls Trailhead at Wyman Park Drive to the south. The east bank of the Stony Run (between University Parkway and Wyman Park Drive) is part of the Johns Hopkins University Homewood Campus. As a neighbor and steward of the park and forested area, JHU supports the overarching objective of

the Plan to improve accessibility along the entire path, including access to and from campus. A draft report of the Lower Stony Run Strategic Plan was completed in late Fall 2022 and a finalized plan is scheduled to be issued sometime in February 2023.



# RESPONSIBLE CONSUMPTION



Individual discarding an item in a waste bin in Levering Hall

## **METRICS**

**33%** waste diversion rate in 2022

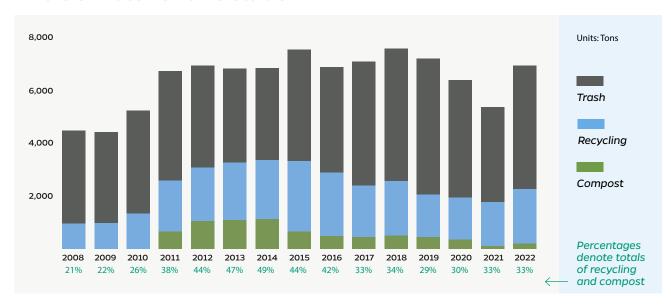
**Over 90%** Construction & Demolition recycling rate for JHU's biggest construction projects

**128%** increase in composting since 2021

Throughout JHU's Sustainability Plan engagement process, the topic of "responsible consumption"— spanning waste reduction, food systems, and procurement—emerged as a key priority from university and community stakeholders, resulting in impactful conversations about charting a path towards a zero-waste future. Additionally, JHU lent support to a community-led effort for the

development of a regional compost facility, which would serve as a regional hub to accept organic waste and reduce the tonnage of material sent for disposal. Although waste generated across the university returned to pre-pandemic numbers, the recycling rate remained stable thanks to extensive communications and outreach efforts as people returned to campus in greater numbers.

## JHU's Waste Generation Returns To Pre-Pandemic Levels, Diversion Rate Remains Stable



### **Responsible Consumption Achievements**

#### **New Ambitious Waste Reduction Goals**

Reducing waste and responsibly consuming resources is integral to addressing JHU's impact on the environment and public health. To tackle this issue, the SLC Zero Waste Planning Working Group was launched in Fall 2022. Its mission is to identify waste-related opportunities and challenges, research zero-waste best practices, and work collaboratively to implement programs to set JHU on a path towards a zero-waste future. The group is composed of stakeholders

from every division of JHU, including custodial and facilities managers, housing and dining staff, faculty, and students. "In order to be consistent across the university and to understand the differences between all of the different campuses," says Leana Houser, Waste Reduction and Recycling Manager for the Office of Sustainability, "we need to make sure that we have representation from each of those divisions."

The work of this group builds on a stakeholder engagement process launched in Spring 2022 to

inform the long-term responsible consumption goals of the Sustainability Plan. "We did a deep dive to take the pulse of people- those that are responsible for [responsible consumption] programs themselves, those that are engaging with those programs to support their own work, and the "end users" made up of general Hopkins student body and staff," says Houser. This input will help prioritize new initiatives, such as creating more consistent waste messaging and infrastructure across all JHU campuses.



Brandon Riley, Waste Reduction and Recycling Operations Coordinator for the Homewood Campus, with the first batch of recycled pipettes from the Homewood Campus

## JHU Pledges Support for the Creation of a New Compost Facility in Baltimore

Throughout 2022, the South Baltimore
Community Land Trust (SBCLT), the Office
of Economic Development and Community
Partnerships, the Office of Sustainability, and
the Johns Hopkins Ecological Design Collective
worked collaboratively to pave the way for
greater access to composting in Baltimore. As
a result, JHU pledged to support SBCLT in its
proposal to develop a Zero Waste composting
facility in Baltimore. JHU committed to divert
at least 500 tons of the institution's food
scraps, yard waste, and other organic materials
generated annually to a proposed local facility.
The university also expressed support for
community-led development that adheres to

operational excellence, cost effectiveness for organizations and institutions, and engagement with local host communities in the formulation of community benefits agreements that align with the desires impacted residents.

Acknowledging that a multitude of resources will be required to get a facility off the ground, JHU worked with members of the Baltimore Colleges and Universities for a Sustainable Environment coalition including University of Maryland, Baltimore, Coppin State University, University Maryland Medical Center, UMBC, and the Baltimore Collegetown Network, to jointly undersign letters of support to the Maryland Congressional Delegation and the Environmental Protection Agency. Both letters expressed support for funding to develop engineering plans and begin site development to construct a small covered aerated static pile compost facility, with the ability to scale into a larger compost operation to support regional needs.



Organic material from JHU being processed into compost

#### First Steps into a Circular Economy: Lab Pipette Recycling

The Homewood campus resumed a pipette recycling program in Spring 2022 as a means to divert a specialty stream of laboratory plastics that cannot be diverted through normal single stream recycling. The program began in 2015

at the JHU School of Medicine and now offers several drop off points at the Homewood, School of Medicine, and School of Nursing campuses, resulting in **14 tons of plastic** recycled across JHU this year. In an effort to reduce plastic waste in laboratories, researchers separate their pipette tip boxes into designated containers that recycling staff collect. These plastics are then transferred to Advant-Edge Solutions, a partner company in Delaware, and the plastic waste is processed into pellets and sent to PolyCarbin, a manufacturing company that turns pellets into new laboratory supplies.

## Homewood Transitions to a Self-Operated Dining Program

A new dining experience welcomed students back in the Fall 2022, as the Homewood Campus and Peabody Institute transitioned to a self-operated dining model. Following a nine-year partnership with a private food service company, the transition to self-operation allows JHU more control to improve upon and implement ambitious sustainability goals and practices. Key to defining these increased efforts was the SLC Sustainable Food and Dining Working Group, including members of the Center for a Livable Future, Hopkins Dining, the Office of Health Promotion and Well-Being, and the Office of Sustainability.

The goals set by this working group aim to shift Hopkins Dining towards more sustainable food production and sourcing and to encourage educational and research opportunities with JHU researchers. Focal areas included supporting local economies in Baltimore, increasing equity and food security, and reducing GHG emissions from food production and waste. According to Hamilton Goss, Director of Culinary Innovation, "While we realize the journey of our sustainability impact is just starting, we are committed

to cultivating partnerships within our local community and supporting sustainable practices to be the best stewards of our environment and to fulfill our commitment to the Johns Hopkins community."

#### A Sustainable Food Future for JHU

In June of 2022, Hopkins Dining welcomed Graham Browning to their team as the inaugural Sustainability Manager to help lead and implement a new set of sustainability priorities into their program. Drawing upon her experience in sustainable product design and waste management, one of Browning's first initiatives focused on replacing single-use togo materials with compostable alternatives, partnering with companies like Waste Neutral to transport compostables and food waste to a regional facility in Upper Marlboro, Maryland. The company audits and weighs materials from Hopkins Dining's operations and provides feedback to help improve waste reduction strategies.



Graham Browning, inaugural Sustainability Manager for Hopkins Dining

Along with increasing waste diversion efforts, Browning and Hopkins Dining have fostered partnerships with a variety of local vendors. Kreider Farms in Manheim, Pennsylvania specializes in regenerative dairy and chicken farming, and Old Line Meat Company in Baltimore provides grass-fed and grain-finished beef that is hormone- and antibiotic-free.

Additionally, Graham chairs a new Food and Dining Working Group of the SLC in collaboration with university-wide partners and is in the process of working with stakeholders on implementing new goals. According to Browning, the Hopkins Dining team has "taken great strides to integrate local and sustainable decision-making into the establishment of their program, and these efforts are intended to grow substantially."

#### **JHU Purchases Real Food**

In 2022, JHU alumni Jeremy Berger (KSAS '21), Raychel Santo (KSAS '14 and staff member at the Center for a Livable Future), and Isabela Garces (KSAS '20) analyzed the JHU dining program's participation in the Real Food Challenge that the university signed almost a decade earlier in 2013. According to their findings—over a six-year period—JHU spent over \$4.7 million on food products categorized as either local, communitybased, humane, ecologically sound, or fair trade between 2013 and 2019, and achieved 30% procurement at the culmination of the challenge. The results, which build upon Berger's senior capstone project and look at the successes and challenges of program participation, were published in the Journal of Agriculture, Food Systems, and Community Development.

# MOBILITY AND TRANSPORTATION



A Blue Jay Shuttle in front of Mason Hall

## **METRICS**

13% of vehicles used by the JHU community for commuting are hybrid or electric 13% of vehicles used by the JHU community for commuting are hybrid or electric

#### 4500+

responses to JHU's first transportation survey **34%** of survey responders use sustainable transportation habits daily

In 2022, JHU made significant strides towards reducing emissions from university fleet vehicles and employee commuting. Major achievements include significant growth of the mass transit Blue Jay Shuttle with a new service to the East Baltimore campus, steady progress towards electrification of the JHU fleet, and infrastructure work on University Parkway as part of a Baltimore City Complete Streets pilot

initiative. Furthermore, to accurately measure progress over time, JHU launched its first university-wide transportation survey. Research on transportation topics has also been active this year with continued work from the Transportation and Health Work Group, a faculty group which focuses on transit equity and environmental health in Baltimore.

#### **Mobility and Transportation Achievements**

## Assessing Commuter Habits and Needs Through a University-Wide Commuting Survey

In 2022, JHU launched its first commuter survey to better understand the commuting patterns of students, staff, and faculty. The 12-question survey, designed by the Sustainability Leadership Council's Green Fleet Working group, was released in October 2022. The results helped assess future parking and shuttle needs, gauge the use of public transit, and capture metrics to begin tracking commuter emissions in JHU's GHG inventory. The survey was published using ArcGIS123, a survey tool which supports the use of maps, and can provide invaluable data to help design new transit routes or the creation of new transportation services.

Results were collected from 4,712 respondents, representing affiliates from all JHU divisions and providing a useful baseline to benchmark future progress. Interesting findings include a median commute time of 25 minutes, with 34% of respondents commuting to either the primary campus or other JHU campuses using sustainable modes of transportation such as biking, walking, carpooling, or using public transit. When asked to rank what would be most influential to encourage them to drive to their primary JHU campus less often, "transit options closer to my residence" was the top choice.

Such data will help inform transportation and infrastructure decisions within the university as it plans for a more sustainable future.

#### **Shift towards Electrification**

Several projects are currently ongoing to transition JHU's fleet from fossil fuel-powered to electric vehicles. In 2021, a new Homewood-Peabody-JHMI bus service contract was signed with Academy, who took over the bus service as of August 2022, with the goal of making all buses on the largest JHU route 100% electric by 2026. JHU Transportation Services and Academy are currently working closely to design the charging infrastructure and order the new electric buses, some of which should start running as soon as 2024.



An electric-vehicle charger in the Keswick garage

Additionally, to incentivize JHU departments towards hybrid and electric vehicle purchases, the Office of Transportation Services offered up to \$50,000 in grant money in fiscal year 2022. Grants were available in two amounts: \$5,000 per vehicle purchased by JHU that is fully electric, or \$4,000 per vehicle purchased by JHU that is hybrid electric. So far, four hybrid electric grants have been awarded. Given the growing interest in this initiative and JHU's commitment to reducing the environmental impact of our transportation, grant awards are still available this fiscal year. Converting the JHU fleet to electric vehicles will not only reduce JHU's transportation-based GHG emissions, but will also improve regional air quality, reduce traffic congestion, and lessen noise pollution impacts on local communities.

#### **75 New Electric Vehicle Charging stations**

In 2022, JHU installed an additional **75 electric-vehicle charging stations** at various campus locations, open to university faculty, staff, students, and guests. With exponential growth of electric vehicles expected in the years ahead, JHU plans to continue expanding the number of charging stations at all campuses.

## **Encouraging Walking, Biking and Public Transit** on University Parkway

In Summer 2022, the resurfacing and redesigning of University Parkway from 39th Street to Charles Street took place as part of

the first Baltimore City Complete Streets pilot on a JHU campus. The redesign, funded by the Baltimore Department of Transportation, established new protected bike lanes and implemented ADA-compliant curbs that will calm traffic on surrounding roads and increase accessibility for multi-modal transportation, such as walking, biking, and public transit. After this pilot project was completed, JHU partnered with several neighboring community associations to gather input for future improvements to University Parkway.



Bike lane on University Parkway





JHU students gardening at the Blue Jay's Perch

## **METRICS**

13 student interns in the Office of Sustainability

**300+** Sustainability Plan Spring Workshop Registrants **26** Green Blue Jay Award Winners

Comprised of thousands of students, faculty, and staff, JHU community members play a vital role in influencing the institution's environmental footprint. In collaboration with campus partners, the Office of Sustainability hosts diverse opportunities for meaningful engagement in a variety of programs and initiatives. From providing input in the ongoing Sustainability Plan process, to participating in events such as "mindful walks" on the Homewood Campus, to joining the Sustainability Leadership Council, any Blue Jay has the opportunity to make a positive impact.

#### **Community Input on the JHU Sustainability Plan**

Collecting widespread feedback from diverse constituents has been an essential part of the Sustainability Plan development process. Throughout the 2021-2022 academic year, the Office of Sustainability received input from over 1,500 JHU students, faculty, staff, alumni, and community members through a variety of engagements including a vision survey, a town hall event, and a series of interactive workshops. The workshop series consisted of eleven sessions focused on a variety of topical areas including equity and environmental justice, student life and campus culture, zero waste, food and dining, and more. This resulted in a set of Plan priorities that was assessed and refined over the summer to be shared for community feedback in 2023.

The Plan development process has also involved several advisory and working groups—including a Community Advisory Group—which was

created to strengthen partnerships and engage community members in the Plan's vision and priorities. The goal is a Plan that responds not only to issues identified by JHU, but also to Baltimore community priorities, especially those individuals disproportionately impacted by climate change and environmental degradation.

#### **Launch of a New Sustainability Website**

In August 2022, the Office of Sustainability launched a new university-wide Sustainability website to serve as a comprehensive hub for all institutional sustainability commitments, academic and research offerings, and involvement opportunities at JHU. Designed by Baltimore-based firm, Fastspot, the project was managed by Office of Sustainability staff with support from student employees and in partnership with the Sustainability Leadership Council. The site offers a holistic view of sustainability at JHU, featuring stories and initiatives across many schools and divisions. Exemplifying this mission is the addition of an integrated Hub News section and a new multidisciplinary Sustainability Research Directory, showcasing over 150 faculty and staff researchers focused on topics from climate solutions to food systems. Whether a student is interested in exploring potential academic programs, a staff member is looking to integrate sustainability into their office practices, or a faculty member is seeking researcher partners, the new website provides a wealth of information to learn, research, and engage with sustainability at JHU.

#### **Impacts of the Student Intern Cohort**

Every year, the Office of Sustainability provides hands-on, applied internships to enhance the personal, professional, and academic goals of both graduate and undergraduate students. One year after restructuring the office's internship program into a new cohort-based model around areas of Communications, Engagement, and Research & Operations, the office welcomed new and returning students in 2022 to embark on a new set of projects.



## Expanding JHU Sustainability's Communications Efforts

The Office of Sustainability continuously explores new avenues for engaging the JHU community through digital communications. Integral to this effort have been four undergraduate communications interns: Mansha Kapur, Rachel Huang, Skye Neulight, and Izzy Nobili. Skye and Izzy both joined the team in Fall 2022 and have focused on expanding writing and storytelling efforts through the Annual Report, a new sustainability blog, and the development of a newsletter—the "Blue Jay's Green Guide." Sophomore Intern, Rachel Huang, manages the office's social media accounts, bolstering engagement through creation of Instagram reels and collaboration with other university accounts and organizations. Senior Intern, Mansha Kapur, spent the summer working for the Office of Sustainability to help finalize the new sustainability website and has designed countless resources including a Green Labs Best Practices Guide, Thrifting Guide, and Preferred Green Cater List.

Kaitlin Williams, a Research and Operations Intern and School of Medicine MD-PhD candidate, also joined the Office of Sustainability intern team in Fall 2022 and has focused on promoting the university's Green Labs Initiative through new digital communications. Her work has ranged from running and expanding the <u>Green Labs</u> <u>listserv</u> to designing new materials that promote green labs best practices across the university.



## The Intersection of Sustainability and Well-Being: Mindful Walks

Combining her passion for sustainability with her pre-medical track degree, Engagement Intern Romina Rojas introduced a series of "Mindful Walks" to the Homewood campus in collaboration with the Office of Student Health and Well-Being. The program consists of monthly walks around campus with meditative stops along the way to promote stress relief and foster a stronger connection with the natural environment. "The environment has a huge impact on people's health," says Rojas. "My work with the Office of Sustainability has given me a new perspective on health care, which I think is going to benefit me as a future physician." Since the launch of the Mindful Walk Series in Spring 2022, the program has since inspired similar walks on other JHU campuses, including East Baltimore.



Students participating in a Mindful Walk on the Homewood Campus

## Zero Waste

After working for the Homewood Recycling Office for three years, undergraduate senior, Mashivat Ahmed, transitioned to the Office of Sustainability team as a Zero Waste Intern in Fall 2022. Mashiyat brought with her a rich background in research, planning, and executing outreach experiences that led to her being awarded the 2021 Undergraduate Student Employee of the Year. "I want to do something where I can have a more sustainable impact," says Ahmed. "That's why I moved to the higherlevel programming side- the administrative sideto understand how waste initiatives come about at Hopkins." Focusing on a range of projects, Ahmed has been instrumental in updating and expanding the Preferred Green Caterer List, conducting a divisional waste infrastructure survey, and researching sustainable purchasing guidelines to help build the tools necessary to transition the university to a zero waste future. According to Ahmed, "Sustainability has pretty much shaped my experience here" and her experience has also definitively shaped sustainability at JHU.



Mansha Kapur, Communications Intern, and other students at an Ecological Design Collective zero-waste event

## Recognizing Sustainability Champions: 2022 Green Blue Jay Awards





Dr. Peter Winch and Dr. Rebecca Kelly, Recipients of Sustaining Champion" Green Blue Jay Award

The 9th annual Green Blue Jay Awards celebrated students, faculty, staff, alumni, and community partners who have uniquely contributed to making JHU a more sustainable institution. In the classroom, lab, office, and beyond—these groups and individuals have used their voices and actions to advance sustainable change at JHU.

In 2022, Dr. Peter Winch and Dr. Rebecca Kelly received the "Sustaining Champion" award for their unwavering commitment to environmental sustainability and long-time advocacy for sustainability education and programming at JHU. Dr. Peter Winch is a Professor in the Social and Behavioral Interventions Program in the Department of International Health at the Johns Hopkins Bloomberg School of Public Health and is the inaugural co-chair of the Sustainability Leadership Council. Dr. Rebecca Kelly was the Director of the Environmental Science and Studies Program at JHU and developed and delivered a range of diverse and engaging undergraduate courses on sustainability and environmental issues. Their efforts, along with those of the other 24 award winners. demonstrate the multitude of ways individuals can influence sustainability across the university.



## SUSTAINABILITY LEADERSHIP COUNCIL



Student conducting biology field research in Professor Pearlman's Course

## **METRICS**

**129** members serve on the SLC

12 Working Groups across five committees contribute to the SLC

**40** Student members serve on the SLC

Three years ago, the JHU Sustainability
Leadership Council (SLC) was formed to
empower students, faculty, staff, and alumni
to develop and shape campus sustainability
initiatives. The council has grown to over 125
members from across the institution serve
on the council. The Council unites diverse
constituents from all schools and disciplines
to advocate for sustainable and equitable

decision-making, priorities, and initiatives. In its first years of activity, the Council has made major progress, including launching research centers, academic programs, influencing campus policies, and guidelines for new infrastructure. In April 2022, the SLC hosted the 3rd Annual SLC Symposium featuring the keynote lecture: "Environmental Justice: Promoting Systems of Life-Enhancement" by Daniel Wildcat.

Co-Chairs Bob McLean & Peter Winch			
RESEARCH & ACADEMICS COMMITTEE	OPERATIONS COMMITTEE	ENGAGEMENT COMMITTEE	ENVIRONMENTAL JUSTICE COMMITTEE
<b>Working Groups:</b>	<b>Working Groups:</b>	<b>Working Groups:</b>	<b>Working Groups:</b>
Campus as Living Lab	Green Fleet	Student	New Initiatives
Sustainability Research Network New Initiatives	Green Labs	Sustainability Coalition	Community Engagement
	Food & Dining		Communications
	Zero Waste Planning		Operations & Planning

## 3rd Annual SLC Symposium "Environmental Justice: Promoting Systems Of Life-Enhancement

In April 2022, the SLC partnered with the Center for American Indian Health to host the 3rd Annual SLC Symposium lecture: "Environmental Justice: Promoting Systems of Life-Enhancement." This keynote address focused on the intersection of environmental justice and present-day environmental action led by Daniel Wildcat, PhD, a professor at Haskell Indian Nations University and Director of the Haskell Environmental

Research Studies Center. Dr. Wildcat is a Yuchi member of the Muscogee Nation of Oklahoma and founder of the American Indian and Alaska Native Climate Change Working Group, a tribal-college-centered network of individuals and organizations working on climate change issues. This event was hosted as part of the on-going virtual lecture series, "Hopkins at Home."



## **RESEARCH & ACADEMICS COMMITTEE**

#### The Academic and Research Committees merged and helped support numerous initiatives:

- Successfully developed a proposal for an interdisciplinary energy minor, launched in Fall 2022
- Contributed to the creation and recruitment processes of both the Climate and Health and Sustainable Transformations and the Energy Bloomberg Distinguished Professor cluster searches
- Created a proposal to establish a new Campus as Living Laboratory initiative to foster research and teaching projects using JHU's campuses as testbeds for innovation
- · Led the creation and organization of a new "Sustainability Research Directory" on the JHU sustainability website
- Formed an Academic & Research Advisory Group to inform the Sustainability Plan development process

## Research & Academics Collaboration Highlight: Campus as Living Laboratory Program to Support Campus-Based Innovations

A proposal for a Campus as Living Laboratory (CAL) program aimed at empowering the use of JHU's campuses as testbeds for innovation was developed and is set to launch in tandem with the new Sustainability Plan. The program will support faculty and student research projects that use JHU's physical campuses to advance sustainability progress, while providing students with applied experiences that can inform local, national, and global solutions. "As JHU finalizes its own sustainability framework for the next decade, the program offers a synergistic opportunity to align research interests with the university's sustainability aspirations," says Julian Goresko, JHU Director of Sustainability. Since receiving university support, the Campus as Lab Working Group has been preparing to ensure successful implementation of a pilot program in the 2023 - 2024 academic year. Through extensive stakeholder interviews, assessment of peer programs, and reception of university

support, the new program has been tailored to "leverage JHU's research prowess, build off the academic and research mission of the university, and foster connections between faculty, students and staff," says Goresko. The program was developed thanks to a collaborative effort among the SLC, faculty, students, operational staff, and stakeholders across the university.



Professor Susanna Thon conducting research

## **OPERATIONS COMMITTEE**

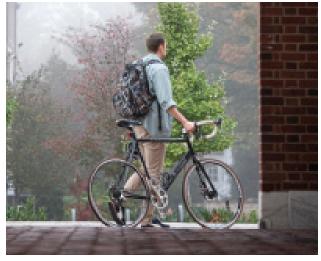
#### The Operations Committee's working groups advanced several key measures:

- Expanded a Green Labs pilot program, certifying 17 new labs, and hired a Green Labs Specialist
- Supported analysis of a new shuttle bus contract for the Homewood-Peabody-JHMI route that resulted in a commitment to electrify of the university's largest bus fleet by 2026
- Introduced an electric and hybrid vehicle grant program with up to \$5,000 for university departments as an incentive over gasoline- and diesel-powered vehicles
- Initiated the development of High-Performance and Healthy Building Requirements as part of the Sustainability Plan with members lending technical expertise in areas of decarbonization, climate resiliency, and more
- Established new Zero Waste Planning and Sustainable Food and Dining Working Groups to further emerging strategic priorities

## Operations Collaboration Highlight: Tracking & Supporting Sustainable Transportation

In October 2022, a collaborative effort facilitated by the Green Fleet Working Group led to the release of the first university-wide transportation survey. Intended to assess baseline commuting trends, this effort was first initiated by Raychel Santo, a staff member at the Center for a Livable Future and long-time member of the Green Fleet Working Group. Raychel, who lives in Baltimore and is passionate about promoting the use of public transit, hoped the survey could help gauge barriers and motivations for using public transit. Greg Smith, chair of the Green Fleet Working Group and Director of Transportation Services, Agathe Pierot, Sustainability Project Manager, and many other members of the Green Fleet Working Group, partnered to design and refine the survey. With over 4,000 responses collected since the survey's release, "we are already finding different ways to use the data than we had initially envisioned," says Greg Smith. The

broad range of perspectives helped ensure that survey results would provide high quality data and benefit numerous groups within the JHU community, and ultimately produced a high-quality tool that the university will be able to use year after year.



Cyclist at the Homewood Campus

## **ENGAGEMENT COMMITTEE**

#### The Engagement Committee advanced several key initiatives:

- Developed a Leadership Proposal for Distributed Accountability and Engagement across schools and divisions
- Provided strategic input for the Sustainability Plan stakeholder engagement process
- Collaborated with the Alumni Council on outreach to JHU alums seeking feedback on Sustainability Plan priorities
- Planned student mentoring opportunities in partnership with Life Design Lab to connect students with alumni in sustainability-related careers
- Contributed to the development of the new sustainability website with emphasis on sustainability-related teaching and research, in addition to operational and engagement initiatives
- Initiated the development of a new Student Sustainability Network to increase collaboration and communication between sustainability-focused student organizations

## Engagement Collaboration Highlight: New Directory Spotlights Sustainability Research Across JHU

A new Sustainability Research Directory was published with the launch of the sustainability website in August 2022 to create a repository of sustainability researchers at JHU. The directory was proposed and developed by the Interdisciplinary Collaboration Working Group of the SLC- a group composed of faculty and students from across multiple JHU schools and disciplines. This working group of the Research and Academic Committee collaborated closely with the Engagement Committee to develop this resource. Formed in 2020, the working group intended to "investigate different ways to highlight researchers and broaden awareness of the range of people contributing to sustainability research at Hopkins," according to working group chair Dr. Darryn Waugh, Professor in the Department of Earth and Planetary Sciences.

"Having a mechanism to make connections between researchers across different sustainability disciplines was the goal," says Waugh.

The directory is organized by eight multi-disciplinary research categories, including Affordable & Sustainable Energy, Climate Solutions, Sustainable Food Systems, and more. Each category also includes a highlighted faculty member to serve as a "Research Ambassador," acting as the point of contact for individuals interested in learning more about specific areas of research. By promoting the work of researchers across disciplines, the SLC hopes to inspire collaboration and encourage sustainability-related research both within and beyond the JHU community.



## **ENVIRONMENTAL JUSTICE COMMITTEE**

#### The Environmental Justice Working Group became a committee, and their contributions included:

- Developed an Environmental Justice Program Center Proposal to develop an administrative, programmatic, and strategic hub for Environmental Justice at JHU
- · Supported the establishment of a Community Advisory Group to advise on regional priorities for the Sustainability Plan
- · Facilitated the establishment of a Post Landfill Action Network chapter at JHU
- Provided recommendations for integrating environmental justice considerations into the Second Roadmap on Diversity, Equity, and Inclusion goals
- Provided guidance and input for recommendations for Baltimore Initiatives in the JHU Sustainability Plan

### **EJ Committee Collaboration Highlight: New Environmental Justice Committee Formed**

In Fall 2022 the Environmental Justice Working Group became a committee, growing to over 30 members organized into four working groups including Operations & Planning, New Initiatives, Communications, and Community Engagement.



A meeting about Environmental Justice in Baltimore organized by a new JHU Center

This expansion allows for greater collaboration among faculty, staff, and students dedicated to supporting environmental justice principles throughout the SLC and university at large. The Committee has been organizing initiatives to track and compile environmental justice issues and efforts, to raise awareness around environmental justice broadly, and to promote equity and justice considerations for decisionmaking and new initiatives. The committee is led by two faculty co-chairs focused on environmental justice research and practice: Christopher Heany, Associate Professor in the Department of History and researcher with the CHARMED Center and Nicole Labruto. Assistant Research Professor in the Department of Anthropology, and a leader with the Ecological Design Collective.

For more information, visit: sustainability.jhu.edu



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