

Meeting Summary November 3, 2023

Council Members Present: (via Zoom):

Carlo Colella – Vice President for Administration (Chair) Scott Lupin – Assoc Dir., Environmental Safety, Sustainability & Risk; Director, Office of Sustainability Ann Tonggarwee — Deputy Chief of Staff, Office of the President Bryan Quinn — Director of Technical Operation, Department of Electrical & Computer Engineering Jennifer Hadden — Associate Professor, Government & Politics Giovanni Baiocchi— Associate Professor, Geographical Sciences Yueming Lucy Qiu — Professor, Public Policy; Associate Dean, Research and Faculty Affairs (SPP) Maureen Kotlas – Executive Director, Environmental Safety, Sustainability & Risk Tom McMullen – Special Assistant to the Provost for Facilities Colleen Wright-Riva – Assistant Vice President, Division of Student Affairs Susan Corry – Director, Engineering & Energy Margaret Mothershed – Undergraduate Student Representative Paromita Basak – Graduate Student Representative

Guests Present:

Javiera King – Administrative Coordinator, Office of the Vice President & Chief Administrative Officer David Allen – Executive Director, Department of Transportation Services Emily Hightower — Project Manager – Sustainability Measurement and Outreach, Office of Sustainability

Meeting Highlights

Welcome

SustainableUMD Annual Progress Report - E. Hightower

The Office of Sustainability presented on annual progress in calendar year 2022 (Appendix A). Notable updates include:

- The University continues to identify sustainability as a key theme, with inclusion in the Campus Facilities Plan and with the Grand Challenges Research Grants
- Maintained a 55% reduction in net greenhouse gas emissions compared to a 2005 baseline
- 13% of campus built to LEED Silver or equivalent, 58% institutional diversion rate for waste, 174 stormwater BMPs, and 14% reduction in per plate food emissions (through the Cool Food Pledge)
- Over 20,500 students reached over the history of the Green Terp and Green Chapter programs
- Approximately \$40 million to support ShuttleUM fleet bus electrification

The presentation also included a brief summary of the Green Office program. After twelve years, the Office of Sustainability is updating the program to the new Green Workspace pilot. The progress presentation included a two-slide summary of the program and staff survey data on behaviors.

Post-presentation discussion included questions about increased water use and new construction versus retrofitting older buildings.

Sustainability Fund Proposals Presentation – M. Mothershed

Margaret Mothershed presented to the Council on the Sustainability Fund Budget and proposals (Appendix B). The Sustainability Fund Review Committee estimates having a revenue of \$650,000 and recommends funding for two proposals:

- Native Biodiversity An Undergraduate Outdoor Classroom: (\$68,510)
 - This project requests funding to create an outdoor classroom at the UMD Golf Course. The specific area where the classroom will be located was damaged by a storm a few years ago. They want to add greater diversity of vegetation and habitat by planting native plants and pollinator friendly plants.
 - The Council had some questions regarding accessibility to the classroom and possible disruption to people golfing.
 - The Council unanimously approved this project proposal.
- DSA Sustainability Collaborative: (\$74,760)
 - This project was submitted by Colleen Wright-Riva. The Department of Student Affairs is requesting the fund cover cost of nine intern salaries for one year. These interns would work in different units with DSA such as Dining Services and Residential Life. The request also included covering expenses related to give aways and attendance to a local conference.
 - The Council had some questions regarding the amount allocated for giveaways and C. Wright Riva addressed the council's concerns.
 - The Council **unanimously approved** this project proposal. Colleen Wright-Riva abstained.

Open Forum

Scott Lupin shared that the Green Office Program has been retired and the Office of Sustainability is now piloting the Green Workspace Program. He asked Taylor Brinks to share some information about the new program with the Council. Taylor Brinks explained that there had been a general decline in the number of offices certifying as a Green Office and that staff wanted more opportunities to be recognized for the work that they were doing in sustainability. The name changed to be more inclusive of spaces that aren't typical offices. She also shared that the Office of Sustainability recently launched a Sustainability Badge for staff that recognizes their individual actions to lead a more sustainable lifestyle.

Adjourn 2:00PM

Appendices:

Appendix A: SustainableUMD Annual Progress Report (2022-2023)

Appendix B: Sustainability Fund Proposals

sustainability fund

GRANT RECOMMENDATIONS November 2023



Sustainability Fund Budget for FY24



FY24 General Info		Expenses		
Fund Balance as of July 1st*	\$284,410	Sustainability Mini-Grants**	\$20,000	
FY24 Estimated Revenue	~\$650,000	Carbon Offsets for Carbon Neutral Undergrad Commuting**	\$100,000	
Proposals Received	13	Grants Issued to-date	x	
FY24 Total requested so far	\$1,446,801.50	Today's Grant Recommendations	\$143,271	
FY24 Requests still pending	\$1,446,801.50	Remaining Balance if recommendations are approved*	~\$671,139	







- 1. Native Biodiversity An Undergraduate Outdoor Classroom
- 2. DSA Sustainability Collaborative





Requested: \$68,510

SFRC recommendation: \$68,510

Summary: The Golf Course is seeking funding to convert part of the course into an outdoor classroom featuring native and pollinator friendly plants. This area was severely damaged in a storm in 2022 so they are looking to repurpose the space while providing educational opportunities.



Submitted by: Jeff Maynor, Director of Golf

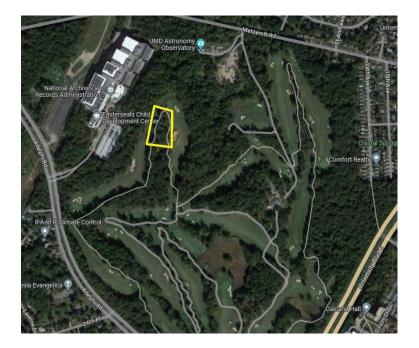




- The Golf Course outlined these impacts:
 - \circ $\,$ A greater diversity of native vegetation and habitat $\,$
 - Greater carbon capture and better transpiration
 - Mitigation of stormwater runoff
 - More learning opportunities for undergraduate students
 - At least five courses would include this site in the material/visits
 - Including opportunities for service projects or hands-on support in designing and preparing the site.
- Golf Course staff will maintain the site after the initial costs for plants and installation.
- They also submitted letters of support from:
 - William Hubbard, Assistant Director, Environment, Natural Resources & Sea Grant Programs
 - Elliott Kenney, Graduate Student of Landscape Architecture
 - Kenneth Ingram, Lindsay Barranco, Institute of Applied Agriculture
 - Meg Smolinski, UMD Arboretum & Botanical Gardens
 - Dr. Shannon Browne, Biology Professor
 - SGA Sustainability Committee
 - ENSPire (Environmental Science and Policy student advisory board)













Туре	Notes	Cost	
Plants	Grasses, pollinator plants, trees, shrubs	\$28,045	
Tools and Labor	Traditional and Battery Powered, installation of signage and bird and bee houses	\$26,400	
Other necessary materials	Mulch, Wood chips, Bee and Bird Houses, Educational Signage	\$14,065	
Total		\$68,510	





Requested: \$74,761

SFRC recommendation: \$74,761

Summary: The Division of Student Affairs wants to create a Student Sustainability Collaborative. There would be undergraduate internship opportunities in divisions such as Residential Facilities, Good Tidings Catering, Dining Services, Resident Life and Conferences and Visitor Services.

Submitted by: Colleen Wright-Riva, Assistant VP for Student Affairs











- Students would work with DSA to further on campus sustainability while receiving sustainability experience.
- Department of Resident Life is hiring a full-time Sustainability Coordinator and providing two Associate Directors who will oversee the program.
- Proposed internship positions:
 - Multicultural Advocate Intern for Environmental and Social Justice
 - DRF Energy and Utilities Intern
 - DRF Operations Intern
 - Good Tidings Catering and Conferences & Visitor Services Intern
 - Dining Services Communications Intern
 - Dining Services Green Dining Intern
 - 2 Terp to Terp Student Managers
 - Collaborate Student Manager Position
- Letters of Support include:
 - Student staff in DSA
 - Joann Prosser, Interim Director of Assessment, DSA
 - Our own Dr. Perillo



DSA Sustainability Collaborative



Туре	Notes	Cost	
9 Intern Salaries	10-15 hours per week at \$15-\$16 per hour depending on the position	\$29,280 per semester	
Fringe Benefits		\$2,225 per semester	
Prizes and Incentives/Conference Attendance fees	Fees for Sustainability and DEIJ Conference Attendance (\$750 per intern)	\$11,750	
Total		\$74,760	

SustainableUMD Progress Summary

Emily Hightower, Office of Sustainability *November 3, 2023*

OVERVIEW:

Review of Sustainability Goals

- UN Sustainable Development Goals
- Sustainability in Fearlessly Forward
- Campus Sustainability Goals

Sustainability at UMD

- General Update
- Progress by Campus Goals

Highlights from 2022

- Grand Challenges Grants
- Climate Change Research Highlight April 2022
- 50th Year of Shuttle-UM & Bus Electrification
- Campus Creek Restoration
- Green Workspaces
- Bee Campus USA Certification

Office of Sustainability Updates

- Green Workspaces
- Climate Action Plan 3.0



UN SUSTAINABLE DEVELOPMENT GOALS





Example SDG Targets:

- Target 1.2: Reduce the number of men, women, and children living in poverty in all its dimensions by half by 2030
- Target 1.5: By 2030, reduce people living in poverty to exposure and vulnerability of climate-related extreme events and other economic, social and environmental shocks and disasters

Connection to UMD Programs:

- Terp to Terp Campus ReUse Store
- Student Crisis Fund
- Campus Pantry
- Financial Wellness Seminars and Courses
- Climate Resilience Research



SDG 9: Industry, Innovation and Infrastructure

Example SDG Targets:

- Target 9.1: Develop quality, reliable, sustainable & resilient infrastructure to support economic development & human well-being, with a focus on affordable & equitable access for all

Connection to UMD Programs:

- Maryland Energy Innovation Institute
- Greater College Park & CP-CUP
- School of Architecture, Planning & Preservation
- Small Business Development Center
- Do Good Institute

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



SDG 12: Responsible Consumption and Production

Example SDG Targets:

- Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources
- Target 12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling & reuse

Connection to UMD Programs:

- Terp Farm, Farmers Market, & Dining at UMD
- College of Agriculture and Natural Resources
- Recycling & Solid Waste Unit
- Regulated Hazardous Waste Program
- Engineering Sustainability Store

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

SUSTAINABILITY COUNCIL GOAL FRAMEWORK



100% carbon neutral by 2025 compared to 2005, site energy conservation measures, expansion of renewable sources

Carbon Neutrality



Education for Sustainability

Formal and informal opportunities for students to gain knowledge/ skills and to collaborate with staff/faculty on solutions

Local and Global Impact

Partner to further sustainability in Maryland and beyond, encourage sustainable procurement at UMD, support green dining programs

Smart Growth



Alternative transportation, environmental stewardship in landscape, high performance building and utility design



Sustainable Water Use

Reduce purchases of potable water, expand harvesting and reuse, responsibly manage stormwater to protect the Chesapeake Bay



Waste Minimization

Divert 75% from the landfill, reduce solid waste generated per person 1% annually, increase cleaning and waste sorting

STATE & UNIVERSITY POLICIES — SUSTAINABILITY



Carbon Neutrality

Climate Action Plan (2009, 2015, *2023*) Buildings and Energy Work Group Report (2013) President's Energy Initiatives (2014) Carbon Offset Workgroup Report (2015) MD Department of Government Services Energy Executive Reporting (2018, 2021) NextGen Energy Program

Climate Solutions Now Act (2022)



Smart Growth

Facilities Master Plan (2011, 2017, *2023*) Design Criteria Facility Standards (DCFS) High Performance Buildings Act (2010) Sustainable Transportation Policies



Local and Global Impact

Environmentally Preferable Procurement Policy Cool Food Pledge Hunger-Free UMD



Waste Minimization

Maryland Recycling Act Maryland Composting Law (2023)



Education for Sustainability

University Strategic Plan (2022)



Sustainable Water Use

Sustainable Water Use and Watershed Report (2014, 2022)



FEARLESSLY FORWARD

Released in February 2022, the new University Strategic Plan, *Fearlessly Forward*, includes sustainability as a key theme. Divided into four principles, the strategic plan is easily connected to campus sustainability goals and international sustainable development frameworks.

- 1. We reimagine learning.
- 2. We take on humanities grand challenges.
- 3. We partner to advance the public good.
- 4. We invest in people and communities.





CAMPUS FACILITIES PLAN

On September 7th, President Pines presented the Campus Facilities Plan to the USM Board of Regents finance committee.

The Campus Facilities Plan "offers a guiding document for potential construction projects and mobility, infrastructure and sustainability efforts. It addresses longstanding challenges facing UMD, including a shortage of undeveloped land and a diverse campus topography, and aligns development priorities—sustainability, innovative buildings and facilities, pedestrian-friendly mobility and wellness—with future growth." (Haslam, <u>Maryland Today</u>)



CLIMATE ACTION PLAN 3.0

- ► The Office of Sustainability is updating the Climate Action Plan (CAP 3.0).
 - CAP 2.0 was published in 2015. A minor update -- CAP 2.1 -was published in 2021.
- ▶ Strategies provided by key stakeholder units review.
 - Stakeholders include Facilities Management, Department of Transportation Services, academic units, and others.
- ▶ CAP 3.0 includes existing and new programs.
 - Strategies reflect changing markets, technology, funding, and goals.

Sustainability at UMD

HALL

SUSTAINABILITY PROGRESS UPDATE

The SustainableUMD Progress Hub dashboards are up-to-date with 2022 data.

Carbon Neutrality



100% renewable purchased electricity
37% of electricity generated at CHP
31,935 MTCO2e of carbon offsets (18%)



Education for Sustainability

200 certified Green Offices (2011-2022)
254 sustainability minor enrollments
1,717 students certified Green Terp

Local and Global Impact



14% emissions reduction per plate (2017)
57% cities certified Sustainable MD
19,046 lbs produce from Terp Farm

Smart Growth



9.13 kCO2e/gsf emissions intensity 13% of campus built as LEED Silver 15 years as Tree Campus Higher Ed



Sustainable Water Use

16% increase in water consumption (2006)

874 acres of permeable surfaces

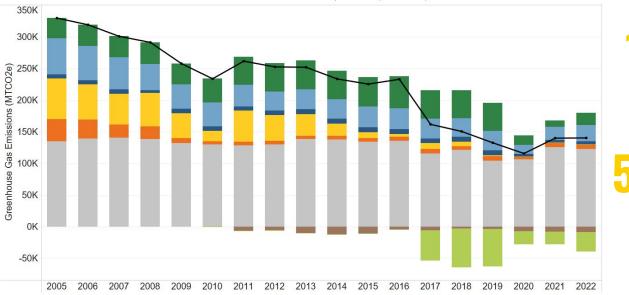
174 stormwater management facilities



Waste Minimization

58% institutional diversion rate43% individual recycling rate1,430 tons of compost generated





University of Maryland Greenhouse Gas Emissions

Metric Tons of Carbon Dioxide Equivalent (MTCO2e)

Net Greenhouse Gas Emissions

Air Travel: Directly Financed and Study Abroad

Faculty, Staff and Student Commuting

UMD Fleet Vehicles

Purchased Electricity

Agriculture (Animals and Fertilizer), Solid Waste, and Refrigerants/Chemicals

Combined Heat and Power Plant (CHP) and Other Stationary Sources

Verified Carbon Offsets

Non-Additional Sequestration

147,115 MTCO2e

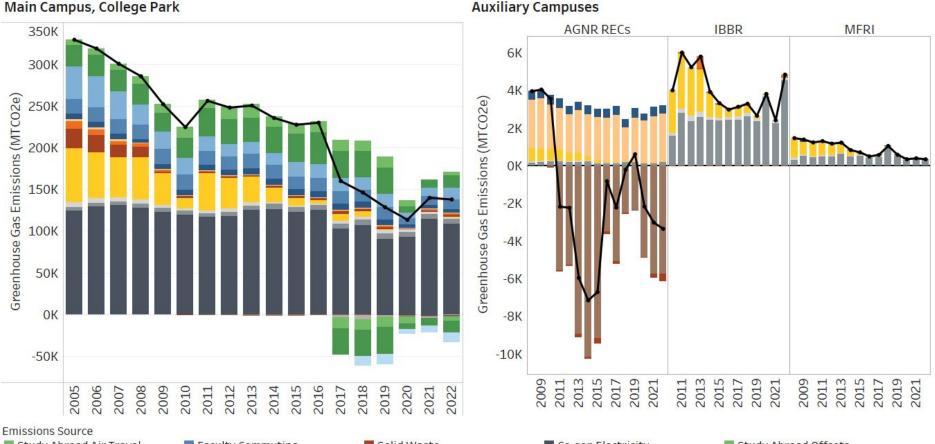
net greenhouse gas emissions

55.4% reduction

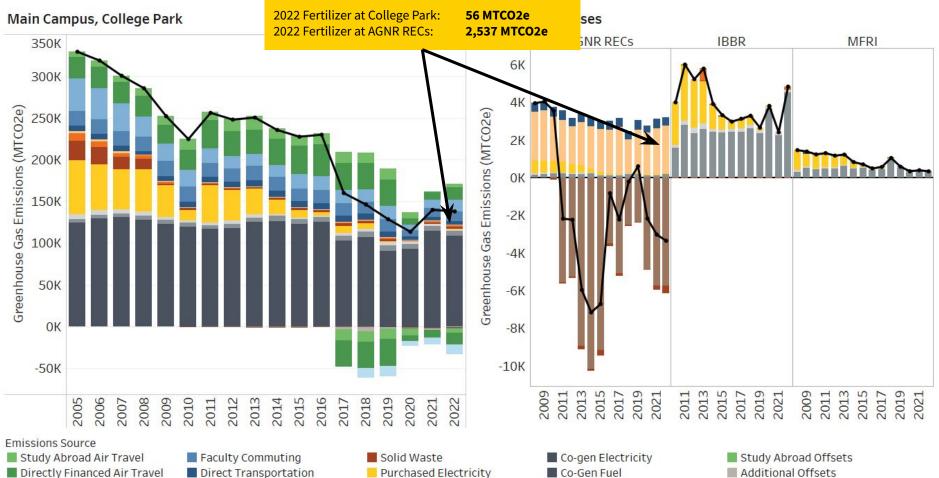
compared to 2005 baseline (Net)



compared to 2021 data (Net)



- Study Abroad Air Travel Directly Financed Air Travel Student Commuting Staff Commuting
- Faculty Commuting Direct Transportation Fertilizer & Animals Refrigerants & Chemicals
- Solid Waste Purchased Electricity T&D Losses Other Stationary Fuel
- Co-gen Electricity Study Abroad Offsets Co-Gen Fuel Undergrad Commuting Offsets 📕 Non-Additional Sequestration Air Travel Offsets Compost Offset
 - Additional Offsets



Student Commuting

Staff Commuting

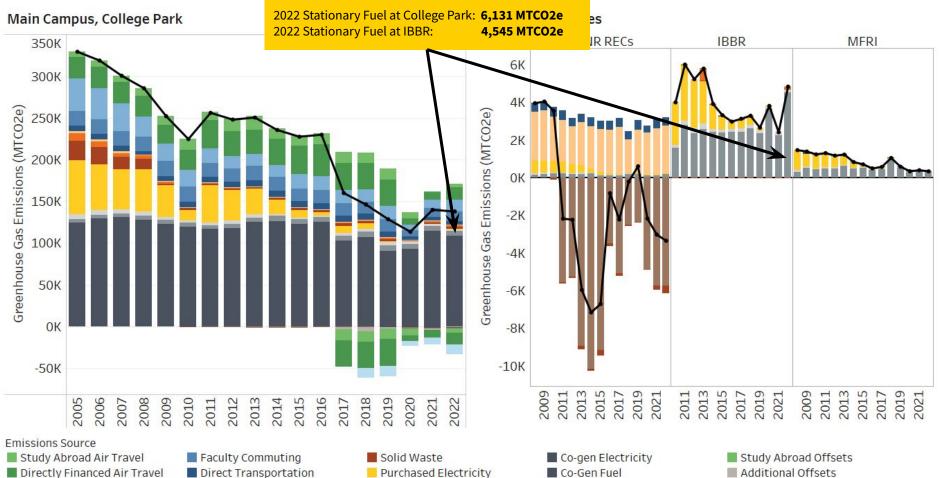
Faculty Commuting
 Direct Transportation
 Fertilizer & Animals
 Refrigerants & Chemicals

Solid Waste
 Purchased Electricity
 T&D Losses
 Other Stationary Fuel

Undergrad Commuting Offsets Non-Additional Sequestration

Compost Offset

Air Travel Offsets





Direct Transportation Fertilizer & Animals Refrigerants & Chemicals Purchased Electricity T&D Losses Other Stationary Fuel

Undergrad Commuting Offsets 📕 Non-Additional Sequestration Air Travel Offsets Compost Offset

DEVELOPING CAMPUS & GREATER COLLEGE PARK

CARBON NEUTRAL NEW DEVELOPMENT BUILDINGS

GREEN BUILDINGS ON CAMPUS BETWEEN 2010-2022

2.16 million

SQFT GREEN BUILDINGS ADDED BETWEEN 2010-2022, 12.5% INCREASE IN TOTAL CAMPUS BUILDING SPACE



DEVELOPING CAMPUS & GREATER COLLEGE PARK

14.7K BEDS ON- OR NEAR TO CAMPUS (13% INCREASE COMPARED TO 2011)

438K RIDES ON SHARED MOBILITY SERVICES



17 PARTNERSHIPS FOR THE GOALS **11** SUSTAINABLE CITIES AND COMMUNITIES



STORMWATER BEST MANAGEMENT PRACTICES

174 STORMWATER BMPS ON CAMPUS



UMD STAFF RECEIVED STORMWATER TRAINING



FOR PHASE 2 OF CAMPUS CREEK RESTORATION AWARDED IN 2022





ON-CAMPUS OUTREACH FOR STUDENTS



ON-CAMPUS EVENTS, INCLUDING EARTH FEST & MARYLAND DAY



INDIVIDUALS AT THE SUSTAINABLEUMD OUTREACH BIKE

20,566 **STUDENTS REGISTERED AS GREEN TERPS BETWEEN 2012-2023**

1,717 REGISTERED IN 2022-2023



LEADERSHIP IN GREEN PURCHASING

87% REDUCTION IN TOTAL PURCHASING IN 2022 **REDUCTION IN TOTAL PAPER COMPARED TO 2011**



REDUCTION IN PER PLATE 14% REDUCTION IN PER EMISSIONS IN 2022 COMPARED TO 2017 **COMPARED TO 2017**



SPENT ON GREEN CLEANING PRODUCTS, **AROUND 72% OF TOTAL CLEANING PURCHASES**



EXCELLENCE IN WASTE MINIMIZATION & MANAGEMENT

SHORT TONS OF COMPOST DIVERTED FROM LANDFILLS

18.5K

1,400

POUNDS DIVERTED FROM THE LANDFILL THROUGH TERP TO TERP REUSE STORE

58.4%

INSTITUTIONAL RECYCLING RATE 40% LESS WASTE GENERATED OVERALL COMPARED TO 2005



Highlights from 2022

TACKLING THE

EPA

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EPA

€EP"

EXCELLENCE IN OPERATIONS

Throughout the year, UMD celebrated its sustainability legacy, joined new national organizations, and received funding to support the next generation of sustainability programs on campus.

50-Years of Shuttle-UM & Bus Electrification Grant:

► The Shuttle-UM program and Department of Transportation Services celebrated two major milestones in 2022. In the same year of its golden anniversary, the Shuttle-UM program received around \$40 million in federal funding to support the next generation of all-electric buses.

Bee Campus USA:

Through the efforts of students, staff, and faculty on campus, UMD became an affiliate of the Bee Campus USA program. With a photo from the Golf Course BioBlitz, UMD won first place in a pollinator photography competition (Adrienne van den Beemt).

Zero Emissions Vehicles Infrastructure Study:

► The university has made significant progress on the ZEV Infrastructure Study, including issuing an RFP, onboarding a consultant, and making progress towards a completed plan. Included in the updated Climate Action Plan, the strategy will inform future ZEV-transition strategies.



SHELL CAMPAIGN FOR CLIMATE CHANGE

In April 2023, the University of Maryland launched the first *Fearlessly Forward* Shell Campaign to build greater awareness of the critical work UMD is doing to address the grand challenge of climate change.

Highlighting SustainableUMD & EarthFest:

In partnership with the Division of Research, SustainableUMD was highlighted in the Research RoundUp. The newsletter included a special highlight of sustainability research and the UMD research website highlighted climate change and sustainability events like EarthFest.

Earned, Owned, and Paid Advertising Channels:

▶ The university's communications team launched a campaign to highlight UMD's climate change related research through earned, owned and paid advertising channels.

EnTERPrise Research:

► The Shell Campaign also released two EnTERPrise Research video features on two of the three Grand Challenges Grant Institutional Award winners: Global FEWtures Alliance and Addressing Climate Challenges for a Sustainable Earth.

IMAGINE A CLIMATE OF HOPE >

WE GAN.

#FEARLESSLYUMD



UMD IS INVESTING IN RESEARCH TO SOLVE THE CLIMATE CRISIS: ANOTHER WAY THE UNIVERSITY OF MARYLAND IS LEADING FEARLESSLY FORWARD.

UMD is a global leader in the study of climate change, with more than 200 researchers and experts working across disciplines in partnership with NASA, NOAA and other federal agencies to identify solutions for a global crisis. We're committed to saving the planet-and the turtles.

GRAND CHALLENGES GRANTS

A Fearlessly Forward initiative, the Grand Challenges Grants Program supportS projects that address emerging social issues, including climate change, social injustice, global health, and educational disparities.

Institutional Awards: \$9,000,000

Three institutional grants were awarded \$1M each in funding for 3 years to projects addressing SDG goals like zero hunger (SDG 2), quality education (SDG 4), and climate change (SDG 13). More than 45 UMD faculty are involved in the research projects.

Impact Awards: \$3,000,000

Six impact grants were awarded \$250,000 each in funding for 2 years to projects addressing SDG goals like reduced inequality (SDG 10), peace, justice and strong institutions (SDG 16), and partnerships for the goals (SDG 17). More than 64 UMD researchers are involved in the research projects.

Team Projects (\$24,000,000) & Individual Projects (\$3,750,000)

Sixteen teams were awarded \$500,000 each in funding for 3 years to projects addressing SDG goals like good health and well-being (SDG 3), industry and infrastructure (SDG 9), and sustainable cities (SDG 11). More than 76 UMD researchers are on the various teams. Twenty-five researchers were awarded funding of \$50,000 each for 3 years to individual projects addressing a variety of sustainability goals.



DEVELOPMENTS IN OUTREACH

Throughout the year, the Office of Sustainability and other units on campus have successfully established new partnerships, launched innovative programs, and increased engagement with campus sustainability initiatives.

Maryland Day & the Do Good Challenge

For the 25th Maryland Day celebration, the Office of Sustainability and other campus units partnered with the Do Good Challenge scavenger hunt. Through the collaboration, hundreds of campus visitors stopped by the Office of Sustainability booth to take the SDG Climate Action Superhero quiz.

Promoting the Campus Arboretum & the Cherry Blossom Story Map

▶ In the spring, the Arboretum and Botanical Gardens partnered with Campus GIS to create a guide of campus cherry blossom trees. With support from Maryland Today, the official UMD Twitter, and President Pines, more than 4,000 people explored the interactive story map over a three week period. The Office of Sustainability is also partnering with the Arboretum and Botanical Gardens to improve outdoor Sustainability Fund signage.

Green Workspace

The Office of Sustainability is piloting the Green Workspace program as an update to the Green Office program. The Office met with more than ten other universities, spoke with staff on campus, and connected with active Green Office participants during the benchmarking and program planning phases.



Green Office: Program Impact Review



Over the history of the 12-year program, more than 200 unique offices certified at the Bronze, Silver, Gold, and Platinum levels.



GREEN OFFICE AUDITS DURING THE CERTIFICATION PROCESS



273

BRONZE

PRE-AUDITS

OFFICES RECERTIFIED MORE THAN 5 TIMES

GOLD

PLATINUM

185

SILVER



Green Office: Program Impact Review



More than 30% of the office was required to complete the staff survey as part of the certification process. The survey aimed to indicate sustainable behaviors practiced by UMD staff. This survey helped demonstrate the effectiveness of programming over time and identify areas to continue engaging staff and faculty in green behaviors. The table to follow highlights some behaviors that were already adopted by participating offices and others with significant improvement over the 12-year program.

Green Office Behavior (staff that indicate "YES" to the following statements):		2017	2022
I turn off lights when leaving for more than 10 minutes (my office, common rooms, bathrooms).		96.7%	96.7%
I compost food scraps and paper towels.	32.8%	68.5%	91.8%
I am familiar with the UMD Climate Action Plan.	8.6%	26.1%	85.3%
When I need to purchase supplies or other items for office use, I check for and select sustainable items.	0.0%	42.4%	68.9%
I have changed my commuting habits (biking, walking, carpooling, or using public transportation).	0.0%	70.7%	68.9%

Contact: Office of Sustainability <u>sustainability@umd.edu</u> | @SustainableUMD

Questions?

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