University of Maryland sustainability council

Meeting Summary
October 8, 2020

Council Members Present (online):

Carlo Colella, Vice President, Administration and Finance (Chair)
Patty Perillo, Vice President, Student Affairs
David Cronrath, Associate Provost
Maureen Kotlas, Executive Director, Department of Environmental Safety, Sustainability & Risk
Scott Lupin, Assoc Dir., Environmental Safety, Sustainability & Risk, & Dir., Office of Sustainability
Susan Corry, Manager, Engineering & Energy, Facilities Management
Bryan Quinn, Director of Technical Operation, Department of Electrical & Computer Engineering
David Cooper, Assistant Director of Operations, Division of IT
Eric Wachsman, Prof., Materials Science and Engineering and Director, MD Energy Innovation Institute
Giovanni Baiocchi, Associate Professor, Geographical Sciences
Jennifer Hadden, Associate Professor, Government & Politics
Jana VanderGoot, Assistant Professor, Architecture
Nina Jeffries, Undergraduate Student Representative
Nicole Barbour, Graduate Student Representative

Guests Present:

Kristy Long, Executive Director, Operations & Maintenance, FM
Mary Hummel, Assistant Vice President, Student Affairs

Meeting start time: 11:00am

Meeting Highlights

Welcome New Members

Carlo Colella welcomed new Council members including Nina Jeffries – Undergraduate Student Representative, Nicole Barbour – Graduate Student Representative, Giovanni Baiocchi – Faculty Representative, and Jennifer Hadden – Faculty Representative.

Sustainability Progress Report – CY2019

Sally DeLeon and Emily Hightower from the Office of Sustainability (OS) presented data showing UMD's progress on various sustainability metrics with the latest data from 2019. OS is in the process of launching a SustainableUMD Progress Hub, a web-based portal where people can explore data related to UMD's sustainability goals, read inspiring stories of collaboration toward these goals, and find opportunities to participate at UMD. The Council got a seek peek at some sections of the Progress Hub and a briefing on key findings from the data review including:

- UMD maintains a STARS Gold Rating. Nine other US-based universities have achieved Platinum.
- Core metrics:
    - 56% reduction in net greenhouse gas emissions from 2005 to 2019
    - 80% of solid waste was diverted from landfills in 2019
    - 74% of electricity was produced from renewable resources in 2019
    - 90% of academic departments offer at least one course that includes sustainability
    - 29% of food purchased by Dining Services is sustainably sourced
- Additional information in the appendix

Sustainability Fund Annual Report

Mark Stewart from OS presented the annual report on Sustainability Fund activities. Student Sustainability Fee revenue typically equals around $330,000 per year; however, in spring 2020, $83,433 of the FY20 Student Sustainability Fee revenue was refunded to students in response to the campus closure due to COVID-19. Final revenue in FY20 was $254,192. In FY20, nine projects received grants from the Fund. See the report in the appendix.

CY2019 Carbon Credit Purchase – Update

Sally DeLeon from OS provided an update on carbon credit purchasing activities. To offset air travel emissions, UMD will retire 46,651 credits that were purchased in 2019 and purchase an additional 20,000 credits from the Maharashtra Wind Energy Project in India and from local landfills with methane destruction devices. To offset undergraduate commuting emissions, UMD will purchase 14,342 credits from Maharashtra Wind, local landfills, and the Dempsey Ridge Wind Farm. By purchasing credits from local landfill projects, UMD is also helping to fund the Chesapeake Bay Foundation's tree planting programs. See additional details in the appendix.

Open Forum

Carlo Colella suggested that the Council should receive an update later this year on the NextGen Program, which aims to renew UMD's district energy system.

Nicole Barbour suggested the OS host an online event to launch the SustainableUMD Progress Hub and give people an orientation to the data and resources. General agreement from other Council members.

Nina Jeffries asked if the President's Office has responded to the Council's May 2020 recommendation that UMD "accelerate climate action" and strive to achieve carbon neutrality by 2025. Carlo Colella said it is on his agenda to discuss it with President Pines.

Nina Jeffries informed the Council that a coalition of students from state universities in Maryland are working with members of the General Assembly to introduce a bill that would require state universities to achieve carbon neutrality by 2030. She asked if the Council would endorse such a bill. Carlo Colella said that the Council would not be the body to endorse legislation but could make a recommendation to the campus leadership.

Adjourn 1:00 pm

Progress Update

2020 Report for Sustainability Council


UNIVERSITY OF MARYLAND
sustainability
council
sustainableumd

Council's Sustainability Goal Framework

- **Carbon Neutrality (2009):** *50% net reduction by 2020 compared to 2005; site energy conservation measures and expansion of renewable energy sources*
- **Education for Sustainability (2009, 2014):** *formal and informal opportunities for students to gain knowledge/skills/awareness and to collaborate with faculty and staff on solutions*
- **Waste Minimization (2009, 2017):** *75% diversion from landfill; reduce solid waste generated per person by 1% annually*
- **Smart Growth (2011, 2017):** *alternative transportation, environmental stewardship in landscape, high performance building and utility design*
- **Sustainable Water Use (2014):** *reduce purchases of potable water, expand harvesting & reuse, responsibly manage stormwater to protect the Chesapeake*
- **Local & Global Impact (2014):** *partner to further sustainability in Maryland and beyond*

Sustainability Goals | University of Maryland Office of Sustainability

UMD's Sustainable Behavior Actions

UMD's Sustainable Behavior Actions

- **TAKE ACTION** aligns with **Education for Sustainability goal**
- **REDUCE WASTE** aligns with **Waste Minimization** and **Smart Growth goals**
- **SAVE WATER** aligns with **Sustainable Water Use** and **Smart Growth goals**
- **DINE GREEN** aligns with **Local & Global Impact** and **Waste Minimization goals**
- **COMMUTE SMART** aligns with **Smart Growth** and **Carbon Neutrality goals**
- **CONSERVE ENERGY** aligns with **Carbon Neutrality** and **Smart Growth goals**
- **CLEAN SAFE** aligns with **Local & Global Impact goal**

SUSTAINABLE DEVELOPMENT GOALS

Considering Alignment

Connect4Climate is a global partnership program launched by the World Bank Group and the Italian Ministry of Environment, Land and Sea, together with the German Federal Ministry for Economic Cooperation and Development, that takes on climate change by supporting ambitious leadership, promoting transformative solutions and empowering collective action.

Higher Education Sustainability Assessment Frameworks Compared

The table below summarizes the major features of the three most widely used international higher education sustainability reporting and assessment frameworks. It is intended to highlight the similarities and differences between the platforms and help institutions decide which to participate in.

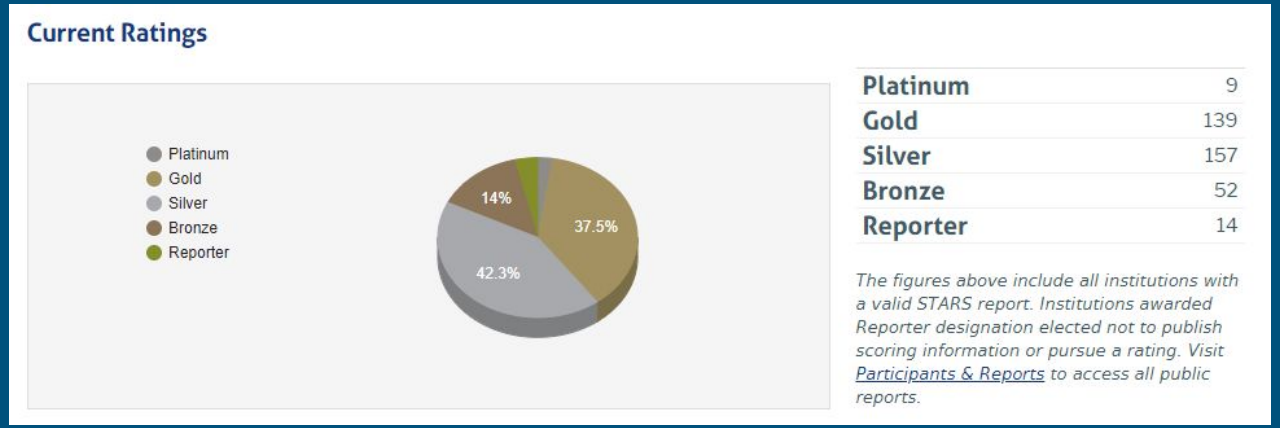
	stars a program of aashe		UI GreenMetric World University Rankings
Overview	The Sustainability Tracking, Assessment & Rating System (STARS) is a self-reporting framework for colleges and universities to measure their sustainability performance.	The Times Higher Education Impact Rankings measure global universities' success in delivering the United Nations' Sustainable Development Goals (SDGs).	The aim of the UI GreenMetric World University Rankings is to enable universities to measure and improve their implementation of sustainability policies and programs.

	stars a program of aashe		UI GreenMetric World University Rankings
Scope and Structure	Focused around a broad and inclusive concept of sustainability and structured in 17 impact areas: 1. Curriculum 2. Research 3. Campus Engagement 4. Public Engagement 5. Air & Climate 6. Buildings 7. Energy 8. Food & Dining 9. Grounds 10. Purchasing 11. Transportation 12. Waste 13. Water 14. Coordination & Planning 15. Diversity & Affordability 16. Investment & Finance 17. Well-being & Work	Focused and structured around the 17 SDGs. Each SDG has a series of metrics that are used to evaluate the performance of the university on that SDG. 1. No poverty 2. Zero hunger 3. Good health and well-being 4. Quality education 5. Gender equality 6. Clean water and sanitation 7. Affordable and clean energy 8. Decent work and economic growth 9. Industry, innovation and infrastructure 10. Reduced inequalities 11. Sustainable cities and communities 12. Responsible consumption and production 13. Climate action 14. Life below water 15. Life on land	Focused around environmental, social and economic sustainability and structured in 6 categories: 1. Setting and Infrastructure 2. Energy and Climate Change 3. Waste 4. Water 5. Transportation 6. Education

UMD's STARS Rating

Strengths: Air & Climate, Waste Minimization & Diversion, Research & Scholarship, Public Engagement, Building Design & Construction

Weaknesses: Sustainable Investment, Water Use, Building Energy Efficiency, Clear Sustainability Learning Outcomes

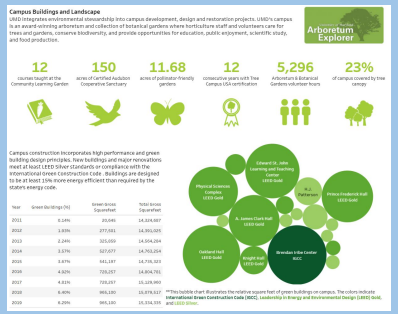


UMD's STARS Report, 2019

New Approach for Public Progress Reporting

The sustainableumd **Progress Hub** will be a web-based portal where people can **explore data** related to UMD's sustainability goals, **read inspiring stories** of collaboration toward these goals, and **find opportunities** to participate at UMD.

Measuring Progress



Celebrating Stories

Partnering for the Global Goals

The portal will also draw connections between UMD's goals and the UN Sustainable Development Goals

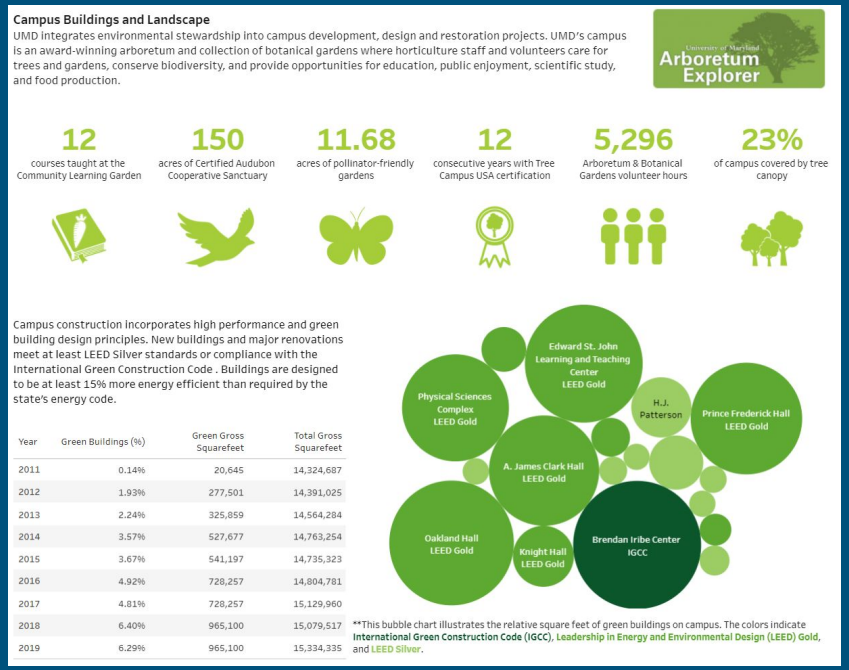
Measuring Progress

Tableau-based Story Dashboards

Allows visitors to interact with data and explore it at their level of interest

Simplifies information requests

Pages will include a callout to SDGs aligned with each of the six goals



Reduction in net ghg emissions since 2005:

56%

Amount of waste diverted from the landfill:

80%

Percentage of electric power from renewable sources:

74%

Percentage of academic departments offering courses with sustainability content:

90%

Percentage of food that is sustainably sourced:

29%

Sustainability Fund proposals that receive awards:

66%

sustainableumd

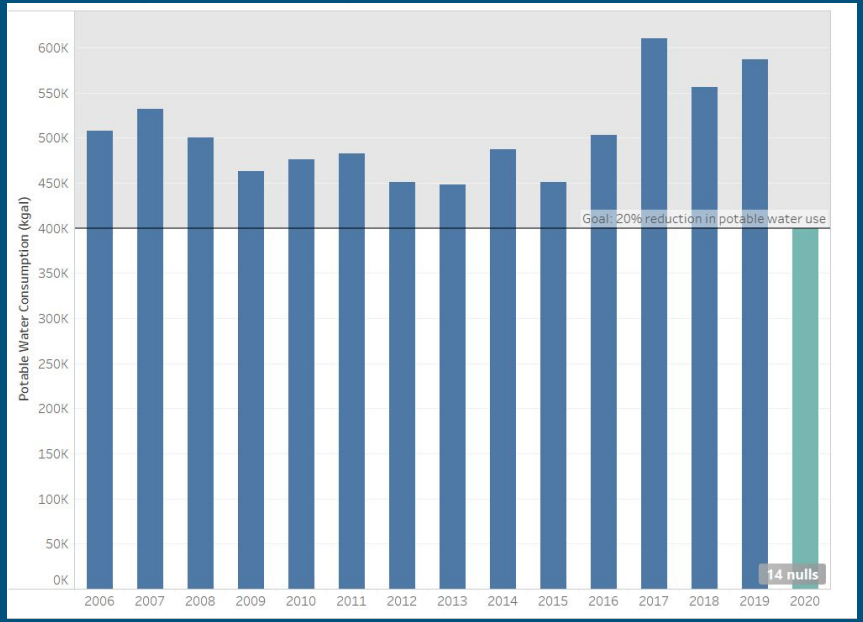
Sustainable Water Use

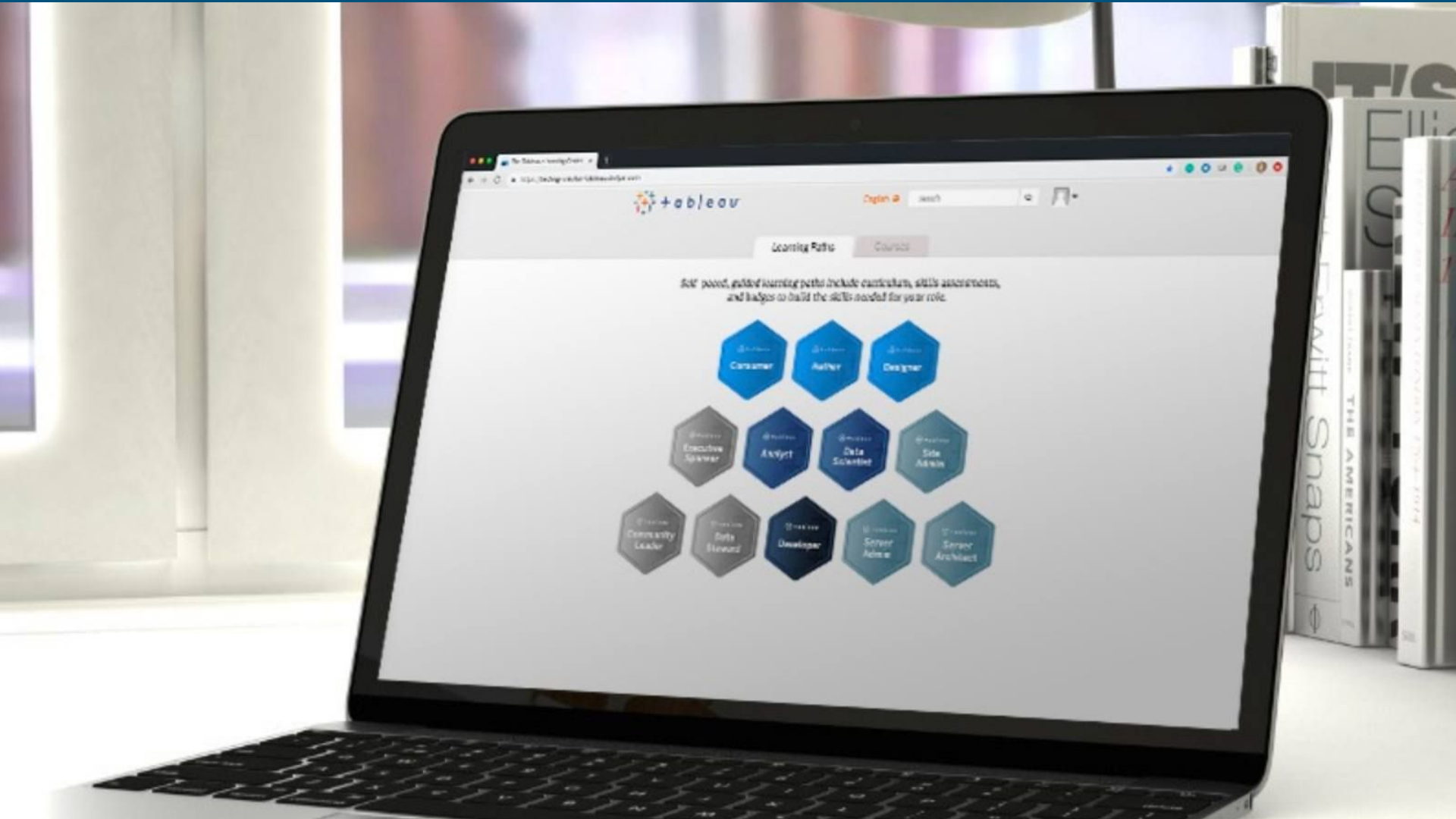
Working to improve data consistency and accuracy

UMD has not reduced potable water purchases

Steam condensate loss is a challenge

Dashboard will also include 155 stormwater management facilities




+ableau
Learning Paths
Consumer
Author
Designer
Executive Sponsor
Analyst
Data Scientist
Site Admin
Community Leader
Data Steward
Developer
Server Admin
Server Architect
THE AMERICANS

University Sustainability Fund

Annual Report for Fiscal Year 2020

Fiscal year 2020 (July 2019–June 2020) was the tenth year of the University Sustainability Fund, which is administered by the Office of Sustainability with oversight and funding authority by the University Sustainability Council. All revenue comes from undergraduate students in the form of a Student Sustainability Fee, which was $12 per fulltime student per year in FY20 and has been fixed at that rate since FY14. A student-majority Sustainability Fund Review Committee reviews proposals and recommends grant awards to the Sustainability Council. Current University of Maryland students, faculty, and staff can submit proposals by October 15 (priority deadline) or January 15 (final deadline).

Student Sustainability Fee revenue typically equals around $330,000 per year; however, in spring 2020, $83,433 of the FY20 Student Sustainability Fee revenue was refunded to students in response to the campus closure due to COVID-19. Final revenue in FY20 was $254,192.

Funds are set aside at the beginning of each fiscal year for two on-going initiatives that are supported with Student Sustainability Fee revenue:

1. **Sustainability Mini-Grants**: Funds are transferred from the Student Sustainability Fee account to give a separate account, also administered by the Office of Sustainability, a balance of $20,000 at the start of each academic year. The Student Government Association's Sustainability Committee has authority, granted by the Sustainability Council, to award mini-grants (up to $2,000 per project) based on proposals received on a rolling basis throughout the academic year.
2. **Carbon Neutral Undergraduate Commuting**: Funds are transferred from the Student Sustainability Fee account to the Greenhouse Gas Reduction Fund for the annual purchase of carbon credits to offset all greenhouse gas emissions associated with undergraduate student commuting. This program was proposed by the Student Government Association and approved by the Sustainability Council in FY19. Costs for this program are contained with an annual cap on expenditures. The cap is $65,000 per year unless modified by the Sustainability Council. The Sustainability Council, with advice from the Sustainability Fund Review Committee, may elect to adjust the cap, authorize an annual expenditure above the cap, and/or terminate the program.

After accounting for transfers-out and carry-forward from FY19, $217,910 was available for Sustainability Fund grants in FY20. The Sustainability Council approved $197,395 in grants, leaving approximately $20,515 in carry-forward to FY21.

Sustainability Fund Activity	**FY20**	**All Years (FY11-20)**
Proposals received	19	322
Funds requested	$635,128	$9,784,255
Grants awarded	9	146
Funds awarded	$197,395	$2,791,267
Average award	$21,933	$19,118

Sustainability Fund Grant Recipients in FY20

The Sustainability Curriculum Project

Office of Sustainability

$66,000

The Office of Sustainability will fund a UMD faculty member to take lead on sustainability curriculum initiatives and work with other faculty members to develop new sustainability General Education courses. This project seeks to increase sustainability education opportunities for thousands of UMD students while improving UMD's national rankings as a sustainability leader.

Monitoring Effects of Campus Creek Stream Restoration on Water Quality

Department of Geology

$47,200

This project monitors water quality to determine the environmental impacts of the Campus Creek Restoration project. Project leaders already collected 3 years of data at sampling points directly downstream of the Campus Creek and at Paint Branch prior to the restoration. This study will compare pre- and post-restoration water quality and lead to recommendations for either continuing to use regenerative stormwater conveyance (RSC) or changing the way that UMD uses RSC in the future.

Including Estimates of Campus Forest Carbon in UMD's Climate Action Plan

Department of Geographical Sciences

$27,861

This project advances UMD's goal to become climate neutral by using the latest remote sensing techniques to estimate and include land-based carbon sequestration into UMD's greenhouse gas inventory.

Energy Utilization Index (EUI) for UMD Campus Buildings

Department of Mechanical Engineering

$27,327.50

This project will perform energy simulations for 220 UMD buildings to establish an energy use intensity target for each building. A database of building characteristics including enclosure properties, mechanical system types, and schedules for all of UMD buildings will be created. Further, these building characteristics will be inputs into energy models for every building, and the model results will form a basis of target energy use. Such a database will allow for setting ambitious but realistic target goals for the energy efficiency of buildings at UMD.

Rain Barrels for Sustainable Greek Living

Department of Fraternity and Sorority Life

$15,065

This project includes the purchase of 42 rain barrels, two per each of the 21 university-owned fraternity and sorority houses, as well as student-led installation of the barrels and involvement of student residents. Two student employees, trained by Facilities Management, will carry out each installation and demonstration of rain barrel benefits with chapter members.

Food Recovery Network

Food Recovery Network and Dining Services

$4,541.25

Food Recovery Network received this Sustainability Fund Grant to cover the cost of operations for the first 60 days of the semester, so that it may request greater than $1500 per month from the SGA in order to expand operations. This expansion will be sustained by the ability to request greater amounts of funding from the SGA, and further requests from the Sustainability Fund Grant for this reason will not be necessary.

Campus Arboretum Reforestation Project

Facilities Management

$3,400

This project will add more trees in select wooded areas on campus, increase the number of understory plants in those areas, increase biodiversity on campus, and serve as a living laboratory for coursework in entomology, plant science, and other classes.

Building the Foundation of the AgroEcology Corridor

College of Agriculture and Natural Resources

$3,000

This grant will support the implementation of a stakeholder workshop designed to bring all campus partners together to explore the next steps to launching the AgroEcology Corridor project.

Compology Collaboration on Waste and Recycling Sensor Data

QUEST and Facilities Management

$3,000

This project could improve waste and recycling on campus and improve the experiential learning of our students in data science. By installing two Compology Starter Packs on UMD dumpsters, students will collect and analyze real-time data on dumpster contents. Through data analysis, the students can advise UMD on how to better manage waste and recycling on campus.

2019 Verified Carbon Credits (Proposed)

- Metered projects
- Pass Additionality Tests
- 2017-2021 vintage years
- Methane Capture
  - Local Landfill gas to Electricity
- Clean Power
  - Wind (India and rural US)

Carbon Credit Co-Benefits for Maryland

- Financial and Service Support of Chesapeake Bay Foundation
- Tree plantings in Maryland

Contracts for Carbon Credit Purchasing and Development

native energy

A Public Benefit Corporation

WGL Energy

A WGL Entity

CHESAPEAKE BAY FOUNDATION

Saving a National Treasure

Proposed purchase to offset Air Travel Emissions (2019-2020)

Portfolio of 20,000 credits to be purchased this year

(will allow 10% of 2019 air travel offset to flow from local projects)

Offset Vintage	Project	Metric Tons	Purpose
2020, 2021	Maharashtra Wind	15,600	Build Surplus
2017, 2018	Regional Landfills (CBF)	1,305	Build Surplus
2017, 2018	Regional Landfills (CBF)	3,095	Retire now
All Above	Combination of Above	20,000	

Portfolio of credits purchased in 2019 to be retired this year

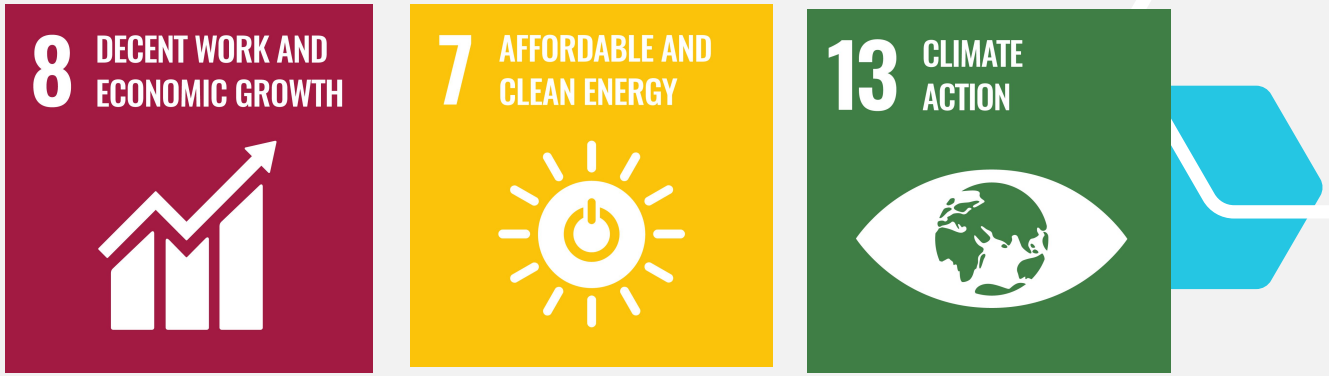
Offset Vintage	Project	Metric Tons
2018, 2019	Maharashtra Wind	44,768
2018	Virginia Landfill	1,883
All Above	Combination of Above	46,651

Proposed purchase to offset Undergraduate Commuting Emissions

Portfolio 14,342 credits to be purchased and retired this year

Offset Vintage	Project	Metric Tons
2020	Maharashtra Wind	6,342
2017, 2018	Regional Landfills (CBF)	5,000
2019	Dempsey Ridge Wind Farm	3,000
Summary	Combination of Above	14,342

Renewable Wind Power in Oklahoma, Supports Farmers (Undergraduate Commuting)

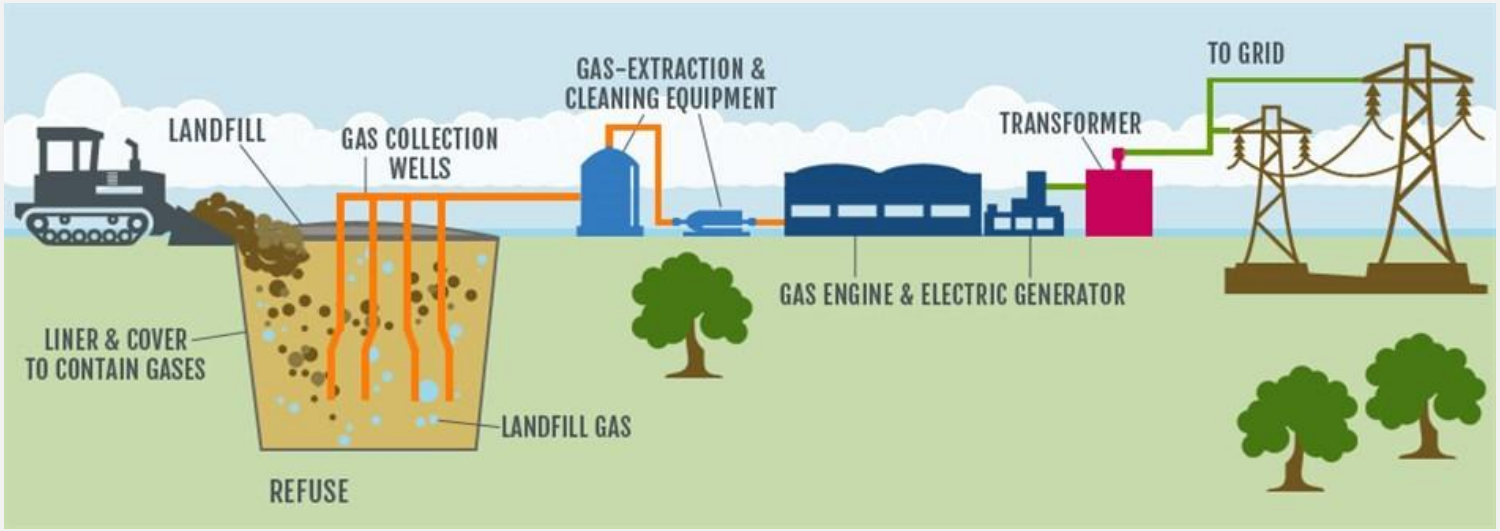


Read more about this Project on Native Energy's website

Renewable Wind Power to Address Energy Poverty in India

Read more about this Project on Native Energy's website

Landfill Methane Capture and Use with VA and PA Landfills



Learn more about one of these projects in a Henrico County Public Relations Video titled *From Garbage to the Grid: A Powerful By-Product of Henrico's Trash*