

Meeting Summary February 28, 2020

#### **Council Members Present:**

Carlo Colella, Vice President for Administration and Finance (Chair) (by phone) Patty Perillo, Vice President for 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 Kristy Long, Executive Director, Operations and Maintenance, Facilities Management Bryan Quinn, Director of Technical Operation, Department of Electrical & Computer Engineering David Cooper, Assistant Director of Operations, Division of IT Joe Sullivan, Professor and Associate Dean, College of Agriculture and Natural Resources Jelena Srebric, Professor, Mechanical Engineering Jana VanderGoot, Assistant Professor, Architecture Candela Cerpa, Undergraduate Student Representative Aditi Dubey, Graduate Student Representative

#### **Guests Present:**

Mary Hummel, Assistant Vice President, Student Affairs Susan Corry, Energy Conservation Manager, Facilities Management

Meeting start time: 11:00am

#### **Meeting Highlights**

#### Welcome and Introductions

Scott Lupin called the meeting to order. Carlo Colella joined by phone.

#### Accelerating Climate Action — Presentation and Discussion

Mark Stewart, Sustainability Manager, Office of Sustainability, presented a confidential discussion draft plan to move UMD's carbon neutrality goal from 2050 to 2025 or earlier. See attached slides.

#### Discussion:

- > Jana VanderGoot: Is it strategic to align with certain values of offset projects?
  - Sally DeLeon: The Council had a workgroup a few years ago, decided to give preference to projects in MD, however, there are not many verified projects in MD, so we are focusing on tree planting with CBF and regional methane capture.

- Scott Lupin: Last year was first competitive RFP for carbon pricing projects, had to work through portfolio to select winning bidder
- Carlo Colella: What goes into verifying the offsets projects?
  - Sally DeLeon: Vera standard, every project has to submit annual emission prevention measurements, third party auditors verify data, all info is public in VFO registries.
    - UMD only counts verified credits in project
    - Reforestation projects are harder to measure, we focus more on the metered project
    - Selected projects with methane because of economic feasibility and high warming impact
  - Scott Lupin: projects have to be "additional," so they wouldn't have happened by regulation or plan without the additional payment
  - Sally DeLeon: projects must be real, measurable, additional, and verifiable
- Jana VanderGoot: Has UMD considered investing in land purchase and considering offsets as an investment?
  - Scott Lupin: If we can find a site and scale up, then we could consider it. We are also
    considering the impact of a carbon capture project. Still in process, issue is locating facility that
    meets size requirements.
  - Sally DeLeon: The Global Ecology Lab is looking at carbon sink possibilities of UMD owned forest land.
- > Jelena Srebric: Maybe on campus bodies/labs (business students etc) can participate in this process
  - Scott Lupin: We attempted to work a standing committee (reviewing projects and prices) into the procurement process but deadlines prevented that. Instead, the Office of Sustainability reports annually to the Sustainability Council and SGA to seek input that could guide the following year's purchase of carbon credits.
- > Patty Perillo: What would a carbon fee look like? Would it be built into student fees?
  - Mark Stewart: estimated cost is \$520,000 based on \$3 per ton
  - A carbon fee can provide more money to fund on-campus projects, however, it's hard to find on-campus projects that are as cost-effective as offset projects in reducing global GHG emissions.
  - No conversation has been had on where the funding would come from
- > Bryan Quinn: We're creating a tax on usage, money has to come from somewhere
  - Carlo Colella: A carbon surcharge on air travel is primarily paid using central funds. Student commuter offsets is built into student sustainability fee.
  - Joe Sullivan: We should be careful that the message isn't just, if you have enough money then anyone can be carbon neutral.
  - Bryan Quinn: If you want it in 5 years it has to be done that way. In my opinion offsets are a
    wasted monetary investment, I would rather see us put it into research.
  - Scott Lupin: We can't lose sight of other strategies. We must continue to do efficiency, fuel switching, and renewables. This is a way to achieve a shorter-term goal because of scientific necessity, but longer-term strategies should be maintained. We have to drive down emissions in a technically feasible and financially responsible way as well.
- Scott Lupin: Tabled topic for March meeting.

#### Sustainability Fund Project Review

Candela Cerpa, Undergraduate Student Representative, presented the Sustainability Fund Review Committee's recommendations for projects that should receive grants from the Sustainability Fund. See attached slides.

1. Energy Utilization Index (EUI) for UMD Campus Buildings - Requested \$54,655. Recommendation: \$27,327 with half funding from FM. *Approved*.

- 2. Monitoring Effects of Campus Creek Stream Restoration on Water Quality Requested \$47,200. Recommendation: \$47,200. Approved contingent on project leaders receiving all necessary approvals.
- 3. Building the Foundation of the AgroEcology Corridor Requested \$30,000. Recommendation: \$3,000 for a workshop. *Approved*.
- 4. Campus Arboretum Reforestation Project Requested \$6,800. Recommendation: \$3,400 (the Student Facilities Fund Committee is interested in funding the other half). *Approved contingent on the Arboretum reporting back to the Council one year after project implementation on the survival rate of the trees planted with this grant.*
- 5. The Sustainability Curriculum Project Requested \$66,000. Recommendation: \$66,000. Approved.

Adjourn 1:00

# **Accelerating Climate Action**

**Carbon Neutral Today, Climate Restorative Tomorrow** 

Confidential Discussion Draft for the University Sustainability Council

February 28, 2020

# Brief History of Climate Action at UMD

**2007** – UMD became a charter signatory of the American College and University Presidents' Climate Commitment (now called the Carbon Commitment)

2009 – University Senate and President approved the first Climate Action Plan (CAP)

2014 – President Loh announced three new President's Energy Initiatives

2015 – UMD exceeded its CAP target by cutting emissions 27% between 2005 and 2015
2015 – The University Senate and President approved CAP 2.0

**2018** – UMD met its 2020 target early by cutting emissions 50% between 2005 and 2018



#### Global total net CO<sub>2</sub> emissions

Billion tonnes of  $CO_2/yr$ 

50 40 30 20 10 Four illustrative model pathways **P1 P2** -10 **P3** -20 P4 Source: IPCC Special Report on Global Warming of 1.5C 2010 2020 2030 2040 2050 2060 2070 2080 2090 2100

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) issued a Special Report explaining how rapidly global greenhouse gas emissions need to decrease in order to prevent catastrophic climate change.

> The global economy must rapidly decarbonize and reach net-zero emissions within 30 years.



# UMD leaders share these concerns and are taking action.









Confidential Discussion Draft for the University Sustainability Council





Confidential Discussion Draft for the University Sustainability Council

# A Meaningful Impact

Achieving net-zero GHG emissions for UMD is equivalent to providing 100% renewable energy to more than **85,000** American homes.





# Questions?

Put a Price on Carbon Achieve Net-Zero GHG Emissions Phase-Out Fossil Fuels Go Beyond Carbon Neutrality

Confidential Discussion Draft for the University Sustainability Council

# Sustainability

Sustainability Fund Review Committee Recommendations February 28, 2020



# **Statistics for FY20**

Total Requests 18 proposals	\$635,128.47
Total Recommended	\$257 <i>,</i> 394.75 (85%)
Remaining in Fund	\$44 <i>,</i> 323.25 (15%)



## **Projects Recommended**

- 1. Energy Utilization Index (EUI) for UMD Campus Buildings based on LEED Energy Performance Credits
- 2. Monitoring Effects of Campus Creek Stream Restoration on Water Quality
- 3. Building the Foundation of the AgroEcology Corridor
- 4. Campus Arboretum Reforestation Project
- 5. The Sustainability Curriculum Project



#### **EUI for UMD based on LEED Energy Performance Credits**



#### **Requested:** \$54,655

Submitted by: Jelena Srebric, ENGR Faculty

SFRC recommendation: \$27,327.50

(Half funded by Facilities Management)



## **EUI for UMD based on LEED Energy Performance Credits**



Example Target vs Measured EUI from U Texas

Summary: Perform energy simulations for 220 UMD buildings to establish an Energy Use Intensity (EUI) target for each building on campus.

#### **Benefits**

 A database will be created to model specialized target goals for energy efficiency.



## **Recommended Grant**

Item	Cost
Dr. Shengwei Zhu's Salary and Benefits (half)	\$19,227.50
Undergraduate Research Associate (\$15/hr for 180 hrs)	\$2,700
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## **Monitoring Effects of Stream Restoration on Water Quality**

**Requested:** \$47,200

Submitted by: Dr. Sujay Kaushal, GEOL Faculty

**SFRC recommendation:** \$47,200





## **Monitoring Effects of Stream Restoration on Water Quality**

Summary: Monitor water quality to determine the environmental impacts of the Campus Creek Restoration Process, which used Regenerative Stormwater Conveyance (RSC)

#### **Benefits**

• Recommend to either continue to use RSC or change methods





## **Recommended Grant**

ltem	Cost	ltem	Cost
HDPE Bottles	\$750	Streamwater Sample Processing	\$5,000
Water Quality Analyses	\$15,000	Groundwater Well Set-up	\$500
Gas Tanks	\$7,000	Groundwater Well Sampling	\$200
Reagents	\$5,000	Groundwater Sample Processing	\$5,000
Field Meters	\$6,000	EPA Certified Standards	\$2,000
		Stream Sampling Equipment	\$750



#### **Building the Foundation of the AgroEcology Corridor**



#### **Requested:** \$30,000

Submitted by: Dr. Frank Coale, AGNR Faculty and Staff

**SFRC recommendation:** \$3,000



## **Building the Foundation of the AgroEcology Corridor**



Summary: Through capstone projects evaluate communication technologies to share the project and look at the stormwater management practices installed on campus, and host a stakeholder workshop to explore next steps.

#### **Benefits**

 Provide the knowledge foundation to begin the project.



#### **Recommended Grant**

Item	
Workshop staffing (organizer, facilitator, recorder), venue, lunch, materials	\$3,000





## **Campus Arboretum Reforestation Project**

**Requested:** \$6,800

Submitted by: Meg Smolinski, Arboretum & Botanical Gardens Staff

**SFRC recommendation:** \$3,400

(The Student Facilities Fund Committee wants to fund half of this project)





## **Campus Arboretum Reforestation Project**

Summary: Add more trees to UMD's urban tree canopy in wooded areas as well as increase the number of understory plants in these areas.

#### **Benefits**

• Expand the size of our forested area, increase biodiversity on campus, and serve as a living laboratory for coursework.





#### **Recommended Grant**

ltem	Cost
50 Native Trees	\$750
150 Native Shrubs	\$2,250
Deer Protection & Staking Materials (half)	\$400





#### **The Sustainability Curriculum Project**



#### **Requested:** \$66,000

# Submitted by: Mark Stewart, Office of Sustainability Staff

SFRC recommendation: \$66,000

## **The Sustainability Curriculum Project**



Summary: Hire a UMD professor for two years on a course buyout to work with other faculty to develop new sustainability General Education courses and lead other sustainability curriculum initiatives.

#### **Benefits**

 Increase sustainability education opportunities for at least 1800 students and improve UMD's rankings as a sustainability leader.



## **Recommended Grant**

Item	
Faculty Lead (course buyout: 10 hrs/wk, 4 semesters)	\$36,000
Faculty Workshops (\$500 stipend per participant, catering, etc.)	\$32,000
Ongoing Faculty Support (trainings/meetings with lunch)	\$4,000
Literacy and Culture Assessment (incentives for participants)	\$1,000

