

Sustainability Report



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Introduction

The University of Miami's 2020 Sustainability Report is the culmination of efforts led by the entire UM community. From energy conservation, waste diversion to participatory governance or community partnership, our institution has always shown leadership. In the way we build, the way we teach, the way we do research, all aspects of sustainability have been embedded in the life of our campuses.

Our commitment to carbon emission reduction and the creation of our office of sustainability in 2007 have helped coordinate those efforts, and this report provides a comprehensive and systematic approach to track them.

Our Interim Report published in 2015 followed the steps of our first Climate Action Plan published in 2010. This report intended to give a snapshot of the state of green initiatives and achievements at UM. To fulfill long-term goals of greenhouse-gas emission reductions, UM has committed to various programs, projects and policies, outlined in that document. However, we were looking for a better way to track, assess and benchmark those endeavors. As an active member of the American Association for the Advancement of Sustainability in Higher Education, choosing STARS was an evidence. The Sustainability Tracking, Assessment & Rating System™ (STARS) "is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance"². We applied for the first time in 2017, and received a Silver rating. On our more recent application in 2019, we received a Gold rating.

We would not have been able to complete our first Sustainability Action Plan without the holistic and efficient tool that STARS represent. We first collected all the data, entered it into the STARS online platform and were able to benchmark with other similar institutions in the country. This allowed us to build a gap analysis for every credit we have submitted, and start designing a series of broad goals to fill those gaps. This report measures the University' sustainability performance.

The grand majority of the goals outlined in our first 2019 Sustainability Action Plan have been implemented. They constitute the roadmap that the University will follow in its journey towards carbon neutrality. The Sustainability Report 2020 is a snapshot of the State of the University in that journey.

2- <https://stars.aashe.org/>

Letter from the President

UNIVERSITY
OF MIAMI



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May 11, 2019

STARS Steering Committee
Association for the Advancement of Sustainability in Higher Education
2401 Walnut Street, Suite 102
Philadelphia, PA 19103

Dear Members of the STARS Steering Committee:

On behalf of the University of Miami, I am pleased to endorse the report submitted to the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking Assessment Rating System (STARS). Our report reflects the progress and accomplishments of faculty, staff, and students to advance sustainability at our University and in the Miami-Dade County area.

The University of Miami is committed to developing and implementing educational, facility, and community outreach programs that are aimed at reducing our environmental impacts as well as fulfilling our commitment under the 2nd Nature - American College and University Presidents' Climate Commitment. The STARS program provides a way for us to track the progress of our initiatives. All our programs and initiatives have a strong educational component that focuses on developing a pledge to sustainability across our campuses and surrounding communities. UM's Office of Sustainability is charged with monitoring initiatives, delivering education programs, and implementing new projects in conjunction with our stakeholders.

One of the University's most significant achievements since our last application has probably been the implementation of our Sustainability Action Plan. The goals laid out in this plan were designed after our Silver rating from STARS. From the integration of sustainability in the curriculum and research, the creation of engagement programs like our staff "green liaisons" or our student resident "ECO-reps", the collaboration with our local community on climate resilience, the addition of two new LEED Gold certified buildings, or our first Environmental, Social and Governance (ESG) investments in renewable energy, the University of Miami is on track with its carbon emission reduction goals for 2020.

We are proud to participate in the AASHE STARS program and look forward to our continued involvement. Thank you for your important work to encourage behaviors that will sustain and improve our environment for generations to come.

Sincerely,

Julio Frenk

The University of Miami's Commitment

The university strives to educate future leaders, and to “transform lives through teaching, research, innovation, and service”. The Culture transformation the University has embarked on in the last few years embraces Sustainability as one of its guiding principles.



The Department of Facilities and Operations supervises the Office of Sustainability called Green U.

In 2007, President Donna E. Shalala signed the American College and University Presidents Climate Commitment. This historical event sent a strong and unequivocal message about University of Miami's dedication to sustainability. Since then, The University of Miami has taken steps towards carbon neutrality and made reducing Greenhouse Gas emissions a priority. The Second Nature - American College & University



Presidents' Climate Commitment is a “high-visibility effort to address global climate disruption undertaken by a network of colleges and universities that have made institutional commitments to eliminate net greenhouse gas emissions from specified campus operations, and to promote the research and educational efforts of higher education to equip society to re-stabilize the earth's climate” (2nd Nature)

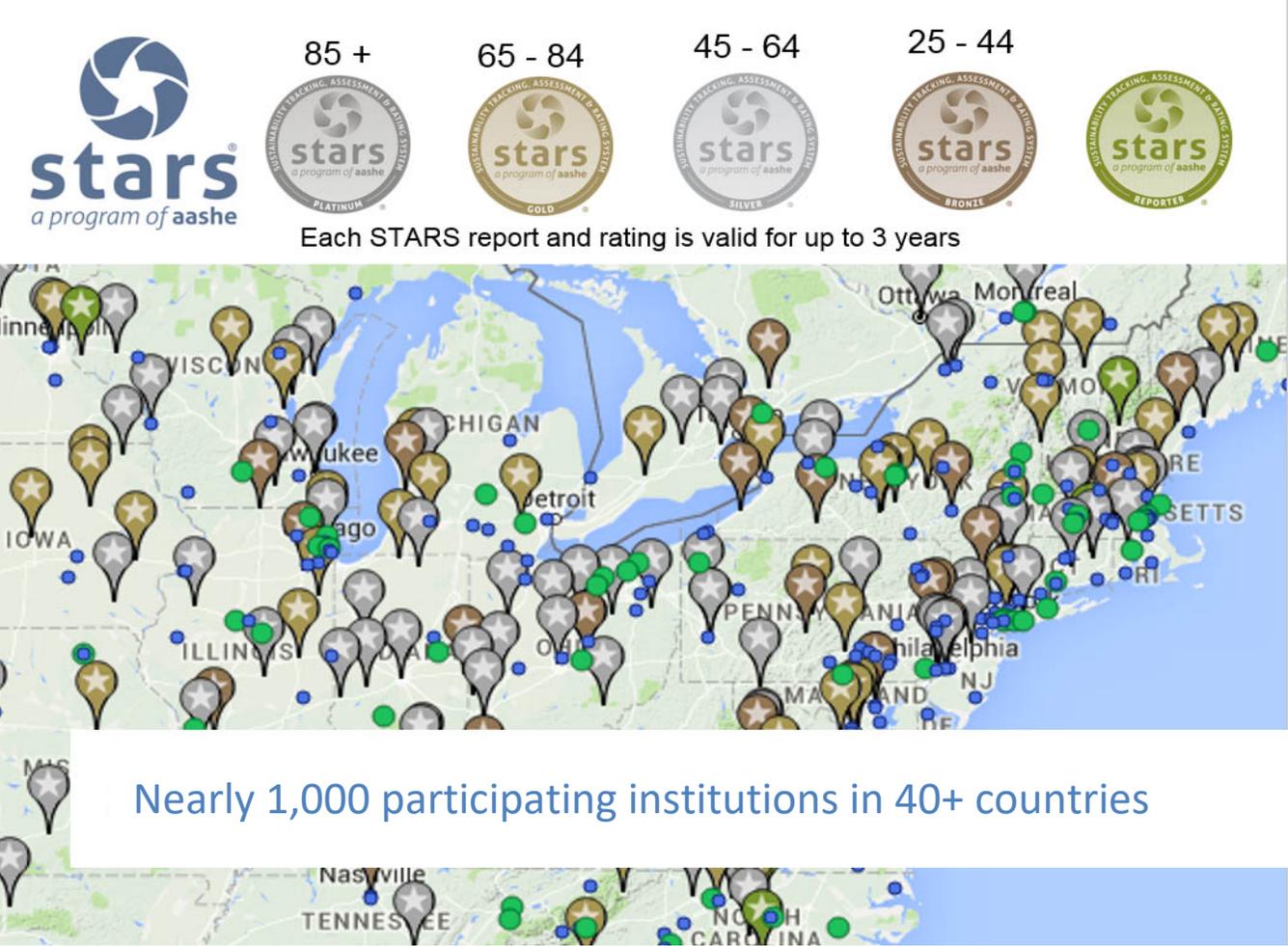
In 2015, Julio Frenk became the sixth president of the University of Miami. Among his many endeavors, he has served as the Minister of Health of Mexico from 2000 to 2006. As a board member of the UN Foundation and the Robert Wood Johnson Foundation, and as a recipient of the Clinton Global Citizen Award, President Frenk is well aware of the challenges and threats Climate Change represent for the future of our communities and our Hemisphere. On top of endorsing our climate commitment and our first sustainability action plan, in 2016, President Frenk has shown the University' spirit of resilience and innovation by signing the “We Are Still In” agreement, joining the many elected officials and CEOs of the Nation, committed to carbon neutrality.



STARS (Sustainability Tracking and Assessment Rating System)

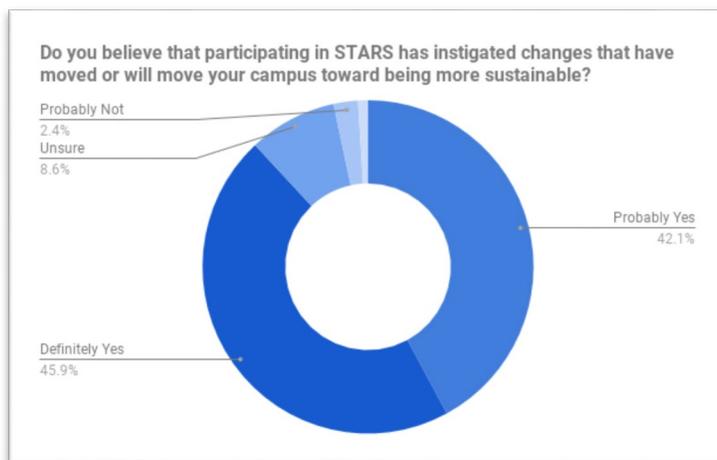
About STARS

STARS is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. It was developed by the Association for the Advancement of Sustainability in Higher Education (AASHE) with broad participation from the higher education community. STARS participants submit data to earn a Bronze, Silver, Gold or Platinum rating, or recognition as a STARS Reporter. The credits included in STARS span the breadth of higher education sustainability and are organized into four categories: Academics, Engagement, Operations, and Planning & Administration. As of July 2020, 986 institutions have registered to use the STARS Reporting Tool. All reports are publicly accessible on the STARS website.



STARS is designed to:

- Provide a framework for understanding sustainability in all sectors of higher education.
- Enable meaningful comparisons over time and across institutions using a common set of measurements developed with broad participation from the campus sustainability community.
- Create incentives for continual improvement toward sustainability.
- Facilitate information sharing about higher education sustainability practices and performance.
- Build a stronger, more diverse campus sustainability community.



“The most important benefit was pedagogical. We look forward to continuing to use STARS as a central part of our environmental studies and sustainability capstone courses.”

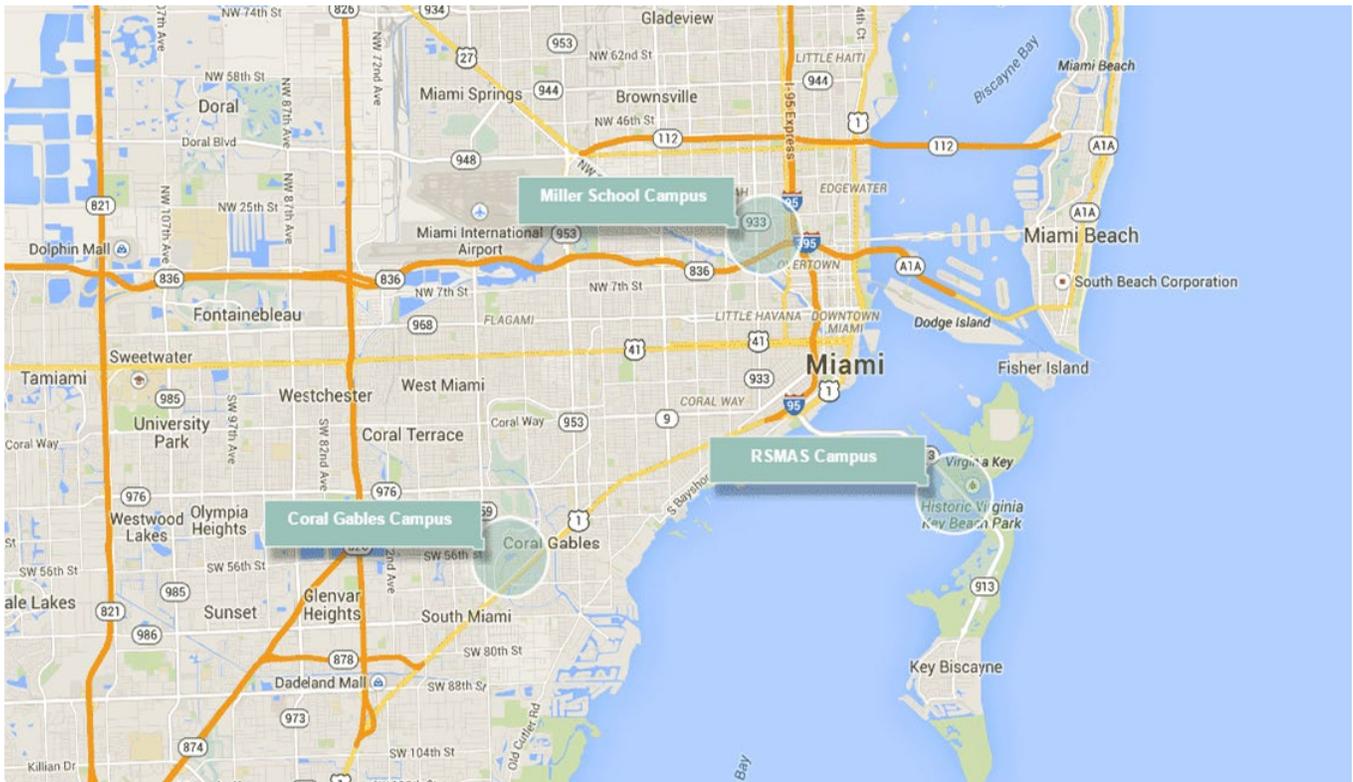
AASHE member

STARS is intended to engage and recognize the full spectrum of colleges and universities—from community colleges to research universities, and from institutions just starting their sustainability programs to long-time campus sustainability leaders. STARS encompass long-term sustainability goals for already high-achieving institutions as well as entry points of recognition for institutions that are taking their first steps toward sustainability.

About University of Miami application:

The University of Miami is comprised of three campuses: the main campus of Coral Gables which houses seven schools and two colleges, and has over 6,000,000 sq ft of building space; the Rosenstiel School of Marine and Atmospheric Science campus, adjacent to the Miami Seaquarium with over 400,000 sq ft of building space; the Leonard M. Miller School of Medicine campus, located in the City of Miami consists of 68 acres within the 153 acres University of Miami/Jackson Memorial Medical Center complex, and has over 3,000,000 sq ft of building space; and the Richmond Campus, a 76 acres site housing the Center for Southeastern Tropical Advanced Remote Sensing (CSTARS). Excluded from this report are the three hospitals currently in operation on the Miller School of Medicine campus, the Lennar Foundation Medical Center in Coral Gables, as well as all our health care facility satellites located across Southeast Florida.

The performance year of the recent Gold rated STARS report is Fiscal Year 2018. Its baseline is FY 2013, except for credit OP1 – Green House Gases Inventory that follows our original Climate Commitment FY 2007 baseline.





Sustainability:

AASHE defines sustainability in a pluralistic and inclusive way, encompassing human and ecological health, social justice, secure livelihoods, and a better world for all generations. STARS attempt to translate this broad and inclusive view of sustainability to measurable objectives at the campus level. Thus, it includes credits related to an institution’s environmental, social, and economic performance.



Curriculum +

29.46 / 40.00



Score
Quartiles ?

The grey bar displays the scores for all STARS rated institutions of the same basic type as the institution featured in the report (Associate, Baccalaureate, Master, or Doctorate) in quartiles.

Credit	Status	Points
Academic Courses	✓ Complete	12.26 / 14.00
Learning Outcomes	✓ Complete	1.20 / 8.00
Undergraduate Program	✓ Complete	3.00 / 3.00
Graduate Program	✓ Complete	3.00 / 3.00
Immersive Experience	✓ Complete	2.00 / 2.00
Sustainability Literacy Assessment	✓ Complete	2.00 / 4.00
Incentives for Developing Courses	✓ Complete	2.00 / 2.00
Campus as a Living Laboratory	✓ Complete	4.00 / 4.00

- **Percentage of courses that are sustainability course offerings:** 31%
- **Percentage of academic departments with sustainability course offerings:** 63%

Sustainability courses can provide valuable grounding in the concepts and principles of sustainability, help build knowledge about a component of sustainability, or introduce students to sustainability concepts. Conducting an inventory of academic offerings provides an important foundation for advancing sustainability curriculum.

What next?



- Increase the number of departments that include sustainability in their learning outcomes.
- List the SUST designated courses in the electives offered in the new programs focused on Sustainability.
- Offer two “Sustainability in the Curriculum” workshops for faculty per year, and increase the number modified existing syllabi.



By researching sustainability issues and refining theories and concepts, higher education institutions can continue to help the world understand sustainability challenges. The University of Miami is focused on developing new technologies, strategies, and approaches to address those challenges.

Research +

12.51 / 18.00



Score
Quartiles ?

The grey bar displays the scores for all STARS rated institutions of the same basic type as the institution featured in the report (Associate, Baccalaureate, Master, or Doctorate) in quartiles.

Credit

Status

Points

Research and Scholarship

✓ Complete

8.51 / 12.00

Support for Research

✓ Complete

4.00 / 4.00

Open Access to Research

✓ Complete

0.00 / 2.00

- Percentage of the institution's faculty and staff researchers engaged in sustainability research: 16%
- Percentage of research-producing departments that are engaged in sustainability research: 31%

What next?



- Create a repository of Sustainable Development Goal resources available in the UM libraries to assist faculty and students with their research and projects.



Research

U Link - University of Miami Laboratory for Integrative Knowledge

The world's most compelling and difficult problems are complex. Addressing the challenges of climate change, for example, requires thinking about weather patterns, relationship of disease and environment/diet, coastal architecture, energy use, city planning, human communication, the role of truth in media, international relations, big data and many other fields. U-LINK seeks applications from interdisciplinary teams that may combine researchers from across UM's three campuses.



"We encourage proposals that tackle problems aligning with the University's strategic plan, such as addressing environmental challenges, engineering smart/connected cities, promoting health and wellness, cultivating a culture of belonging, and applying the potential of big data to global issues." U Link

Groundbreaking Research at Rosenstiel School of Marine and Atmospheric Science

The University of Miami's Marine Technology & Life Sciences Seawater Complex was inaugurated in 2014 at the Rosenstiel School of Marine & Atmospheric Science. The SURge STructure Atmosphere INteraction Facility (SUSTAIN) addresses a significant gap in the existing research infrastructure available to support the development of disaster-resistant and resilient coastal communities. SUSTAIN has the capability to test three-dimensional coupled wind-waves and surge, and their combined impacts on structures in conditions as extreme as a land-falling Category 5 hurricane.



The Coral Reef Futures Lab - Rescue a Reef

A major research theme is the complex and dynamic relationship between corals and their algal symbionts ("zooxanthellae" in the genus *Symbiodinium*), to better understand how corals might adapt to both warming ocean temperatures and increased ocean acidification in the coming decades. The University of Miami (UM) Rosenstiel School's coral conservation program is designed to build community and coastal resilience through coral reef research, restoration, and citizen science.



The Future of Flight – College of Engineering



With technology developed at the University of Miami, aerospace engineer Ge Cheng Zha hopes to usher in a new era of urban air transportation. *"It is important that we develop green aviation for the future because our highway infrastructure just won't be able to keep pace with population growth,"* Dr. Zha

The Center for Urban and Community Design is part of the UM School of Architecture and fosters a collaborative interdisciplinary approach that supports the people, places and processes essential for creating and sustaining family oriented and environmentally responsible communities as near as West Coconut Grove and as far as Mexico.

The CUCD promotes a collaborative, interdisciplinary approach that supports creation, preservation and retrofitting of resilient / sustainable communities and buildings by integrating research, teaching and service, encouraging inter-disciplinary thought and action in the areas of resiliency, sustainable design and development, historic preservation and civic engagement

Smart Cities - U-School of Architecture and the Center for Computational Science are collaborating on their newest focus area, designed to create services and training involving Smart Cities concepts. A 'smart' city is one that uses digital technologies to address and manage Well Being (Healthcare)/Quality of Life/Ageing; Operating Costs (Infrastructure); Resource Allocation and Consumption; Citizen Participation and Governance; Education; Transportation and Development; Information and Communication Technologies Growth and Access; Natural Resources and Climate Change (Energy Governance); Human and Social Capital; Public Safety.

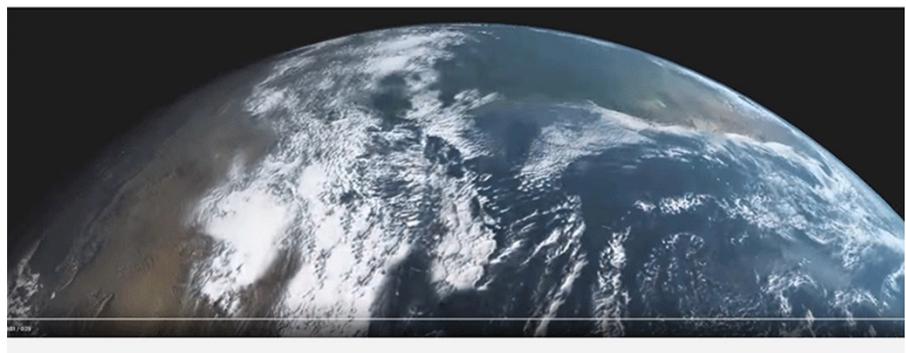
The Climate Studies Group

The Climate Studies Group at the UM Rosenstiel School involve faculty members from all six Rosenstiel School divisions (Applied Marine Physics, Marine and Atmospheric Chemistry, Marine Affairs and Policy, Marine Biology and Fisheries, Marine Geology and Geophysics, Meteorology and Physical Oceanography). Research and course work are designed to address fundamental questions about the Earth's climate and its impacts on society using a broad range of approaches.



Climate report

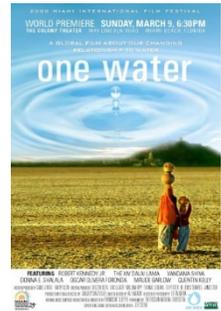
The University of Miami is marshaling the collective problem-solving muscle of all its schools and colleges to help answer a mosaic of complex questions about the science of



climate change. Researchers, engineers, architects, marine scientists, and geologists are exploring new technologies and new ways to live in this changing world. Educators are reaching out to local schools to share the latest science with young learners, the next line of defense against climate change. Visit climate.miami.edu

Research Institutes: The Clean Energy Research Institute at the College of Engineering, University of Miami, led by Hongtan Liu, Ph.D., professor of mechanical and aerospace engineering, focuses on issues of clean energy sources. The Clean Energy Research Institute houses the **Dorgan Fuel Cell Laboratory**. The lab focuses on fuel cell and other clean energy technologies.

School of Communication: Professor Chatterjee is producer, co-director and writer of a global motion picture project about our changing relationship to fresh water entitled “One Water”. An international television version of the film was completed in 2009 for which Chatterjee wrote a new script narrated by actor Martin Sheen and has reached over 4 million television households worldwide.



Academics

Master of Arts in Environment, Culture, and Media

The Master of Arts in Environment, Culture, and Media (ECM) integrates the study of the environment with emerging screen technologies, digital culture, cultural theory, and ethics. For new scientists, the defining creative and intellectual challenge of the 21st century exists in the use and design of digital content aimed at engaging an increasingly participatory media culture.

MS Sustainable Business – Miami Herbert Business School



“The University of Miami Herbert Business School’s new 10-month Master of Science in Sustainable Business is your opportunity to be a force for good inside a company: making positive impacts on the environment and society in a way that increases the long-term value of the firm and is consistent with the firm’s strategy and vision.” MHBS

The Miami Herbert Business School is also offering a Minor in Sustainable Business

Moving into the future, the most important business degrees will focus on sustainability – sustainability for our planet as well as sustainability for every facet of business. Being on the forefront of this emerging field is crucial.

The University of Miami offers a Master of Professional Science degree in Urban Sustainability and Resilience.

Miami is the ideal living laboratory, an urban landscape to explore, analyze and propose solutions to the complex interrelationships among globalization, sustainability and planning, such as health, housing, crime, the environment, disaster mitigation, and sea-level rise. This unique program is designed for students from diverse backgrounds in architecture, environmental sciences, management, social sciences, or those already working in green careers.



Construction Management Master of Science

The MS in Construction Management program is designed to develop leaders and managers for complex building projects, with mastery in best practices related to resiliency, sustainability, building information modeling, project delivery and decision-making. The University is uniquely situated in a booming metropolis where commercial and residential construction is a large and important industry.

Master of Science in Climate and Health

UM's Miller School of Medicine and Rosenstiel School of Marine and Atmospheric Sciences (RSMAS) have launched a new Master of Science in Climate and Health. The program trains future generations of professionals, research analysts, planners, decision-makers, and leaders to address the intricate relationship between human health and climate, climate change and weather patterns and anomalies.



**UNIVERSITY OF MIAMI
GREEN PROFESSIONAL
BUILDING SKILLS TRAINING
(GPRO) CERTIFICATE**

Learn leading-edge sustainability practices that reduce energy, water use, and waste.

UNIVERSITY OF MIAMI
DIVISION of CONTINUING & INTERNATIONAL EDUCATION

UNIVERSITY OF MIAMI
COLLEGE of ENGINEERING

GPRO

MIAMI-DADE COUNTY

Green Professional Building Skills Training (GPRO) Certificate

GPRO is North America's top program for teaching the people who build, renovate, and maintain buildings the principles of sustainability combined with the techniques they can use on the job. The University of Miami GPRO Certificate Program is customized for the climate and regional needs of South Florida.

The Center for Ecosystem Science and Policy (CESP): The CESP creates innovative, interdisciplinary initiatives that bridge the gap between science and environmental policy. The Center offers an **Environmental Sustainability Certificate**. Knowledge of sustainability is now a requisite for a growing number of professions, as businesses, organizations, and educational institutions confront the challenges of a rapidly modernizing and increasingly connected world subject to climate change, mass movements of people, limits to energy and water supplies, and diminishing biodiversity. The program serves as a curricular adjunct to sustainable initiatives at UM, fosters a culture of conservation, enhances students' preparation for a variety of careers (engineering, architecture, business, marketing, government), and affirms UM's commitment to sustainability, complementing its efforts to enhance environmental education.



In 2017, The Abess Center for Ecosystem Science and Policy, and the Office of Sustainability proposed the addition of a **SUST Class Attribute** that allows students to search in Cane link for courses with a sustainability focus or component, and apply to the Sustainability Certificate administered by the Ecosystem Science and Policy (ECS) program.

Sustainability in the Curriculum Workshop 9/12/19: Faculty members from various Schools came with great ideas on how to integrate Sustainable Development Goals in their syllabus and had a chance to brainstorm with colleagues and experts.



School of Law:

Founded in 2012, the **Environmental Justice Project** works to increase awareness and provide support to communities affected by issues related to environmental justice throughout Miami-Dade County, Florida. Currently research is focused on the site placement of a City of Coral Gables trolley depot in a residential West Coconut Grove neighborhood.



Engaging in sustainability issues through co-curricular activities allows students to deepen and apply their understandings of sustainability principles. Institution-sponsored co-curricular sustainability offerings, often coordinated by student affairs offices, help integrate sustainability into the campus culture and set a positive tone for the institution.

Faculty and staff members' daily decisions affect an institution's sustainability performance. Equipping faculty and staff with the tools, knowledge, and motivation to adopt behavior changes that promote sustainability is an essential activity of a sustainable campus.

"Are you a student resident at UM with a passion for the environment, or do you just want to have a positive impact on your peers and improve sustainability on your campus?"

Become an Eco-Rep now! Start helping your fellow residents on environmental issues like waste reduction, energy and water conservation" ECO rep



Campus Engagement +

19.26 / 21.00



Score
Quartiles ?

The grey bar displays the scores for all STARS rated institutions of the same basic type as the institution featured in the report (Associate, Baccalaureate, Master, or Doctorate) in quartiles.

Credit	Status	Points
Student Educators Program	✓ Complete	3.01 / 4.00
Student Orientation	✓ Complete	2.00 / 2.00
Student Life	✓ Complete	2.00 / 2.00
Outreach Materials and Publications	✓ Complete	2.00 / 2.00
Outreach Campaign	✓ Complete	4.00 / 4.00
Assessing Sustainability Culture	✓ Complete	1.00 / 1.00
Employee Educators Program	✓ Complete	3.00 / 3.00
Employee Orientation	✓ Complete	1.00 / 1.00
Staff Professional Development	✓ Complete	1.25 / 2.00

- Percentage of students served by a sustainability peer-to-peer educator program: 75%
- Percentage of employees served by a sustainability peer-to-peer educator program: 100%

What next?



- Enhance the peer-to-peer educator programs for graduate students.
- Enhance and diversify the sustainability training programs for staff.

In 2005, the University launched Green U, the University’s Office of Sustainability, under the direction of Alan J. Fish, Vice President of Business Services at the time, to officially categorize and direct the numerous sustainability efforts of the University.

Programs for staff:

- **The Green Office Certification program** is a voluntary program. It helps Faculty and Staff to go green in the workplace with easy step-by-step guidelines. All applicants receive 50 points on their Well’ Canes account.



- **Sustainability 101:** This is a 1 hour webinar open to anybody who wants to learn about sustainability at UM. The workshop is mandatory for green leaders applying to the Green Office certification program. It will introduce the participant to environmental science and climate change science basics. More than a theoretical approach to pollution and the environment, the workshop offers solutions in the workplace for environmentally minded workers who want to make a change at UM.

- **The Green Liaisons is a peer-to-peer sustainability education program for staff and faculty at the U:** Comprised of small groups of faculty and staff who are passionate about the environment and willing to volunteer to take on innovative sustainability projects.



- **Green Event Certification**
“Don’t feel bad if you think that your events are generating too much impact on the environment, Green U can help!” This program is an easy way to make sure events will be green.

- **Green Lab program:**
“If you work in a lab, manage a lab, study in a lab, and you want to make it more sustainable, Green U is here to help!” Green Lab offers a practical way to implement sustainable practices in our labs.

Programs for students:

- **Green U internships:** under the validation of our Toppel Center “Internship at UM” program, 1 to 2 interns work every semester on specific sustainability projects.
- The **Student Government ECO Board** determines and implements sustainable initiatives at the U. They are inspired by our students, faculty, local partners and current sustainable choices being made globally.



“The Green Committee works with the Student Government ECO Board to carry out sustainable initiatives on the University of Miami campus. The committee is highly involved in being the face of sustainability on campus by hosting events, supporting other sustainable organizations, educating student peers, and creating an environment where green ideas are celebrated, expanded on, and put into action.” Student Government ECO Board

- **Student Orgs:** There are several environmental related student groups at UM. These organizations have greatly contributed to the University’s Sustainability efforts. Among them:



And many more at greenu.miami.edu/get-involved/



CALENDAR of EVENTS SAMPLE: 2019

January:

- **Breakfast & Learn series:** Miami Dade County Green Print Sustainability Action Plan

February:

- **World Water Day:** Join Take Back the Tap-University of Miami. Water Conservation and Tap water blind tasting!

March:

- **Earth Hour:** the University of Miami will join millions around the world by turning the lights off at Gables One Tower for an hour on Saturday, March 30, between 8:30-9:30 p.m.
- **Ocean Awareness Week March 18-24,** Fight plastic pollution, participate in Coral Reef restoration!
- **Teach-In 2019 - Moving Forward:** UM Law School and Hope Center for Climate Science

April:

- **Canes Day of Service - Baynanza :** The University of Miami will partner with Miami-Dade County for the annual Biscayne Bay Beach Cleanup Day event
- **ECO Cinema Shorts - March 16:** Pollution, sea-level rise, sunny-day flooding, harmful algal blooms, endangered/invasive species, coral bleaching, illegal wildlife trafficking, and issues of environmental justice on screen
- **Energy Security and Sustainability Symposium- April 13**
- **Earth Day - Hug the Lake-April 22:** Earth Day Fair, Music, ECO Art, and sustainable food.
- **Corporate Sustainability Symposium - 3rd Edition – April 23**
- **Arbor Day at Gifford- April 24:** Edible Fruit Tree Tour, Tree Campus USA Award, Concert, Buffet, ECO Recognition
- **Green Baseball Game- April 26:** with Miami Dade County Water and Sewer Department and Debris Free Ocean with giveaways and information about water conservation and ocean plastic pollution.

July:

- **Breakfast & Learn series:** Coral Gables and City of Miami Climate Action Plan



Public Engagement



The University of Miami partners with Miami-Dade County for the annual Biscayne Bay Cleanup Day event – Baynanza

Engagement in community problem solving is fundamental to sustainability.

By engaging with community members and organizations in the governmental, non-profit and for-profit sectors, institutions can help solve sustainability challenges. Community engagement can help students develop leadership skills while deepening their understandings of practical, real-world problems and the process of creating solutions.

“National Gandhi Day of Service, the largest day of service on campus, brings together a diverse group of ‘Canes to volunteer at a wide variety of sites in the South Florida community. Participants of Gandhi Day give back to the community in the ideals of peace and civic duty advocated by Mahatma Gandhi.” Butler Center for Service & Leadership



Public Engagement +

16.51 / 20.00



Score
Quartiles ?

The grey bar displays the scores for all STARS rated institutions of the same basic type as the institution featured in the report (Associate, Baccalaureate, Master, or Doctorate) in quartiles.

Credit	Status	Points
Community Partnerships	✓ Complete	3.00 / 3.00
Inter-Campus Collaboration	✓ Complete	3.00 / 3.00
Continuing Education	✓ Complete	3.25 / 5.00
Community Service	✓ Complete	3.26 / 5.00
Participation in Public Policy	✓ Complete	2.00 / 2.00
Trademark Licensing	✓ Complete	2.00 / 2.00

Community Scholars in Affordable Housing is an innovative program designed to familiarize emerging leaders and young professional with best practices in community development and affordable housing policy and practices in the United States. This collaboration between the Office of Civic and Community Engagement; School of Education and Human Development; the South Florida Community Development Coalition and Catalyst Miami has trained 46 emerging professionals working in non-profit, for-profit and government sectors over the last two years. Participants have the opportunity to engage with local and national experts to explore techniques and concepts in development of affordable housing, including critical issues facing South Florida, such as funding, design, special needs populations, home ownership, advocacy, markets, engaging stakeholders, and resilience.



President Frenk views the Miami Affordability Project at eMerge Americas 2019





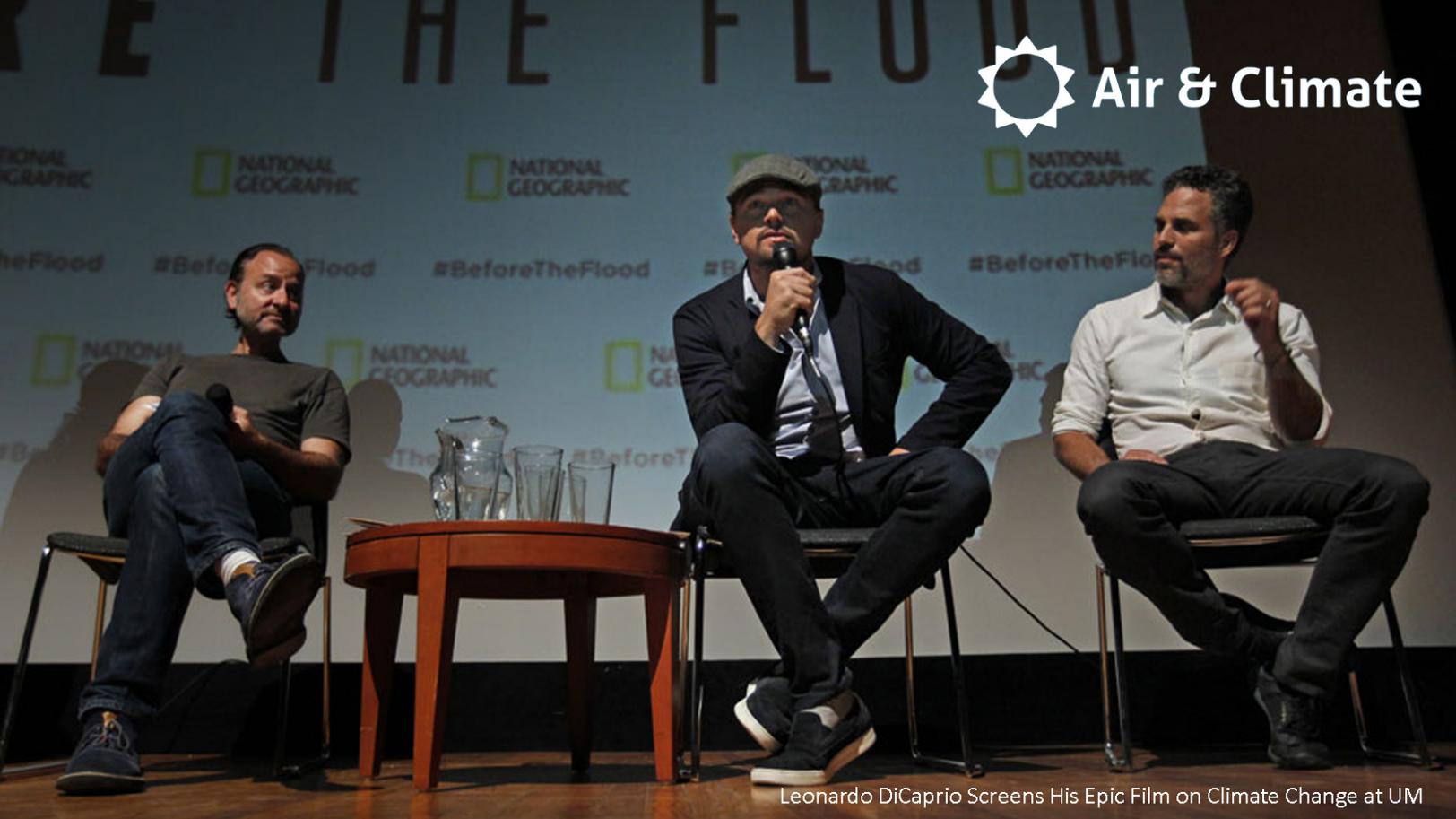
The Miami Affordability Project (MAP) is an interactive online map centered on the distribution of affordable housing and housing needs in greater Miami. The intent is to provide an open-access tool for planners, developers, community groups, and scholars of urban issues to better understand local housing needs and encourage data-driven affordable housing planning and analysis.

“Building Efficiency 305 (BE305) is Miami-Dade County’s strategy to increase energy and water efficiency in large public and private buildings countywide. The Office of Resilience collaborated with the Urban Green Council and the University of Miami to hold a Green Professional Building Skills (GPRO) training focused on improving building performance in existing buildings. The University of Miami provides GPRO training to the community in the form of a Certificate Program through its College of Engineering and Division of Continuing Education” Miami Dade County Office of Resilience



What next?

- Increase the number of continuing education courses that address sustainability
- Increase the number of community services hours per student

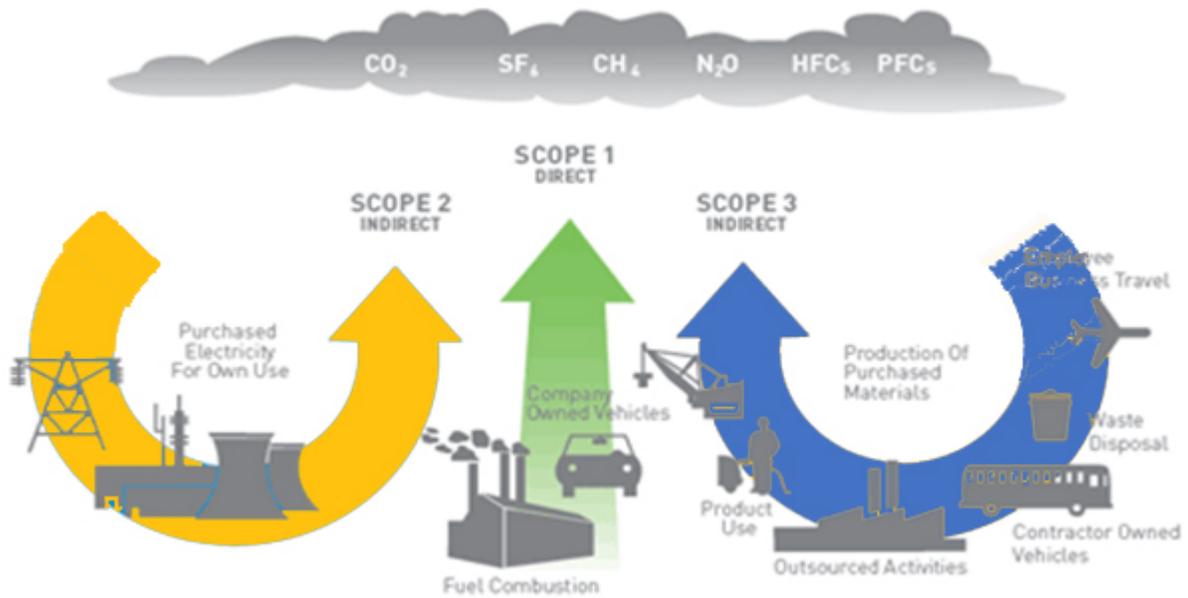
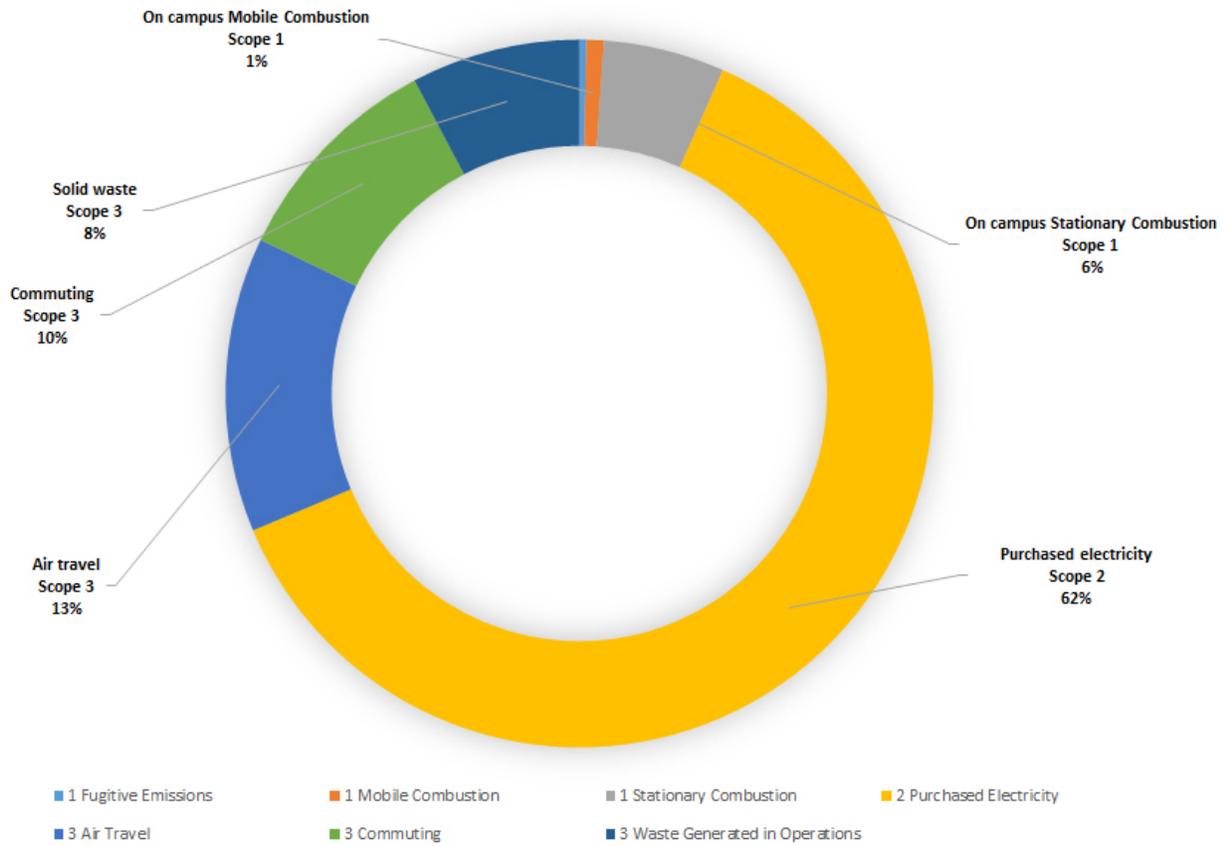


Global climate change is having myriad negative impacts throughout the world, including increased frequency and potency of extreme weather events, sea level rise, species extinction, water shortages, declining agricultural production, and spread of diseases. The impacts are particularly pronounced for low-income communities and countries. In addition, institutions that inventory and take steps to reduce their air pollutant emissions can positively affect the health of the campus community, as well as the health of their local communities and regions.

"The science is clear and convincing: Climate change poses a very real risk to our health. The new Master of Science in Climate and Health provides an exciting interdisciplinary approach to understanding and mitigating the many complex factors that impact this new frontier in public health." President J. Frenk on the MS in Climate and Health offered by the Department of Public Health Sciences, the Miller School of Medicine & the Department of Atmospheric Sciences at Rosenstiel School of Marine and Atmospheric Sciences.



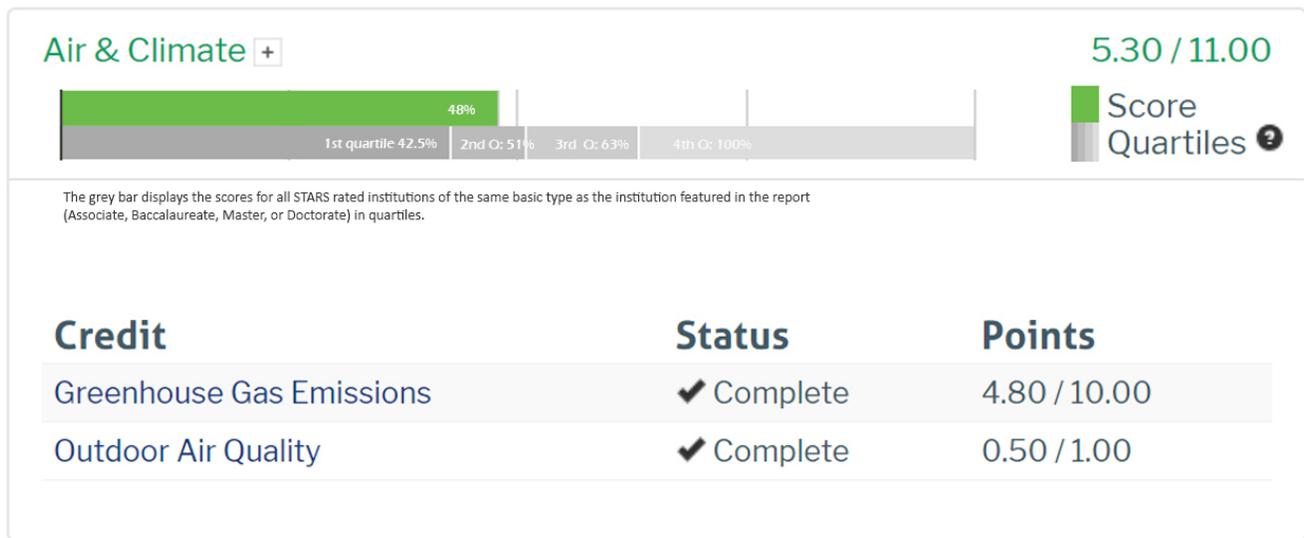
GHG Metric Tons of CO2e by type - 2018

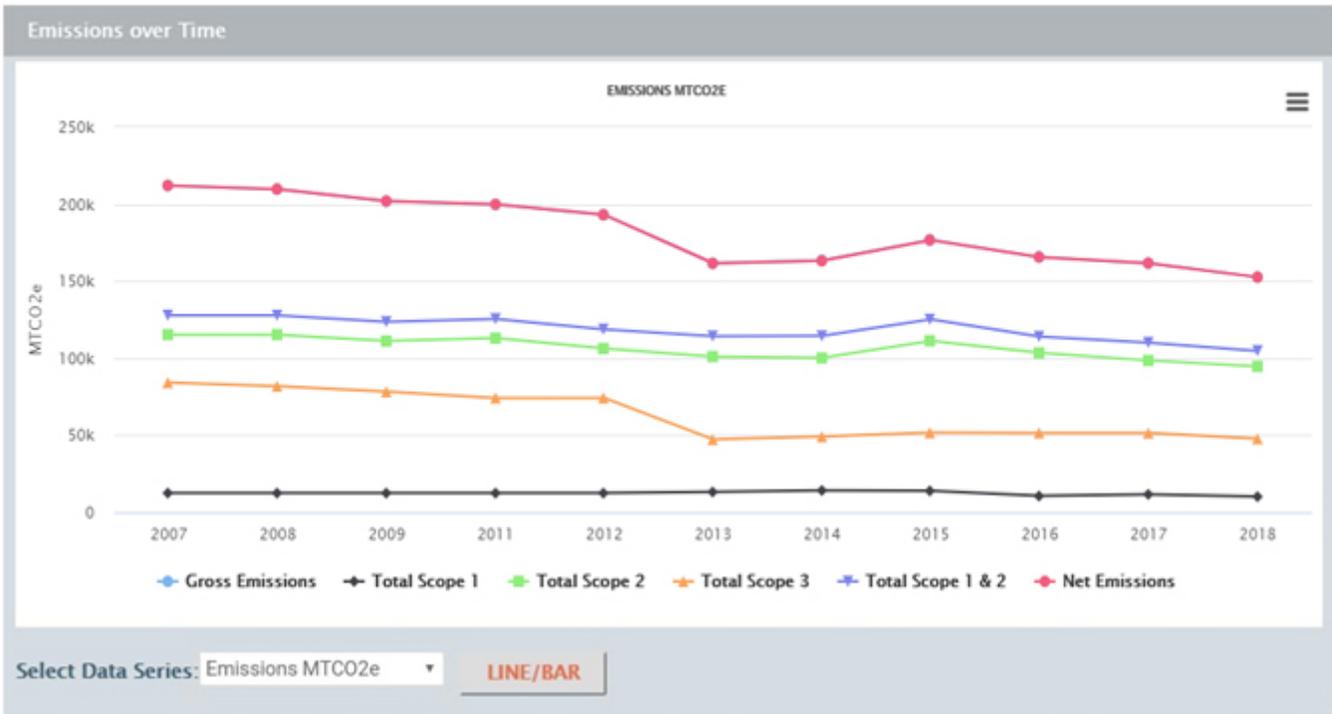




“The Miami Climate Symposium 2020: Predicting and Living with Extremes will present the state of the science for understanding climate dynamics and extreme events—and for managing the associated risks.” MCS

Dr. Ben Kirtman is a professor at the University of Miami’s Rosenstiel School of Marine and Atmospheric Science and is co-chair of the NOAA Climate Prediction Task Force. He is a lead author of reports by the Intergovernmental Panel on Climate Change used during the 2015 Paris Summit.





Change in GHG emissions 2018 vs. 2007 baseline and Emission reduction targets

UNIVERSITY OF MIAMI

	TOTAL SCOPE 1	TOTAL SCOPE 1, 2, & 3
CHANGE IN EMISSIONS PER 1,000 SQ. FT. PER FULLTIME ENROLLMENT	↓ 18.92%	↓ 28.02%
	↓ 23.93%	↓ 32.46%
	↓ 29.95%	↓ 37.81%
EMISSION REDUCTION TARGETS		20% by 2020 40% by 2030

- 2nd Nature-ACUPCC target: 30% reduction of Scope 1 and Scope 2 GHG emissions per weighted campus user by 2025, from a 2007 baseline
- Percentage reduction in adjusted net Scope 1 and Scope 2 GHG emissions per weighted campus user from 2007 to 2018: 19%

The **Climate Change Special Report**, developed over nearly six months by University Communications, highlights the work of scientists, researchers, faculty, students and alumni in the area of climate change and sustainability, from all the University's eleven schools and colleges.



“One of the most complex global issues we face today is Climate Change. Our home here in Miami is extremely vulnerable to Sea Level Rise. That’s why the University of Miami is launching a comprehensive and cross-disciplinary initiative to harness our expertise to better understand the changing climate and to find ways we can adapt now to mitigate the pressure on future generations.” President Julio Frenk

In 2007, President Donna E. Shalala signed the American College and University Presidents Climate Commitment. This historic signing demonstrated the University of Miami’s dedication to sustainability. As part of the **President Climate Commitment**, the University of Miami was required to initiate two or more tangible actions to reduce greenhouse gases from the following list:



- Establish a policy that all new campus construction will be built to at least the U.S. Green Building Council’s LEED Silver standard or equivalent.
- Adopt an energy-efficient appliance purchasing policy-requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.

- Encourage the use of, and provide access to public transportation for all faculty, staff, students and visitors at our institution.
- Participate in the Waste Minimization component of the national Recycle Mania competition.

The University adopted the implementation of all four of those actions.

Groundbreaking Research at RSMAS:

The University of Miami’s Marine Technology & Life Sciences Seawater Complex was inaugurated in 20014 at the Rosenstiel School of Marine & Atmospheric Science. The new complex provides research and teaching laboratories in two critical areas: air-sea interactions and biology of living marine organisms, including a wind-wave-storm surge simulator capable of generating Category 5 hurricane-force winds in a three-dimensional test environment.



RSMAS Climate Risks & Preparedness

Katharine Mach is an Associate Professor at the University of Miami Rosenstiel School of Marine and Atmospheric Science and a faculty scholar at the UM Abess Center, focused on environmental science and policy. Mach's research assesses climate change risks and response options to address increased flooding, extreme heat, wildfire, and other hazards. Through innovative approaches to integrating evidence, she informs effective and equitable adaptations to the risks.

University of Miami School of Law – A Climate mission in Madrid

With the world already 1.1 degrees Celsius warmer than it was in preindustrial times, the United Nations COP25 climate change conference, which took place in Dec. 2019 in Madrid, could not have been held at a more critical time. Students from University of Miami School of Law professor Jessica Owley’s UN negotiations class were in Madrid reporting on the Conference as accredited observers.





Buildings



Buildings are generally the largest user of energy and the largest source of greenhouse gas emissions on campuses. Buildings also use significant amounts of potable water. Institutions can design, build, and maintain buildings in ways that provide a safe and healthy indoor environment for inhabitants while simultaneously mitigating the building's impact on the outdoor environment.

“The Lakeside villages’ rain garden provides several environmental benefits and is the future of storm water management” Housing & Residence Life



Student Housing Lakeside Village – Inauguration in Fall 2020

Innovative design features such as rooftop green spaces, a rain garden and a **LEED Gold Certified** construction will support the sustainability initiatives of our campus and local communities:

- The village’s **green roofs** reduce and slow down water runoff, provide food for pollinator species of animals, naturally insulate the building, and absorb carbon dioxide to clean the air and help regulate the climate

- **Insulated walls and enhanced window glazing** help to regulate the interior temperature without relying on cooling or heating systems
- **Innovative heating and cooling systems** are designed to condition and filter the air as well as re-purpose it for other uses throughout the facility
- **Existing trees and plant life** were evaluated and, when possible, were incorporated into the landscape of Lakeside Village or located elsewhere on campus or in the surrounding local area

The University of Miami is home to the first high-rise in South Florida constructed using green principles- residential or commercial. **The Don Soffer Clinical Research Center** is home to medical research at the UM Miller School of Medicine. Built using LEED™ principles and practices. Reflective “Energy Star” roof reduces heat gain; double- pane argon gas windows insulate the building; curtain wall fins reduce solar heat; raised floor system provides for better indoor air quality and energy efficiency (first high-rise in South Florida with this technology); floor vents reduce ductwork, improving air flow and efficiency; all lighting is low-energy fixtures; automated light and alarm timing save electricity; chilled water loop system provides more efficient cooling ; permeable pavers improve run off; carpet and other internal materials are certified green and recyclable; modular floors, walls, carpet, outlets and vents are easy to reconfigure; close proximity to Metrorail and buses; Wellness Center showers and lockers for cyclists and public transit users; and a landscaped river walk on Wagner Creek.



Sustainable Building Policy

In support of the University's commitment to a high level of environmental stewardship and social values, it is the policy of the University of Miami's Design and Construction department to plan, design, construct, manage, renovate and maintain its facilities in a sustainable manner. This policy applies to all new construction and all major renovations.



The **Miami Herbert Business School**, located on the University of Miami Coral Gables campus, has achieved **LEED Gold Certification for Existing Building Operations & Maintenance (EBOM)** as designated by the US Green Building Council (USGBC) for its environmental performance and sustainable operations. The project is the first LEED v4.1 OM higher-education building in the State of Florida.

Over 15 other buildings are LEED™ certified or in the process of being certified:

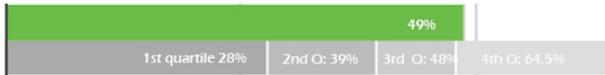
The Biomedical Research Building, the Cox Neuroscience and Health Annex, the Hecht Athletic Center, the Life Science and Technology Park, the Marine Technology and Life Sciences Seawater Research Building, the Multi-Purpose and Practice Facility, the Robert and Judi Prokop Newman Alumni Center, the Student Shalala Center, the P. Murphy Design Studio, the Patricia Louise Frost Music Studios, the Football Indoor Practice Facility, the SONHS Simulation Hospital, and the Lennar Foundation Medical Center.



The University uses these buildings as educational tools for those in and outside the University of Miami, and is an active member of the **Better Building Alliance**, a Department of Energy's (DOE) exceptional network of research and technical experts with mission to develop and deploy innovative, cost-effective, energy-saving solutions for more sustainable buildings in the country.

Buildings +

3.94 / 8.00



Score Quartiles ?

The grey bar displays the scores for all STARS rated institutions of the same basic type as the institution featured in the report (Associate, Baccalaureate, Master, or Doctorate) in quartiles.

Credit

Status

Points

Building Operations and Maintenance

✓ Complete

1.88 / 5.00

Building Design and Construction

✓ Complete

2.06 / 3.00

- Percentage of newly constructed or renovated building space certified under a green building rating system for design and construction: 100%
- Percentage of building space certified under a green building rating system for the operations and maintenance of existing buildings: 7%



What next?

- Create a set of UM Sustainable Operations and Maintenance guidelines for existing buildings

The Lennar Foundation Medical Center has high-efficiency HVAC and LED lighting systems, high-performance glass that maximizes natural light while reducing cooling and heating loads, fins that reduce solar radiation for many of the windows, and low-flow plumbing fixtures. “At the University of Miami Health System, we believe in treating people as human beings. Watch and experience how The Lennar Foundation Medical Center is revolutionizing the way health care is delivered.”* *The LFMC is not part of this plan’s geographical boundaries*





The Patricia Louise Frost Music Studios (Coral Gables campus). This building achieved a **LEED Platinum certification**: Photovoltaic roof panels convert sunlight into electricity. Rainwater is collected and used in and around the building (toilet flushing and landscaping irrigation). Serving as the equivalent of planting 320 trees, the amount of titanium dioxide mixed into the concrete remove air pollutants, and electro-chromic windows automatically adjust to bright or overcast conditions outside.

“The Design and Construction department has taken the lead in ensuring that our buildings are constructed in a sustainable manner. The department has LEED certified 1.2M SF of Green Buildings to date and is in the process of developing an additional 727K SF of LEED certified facilities.”
UM Design and Construction Department

LEED Educational Signage at the School of Nursing and Health Studies Simulation Hospital

This building captures all the **Storm Water** that falls on the site and slowly releases it into the ground, where it is naturally filtered by the limestone bedrock to **replenish our aquifer**. Managing stormwater runoff helps maintain the quality of our drinking water.

SUSTAINABLE Sites

This building was built to reduce high temperatures on its sidewalks, courtyards and parking lots. This phenomenon is also called the **Heat Island effect**. By providing shade from the existing tree canopy or architectural structures that reflect the heat from the sun, the building reduces the Heat Island Effect by **50%**.

Sustainable landscaping at home

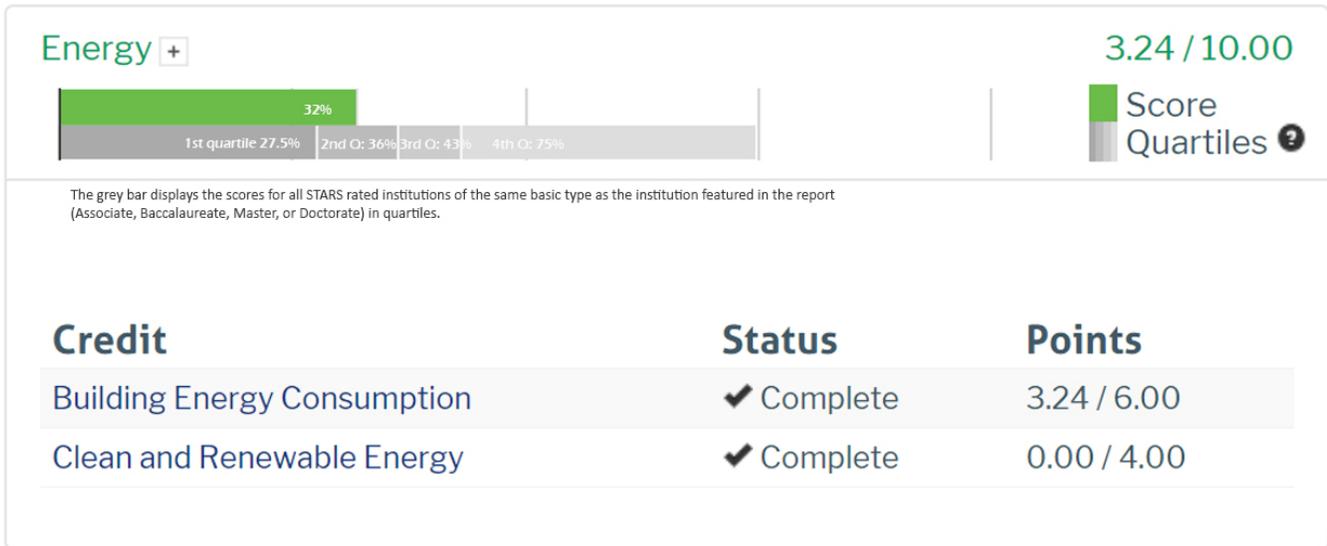
- Plant Florida friendly trees and shrubs
- Make your roof white to lower AC load
- Use grass, or mulch instead of paving

MIAMI 20 SUSTAINABILITY | SCHOOL OF NURSING & HEALTH STUDIES | ECO



For most institutions, energy consumption is the largest source of greenhouse gas emissions, which cause global climate change. Our institution, along with others in the region are especially sensitive to this issue because Southeast Florida has become ground zero for Sea Level Rise. University of Miami has brought its expertise to the South-East Florida Regional Climate Compact since its inception. The Compact is a partnership between Broward, Miami-Dade, Monroe and Palm Beach counties, their municipalities and the Institute for Sustainable Communities to prepare for Climate Change impacts, as our region remains the most vulnerable in the nation.

In addition to causing global climate change, energy generation from fossil fuels, especially coal, produces air pollutants such as sulfur dioxide, nitrogen oxides, mercury, dioxins, arsenic, cadmium and lead. These pollutants contribute to acid rain as well as health problems such as heart and respiratory diseases and cancer. Coal mining and oil and gas drilling can also damage environmentally and/or culturally significant ecosystems. Nuclear power creates highly toxic and long-lasting radioactive waste. Large-scale hydropower projects flood habitats and disrupt fish migration and can involve the relocation of entire communities. Implementing conservation measures and switching to renewable sources of energy can help institutions save money and protect them from utility rate volatility. Renewable energy may be generated locally and allow campuses to support local economic development. Furthermore, institutions can help shape markets by creating demand for cleaner, renewable sources of energy.



- **Percentage reduction in total building energy consumption (source energy) per unit of floor area from baseline (FY2013): 10%**

What next?



- Invest in Energy Efficiency retrofits, sustainable Operations & Maintenance best practices, as well as conservation campaigns to further reduce our energy consumption



Energy

The University of Miami is constantly looking for ways to reduce energy usage.

CO2 Scrubbers

Poor indoor air quality and high HVAC energy consumption is always a challenge for high traffic buildings. UM installed HLRs-CO2 scrubbers on each floor of the 60,000-ft2 wellness facility at the Don Soffer Clinical Research Center to scrub air of contaminants and reduce the amount of outside air ventilation required, saving 28% more energy than in regular units.

Housing & Residence Life innovative energy efficiency technology



The app-based system uses occupancy sensors and intelligent thermostats to adjust a room's temperature according to occupancy, eliminating the unnecessary heating and cooling of empty rooms. By intelligently controlling the temperature and plug loads in unoccupied rooms, this energy management system allows a residence hall to decrease equipment runtime and energy usage without a negative impact to occupant comfort.

Energy Efficiency

Reducing electrical consumption has been our focus over the past 3 years. Significant energy conservation improvements and activities during this period have included the following:

- In collaboration with UM IT, Facilities and Operations offers an IT energy saving program where all desktop computers are set on sleep mode. Extended to all PCs in all divisions of the main campus, this could save up to 15% of our energy consumption.
- Since 2016, the University passed a LED lighting mandate to phase out incandescent and CFL bulbs.
- Improved management of our Utility Plants CHW loop control strategies and set points to reduce the cost of Chilled Water production.
- Refrigerants upgrades to improve our chilled water loop system performance.
- Interior Lighting retrofit from T12 to T8 lamps with electronic ballast.
- Exterior LED lighting retrofits reducing wattage.
- Occupancy sensors in all buildings.
- BACnet EMS installation.
- Utility Plants upgrade of chiller to high performance energy efficient units to address additional load.
- High Efficiency Motor replacements.
- Campus wide efficiency setback of thermostats during campus break.
- Establishment of a campus Wide Set point of 74 Deg (+/- 1.5)
- On-going routine and preventive maintenance of building mechanical systems equipment to maximize their efficiency.
- Consolidate off period activities into selected energy efficient buildings so less efficient buildings can be set to unoccupied status.
- Load shifting to off peak hours.



Integration of well and water treatment systems – Miller School of Medicine campus

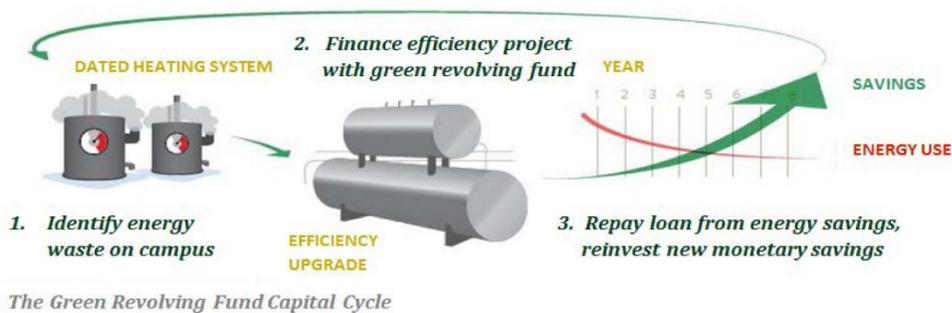
This new treatment system, part of the original central energy plant build, utilizes pulsed electric fields for control of mineral scaling, microbial growth and corrosion in the cooling towers. Cooling tower blowdown is discharged to a filtration pond, instead of the sewer, part of an environmentally friendly process that essentially recycles aquifer water back to its source.



"Since the new plant commenced operation, the Miller School has not stopped its pursuit of ever-greater energy efficiency and resiliency. In recent years, it has increased the plant's emergency power supply and installed a backup water well system. In addition, projects are now in the works to both integrate those wells with the chiller plant's nonchemical water treatment system and to install variable speed drives on condenser water supply pumps." 2017 International District Energy Association

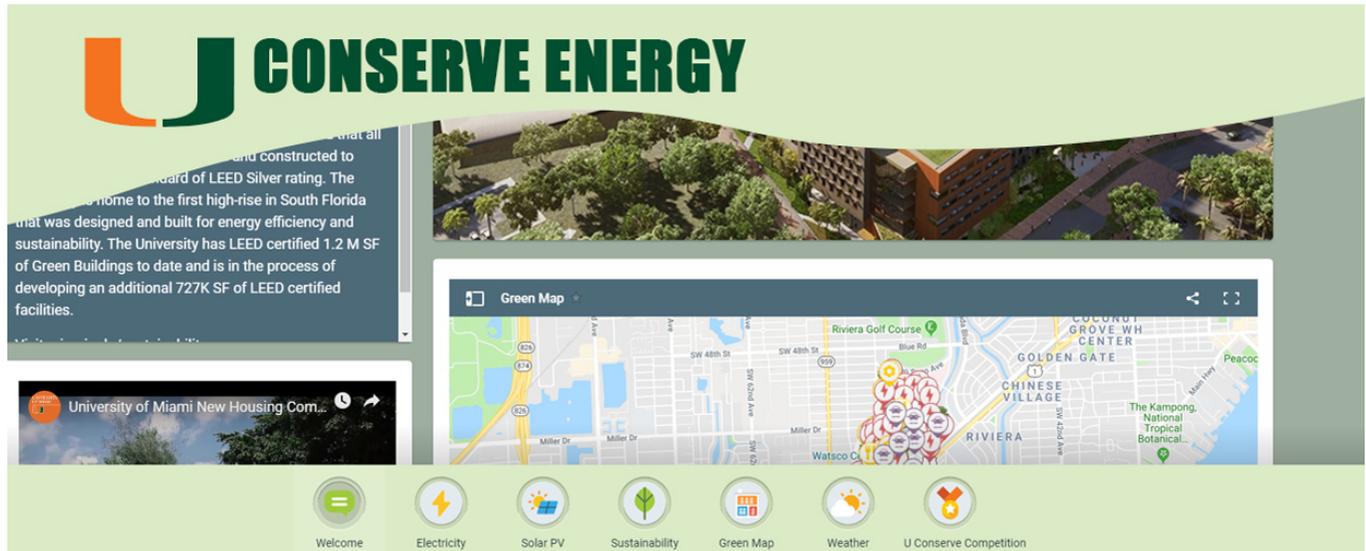
Green Revolving Reserve

In 2015, the UM Real Estate and Facilities Department launched the U Green Revolving Reserve with the support of the office of sustainability, the School of Architecture and the College of Engineering. UGRR is an internal investment vehicle that provides financing to parties within UM for implementing energy efficiency and other sustainability projects that generate cost-savings. Our participation in the Billion Dollar Green Challenge grant us access to valuable online resources: *"The Billion Dollar Green Challenge encourages colleges, universities, and other nonprofit institutions to invest a combined total of one billion dollars in self-managed revolving funds that finance energy efficiency improvements."*



U Conserve - Energy Conservation Campaign

U Conserve Campaign reminders are sent regularly to the whole UM community on Energy Conservation duties.



“U Conserve Energy Summer 2019: Winner were invited to a luncheon and had a chance to learn about energy conservation and solar energy in the community.” Office of Sustainability

The **Green Office Certification Program** reaches out to all our staff and faculty members. To facilitate the adoption of behavioral changes that will make an impact on our general carbon footprint, Green U offers a simple checklist program for offices that want to go green in the workplace. Office Green leaders can take a “Sustainability 101” workshop as part of their Professional Development credit requirement.





Renewable Energy

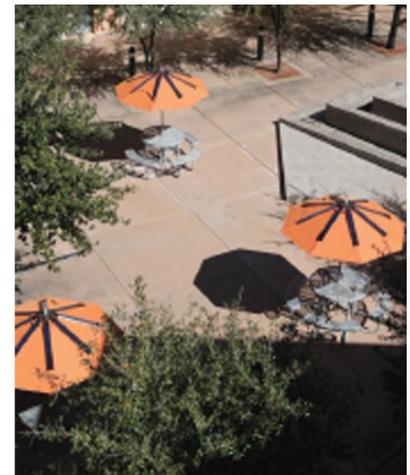
The **Patricia Louise Frost School of Music building** is equipped with a **70 KW Photovoltaic solar panel system** that offsets 20 to 30% of the building's current load.

Another **20 KW Photovoltaic system** was installed on the Coral Gables campus' Food Court rooftop. This system, sponsored by the Student Government organization **ECO Board**, also has an educational mission, inviting students to learn about



Solar Energy. The system connects to an online dashboard that gives visitors a clear picture of the savings and offsets associated with the PV system.

UM has installed a **Solar Thermal system** as part of our Silver LEED Neuroscience Center hot water system to reduce total energy demand for scientific research. The system has reduced total hot water energy demand for cage wash, lab sinks and domestic use onsite by 30%. Students can also charge their phone with **Solar umbrella** sets around campus.





Food & Dining



Teaching KITCHEN

LEARN • GROW • TRY



Pesticides and fertilizers used in agriculture can contaminate ground and surface water and soil, which can in turn have potentially dangerous impacts on wildlife and human health. The production of animal-derived foods often subjects animals to inhumane treatment and animal products have a higher per-calorie environmental intensity than plant-based foods. Institutions can use their purchasing power to require transparency from their distributors and find out where the food comes from, how it was produced, and how far it traveled. Institutions can use their food purchases to support their local economies; encourage safe, environmentally friendly and humane farming methods; and help eliminate unsafe working conditions and alleviate poverty for farmers. These actions help reduce environmental impacts, improve local food security, and support fair and resilient food systems.

“UM Dining takes pride in our vast sustainability initiatives. [...] The world we live in and the quality of food we serve is important to us, which means we will never stop working to affect positive change on the environment” UM Dining Services



Use these symbols to help you to make informed dietary choices.



Food & Dining +

2.00 / 8.00



Score
Quartiles ?

The grey bar displays the scores for all STARS rated institutions of the same basic type as the institution featured in the report (Associate, Baccalaureate, Master, or Doctorate) in quartiles.

Credit	Status	Points
Food and Beverage Purchasing	✘ Not Pursuing	0.00 / 6.00
Sustainable Dining	✔ Complete	2.00 / 2.00

What next?



- Enhance the voluntary composting program for residents and farmers market vendors.
- Reduce the use of disposable plastic in on campus Dining restaurants.
- Increase the offering of plant-based menu options across Dining services.



Food

UM Dining Sustainability program features Certified Sustainable Seafood, certified Humane Cage Free eggs, AG Hormone Free Dairy products, Fair Trade coffee, Antibiotics free poultry, maximizing the use of local products to support Local farmers.



Reducing FOOD WASTE with UMDINING



UM'S STUDENT GOVERNMENT ECO BRANCH CREATED A CHAPTER IN MIAMI WITH **THE FOOD RECOVERY NETWORK.**

STUDENTS RECOVER THE SURPLUS FOOD FROM THEIR DINING HALL THEN TRANSPORT THE FOOD TO A HUNGER FIGHTING PARTNER.



WE USE STANDARDIZED SERVING UTENSILS TO CONTROL PORTION SIZES (BUT YOU CAN ALWAYS GO UP FOR SECONDS!) AND **SMALL BATCH COOKING.**



GETTING RID OF TRAYS IN THE DINING HALLS HAS **REDUCED UNWANTED FOOD BY 23%**



DURING OUR STOP FOOD WASTE DAY EVENT (HELD FOR ONE WEEK EACH APRIL), WE COLLECT AND WEIGH ALL FOOD RETURNED TO THE DISH ROOM. THIS **REDUCES THE AMOUNT OF DISCARDED FOOD BY NEARLY 500 LBS PER WEEK.**

500 POUNDS



TAKE-OUT DINING WAS REDESIGNED, BY REPLACING "BOTTOMLESS" CONTAINERS WITH PRE-PORTIONED GRAB-AND-GO OPTIONS, **REDUCING THE TOTAL AMOUNT OF FOOD TAKEN OUT BY 37.5%.**



48.3 TONS OF FOOD DONATED

OVER 48.3 TONS HAVE BEEN DONATED TO THE **MIAMI RESCUE MISSION** OVER THE PAST 6 YEARS. THAT'S EQUAL TO ABOUT 56,677 MEALS!

The **UM Farmer's Market** is open every Wednesday on the main campus and every Thursdays on the Medical campus. Faculty, staff and students can visit and buy from local vendors fresh local fruits and vegetables, cheeses, and much more.



Through programs like **Well 'Canes** and its points award system, UM promotes healthy living styles in the workplace. Our **Health and Wellness System** makes sure that students receive all the help they need to quit smoking, exercise and educate themselves on adopting a healthy diet.

With the intent to raise awareness about Sustainable Food, the Office of Civic and Community Engagement, the Office of Sustainability, and the Butler Center for Volunteering and Leadership celebrate **FOOD DAY** annually. This event has helped connect entities like the UM Garden Club, the Plant based Canes student group, faculty members teaching food ethics and UM dining services to launch a series of initiatives: an herb garden at the Mahoney dining hall, a coffee ground collection program, or the opening of our first 100% vegetarian meals restaurant on campus.





Grounds

Beautiful and welcoming campus grounds can be planned, planted, and maintained in any region while minimizing the use of toxic chemicals, protecting wildlife habitat, and conserving resources. The University of Miami is a wonderful example of how natural flora can improve aesthetics along with community health.

The University of Miami - Coral Gables Campus has been designated **Tree Campus USA** by the Arbor Day Foundation. Our campus has a unique landscape architecture with elements designed specifically for its climate and natural setting. It conveys a positive and unified sense of place, coherency, and consistency. Its thoughtful landscape planning has become renowned worldwide as a “campus-in-a-tropical garden”. The campus enjoys many important vegetated areas, which include Lake Osceola, The Gifford Arboretum, the Palmetum and the Butterfly Gardens. Our goal is to preserve and enhance these important features. Our general purpose is to

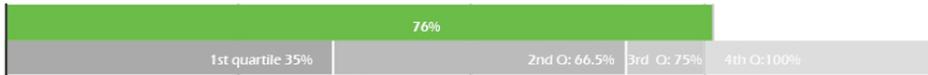
guarantee that the standards of beauty, sustainability and environmental stewardship are respected and applied on our campus landscape.

TREE
CAMPUS
USA



Grounds +

3.04 / 4.00



Score
Quartiles ?

The grey bar displays the scores for all STARS rated institutions of the same basic type as the institution featured in the report (Associate, Baccalaureate, Master, or Doctorate) in quartiles.

Credit	Status	Points
Landscape Management	✓ Complete	1.04 / 2.00
Biodiversity	✓ Complete	2.00 / 2.00 ?

- Percentage of grounds managed in accordance with an Integrated Pest Management program: 95%
- Percentage of grounds managed in accordance with an organic program: 4%

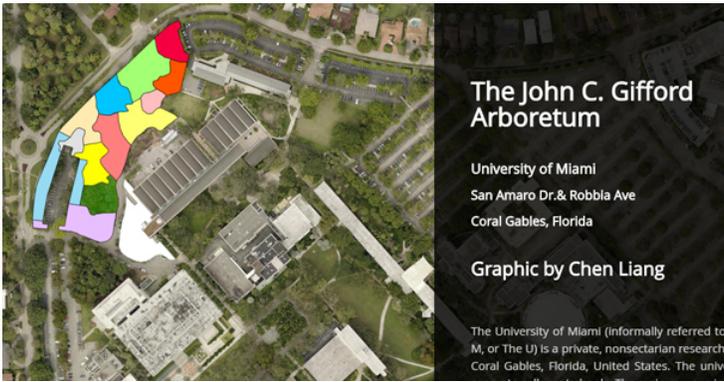
What next?



- Phase out the use of glyphosates herbicides.
- Increase the landscape areas managed organically
- Increase the installation of smart irrigation systems

The Gifford Arboretum is a collection of important trees and plants that have been assembled for the purposes of education and research.





No chemical pesticide is used on the shrubs and trees. Part of the mulch used in the Arboretum is locally produced from our yard clipping waste. The “Right tree in the Right place” concept is applied in our guidelines to avoid any damage to existing and future infrastructure. All plant material needs to be Florida No. 1 or better as specified within "Florida Grades and Standards for Nursery Plants" from the

State of Florida Department of Agriculture and Consumer Services.

The Gifford Arboretum Sustainability Garden

Dr. Weisskoff is one of three professors on campus who have integrated gardening into their classes. Abess Center for Ecosystem Science and Policy Professor Terri Hood, who specializes in environmental science and geology, has been working to create a garden that could be used in UM classes for years. Working with the University’s Office of Sustainability and the John C. Gifford Arboretum, Hood began using a garden space tucked in the arboretum, in what was once a landscape debris area.

The Sustainability Garden is now being shared by Hood and Professor Kathleen Sealey, who are teaching a course together, as well as Weisskoff’s class.

“The Gifford Arboretum Sustainability Garden is located on the University of Miami Coral Gables campus. Up until summer of 2018, it was a “temporary” dumping ground for tree trimmings etc. from around campus. For almost 5 years before this, U Miami faculty and students had been campaigning for dedicated gardening spaces for classes. During the summer of 2018 the site was cleared and leveled. Garden creation began in August 2018 and is ongoing.” Dr. Hood



ECO signs on Lake Osceola

If you stroll around Lake Osceola, you will discover signs about the ecology of our historic lake. This partnership between ECO and UM Administration gives a renewed sense of belonging and connection with our environment.

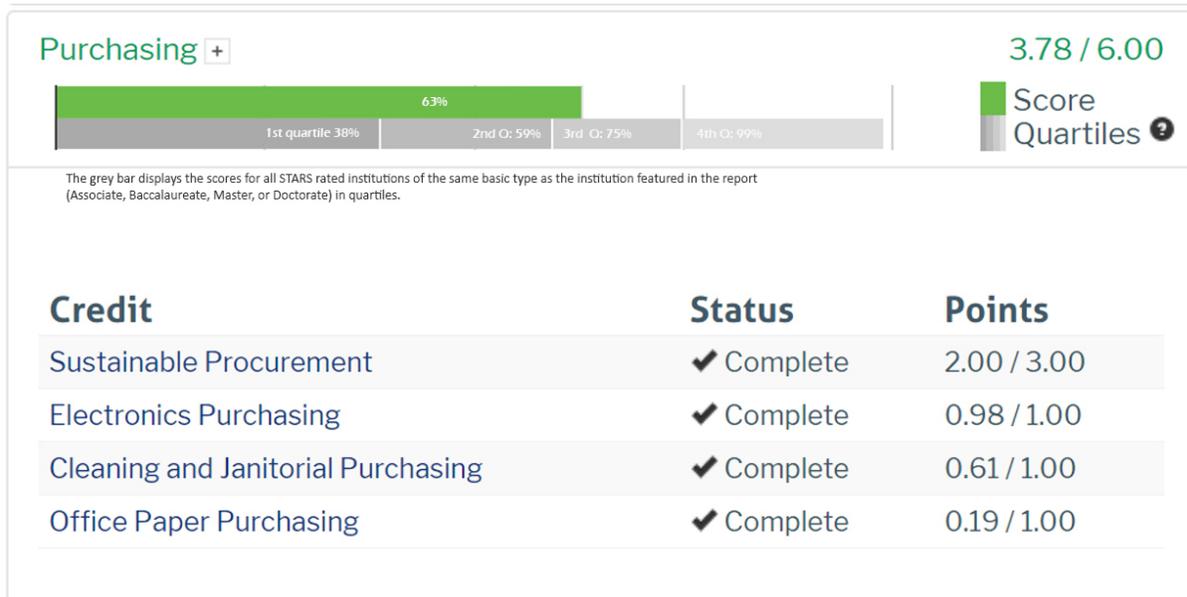


Supply Chain



Collectively, institutions spend billions of dollars on goods and services annually. Each purchasing decision represents an opportunity for institutions to choose environmentally and socially preferable products and services, supporting companies with strong commitments to sustainability.

- **Percentage of expenditures on electronic products that are EPEAT Gold registered: 96%**
- **Percentage of expenditures on office paper that is 90-100 percent post-consumer recycled and/or agricultural residue content and/or FSC Recycled label: 16%**





BSJ-180 SUSTAINABLE PROCUREMENT

PURPOSE

To strive to purchase environmentally and socially responsible materials, products, and services.

POLICY

In an effort to promote healthier and safer communities, both locally and globally, the University of Miami (UM) is committed to lessen environmental and social impacts throughout the organization. UM applies these principles to achieve optimal environmental and corporate social responsibility standards consistent with institutional goals and financial consideration.

PROCEDURE

1. Environmentally Preferred Products and Services (EPPS) guidelines:

UM will consider products and services that:

- Use renewable natural resources and conserve non-renewable natural resources through cost efficient use and careful planning.
- Conserve energy, water, and improve the energy efficiency of our operations. Make every effort to use and promote environmentally safe, cost-effective and sustainable energy and water sources.
- UM is committed to purchasing products that have earned the Energy Star label, and have met the Energy Star specifications for energy efficiency, wherever possible and practical (visit www.energystar.gov for complete product specifications and updated lists of qualifying products).
- Minimize the generation of waste through source reduction, re-use and recycling programs.
- Manage, minimize and eliminate, whenever possible, the use of hazardous materials.
- Ensure the health and safety of our employees, students, patients and community by promoting environmentally and socially responsible wellbeing best practices.
- Provide UM employees, students and patients with educational programs to promote safety, sustainability awareness, and social wellbeing.



Green Purchasing and Printing

University of Miami strives to purchase environmentally and socially responsible materials and products. Our Purchasing Department is committed to purchasing products that earn the Energy Star label and meet the Energy Star specifications for energy efficiency, wherever possible and practical.



Plastic bags and Polystyrene containers ban

The University was one of the first to comply with the City of Coral Gables bans on disposable plastic bags and polystyrene containers. The institution phased out cups, plates, plastic stirrers and plastic straws from its vendor’s catalogs, and swiftly adopted environmentally preferred products providing a good alternative to disposable plastic.



The Electronic Product Environmental Assessment Tool (EPEAT) is an easy-to-use resource for purchasers, manufacturers, resellers and others wanting to find or promote electronic products with positive environmental attributes. 96% of the University’s electronic products are **EPEAT Gold registered**



Recyclable Carpet: New Carpet contracts state that new carpet must comply with LEED standards as well as green carpeting standards. Old carpet must be recycled and new carpet must be recyclable.



Light bulbs: The University is pursuing an aggressive LED lighting installation program.



Cleaning Products & Equipment: Our Custodial Companies are required to follow those guidelines and many of the products that they use have one of the main Sustainable/Green labels, such as Green Seal. Staples is our official office supply provider and offers a wide range of “Easy on the Planet” products.

Paper Reduction program: Departments on the UM Miller School of Medicine campus are going 100% paperless, and many other departments at UM are working to implement similar programs. The University of Miami’s Document Management System is helping to implement solutions. The ECM Team has helped over 100 University departments streamline their operations and eliminate paper.

In July 2019, a **Sustainable Procurement Survey** was sent to our vendors to assess broad environmental considerations in our supply chain. Among the 384 answers received, here were some of the highlights:

- 41% offer a line of reusable products
- 28.5% offer products that are recyclable in SE Florida.
- 44% are shipping from less than 500 miles from our main campus.
- 13.5% have prepared and published their own Corporate Social Responsibility report.
- 22.5% of vendors appeared to have a formal Environmentally Preferred Products and Services policy.

Managed Print Services: The Department of Managed Print Services and Canon Solutions America have joined forces with Green U to promote environmental awareness through the system. MPS and Canon establish environmental goals and monitors their progress on a yearly basis. Initiatives are continuously undertaken to reach these goals, which focus on minimizing raw materials/use CO2, and the energy consumption.



You can **save 50% on your cost of paper** and use 50% less paper just by using duplex printing.

Document Scanning allows you to produce less paper waste and keep your documents more secure.

Black & white printing/copying as a default provides greater **cost savings** over color.

What next?

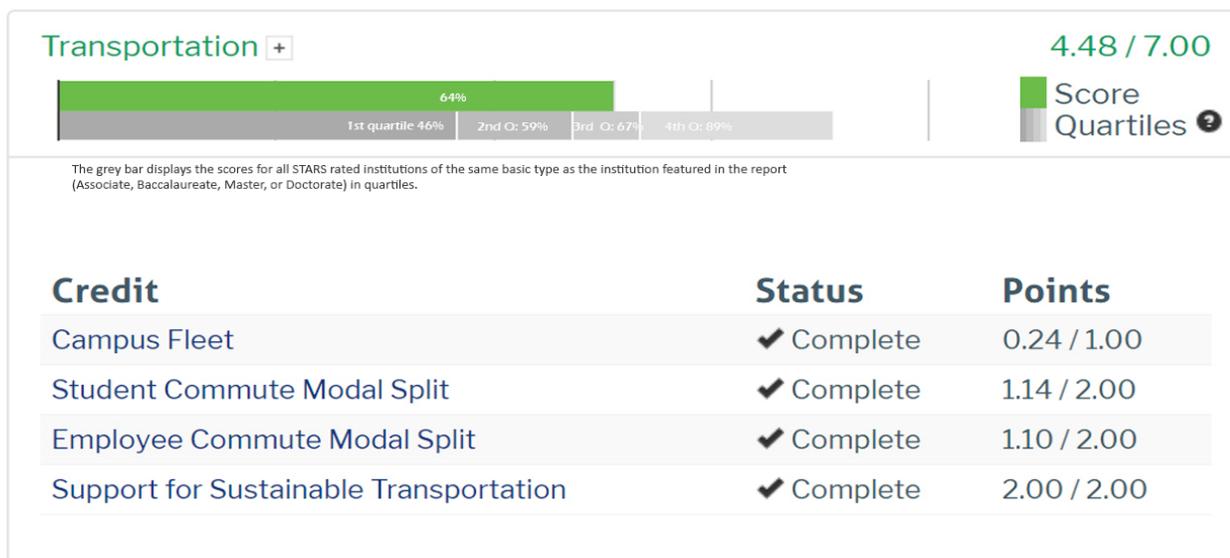


- Increase the amount of Environmentally Preferred Products in UM approved catalogs
- Collaborate with the Miami Herbert School of Business MS in Sustainable Business to elaborate a Life Cycle Cost Analysis (LCCA) guide for materials, energy and water related products and services in big renovations at the University.

Transportation



Transportation is a major source of greenhouse gas emissions and other pollutants that contribute to health problems such as heart and respiratory diseases and cancer. Campuses can reap benefits from modeling sustainable transportation systems. Bicycling and walking provide human health benefits and mitigate the need for large paved areas, which helps campuses better manage storm water.



- **Total percentage of students (graduate and undergraduate) that use more sustainable commuting options as their primary means of transportation: 57%**



What next?

- Increase Level 2 charging stations available on campus
- Adoption of mobile applications to facilitate carpooling, mass-transit, or other alternative transportation modes.



Transportation

Transportation accounts for the second largest source of campus emissions. The University of Miami's transportation initiatives can serve as a model for the region. The University strives to maintain a campus-based, multi-modal transportation system that promotes walking, bicycling, public transit, vehicle pooling and vehicle sharing.

Despite the constraint and challenges of new parking space availability mandated by our local authorities, the main campus added **6 new Level 2 Charging stations for Electrical Vehicles** to the already existing Level 1 outlets available in our CRB building (Medical campus) and our new Marine Technology & Life Sciences Seawater Research Building (RSMAS).





Public Transportation Passes: University of Miami employees and students can take advantage of an environmental friendly initiative that addresses some of the challenging transportation issues in our community: Up to 50 percent savings on the monthly cost of Miami Dade County Mass Transit passes.

Zipcar: The program allows members to reserve fuel-efficient cars online, via phone or mobile device, for a small hourly rate that includes gas and insurance. That is especially helpful for **freshmen residents at UM, who are not allowed to have a parking permit on campus.**

Carpool to Campus: The University of Miami has collaborated with South Florida Commuter Services (SFCS), a program of the Florida Department of Transportation, to provide transportation related programs and services to UM students, faculty and staff. Students, faculty and staff that carpool to the Coral Gables or RSMAS campus can register their carpools and be entered in the SFCS Emergency Ride Home program. RideFlag, the University's official carpool mobile app, provides carpool matches in real time and allows you to schedule future carpool rides or ride with a fellow 'Cane.



UM's Bicycle Reuse program recently partnered with **Good Will SF** to repurpose old bikes left by students on campus.

GEM Neighborhood Electric Vehicles: Road ready with speeds up to 35mph. Among the University's fleet, several are powered by solar energy.



U Bike: The program facilitates the selling of bicycles and helmets at the bookstore at a discounted price to students. Registered students will also have access to free bike locks that can be picked up at the UM police station. As part of this initiative, the University has widened sidewalks, and added bike racks and repair stations to the Coral Gables campus. The University of Miami also welcomes the use of skateboards, inline skates, scooters, and other human powered transportation. The University of Miami was recognized as a **Bike Friendly University (BFU)**



by the **League of American Bicyclists**, joining a small group of elite schools that have also earned the honor.



Through the **Walking Canes program**, the University’s Mobility Plan prioritize pedestrian access to different parts of the Coral Gables campus.

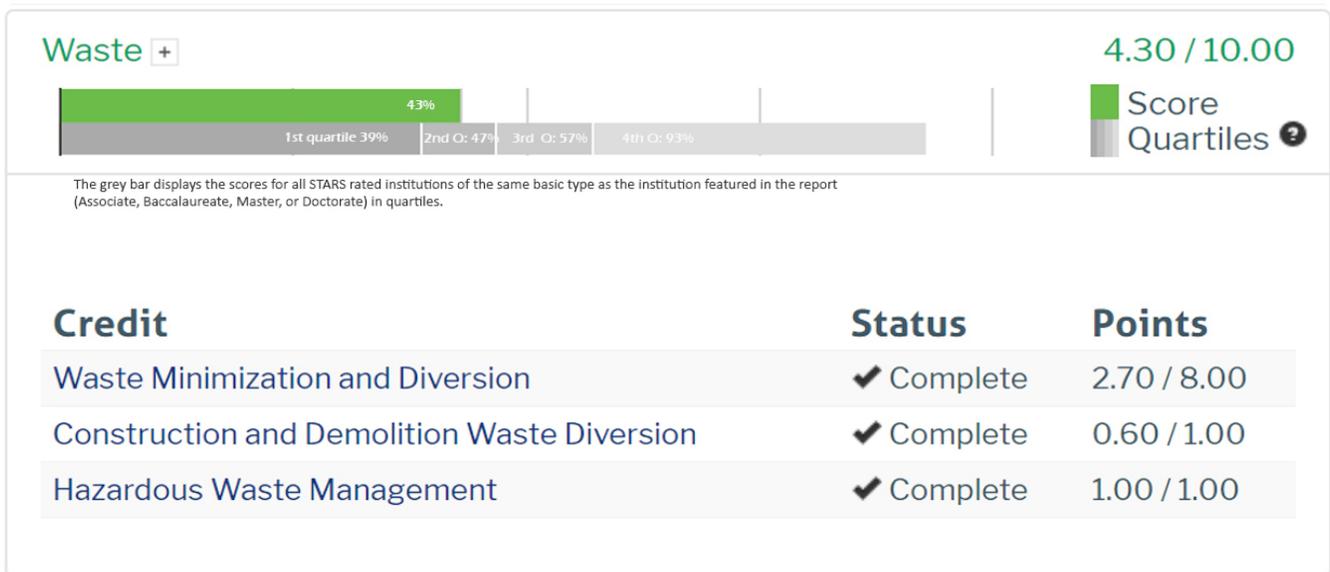
“We are committed to providing safe and reliable parking and transportation options that provide mobility, accessibility, and enhance sustainability

for the University community. Our department is responsible for the overall management of parking facilities, traffic control, and meeting the transportation needs of the Coral Gables campus” UM Parking & Transportation





Reducing the generation of waste also reduces the flow of waste to incinerators and landfills, which produce greenhouse gas emissions, can contaminate air and groundwater supplies, and tend to have disproportionate negative impacts on low-income communities. Source reduction and waste diversion also save institutions costly landfill and hauling service fees. In addition, waste reduction campaigns can engage the entire campus community in contributing to a tangible sustainability goal.



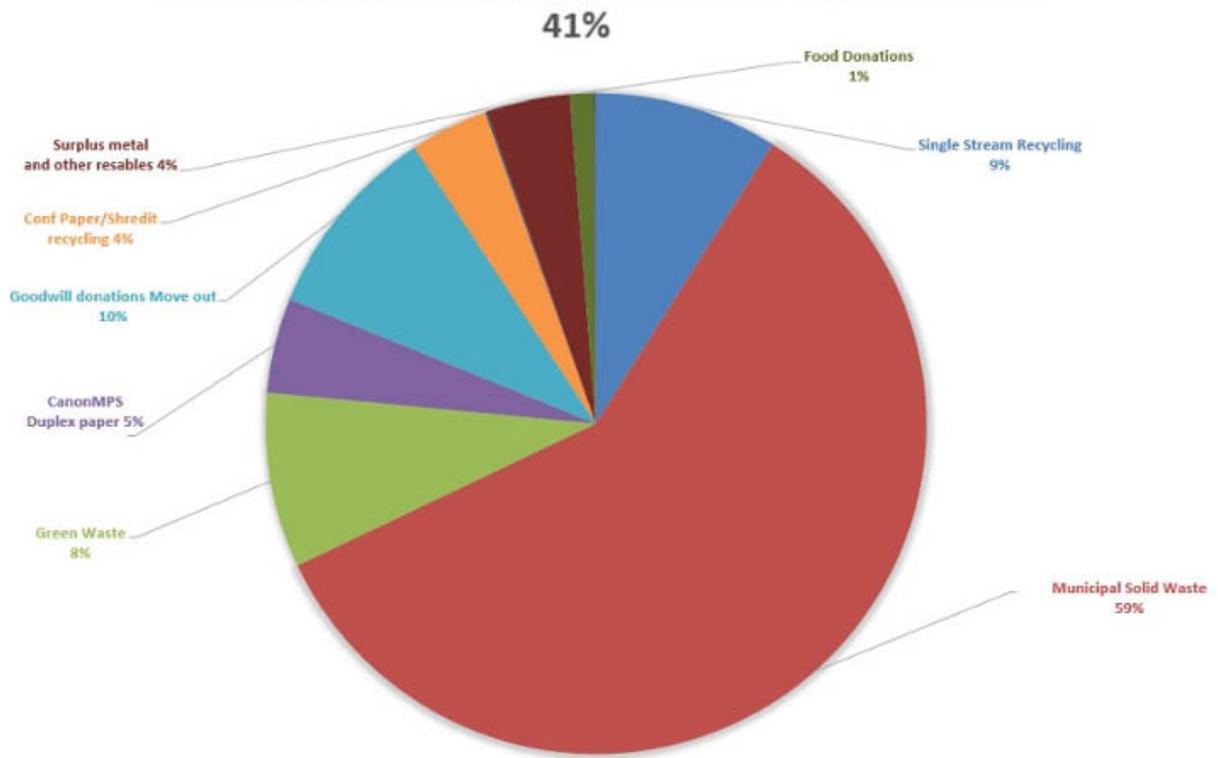
- Percentage of materials diverted from the landfill or incinerator by recycling, composting, donating or re-selling in FY2018: 34.5%.
- Percentage reduction in total waste generated per weighted campus user from FY2013: 10%



What next?

- Reduce the University's waste generation and increase its diversion rate from landfill

Waste Diversion from landfill Coral Gables campus - Jan 2019





Recycling & waste diversion

The University of Miami is committed to recycling and waste minimization. On all our campuses, the University is constantly working to reduce, recycle and find better end uses for our waste streams. Here are the main programs promoting waste minimization and diversion on campus:

Single Stream Recycling: The University has been implementing an aggressive single stream recycling campaign since the 2000's. The Green Office also promotes a best practice consisting of trading desk trashcans for centralized waste stations, increasing the rate of recycling.



Confidential Paper Shredding and recycling: Third-party companies oversee collection, shredding, and recycling of our confidential paper.

Mulching and composting: Part of the University's yard waste, landscape trimming, and tree pruning waste is mulched and used on site, the rest is turned into mulch or wood pellets by a local recycling vendor. This program does not include any food waste, but supplies our extensive landscaping mulch needs in the Arboretum. Our Mulching on site practice offsets 470 Tons of green waste per year from our landfills.



Toner and Cartridge recycling: Staples and Canon Cartridges Recycling program is available through U Marketplace for any UM offices to use for free.

Single-use battery recycling: Offices pursuing the Green Office program collect their used batteries, and ship them back to the vendor they contracted with when their box is full.



Food waste

Tray-less Dining Halls: The two main dining halls on the Coral Gables Campus have gone tray-less. The purpose of this program was to reduce food waste and water/energy use associated with the use of dining hall trays.

In 2015, UM Dining decided to standardize our **Used Cooking Oil** disposal practices by contracting with a new vendor. This change allowed the recycling of more than 15,000 Lbs. of Used Cooking Oil a year.

A program launched in partnership with Green U, UM Dining and Grounds Management reuse the **Coffee grounds** generated in our Starbucks for soil amendment in our sustainable garden.



Food Recovery

UM Dining Services, the Student organization Food Recovery Network and the Miami Rescue Mission collaborate all year long to donate food. Food Recovery Network recently launched a Food Alert program where students considered at food insecurity risk receive notices from events that wish to donate their leftovers.

Pilot Composting program in the Arboretum Sustainable Garden

Selected senior residents and farmers market vendors collect their food scraps, and are invited to drop it during our composting management opening hours. The compost generated is applied directly on site at the garden.

E Waste, appliances, furniture and bulk recycling: The University of Miami Property Surplus Department handles all transfers, disposals, and recycling of University Property. The Surplus Office will contact the department and arrange free pick-up and/or disposal. In 2018, Surplus started promoting their inventory on Facebook for UM community's convenience. Our IT Department allows for proper disposal and recycling of UM owned electronic devices. For personal electronics, our U Tech Source located in our Book Store takes old technology and gives a trade-in quote for the device, even if it is broken. All trade-ins are repurposed, nothing goes to landfill. For rechargeable batteries, our Facilities customer service picks them up on demand and disposes of them with certified third parties for recycling.

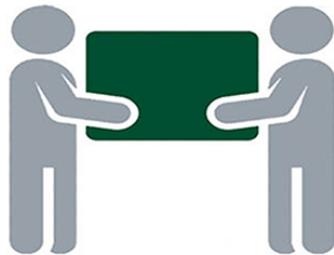
Go disposable plastic free!

From the moment they register for orientation, UM freshmen are encouraged to go disposable plastic free, reusable utensils, metal straws and reusable water bottles are part of the kit they are provided with to start their journey at the U!



GREEN your MOVE OUT

Take canned and packaged food to the Feeding South Florida bins in the Dining Halls



Take **big items and electronic waste** to the Goodwill container (cabinets, furniture, printers, flat screens, laptop,...)

DON'T THROW AWAY YOUR STUFF!

Clear bags for clean and empty recyclables
Black bags for trash

miami.edu/sustainability



Green Move Out: During Move out, Earth Week and other events, the University partners with Good Will to make sure students used belongings are reused and do not end up in a land fill. Containers are placed throughout campus for drop off. The University also partners with Feeding South Florida to collect packaged food. In 2019, the Green Move Out donated 83,070 Lbs. of goods to Good Will and 994 Lbs. of packaged food to FSF.

ReUse Initiatives: The ReUse Store offers an alternative for departments cleaning out their space. Instead of throwing away their small office supplies, and because UM Surplus Property warehouse only deals with large items like furniture and computers, the ReUse store is an excellent way to make another department happy. At the end of the year, the remaining items are donated to the Miami Dade Education Fund

ReUse Store



 f @UMUthrift

Wednesdays 11:30am - 2:30pm
at the Farmer's Market

DONATE lightly used items
such as clothes, shoes, books, knick-knacks, etc.

PICK UP one bonus item for each item that you donate or
pick up one FREE item anytime



As a result of these efforts, our **rate of waste diversion is constantly over the 35%**. Our goal in the next 2 years is to reach a 45% diversion rate with the implementation of more reuse, recycle and reduce programs.

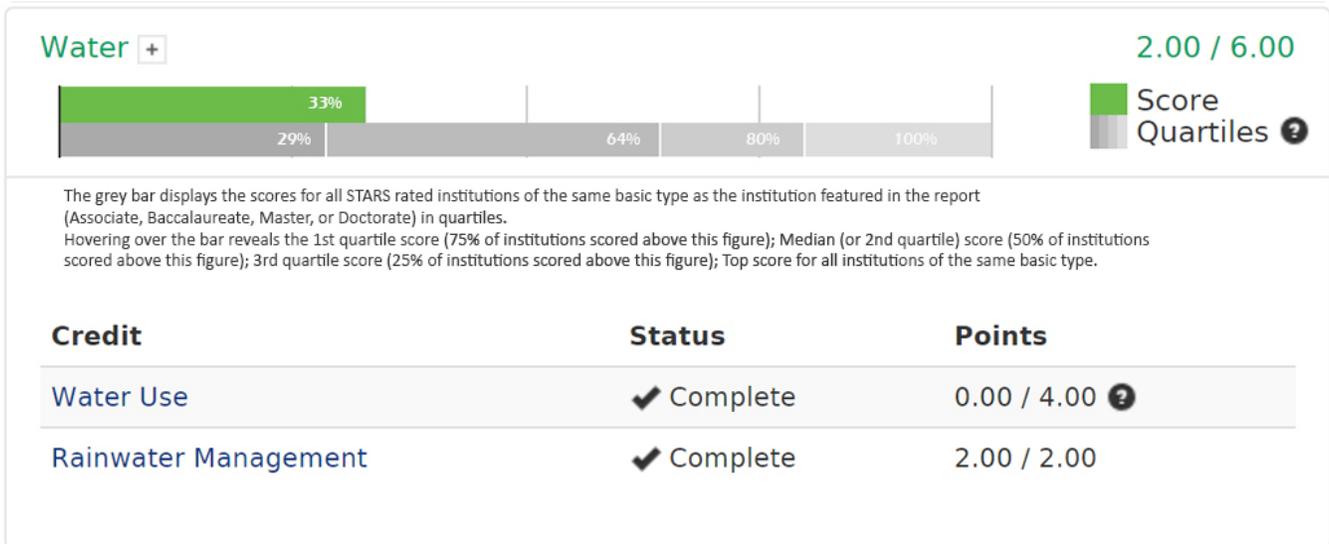


Institutions should conserve water, make efforts to protect water quality and treat water as a resource rather than a waste product. Pumping, delivering, and treating water is a major driver of energy consumption. Institutions can help reduce energy use and greenhouse gas emissions associated with energy generation by conserving water. Likewise, conservation, water recycling and reuse, and effective rainwater management practices are important in maintaining and protecting finite groundwater supplies. Water conservation and effective rainwater management also reduce the need for effluent discharge into local surface water supplies, which helps improve the health of local watersheds and ecosystems.

- Potable water use per weighted campus user FY2013: 18,543.74 Gallons; FY2018: 20,711.48 Gallons
- Potable water use per unit of floor area FY2013: 36.79 Gallons / GSF; FY2018: 41.56 Gallons / GSF

What next?

- Reduce our Potable water use per weighted campus



Water

The University of Miami is constantly looking for ways to reduce water use. Our Facilities department has adopted best practices and technologies to optimize the campus' water use and further promote the University's water conservation efforts despite a constant growth in demand. Our initiatives in this area include:

- The replacement of all resident hall and apartment shower heads with low flow models.
- The installation of smart irrigation systems.
- An ongoing, aggressive leak detection program to prevent excessive water consumption.
- An ongoing replacement program of urinals and toilets to low flow models.
- An ongoing conversion of campus irrigation systems to well water in lieu of domestic water usage.



All new buildings are LEED Silver at a minimum, and LEED certified buildings are performing at least 40% better in water consumption than standard building of the same size.

Rainwater harvesting: The Sustainable Garden located at the edge of the Coral Gables campus Gifford Arboretum saves water by using rain barrels for its irrigation needs. The main advancement in water conservation has been the installation of a rainwater harvesting system in the **Frost School of Music Studio LEED Platinum building** that provides for all its non-drinking water demand, toilets flushing included. On the RSMAS campus, a **closed loop system has been installed in the Chiller plant: 90% of condensate water** is recirculated in the system as makeup water for the cooling towers. Submeters have been installed to measure the percentage of condensate in the mix, generating an average of 300 gallons per day or 10% of the cooling tower demand.

Most of us would be surprised to hear that the average person uses **over 100 gallons of water per day**. What is even more surprising is that most of this consumption goes towards **flushing toilets**.

WATER EFFICIENCY

This building incorporates a water supply system design that reduces the overall water consumption by **40%** compared to a standard building of similar size.

Conserve water at home

- Install low flow showerheads and water misers
- Install WaterSense labeled toilets
- Make sure to wash only full loads
- Turn off the faucet while brushing your teeth

MIAMI.EDU/SUSTAINABILITY | SCHOOL of NURSING & HEALTH STUDIES | ECO





Frost School of Music Studios - LEED® Platinum Rain Harvesting System

Many LEED building achieve good rating on water conservation thanks to dedicated **Native landscaping and Xeriscape** best practices.



As Orientation week kicks in, a **reusable bottle is offered to every freshman by Green U and ECO Board**. Students can look for fountains on our new online Hydration stations map, and sign the “Take back the Tap” pledge.





Coordination & Planning



Colleges and universities are institutionalizing sustainability by dedicating resources to sustainability coordination, developing plans to move toward sustainability, and engaging students, staff, faculty, and community stakeholders in governance. Staff and other community members help an institution organize, implement, and publicize sustainability initiatives.

“Our Facilities Operations and Planning group is leading the effort to seek new and innovative ways for the University to meet its sustainability goals through conservation, reducing, reuse and recycling programs [...] and reducing their energy consumption”

University of Miami Strategic Plan. p 44



Diversity & Affordability



The historical legacy and persistence of discrimination based on racial, gender, religious, and other differences make a proactive approach to promoting a culture of inclusiveness an important component of creating an equitable society. Higher education opens doors to opportunities that can help create a more equitable world, and those doors must be opened through affordable programs accessible to all regardless of race, gender, religion, socio-economic status and other differences. In addition, a diverse student body, faculty, and staff provide rich resources for learning and collaboration.

“The University of Miami is committed to blending our cultures into a harmonious family atmosphere and accepting each as a vital link in our mission. Workplace Equity and Performance is responsible for implementing diversity initiatives to increase diversity awareness throughout the University of Miami community.” Human Resources Dpt.

IT'S ON



WE'RE HERE TO HELP U

Empowering individuals to overcome sexual misconduct and gender discrimination

miami.edu/itsonus

Diversity & Affordability +

8.51 / 10.00



Score Quartiles ?

The grey bar displays the scores for all STARS rated institutions of the same basic type as the institution featured in the report (Associate, Baccalaureate, Master, or Doctorate) in quartiles.

Credit	Status	Points
Diversity and Equity Coordination	✓ Complete	2.00 / 2.00
Assessing Diversity and Equity	✓ Complete	1.00 / 1.00
Support for Underrepresented Groups	✓ Complete	1.92 / 3.00
Affordability and Access	✓ Complete	3.59 / 4.00

- **The Standing Committee on Diversity, Equity, and Inclusion is entrusted with the researching, recommending, and promoting educational and programmatic efforts that are consistent with UM’s unwavering dedication to diversity and inclusion.**
- **The percentage of need that was met for students who were awarded any need-based aid: 99%**
- **The graduation/success rate for low-income students: 81%**
- **The percentage of students graduating with no interest-bearing student loan debt or for whom no out-of-pocket tuition is required: 60%**

The University of Miami is dedicated to providing people of all abilities, gender identities and expressions, a safe and comfortable environment. [...] Employee Resource Groups (ERG) are collaborative networks of employees, organized around a dimension of diversity. Their shared goal is to enhance the University’s culture of belonging, making UM a place where everyone feels welcomed, valued and able to add value.



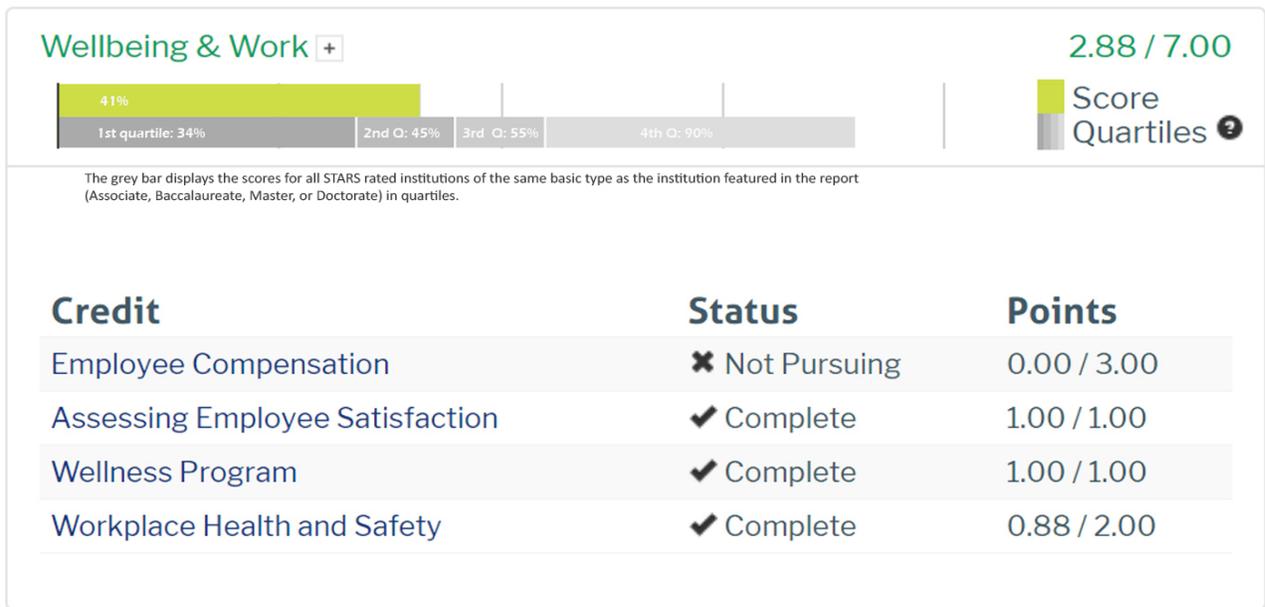


Wellbeing & Work

An institution's people define its character and capacity to perform; and so, an institution's achievements can only be as strong as its community. An institution can bolster the strength of its community by offering benefits, wages, and other assistance that serve to respectfully and ethically compensate workers and by acting to protect and positively affect the health, safety and wellbeing of the campus community.

"Discounted Public Transit is available to all full-time faculty and staff who have benefits, and to all full time students. [...] The Walking 'Canes program motivates University of Miami faculty and staff to reach walking milestones." Human Resources Dpt.





- **Percentage of employees (staff and faculty) assessed by a survey or other evaluation that allows for anonymous feedback to measure employee satisfaction and engagement: 100%**
- **The University of Miami provides a comprehensive wellness program to all faculty and staff based on a holistic view of well-being that incorporates physical, psychological, interpersonal, financial, communal and occupational dimensions of wellness.**

Well 'Canes Market

The Well 'Canes Marketplace offers a variety of items such as produce, kettle corn, acai bowls, organic honey, gyros, baked goods, Shea butter and soap, and much more.



Telecommuting arrangement

The University of Miami has created guidelines, policy, and procedures to help facilitate telecommuting arrangements. Telecommuting entails regularly working outside of the office for at least part of the workweek. With adaptation to the new Covid 19 pandemic reality, Teleworking, online courses and training have been enhanced like never before.

Tobacco Prevention Education Program

Smoking and/or the use of any tobacco product is prohibited in all areas of the university campus. The University of Miami is committed to promoting a healthy environment for the well-being and safety of staff, students, faculty, patients, visitors and all individuals who have a presence on our campuses.



Conclusion

Southeast Florida has been labeled as “ground zero” for sea level rise. Community leaders, elected officials and private partners have already started adapting to this threat. The University of Miami, as a leader in higher education, innovation, health and research, is playing a special role not only in the region, but in the Hemisphere. This Sustainability Report 2020 offers a holistic view of the University’s approach to climate change mitigation, and how we foster sustainable behaviors and investments in our institution’s values. Since our last milestone in 2016, the University of Miami has kept on reducing its carbon footprint, on track with its 20% reduction by 2020 initial target. We are following our roadmap, and are confident that after this 2020 update, we will be on our way to uphold new bolder challenges.

