UNIVERSITY OF MIAMI
OFFICE OF SUSTAINABILITY

SUSTAINABLE OPERATIONS PLAN 2035

INTRODUCTION & HISTORY

The University of Miami's **Sustainable Operations Plan 2035** is a roadmap to reaching net-zero carbon emissions, detailing projects in energy efficiency, materials management, the built environment, purchasing, waste diversion, and water. It is the result of intensive collaboration with UM staff, across departments, responsible for operating the Coral Gables and Rosenstiel Campuses. The plan establishes a framework for strategically developing, implementing, and managing projects that contribute to meeting UM's sustainability goals. Through its teaching and research endeavors, as well as the operations of its overall enterprise, the University of Miami is committed to the safeguarding of the environment.

The American College and University Presidents' Climate Commitment is a project developed by the national organization 2nd Nature in partnership with the Association for the Advancement of Sustainability in Higher Education (AASHE), from which the University of Miami is an active member. The commitment provides a framework and support for America's colleges and universities to become carbon neutral. The University of Miami reports its Green House Gas inventory through the 2nd Nature Reporting Platform.

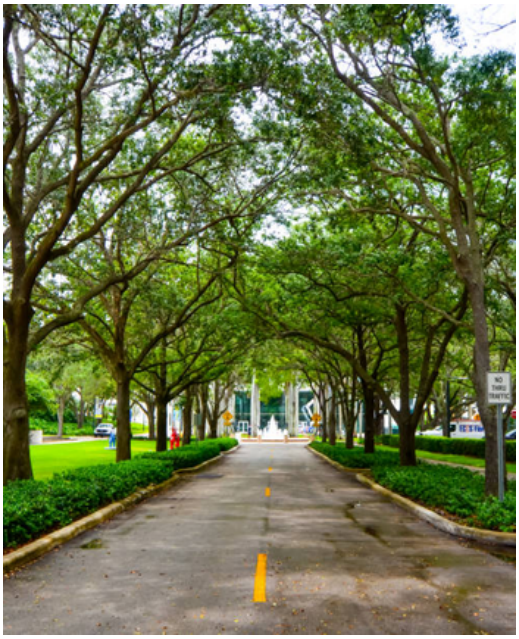
The Office of Sustainability's efforts are coordinated through the Department of Facilities, Operations and Planning. Green U works with staff, faculty, students, alumni and community partners to promote a culture of environmental stewardship and sustainable development. Its mission is to spread sustainable behaviors, practices, and policies that will minimize our impacts on natural resources, reduce our carbon footprint and foster a more balanced relationship between humans and their surrounding environment.

Since 2017, the University has decided to use the Sustainability Tracking Assessment and Rating System (STARS), developed by AASHE, as the most appropriate tool for this endeavor. STARS is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. In 2024, UM received a Gold rating on STARS for its achievements in sustainability performance. This ranking was allowed by the implementation of our Sustainability Action Plan 2019.

ROADMAP TO OUR NEW CENTURY

"Improve the effectiveness and efficiency of administrative and operational processes that are critical to our long-term success. **Further expand our commitment and the major efforts already underway to advance environmental responsibility across our University and reduce our carbon footprint.** Grow our endowment to provide financial stability while enabling us to make strategic investments, pursue opportunities, and respond to challenges."

University of Miami Mission Statement



Addressing Regional Challenges

There are several pressing climate issues that affect the South Florida region. The most significant ones that impact the University of Miami community include sea level rise, hurricane intensification, flooding, and extreme heat.

Sea Level Rise - Due to our low-lying coastal geography and porous limestone foundation, Miami is one of the most vulnerable cities in the world to sea level rise. Sea level rise can lead to more frequent and severe flooding that endangers infrastructure, as well as saltwater intrusion into freshwater aquifers, posing a serious threat to our freshwater supply.

Flooding - With rising sea level and increasing amounts of annual rainfall, certain low-lying areas in Miami are at extreme risk for flooding. According to Miami-Dade County statistics, the county elevation average is 12 feet above sea level.

Extreme Heat - Miami is experiencing rising temperatures due to climate change. The 'heat island effect,' where urban areas with limited tree cover become significantly hotter than surrounding rural areas, is an increasing challenge. It contributes to health problems like heatstroke and increases strain on energy resources due to higher demand for cooling.

Hurricane Intensification – As the climate warms, rising sea surface temperatures provide additional energy for hurricanes, increasing the likelihood of more intense and destructive storms in South Florida.

CARBON NEUTRALITY

GOAL #1:
GHG EMISSIONS

Reduce GHG emissions by 90% from the 2013 baseline.

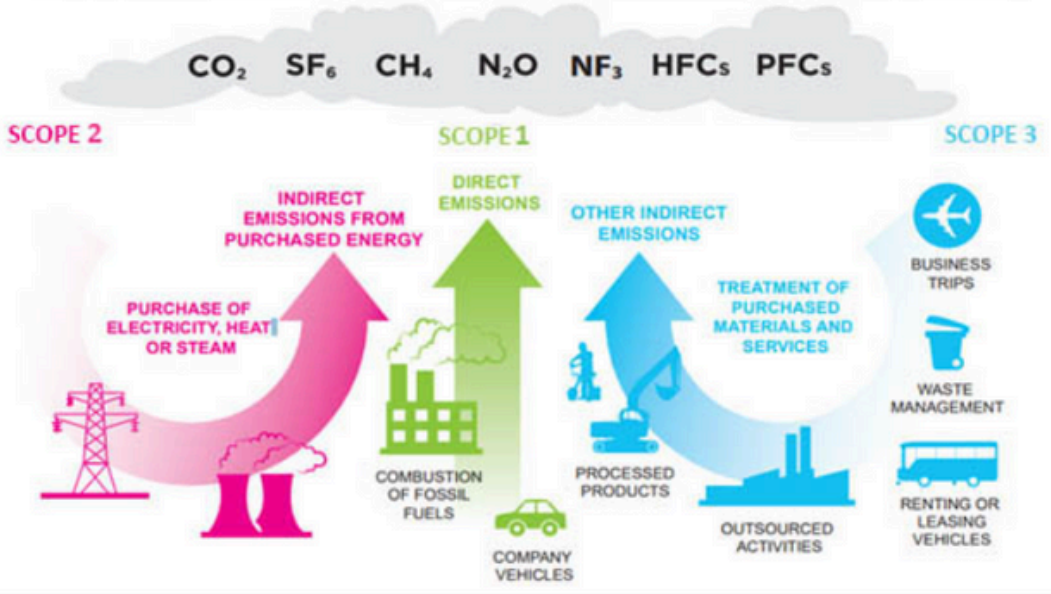
Achieving our goal of reducing scope 1 and 2 greenhouse gas (GHG) emissions by 90%, will help in mitigating climate issues in South Florida by slowing the root cause of climate change—global warming. Lower emissions reduce the warming of both the atmosphere and oceans, which in turn slows sea level rise and subsequent flooding, lessens the intensity of hurricanes, and minimizes the risk of extreme heatwaves. Overall, reducing GHG emissions can help protect vulnerable regions, like South Florida, from the most severe climate impacts. Thus far, we have achieved a 79.6% emissions reduction for scopes 1 and 2 emissions on the two campuses.

WHERE WE ARE

Goal 1: Reduce GHG Emissions by 90% from the 2013 baseline

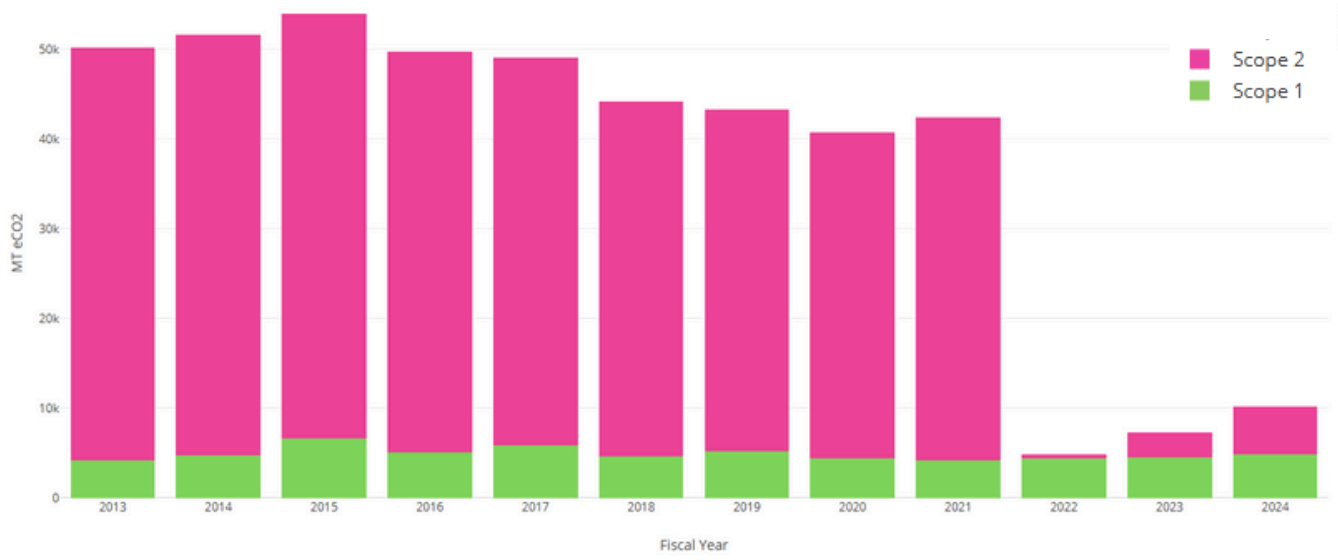
80%

79.6% reduction calculated using GHG emissions (MT CO2e) for the Coral Gables and Rosenstiel campuses from 2013 and 2024



CARBON NEUTRALITY

Historical Greenhouse Gas Emissions by Scope



The above graph shows how the University of Miami's emission consumption levels, standardized in metric tons of carbon dioxide equivalents (MT eCO2), have changed over time from 2013 until now. What can be seen is that Scope 1 emissions have slightly decreased despite a growing campus size. A great reduction is seen in Scope 2 emissions between 2021 and 2022, which represents the beginning of the FP&L Solar Together partnership.

FP&L Solar Together Program

In 2019, the University of Miami joined Florida Power & Light's Solar Together program, becoming one of the largest higher education institutions in Florida to harness solar energy to power nearly all of its campuses. The electricity purchased from FP&L represents the majority of the total greenhouse gas emissions of the University, and puts us well on our way to reaching a 90% reduction in our GHG emissions.

ENERGY EFFICIENCY

ENERGY USE

Reduce energy consumption by 35% compared to the 2013 baseline.

Despite a campus size that has grown by over 1 million square feet or a 17% increase since our 2013 baseline, our energy consumption per square foot of building space has decreased over time. The infrastructure and facilities are constantly changing, growing, and improving to meet the needs of the students, faculty, staff, and visitors of the University.

Most recently, the UC Pool has implemented a geothermal heat pumps and an 80 KW solar array was installed on the Fieldhouse building. Retro-commissioning of existing buildings and utilities are helping reduce our consumption too.

WHERE WE ARE

Goal #2: Reduce energy consumption by 35% compared to 2013 baseline

12%

A 12.1% reduction in energy consumption is seen when comparing total kWh per campus user on the Coral Gables and Rosenstiel campuses from 2013 and 2024

Chiller and HVAC Units Energy Conservation

On the **Coral Gables campus**, the department of facilities management has developed an initiative to conserve energy by reducing the run times of our campus chilled water utility plants and increasing our supply chilled water temperature, from 42 to 46 degrees Fahrenheit. By doing this, we will not have to run as many machines fully loaded during peak hours, saving energy and costs.

We have also reduced the quantity of run times on most of our building AC systems by developing a detailed run schedule for each building. This will reduce the run times for building systems when those buildings are unoccupied. Reducing run times will also reduce wear and tear on the mechanical equipment systems.

ENERGY EFFICIENCY

Most recently on the **Coral Gables campus**, upgraded Building Management Systems (BMS) have been implemented to improve efficiency at 6 buildings: Communications, Schwartz Center for Nursing & Health Studies, Herbert Wellness Center, Watsco Center, Newman Alumni Center, and Knight Physics Building. Implementing these upgrades has resulted in great gains in chilled water and electricity efficiency thus far.

To coincide with those BMS upgrades, we have partnered with Siemens to utilize their AI Platform "Activity Central" at the Herbert Wellness Center. This platform makes the Herbert Wellness Center our first fully smart building and will allow the building to behave more efficiently and provide us with opportunities to save. We are also currently conducting another pilot at the Newman Alumni Center that will provide recommendations to improve efficiency using real occupancy data. This data will inform us on the number of people within the space at different times of day so that we can improve run schedules.

Lastly, the installation of two new chillers, one at the Mahoney-Pearson Utility Plant and one at the Central Energy Plant (CEP) are already showing great gains in energy efficiency.

At the **Rosenstiel Campus** on Virginia Key, we have taken considerable steps to improve energy efficiency. This past year, the department of facilities management at Rosenstiel completed an overhaul of the main chiller plant. This project involved the implementation of a new cooling tower fill and acid washing condensers for descaling. These actions have resulted in significant run time reductions and energy use reductions.

At the LEED Gold Marine Technology and Life Sciences Seawater (MTLSS) Research Building, the Pumphouse Seawater filter has been replaced, which has caused a significant drop in differential pressure across the filter. This has resulted in energy usage reductions as a lower pressure difference indicates that less energy is used to pump seawater.

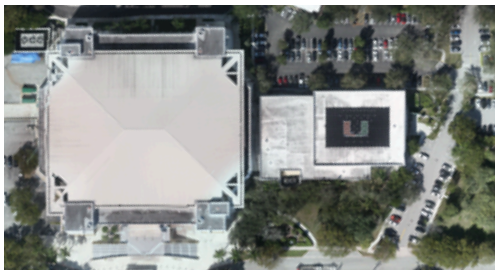
Additionally, Two Air Handling Units (AHU) at the Cooperative Institute for Marine and Atmospheric Science (CIMAS) building have been replaced to improve energy efficiency.

Renewable Energy

The University of Miami currently has three rooftop solar installations on the Coral Gables Campus. A 20 kW system sits on the roof of the Hurricane Food Court and a second 70 kW system exists at the Frost Studios North and South. The most recent is the **90 kW solar installation at the Fieldhouse Practice Building** which was partially sponsored by Student

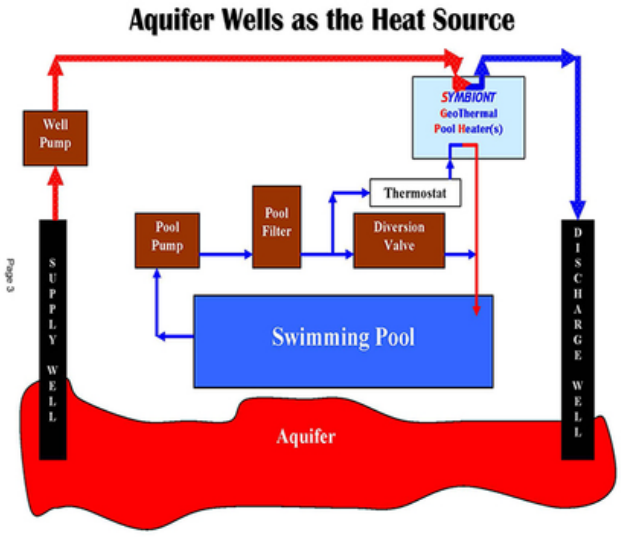
ENERGY EFFICIENCY

Government's ECO Agency. ECO Agency has also sponsored a **Solar Bench** in the Gifford Arboretum that allows students to charge their electronic devices using solar power. See both new additions below.



The UC Pool is now heated and cooled with a **Geothermal heat pump**. Instead of using a traditional natural gas powered pump, the UC pool geothermal system uses the difference of temperatures between the surface and deep underground to provide heat or cool without burning any fossil fuel. It brings many benefits and considerably reduces the carbon footprint of that area of campus. Compared to Gas heaters which have a 5-year serviceable life expectancy and Air Source heaters that have a 6-10 year serviceable life expectancy; the University of Miami can expect to utilize the current Geothermal heat pump for the next 15 to 20 years.

As illustrated below, pool water passes by the Thermostat and through the heater prior to returning to the pool. When the Thermostat senses the pool needs heat, the system cycles on and the well pump begins to deliver water to the heater(s). The well water and pool water never mix. The Symbiont GeoThermal Pool Heater system then transfers the heat stored in the well water to the pool water through a refrigerant cycle detailed in a separate diagram. The transfer of free heat in a water to water system (GeoThermal) is much more efficient than that of an air to water system (standard heat pumps) or a heat generated system (gas heater). Because the ground water remains a constant temperature throughout the year, the Symbiont system can exceed the performance of both standard heat pumps and gas heaters. When the pool has reached the desired temperature the heater(s) and well pump will cycle off.



GREEN BUILDINGS

100%

BUILDINGS

Achieve 100% compliance with LEED standards or equivalent for new constructions and major renovations

The University has a strict commitment to LEED certification for new construction, supported by the Green Building Policy, and we are currently updating our existing buildings to be more energy efficient as well. The Green Building Policy states that all new buildings and major renovations at the University of Miami must achieve at least a LEED Silver rating, with efforts to exceed this standard when possible. Minor renovations will follow sustainable design practices, and all projects must adhere to updated University Building Component Standards, with LEED-accredited staff involved in the design and construction process.

The Design and Construction department has certified 1.2M square feet of Green Buildings to date and is in the process of developing an additional 727,000 square feet of LEED-certified facilities. The US Green Building Council (USGBC) has certified 17 buildings on the University of Miami campuses, with most of them certified at the Gold level. In 2022, the Miami Herbert Business School was awarded the LEED Platinum certification for its ongoing operations and maintenance efforts.

Currently, the Design and Construction department is working to develop a Sustainable Design and Construction Guide that will provide the University with a framework for best practices for new constructions, major renovations and additions, as well as interior fit outs.

WHERE WE ARE

Goal #3: Achieve 100% compliance with LEED standards or equivalent for new constructions and major renovations

100%

100% compliance with LEED Standard for new construction and big renovation projects will be achieved by July 2025 through the completion of the Sustainable Design & Construction Guide

GREEN BUILDINGS

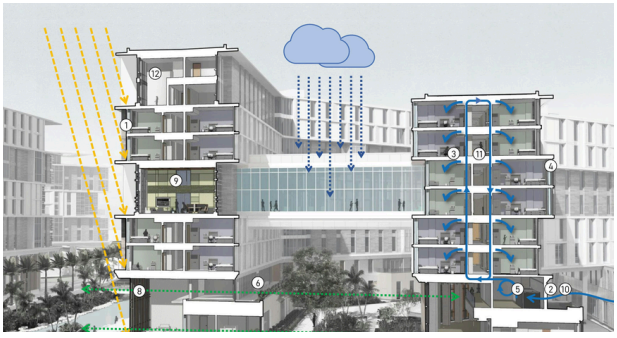
New Builds & LEED Certifications

Lakeside Village was completed in 2022, and is a **LEED Gold** residential college. Sustainable design features of the Lakeside Village Housing units include the first green roofs on residential student housing in our region, rain gardens to manage storm water, HVAC heat recovery systems, as well as stilt structures to address climate resilience. Check out the virtual tour HERE!

The **Miami Herbert Business School** (MHBS) has achieved **LEED Gold Certification for Existing Building Operations & Maintenance (EBOM)** as designated by 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.

In 2023, the **MHBS** was awarded the **USGBC Florida's 2023 Operations and Maintenance Award** after earning the highest rating for existing buildings: LEED Platinum Certification for Operations and Maintenance (O&M).

In August of 2024, the first two of five total **Centennial Village** residence colleges opened for freshmen student housing. Phase 2 of the project, which encompasses three more residential colleges is set to be complete in August of 2026. With an emphasis on durable and sustainable materials, Centennial Village makes use of emerging elements in building and design to support and enhance student learning and residential living.



Sustainable design features in Centennial Village include stilted infrastructure to withstand projected flooding during Category 5 hurricane high tides, bioswales for stormwater management, active chilled beam HVAC design, self-shading exterior elements to conserve energy, and direct air systems with enhanced filtration and recovery. Check out the virtual tour HERE!

ALTERNATIVE MOBILITY

90%

FLEET

Increase the percentage of EVs, Hybrid, HEV and alternative fuel vehicles in UM's fleet to 90%.

WHERE WE ARE

Goal #4: Increase the percentage of EV, hybrid, HEV, and alternative fuel vehicles in UM's fleet to 90%

29%

Currently 56 of our total 194 vehicles are either EV, hybrid, HEV, or use alternative fuel.

Currently, 28.9% of the University's fleet is powered via electricity. This fleet includes university owned trucks, cars, and golf carts. The Division of FOP on the Coral Gables campus has started transitioning to an electric fleet, and has recently added a total of 5 new electric vehicles. FOP is leading the way with the procurement of the first Electric Transit Connect van at UM. Additionally, the University of Miami Police Department (UMPD) and the Athletics Department have all made strides toward achieving the University of Miami's Alternative Mobility Goal.

To support the growing University fleet and student-driven electric vehicles, the University has installed 19 Level 2 charging stations on the Coral Gables campus and 12 Level 1 charging stations at the Rosenstiel campus, with plans to install more in the future. Any EV driver can charge at these locations, at no cost, for a maximum of 4 hours while actively charging.

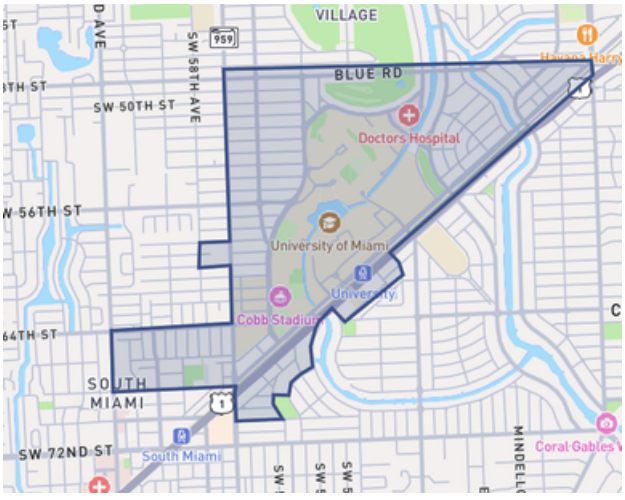
ALTERNATIVE MOBILITY

Each year, the Office of Sustainability distributes a survey to all UM students, faculty, and staff to gather information on commuting practices. This year, we are also partnering directly with Parking & Transportation and Campus Planning & Development. The information collected from this survey will be used to determine the future direction of alternative mobility here at the U.

On-Campus Mobility Solutions

The University of Miami has started a new partnership with **Freebee** to provide a zero-cost, micro-transit option for students. Freebee provides transportation anywhere on campus and to certain areas around the campus perimeter using two **electric vehicles**. This service seeks to institute a sustainable transportation option, increase student safety at night, and enhance the mobility experience for students on campus.

Freebee services operate Monday through Friday from 7 PM through 4 AM. This ensures that students have a safe way to get across campus outside of the normal Hurry 'Canes Shuttle schedule. During the Spring 2025 semester a pilot was conducted to extend Freebee services to include Saturday and Sunday from 7 PM to 4 AM.



WASTE DIVERSION

70%

WASTE

Increase the waste diversion rate to 70%.

Waste diversion is the prevention and reduction of generated waste through source reduction, recycling, reuse, or composting. Waste diversion generates a host of environmental, financial, and social benefits, including conserving energy, reducing disposal costs, and reducing the burden on landfills and other waste disposal methods.

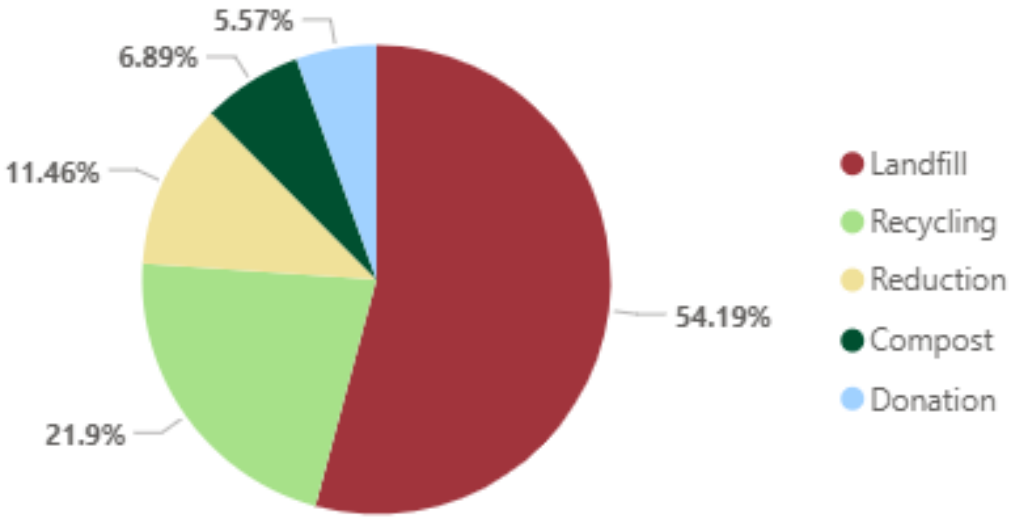
WHERE WE ARE

Goal #5: Increase the waste diversion rate to 70%

46%

A 45.8% waste diversion rate was achieved for FY2024 on the Coral Gables and Rosenstiel campuses. The breakdown can be seen in the chart below.

Diverted Materials by Type



Waste to Landfill	Diverted Waste
54.19%	45.81%

WASTE DIVERSION

The University of Miami offers single-stream recycling for common recyclables, and provides on campus residents with directions on recycling by resident hall through the "Recycle Right" initiative. UMiami is also proud to offer **wasteless** and **re-use** programs to enhance its waste diversion in both resident halls and across campus.

Wasteless Programs

Examples of specialized items that can be recycled here at the U through "wasteless programs include:

- Batteries
- Electronic waste
- Toner cartridges
- Plastic film
- Glass

Most recently, the University of Miami introduced a glass recycling pilot program. Students have the option to collect their glass bottles and jars, and dispose of them safely in the secured Glass 4 Life cart located in front of the Mahoney-Pearson Dining Hall. The glass collected will later be recycled by pulverizing the glass into sand. This by product is then used for hurricane bags, landscaping, and farming. This program has been brought to campus by Student Government's ECO Agency.

ReUse Programs

Our **Green Move Out and 'Canes Resale** initiatives establish greater circularity within on and off campus housing by allowing students to donate their small, gently-used appliances at the end of the Spring semester. The following Fall semester, the items are resold at a low price for incoming students. The proceeds from the resale support the on campus food pantry that works to serve food insecure student populations that may exist.

WASTE DIVERSION

Sneaker Impact

The University of Miami has brought **Sneaker Impact** to the U. Sneaker Impact is a company headquartered in Miami that provides collections, recycling, and end-of-life circular innovations for used sneakers and shoes. Bringing this initiative to the U has allowed students, faculty, and staff to recycle their old or new sneakers by placing them in bins situated around campus. Currently, bins are located in the UM Bookstore, in the Herbert Wellness Center, and throughout the Athletics Facilities, such as athlete locker rooms. Bins are also located in common areas on the Rosenstiel Marine Campus.

Composting

More recently, the University of Miami has begun collecting compostable food scraps at all the on-campus dining halls. Thus far, compostable food scraps have included everything but meat and cheese waste coming from the meals cooked at the dining halls. Composting at the dining halls is administered in partnership with **Compost For Life** who brings our organic waste to their Red Land based facility to be turned back into soil. This partnership has allowed for the University of Miami to divert 43.2 tons or 86,400 lbs of food waste from landfill in the past (FY24) fiscal year alone.

'Canes Community Food Pantry

The Canes Community Food Pantry was started by members of ECO Agency in 2021 who wanted to both provide resources for students who may have food insecurity and divert waste from local grocery stores. Today, the 'Canes Community Food Pantry accepts both non-perishable and monetary donations to maintain operations, which resulted in 1,051 checkouts this past year!

The 'Canes Community Food Pantry is run by student employees and can be found in Lakeside Village Room 1054, which is behind Lobby A. Any student, faculty, or staff member may stop by during hours of operation to receive items.

WATER CONSERVATION

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. 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.

WHERE WE ARE

Goal #6: Reduce water consumption by 30% from 2013 baseline

23%

A 23.4% reduction in water consumption is seen when comparing total gallons per campus user on the Coral Gables and Rosenstiel campuses from 2013 and 2024.

Water System Improvements

On the Coral Gables campus, the FOP department has implemented aggressive practices and technologies to optimize the campus' water use and to further promote the University's water conservation efforts.

Initiatives in this area include:
- The replacement of all resident hall and apartment shower heads to low flow models.
- The installation of timer setting controls on the campus 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.

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.

SUPPLEMENTAL UPDATES

Outside of the main interest areas presented above, other collaborative efforts have been made throughout the Coral Gables and Rosenstiel campuses to increase sustainability efforts.

Purchasing

The Contract and Sourcing team is in the process of developing a proposal for the transition to Forest Stewardship Council (FSC) certified paper at the University of Miami by 2035. FSC certified paper comes from responsibly managed forests that protect biodiversity and ecosystems. Many individual offices around campus are already using FSC certified paper, which is a pre-requisite of the Green Office program. Fully transitioning to FSC certified paper is a practical step toward sustainability without compromising on quality or reliability.

Food & Dining

In addition to meeting Chartwells' target of 60% plant-based menus by 2035, our Dining and Auxiliary Services team has other sustainability initiatives in place. The OZZI program provides reusable containers for take-out from the dining halls. In FY2025, this service was used over 21,000 times. In Fall 2025, the Centennial Village dining hall will pilot sending animal protein to the Compost for Life facility which recently began collecting animal protein in addition to produce scraps. If successful, this implementation to other dining halls on campus would positively impact the overall waste diversion rate from landfill.

Grounds Management

Significant efforts have been made to build off of existing grounds management standards. The "No Spraying" buffer that prevents grounds crews from using pesticides around bodies of water at the University has been raised from 15 feet to 25 feet. To better understand our campus biodiversity and aid tree management record keeping, a tree inventory using ArcGIS has been completed for all trees on the Coral Gables campus. The Coral Gables campus now also has a total of five native ecosystem gardens to sustain pollinators and endangered species, and to reduce flooding. More information on University of Miami gardens can be found HERE.

Information Technology

Although many overlook IT as somewhere sustainability initiatives need to be in place, the Ungar building, which houses computer servers for the Coral Gables campus, is the biggest electricity consumer on campus. To mitigate its impact and provide energy savings, the server's infrastructure was recently upgraded. In addition, new Virtual labs have been instituted at the Miami Herbert Business School and the College of Engineering.

RECOGNITIONS & AWARDS

The University of Miami started 2025 on a green note! Our ranking went up from #26 to **#13 in the Princeton Review Top 50 Green Colleges.** This very competitive list highlights institutions with excellent "sustainability practices, a strong foundation in sustainability education, and a healthy quality of life for students on campus."

The University of Miami Received STARS Gold Rating for the third consecutive time! In 2024, the University of Miami has earned a STARS Gold rating in recognition of its sustainability achievements from the Association for the Advancement of Sustainability in Higher Education (AASHE). STARS, the Sustainability Tracking, Assessment & Rating System measures and encourages sustainability in all aspects of higher education.

For the **11th consecutive year**, our university has been honored with the **Tree Campus USA** designation—an initiative of Tree Campus Higher Education developed by the Arbor Day Foundation. This honor reflects our strong commitment to sustainability and campus wellness. Trees across our campus do more than add beauty—they connect spaces, cool walkways, and support a healthy learning environment. We're proud to continue fostering a greener, more resilient place to live and learn.

ACKNOWLEDGEMENTS

2035

Thank you to all the departments, student groups, faculty, and many more across the Coral Gables and Rosenstiel campus communities for supporting GreenU in our efforts to make the University of Miami a more sustainable place! Our office could not have made the strides we have toward our SOP 2035 goals without these essential collaborations and partnerships.

For more information about sustainability efforts at the U please visit:

GREENU
miami.edu/sustainability