

Building on a decade of accomplishment to enhance sustainability at Emory University and Emory Healthcare (hereafter “Emory”), the Office of Sustainability Initiatives has worked with representatives of many academic, operational, and healthcare units to carry out a strategic planning effort to chart the next five to ten years.

Our vision for Emory is to be a model of transformative practices and sustainable choices at every level. From the copy room to the operating room, from the class room to the residence hall—among academic units, healthcare units, and operational units—Emory will more deeply engage the challenges of sustainability and expand our leadership in higher education.

**A decade of accomplishment:**

In 2004, Emory adopted sustainability as a guiding principle and inscribed it into the 2005-2015 Strategic Plan. Since that time, the university has become known for innovations in green building, curriculum development, sustainable food procurement, and energy and water conservation. This progress built on important efforts that include robust academic programs in sustainability-related fields, establishment of the University Senate’s Committee on the Environment, Emory Recycles, the No Net Loss of Forest Canopy policy, the commitment to LEED<sup>1</sup> construction standards, and the campus land use classification plan. Key institutional structures are now in place: the Office of Sustainability Initiatives, the Faculty Advisory Council, the Sustainable Food Committee, the Sustainability in Health Sciences Taskforce, a Sustainability Representatives program in over fifty campus buildings, and the Sustainability Forum that coordinates over a dozen student groups related to sustainability. Together with active partnerships in Campus Services, Purchasing, Campus Life and Dining, and all the academic units, Emory has seen dramatic progress. Some highlights are:

- Built or renovated over 28 buildings to LEED standards.
- Met the goal of reducing campus energy use per square foot by 25% from 2005 levels, with over \$25 million in costs avoided.
- Created the Cliff shuttle system that runs on biofuel made from hospital and campus used cooking oil and transports millions of riders annually.
- Diverted 95% of construction waste from landfills and currently diverts over 40% of non-construction and non-hazardous waste.
- Built a new WaterHub facility that will reduce potable water consumption as much as 40% and save the university millions in water utility costs over a 20-year period.
- Created or renovated over 300 courses that engage sustainability issues (offered in 57% of all academic departments across the university) and developed two minors related to sustainability.
- Inaugurated the Oxford College Organic Farm to provide healthy food to the Oxford and Atlanta dining halls, to CSA subscribers, and to a Newton County food pantry.
- Created thriving educational garden project, student-run fair trade coffee shop, and weekly Emory farmers market.
- Developed multi-focused sustainability efforts in Emory Healthcare, including waste and energy reduction; Emory University Hospital Midtown alone has decreased its energy consumption by over 30% per square foot since 2009.

In the next ten years, we seek to amplify this momentum to respond to the urgencies of climate change, though we realize that future efforts may be more challenging. Because creating a sustainable campus and community is a long process, we have crafted a ten-year Vision. However, we plan to conduct a review after five years and, if necessary, undertake a midcourse correction to ensure that our Vision is relevant and on-target to our fast-changing world.

**What is sustainability?** Sustainability is defined in Emory’s 2005-2015 Strategic Plan as relating to quality of life: a community is sustainable if economic, social, and environmental systems provide a healthy, productive, and meaningful life for all community residents, present and future.<sup>2</sup> Sustainability supports and incorporates many aspects of Emory’s mission—educational, healthcare, and operational. Sustainability provides a multi-disciplinary framework for broadening student and employee perspectives on the economic, social, and environmental factors shaping our lives and our world, our interdependence as a local and global community, and the impact of our actions on future generations. Pursuing sustainability allows Emory to more fully enact our principles and provide equitable opportunities for satisfying livelihoods and study through a safe, healthy, and high quality of life for current and future generations.

### **The Strategic Vision Process**

This strategic plan articulates a primary vision for the future, with four strategic action arenas. It includes guiding questions to stimulate further creativity towards sustainability efforts among all Emory units. The work outlined in this report enhances Emory’s educational and healthcare missions, contributing to institutional vitality and longevity. Care and creativity will be necessary to accomplish these goals in ways synergistic with and supportive of other important university and healthcare goals.

The Visioning Committee was appointed by Provost Claire Sterk and Executive Vice President Mike Mandl in the fall of 2014. In committee discussions and an overnight retreat, it created a draft report, which was then disseminated widely in summer and fall, 2015. Through leadership meetings and a campus-wide community conversation—including an on-line invitation for group and individual feedback—208 suggested changes were received and most were integrated into this revised report. The consultations and survey revealed much sustainability-related change over the last decade and a shared ownership of these strategic goals. This report was submitted to and approved by senior administrators and the University Senate in 2015-6. We trust this vision and collaborative consultation process will guide our efforts through the next decade and inspire future generations to bold sustainability action.

### **Four strategic action arenas:**

- I. Support culture change among academic, healthcare, and operational units to carry forward courageous action on sustainability.
- II. Expand the network of sustainability champions to strengthen leadership at every level.
- III. Use Emory landscape, buildings, and operations to model sustainable choices.
- IV. Create strategic partnerships with local, national, and international institutions to build flourishing and resilient communities.

### **I. Support enterprise-wide culture change among academic, healthcare, and operational units to carry forward courageous action on sustainability.**

*Guiding questions: How can each group in the Emory community assess its contribution to Emory’s sustainability commitments? How can the Emory healthcare network and every degree program and departmental culture encourage consideration of the full economic, environmental, public health, and other social costs of its decisions? How can our student groups, academic centers, business processes, and infrastructure of support adapt? How can we establish an environment in which sustainable choices are the default?*

**Action commitments:**

## a) Integrate sustainability into the visible culture of Emory:

- Incorporate sustainability into first impressions of Emory's campuses, clinics and hospitals, through the main Emory websites, campus tours, signage, and publications.
- In collaboration with administrative leaders and deans, ensure all new undergraduate, professional, and graduate students, as well as faculty, staff, and healthcare professionals, are welcomed into—and feel a personal stake in—Emory's sustainability commitments, through orientation activities that include the president's affirmation.

## b) Align unit goals and standards with sustainability commitments:

- Integrate sustainability commitments into each unit's strategic plan, including Emory Healthcare and the next Emory Campaign.
- Incorporate sustainability criteria (full-cost accounting of economic, health, social, and environmental impacts) more fully into routine decision making and purchasing—whether in the classroom, hospital, lab, or office, in caregiving, dining, or events.
- Integrate sustainability into recruitment so that all prospective employees understand that sustainability commitments are expectations for every Emory community member.
- Revise job performance criteria in collaboration with existing employees and integrate sustainability commitments into evaluations.

**II. Expand the network of sustainability champions to strengthen leadership at every level.**

*Guiding questions: How can we build expertise and share essential knowledge for sustainability? How can we coordinate existing efforts and stimulate new initiatives? How can Emory students, faculty, and staff incorporate sustainability into everyday life and take what is learned beyond the Emory environment? How can we strengthen both top down and bottom up support for culture and behavioral change and distribute sustainability leadership broadly?*

**Action commitments:**

## a) Expand support structures and strengthen organizational structures for champions:

- Strengthen faculty leadership through a rotating Faculty Fellows program with the support of each dean by 2020.
- Strengthen staff champions in collaboration with the Administrative Council by expanding the role of Sustainability Reps; provide improved communications channels and support.
- Create a program for student champions through collaboration with staff and faculty mentors and internships in Campus Services, Dining, Campus Life and other administrative units, with a focus on sustainability decision making, life skills, and leadership.
- Strengthen or create sustainability leadership positions throughout student government at both the undergraduate and graduate levels.
- Create a program of sustainability champions throughout Emory Healthcare by 2025.
- Expand sustainability literacy in all existing Leadership Academies and, as needed, develop a new Sustainability Leadership Academy.
- Develop sustainability learning outcomes for all staff and develop educational programs and assessment tools.

- Partner with the Healthy Emory initiative to develop advocates for an inclusive approach to well-being and healthy living across Emory in keeping with the vision of “Healthy Emory, Healthy Planet.”
- b) Through academic programs and degrees, prepare Emory graduates for sustainability leadership throughout their lives:
- Integrate sustainability into academic programs, degrees, and experiential learning opportunities to assure universal sustainability literacy.
  - Expand curriculum initiatives through the Piedmont Project, Piedmont TATTO Fellowships, Oxford Institute, and others. Increase by 25% the number of sustainability-related courses taught across the university by 2025.
  - Develop tools for assessing student competencies across the domains of sustainability.
  - Link sustainability-related information needs across campus to academic projects through partnerships with operations personnel, the Quality Enhancement Plan, and the Institute for Quantitative Theory and Methods.
  - Support campus-based sustainability research activities with a data hub and interdisciplinary laboratory for action research projects by 2025.
  - Support start-ups for sustainability-related faculty interest groups, building on existing efforts in Environmental Health, Environmental Law, Climate Change, Food Studies, Religion and Ecology, and Global Health, among others.
  - Foster research on the health implications of sustainability policies and practices, such as the impacts of green buildings.
- c) Integrate sustainability into the life of the campus:
- Promote adoption of green office and green lab standards for all units.
  - Infuse sustainability expectations and goals into residential education, including the first year experience, Greek life, and Emory Dining educational activities.
  - Support student leadership at graduate and undergraduate levels to develop metrics of sustainability literacy for each program, residence hall, and Greek house.
  - Develop sustainability literacy survey for all students and administer annually.
  - Expand sustainability-related community service opportunities through Volunteer Emory and other groups, especially for graduate and professional students.
  - Link programs with Office of Health Promotion to strengthen awareness of individual health of our students with global community and planetary health and well-being.
  - Ensure sustainability commitments are met and communicated in summer conference and camp programs and events.
- d) Invest in the Office of Sustainability to achieve successful implementation of this plan; build capacity through secure central funding and adequate staff to ensure robust communications, innovative projects, creative problem-solving, and data analytics throughout the university and healthcare:
- Allocate appropriate funding for staff and operations through a dedicated annual budget.
  - Refine sustainability metrics and expand publicity for Emory’s sustainability progress.

### III. Leverage Emory landscape, buildings, and operations to model sustainable choices.

*Guiding questions: How can Emory architecture, physical plant operations, and broader ecosystem act as pedagogy for sustainability and make visible our commitments throughout the institution? How can daily life in this institution enhance the economic, social, and environmental aspects of sustainability?*

**Action commitments:** All goals use 2025 as a target date and 2015 as data baseline, unless otherwise noted.

#### a) Climate action:

- Update Emory’s climate action goals based on latest science, aligning dates with international goals.
- Reduce Emory’s total greenhouse gas emissions by 45% by 2030 and achieve net zero emissions by 2050, using 2010 levels as baseline.
- Revise greenhouse gas inventory to add sources of emissions from components of supply chain by 2030.
- Use carbon offsets, with preference for local projects with a social justice benefit, to reduce the impacts of Emory-purchased air travel.
- Invest in a portfolio of innovative greenhouse gas sequestration projects that provide resilience, research, teaching, and national leadership benefits to Emory.
- The portion of Emory’s endowment managed by Emory Investment Management does not currently hold direct stock in public companies producing fossil fuels, based on information compiled and maintained by Fossil Free Indexes. Emory holds many investments in sustainable businesses and businesses with exemplary sustainability performance.

#### b) Built environment:

- All new construction on campus will be carbon neutral.<sup>3</sup>
- Incorporate major building renovations into LEED silver commitment or higher.
- Attain best practices for sustainable performance in building interiors.
- When replacement is necessary, make all roofs cool, green and/or solar.
- When acquiring new buildings, bring up to existing sustainability standards.
- When constructing or renovating buildings, review space needs to consolidate offices and reduce building size.
- Reduce university campus energy use per square foot by 50% and total energy use by 25%.
- Reduce Emory Healthcare energy use by 25%.
- Self-generate 10% of energy used on campus to replace fossil fuel sources.
- Eliminate drinking water use for heating, cooling, toilet-flushing, and other non-potable uses, with a goal to reduce Emory water use by 50%.
- In the new Emory Student Center (former DUC) or other appropriate innovative facility, incorporate regenerative architectural standards such as net zero impact and “living building” to educate campus community and visitors. Renovate and use iconic buildings on campus for sustainability education and outreach.
- Create financial incentives for all operating units to conserve beyond existing goals, including a sustainability revolving fund.

c) Waste:

- On academic campuses, divert 95% of construction and non-construction waste (except regulated lab and medical waste) from municipal landfills.
- On healthcare campuses, divert 37% of waste (except regulated lab and medical waste) to match best practice rate in healthcare).<sup>5</sup>
- Strengthen administrative mandates for recycling and composting throughout the university, healthcare, and related enterprises; eliminate all desk-side trashcans on academic campuses by 2020.
- Support culture change towards “reduce, repair, restore, and reuse” mentality and “cradle to cradle”<sup>6</sup> purchasing.
- All university events will be zero municipal landfill waste by 2025.
- All university functions will be plastic bottle free to the extent possible.

d) Transportation:

- Expand opportunities for safe biking and walking on all campuses and healthcare centers; explore possibility of an “Emory Greenbelt” biking and pedestrian path system.
- Develop bicycle and pedestrian master plan in cooperation with government agencies and neighborhood stakeholders to include dedicated bike and pedestrian lanes and trails and bike amenities.
- Support flexible workdays to reduce commute time, improve recruitment and retention, and support work/life balance; work with InfoTech, Human Resources, and other appropriate groups to ensure that all non-essential personnel are expected to telecommute at least one day per week by 2025 unless justified by supervisor.
- Improve air quality through enforcement of No Idling policy and other pollution prevention actions.
- Shift Emory University and Emory Healthcare vehicle fleet to meet national sustainable fleet certification standards.
- Extend incentives for sustainable commuting to students.
- Continue to expand transportation options for employees and students through bike share, Cliff Shuttle, and public transit to reduce single occupancy vehicle trips.
- Increase awareness of alternative transportation options among Emory healthcare patients and university visitors.

e) Campus ecosystem:

- Explore opportunities to enhance Emory’s original vision of “a campus in a forest.”
- Eliminate planting of invasive species on campus to foster healthy campus forests; remove invasive species in at least 25% of campus woods, while protecting fragile ecosystems.
- Shift from No Net Loss policy for forest canopy to Net Positive forest canopy policy.
- Enhance pedestrian shade by planting 200 new trees by Emory’s 200<sup>th</sup> anniversary.
- Revise and implement Stormwater Management Plan, including goals to reduce water runoff and enhance stream quality.
- Improve water quality, groundwater recharge, and greenspace through new or enhanced green infrastructure projects such as rain gardens, stream buffers, and bioswales.
- Reduce turf grass on Druid Hills and Oxford campuses by 15% and replace with biodiverse woodland and shrubbery areas, using drought-tolerant plant palette.

- Transition to herbicide and pesticide alternatives safer to pollinators and people with the goal to reduce or eliminate their use.

f) Food:

- Expand sustainable food purchases (either locally grown or sustainably grown) in Emory Dining with a goal of 50% by 2020, and 75% by 2025. Update sustainability purchasing guidelines every three years, as necessary, and revise tracking systems.
- Continue to support the Oxford Organic Farm to provide produce for the Oxford campus, Emory farmers market, and campus and hospital cafeterias.
- Expand sustainable and local food purchases in catered events for all units.
- Expand urban food production and hands-on education through the Educational Garden Project and the Oxford Organic Farm to provide living/learning opportunities for undergraduate and graduate students.
- Expand sustainable and local food purchases in Emory Healthcare to 25% and establish tracking system to document future gains.
- Expand onsite educational gardens to include Emory Healthcare staff, faculty, and students.

g) Social dimensions of sustainability:

- Support and extend efforts for social equity and economic opportunity; connect sustainability strategic goals with recommendations of Class and Diversity Committee to enhance access for all students and staff, regardless of means, to the full benefits of the Emory experience.
- Promote universal design and continue progress towards disability awareness and accessibility for all buildings, campus transit systems, and Emory programs.
- Create intergenerational daycare centers at all campuses.
- Support linkage of “person, place, and planet” by extending partnerships with Healthy Emory and other entities to promote health-enhancing behaviors and personal flourishing.
- Develop campus-level resilience assessment and plan that addresses health, personal well-being, and climate adaptation concerns.
- Develop program of paid maternity and paternity leave for all Emory employees.

**IV. Create strategic partnerships with local, national, and international institutions to build flourishing and resilient communities.**

*Guiding questions: Promoting a healthy, thriving, and resilient community is central to Emory’s sustainability mission; how can we be sure our policies and standards will reflect these commitments? How can Emory expand its leverage through relationships with other entities? How can risk management strategies join with the other components of sustainability decision-making to inform our institutional choices? How can we share this courageous inquiry with our community partners?*

**Action commitments:**

- a) Identify and partner with other Atlanta institutions, national and international governmental organizations, nonprofits, and corporate partners to create more sustainable decision options for Emory students and employees and to enhance sustainability across the region:
- Expand rail and bus/shuttle service to campuses by MARTA, GRTA, and municipality of Oxford.

- Expand fossil-fuel-free energy options through Georgia Power or other sources.
- In alliance with Atlanta partners, expand food security in metro area and resilience in self-provisioning, for example by supporting the development of a food hub to aggregate, process, and preserve food from local and sustainable farmers.
- Support procurement of local products with a sustainability-focused business incubator.
- Expand awareness of healthy, sustainable behaviors among the populations served by Emory Healthcare through education and outreach (such as pharmaceutical take-back events, thermometer swaps, and information on proper medication disposal with prescriptions).
- Support sustainability-oriented efforts in Atlanta to expand pedestrian-friendly, bike-friendly, and accessible commercial/residential projects near campuses with price points appropriate to entry-level staff members.
- Share research and provide support to governments, nonprofits, and other entities on sustainability initiatives.
- Work with local municipalities and partners to develop a resilience assessment and plan for the greater Emory community that addresses health, personal well-being, and climate adaptation concerns.

b) Support Purchasing and other Emory entities in building a coalition of distinguished leaders and corporations to enhance sustainability decision making in the national and Emory supply chains:

- Identify priority areas for supply chain improvement and work with academic researchers, students, and vendors to identify best practices for sustainability.
- Develop scorecards for “Emory preferred” practices and decisions which encourage full-cost accounting among vendors and contractors and integrate sustainability into selection criteria when awarding contracts.

### **Conclusion:**

This strategic vision seeks to strengthen and harmonize our institutional culture with sustainability commitments, expanding our individual capacities for courageous action and enhancing the effectiveness of our educational mission. We hope this plan will support creativity at every level of Emory—and generate unexpected synergies—while incorporating sustainability more integrally in our daily lives. As Emory graduates and employees, we will gain the knowledge, skills, and habits to address personal as well as community sustainability challenges throughout our lives. These next ten years offer opportunities for new leadership, as sustainability principles are embedded in the policies that emerge from the decisions, information, champions, structures, and partnerships outlined here. We seek to build on the pioneering work of the previous decade, making sustainability ever more deeply a part of who we are as an institution.

### **Sustainability Visioning Committee Members † (2019-20 review committee members \*):**

†Steve Bowen, Dean and CEO, Oxford College; Kenan Professor, Biology (now emeritus)

†Christian Bowers, former College student, Environmental Sciences and Economics (now Ernst & Young)

\*Tjuan Dogan, Assistant Vice President, Social Impact Innovation

†\*Ioulia Fenton, Laney Graduate School, Anthropology, & President, Graduate Sustainability Group (now instructor, Anthropology)

†\*Dave Fuhman, Senior Director, Emory Dining (now Finance, Administration, and Operations)

\*Mindy Goldstein, Clinical Professor of Law and Director, Turner Environmental Law Clinic

\*Melissa Hage, Assistant Professor, Environmental Science, Oxford



†\*Ciannat Howett, Director, Office of Sustainability Initiatives, and Adjunct Associate Professor, School of Public Health

\*Russell Kempker, Associate Professor, School of Medicine

†\*Joan Kowal, Senior Director, Energy Strategy and Utilities, Campus Services (now Campus Master Planning)

†Carolyn Livingston, former Senior Associate Vice President for Campus Life (now Carleton College)

\*Wes Longhofer, Associate Professor, School of Business

\*Hiram Maxim, Professor, German Studies

\*Rebecca Purdom, Professor of Practice, School of Law

†Justin Remais, Associate Professor, Environmental Health, Rollins School of Public Health (now UC Berkeley)

\*Daniel Rochberg, Instructor, School of Public Health and Chief Strategy Office, Climate@Emory

†\*Tom Rogers, Associate Professor, History, Emory College

†\*Eri Saikawa, Assistant Professor, Environmental Sciences, Emory College (now Associate Professor)

\*Melissa Smarr, Assistant Professor, Environmental Health, Rollins School of Public Health

\*Lisa Thompson, Associate Professor, School of Nursing

†Paige Tolbert, Professor and Chair, Environmental Health, Rollins School of Public Health

\*Lisa Underwood, Interim Vice President, Campus Services

†Demetrius Woods, Assistant Professor, Obstetrics and Gynecology, School of Medicine (now private practice)

Co-chairs:

†\*Peggy Barlett, Goodrich C. White Professor of Anthropology and Faculty Liaison, Sustainability

†Matthew Early, Vice President, Campus Services (now Vice President of Facilities, KAUST, Saudi Arabia)

<sup>1</sup>The US Green Building Council was created in 1993 to promote energy efficiency improvements in building and construction. Its certification program, LEED (Leadership in Energy and Environmental Design), began in 2000 and recognizes best-in-class building practices. Emory achieved the first LEED-certified building in the Southeast and continues to be a national leader in certified square footage. See <http://sustainability.emory.edu/page/1007/green-buildings/green-space>.

<sup>2</sup> A more detailed definition of sustainability was adopted by the Emory College Sustainability Minor Steering Committee 9-27-13:

Sustainability refers to a process in which human societies adapt to live within the earth's finite limits in ways that:

- restore healthy ecosystems and reduce harm to water, air, forests, soils, and biodiversity;
- support secure livelihoods and vibrant local economies and redress poverty and inequality;
- create resilient cultural and natural systems and empowered communities;
- and meet the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainability includes economic, environmental and social dimensions, including equity and diversity goals.

<sup>3</sup> Carbon neutral buildings create no increase of carbon dioxide to the atmosphere through their operations; any fossil fuels burned are offset by other activities that remove carbon from the atmosphere.

<sup>4</sup> A “net zero energy” building produces energy on site each year that is roughly equivalent to the amount of energy consumed. Like the “living building,” program, such buildings do not increase the quantity of greenhouse gases in the atmosphere. See: <http://living-future.org/>

<sup>5</sup> The reduce/reuse/recycle metric includes diversion of unused medical supplies and equipment for donation, reprocessing and reuse.

<sup>6</sup> Cradle to cradle purchasing refers to an approach to the efficient use of products and materials in production to mimic the cyclical reuse of nutrients in nature. The outputs of one process become the inputs of another, creating an essentially waste-free system or industry.