# A History of Action — A Foundation for Change

150 years of sustainability at the University of Michigan





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Cover Images: Top to Bottom: Teach in on the Environment, March 1970, Ann Arbor | Bentley Image Bank, Bentley Historical Library; Field-based Research at the U-M Biological Station, Pellston, MI| LSA website; Planet Blue Ambassadors, Ann Arbor | Planet Blue website.



### Letter from the President

For more than 150 years, the University of Michigan has taken a leading role in sustainability. From our pioneering forestry programs and the first Earth Day teach-in, to groundbreaking work in environmental justice and today's ambitious carbon neutrality commitments, each generation has advanced solutions to the ecological and social challenges of their time.

A History of Action, A Foundation for Change is both a celebration and a call to action. It documents the progress we have made together – in our classrooms, clinics, laboratories, and communities – while setting a clear foundation for the work that lies ahead. Our sustainability legacy is not a series of isolated achievements, but a shared story of persistence, innovation, and public service.

To carry this work forward, in 2025, we launched the Sustainability and Climate Executive Leadership Council (SCELC)—the first cross-campus leadership structure of its kind at a public university. SCELC unites efforts across academics, operations, research, and healthcare, ensuring that our commitments have a coordinated, measurable impact. I am deeply grateful to our principal sustainability leaders, Shana Weber, Shalanda Baker, and Tony Denton, for their vision and dedication to this work, and to the many faculty, staff, students, and partners whose passion makes Michigan a living laboratory for change.

Society looks to Michigan for answers to climate threats. This report reminds us that our university's greatest strengths lie in its scale, breadth, and collective will. Together, we will meet this moment of climate urgency with the ambition, creativity, and resolve it demands. In doing so, we honor our history and build a stronger, more sustainable future for Michigan, our state, and the world.

Stay green and Forever Go Blue!



**Domenico Grasso, PhD** 

President

### Letter from SCELC Leadership

Dear U-M Community of Changemakers,

For over a century and a half, U-M has been at the forefront of sustainability action, research and education. From early expertise in sustainable forestry, to the advocacy that brought us the first Earth Day, being at the vanguard of environmental justice in academia, innovating pathways to cross-disciplinary innovations in sustainability learning and research, and award-winning green medical practices, U-M community members, including generations of alumni, have repeatedly stepped up to address the sustainability challenges of their times.

Over the last decade and a half, U-M has taken major steps to set actionable sustainability goals and commitments. This began in 2011 with the Ann Arbor-focused 2025 Sustainability Goals and culminated most recently in the University-wide carbon neutrality goals set by the President's Commission on Carbon Neutrality (PCCN) and through Michigan Medicine's 2024 Environmental, Social and Governance (ESG) Report. The University's 10-year strategic vision document, Look to Michigan, reflects those sustainability ambitions and commits U-M to making demonstrable positive change for humanity in the areas of energy, climate action, sustainability, and environmental equity over the next decade.

To implement this change, the Sustainability and Climate Executive Leadership Council (SCELC) was created to enable coordinated planning and implementation across U-M operations, academics, research, and Michigan Medicine. Meanwhile, U-M's passionate community of sustainability experts, partners, and collaborators continue to advance critical sustainability education, research, and operational work every day across U-M's campuses, schools and units.

For the first time, U-M has named sustainability and climate action as an institutional priority, has clearly articulated sustainability commitments, and has a sustainability leadership structure that spans all three campuses and Michigan Medicine. We are entering a new era of action, one that builds on the legacy, passion, and contributions of students, staff, faculty, alumni, and community partners to advance solutions that serve the people of Michigan and the world.

As we embark on this new era together, we have a valuable opportunity to reflect on what we have accomplished as a university, where we can continue to lead locally and globally, and the critical challenges and opportunities that lie ahead. Given U-M's long-standing commitment to sustainability, and the scale and complexity of our institution, it can be difficult to see the full picture of where we've been and where we stand today. That's why we are proud to share *A History of Action, A Foundation for Change*, a resource designed to daylight and celebrate the many contributions of our U-M community over time, clarify our current commitments, and chart a clear path forward toward deeper, more coordinated sustainability action and impact.

Every major era of sustainability action at U-M has been shaped by the conditions of its time, driven by passion, energy, and a determination to confront the moment's most urgent issues within shifting economic, social, and political realities. Our path forward is no different. We must acknowledge the realities of this moment: 2025 marks a pivotal point in human and planetary history, defined by intensifying environmental, social, and economic crises, alongside growing polarization in the national discourse.

These are the headwinds U-M must face as we work to advance solutions locally and globally. But they also present a powerful opportunity to sharpen our focus, accelerate innovation, and drive transformational change that recognizes the deep interconnections between human well-being, environmental resilience, and the systems that shape our shared future. We must meet this moment with clarity and resolve, building on the work already underway, while expanding how we use our systems, curricula, campuses and alumni network, to advance sustainability innovation, justice, and resiliency across generations and geographies.

A History of Action, A Foundation for Change shines a light on the meaningful sustainability work underway across U-M's three campuses, Michigan Medicine, and Michigan Athletics, and honors the students, staff, faculty, researchers, alumni, and community partners who have helped lead us to this point. We invite you to read it not just as a record of what's been done, but as a shared starting point for what's next, a foundation for collective action rooted in clarity, purpose, joy, and compassion.



Shalanda H. Baker

Vice Provost for
Sustainability and Climate
Action



**T. Anthony Denton**Senior Vice President & Chief ESG Officer, U-M Health/Michigan Medicine



**Shana S. Weber**Associate Vice President for Campus Sustainability

### Introduction

Designed to provide an overview of the University of Michigan's collective energy, sustainability, climate action, and environmental equity efforts-to-date, this report is part reflection, part lookahead. It weaves together the many threads of sustainability and climate action work spread across U-M, past and present, and offers a shared foundation for the future.

Rooted in student, faculty, staff, and community contributions and driven by our collective values, it is both a record of what's come before, and an invitation to help shape what comes next as we move into the next phase in our sustainability journey.

### **Charting our Path Forward**

The purpose of this report is threefold:



To recognize and celebrate the breadth of sustainability, climate action, and environmental justice efforts, past and present, driven by U-M students, staff, faculty, researchers, and community partners.



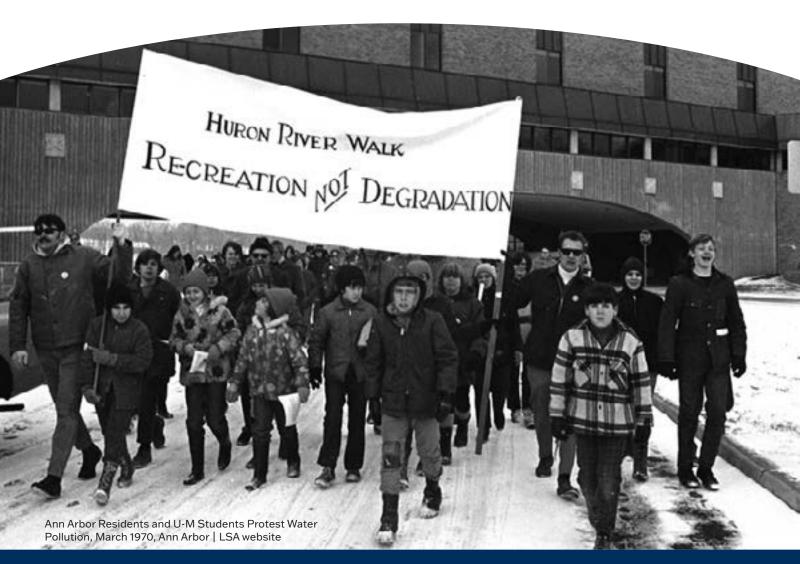
To compile and clarify U-M's sustainability goals, actions, and commitments, including key metrics and progress to date.



To initiate a new era of sustainability action and implementation, grounded in past achievements and driven by the urgency of the climate crisis and the many interrelated challenges facing our communities.

### U-M's Sustainability Journey

The University of Michigan's path towards leadership in sustainability, climate action, and environmental justice spans more than 150 years. The following overview traces five distinct eras in that journey, each defined by transformational milestones in teaching, research, operations, advocacy, engagement, governance and strategic direction. It is important to note that many of the milestones in each era were shaped by, or in response to, the shocks, stresses, uncertainties, and inequities of their time. These ranged from the catastrophic Midwest fire events of the 1870s; to the environmental, social, and economic impacts of deforestation and poor forestry practices in the early 1900s; to the push for research into the peaceful use of atomic energy in the 1950s; to the growing recognition of the disproportionate health impacts of pollution on marginalized communities; to most urgently, the ongoing climate emergency and its cascading impacts across natural and human systems.



#### Sustainable Foundations 1840s – 1950s

A century before the 1987 Brundtland Report defined "sustainability," U-M had already established environmental education as a core institutional value. Early efforts responded to widespread deforestation in Michigan, focusing on the environmental, social, and economic impacts of forestry practices. By the mid-20th century, U-M had begun pioneering work in sustainable energy as its scope expanded.



Nuclear Engineering Students, 1950s | Michigan Memorial Phoenix Project website

#### Early Environmentalist Leadership 1960s – 1980s

From the 1960s to '80s, amid rising concerns over pollution, deforestation, toxic waste, and the threat of nuclear war, U-M once again stood at the forefront of sustainability. This era was marked by powerful student activism, the growth of interdisciplinary academic programs focused on environmental issues, and a deepening institutional commitment to integrating sustainability into research, education, and campus life.



Huron River Walk, 1970 | Bentley Image Library

In **1817**, 4.6 million acres of Indigenous land was ceded to the United States by the Ojibwe, Odawa, and Bodewadami Nations through the **Treaty at the Foot of the Rapids.** 1,920 acres was reserved to "the corporation of the college at Detroit," the fledgling University of Michigan as a gift so their children could be educated. Proceeds from the sale of this land funded the origins of the University of Michigan.

#### 184

U-M's first college, the **College of Literature, Sciences** and the Arts (LSA) is established in 1841, followed a decade later by the **U-M Medical School**, the University's second academic college, which opens in 1850.



1903

The **Department of Forestry opens in 1903** – in the College of Literature, Science, and the Arts.

1927

The **Department of Forestry** evolves into the School of Forestry and Conservation, the first school of its kind in the United States.

1950

The School of Forestry and Conservation changes its name to the School of Natural Resources and graduates master's-level students.

1965

The School of Landscape
Architecture joins the School
of Natural Resources, further
broadening its offerings.

1969

Founder of Environmental Education. U-M's William B. Stapp and his students publish the first formal definition of "environmental education," launching a global movement in environmental learning.

1979

**U-M Biological Station** becomes a National Atmospheric Deposition Program site, helping shape the 1990 Clean Air Act amendments that cut fossil fuel emissions by 50% and restored ecosystems nationwide.

**1881** saw the creation of U-M's first Forestry Class – unique in it's focus on forestry's impact on the social and economic welfare of the country.

1909

The University of Michigan Biological Station (UMBS) opens on 10,000 acres of cleared land acquired from local logging barons in Northern Michigan.

1948

A small nuclear reactor is built on North Campus to facilitate research into the peaceful uses of atomic energy.

1963

The Central Power Plant is converted from a coalburning facility to natural gas.

1966 - 1986

SNR professor Joe Sax became the leading voice among scholars helping to develop the present-day American environmental law system.

He also mentored hundreds of

He also mentored hundreds of Michigan students, who went on to become leaders themselves in environmental law.

1970

U-M students organize the landmark Teach-In on the Environment, a four-day event that inspires the first Earth Day and mobilizes thousands around the ecological crisis and the political and social forces driving it.

**1983** A grant from the Hewlett Foundation enables **further redesign of the integrative interdisciplinary curriculum** offered at the School of Natural Resources.

1989

**U-M's Recycling Program begins** with the collection of white office paper, newspaper and corrugated cardboard and the first formal recycling program for the 'Big House', U-M's football Stadium, is implemented.

#### Deepening Sustainability Curriculum & Culture 1990's – 2000's

This era reflected rising global urgency around climate change, greenhouse gas emissions, and ecosystem destruction—and growing awareness of the disproportionate impact of pollution on low-income communities and communities of color. At U-M, it marked a deepening commitment to environmental policy, expanded research and education on global climate issues, and a growing academic focus on environmental justice.



Participants of the Conference on Race and the Incidence of Environmental Hazards, 1990 | U-M School for Environtment and Sustainability

### Onset of Measurable Impact: Early 2000's - Early 2010's

Around the turn of the millennium, U-M began improving its environmental performance, building on its academic and research leadership in sustainability. A team from the Center for Sustainable Systems introduced the first campus-wide sustainability indicators that helped measure and improve operations at U-M Ann Arbor and Michigan Medicine. This laid the foundation for setting goals and advancing sustainability action across campuses.



Planet Blue Student Leaders | U-M Student Life

#### 1990

U-M hosted the **Michigan Conference on Race and the Incidence of Environmental Hazards**. This landmark conference helped establish environmental justice as a recognized field of academic inquiry.

#### 1991

Saw the creation of the National Pollution Prevention Center (NPPC), which in 1999 becomes the Center for Sustainable Systems (CSS) a permanent center within SNRE/SEAS.



#### 1995

Saw the creation of the Corporate Environmental Management Program (CEMP) and the Erb Environmental Management Institute – joint venture between SNRE and the Ross Business school.



The School of Natural Resources becomes the **School** of Natural Resources and Environment (SNRE) and also becomes the first and only school in the U.S. to launch an Environmental Justice program offering both undergraduate and graduate degree specializations.



#### 2000

Saw the decommissioning of the waste incinerator at Michigan Medicine and transition to more intensive reduction, reuse and recycling of medical waste

#### 2001

First Wege Lecture held, which is U-M's first talk in our flagship sustainability series.

#### 2006

The Graham Sustainability Institute is founded, charged with convening students, researchers, faculty, policy makers, and partners around sustainability solutions.

#### 2004

Michigan Medicine received its first Practice Greenhealth award -

honoring healthcare organizations that have made a commitment to sustainable practices.

#### 2007

SNRE hosts the "Coping with Climate Change National Summit" focused on helping the citizens of the U.S. prepare for the future impacts of climate-based changes in temperature, precipitation, sea level rise, and species range.



#### The University of Michigan Campus Sustainability Integrated Assessment is released,

introducing U-M's first campuswide sustainability goals, known collectively as the '2025 Goals' in

#### 2011

#### 2012

The Campus Farm at the Matthaei Botanical Garden is founded, funded by a grant from the Planet Blue Student Innovation Fund.

#### 2013

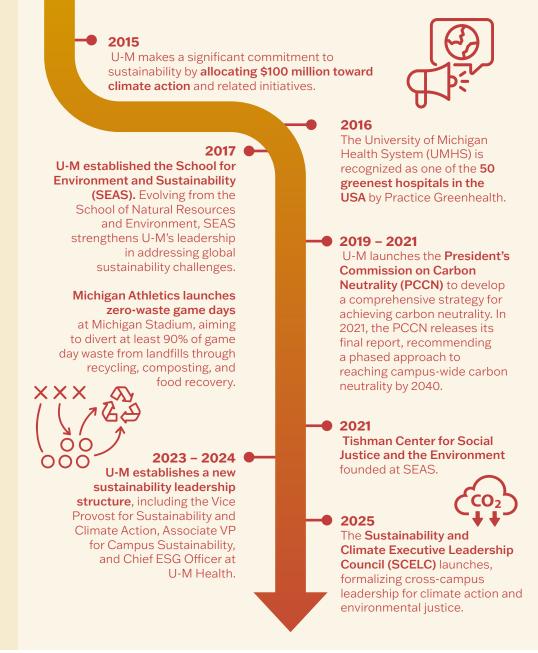
The **Planet Blue Ambassadors** (PBA) program is launched, providing resources and training for U-M community members dedicated to furthering their commitment to sustainability.

#### Towards a System-Wide Sustainability Vision Mid 2010s – Present

This current era has seen a major growth in investment, policy leadership, and organizational commitment related to sustainability. U-M has transitioned from unit- and campus-specific sustainability goals and objectives to broader, U-M system-wide visions, goals, and initiatives that reinforce the University's overarching commitment to sustainability. The President's Commission on Carbon Neutrality (PCCN), Vision 2034, and new campus plans provide a framework for systemwide coordination and action on sustainability.



PCCN Co-chairs speaking to a U-M Town Hall



### **Looking Forward**

The next era of sustainability at U-M will be defined by action, building on more than 150 years of progressive knowledge and leadership, and carrying forward the bold commitments made over the past decade and a half.

New challenges lie ahead—but wherever Wolverines go, progress follows. Together we will develop, evaluate, govern, and responsibly harness new technologies, including AI, to deliver just and sustainable solutions to some of the most complex issues of our time.

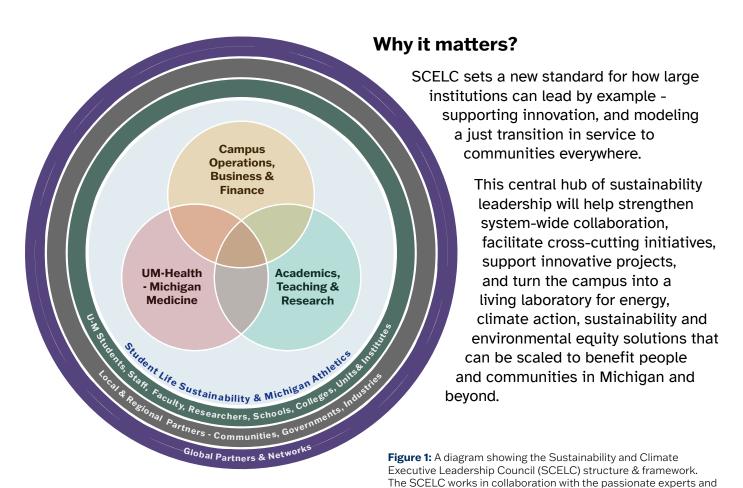
We invite you to join us as we embark on the next phase of our sustainability journey.

### Leading With Purpose

U-M is uniting its energy, climate action, sustainability, and environmental equity work under a stronger, clearer leadership structure designed to turn ideas into impact. This section introduces that new leadership model and outlines how it will advance progress - spotlighting the themes, milestones, and commitments moving U-M forward.

### U-M's New Sustainability Leadership Structure

Launched in early 2025, the Sustainability and Climate Executive Leadership Council (SCELC) is the first cross-campus leadership structure of its kind at a public university. The council brings together senior leaders from sustainability operations, academics and research, and health care. Charged with coordinating sustainability planning and implementation across the university, the SCELC's focus will be on realizing the sustainability vision in Look to Michigan and implementing U-M's existing sustainability goals.



leaders across campuses, schools, colleges, units, institutes, and

community partners.

### **U-M's Sustainability Evolution**

U-M has been moving from campus- and unit-specific sustainability commitments towards a centralized, university-wide sustainability vision, leadership, goals, and plans. This overview spotlights the core sustainability goal-setting documents that have informed our university-wide strategies and physical campus plans—as well as the many energy, climate action, sustainability, environmental equity initiatives that are helping turn vision into action.

2011

The U-M Campus Sustainability Integrated Assessment

U-M's first comprehensive set of sustainability goals for UM-Ann Arbor, collectively known as the "2025 Goals."

The goals were organized under 4 core themes: Climate Action, Waste Prevention, Healthy Environments, and Community Awareness.

2021

The President's Commission on Carbon Neutrality (PCCN)

A milestone initiative marking a shift towards institution-wide carbon neutrality. PCCN focused on both emissions reductions and structural transformation.

Key commitments include net-zero Scope 1 & 2 emissions by 2040 and significant progress on Scope 3 emissions.

2024

U-M Health Environmental, Social & Governance (ESG) Report

The ESG Report establishes how Michigan Medicine is meaningfully embedding sustainability into its healthcare operations.

U-M Health has 6 Goal Areas and 15+ nested goals, actions and commitments connecting directly to PCCN, Campus Plan 2050, and Look to Michigan.

T

2024

/ Look to Michigan Look to Michigan is U-M's strategic roadmap for the next decade, positioning energy, climate action, sustainability and environmental equity as university-wide priorities.

The vision calls for bold action across research, education, operations, and engagement in service to people, place, and planet.

2024 / 2025 Campus Plan 2050

UM-Flint Comprehensive Campus Plan

**UM-Dearborn** Campus Plan

U-M's campus planning provides a unified, enduring blueprint for the ecological and strategic transformation of our physical spaces.

**Figure 2:** U-M's evolution towards University-wide sustainability action.

U-M has bold ambitions for impact. The University has publicly articulated more than **300** goals, actions and commitments that relate to **8** overarching sustainability topics - making clear where we will focus for meaningful change.



### Reducing Emissions

Pursuing Scopes 1& 2 carbon neutrality and Scope 3 reductions through targeted actions guided by science-based data & metrics.



### Campus & Community Engagement

Fostering a culture of sustainability that empowers students, faculty, staff, and the community.



### Reducing Waste

Expanding reuse, recycling, composting, and sustainable purchasing practices across U-M.



### Sustainable Food Systems

Offering, promoting, and supporting campus initiatives that promote food security, nutrition, equity, and environmental stewardship.



### Academics & Involvement

Embedding sustainability into teaching, learning, and research & engaging the U-M community in solving real-world challenges.



### Resilient Grounds

Building healthier, climate-resilient landscapes that support biodiversity, and reduce environmental impacts.



### Cross-Cutting Initiatives

Leveraging data and information sharing across the institution to actively scale-up emerging best practices.



#### Eliminating Chemicals of Concern

Adapting healthcare approaches to eliminate harmful chemicals from clinical and laboratory practices.

### **Snapshot: Our Commitments & Actions**

You can follow our progress on these and many other sustainability commitments in real time, with data updated regularly and shared through the Planet Blue website.

### **2025 Goals**



**WORK IN PROGRESS:** First established in U-M's 2011 Campus Sustainability Integrated Assessment, the 2025 Goals are currently being updated and integrated into other initiatives.

Reduce waste sent to landfill by 40%



14% reduction to date

Increase U-M Food purchased from local and sustainable sources to 20%



19% purchased to date

Reduce runoff & chemical applications to campus landscapes by 40%



Reduce vehicle carbon output by passenger trip by 30%



This goal is now encompassed in the carbon neutrality commitments from the PCCN.

Reduce greenhouse gas emissions by 25%



### **Campus Climate Action**

U-M carbon neutrality goals cover direct, on-campus GHG emissions (Scope 1), and emissions from purchased power (Scope 2). Goals for indirect sources (Scope 3) are currently under development.

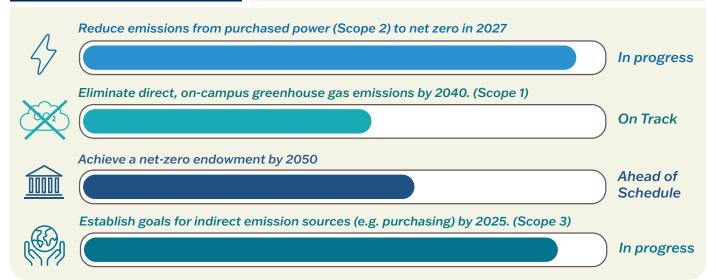


Figure 3: An infographic snapshot of ongoing efforts and achievements toward U-M's carbon neutrality and sustainability goals.



700+

the number of faculty engaged in sustainability education throughout U-M's 19 schools and colleges



the number of sustainability related courses available to undergraduate and graduate U-M students





386

students wore sustainabilitythemed honor cords at graduation \$1.25M

in Carbon Neutrality
Acceleration Grant
funding was awarded
to U-M faculty across
all three campuses to
advance innovative,
actionable carbonneutrality research





#### Did you know?

The Center for Sustainable Systems (CSS), part of School for Environment and Sustainability, has led 300+ research projects and has released 1000+ publications, including its popular Sustainability Factsheets, which were viewed over 500,000 times in 2023 alone.

### **Michigan Medicine**

Key highlights from UM-Health's 2024 ESG Report

#### Green Anesthesia Initiative (GAIA)



Michigan Medicine cut inhaled anesthetic emissions by 88% in just two years—surpassing its 80% target three years ahead of schedule.

Since launching in 2017, U-M Health's virtual care services have:



Avoided nearly

100 million

miles of car travel



The equivalent of 400,000 cross-country road trips



Preventing 38,000 metric tons of GHG emissions

Michigan Medicine has earned annual recognition from Practice Greenhealth for over 20 years, with U-M Health named one of the Top 25 hospitals and health systems nationwide for environmental sustainability, and receiving four Circle of Excellence Awards in 2025.



Figure 4: An infographic snapshot of ongoing efforts and achievements related to U-M academics and Michigan Medicine.

### Sustainability at U-M Today

Sustainability at the University of Michigan is not the work of one office, initiative, or moment; it is the result of a steady, collective effort across disciplines, campuses, and communities. From outdoor classrooms to operating rooms, from grassroots student organizing to executive-level commitments, and from world-class research labs to hands-on projects that use the campus as a living, learning lab, the drive to address climate change and environmental equity is embedded in the everyday fabric of campus life.

### **Spotlights on Sustainability**

The spotlights on the following pages showcase just a few of the people, programs, and partnerships shaping U-M's path toward a more just and sustainable future.

Celebrate more stories of sustainability and discover how to get involved on the Planet Blue website.



# Next Generation Changemakers: Student Leadership in Action

Student leadership and action continue to move U-M forward, challenging the institution to be bolder, more accountable, and more just in its approach to sustainability.

### **Saving Lives, and the Planet**

**Blueprints for Pangaea (B4P)** is a student-led organization redistributing unused, excess medical supplies from U.S. hospitals to hospitals and communities in need around the world.





> \$9M

worth of unused medical supplies have been reallocated to communities in need.



### Fighting fast fashion with a slip stitch

The U-M students leading **Crocheting for Conservation** are countering the fast fashion industry by creating clothes and accessories from second-hand, reused, and sustainably sourced materials.

### **Student Voices for a Climate Conscious Campus**

The **Student Sustainability Coalition (SSC)** bridges between students, campus organizations, and university administration. SSC helps shape sustainability policy and programming across all three U-M campuses, co-ordinating cross-campus initiatives, supporting grassroots action, and advising university leadership.





45 lbs
of fresh produce
was donated to the
Student Food Pantry
through this garden
initiative in 2024.

### Fostering Community Through Food at UM-Dearborn's Community Organic Garden

At UM-Dearborn, students are demonstrating the power of grassroots climate leadership through a student-led community garden plot at the **Environmental Interpretive Center's Community Organic Garden**. The garden helps address campus food insecurity by growing fresh produce for the Student Food Pantry.

## Cross-Cutting Sustainability Education & Curricula

At U-M, sustainability education extends across disciplines, campuses, and communities, grounded in real-world challenges and shaped by a deep sense of place. Faculty and students engage with climate and sustainability through curricula that emphasize systems thinking, civic engagement, and cross-disciplinary collaboration.

### **Expanding Climate Dialogue Across Disciplines**

The **Make Climate a Class** initiative provides a flexible, low-barrier way for faculty across disciplines to integrate climate-related content into at least one session of an existing course.



### Seeds of Change: Linking Climate, Culture, & Community Resilience

UM-Dearborn's Department of Health & Human
Services' undergraduate course, HHS301: Seeds, Weeds,
& Earthly Needs: Collectively Surviving the Climate Crisis
explores the intersection of climate change, food sovereignty, and
social justice through a public health lens. HHS301 helps students to
understand the impacts of environmental change on food systems,
health disparities, and cultural practices.

### The Business of Sustainability at the Erb Environmental Management Institute

The **Erb Environmental Management Institute**, established in 1995, provides a formal bridge between business and sustainability teaching and research through a dual-degree MBA/MS program with the Ross School of Business and the School for Environment and Sustainability.

### The Program in the Environment

The Program in the Environment (PitE) is a jointly managed undergraduate program between U-M's College of Literature, Science and the Arts (LSA) and the School for Environment and Sustainability (SEAS). With a focus on the complex interactions of human beings and their environment, PitE students develop foundational knowledge across environmental and ecological principles, human behavior and decisions, environmental justice and equity, and environmental history and humanities. Students can pursue a BA or BS in Environment, and can choose from five minors: Environment, Sustainability, Water, Energy or Food.

The School
for Environment and
Sustainability (SEAS) prepares
leaders to tackle the climate crisis
through research, education, and
engagement. Graduate programs span
eight specializations, ranging
from environmental justice and
policy to ecosystem management,
geospatial data science, and
sustainable systems along with
a two- or three-year Master of
Landscape Architecture,

and more.

### **Campus as a Living-Learning Lab**

U-M's campuses are ideal places to test, co-create, and apply the values of sustainability in real life, in real time. Students, staff, faculty and researchers are transforming U-M campuses into living-learning laboratories

for sustainability.

### Home, Sweet (Sustainable) Home: MSC at Oxford Residence

The **Michigan Sustainability Community (MSC)**, is a living-learning community where students explore what it means to live sustainably, together. The MSC offers a space for students to connect their values to daily life, build relationships across departments and disciplines, and work together to find solutions to challenges that matter to them.



### Sowing the Seeds of Sustainability, Food Security & Climate Action

Catalyzed in its beginning by the very first Planet Blue Student Innovation Fund grant, the **U-M Campus Farm at Matthaei Botanical Gardens** has grown into an 11-acre working farm with 3 acres of vegetable production and 12,000 square feet of passive solar greenhouse space, providing fresh, local food for students in partnership with U-M Dining, The Farmstand, and the Maize and Blue Cupboard. In addition to food production, the Farm serves as one of the university's leading "campus as lab" spaces, regularly collaborating on a wide range of student- and faculty-led research and demonstration projects each year.



20,000 kg

the amount of CO<sub>2</sub> cut in one semester by MDining defaulting to oat milk in campus cafes.

MDining has committed to

plant-based meals in collaboration with the Humane Society of the United States.



### Serving up Sustainability, One Meal at a Time

**M Dining** is more than a cafeteria, it is a living-learning lab in action, combining daily food service with hands-on learning, testing, and collaboration. M Dining staff work with students, offering mentorship and access to data, facilities, and real-world sustainability challenges. Together, they have piloted waste-reduction strategies like trayless dining, made-to-order meals, full-scale composting, and surplus food recovery.

### U-M Health - Michigan Medicine Leading the Way

For more than 20 years, Michigan Medicine has been setting the pace for sustainable healthcare, earning top recognition from Practice Greenhealth, including Circles of Excellence (systemwide leadership and Greening the OR) and the Greenhealth Emerald Award for progress in sustainability, resilience, and culture.

In 2025, U-M Health was recognized among the nation's top 25 hospitals and health systems for environmental performance, underscoring a simple truth: world-class patient care and environmental stewardship can and should go hand in hand.





### Scrubs, Scalpels, and Sustainability: Climate Action in the Operating Room

In 2022, Michigan Medicine launched the **Green Anesthesia Initiative at Michigan (GAIA)**, with an aim to cut greenhouse gas emissions by 80%. Focused on reducing the use of high-impact anesthetic gases like nitrous oxide and shifting toward less harmful alternatives – including intravenous anesthetics – GAIA achieved an 88% reduction in greenhouse gas emissions from inhaled anesthetics.



### **Smart Sharps: Safe and Sustainable Care**

Michigan Medicine, in partnership with Daniels Health, has swapped single-use sharps containers for reusable collector bins that are sanitized and put back into service. **The Reusable Sharps Container Program**, replaces single-use sharps bins with reusable ones that can used up to 500 times.

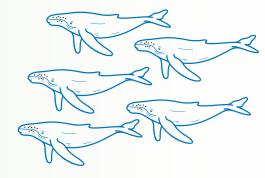
The updated design has also improved safety at the point of disposal, leading to a 57% reduction in sharps-related injuries. This shift reduces waste and supports a safer, more sustainable health system.

This change is expected to keep more than

100,000

sharps containers out of landfills every year...

that's more than
258,000 lbs
of plastic and
22,000 lbs
of cardboard...



or roughly the weight of five humpback whales.

### **Where Patient Care Meets Planetary Care**

Operating rooms can generate 25-35% of a hospital's total waste; much of it plastic. To tackle this challenge, Michigan Medicine launched the Medical Plastics Recycling Initiative (MPRI) in partnership with DuPont, focusing on recycling sterile "blue wrap" and other noncontaminated plastics used in surgical settings.

Since the initiative's introduction in 2021, the MPRI program has diverted more than 22 tons of clean medical plastics, proving that even small interventions in hospital practice can have big impacts.



### **Health, Wellness & Sustainability**

Across the University of Michigan, students, staff, faculty, and researchers are strengthening the connections between health, well-being, and sustainability—recognizing that what's good for people is also good for the planet.

### **Tracing Exposure, Advancing Environmental Equity**

MI-CARES (Michigan Cancer and Research on the Environment Study) is a long-term research initiative led by the U-M School of Public Health and Rogel Cancer Center that aims to reveal how environmental toxins impact health, especially cancer risk, in Michigan. The study focuses on communities that have long faced disproportionate impacts from pollution, particularly Black, Latino, Arab American, and Indigenous communities living in environmental injustice 'hotspots' including Detroit, Flint, Grand Rapids, Kalamazoo, and the Tri-Cities area.



### **Pantry with a Purpose**

The Maize & Blue Cupboard is a vital student-run campus resource working to address food insecurity on U-M's Ann Arbor Campus. The student-run pantry provides free groceries, kitchen supplies, and household essentials to all members of the U-M community and links users to campus support services like financial aid, wellness resources, and SNAP assistance. Supported by Student Life, with funding from the Planet Blue Student Innovation Fund, the Cupboard offers fresh, frozen, and shelf-stable foods, cookware, hygiene and cleaning supplies, and more, at no cost - no questions asked.

### **Daily Dose of Nature - A Prescription for Sustainability**

Nature Rx is a university-wide initiative that encourages the U-M community to engage with nature, building on scientific evidence of nature's many benefits, including mental health. Part of the free Michigan App, Nature Rx features over 100 locations around the Ann Arbor Campus and surrounding areas for users to quickly find a bit of nature to explore.



### Rooted in Place: Land Based Experiential Learning at U-M

U-M has offered land-based learning opportunities to students for over 100 years. Today, land-based experiential learning is a cornerstone of the University's sustainability education. It connects students and researchers to real-world sustainability challenges and provides opportunities to develop sustainability solutions rooted in local knowledge and relationships, have tangible benefits within Michigan, and can be applied at scale globally.

#### Field School, Elevated

Since 1929, the **U-M Camp Davis Rocky Mountain Field Station**—located 20 miles outside Jackson Hole, Wyoming—has provided a 120-acre site for experiential learning in geology, ecology, and environmental science, all within one of the most remarkable landscapes on Earth.



### **A Century of Climate Research in Northern MI**

Some of the first climate change studies were done at the **University** of **Michigan Biological Station**, a research and teaching campus founded in 1909 on more than 10,000 acres of land in northern Michigan acquired from lumber barons after virtually all the trees had been cleared. Now in its second century of operations and home to historic datasets and state-of-the-art research infrastructure, UMBS serves as a gathering place for students and researchers from a wide variety of disciplines who immerse themselves in nature, track changes and drive discoveries and solutions to benefit Michigan and beyond.

### **Building Roots, Cultivating Connections**

The Matthaei Botanical Gardens and Nichols Arboretum (MBGNA) advances social and ecological resilience by connecting people with the natural world and cultivating stewardship of local lands and waters. As a vibrant Campus-as-Living-Learning Lab, MBGNA supports hands-on research and education across disciplines.

**UM-Dearborn's Environmental Interpretive Center** serves as a public gateway to the 120-acre Environmental Study Area, offering students, school groups, and local community members hands-on and immersive, place-based experiences that build environmental awareness and care.



### Research, Innovation, & Partnerships

Research, innovation, and partnerships are at the core of how U-M tackles urgent sustainability challenges, both locally and globally. U-M faculty and researchers work alongside communities, industry leaders, and policymakers to generate solutions that are both actionable and equitable.

668
U-M faculty
members are
listed in the
Graham Institute
Sustainability
Experts Database



Sustainability Factsheet

#### **Catalyzing Ideas, Connecting Impact**

**The Graham Institute** plays a key role in enhancing collaborative research and increasing U-M's real-world impact. The Institute provides seed funding, facilitates connections, supports stakeholder engagement, and creates translational science products. Graham offers Catalyst Grants for faculty at all three campuses to pursue projects that address critical sustainability challenges..

### **Small Sheets, Big Impact: Sustainability Simplified**

Since 2001, the **Center for Sustainable Systems (CSS)** part of the School for Environment and Sustainability, has produced a popular collection of 34 sustainability factsheets that showcase U-M's sustainability expertise on a global stage. These clear, accessible snapshots of key environmental impacts have become a trusted resource for journalists, educators, policymakers, and decision-makers around the world.

### **Collaborating for a Carbon-Free Future**

**MI Hydrogen** is a University of Michigan initiative that brings together researchers, industry partners, and policymakers to shape a clean hydrogen economy that is safe, equitable, and climate-aligned. MI Hydrogen supports collaborative research, real-world demonstration projects, and cross-sector dialogue.

#### **Where Research Meets Restoration on the Flint River**

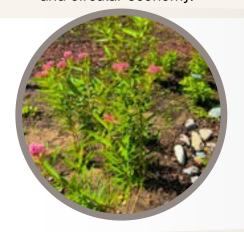
In partnership with the Michigan Department of Natural Resources and the U.S. Fish and Wildlife Service, the **University of Michigan-Flint has played a key role in the ongoing restoration of the Flint River**. In Fall 2024, a century old dam was removed and a series of rock "riffles" were installed to improve river flow, reduce flood risk, and expand access for both people and wildlife. By re-establishing natural hydrology and reconnecting upstream and downstream habitats, the project is helping to restore the River's ecological function, supporting biodiversity in the heart of the city.

# **Sustainability as Service: Community Partnerships for a Just Future**

In service to both people and the planet, U-M is starting in the communities we call home by strengthening partnerships that bridge the gap between local insight and global impact. The result is a community-powered, action-first approach to sustainability.

#### **Connecting Classrooms & Communities**

The **Detroit Sustainability Clinic**, housed within the School for Environment and Sustainability (SEAS), connects community organizations with U-M students, faculty, and experts to advance client-identified sustainability goals. Through flexible projects ranging from rapid technical assistance to long-term partnerships, the Clinic supports efforts across Detroit and throughout SE Michigan in areas such as environmental justice, housing, climate action, green infrastructure, and circular economy.



### **Re-framing the Narrative at UM-Dearborn**

**Restoring Native Voice**, a collaboration between the UM-Dearborn College of Arts, Sciences and Letters, the Environmental Interpretive Center (EIC), and local Indigenous communities, is reshaping how history is told on campus. This project recognizes the contributions of Native peoples to the land and local community, uplifts Indigenous perspectives in environmental stewardship, and creates space for cultural placemaking on campus.

#### **Collaboration for Sustainable Food Futures**

Convened by SEAS, the **U-M Sustainable Food Systems Initiative (SFSI)** brings together faculty, students, and community partners to address the complexity of global and local food challenges. Since 2017, SFSI has led **Food Literacy for All**, a community-academic partnership course, featuring a weekly lecture series co-designed and co-taught by U M faculty and Detroit-based community leaders.



### **Touchdown, Sustainability!**

Each football season, Michigan Athletics works behind the scenes to make game days more sustainable through the **Zero Waste Game Day initiative**. First pitched in 2012 as proposal from the Student Sustainability Initiative, Michigan Athletics launched zero-waste game days at Michigan Stadium in 2017, with an aim to divert at least 90% of game day waste from landfills through recycling, composting, and food recovery.

By prioritizing recycling, composting, and food donations, Michigan Athletics has diverted over 500 tons of waste from landfills since 2017.

### **Stadium Stats:**

On a typical game day, the stadium...



recycles

~8.5 tons



composts nearly

3 tons

of organic waste



and donates almost

half a ton

of surplus food to local food banks



Michigan Athletics, in partnership with OCS, the Campus Farm, Grounds Services, and Waste Management, is piloting a closed-loop initiative that turns compost from Zero Waste Game Day into soil used to grow food at the Campus Farm.



# Investing in Our Future: On the Path to Carbon Neutrality

U-M is laying the groundwork for carbon neutrality with bold investments in sustainable mobility, energy systems, and campus leadership. Across all three campuses, more than 65 projects have been completed to date that

directly support U-M's carbon neutrality goals, many of them

funded through the university's Revolving Energy Fund.

### Changing How We Move: Sustainable Mobility at U-M

U-M is investing in the future of campus movement. One of the most ambitious ideas being explored is an **Automated Transit System** (ATS), a high-capacity, all-electric Campus Connector that would provide frequent, efficient, and sustainable travel between U-M's North, Central, and Medical campuses in Ann Arbor.

### From Fossil Fuel to Future-Ready

A cornerstone of U-M's transition to carbon neutrality is the adoption of **geo-exchange technology**, an efficient, all-electric system that uses the earth's consistent underground temperature to heat and cool buildings and will support U-M's goal to eliminate Scope 1 emissions by 2040.



U-M Commitments

all three campuses, making it the largest renewable energy project in U-M's history. This initiative directly supports the university's broader carbon neutrality goals, including efforts to eliminate Scope 2 greenhouse gas emissions linked to purchased electricity. Maize Rays will also help transform the campus into a living laboratory, providing real-time

data for teaching, research, and engagement.

Maize Rays will install 25 MW of on-campus solar capacity across

### \$1B

investment in climate solutions through U-M's endowment portfolio since 2019. \$7.3M

dispensed to-date from a central Revolving Energy Fund to units across the university pursuing energy efficiency projects.

### \$154,243

energy infrastructure and carbon neutral construction

standards.

in student to student grant funding through the Planet Blue Student Innovation Fund and Social and Environmental Sustainability Grant (FY 24/25)

### **Investing our Future**

U-M's **Revolving Energy Fund (REF)** is a \$25M self-sustaining source of funding for Energy Conservation Measures (ECMs), which are projects that both reduce energy use and generate cost savings. Since its launch in 2022, the REF has supported over 65 ECM projects across all three campuses, ranging from lighting upgrades and building automation systems, to more efficient heating and cooling technologies.

### Toward the Next Era

As the University of Michigan works towards the aspirations laid out in the Look to Michigan vision, the opportunity to weave energy, climate action, sustainability, and environmental equity into the University's long-term direction has never been more timely, or more urgent.

The Sustainability and Climate Executive Leadership Council (SCELC) is charged with guiding this integration. In coordination with sustainability experts from across the U-M system, the Council is well positioned to ensure that this work is not only aligned with Look to Michigan, but is also responsive to the emergent ambitions and priorities of the U-M community.

As we work towards an era of action planning and implementation, our focus will be on the following:

- Considering where U-M can and must push further and leverage its unique history, scale and areas of expertise for meaningful sustainability change.
- Improving our communications and knowledge-sharing internally and with our broader U-M community, so that we all have the map towards our shared destination.
- Identifying and securing the financial, human, and operational resources to sustain this next era.
- Advancing creative partnerships, and new ways of thinking and organizing ourselves. This includes more effective cross-campus collaboration.
- Honoring the work of our sustainability experts and positioning the next generation of sustainability leaders. This means connecting and empowering our established and emerging leaders across our community of students, faculty, staff, and researchers.

Looking ahead, this next era requires us to imagine what's possible when our ambition is matched by our systems, our people and our passion.

Join us and add your voice and expertise to our collective efforts as we fulfill our commitments and develop scalable energy, climate action, sustainability and environmental equity solutions that benefit people and communities in Michigan and beyond.

### Acknowledgments

This report is the result of thoughtful collaboration, deep commitment, and the collective efforts of many across the U-M community. We gratefully acknowledge the faculty, staff, students and leadership from all three campuses and Michigan Medicine who contributed their time, insight, and experience. We are especially grateful for the spirit of collaboration, curiosity, and reflection that guided this work.

#### Special Thanks

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