



**Northwestern University  
Strategic Sustainability Plan**

2017–2021

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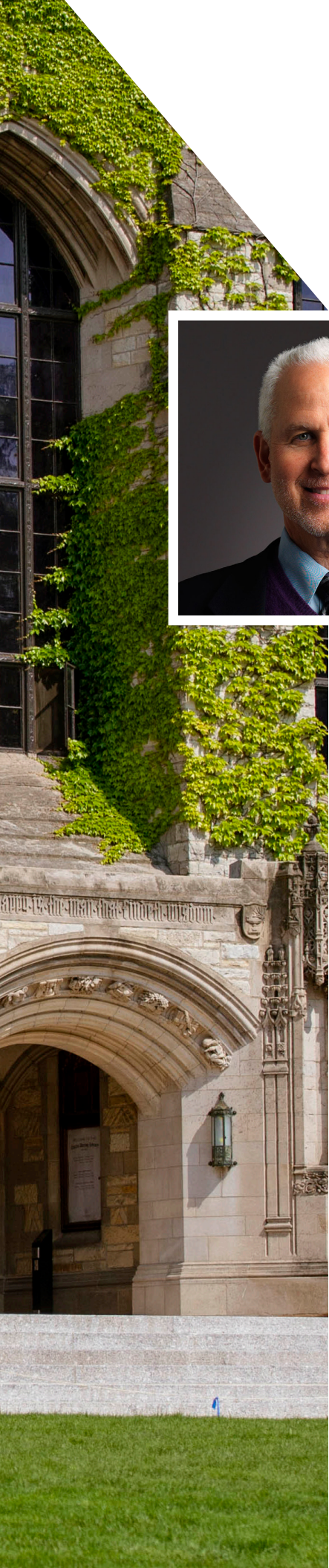


THE FOUNDATION OF THE UNIVERSITY OF CHICAGO

CHARLES DEERING HOWARD

1857





## From Our President

Northwestern University is committed to bringing together the research efforts of our faculty, the entrepreneurial spirit of our students, and the living-learning laboratory of our campuses to develop new alternatives for energy and sustainable solutions for the environment. I would like to recognize the efforts of the Northwestern students, faculty, and staff who are dedicated to the vision of a greener Northwestern and are working together to develop a sustainability plan for Northwestern's future.

*Morton Schapiro*  
*President & Professor*

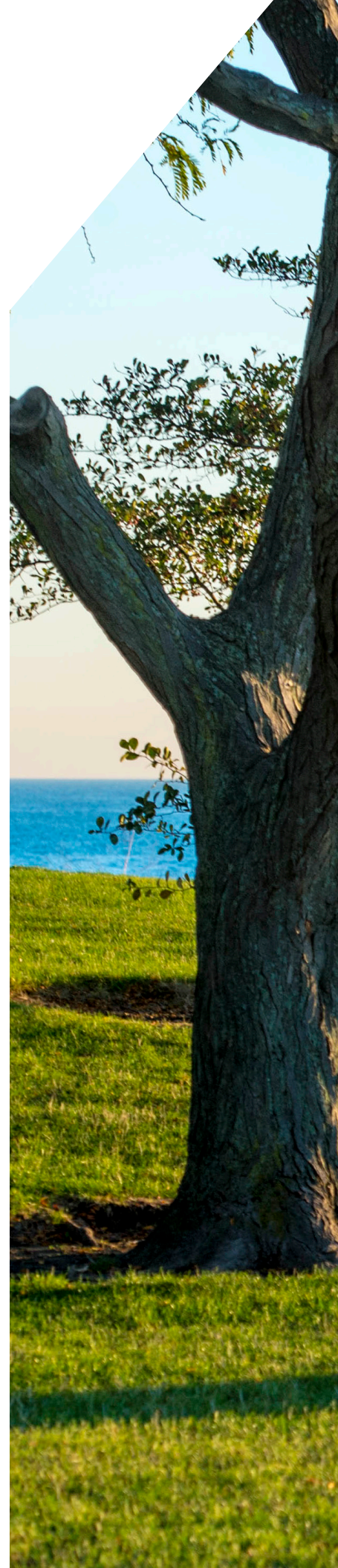


# Northwestern's Commitment to Sustainability

Northwestern is committed to fostering environmental and ethical stewardship; providing a living-learning environment that supports student-, faculty-, and staff-led sustainability initiatives; and improving our built environment and natural ecology.

As one of the world's leading academic institutions, Northwestern strives to be exemplary in addressing sustainability, climate change, and the opportunities and challenges they pose. The University is dedicated to creating a greener campus by reducing waste, conserving water and energy, and promoting sustainable modes of transportation.

Northwestern recognizes the power of teaching and research in driving increased awareness and public understanding, knowledge transfer, discoveries, and new technologies. We are committed to achieving the greatest impact by offering courses, supporting research, and creating partnerships that focus on sustainability, renewable energy, water conservation, and climate change.









# sustainNU's Mission

sustainNU is a University-wide program that aims to engage students, faculty, and staff in reducing—and eventually eliminating—Northwestern's contribution to climate change. In doing so, we will lead the way toward a greener, healthier, and more sustainable future.

sustainNU directly supports the execution of our Strategic Sustainability Plan through our commitment to create an environmentally sound, socially just, and economically sustainable culture at Northwestern. We will encourage our entrepreneurial students, industry-leading researchers, world-class faculty, dedicated staff, and supporting communities to integrate sustainability into all their endeavors. We will set an example of environmental accountability for generations to come.





# Strategic Framework

Northwestern's 2017–21 Strategic Sustainability Plan supports an important objective of the University's strategic plan, **NorthWestern Will**: We will contribute to the solutions for renewable energy and a sustainable environment and to how public policies and economic incentives promote the implementation of new technologies and practices.

The commitments we make in the plan directly align with the four pillars of **NorthWestern Will**:

## ***To discover creative solutions***

- ▶ **WE WILL** increase our focus on renewable energy and a sustainable environment.

## ***To integrate learning and experience***

- ▶ **WE WILL** provide hands-on learning experiences and support the development of a Living-Learning Lab program.
- ▶ **WE WILL** encourage innovation in pursuing objectives that support our strategic plan.

## ***To connect our community***

- ▶ **WE WILL** expand the reach of our sustainability programs.
- ▶ **WE WILL** foster community engagement through Working Groups whose members work together on the University's sustainability objectives.

## ***To engage the world***

- ▶ **WE WILL** educate at the local level as the first step toward building global awareness of the importance of sustainability.



# Governance

The **Sustainability Steering Committee**, composed of Northwestern's senior leaders and administrators, provides high-level oversight for sustainability initiatives and ensures their alignment with the University's mission and goals.

The **Sustainability Council**, convened under the guidance of the University President's office, leads and monitors the implementation of the Strategic Sustainability Plan, keeping efforts coordinated, on track, and on target. Institute for Sustainability and Energy at Northwestern (ISEN) and sustainNU administrators serve as cochairs of the council, whose other members include the Associated Student Government vice president for sustainability, a Faculty Senate member designate, and the cochairs of each of sustainNU's five Working Groups.

The five sustainNU **Working Groups** are composed of students, faculty, and staff from across the University's schools and administrative units; each group has two cochairs who also sit on the Sustainability Council. Each group is assigned to one of the five program areas identified in the Strategic Sustainability Plan and is responsible for planning and implementing initiatives specific to that area, as noted below.

- 1. Built Environment Working Group**

Energy, renewable energy, infrastructure, water and land, greenhouse gas emissions

- 2. Transportation Working Group**

Commuting and campus travel, cycling, electric vehicles

- 3. Resource Conservation Working Group**

Waste reduction, environmentally preferable purchasing, sustainable food

- 4. Experiential Learning Working Group**

Living-Learning Lab Program

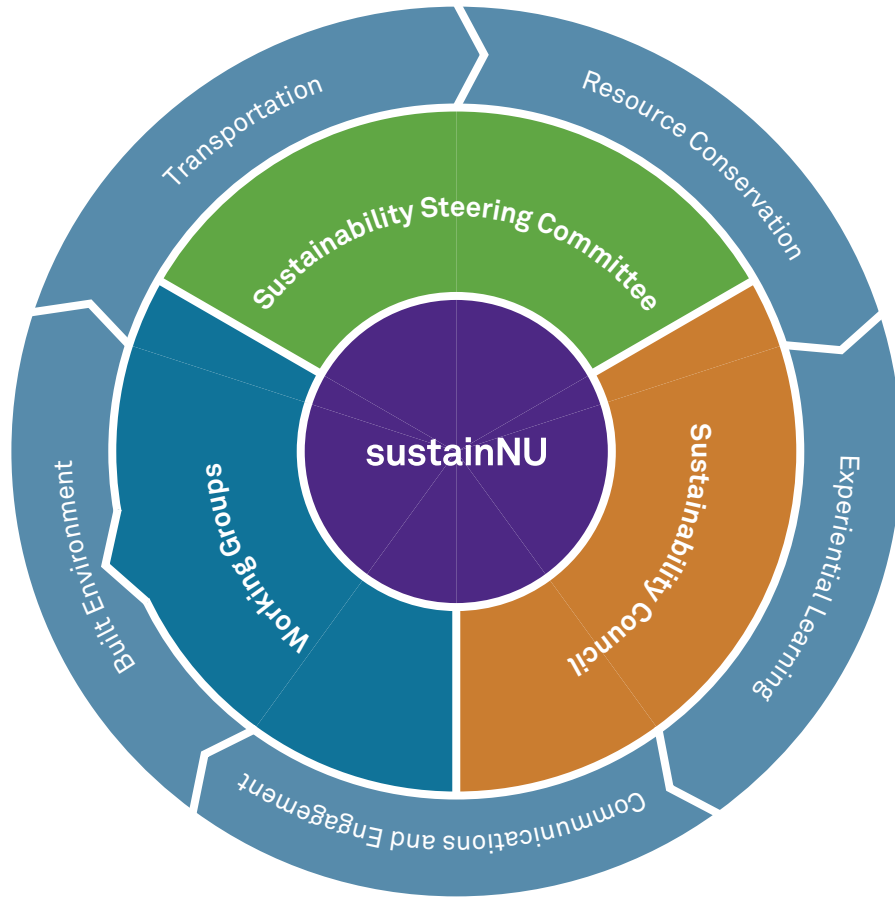
- 5. Communications and Engagement Working Group**

Engagement and outreach to faculty, student, staff, alumni, and community members

The Working Groups will follow the Strategic Sustainability Plan's Implementation Roadmap over the next five years, meeting monthly to assess progress on their respective initiatives and reporting quarterly to the Sustainability Council, which in turn will prepare annual Working Group progress reports for the Sustainability Steering Committee.



## GOVERNANCE STRUCTURE





# Strategic Sustainability Plan

Northwestern's Strategic Sustainability Plan is a comprehensive planning resource that supports and guides the University's sustainability programs. The plan identifies targets for reducing University greenhouse gas emissions and waste; outlines strategies for increasing efficiency in energy, water, and resource use; offers measures for incorporating sustainability into University purchasing and operational practices; and sets goals for encouraging the participation of academic and operational stakeholders in the University community.

## IMPLEMENTATION ROADMAP

The Implementation Roadmap complements the Strategic Sustainability Plan by detailing how Northwestern's sustainability objectives will be met and our success measured. The current roadmap, valid through fiscal year 2021, specifies incremental milestones for achieving needed transformations but also allows flexibility for exploration, discovery, and creativity. The roadmap will be adapted as goals are reached and as new, more ambitious goals are set by the Working Groups.



# Program Areas

The Strategic Sustainability Plan sets the framework for a range of action plans targeting five key program areas:

- 1. Built Environment**
- 2. Transportation**
- 3. Resource Conservation**
- 4. Experiential Learning**
- 5. Communications and Engagement**





# 1. Built Environment

**Our vision is to improve the built environment at Northwestern so that we lessen our harm to the environment and reduce greenhouse gas emissions.**

Northwestern's buildings and spaces—located on campuses in Evanston, Chicago, and Qatar, with facilities accommodating the activities of thousands of students, researchers, faculty, staff, and visitors each year—account for 80 percent of the University's carbon footprint.

Recognizing the dangers of climate change, we regard reducing energy-related greenhouse gas emissions—while still meeting the needs of the Northwestern community—as a top priority. We aim to reduce the University's normalized energy consumption to 20 percent below 2010 levels by the year 2020 and to achieve net zero emissions by 2050. An active partner of the US Environmental Protection Agency's ENERGY STAR® program since 2015, Northwestern follows the program's Guidelines for Energy Management and uses its Portfolio Manager software to benchmark and track University energy, water, and waste performance.

The Built Environment Working Group is the hub for sustainability efforts involving Northwestern's buildings and grounds.

## KEY FOCUS AREAS

- ▶ Energy and water efficiency in existing buildings and grounds
- ▶ Renewable energy use
- ▶ Sustainability in new construction and building renovations
- ▶ Greenhouse gas emissions
- ▶ Sustainability awareness and outreach programs for building users

## MAKING PROGRESS

Northwestern has reduced net greenhouse gas emissions 13 percent since 2012.

## KEY OBJECTIVES

### *Energy*

- 1.1 Establish an energy conservation policy by 2017.
- 1.2 Implement an ongoing energy management program based on ENERGY STAR® Guidelines for Energy Management.
- 1.3 Implement an energy management information system by 2018.
- 1.4 Reduce energy consumption at Northwestern by 20 percent (from 2010 baseline) by 2020.
- 1.5 Establish a retro-commissioning and ongoing commissioning and optimization program by 2018.



### *Renewable Energy*

- 1.6** Increase on-site renewable energy generation by installing one new solar photovoltaic system, with up to 100kW electric capacity, per year.
- 1.7** Establish a renewable energy procurement plan by 2020.

### *Infrastructure*

- 1.8** Incorporate energy efficient and renewable energy technologies into design and construction standards and equipment specifications by 2018.
- 1.9** Design new construction and renovations to use 50 percent less energy than required by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers standard (ASHRAE 90.1-2010).
- 1.10** Ensure that all new construction projects begun in 2017 or later achieve no less than Gold Leadership in Energy and Environmental Design (LEED) certification v4.

- 1.11** Ensure that renovations of existing buildings achieve no less than Silver LEED certification v4 by 2021.

### *Water and Land*

- 1.12** Audit water consumption to establish baseline and conservation goals.
- 1.13** Establish a water conservation plan by 2018.
- 1.14** Double the use of adapted plants on campus by 2020.

### *Greenhouse Gas Emissions*

- 1.15** Reduce scope 1 and 2 greenhouse gas emissions by 30 percent (from 2012 baseline) by 2030 and achieve net zero emissions by 2050.
- 1.16** Establish an institutional climate action plan by 2019.



# 2. Transportation

**Our vision is to reduce the environmental impact of student, faculty, staff, and visitor travel by providing safe, environmentally efficient modes of transportation and the required support infrastructure.**

The daily transportation and travel choices made by members of the University community and by visitors to campus affect Northwestern's greenhouse gas emissions. We will reduce the negative environmental impact of these choices by increasing the availability of options such as biking, walking, and public transportation, and increasing access to charging stations and other infrastructure for electric vehicles.

The Transportation Working Group is the hub for sustainability efforts involving Northwestern's pedestrian, bicycle, public transportation, and electric vehicle accessibility.

## KEY FOCUS AREAS

- ▶ Public transportation use
- ▶ Pedestrian- and bike-friendly roads and walkways
- ▶ City of Evanston partnership for a Complete Streets policy
- ▶ Resources and facilities supporting bicycle and electric vehicle use
- ▶ Campus fleet emissions reduction

## MAKING PROGRESS

Northwestern was awarded Bike Friendly University Silver status by the League of American Bicyclists in 2016.

## KEY OBJECTIVES

### *Commuting and Campus Travel*

- 2.1 Increase campus commuters' use of public transportation by 5 percent (from 2016 baseline) by 2021.
- 2.2 Increase participation in the Commuter Pre-Tax Transit benefit by 25 percent by 2019.
- 2.3 Eliminate the campus shuttle fleet's greenhouse gas emissions by 2030.
- 2.4 Offset all greenhouse gas emissions associated with University-sponsored travel by 2021.
- 2.5 Transition the campus fleet to run exclusively on renewable energy by 2030.





### *Cycling*

- 2.6 Increase bike commuting by 10 percent (from 2016 baseline) by 2021.
- 2.7 Achieve Bicycle Friendly University Platinum status through the League of American Bicyclists by 2021.
- 2.8 Establish a bike management plan and program by 2019.

### *Electric Vehicles*

- 2.9 Provide new and renovate or retrofit existing parking facilities to increase and incentivize the use of environmentally sustainable transportation by 2021.
- 2.10 Establish an electric-vehicle charging policy by 2017.



# 3. Resource Conservation

**Our vision is to adopt sustainable procurement practices for materials, food, and services and take a comprehensive approach to conserving resources, and reducing and managing waste.**

A significant portion of Northwestern’s daily operations involves the purchase and consumption of goods and the production of waste. Leveraging the University’s purchasing power, we can choose environmentally preferable products and services, including locally and sustainably sourced food, and can prioritize waste prevention, reuse, recycling, and composting over landfill disposal.

The Resource Conservation Working Group is the hub for sustainability efforts involving University purchasing and waste reduction and management.

## KEY FOCUS AREAS

- ▶ Waste reduction and landfill diversion rates
- ▶ Rates of reuse, recycling, and composting
- ▶ Sustainable procurement practices
- ▶ Food sources and partnerships with food service providers

### MAKING PROGRESS

Recycling and composting efforts diverted 38 percent of our waste from the landfill during the 2016–17 academic year.

## KEY OBJECTIVES

### *Waste Reduction*

- 3.1** Increase landfill diversion rate to 50 percent of total waste generated by 2020.
- 3.2** Develop systematic, centralized waste-minimization guidelines—including solid, universal, hazardous, and electronic waste—by 2017.
- 3.3** Establish a University surplus program by 2021.





### *Environmentally Preferable Purchasing*

- 3.4** Establish procurement guidelines effective as of 2017 that prioritize the purchase of durable, reusable, recyclable, compostable, and environmentally conscious goods and services.
- 3.5** Increase the purchase of environmentally preferable goods and services by 10 percent (from 2018 baseline) by 2021.
- 3.6** Increase recycled content of paper purchased to 40 percent postconsumer content by 2021 and 60 percent by 2030.
- 3.7** Support Northwestern's Business Diversity Strategy, with a focus on increasing partnerships with diverse businesses year over year.

### *Sustainable Food*

- 3.8** Participate in the Real Food Challenge to achieve a 20 percent level of "real food" on campus by 2020.
- 3.9** Increase the use of sustainable food served in University dining facilities to 20 percent (from 2018 baseline) of total food purchases by 2021.
- 3.10** Achieve Green Restaurant Certification for all dining halls by 2018.



# 4. Experiential Learning

**Our vision is to support hands-on experiential learning at Northwestern that enables students to engage with the physical environment, address global environmental issues, and grow as leaders in sustainability.**

Northwestern strives to prepare students to be globally aware citizens. The University's strategic plan, NorthWestern Will, emphasizes the discovery of creative solutions that promote a sustainable environment, integrated learning, community connections, and global engagement. We are committed to providing hands-on experiential learning that not only educates our students about sustainability but also empowers them to be sustainability leaders equipped to solve critical environmental and social challenges.

The Experiential Learning Working Group is the hub for programs that catalyze research, teaching, and outreach in the linked fields of energy and sustainability. The group will cultivate faculty, student, and staff collaboration to create a Living-Learning Lab Program that will explore and apply sustainability concepts in the campus environment.

## KEY FOCUS AREAS

- ▶ Real-world learning opportunities
- ▶ Research and application of sustainability technologies

## MAKING PROGRESS

The Northwestern Sustainability Fund awarded over \$50,000 in grants to support student-led sustainability projects on campus during the 2016–17 academic year.

## KEY OBJECTIVES

- 4.1 Establish a Living-Learning Lab Program by 2018.
- 4.2 Identify courses that lend themselves to hands-on experiential learning.
- 4.3 Increase student sustainability literacy.







# 5. Communications and Engagement

**Our vision is to foster a University-wide culture of sustainability and environmental stewardship.**

Northwestern is committed to developing sustainability programs that encourage conservation and protection of the natural environment. Because our programs will succeed only if the University community is consistently informed and engaged, we will strive to weave sustainability into the campus culture, encouraging greater awareness of the environmental impact of our actions and the adoption of more sustainable practices.

The Communications and Engagement Working Group is the hub for outreach efforts and ensures that all five Working Groups maintain a common focus on Northwestern's sustainability objectives. The group seeks to build the leadership capacity of students, faculty, and staff and to motivate them to conserve resources, reduce waste, increase energy efficiency, and reduce the University's carbon footprint.

## KEY FOCUS AREAS

- ▶ Programs and events promoting campus-wide sustainability efforts
- ▶ Funding for hands-on learning and student-led sustainability projects
- ▶ Community service opportunities
- ▶ Green certification programs for spaces on campus

## MAKING PROGRESS

During the 2016–17 academic year, sustainNU hosted or provided support for 55 campus events with a focus on sustainability, reaching more than 5,000 students, faculty, staff, and community members.

## KEY OBJECTIVES

### *Faculty and Staff Engagement*

- 5.1** Double the number of offices participating in Northwestern's Green Office Certification Program annually and increase their engagement in sustainability initiatives.
- 5.2** Establish a Green Labs Program by 2020.
- 5.3** Integrate sustainability into programs and learning opportunities for University staff.



### *Student Engagement*

- 5.4 Restructure Northwestern's Eco-Reps Program as a means of engaging students in residence halls.
- 5.5 Facilitate collaboration among sustainability-focused student organizations and their involvement with the wider University community.
- 5.6 Engage students in sustainability-themed events and activities.
- 5.7 Incorporate sustainability into programs targeting student organizations.

### *Community Engagement*

- 5.8 Collaborate with Northwestern's host municipalities to engage community members in joint sustainability initiatives.
- 5.9 Partner with the Office of Alumni Relations and Development to build support for University sustainability initiatives.

### *General Awareness and Visibility*

- 5.10 Increase the visibility of campus sustainability activities among students, faculty, staff, and other key stakeholders.
- 5.11 Promote Northwestern's sustainability initiatives to audiences outside the University via publications and associations.





# Measuring and Reporting Success

Applying benchmarking tools and metrics widely used by other universities and peers in the healthcare, hospitality, and commercial real estate industries, sustainNU will measure the University's sustainability performance against that of peer institutions and chart progress over time, ensuring that our initiatives are worthy of continued investment and that our goals are appropriately challenging and impactful. Northwestern's performance tracking data will be made available to the public for transparency and accountability.

## **sustainNU's benchmarking platforms:**

- ▶ EPA's ENERGY STAR Portfolio Manager® for tracking waste, water, and energy use
- ▶ Sustainability Tracking Assessment and Rating System of the Association for the Advancement of Sustainability in Higher Education for reporting and measuring performance across the Strategic Sustainability Plan's five program areas
- ▶ The Campus Carbon Calculator, a tool we will use to develop our climate action plan, for benchmarking our sustainability efforts against peer and best-in-class institutions
- ▶ Standards set by the Climate Registry for calculating, verifying, and publicly reporting greenhouse gas emissions



# Our Vision by 2021

By 2021, sustainability will be an integral component of the daily life of Northwestern University, a critical consideration in decision-making, a focus of experiential learning, and a motivating force for behaviors and innovative ways of planning and operating.

“Northwestern University is committed to addressing the linked challenges of sustainable energy use and climate change mitigation and has demonstrated this in recent years through significant investment in programs, faculty, staff, and infrastructure. The creation of a campus sustainability plan brings all of these efforts together and sets clear goals for the future. It is the next logical step for our community.”

— **Bradley Sageman**, PhD, Professor and Department Chair, Department of Earth and Planetary Sciences, Weinberg College of Arts and Sciences

“Together we can achieve the sustainable future that we envision for our campus community, for the communities that surround us, and for our nation. If we actively participate in the sustainability plan at both the institutional and personal levels, together we can make the most lasting impact.”

— **Kathia Benitez**, Sustainability Director, sustainNU, Facilities Management

“Northwestern University’s sustainability plan will ensure that we continue making major reductions to our energy, climate, and resource footprints, across all aspects of our operations, and in an inclusive, transparent, and accountable manner. And by reinforcing our commitment to sustainability research, teaching, and outreach, the University will strengthen its contributions to societal goals as well.”

— **Eric Masanet**, PhD, Associate Professor of Mechanical Engineering and Chemical and Biological Engineering, McCormick School of Engineering and Applied Science





# Acknowledgements

## SUSTAINABILITY STEERING COMMITTEE

### *Senior Leadership*

**Morton O. Schapiro**, President

**Jonathan Holloway**, Provost

**Nim Chinniah**, Executive Vice President

### *Administration*

**Mary L. Baglivo**, Vice President for Global Marketing and Chief Marketing Officer

**Pamela S. Beemer**, Vice President and Chief Human Resource Officer

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**Sarah M. Pritchard**, University Libraries

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**Teresa K. Woodruff**, The Graduate School

## SUSTAINABILITY COUNCIL

### COUNCIL COCHAIR

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### COUNCIL COCHAIR

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### RESOURCE CONSERVATION WORKING GROUP COCHAIR

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### STUDENT ROUNDTABLE CHAIR

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**Monika Wnuk**, Assistant Director of Marketing and Communications, Institute for Sustainability and Energy at Northwestern

# A Year in Review 2015–2016

## Built Environment

- 
**Using the sun —**  
 Renovation of Kresge Centennial Hall included installation of an **81kW solar array**  
*Equal to saving 70,000 pounds of coal annually*
- 
**Reducing energy —**  
 ✓ 2% reduction from prior year  
 ✓ 15% reduction from baseline year (2010)
- 
**Saving water —**  
 ✓ 850,000 gallon reduction from prior year  
*Equal to filling 1.3 Olympic swimming pools*
- 
**New LEED-certified buildings —**  

 1) Ryan Center for the Musical Arts  
 2) Sailing Center  
  
 Northwestern is home to **10 LEED-certified buildings**, totaling 500,000 square feet
- 
**Committed to sustainability —**  
 Northwestern University is a proud ENERGY STAR® partner, and partner of the US Department of Energy's Better Buildings Alliance and Better Buildings Challenge, committed to reducing our energy consumption by 20% or more by 2020




## Communications & Engagement

- 
**Celebrating Earth Month —**  
**Reached 1,400 community members** throughout the month and hosted **4 events** during Earth Week
- 
**Green Cup Competition —**  
 Electricity use decreased by **3 kWh/person** and water use decreased by **1 cubic ft/person** during this competition
- 
**Sustainable offices —**  
**Recognized 10 departments** with Green Office Certifications, **engaging 578 staff members**
- 
**Recognizing service —**  
**9 Sustainability Excellence Awards** given in conjunction with the Northwestern Service Excellence program
- 
**Reaching out to the community —**  
 Established baseline of **3,300 sustainability newsletter subscribers** and committed to a 6% annual increase



## Resource Conservation

- 
**Switching to mixed recycling —**  
 Transitioning away from dual-stream recycling, Northwestern has seen an **increase of 91 additional tons** collected as compared to the previous year
- Reducing food waste —**  
 University composting initiatives **collected 260 tons of food waste**
- Avoiding the landfill —**  
 Increased recycling and composting efforts **diverted 39% of Northwestern's waste** from going to the landfill
- 
**Better food at the source —**  
 Committed to the Real Food Challenge to **increase “real food” by 20%**  
*community-based, fair, ecologically sound, and humane food*
- 
**Facilitating campus events —**  
 sustainNU provided guidance and composting for **6 zero-waste events**
- 
**Move out collections —**  
 During move out, more than **400 pounds of food** and **20,000 pounds of clothing and household goods** were donated

## Transportation

- 
**Campus bike share —**  
 A partnership between Northwestern and the City of Evanston brought 3 Divvy bike share stations to campus  
**3,197 trips from campus stations** since inception in July 2016
- 
**Bike Commuter Challenge —**  
 Northwestern cyclists logged nearly **1,200 bike trips** covering more than **7,000 miles**—more than any of the other 268 teams
- 
**Supporting electric vehicles —**  
 Installed **4 electric charging stations**  
  
 Purchased **10 new Global Electric Motorcars** for Facilities Management fleet

## Curriculum & Research

- 
**Teaching our students —**  
 Over **100 sustainability- and energy- related courses** offered at Northwestern and 9 courses offered by the Institute for Sustainability and Energy
- 
**Enabling student innovation —**  
 Northwestern Sustainability Fund awarded a \$30,000 grant to House by Northwestern  
*House by Northwestern is a 2017 DOE Solar Decathlon entry*



# Glossary

**adapted plants:** Adapted plants are those that were not originally part of the natural ecosystem but have evolved to a point where the physical conditions such as soil, climate, and geology are conducive for healthy growth.

**benchmarking:** A measurement of the quality of an organization's policies, programs, strategies, etc. and their comparison with standard measurements, or similar measurements of peers.

The objectives of benchmarking are to determine what and where improvements are called for, to analyze how other organizations achieve their high performance levels, and to use this information to improve performance.

**carbon footprint:** The total amount of greenhouse gases that are emitted into the atmosphere each year by a person, family, building, organization, or company.

**climate action plan:** A set of strategies intended to guide efforts for climate change mitigation

**The Climate Registry:** A nonprofit organization governed by US states and Canadian provinces and territories. TCR designs and operates voluntary and compliance greenhouse gas reporting programs globally, and assists organizations in measuring, reporting and verifying (MRV) the carbon in their operations in order to manage and reduce it. TCR also consults with governments on all aspects of GHG measurement, reporting, and verification.

**Complete Streets policy:** Policies that formalize a community's intent to plan, design, and maintain streets so they are safe for all users of all ages and abilities. Policies direct transportation planners and engineers to consistently design and construct the right-of-way to accommodate all anticipated users, including pedestrians, bicyclists, public transportation users, motorists, and freight vehicles.

**Eco-Reps:** A student organization that works to promote sustainable practices on campus, with a focus on encouraging waste reduction and energy and water conservation in campus residences.

**energy management information system (EMIS):**

A broad family of tools and services to manage commercial building energy use. These technologies include, for example, energy information systems; equipment-specific fault detection and diagnostic systems; benchmarking and utility tracking tools; automated system optimization tools; and building automation systems.

**environmentally preferable purchasing:** Purchase of products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.

**ENERGY STAR® program:** A US Environmental Protection Agency voluntary program that helps businesses and individuals save money and protect the environment through superior energy efficiency.

**green labs program:** A program dedicated to minimizing energy, water, and material goods consumption in labs through occupant engagement and behavioral changes.

**Green Restaurant Certification:** A certification process created by the Green Restaurant Association.

**greenhouse gas emissions (GHG):** Emission of gases, such as water vapor, carbon dioxide, tropospheric ozone, methane, and low-level ozone, that are transparent to solar radiation but opaque to long-wave radiation, and that contribute to the greenhouse effect.

**LEED (Leadership in Energy and Environmental Design):** A rating system devised by the US Green Building Council to evaluate the environmental performance of a building and encourage market transformation toward sustainable design. The system is credit based, allowing projects to earn points for environmentally friendly actions taken during construction and use of a building.

**net zero emissions:** Producing no greenhouse gas emissions or offsetting any emissions through means such as carbon sequestration or the purchase of carbon credits.

**real food:** Food that is local and community based, produced in fair and safe conditions, and ecologically sound and humane (i.e., no added hormones or nontherapeutic antibiotics).

**Real Food Challenge:** A national organization that provides institutions with tools and strategies to support the development of a sustainable, local, fair, and humane food system through responsible procurement decisions.

**renewable energy:** Energy sources that are not depleted by use. Examples include energy from the sun, wind, and small (low-impact) hydropower, plus geothermal energy and wave and tidal systems.

**retro-commissioning:** A process that determines the extent to which a building is operating as intended. It helps identify improper equipment performance, what equipment or systems need to be replaced, opportunities for saving energy and money, and strategies for improving performance of various building systems.

**postconsumer content:** Content that has been used and recycled for reuse in another consumer product.

**solar photovoltaic system:** A photovoltaic system, also PV system or solar power system, is a system designed to supply usable solar power by means of photovoltaics. It consists of an arrangement of several components, including solar panels to absorb and convert sunlight into electricity, and a solar inverter to change the electric current from DC to AC, as well as mounting, cabling, and other electrical accessories to set up a working system.

**Scope 1 emissions:** Direct emissions from sources that are owned or controlled by the reporting entity; Scope 1 includes on-site fossil fuel combustion and fleet fuel consumption

**Scope 2 emissions:** Indirect emissions from sources that are owned or controlled by the reporting entity; Scope 2 includes emissions that result from the generation of electricity, heat, or steam purchased by Northwestern from a utility provider.

**Scope 3 emissions:** Indirect emissions, such as those resulting from the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, and electricity-related activities.

**universal waste:** A category of waste materials designated as hazardous, but containing materials that are very common. Universal waste includes: batteries, pesticides, mercury-containing equipment (including many thermostats), and lamps containing mercury (e.g. fluorescent lamps, including compact fluorescent lamps). Businesses and other generators of such waste are required to provide for its proper disposal.









# Northwestern University

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**together,  
we will sustainNU**

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[northwestern.edu/sustainability](https://northwestern.edu/sustainability)