

A man and a woman are in a forest, measuring a tree trunk with a tape measure. The man is wearing a dark jacket and glasses, and the woman is wearing a dark jacket and glasses. They are both looking at the tape measure. The forest has many trees and fallen leaves on the ground.

Dickinson

A Year of Engagement

2016 SUSTAINABILITY REPORT

A YEAR OF ENGAGEMENT	1
HOW WE ENGAGE	2
On Campus	2
Greater Carlisle	3
Across Pennsylvania	3
Across the Region and Nation	3
Internationally	4
HOW WE LEARN	5
Across the Curriculum	6
New Certificate Programs	6
Around the World	8
Living Laboratory	8
HOW WE LIVE	10
Day One	11
“Just” Sustainability	11
Tread Lightly	12
Wellness	13
Mindfulness	15
Visitors and Events	16
HOW WE OPERATE	17
Energy and Climate	17
Food and Farm	18
Land, Water and Waste	19
Transportation	20
HOW WE INVEST	21
Green Revolving Fund	21
Endowment	22
Grants, Contributions and Recognitions	22
ON THE HORIZON	24

In this report we highlight some of the ways in which Dickinson has engaged different constituencies in sustainability work and selected achievements of the sustainability initiative in 2015-16. More information available at:

www.dickinson.edu/sustainability
www.dickinson.edu/sustainabilitydashboard



A Year of Engagement

Broader and deeper engagement was a theme of Dickinson's sustainability initiative in the 2015-16 academic year.

New certificate programs in **Food Studies (FDST)** and **Social Innovation and Entrepreneurship (SINE)** now provide structured yet flexible pathways for students to engage in interdisciplinary sustainability-related studies. New co-curricular programs such as **Exploring Our Place, Sustain IT** and the pop-up restaurant **GATHER**, as well as a reimagined **Eco-Rep program**, are bringing students, faculty and staff together to build skills, share knowledge, forge relationships and learn about place as a context for creating sustainable communities.

Reaching beyond the campus, Dickinson's Center for Sustainability Education (CSE) connected Dickinsonians with community development projects in Greater Carlisle, state-level energy and climate policy in Pennsylvania and international climate policy at the Paris climate conference. The **Alliance for Aquatic Resource Monitoring (ALLARM)** worked with new partners, adding to the capacity of communities across a multistate region for investigating and improving water quality, publishing community data and engaging with the national volunteer monitoring community. The **Dickinson College Farm** continues to grow organic food for the community, serve as an anchor of Carlisle's farmers market and educate the community about sustainable and wholesome food. The **Center for Service, Spirituality & Social Justice (CSSS)** matched students with community partners that created reciprocal relationships, often in ways that advance social, economic and environmental sustainability.

“There is indeed a broader movement at Dickinson not just to prepare students for careers but to also prepare students for lives as active citizens working to build sustainable communities.”

Shalom Staub, associate provost of academic affairs and civic engagement

HOW WE ENGAGE



ON CAMPUS

In 2015-16 we reached a larger and more diverse campus audience through our peer education programs by adopting a new strategy for engaging students, faculty and staff; reimagining our Eco-Reps program; and launching a new workshop series and field trip program:

- Our new strategy is to design our **peer-education** programs to serve faculty and staff as well as students, bringing them together in activities that create new and rewarding relationships.
- **Eco-Reps** is a seven-year-old peer-education program that empowers Dickinsonians to make sustainable changes in their lives and work. It recently was reorganized to include students, faculty and staff as Eco-Reps and to expand the program beyond the residence halls and into communities such as athletic teams, clubs and organizations and offices, departments and centers.
- **Sustain IT** workshops were launched in fall 2015 to help create action on issues of concern through hands-on learning and networking. Topics for the first year of workshops included composting, building rain barrels, campus energy and water use, upcycling discarded materials and biking.
- **Exploring Our Place** field trips help us become more knowledgeable and responsible inhabitants of the places where we live, study, work and play. Sites visited this year included local water and sewage treatment plants, LeTort Spring Run, local cemeteries, sustainable campus buildings and the U.S. Army Heritage & Education Center.

GREATER CARLISLE

Dickinson's growing partnership with the Greater Carlisle Project (GCP) provides numerous opportunities for curricular and co-curricular engagement with local communities. CSE led a grant-writing effort in 2016 on behalf of the GCP that secured \$50,000 from the Pennsylvania Humanities Council and \$10,000 from the South Mountain Partnership to implement **Greater Carlisle Heart & Soul**. The funded project uses the Orton Family Foundation's storytelling process to enable community members to learn about the "heart and soul" of the community and to apply this knowledge in community planning and development. Significant in-kind contributions of staff and student time are being provided by Dickinson's CSSS, the Community Studies Center, the Media Center and CSE, which is helping to lead the project. To date, Heart & Soul volunteers have worked over 1,400 hours at more than 20 community events to collect 685 stories in written, pictorial, voice and video forms.

31 students

in the **first-year learning community *Modernity and Its Critics*** participated with their professors in **LOCALTUNITY**—buying, cooking and eating local foods together with the help of the **Farmers on the Square** market.

www.dickinson.edu/LOCALTUNITY

Building on the successful Heart & Soul grant collaboration, four GCP member organizations were invited to participate in a grant-writing assignment for the **2016 Baird Sustainability Fellows Colloquium**. Instead of writing grant applications as a classroom exercise, as had been done in the past, the Fellows worked in teams with GCP partner organizations to write grant applications that were submitted to funding agencies. The efforts of the students and their partner organizations were supported with two grant-writing workshops, as well as feedback on drafts from successful grant writers. One of the applications was successful and resulted in the Partnership for Better Health awarding a \$15,000 grant to Leadership Education and Farming (LEAF).

ACROSS PENNSYLVANIA

Dickinson was the lead organizer of the **PA Power Dialog**, working with the Pennsylvania Environmental Resource Consortium (PERC) and other Pennsylvania colleges and universities. The event was one of 30 Power Dialogs held in state capitals across the nation on April 4, 2016. The dialogs brought college students together with regulators and legislators to learn from each other about state-level implementation of the federal Clean Power Plan. The PA Power Dialog was one of the largest dialogs in the nation, attracting over 235 participants from 15 colleges and universities, including 30 Dickinson students, faculty and staff. The program featured a keynote talk by John Quigley, secretary of Pennsylvania's Department of Environmental Protection; three student panels; a panel of experts from government, the private sector and civil society; and small and large group discussions.

ACROSS THE REGION AND NATION

As the **Alliance for Aquatic Resource Monitoring (ALLARM)** celebrated its 30th year, it launched an online database and toolkit for shale gas volunteers. The database provides volunteers across Pennsylvania, New York and West Virginia access to water quality data and data management tools that facilitate use of the data by concerned citizens. ALLARM has been leading regional efforts to train volunteers, provide equipment and test water to assess streams for the early detection and reporting of surface water contamination by shale gas extraction activities since 2010. This database now houses

nearly 4,000 observations and 13,000 measurements from over 250 sites, drawing from the over 2,000 volunteers trained on ALLARM's shale gas protocol. ALLARM established building blocks for the Chesapeake Monitoring Cooperative (CMC) in the first year of this multistate, federally funded effort. The CMC aims to increase understanding of the health of the bay by integrating community and government agency data. ALLARM's work on the CMC and shale gas database and work with volunteers earned ALLARM a seat on the National Water Quality Monitoring Council.

INTERNATIONALLY

Dickinson sent a seven-person delegation of students, staff and alumni to the **21st Conference of the Parties (COP21) of the United Nations Framework Convention on Climate Change (UNFCCC)** in Paris in December 2015. Dickinson organized a well-attended event at COP21, Climate Action: Engaging the Next Generation, which featured Rose-Walters prizewinners Bill McKibben and James Balog as speakers. Anna McGinn '14 (environmental studies), Liz Plascencia '16 (earth sciences) and CSE director Neil Leary also spoke at the event, as did John Adams and Jacob Scherr of the Natural Resources Defense Council and Mark Jacobson of Stanford University. Other members of the Dickinson delegation at the climate conference included Timothy Damon '12, Sarah Ganong '13, Sam Pollan '14 and Keziah Groth-Tuft '17.

In January 2016, our College Farm managers Matt Steiman and Jenn Halpin traveled to Israel and Kenya, meeting with the members of the Arava Institute, several Kibbutzim and other groups and learning about hydroponics, aquaponics, small-scale biogas production, green building technologies and other sustainable practices and technologies. The trip has resulted in tangible results at the Dickinson farm, as well as installation of a home biogas unit at the Treehouse, which allows students to produce biogas for cooking from food waste. Matt and Jenn also returned with many ideas for integrated courses, student exchanges and global studies opportunities.



HOW WE LEARN



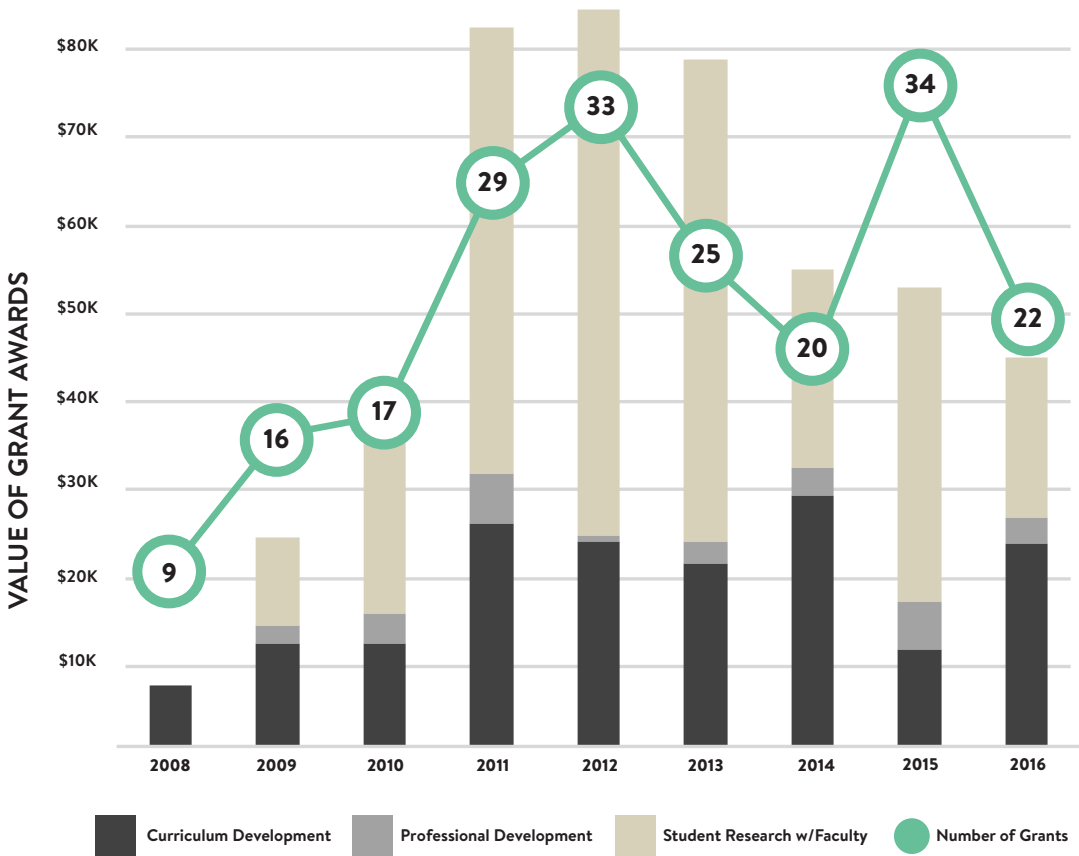
The Center for Sustainability Education (CSE) developed and adopted a new strategic plan for supporting sustainability learning at Dickinson for the next five years.

The 2021 Strategic Plan states an aspirational vision: Every Dickinsonian will develop the knowledge, skills and passions to help create an inclusive and just world that is socially, economically and ecologically sustainable. The revised mission of CSE is to engage Dickinsonians in learning about, innovating for and practicing sustainability in the classroom, on the campus and in communities near and far.

Working in collaboration with faculty, multiple college offices and programs, plus off-campus partners, CSE will pursue the following goals:

- 1** Enable and enhance a curriculum at Dickinson that is rich in opportunities for exploring sustainability.
- 2** Support and improve living laboratory and other co-curricular opportunities for practicing sustainability.
- 3** Advance Dickinson as a leader in transforming liberal education for an inclusive, just and sustainable world.
- 4** Nurture and strengthen mutually beneficial college-community partnerships for sustainability.

SUSTAINABILITY EDUCATION FUND GRANTS



ACROSS THE CURRICULUM

Dickinson continues to invest in creating new opportunities for students and faculty to engage in sustainability learning, practice and research through Sustainability Education Fund (SEF) grants. Twenty-two SEF awards totaling \$44,895 were made to faculty and staff in 2015-16 for curriculum development, professional development and student-faculty research projects. Cumulatively, 205 SEF awards have been made since 2008, for a total of \$472,052.

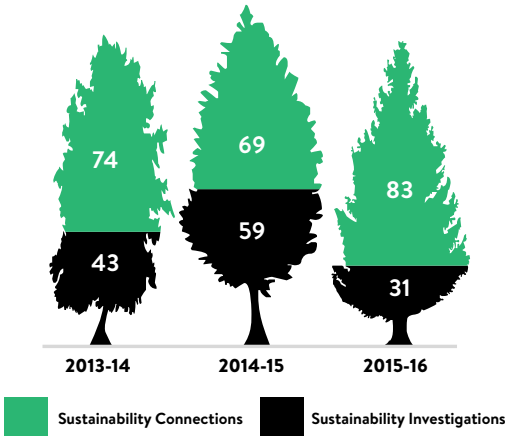
Sustainability curriculum development projects were funded this year in biology, earth sciences, East Asian studies, English, environmental studies, food studies, French, history, international business & management, Italian, mathematics and computer sciences and religion. Included among these are 10 faculty members who participated in 2016 Valley & Ridge, a study group that supports faculty in integrating sustainability content into existing and new courses.

NEW CERTIFICATE PROGRAMS

Two new sustainability-related certificate programs were launched in 2016. The Social Innovation and Entrepreneurship (SINE) certificate enables students to develop systems thinking and other skills for creating new products, services and social structures that address issues of justice, education, environmental protection, sustainability and community development. Students who pursue the food studies certificate will explore questions from different disciplinary perspectives: Where does food come from? Why do people eat what they eat? Are current food systems sustainable? What factors will shape the future of food systems, foodways and food culture?

To earn the certificates, students complete six courses—an introduction to the field, four electives and a capstone course. Students must also complete a hands-on experiential project or activity that might take the form of an internship or independent study, field research or a hands-on work experience. In addition, students pursuing

SUSTAINABILITY COURSE SECTIONS OFFERED AT DICKINSON



the SINE certificate will also compile a dossier of reflective essays that demonstrate learning and mindfulness in pursuing the certificate.

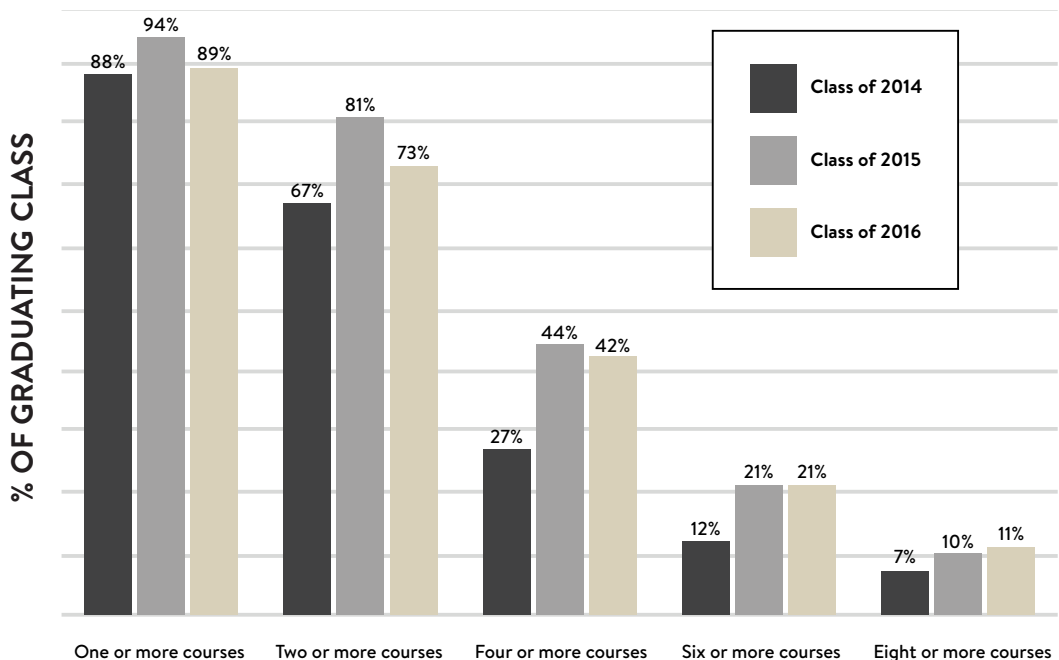
These new programs add to a robust and diverse curriculum of sustainability courses at Dickinson. In 2016, 25 of 42 degree programs offered 114 sections of Sustainability Investigations and Sustainability Connections courses. Ninety percent of the class of 2016 took one or more sustainability courses during their four years at Dickinson, and 42 percent took four or more.

Beginning with the class of 2019, all students will take at least one sustainability course to satisfy the new graduation requirements adopted in 2015.

Students encounter sustainability questions, problems and strategies in arts and humanities, social science and science courses. A sample of sustainability-focused and -related courses offered in 2015-16 includes:

- African American Foodways (AFST-220)
- Ecological Anthropology (ANTH-214)
- Insects and Human Sustainability (BIOL-401)
- Economics of Natural Resources (ECON-332)
- Literature and Food (ENGL-101)
- Environmentalism and Capitalism (ENST-406)
- Earth's Changing Climate (ERSC-142)
- Energy Resources (ERSC-202)
- German Environments (GRMN-215)
- American Landscapes (HIST-211)
- Globalization, Sustainability and Security (INST-401)
- Brazilian Cultural and Social Issues (LALC-242)
- Climate Change and Renewable Energies (PHYS-114)
- Environmental & Social Justice (SOCI-230).

ENROLLMENT IN SUSTAINABILITY COURSES BY GRADUATING CLASS



AROUND THE WORLD

Students Matthew Brinckerhoff '16 (physics, mathematics), Joelle Cicak '16 (art & art history), Yuan Lin '16 (theater, art & art history) and Nick Toole '16 (political science) traveled with art & art history professor Barbara Diduk to Jingdezhen, China, in summer 2015 with support from the **Luce Initiative on Asia and the Environment** to explore sustainability amid rapid industrialization through an artistic lens. The students interviewed Chinese workers, businesspeople, government leaders and artists about sustainable practices in a city world-renowned for its traditional arts and produced multimedia presentations of their interviews. Among their interview subjects is Ai Weiwei, China's most famous contemporary artist.

The 2016 summer Mosaic **Meltdowns and Waves** took students Alexander Holmes '18 (biology), Connor Moore '18 (English), Ian Norden '19 (education) and Hayat Rasul '19 (earth sciences, mathematics) and professors Alex Bates and Marcus Key to Three Mile Island (TMI), coastal New Jersey and Japan to study and compare responses to disasters. Perspectives gained from visits to the sites of the TMI accident, Hurricane Sandy and the Tohoku earthquake and tsunami built on course readings, lectures and discussions to generate deeper understanding of the causes and consequences of hazards, communities' vulnerabilities to hazards and post-disaster mitigation responses.

Dickinson students are beginning to take advantage of the opportunities offered by the **EcoLeague** to learn about sustainability in the different ecosystems, places and contexts of the EcoLeague member schools. Claire Jordy '17 (environmental studies) studied the history of apples at the College of the Atlantic in Bar Harbor, Maine, in fall 2015, and Tess Zahn '18 (environmental science) worked with sea otters through the U.S. Geological Survey while studying at EcoLeague partner Alaska Pacific University.


LIVING LABORATORY

Dickinson's **Living Laboratory for Sustainability** continues to grow and evolve, engaging students in active, place-based, hands-on learning on the campus and in communities. Living lab activities include self-directed, group and class projects; student-faculty and independent research; on-campus internships with the farm, ALLARM and CSE; off-campus internships; service learning; Exploring Our Place field trips; and Sustain It workshops. Some examples from the past year include the following.

ALLARM student employees and professional staff worked with new community partners this year, including the Bethel Township Environmental Advisory Committee and Big Spring Watershed Association, as well as with continuing community partners. ALLARM students build environmental and community-based skills by training communities on stream testing tools, writing proposals, conducting research and presenting their work at professional conferences.

Gather, a new pop-up restaurant run by the Dickinson College Farm, brings our community together to share wholesome local food, hear a sustainability-themed presentation and enjoy musical entertainment. Much of the food served at Gather is grown and harvested by our student farmers, using sustainable and organic practices. The student farmers also participate in preparing, cooking and serving the meal under the direction of professional guest chefs and Dickinson staff.

Dickinson staff and administrators visited classes in earth sciences, environmental studies, international business & management and religion and led tours and organized workshops to provide students insights into the ways the college seeks to apply sustainability principles in campus operations.



LIVING LABORATORY

Anna McGinn '14 was awarded a Sustainability Education Fund grant to conduct research on conflict and climate change adaptation at the U.N. climate conference in Paris. Her research was the basis for a successful application for a prestigious **National Science Foundation Graduate Research Fellowship** that is funding her graduate studies at the University of Maine.

Kaylee Mueller '16 and Professor Dana Wohlbach assessed diversity of microbial communities of a Greenland lake, seeking to understand **how climate change affects Arctic lake ecosystems and food webs**. The project, which is part of a larger research effort that includes Professor Kristin Strock, is setting a baseline that is critical for developing strategies to mitigate the effects of climate change on high-latitude lakes.

Emily Whitaker '17 and Sean Jones '17, working with Matt Steiman, assistant farm manager, tested the **use of solar heating systems for increasing methane production from biogas digestion of food waste**. The solar systems were developed in the spring semester under the guidance of Professor Hans Pfister. Results of the summer research project will inform decisions for expanding use of food waste to produce biogas fuel for the farm.

In another summer research project, Robert Page '17, working with Professor Ben Edwards, assessed the **effects of different tillage practices on soil health at the Dickinson farm**. Results of the research will help improve soil management at the farm and will also provide material for labs and lectures in the course Introduction to Soils (ERSC 205).






HOW WE LIVE

“I HOPE THAT THE OFFICE OF STUDENT LIFE AT DICKINSON HELPS STUDENTS UNDERSTAND OUR SHARED RESPONSIBILITY FOR THE CARE OF THE PLANET AND ITS PEOPLE.”

Joyce Bylander, vice president and dean of student life



“A Sustainable Local Adventure helped us work together to build relationships with the students we will spend the next four years with. By the end, I had made strong friends and developed an understanding of what sustainability means at Dickinson.”

William Irving '19

DAY ONE

The class of 2019 was introduced to Dickinson's sustainable ways on day one of the 2016 academic year. Orientation included **A Sustainability Amazing Race** and other activities designed to raise awareness of Dickinson's collegewide commitment to sustainability. New students also learned about opportunities to get involved in **Living Laboratory** programs such as the College Farm, ALLARM, the Handlebar and CSE.

Over 260 members of the class came early and participated in one of 20 **Pre-Orientation adventures**. More than half the adventures included experiences that connected new students with environmental, social or economic dimensions of sustainability. Examples include Wilderness Introduction to Life at Dickinson; Cuisine, Carlisle and Climbing Adventure; and A Sustainable Local Adventure. Participants in A Sustainable Local Adventure immediately paid forward some of what they learned. They assisted with Green Move-In, educating other new students and their families about where, what and how to recycle materials after moving their belongings into their rooms.

“JUST” SUSTAINABILITY

Social justice is inextricably linked to the way we define and seek to practice sustainability at Dickinson, working to help create a sustainable world that is just and inclusive. A day of workshops held in April 2016 titled Exploring Power, Privilege and Social Justice engaged faculty and staff in conversations about building cultural awareness, capacity and inclusion at Dickinson. The workshops were co-sponsored by the Division of Student Life, the Popel Shaw Center for Race & Ethnicity, the Asbell Center for Jewish Life, the Community Studies Center, CSE, Human Resources, Institutional Initiatives, International Student/Scholar Services, LGBTQ Services, the Provost's Office, Waidner-Spahr Library, the Women's & Gender Resource Center and the Center for Service, Spirituality & Social Justice.

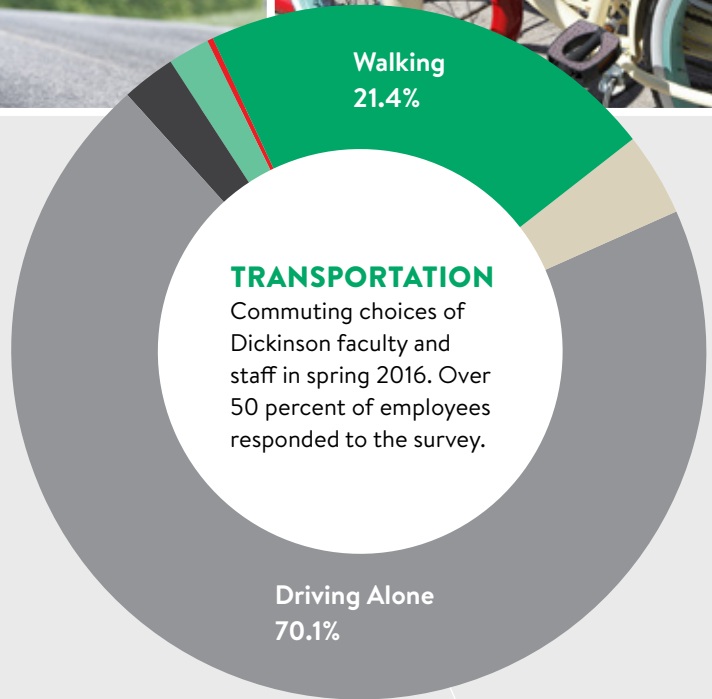
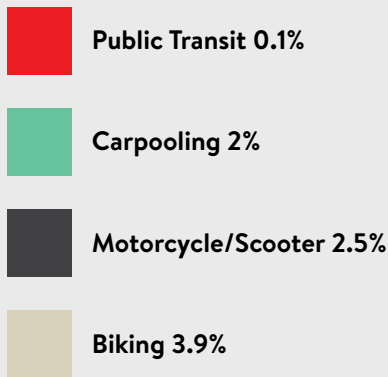
The Office of LGBTQ Services launched a new training program this year, **Ready to Advocate for Inclusive Spaces for Everyone (RAISE)**. RAISE seeks to engage employees and students deeply and personally in issues related to LGBTQ services.

Participants gain a better awareness of their own personal biases and barriers to being an effective ally to the LGBTQ community and are equipped with tools to be able to respond both actively and proactively. Unlike the former training, this program expects participants to commit to ongoing and continuous education and learning.

The Why We Wear Black student group worked constructively with other members of the Dickinson community in 2016 to recognize concerns of underrepresented and marginalized groups on campus. Other student groups active in social justice issues and working to create inclusive spaces on campus include the Feminist Collective, Human Cultures House, Social Justice House and Sustained Dialogue. The social justice work of each of these groups contributes to building a sustainable community on campus.

“Wherever in the world environmental despoliation and degradation is happening, it is almost always linked to questions of social justice, equity, rights and people's quality of life in its widest sense.”

Agyeman, Bullard and Evans, 2003, *Just Sustainabilities: Development in an Unequal World*, MIT Press.



TREAD LIGHTLY

At Dickinson we strive to tread more lightly, reducing our ecological footprints by consuming less and being wise about what we consume.

A commuter survey conducted in spring 2016 revealed that a surprising number of Dickinson employees commute to work in ways that produce little or no emissions of greenhouse gases. Responding to the survey were 477 employees, representing 52 percent of Dickinson’s workforce. Of those, 21.4 percent reported walking to work during the spring semester, 3.9 percent biking, 2.0 percent carpooling, 2.5 percent riding a motorcycle or scooter and 0.1 percent taking public transit.



Results of the survey will be analyzed to help us understand how best to promote alternative, environmentally friendly commuting choices that simultaneously advance Dickinson’s Climate Action Plan and wellness goals. A biking culture is strong and growing at Dickinson, supported by biking infrastructure, semesterlong Green Bike loans, daylong Red Bike loans, the Handlebar bicycle co-op, trainings for Handlebar volunteer mechanics, bike-to-farm potluck and other cycling events, indoor winter and summer bike storage and an active biking@dickinson listserv.



This year's annual **Energy Challenge**, a three-week energy conservation campaign and residence hall competition, saved 4,120 kilowatt hours of electricity and 4,380 pounds of CO₂ emissions. Desserts in the Dark Kickoff, Friday Nights Lights Out, Bonfire Finale Celebration and other events brought the campus community together to participate in the challenge.

The Energy Challenge benefitted from two new touchscreen displays of energy consumption data for 23 academic and residential buildings. The touchscreens, installed in the HUB and Kaufman Hall, allow users to interact with real-time data to examine how much electricity is used in different buildings this hour, this week, this month and this year. Armed with such knowledge, campus residents can better understand how their behaviors affect energy consumption. The data can be accessed online via **Dickinson's Energy Dashboard**.

WELLNESS

A rich variety of wellness programs are offered for Dickinson students and employees, contributing to the sustainability of our community. Overall, the Wellness Center saw an increase in student utilization of healthcare services in 2015-16 with 72 percent of the student body accessing healthcare through the office as compared to 67 percent in 2014-15. There were notable increases in students' use of both mental health services (23 percent vs. 19 percent last year) as well as physical health services (68 percent vs. 63 percent last year).

The Wellness Center piloted a First-Year Student Health program in 2016 designed to help first-year students transition to managing their health and wellbeing independently. Each first-year student was encouraged to schedule three appointments with the Wellness Center in the fall semester to review available services and students' health histories, meet with a staff counselor to review transition to college life, screen for common mental health concerns, discuss self-care strategies and meet with a dietitian to review past and present dietary habits. Forty-eight students attended one or more of the scheduled appointments in this pilot program.

students
utilizing
healthcare:
72%

IN 2015-16

75%
of employees
participated in
wellness programs

In 2016 Dickinson was recognized for the second year in a row as a Platinum Level Fit-Friendly Worksite by the American Heart Association. Seventy-five percent of Dickinson employees participated in one or more of the college's wellness programs in 2016, including biometric screening, health risk assessment, use of the Kline Fitness Center and Kline Center and membership in external gyms.

Dickinson's new **Gear Box** makes it easier for Dickinsonians to get outdoors and enjoy the trails, state parks, mountain views, trout streams and other amenities of the Cumberland Valley region. Housed in Allison Hall's lower level, the Gear Box lends camping, cross-country skiing, boating and climbing gear to students and employees. The outdoor equipment also is available for college-sponsored programs such as the Emerging Leaders Retreat, WILD (Wilderness Introduction to Life at Dickinson) and other Pre-Orientation programs. The Gear Box is a joint venture with the Outing Club, with more than 150 members, and the Office of Outdoor and Experiential Programs.

LOCALTUNITY continued to introduce more Dickinsonians to Farmers on the Square in 2016. The program provides \$5 tokens as incentives to buy healthy food from local farmers and to build community by preparing and sharing meals together. In a new twist, professors Karl Qualls and Dan Schubert participated with their 31 First-Year Seminar students. To date, 463 students and 97 faculty and staff have participated in LOCALTUNITY and shared over 100 meals together.



463 students
AND 97 EMPLOYEES
PARTICIPATED IN
LOCALTUNITY





MINDFULNESS

Dickinson's **Eco-Reps program**, graduation pledge and **Green Devil Certification** promote mindful choices and behaviors that help advance social, economic and environmental sustainability.

2016 saw the launch of the **Green Devil Certification program**, created by Baird Sustainability Fellow Emily Smith '16 (English, political science). Through the program, individuals use a self-assessment tool to reflect on their consumption choices, community engagement and other behaviors. Depending on their answers, participants receive bronze, silver, gold or platinum Green Devil Certification. The tool helps participants identify opportunities to live more sustainably, and participants can retake the assessment to monitor their growth over time.

The Sustainability Jam Hour radio show had another strong year in 2015-16. The show, hosted by Ken Shultes, associate vice president for sustainability and facilities planning, makes connections from music and songs from diverse genres to climate change issues, challenges and opportunities and is intended to advance the college's sustainability culture in a unique way.

Eco-Recycling-Reps
Dickinson

"I PLEDGE to apply sustainability learning and values from my Dickinson experience as I explore and improve the social and environmental consequences of any organizations for which I work and the communities in which I live."

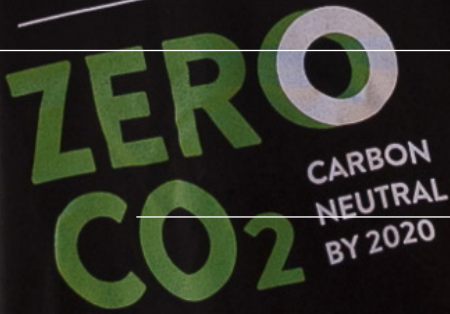
Graduation pledge signed by over 220 members of the class of 2016.

VISITORS AND EVENTS

Immersed in dialogues, connections made:

- **Mark Ruffalo**, recipient of the Sam Rose '58 and Julie Walters Prize at Dickinson College for Global Environmental Activism, gave advice to Dickinsonians on acting, environmental activism and resiliency during a three-day residency that included class visits, meetings with student leaders and a public interview with an audience of over 800 Dickinsonians.
- Caribbean visual artist **Christopher Cozier** discussed his creative work *Actions Between Territories* and the environmental and cultural significance of the arts within the historical and contemporary politics of the Caribbean.
- **Bernard David**, chairman and CEO of CO2 Sciences Inc. and founder of the Global CO2 Initiative, shared his story of bringing together top scientific and business minds to invest in innovative, economically viable approaches to capture 10 percent of the world's CO2 emissions and transform CO2 into a variety of commercial products.
- In the film *Trash Dance*, choreographer **Allison Orr** finds beauty and grace in garbage trucks and in the unseen men and women who pick up trash. Dickinson used a film screening of *Trash Dance* to bring together Eco-Reps, housekeepers, artists and community members to discuss waste issues.
- Buddhist monks from **Drepung Monastery's Gomang College** spent five days in residency sharing insights on Buddhist principles, environmentalism and Tibetan culture. The residency, *Enlightened Activity: The Green Tara Initiative*, included construction of a Green Tara Mandala sand painting, classroom visits, a cultural pageant and shared meals on campus.
- **William Gleason**, professor of English at Princeton University, spoke about the future of the environmental humanities and his collaborative project and book *Keywords for Environmental Studies*.

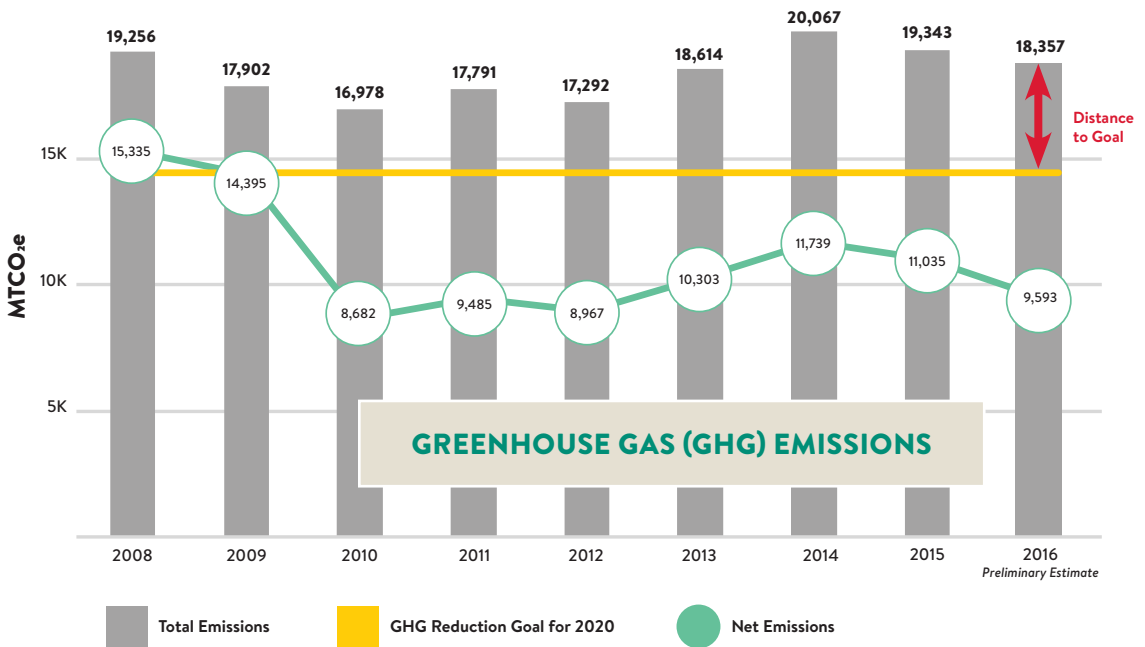




HOW WE OPERATE

ENERGY AND CLIMATE

We made good progress toward our 2020 carbon neutrality goal this year. Thanks to **Climate Action Plan (CAP)** projects implemented in 2015-16, and an assist from a mild winter, greenhouse gas emissions associated with our electricity, natural gas and fuel oil consumption are down by over 1,000 metric tons CO₂ equivalent emissions (MTCO₂e) vs. 2014-15. This is 20 percent of our 2020 target. New CAP projects this year include installation of LED lights in more campus locations and expansion of Dickinson's energy dashboard for real-time monitoring of energy use and emissions.



Further progress is expected in the near future from two large CAP projects that went through planning and design phases in 2015-16. One project would use a power purchasing agreement to install a 3 MW solar array on college-owned land adjacent to Dickinson Park that will generate an estimated 5.2 million kWh of electricity per year, representing 25 percent of Dickinson's electricity consumption. A second project would install a tri-generation system at the central energy plant to produce steam, electric power and chilled water for the campus, generating less emissions than existing systems. The two projects are expected to reduce annual carbon emissions by more than 4,000 metric tons per year, which is approximately 80 percent of our 2020 reduction target.



REDUCED
food waste by
19%
VS. 2014-15

FOOD AND FARM

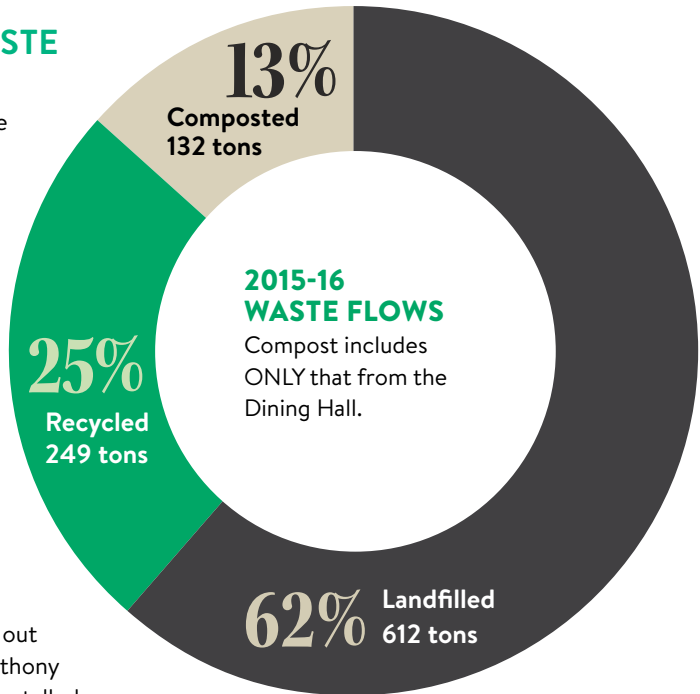
The Dickinson College Farm set a goal to become a net-zero operation in terms of carbon emissions. An in-depth carbon inventory was completed in summer 2015, and a farm-specific CAP was developed that fall. The farm's carbon footprint is already extremely modest, thanks to multiple solar installations, the already net-zero yurts and the general farm ethic and culture of ecological mindfulness. Several initiatives outlined in the farm CAP are already in motion, such as a movement to all LED lighting on the farm and increased emphasis on biodiesel and biogas production and use at the farm.

Dining Services continues to make advancements in the arena of sustainability. Notable initiatives in 2015-16 include the following:

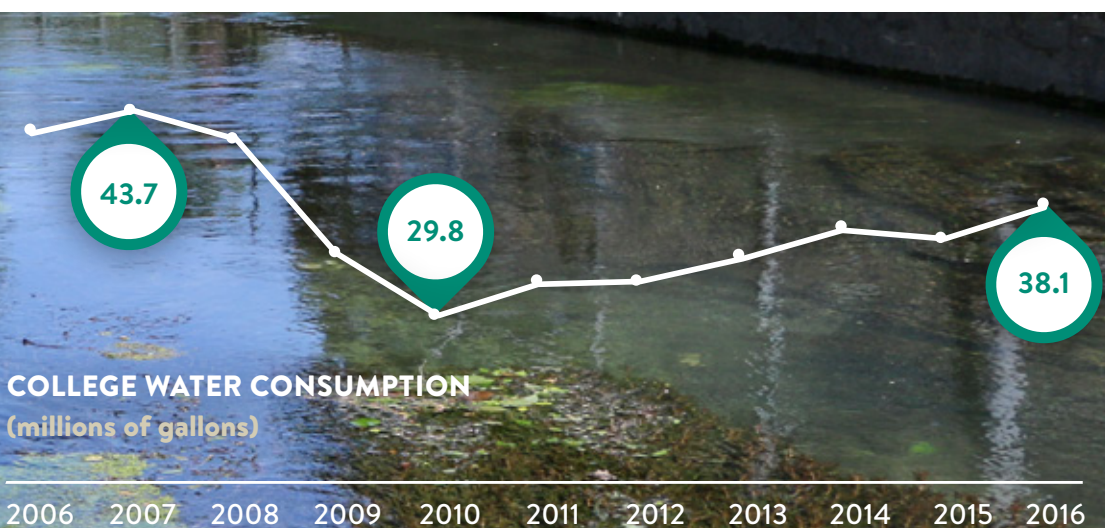
- Achieved **3-Star Certified Green Restaurant** status through the Green Restaurant Association. There are only 250 restaurants in the country at that level and only 20 that have achieved the top level at 4 stars.
- Reduced pre- and postconsumer food waste by 19 percent vs. 2014-15 through the implementation of new food management software that more accurately aligns food purchases and preparation with customer consumption, yielding multiple environmental benefits.
- Replaced a 35-year-old vehicle with a new and more fuel-efficient model that will reduce gasoline consumption and associated carbon emissions.
- Replaced the dishwasher in the Dining Hall with a new and more efficient machine that will reduce electricity and water consumption.

LAND, WATER AND WASTE

The newest addition to natural landscaping at Dickinson is the native wildflower meadow designed and installed by Ann Dailey and other facilities management staff on the east side of Kaufman Hall. The meadow has many environmental and educational benefits and is just one of many examples of how facilities management is advancing sustainable practices on campus to improve aesthetics while decreasing carbon emissions and water consumption (no irrigation required!). Mootisse, a public art sculpture created by Dickinson art students in 2004 for CowParade Harrisburg, was brought out of storage, restored by Professor Anthony Cervino and Carley Zarzeka '15, and installed on the patio adjacent to the meadow.



An all-college committee was formed in 2015-16 with the goal of reducing campus-generated landfill waste. One of the committee's first achievements was creating an initiative to reduce landfill waste emanating from all-college picnics and events. Dining Services, the College Farm, facilities management, CASE and CSE all partnered to implement a new large-picnic protocol geared toward composting and recycling all disposables from events and striving to reduce event-generated landfill waste to the least amount possible.



A new outdoor drinking fountain and filling station was installed at the Hayes Tennis Courts with funding provided by the Dickinson Student Senate, and there are now stations on every floor of Kisner-Woodward Hall. These new water filling stations—along with the 40+ other stations already on campus, a sustainability surcharge on bottled water sales and changes in Dining Services practices—are helping Dickinson reduce the use and sale of disposable water bottles on campus.

TRANSPORTATION

In 2015-16, the Department of Public Safety aligned college fleet vehicles with trip data, resulting in the need for fewer vehicles overall in the fleet and fewer vehicles required per trip. The impact of this planning is a reduction in fuel consumption and associated emissions. Further, four new fuel-efficient minivans were purchased in 2015-16 to replace older, less efficient vehicles.

This year the Bicycle Advisory Committee (BAC) brought a request to the college's Space Planning Committee (SPC) to install bike shelters on campus, to further promote the cycling culture on campus. The BAC researched multiple bike shelter options and provided the information to the SPC, eventually resulting in the adoption of a new bike shelter design for campus. Two shelters will be installed on campus next year, one near Atwater Hall and the other near Adams and Witwer Halls.





HOW WE INVEST

Cumulative investments of \$30.7 million in sustainability programs from 2006 through 2015 have positioned Dickinson as a sustainability leader in higher education. This includes investments of \$12.1 million in sustainability-focused academic programs, \$3.5 million for co-curricular Living Laboratory programs, \$11.7 million for sustainable facilities and CAP projects and \$3.4 million for projects supported by external grants.

The Dickinson Sustainable Investment Group (DSIG) hosted two campus forums on sustainable investment. The first, held in January 2016, was an informational session about Dickinson's endowment and investment management practices. The second, held in February 2016, was more interactive, with a number of small group discussions that explored a variety of questions. The conversations demonstrated support for giving weight to both fiduciary responsibilities and Dickinson's values in managing the college's investments, continuing to invest resources to support sustainability learning and sustainable campus operations, meeting our climate neutrality commitment, increasing and broadening student engagement with the sustainability initiative and enhancing engagement of the college with the greater Carlisle community to promote social, economic and environmental sustainability.

GREEN REVOLVING FUND

In 2016-17, the Green Revolving Fund (GRF) will increase to over \$125,000, which represents the measured savings from 2014-15 CAP projects. These savings will be used to fund future CAP projects, and as the years roll on, the savings and carbon emission reductions will continue to grow. This funding approach enables the CAP program to sustain itself and preserve college resources for other important objectives.

Sustainable INVESTMENTS 11.2%

That's the percentage of Dickinson's pooled endowment that are managed under environmental, social and governance policies.

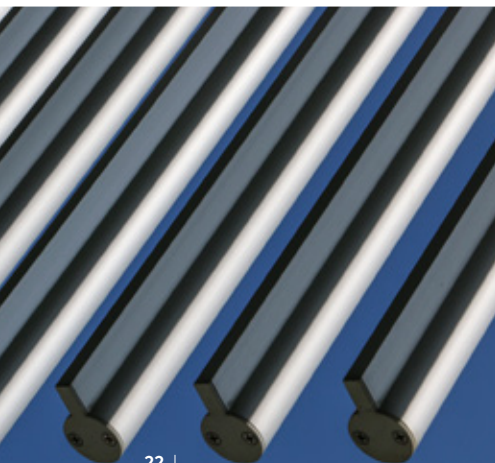
ENDOWMENT

As of March 31, 2016, Dickinson's endowment totaled \$413.1 million, of which \$340.5 million was held in an endowment pool managed for the college by Investure LLC and \$72.6 million was held as non-pooled assets. Investments in renewable energy and positions held with fund managers with environmental, social and governance investment policies represented 11.2 percent of the value of the pooled endowment. Investments in fossil energy represented 4.8 percent of Dickinson's pooled endowment, with the top 200 fossil energy companies accounting for 1.6 percent and coal companies accounting for 0.1 percent. Further information on the endowment as a resource for financial sustainability can be found at www.dickinson.edu.

GRANTS, CONTRIBUTIONS AND RECOGNITIONS

Dickinson received several external grants in 2015-16 to support projects with a sustainability focus or connection, including the following:

- \$650,000 from the **Andrew W. Mellon Foundation for the Civic Learning and Engagement Initiative**
- \$143,400 grant from the **Pennsylvania Department of Environmental Protection**, in partnership with the **borough of Carlisle**, to improve local water quality by implementing stormwater management best practices on campus and on borough streets.
- \$25,000 from the **Foundation for Pennsylvania Watersheds** for ALLARM's project **Taking the Pulse of Pennsylvania's Watershed Movement**
- \$12,000 from the **National Science Foundation's Innovations in Development** for ALLARM's project **Learning to See, Seeing to Learn: A Sociotechnical System Supporting Taxonomic Identification Activities in Volunteer-Based Water Quality Biomonitoring**, with lead institution Carnegie Mellon University
- \$5,000 from the **Miller Foundation** for operating support for the Dickinson College Farm





Additional contributions were received from alumni and parents. Suzanne Gouvernet P'00 provided \$25,000 for the **Sustainability Education Abroad Fund**, and D. Michael Lefever '76 and Michele Pecora provided \$10,000 to support sustainability education.

Dickinson has received numerous recognitions for its sustainability leadership in recent years, including a Gold STARS rating in 2015 from the Association for Advancement of Sustainability in Higher Education. New recognitions received in 2016 by the college and by Dickinson graduates include the following:

- Dickinson's Dining Services was named a **3-Star Certified Green Restaurant** by the Green Restaurant Association.
- The college received **Platinum Level Fit-Friendly Worksite** recognition from the American Heart Association.
- Juliane Bowman Brown '94, Will Kochtitzky '16, Anna McGinn '14 and Olivia Wilkins '15 were awarded prestigious **National Science Foundation Graduate Research Fellowships**.
- Caroline Kanaskie '17 and Keziah Groth-Tuft '17 won highly competitive **Environmental Protection Agency Greater Research Opportunities (EPA-GRO) awards**, each receiving \$50,000 to support their undergraduate studies.
- *Sierra* magazine rated Dickinson a **Cool School** and Princeton Review named us to its **Green Honor Roll**—again!

ON THE HORIZON

Dickinson is in a period of leadership transition. During the transition we are guided by the college's Report on Strategic Direction. The report affirms sustainability as one of Dickinson's core commitments. It calls for building on the college's strength in sustainability, giving priority to connecting sustainability with global education and other distinctive elements of the academic program. In response, CSE will work in the coming year with the Center for Global Study & Engagement to map out meaningful and effective ways to connect sustainability and global learning.

The report also calls for enhancing civic engagement and integrating civic engagement into the educational experience, work that will be aided by a recent \$650,000 grant from the Andrew W. Mellon Foundation. The goals of the Mellon-funded initiative are to deepen connections between Dickinson's civic mission and curriculum and enhance community engagement opportunities for students locally and globally. Sustainability is central to Dickinson's civic mission, and under the initiative we will explore and reinforce intersections between civic engagement and sustainability on issues of social justice, inclusion, community resilience and civic responsibilities.

Also affirmed by the Report on Strategic Direction is Dickinson's commitment to reach carbon neutrality by the year 2020. This fall we are excited to welcome the class of 2020, dubbed the "class of carbon neutrality" since their graduation year coincides with our target date for zero net emissions of greenhouse gases. Fall 2016 Orientation sought to connect Dickinson's newest class to this lofty college goal and enlist their participation in the college's campaign to cut carbon emissions.

While sustainable behaviors by the 2020 class and other members of the Dickinson community are critical for reaching climate neutrality, we also need further investments in low carbon, energy efficient infrastructure. Dickinson signed a power purchasing agreement for a 3 MW solar array to be constructed in the coming year. The array will generate 5.2 million kWh of electricity, displacing purchased electricity with zero-carbon electricity. Also in the year ahead, Dickinson will add a highly efficient tri-generation system to the central energy plant. Financial and environmental analyses of the projects estimate positive financial paybacks and carbon reductions that will move us a long way toward our 2020 goal.

In spring 2017 we will break ground to construct a new residence hall designed to meet LEED Platinum standards. With the new residence hall, we will house more of our students on campus, which has both educational and financial benefits. While energy efficiency and other sustainable features of the building's design will result in small carbon and ecological footprints per resident and per square foot, by housing more students and heating and cooling more living space, the project will add to the college's energy consumption and greenhouse gas emissions. We are accounting for this in our CAP and will take measures to reduce other sources of campus emissions.



Sustainability

is a DEFINING CHARACTERISTIC OF A DICKINSON EDUCATION. DICKINSONIANS CAN: Spark a change. CHANGE A FUSE. CHANGE MINDS. Give directions. GIVE A HAND. Conserve. REUSE ANYTHING. Plant a seed. GROW FOOD. FIND THEIR OWN VOICE. Find common ground. LEAD. FOLLOW. Buy local. TAKE RESPONSIBILITY. Take initiative. BE A GOOD EXAMPLE. Be held accountable. HOLD ONTO THEIR VALUES. Make fuel from waste. MAKE PEACE. Make waves. FAIL WITHOUT BEING DEFEATED. Build a bike. BUILD BRIDGES. BUILD A BETTER WORLD. Strive not for perfection BUT FOR EXCELLENCE—in all that we do during the course of our daily lives, sustainably.



Sustainable Dickinson Dickinson College is working to create a world that is socially, economically and environmentally sustainable. Explore our website to learn how we are infusing sustainability throughout the college and using the campus, community and study abroad locations as living laboratories for learning and service that advance sustainability goals.

LEARN MORE: dickinson.edu/sustainability

