



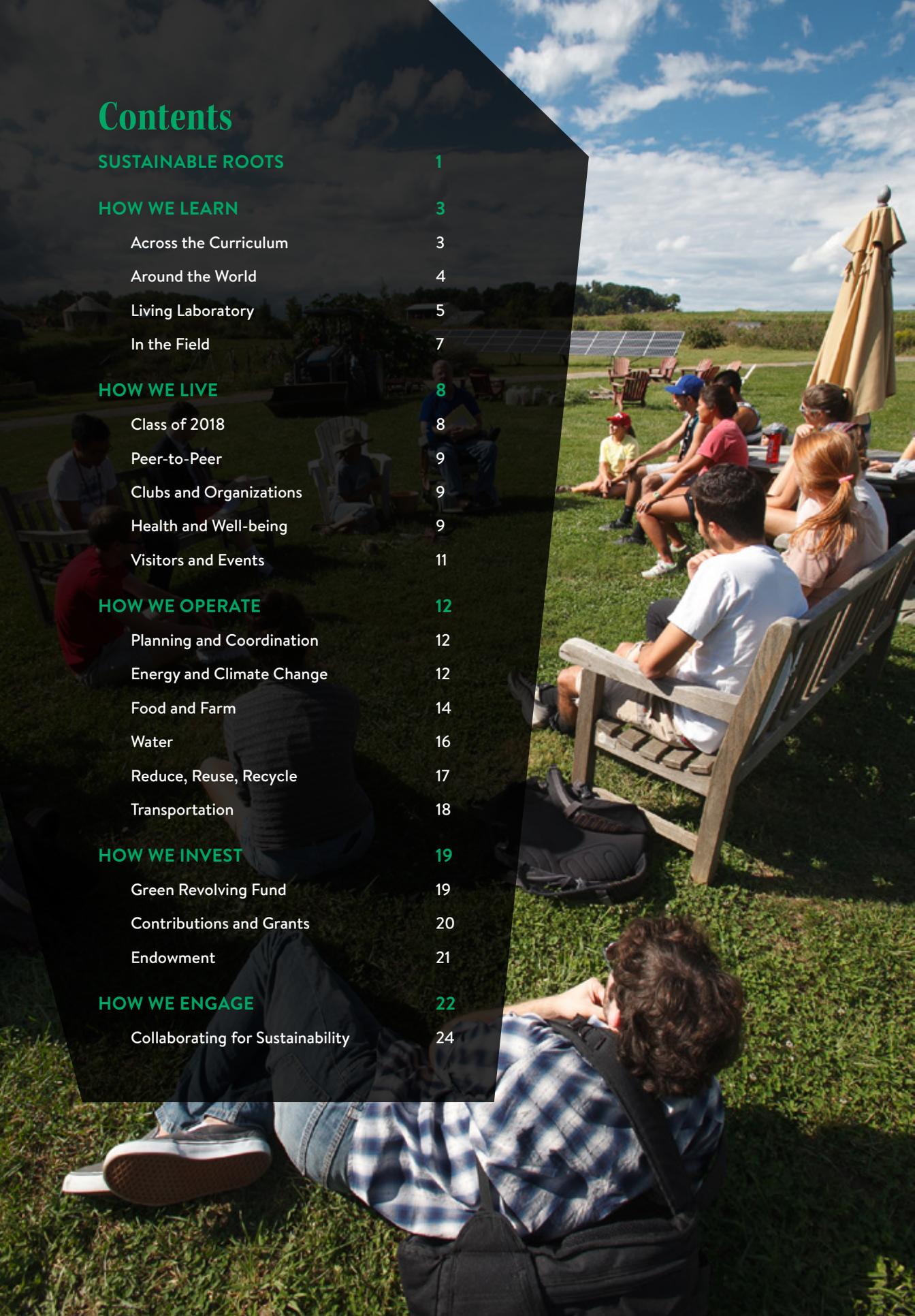
Dickinson

Dickinson does green.

SUSTAINABILITY 2014-15 REPORT

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Sustainable Roots

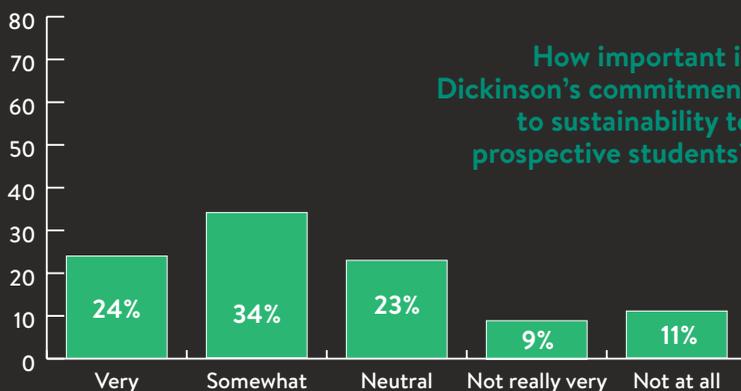
Dickinson launched its holistic sustainability initiative in 2008, seeking to make sustainability a defining characteristic of the college. The initiative

builds on a long history of conservation and environmental stewardship in campus operations, student advocacy and action; a strong environmental studies program; and partnerships that promote community health and well-being.

Our overarching goal is to prepare our students, whatever their studies and future vocations, to participate in a movement that is creating a sustainable society. This requires an approach that engages students in and out of the classroom; models sustainability in our buildings, grounds and operational practices; invites students to use the campus as a living laboratory to research problems and test solutions; and connects students with community partners in activities that advance social, economic and environmental sustainability.

Our sustainability commitment and performance are catching prospective students' attention. In surveys of admitted students conducted in 2012 and 2013, 58 percent of respondents indicated that Dickinson's commitment to sustainability was either "very important" or "somewhat important" in their decision to apply to Dickinson.

58 percent of respondents indicated that **DICKINSON'S COMMITMENT TO SUSTAINABILITY** influenced their decision to apply



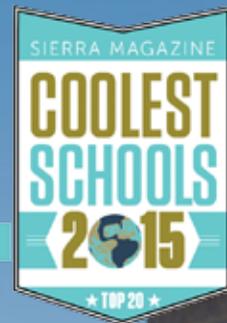
Our sustainability achievements also have earned us **national recognition**. In 2011, Dickinson was one of the first colleges to earn a Gold STARS rating from the Association for Advancement of Sustainability in Higher Education (AASHE). When it was time to reapply in 2015, we again earned a Gold rating from AASHE. In 2013 we were ranked by *Sierra* magazine as the 2nd “Coolest School” in the nation for sustainability performance and 3rd in 2014. In 2015 we were again ranked among the top “Cool Schools.” Each year we make the grade in the Princeton Review’s Green Honor Roll, and 2015 was no exception.

This past year we also earned a new recognition: a Silver rating as a Bicycle Friendly University.

Dickinson is not resting on these accomplishments but is continually working to improve its sustainability performance. We highlight in this report important achievements of the 2014-15 academic year for learning, living and advancing sustainability. Further details can be obtained by contacting the Center for Sustainability Education (CSE) at sustainability@dickinson.edu or visiting dickinson.edu/sustainability.



183 grants
TOTALING
\$427,157 awarded



HOW WE LEARN

ACROSS THE CURRICULUM

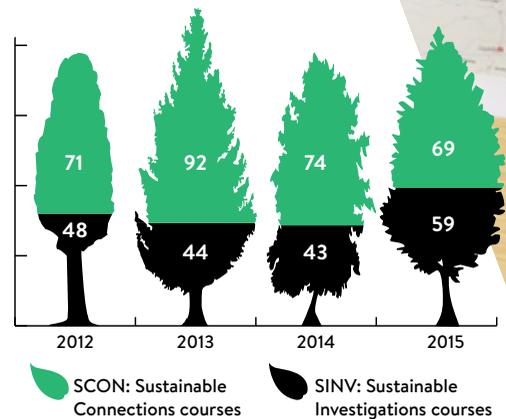
Dickinson has invested in expanding and enriching **sustainability learning opportunities**. Eighteen Sustainability Education Fund (SEF) grants totaling \$53,165 were made in 2014-15 to Dickinson faculty and staff, providing resources for developing new courses, revising existing courses, testing innovative teaching methods, incorporating fieldwork into courses, developing new knowledge and skills and conducting research with students. In addition, the Research & Development committee funded 14 sustainability-related projects in 2014-15 with grants totaling \$39,277. Since 2008, 183 SEF **grants totaling \$427,157** have been awarded.

The investments have paid off. In the 2014-15 academic year, 30 of 44 academic departments and programs offered 128 sections of Sustainability Investigations and Sustainability Connections courses, representing 13.4 percent of total course sections. These include courses in Africana studies, biology, economics, English, environmental studies, history, international business & management, sociology, psychology, physics and women's & gender studies as well as in many other departments.

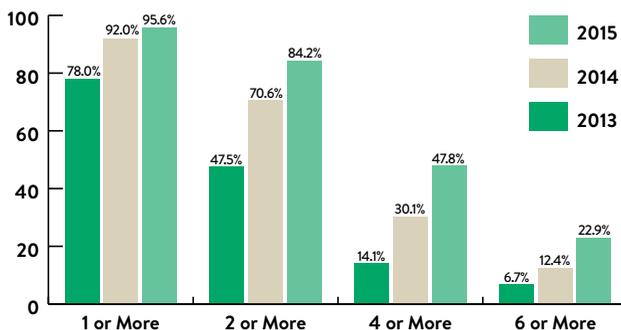
Nearly all Dickinson students have engaged in sustainability learning. **Ninety-six percent of the class of 2015 took at least one sustainability course** during their four years at Dickinson, and nearly half took four or more courses. Twelve Dickinson seniors were recognized as Baird Sustainability Fellows for advancing sustainability through excellence in scholarship, leadership and service.

This infusion of sustainability across the curriculum prompted Dickinson's faculty to add sustainability as a degree requirement in 2015, and beginning with the class of 2019, sustainability will be part of every Dickinson student's education.

Sustainability Course Sections 2012-15



Percentage of Graduating Classes Taking Sustainability Courses



96 percent
OF THE CLASS OF 2015
took at least one
SUSTAINABILITY COURSE

AROUND THE WORLD

Numerous Dickinson students explored sustainability in 2014-15 in the contexts of other places and cultures through Dickinson and partner study-abroad programs in Argentina, Australia, Cameroon, Denmark, Spain, the United Kingdom and other locations. Dickinson Mosaics and globally integrated courses also offer opportunities to study sustainability away from campus. Examples from this past year include:

- **14 Dickinson students traveled to Lima, Peru**, in December 2014 for the 20th Conference of the Parties to the United Nations Framework Convention on Climate Change as part of the four-course **Global Climate Change Mosaic**.
- **10 students traveled in China** for two weeks in January 2015 to study the consequences of climate change and resource exploitation for the course **CLIMATE CHANGE, RIVERS AND CHINESE SOCIETY**.
- A summer 2015 mini-Mosaic took **14 Dickinson students to São Paulo, Rio de Janeiro and El Salvador** to take a critical look at issues of gender, class, social stratification and inequality.



Opportunities for off-campus study of sustainability were expanded in 2014 when Dickinson joined the **EcoLeague**, a consortium of six small liberal-arts colleges with strengths in place-based experiential education, sustainability and environmental studies that provide exchange opportunities for students to study in different bioregions. Dickinson hosted four EcoLeague students in 2014-15, and we sent our first Dickinson students to study at other EcoLeague schools in fall 2015.

LIVING LABORATORY

>600

students visited the
College Farm in over
40 programs

51 students employed by CSE,
College Farm and ALLARM

120 TONS

of food waste diverted from the
landfill to be composted at the
College Farm

The Handlebar maintains & loans
56 green bikes
to Dickinsonians each semester

372 Dickinsonians
participated in LOCALTUNITY

1369 students took one or more
sustainability courses in 2015

23 Eco-Reps hosted
22 water & energy conservation
programs

128 SUSTAINABILITY COURSE
SECTIONS offered in 2015

76 student volunteers
planted **275+**
trees and shrubs along the
Yellow Breeches Creek

\$12,000 raised
for United Way
through the U-Turn waste
diversion program

Electricity saved during
Energy Challenge:

69,670 kWh
Dickinson earns top 10 position
in Campus Conservation Nationals



“The array of unique hands-on learning I’ve experienced in Cuba, Iceland, Canada, Peru, and New Zealand has provided me with a solid foundation for my future in CLIMATE CHANGE STUDIES.”

Elizabeth Plascencia '16



LIVING LABORATORY

Dickinson’s **Living Laboratory for Sustainability** uses the campus and community to engage students in active, place-based learning through internships, volunteer service, research, class and individual projects, residential life and student organizations, often in collaboration with community partners.

In 2015, 51 students were employed by the Dickinson **College Farm**, the Alliance for Aquatic Resource Monitoring (**ALLARM**) and **CSE** to help advance sustainability goals. Many more students assisted as volunteers, and their efforts included the following:

- growing organic food for the campus and community
- providing technical support to community partners for watershed protection
- developing and piloting a new Adopt-a-Storm Drain Campaign for Carlisle
- managing the Handlebar Bicycle Cooperative and promoting biking
- leading the Energy Challenge competition
- promoting water conservation and waste minimization
- producing biodiesel and biogas from food waste
- calculating Dickinson’s greenhouse gas emissions
- mentoring peers in sustainable practices



IN THE FIELD

Dickinson students and faculty engaged in wide-ranging sustainability research in 2015

- Assistant Professor of Environmental Studies Kristin Strock, Tabea Zimmermann '15 and Max Egener '16 studied the effects of increasing wind speed and frequency of extreme rain events on lakes in south central Pennsylvania and Isle Royale National Park.
- Associate Professor of Biology Scott Boback and Mairi Poisson '16 studied the efficacy of the American toad as a biological control of insect pests at the College Farm.
- Art & art history lecturer Andrew Bale and Wesley Lickus '17 traveled to the Peruvian Amazon to conduct a cultural mapping project of the Ese'Eja people.
- Matt Steiman, assistant farm manager, Gwendolyn Kennedy '15 and Steve Fitzpatrick '18 tested the efficiencies of different waste inputs for biogas production at the farm.
- CSE director Neil Leary, Olivia Boggiano-Peterson '17 and Steve Fitzpatrick '18 calculated Dickinson's nitrogen footprint as part of a collaborative research project with five other colleges and universities.
- ALLARM watershed coordinators Noah Burchard '15 and Claire Jordy '17 researched and developed two community manuals—"Fracking Policy 101" and "Community Guide to Shale Gas Development."
- Zev Greenberg '16 and Rachael Sclafani '16 received EPA Greater Research Opportunities (GRO) fellowships. These prestigious and highly competitive fellowships provide \$20,700 tuition support per year for junior and senior years, plus \$8,600 support for a summer internship.

HOW WE LIVE



CLASS OF 2018

Members of the class of 2018 began their engagement with Dickinson's sustainability initiative before they arrived on campus, receiving advice about what to pack for greener living at Dickinson. When they arrived, "**Green Move-In**" volunteers helped new students and their families recycle the mountain of boxes and packing materials they had brought with them.

Many also took part in Pre-Orientation, an optional new program of small-group immersive experiences that offers several outdoor-adventure, community-service or sustainability themes.

One of the Pro-O programs, **A Sustainable Local Adventure**, took 20 first-year students to explore Michaux State Forest, where they kayaked and swam in Laurel Lake, prepared and shared a meal made with local foods and talked about why place matters, meanings of sustainability and personal goals.

In another, **Change the World Through Service**, students explored the Social Change Leadership Model at Dickinson and discovered how community service can be a means to creating socially responsible and sustainable change.

DICKINSON IS
ranked in the
TOP 10
of **ENERGY-CONSERVING**
COLLEGES in the country

PEER-TO-PEER

Student **Eco-Reps** mentor fellow students, educating their peers about sustainable living practices. In 2015, Eco-Reps helped students in residence halls to compost biodegradable waste, recycle plastic bags and electronic waste across campus, celebrate Campus Sustainability Day and Earth Day and compete in the three-week Energy Challenge, an energy-conservation competition among residence halls that is part of the Campus Conservation Nationals (CCN). For the second year in a row, **Dickinson was ranked in the top 10** energy-conserving colleges in the country by CCN.

Events and outreach programs such as Desserts in the Dark, Kill Phantom Power, Do It in the Dark and Power Down and Go Outside encouraged all Dickinsonians to conserve energy. The students' efforts reduced electricity consumption in residence halls by 69,670 kilowatt hours, **saved \$6,270 in utility costs** and cut emissions of climate-changing carbon dioxide by 84,719 pounds. Not bad for a three-week campaign!

Athletics Eco-Reps—athletes who advocate for greening our teams and athletic spaces—implemented plastic bag recycling in the Durden Athletic Training Center and Kline Athletic Center in 2015. The Athletics Eco-Rep program was created in fall 2013 when Dickinson joined the Pennsylvania Collegiate Green Sports Consortium (PACGSC) as a charter member. The consortium of seven schools is dedicated to greening athletics programs across the state.

The student-managed **Handlebar Bicycle Cooperative** continued to thrive this past year as a place for peer-to-peer learning centered on biking, as more than 150 students, faculty and staff members visited the Handlebar. What's the link to sustainability? Self-reliance for maintaining and fixing a bike helps students to see bicycles as a viable, **zero-carbon transportation option**. It also promotes a conservation mindset for maintaining and fixing things to make them last longer.

CLUBS AND ORGANIZATIONS

Dickinson student clubs and organizations provide many opportunities for students to engage in multiple dimensions of sustainability. The **Outing Club, the Treehouse, Students for Social Action and the Idea Fund** organized a variety of sustainability-themed events this past year, such as an innovation competition, Earth Day, Farm Frolics, the Local Foods Dinner, Harvest Fest, the Wild & Scenic Film Festival and numerous hiking, paddling, skiing, rock climbing and camping trips.

HEALTH AND WELL-BEING

Wellness is an essential attribute of a sustainable community, and wellness at Dickinson reaches across the college community to include students and employees as well as their immediate family members. Our efforts have earned Dickinson recognition as a leader in workplace wellness by the American Heart Association, the Partnership for Better Health and the Wellness Council of America.



LOCALTUNITY, a joint initiative introduced this year by CSE, Student Life, the Wellness Center and the Office of Human Resource Services, **provides incentives for healthy eating** while also building community and supporting local farmers and the local economy. All students, faculty and staff can participate, and the program has been wildly popular, with 372 Dickinsonians participating in 2014-15 and preparing over 100 community meals together.

Prevention efforts play a critical role in **student wellness** and are being increasingly emphasized by the Wellness Center and other departments of the Office of Student Life. Preventive behaviors for students were promoted this past year through the following:

- Wellness Center staff offering and participating in 90 educational and outreach events
- intramural sports and group fitness classes that had 328 and 380 participants respectively
- a new program of outdoor activities that took students and employees to hike in Michaux State Forest and paddle on the Susquehanna River
- multiple flu clinics offered at convenient times and locations
- a student group, Mindfully Managing Stress
- a new emphasis on alcohol-free events every Friday and Saturday
- Green Dot program for preventing sexual assault
- walk-in screenings offered weekly for sexually transmitted infections
- support services to relieve stress and address health and other concerns of racially underrepresented cultures, women students and LGBTQ students

Employee wellness programs began in fall 2006 and use a multifaceted, holistic approach to encompass five primary areas of wellness—preventive/physical, emotional, financial, intellectual and nutrition/weight management. During 2014-15, Dickinson offered hundreds of programs for employees to increase overall wellbeing and reduce stress and other disease processes and promote a work-life balance.

In 2014-15, 160 employees (16.7% of all employees) participated in biometric screening. Of these, 105 (11%) also completed a health risk assessment. The wellness program has resulted in reductions in risk levels for biometric markers such as total cholesterol, LDL, HDL, HbA1 and glucose levels. The participants also showed lower levels of medical expenses based on an aggregate medical claims comparison with nonparticipants.

In 2014-15, the college proactively initiated a comprehensive radon testing and remediation program in all campus buildings. Six buildings initially registered more than the EPA recommended 4 picocuries per liter and remediation actions were taken in each of the six buildings. By July 2015, only one building on campus continued to test above 4 picocuries. Additional remediation actions were taken at that location in August, and follow-up testing is scheduled for the 2016 Fall Pause. All buildings remediated in summer 2015 will be tested again over the 2016 Winter Break. Beginning in summer 2016, an ongoing program will be enacted to periodically monitor radon levels in campus buildings.

12 Class of '15 Baird Sustainability Fellows

HOSTED & INTERACTED WITH GUEST SPEAKERS

VISITORS AND EVENTS

The 2014-15 calendar was filled with speakers and events that prompted the campus community to examine critical questions about how we can live responsibly in the modern world.

Environmental photographer and author James Balog, the third recipient of the **Sam Rose '58 and Julie Walters Prize at Dickinson College for Global Environmental Activism**, visited the Dickinson campus in September 2014 for a two-day residency that included a live-streamed public lecture, class visits, meetings with student groups and a screening of his documentary *Chasing Ice*. His work in global climate change was the theme for a series of events over the fall semester for Dickinson's first One College One Community program. The fourth annual Rose-Walters Prize winner, actor and environmental activist Mark Ruffalo, attended the 2015 Commencement ceremony to receive his award. He returned to Dickinson for a two-day residency October 5-6, 2015.

To celebrate Earth Day 2015, the CSE, the Milton B. Asbell Center for Jewish Life and the Office of Religious Life joined forces to explore the spiritual side of sustainability, probing connections among faith, spirituality, ethics and social and environmental justice. Nigel Savage, founder of the largest Jewish environmental organization, Hazon, delivered a public lecture on rallying religious communities to foster sustainability and rode in Bike-to-Farm, where he spoke about culture, food and the environment. Sister Simone Campbell, the executive director of Network, a Roman Catholic social-justice lobby, delivered a powerful message about connections between faith, service and social justice that expanded on her headline-grabbing "Nuns on the Bus" movement and tour. The sustainability and spirituality series culminated with activist, scholar and performer Peterson Toscano, who brought together excerpts from several biographical one-man acts, using humor to describe his experiences as a social commentator, biblical scholar, actor, LGBTQ activist and environmental advocate.

“Education is a necessity if we are to understand the problems facing the natural world and its inhabitants. Julie and I wanted to endow the prize at Dickinson because we fully support the curriculum, which promotes student awareness of the environment and training for professional careers in the sciences as well as responsible living for the protection of all life forms.”

—SAM ROSE '58

HOW WE OPERATE



PLANNING AND COORDINATION

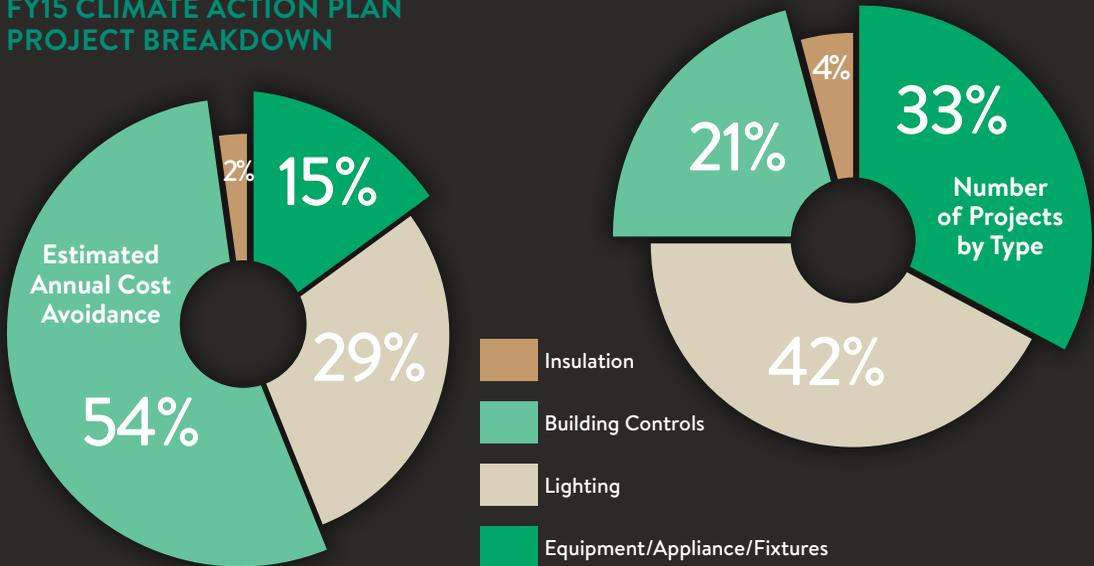
Sustainability is a shared responsibility at Dickinson, one that is embedded in all operational units of the college. The President's Commission on Environmental Sustainability (PCES)—composed of students, faculty, staff, alumni and administrators—provides strategic guidance and coordination across all aspects of our green initiatives. PCES initiated work on an online dashboard in 2015. The dashboard, which goes live in fall 2015, will **display metrics of Dickinson's sustainability performance**, enabling our community to track our progress and make evidence-based decisions for advancing our efforts.

A new position of associate vice president (AVP) for sustainability and facilities planning was created at the start of the 2015 fiscal year as part of a reorganization of the Office of Finance & Campus Operations. Ken Shultes '89, former AVP for facilities management and longtime champion for sustainable campus operations, was appointed to the position. The change is expected to **bring greater coherence and effectiveness to Dickinson's multifaceted campus sustainability efforts**. A major focus of the position is implementation of Dickinson's Climate Action Plan and achievement of our 2020 climate neutrality goal.

ENERGY AND CLIMATE CHANGE

Dickinson made good progress from 2008 to 2012 toward its commitments of **climate neutrality** and 25 percent reduction in greenhouse gas (GHG) emissions by 2020. Energy conservation and efficiency measures cut GHG emissions 11 percent, from 18,956 MTeCO₂ in 2008 to 16,959 MTeCO₂ in 2012.

FY15 CLIMATE ACTION PLAN PROJECT BREAKDOWN



But new construction, acquisition of Allison Hall, unusually cold winters and other factors erased these reductions, and our GHG emissions rose to 19,952 MTeCO₂ in 2014 (data for 2015 are not yet available).

Responding to this upward trend, and acting on recommendations made in 2014 by the Climate Action Task Force, a group composed of 30 students, faculty, staff and administrators, Climate Action Plan (CAP) projects have been identified, analyzed and prioritized to get us back on track for meeting our climate commitments. In FY15, 20 CAP projects were implemented, financed by a new Green Revolving Loan Fund. The CAP projects implemented this past year include installing new LED lights in the gym, new high-efficiency windows in Adams Hall and motion sensors in the labs of Rector Science Complex. **The latter project alone is estimated to reduce annual electricity consumption by 500,000 kWh and associated carbon emissions by approximately 250 MTeCO₂ per year.**

In total, the 20 projects implemented in 2015 are expected to reduce our carbon emissions by over 1,000 MTeCO₂ per year, which represents approximately 20 percent of our 2020 goal of reducing emissions on campus by 25 percent vs. our 2008 baseline.



Energy utility savings from the 2014-15 projects will accrue to the Green Revolving Fund and will be used to finance a new set of CAP projects in future years and move us further toward our 2020 goal.

Recent construction of the Durden Athletic Training Center, Kline Fitness Center expansion, and expansion of the Rector Science Complex have added to energy demands for heating, cooling, lighting and other uses. To limit the emissions that these projects added to our carbon footprint, each was **constructed to high environmental and energy-efficiency standards**. The Durden Athletic Training Center earned LEED (Leadership in Energy & Environmental Design) Gold certification in 2015, and the Kline Fitness Center is expected to be certified LEED Gold shortly.

FOOD AND FARM

FY15 marks the ninth season of the **Dickinson College Farm**, which continues to grow and thrive just like the organic vegetables it produces! In 2015, the farm had 12 acres in vegetable production and 18 acres in animal pasture to supply vegetables and beef to the Dining Hall, a Campus Supported Agriculture (CSA) program with 155 member families and Farmers on the Square (Carlisle's farmers market).

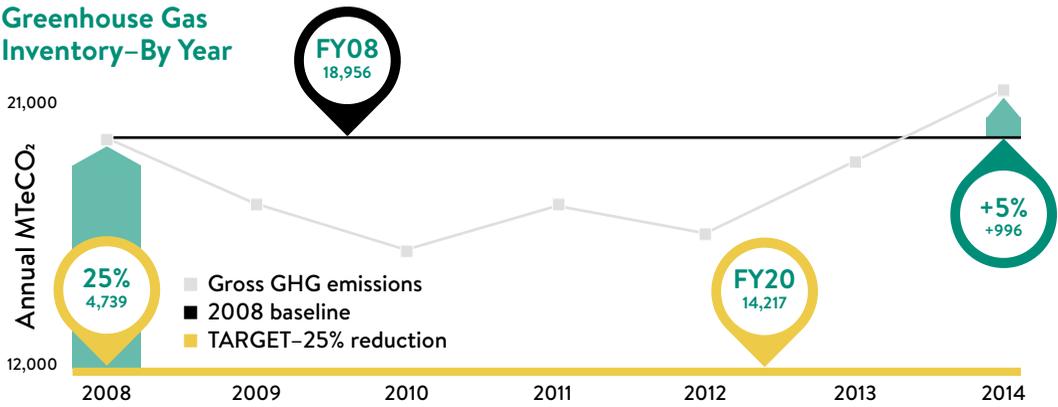
In addition to food production, the farm cultivates opportunities for students and faculty to connect with the farm on academic issues. From Chemistry 141 to Archaeology and World Prehistory, classes are using



155 families
BENEFIT FROM
FARM CSA



Greenhouse Gas Inventory—By Year



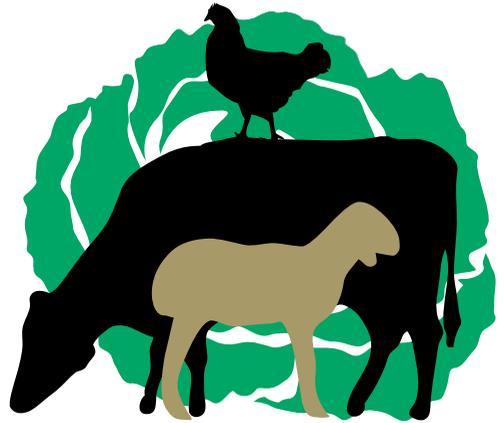
the farm as a venue for field labs, class visits and research. **In FY15, hundreds of students visited the farm as part of an academic course**, and the farm continues to grow as an educational and social centerpiece for the college.

The farm is also a hub of renewable energy innovation that includes solar panels for generating electricity, a solar-powered electric tractor, solar thermal energy for heating water and production of biogas from food waste and animal manure. Dickinson’s biodiesel shop, which uses waste vegetable oil from the Dining Hall to produce fuel for powering farm vehicles and equipment, was moved in summer 2015 from the Carlisle campus to the farm. These renewable-energy projects will help make the farm a net-zero carbon emission operation, a goal for the coming year.

The Dining Hall’s partnership with the College Farm became even stronger in FY15, and the **volume of organic vegetables from the farm** being bought and served by Dining Services continues to grow. Additionally, all of the food waste and biodegradable paper from the Dining Hall continue to be sent to the farm for composting, where it is used as a soil amendment and source of nitrogen for growing more food. This closed-loop system reduces landfilled waste and tipping fees, while also reducing the college’s greenhouse gas footprint.

Dining Services is also taking important strides in reducing energy consumption associated with its operations. New high-efficiency gas-powered convection ovens recently replaced much older and less efficient units, and a new dishwasher unit that will **significantly reduce electricity and water consumption** was installed.

This year, the Dining Hall’s reusable carry-out **Ecotainer Program** continued to expand and now includes over 100 customers. For a nominal participation fee, the program allows customers to use reusable carry-out containers instead of recyclable containers, which is a more sustainable practice.



1 farm

50 acres

7 miles from campus

12 acres of vegetable production ground

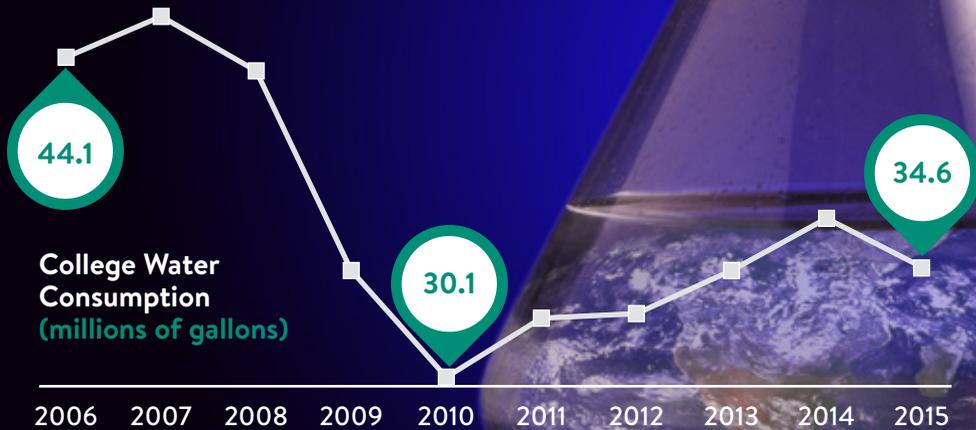
18 acres of animal pasture

3 Mongolian-style YURTS

4 types of livestock: sheep, grass-fed beef cattle, laying hens and broiler chickens



reduced water consumption
20%
SINCE FY08



WATER

People are always surprised by the amount of water the college consumes—and how much it costs. In FY15, water consumption topped 34.6 million gallons and cost almost \$500,000. Roughly 30 percent of water consumption occurred at three sites: the HUB, the central energy plant and Dickinson Park. While the overall level of consumption is significant, **the college has reduced water consumption by 20 percent since FY08**, when consumption neared 44 million gallons. This reduction occurred despite increases in the number of students on campus and the amount of square footage and is the result of ongoing operating initiatives targeted at reducing water consumption.

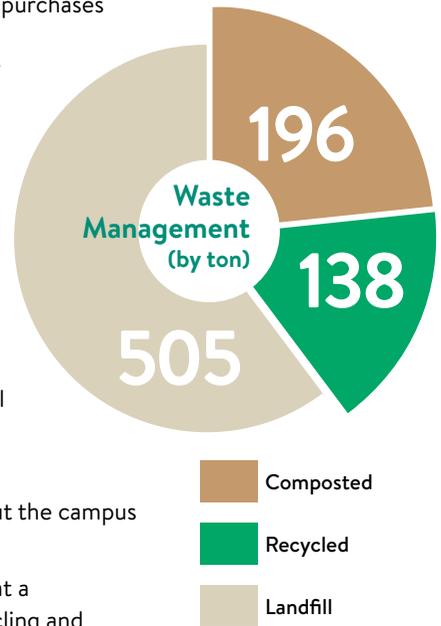
Controlling stormwater is an important goal at Dickinson. Large strides have been made through **landscaping initiatives** that include rain gardens and bio-swales, such as those behind Althouse Hall, to the east of the Rector Science Complex and in the landscape surrounding the new Kline Center expansion. In summer 2015 the college partnered with the Borough of Carlisle to apply for a Pennsylvania Department of Environmental Protection (PADEP) “Growing Greener” grant to address stormwater problems in the lower Quad and the intersection of West and College streets.

Dickinson’s **Alliance for Aquatic Resource Monitoring (ALLARM)** reaches beyond campus borders and immediate surroundings to assist numerous community partners in monitoring and protecting watersheds across Pennsylvania and New York. See “How We Engage” on page 22.

REDUCE, REUSE, RECYCLE

The college continues to seek ways to **reduce the amount of waste going to landfills** by reducing, reusing, composting and recycling through the following initiatives:

- double-sided printing and centralized printing with Papercut software to reduce paper use
- donations of furniture and other items through annual end-of-year United Way U-Turn
- selling, buying and gifting used goods through Campus Wall
- rebuilding bikes from used frames and parts for the Handlebar's Green Bike fleet
- water-filling stations and a \$1 surcharge on bottled water purchases
- reusable Ecotainers for Grab & Go and other food venues
- producing biodiesel from waste vegetable oil
- trayless dining to limit food waste
- green move-in program
- e-waste and plastic bag recycling programs
- peer-to-peer education through Eco-Reps
- composting all food waste and paper from the Dining Hall
- composting food waste in the residence halls
- single-stream recycling program implemented throughout the campus



Homecoming & Family Weekend 2013 was Dickinson's first effort at a **near-zero-waste** event. Volunteers, signage, social media and recycling and composting bins were deployed throughout the weekend to minimize the volume of landfill waste. This past year we expanded our efforts to make a number of large events, including the 2014 Homecoming & Family Weekend, near-zero-waste events.



TRANSPORTATION

Carlisle was named the No. 5 best place in the nation for walking and biking by *Money* magazine in 2015. Dickinson contributed to Carlisle's status by supporting the Carlisle Road Diet, collaborating with Carlisle to create and maintain the Dickinson Bike Trail, encouraging many Dickinsonians biking and walking to work and advocating for alternative transportation.

The use of bikes on campus continued to increase this past year, nurtured and facilitated by CSE, the Dickinson Bicycle Advisory Committee, the Department of Public Safety, the Office of Campus Operations and Student Senate. Their efforts earned Dickinson a new recognition this year: **Silver Bicycle Friendly University**.

Services and facilities that support biking at Dickinson include the Handlebar Bicycle Cooperative, 18 new Red Bikes available for daily loan from the Department of Public Safety, 56 rebuilt Green Bikes available from the Handlebar for semester loan, convenient bike racks across campus, an online bike resource map, three campus bike repair stations, winter and summer indoor bike storage, a biking listserv with over 300 members and the **Biking @ Dickinson** blog (blogs.dickinson.edu/dickinsonbikes).

In 2014, Dickinson became a community partner of Commuter Services of PA to help our employees find alternatives to driving alone on their commutes. The online Ridematch system helps match people to share rides and form carpools and vanpools and can also be used to find partners for safe biking and safe walking. An important benefit is reimbursement for emergency rides home for all registered users who commute to work by carpooling, vanpooling, public transit, biking or walking.

The Student Senate helped bring a new public transit service to Carlisle. The Senate committed \$47,000 in 2014 to co-fund a three-year demonstration of the Carlisle Circulator, a new bus service of Capital Area Transit with routes serving downtown Carlisle, retail locations, local employers, health and medical facilities and the Carlisle Fairgrounds. Students are able to ride the Carlisle Circulator buses by showing their student ID.

No. 5
BEST PLACE
in the nation for
WALKING & BIKING





HOW WE INVEST

Cumulative investments in sustainability programs have positioned Dickinson as a sustainability leader in higher education

Dickinson invests in sustainability by allocating resources to academic programming for sustainability learning and research; co-curricular programs like the farm, ALLARM and CSE; CAP, energy and water conservation projects; stormwater management and land stewardship; new infrastructure designed to meet demanding environmental standards; community partnerships; and investments of the colleges pooled endowment. Resources for these investments come from tuition and fees, gifts and grants, capital funds, a new Green Revolving Fund and earnings on the endowment.

Cumulative investments of \$27.8 million from 2006 through 2014 in sustainability programs have positioned Dickinson as a sustainability leader in higher education. This includes investments of \$10.4 million in sustainability-focused academic programs such as the Department of Environmental Studies, the CSE, the Geographic Information Systems (GIS) Laboratory and summer global sustainability immersion programs. Additionally, \$2.9 million went toward co-curricular living-laboratory programs such as the College Farm and ALLARM.

Investments in facilities that have advanced sustainability and CAP goals total \$11.3 million since 2006. This includes construction of a **high-efficiency central energy plant**, renewable energy projects, energy conservation, meeting LEED certification standards and purchase of renewable energy credits. External grants of \$3.2 million have provided additional support for a variety of sustainability programs.

GREEN REVOLVING FUND

A Green Revolving Loan Fund was established in FY15 to finance CAP projects with an initial injection of \$230,000, which included \$75,000 from the operating budget, \$75,000 from ACT 129 rebates and an \$80,000 gift. This start-up financing was used to implement 20 CAP projects this year. The savings from the FY15 CAP projects will be channeled back into the Green Revolving Loan Fund to finance future CAP projects. **In FY15, the utility savings are projected to exceed \$145,000.** If the Green Revolving Loan Fund performs as projected, and receives ongoing approval and support, the fund will grow significantly over time and enable funding of large sustainability initiatives that also will help to renew college assets and eradicate deferred maintenance.

Since many variables can impact energy consumption and performance of the CAP projects, the performance of the FY15 projects will be closely measured and savings verified during FY16. Contingent on verification of cost savings, a new set of CAP projects will be implemented in FY17. Planning for **several important projects are in motion** that will yield both utility savings and carbon reductions, including connection of buildings on the Rush campus to the central energy plant and expansion of the central energy plant to add a new combined heat, power and cooling plant (CHPC, aka Tri-Gen).

CONTRIBUTIONS AND GRANTS

While campus sustainability initiatives can pay for themselves over time, many require significant upfront capital outlays. For this reason, the Office of Advancement is and will be critical for transforming our campus to meet sustainability goals.

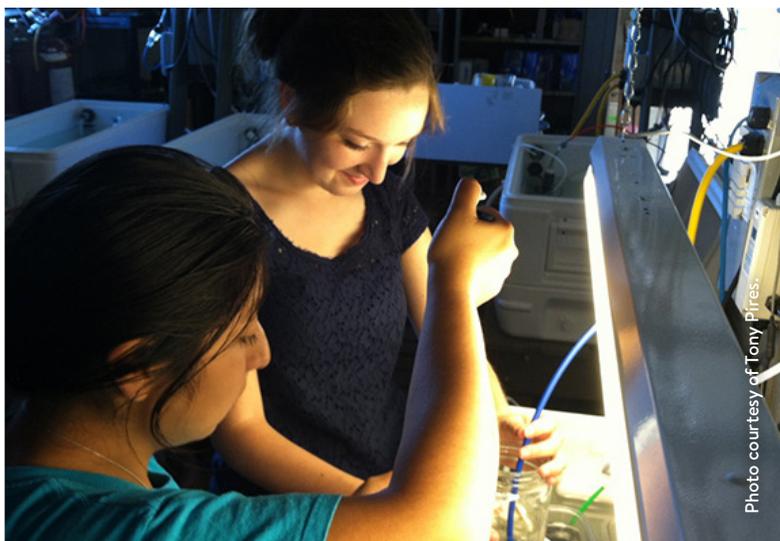
Alumni of the college helped to create and/or provide support for Dickinson's sustainability initiative in FY15:

- The Jeffrey Niemitz Endowed Student Research Fund (creation of new fund for research on sustainable use of natural resources in disadvantaged communities)
- The Kenneth C. Spengler '36 Sustainability Education Fund (payment on \$100,000 commitment)
- Dan and Betty Richardson Churchill '58 sponsored student summer research projects in Peru and Greenland.

Additionally, Mark '81 and Lisa Burgess renewed their \$100,000 four-year commitment to ALLARM, and other major gifts were received from Michael Lefever and Rick '81 and Mary Shangraw.

Dickinson received a number of important **external grants to support projects with a sustainability focus** in FYs 2014 and 2015, including the following:

- \$421,000 from the EPA for ALLARM's "Integration of Citizen-based Monitoring and Nontraditional Monitoring Partners Into the Chesapeake Bay Program Partnership" project
- \$20,000 from the Foundation for Pennsylvania Watersheds for ALLARM to establish a database for its 200 volunteers collecting stream data in regions with shale gas development
- \$10,000 from the Pennsylvania Department of Conservation and Natural Resources-South Mountain Partnership for Assistant Professor of Environmental Studies Kristin Strock's research project "Protecting and Managing Laurel Lake in the Face of Environmental Change"
- \$248,000 from the National Science Foundation for Associate Professor of Biology Tony Pires' research project "Ocean Acidification/Collaborative Research/RUI: Effects of Ocean Acidification on Larval Competence, Metamorphosis and Juvenile Performance in a Planktotropic Gastropod"
- Three \$50,000 awards from the EPA's Greater Research Opportunities (EPA-GRO) Award program to support students Tabea Zimmermann '15, Zev Greenberg '16 and Rachael Sclafani '16



ENDOWMENT

In 2013, students and other members of the Dickinson community raised questions about the **endowment** and advocated for divestment from fossil energy investments because of the role of fossil energy as a primary driver of human-caused climate change. In response, the Board of Trustees created a task force of students, faculty, staff, administrators and trustees to investigate the issue.

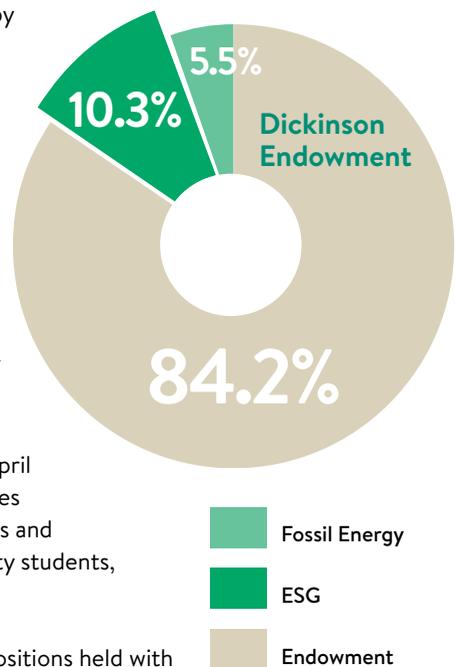
In its spring 2014 recommendations, the Sustainable Investments Task Force (SITF) noted that the investments in fossil energy are in tension with the college's commitments to sustainability and climate change action. But the SITF also recognized that the college has earned superior returns on its endowment portfolio through its participation in the Investure consortium, and that this has benefited the college significantly, including enabling Dickinson to increase its direct investments in sustainability on campus and in our community.

In consequence, the SITF recommended against divestment from fossil energy. The SITF also stated its desire for the college to continually review investments that better support our sustainability values and recommended that Dickinson continue a dialogue about environmental, social and governance (ESG) issues as they relate to college investments, give priority to building our position as an institution focused on sustainability, increase our investment in Investure's Sustainable Investment Fund and create a revolving fund to finance CAP projects.

Each of the recommendations has been acted on positively by the Board of Trustees and the college. Dickinson increased its commitment to Investure's Sustainability Series from \$3.3 million to \$8 million, and the Green Revolving Fund was created to finance CAP projects. The Dickinson Sustainable Investment Group (DSIG) was established in fall 2014 as a standing subcommittee of PCES to continue the ESG dialogue. DSIG is working with the Committee on Investments and Investure on an Investment Beliefs Statement for the college, criteria for identifying and evaluating investments that meet Dickinson defined ESG standards and research into the ESG investment practices of peer institutions.

DSIG hosted a Campus Sustainability Investment Forum in April 2015 to increase Dickinsonians' understanding of the purposes and management of the college's endowment, ESG principles and **the investments the college has made in sustainability**. Eighty students, staff and faculty members attended the forum.

As of June 30, 2015, investments in renewable energy and positions held with fund managers with ESG policies represented 10.3 percent of the value of the pooled endowment. Investments in fossil energy represented 5.5 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.



HOW WE ENGAGE



Dickinson students, faculty, administrators and staff continued to **engage with communities** through courses and co-curricular activities, locally in Carlisle and across the world. Broadly speaking, these activities contribute to sustainability goals, focusing on social, economic, environmental and health and well-being issues.

Dickinson's 29-year-old **ALLARM** currently empowers 25 community organizations in the region to evaluate and protect streams using scientific tools and data. During the 2014-15 school year, ALLARM's volunteer monitoring program trained a total of 345 community members on stream-monitoring techniques, and volunteers monitored nearly 300 sites in Pennsylvania and the southern tier of New York. In Carlisle, ALLARM partnered with local teachers and afterschool programs to teach 137 K-12 students about aquatic ecosystems and connect them to their environment. ALLARM also worked with Carlisle Borough to launch an Adopt-a-Storm Drain campaign to increase residents' awareness about stormwater runoff and help mitigate flooding problems. ALLARM and the College Farm engaged 76 Dickinson students in restoring a section of the Yellow Breeches Creek by planting 275 trees to reduce farm runoff into the creek. On campus, ALLARM presented in 14 Dickinson classes, teaching 257 students.

ALLARM
empowers
25 community
organizations
TO EVALUATE & PROTECT
THEIR WATER

The Greater Carlisle Project (GCP) was founded in 2013 by CSE and community leaders with the goal of **improving the quality of life for all people in the communities of the greater Carlisle area** by advancing social, economic and environmental sustainability. The GCP made significant strides this past year, expanding its membership to 36 organizations, convening a forum on ending poverty that was attended by 147 people from 49 community organizations, forming the Poverty to Prosperity Action Team and supporting the Partnership for Better Health and Hope Station in offering 71 summer camp scholarships to youths with financial need.

The Dickinson College Farm offers a rich variety of student-run programs for the community. SEED (Sustainable Earth Education) offered fun, hands-on workshops for children 5 to 12 years old on composting with worms, eco-art with sheep wool, the science of farming, solar energy and other topics. Farm Cook Eat taught first-grade students at Bellaire Elementary School how to prepare delicious and simple dishes using farm-fresh produce. Art on the Farm and the Local Foods Dinner are two annual events that bring together campus members, community members, farmers and artists.

Nine faculty members taught service-learning or community-based research courses during this past academic year, and **service projects in the Carlisle and Harrisburg area** were integrated into courses such as Spanish for the Health Professions, Jewish Environmental Ethics, Energy Justice, Human Resource Management and a community-based dance course called Community Engagement and Artistic Citizenship.

About 100 students from various class years and majors participated in service work in Philadelphia, Belize, South Carolina, Georgia, Alabama, Michigan and Arizona/New Mexico through the **Center for Service, Spirituality and Social Justice** this past year.

“Sustainability at Dickinson goes much further than the campus community. I had several opportunities to apply academic lessons to needs in the local community.”

—JUSTIN MCCARTY '15



“Through the Idea Fund, students can be empowered to think critically about our community and work together improving and enhancing it through problem-solving and cooperation.”

—BRADY HUMMEL '17

Closer to campus, students coordinated 10 **Commserv** programs with 150 local children and youth through America Reads, ArtWorks!, Big Little, Carlisle Tutoring, Dickinson Friends and Dream Catchers; tutored at the Employment Skills Center and a local prison; and served as senior companions. Day of Service, Change the World Through Service and an Orientation service program found 65 first-year students working with the Salvation Army, the Dickinson Farm, Project SHARE and the Thornwald Home. Alpha Phi Omega, Dickinson's service-focused co-ed fraternity, kept its 115 members busy working with the Salvation Army, the American Red Cross, Kings Gap State Park and the Ironmasters Mansion.

The summer youth camp DIG (Discover, Inquire, Grow) was offered to the Carlisle community for the third time in June 2015 at the Dickinson Farm and was attended by two dozen fourth- through eighth-grade students. The camp is organized and run by Dickinson student interns working for CSE, the farm and ALLARM. Campers gain a **better understanding and appreciation of our local resources** by participating in hands-on learning experiences that connect them to renewable energy, stream health, sustainable agriculture and culinary discoveries

COLLABORATING FOR SUSTAINABILITY

Recognizing the critical role higher education can and must play in the sustainability movement, **Dickinson collaborates with a variety of partners to help advance sustainability.** We are signatories of the American College and University Presidents Climate Commitment (ACUPCC), the Talloires Declaration and the United Nations Higher Education Sustainability Initiative.

We are a **proud and active member** of the Association for the Advancement of Sustainability in Higher Education (AASHE), the National Council for Science and the Environment (NCSE), the Pennsylvania Environmental Resource Consortium (PERC), the Nitrogen Footprint Network, the EcoLeague, the Central Pennsylvania Chapter of the U.S. Green Building Council and the Greater Carlisle Project.

Activities with these partners in the past year have included the following:

- organizing a dialogue among liberal-arts colleges at the 2014 AASHE annual conference
- serving on the Executive Committee of PERC and helping organize PERC's fall conference, winter faculty teaching workshop and spring student sustainability symposium
- working with members of the Nitrogen Footprint Network to calculate and compare the nitrogen footprints of colleges and universities
- hosting four EcoLeague exchange students and hosting the annual EcoLeague retreat
- co-organizing and hosting the Greater Carlisle Project's Community Forum on Ending Poverty.

3 EPA
**Greater Research
Opportunity
(GRO) FELLOWS**



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