

**Skidmore College  
Campus Sustainability Plan  
2016-2017 Annual Report**

**Submitted by the Campus Sustainability Subcommittee of the  
Institutional Policy and Planning Committee**

Campus Sustainability Subcommittee Members

Tory Atkins, Assistant Director, Leadership Activities

Julie DiRoma, Associate Director, Admissions

Adele Einhorn, Executive Director of Horse Show and Director of Special Projects

James Kennelly, Director of Sustainability for Academic Affairs, Professor, Management and Business

Nicol La Cumbre-Gibbs '20, Representative from the Environmental Action Club

Jennifer Natyzak, Sustainability Coordinator for Student Programming

Zoe Pagliaro '20, Chair of SGA Sustainability Commission

Dan Rodecker, Director of Facilities Services

Levi Rogers, Director of Sustainability Programs and Assessment

Rik Scarce, Professor, Sociology

Carol Schnitzer, Director of Purchasing

<b>Campus Sustainability Plan: 2016-2017 Annual Report.....</b>	<b>3</b>
<b>Definition of Sustainability.....</b>	<b>4</b>
<b>Focus Area 1: Energy .....</b>	<b>5</b>
<b>Goal 1: 60% of our electricity from renewable sources .....</b>	<b>5</b>
<b>Goal 2: 60% of our heating and cooling from renewable sources.....</b>	<b>6</b>
<b>Goal 3: 75% reduction in our GHG emissions .....</b>	<b>6</b>
<b>Goal 4: 60% reduction in energy use for heating and cooling per student and square foot.....</b>	<b>6</b>
<b>Goal 5: Maintain electricity use per student and square foot.....</b>	<b>7</b>
<b>Recent Efforts.....</b>	<b>7</b>
<b>Future Steps.....</b>	<b>7</b>
<b>Focus Area 2: Food .....</b>	<b>8</b>
<b>Goal: 25% Sustainable Food in Dining Services .....</b>	<b>8</b>
<b>Recent Efforts.....</b>	<b>9</b>
<b>Future Steps.....</b>	<b>9</b>
<b>Focus Area 3: Waste.....</b>	<b>10</b>
<b>Goal 1: 60% diversion rate in routine operations.....</b>	<b>10</b>
<b>Goal 2: 50% diversion rate for special projects .....</b>	<b>11</b>
<b>Recent Efforts.....</b>	<b>11</b>
<b>Future Steps.....</b>	<b>11</b>
<b>Focus Area 4: Lands and Grounds.....</b>	<b>12</b>
<b>Goal: Create a comprehensive lands management plan for our lands and grounds .....</b>	<b>12</b>
<b>Recent Efforts.....</b>	<b>12</b>
<b>Future Steps.....</b>	<b>13</b>
<b>Focus Area 5: Engagement.....</b>	<b>14</b>
<b>Goal: Make sustainability an essential feature of Skidmore's identity and a value that is integrated into all aspects of the College.....</b>	<b>14</b>
<b>Recent Efforts.....</b>	<b>14</b>
<b>Future Steps.....</b>	<b>15</b>
<b>In Conclusion.....</b>	<b>15</b>



President Glotzbach visits a Skidmore Compost work party

## Campus Sustainability Plan: 2016-2017 Annual Report

### Submitted by the Campus Sustainability Subcommittee of the Institutional Policy and Planning Committee

In May 2015, Skidmore College endorsed its first Campus Sustainability Plan. The *2015-2025 Skidmore College Campus Sustainability Plan* includes five key focus areas: energy, food, waste, lands and grounds, and engagement. Working groups formed by members of the Campus Sustainability Subcommittee (CSS) and other key stakeholders undertook significant research to develop challenging goals within each focus area that we aim to achieve by 2025. The *2016-2017 Annual Report* updates the Skidmore community on our progress toward these goals and represents the College's continued commitment to sustainability.

### Reading the Dials

The tracking dials found in the following sections of this report indicate the College's progress toward our sustainability goals. The light gray needle found in some dials represent the results reported in the 2015-16 Annual Report and illustrate how recent efforts have affected our progress.

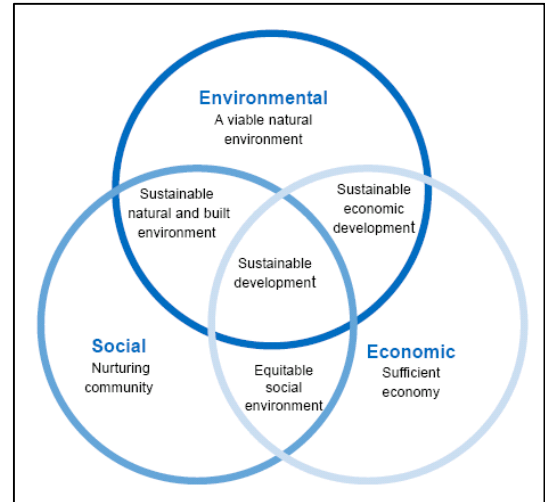
## Definition of Sustainability

Recognizing environmental limits, and sharing the ethic that present actions should not “compromise the ability of future generations to meet their own needs,” \* the Skidmore College community embraces both the concept and practice of sustainability. We endeavor to enact environmentally responsible practices, grounded in economic and social equity, and through our actions to have a positive impact on our community and our planet.

Skidmore’s primary mission is education, and the College’s greatest impacts and achievements will be realized as consequences of the lives our graduates lead. As part of an ever-growing population on a finite planet, we are confronted with an increasingly urgent need to address the resulting environmental constraints and social challenges. Institutional adoption of sustainable practices, informed by an understanding of the complex, interconnected nature of living systems and their physical environment, provides the opportunity for each Skidmore community member to become educated and personally involved in addressing these challenges, and empowered with techniques and strategies that they might apply to make positive changes beyond Skidmore.

We invite Skidmore community members to engage in mindful consideration of their individual and collective ecological, economic and social impacts, to examine their values, and to collaborate in demonstrating their values and principles through action. Teaching, learning and living in accordance with the tenet of sustainability fosters broad education and civic engagement of our community members, and prepares our students to be informed, active citizens and leaders in realizing sustainable futures. The health and wellbeing of future generations is dependent upon their success.

*\*Brundtland Commission*







## Focus Area 1: Energy

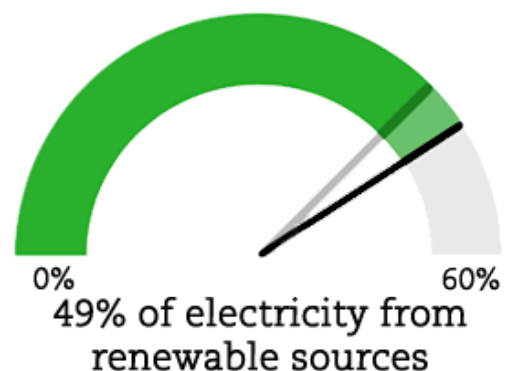
The extraction, transportation, and use of our various energy sources have major environmental, social, and economic impacts, and are a major source of our institutional greenhouse gas (GHG) emissions. As a result, Skidmore has implemented numerous small-scale and large-scale projects that improve energy efficiency, shift us toward a more renewable energy portfolio, and decrease institutional GHG emissions. In addition, we have launched many initiatives that help promote the behavioral changes that are equally important to reducing our energy consumption.

### Goal 1: 60% of our electricity from renewable sources

Current progress: The percent of electricity from renewable sources increased from 45% to 49%.

Skidmore's solar array and small-hydro facility generated 11% and 12% of the College's electricity in fiscal year 2017, respectively. Skidmore received another 26% of our electricity from renewable sources (excluding nuclear) through contract agreements with our energy provider.

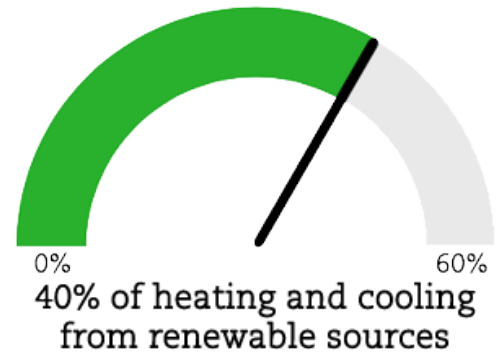
Gravity Renewables completed extensive renovations to the turbines at the Chittenden Falls small-hydro facility to improve efficiency and electricity production. We anticipate the 2017-18 Annual Report will capture the results of these improvements.



**Goal 2: 60% of our heating and cooling from renewable sources**

Current progress: The percent of geothermal heating and cooling remains at 40%.

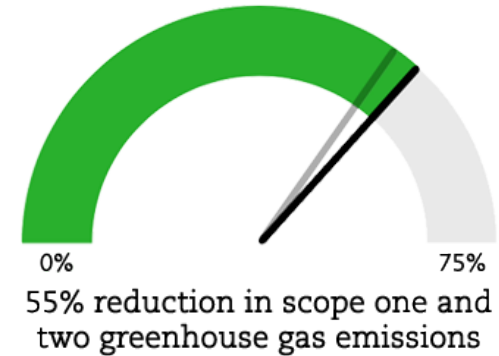
Skidmore completed the construction of its third district geothermal bore field under the Palamountain lot. The system will be activated when the new Center for Integrated Sciences and geothermal node house are complete. We anticipate the project will allow the College to heat and cool over 50% of total campus square footage with geothermal energy.



**Goal 3: 75% reduction in our GHG emissions**

Current progress: We continue to reduce scope one and two GHG emissions, improving from 52% to 55% in 2016-17.

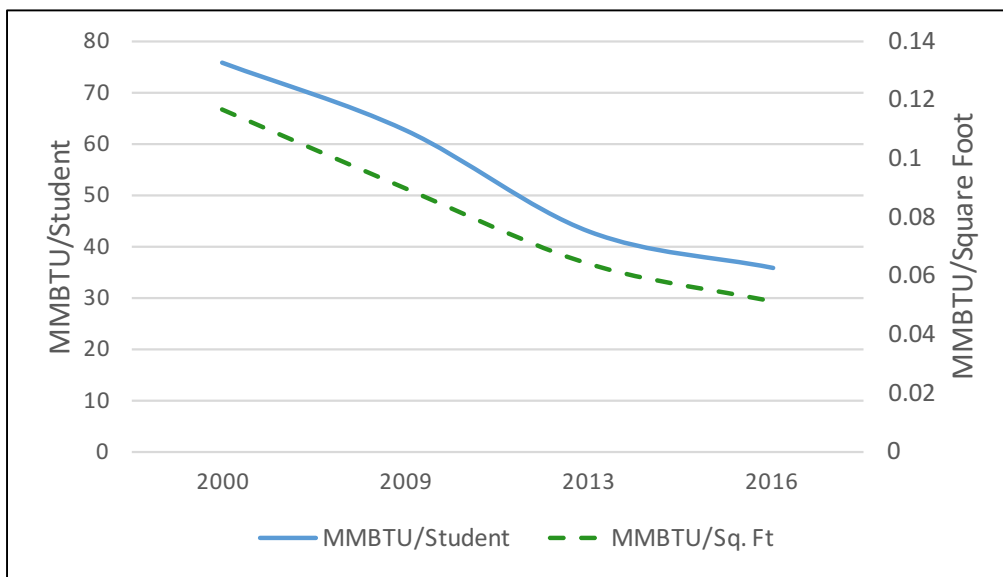
Skidmore's 2016 greenhouse gas inventory shows a 55% reduction in scope one and two greenhouse gas emissions. Skidmore's solar array and small-hydro project played a significant role in reducing the College's scope two emissions. There was a slight increase in scope one emissions compared to the 2013 GHG inventory.



**Goal 4: 60% reduction in energy use for heating and cooling per student and square foot**

Current progress: 53% reduction in energy use for heating and cooling per student (35.56 MMBTU/student) and 56% reduction in energy use for heating and cooling per square foot (0.05 MMBTU/sq. ft.) from 2000 levels.

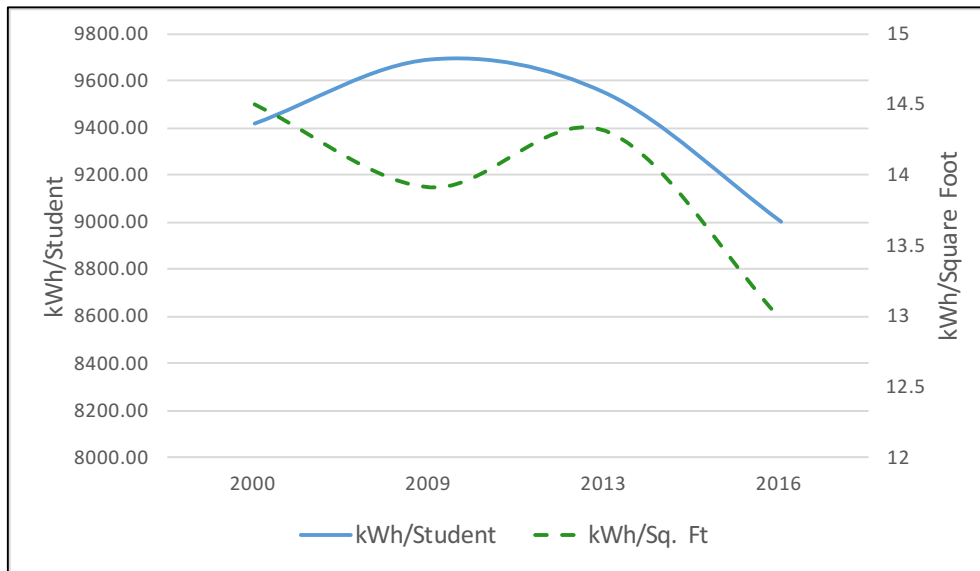
The chart below shows Skidmore's heating and cooling efficiency trend since 2000. The College's geothermal initiatives, building design, decentralized heating project, and campus efficiency improvements play a significant role in our progress toward this goal.



## Goal 5: Maintain electricity use per student and square foot.

Current progress: 4.4% reduction in electricity use per student (8996.88 kWh/student) and 10.6% reduction in electricity use per square foot (12.97 kWh/sq. ft.) from 2000 levels.

We are currently exceeding our goal to maintain electricity use per student and square foot from 2000 levels. Efficiency and conservation efforts including lighting retrofits, electronics management, and behavioral changes contribute to our progress toward this goal.



## Recent Efforts

To reach our energy-related goals, Skidmore:

- completed construction of the Palamontain district geothermal bore field;
- installed its second electric vehicle charging station;
- completed its fourth greenhouse gas inventory;
- purchased a hybrid vehicle for Campus Safety;
- purchased a hybrid vehicle that faculty, staff, and students may reserve for College travel; and
- piloted LED lighting in several campus buildings.

## Future Steps

Future steps will, in many ways, be influenced by grant and incentive dollars and new, innovative partnerships, but possible strategies for meeting Goals 1-3 might include:

- develop additional renewable energy projects, possibly including a second solar or small-hydro project;
- implement individual building metering with connection to a common, comprehensive dashboard;
- additional lighting retrofits;
- install additional electric vehicle charging stations;
- convert the Janet Kinghorn Bernhard Theatre Building to geothermal heating and cooling;
- identify and implement projects to reduce scope one emissions;
- revisit the campus-wide temperature policy; and
- develop additional campaigns, programs, and training to promote behavioral changes.





Students celebrate New York Campus Crunch

## Focus Area 2: Food

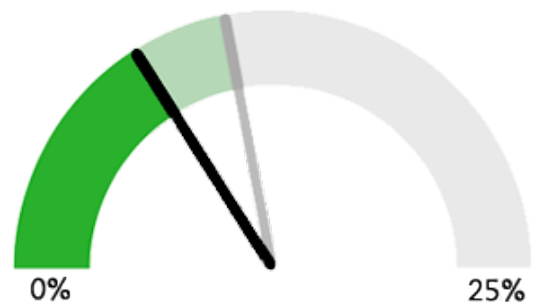
Food production, processing, and distribution methods are integrally connected to ecosystem health and human health. Dining Services is already engaged in many initiatives to advance more sustainable food purchasing and is actively exploring additional opportunities to reduce our GHG emissions and support sustainable agriculture.

### Goal: 25% Sustainable Food in Dining Services

Current Progress: Our sustainable food percentage decreased from 11% to 8%. We expect our new Low-Impact Dining initiative to have a positive impact on our sustainable food percentage next year.

Sustainable Food is primarily defined by the following criteria:

- **Local and Community-Based:** These foods can be traced to farms and businesses that are locally owned and operated (within 250 miles). Sourcing local and community-based foods supports the local economy and builds community relations. Foods travel fewer miles to reach consumers. Seasonal foods, when fresh, often have a higher nutrient content.
- **Fair:** Individuals involved in food production, distribution, preparation--and other parts of the food system—work in safe and fair conditions; receive a living wage; are ensured the right to organize and the right to a grievance process; and have equal opportunity for employment. Fair food builds community capacity and ensures and promotes socially just practices in the food system.



8% of food purchases meet Sustainable Food criteria



- **Ecologically Sound:** Farms, businesses, and other operations involved with food production practice environmental stewardship that conserves biodiversity and preserves natural resources, including energy, wildlife, water, air, and soil. Production practices should minimize toxic substances as well as direct and indirect petroleum inputs.
- **Humane:** Animals can express natural behavior in a low-stress environment and are raised with no hormones or unnecessary medication.
- **Conscientious:** Business operations are guided by the principles of sustainability. The Food Working Group will consider Certified Benefit Corporations and organizations that routinely publish Corporate Social Responsibility Reports proving consistent ethical and transparent business practices.

Foods that contain ingredients that have been proven harmful to human health or are produced under egregious labor conditions are not considered Sustainable Food.

*(adopted from the Real Food Calculator, 2014)*

## Recent Efforts

To reach our food goal, Skidmore:

- implemented Low-Impact Dining, a weekly initiative to support sustainable food systems and reduce the ecological impact of our dining hall menu;
- interns submitted research to Dining Services on supply chains, sourcing local food and seasonal availability, and sustainable alternatives for Skidmore's most frequently purchased ingredients;
- created a new Dining Communications position to promote ongoing efforts;
- visited local vendors and producers, including Antonucci's Wholesale Food and Produce Inc., Tiashoke Farm, a dairy farm in the Cabot Cooperative, a small family-run farm in the Green Acres Community Cooperative that provides sustainably-produced eggs, and Pleasant Valley Farm, a local family-run fruit and vegetable farm; and
- engaged with Pitney Meadows Community Farm to discuss partnership opportunities.

## Future Steps

Strategies that may be implemented to achieve our Food goal include:

- hire a student intern to work 12 months a year to measure Sustainable Food purchasing;
- enhance communications efforts to increase awareness of sustainable food procurement in the Murray-Aikins Dining Hall;
- continue to identify partnerships with local growers and distributors;
- improve supply chain transparency with current vendors; and
- continue conversations with Pitney Meadows Community Farm about future partnerships.



A student compost manager turns a windrow at the Daniels Road site

## Focus Area 3: Waste

Waste reduction is broad in scope in that it affects all offices and operations across campus, as well as the surrounding community and environment. Skidmore produces general municipal solid waste, hazardous materials, as well as compost and recyclables. With such a large waste stream and many stakeholders, there are numerous opportunities for improvements. The goals outlined below aim to make improvements in different areas of the college.

### Goal 1: 60% diversion rate in routine operations

Current progress: The campus diversion rate increased from 31% to 35%.

Recent efforts have allowed the College to measure multiple waste streams in the College's routine operations and provide us with a more accurate assessment of our diversion rate. In total, we sent 484.44 tons of material to the landfill. Our 35% diversion rate includes:

- Zero-Sort recycling: 218.39 tons (29.3%)
- Give+Go: 22.5 tons (3%)
- electronics recycling: 9.92 tons (1.3%)
- residential composting: 9.25 tons (1.2%)
- Feedmore: 1.5 tons (0.2%)



35% diversion rate in routine operations

## **Goal 2: 50% diversion rate for special projects**

Current progress: The Campus Sustainability Subcommittee continues to search for appropriate waste reduction and diversion strategies for special projects and will identify mechanisms to track progress toward this goal.

### **Recent Efforts**

To reduce waste and increase our diversion rate, Skidmore:

- began composting lands and grounds debris, coffee grounds from dining services, and manure from our horse stables at the larger-scale composting site on Daniels Road;
- joined in the Post Landfill Action Network;
- conducted a week-long food waste audit in the Murray-Aikins Dining Hall to measure weekly food waste generation;
- donated 45,000 pounds of material to local and regional organizations through Give+Go;
- diverted an estimated 100 tons of material from the landfill during the Wachenheim Field renovation;
- conducted a case study in the South Quad halls to determine strategies for increasing recycling rates in residential areas;
- composted over 18,000 pounds of food scraps and coffee grounds;
- donated 3,000 pounds of food to the local food pantry; and
- developed more comprehensive assessment methods to measure diversion rates.

### **Future Steps**

Possible strategies for meeting Goals 1 and 2 include:

- schedule frequent meetings with our waste hauler to improve communication and enhance our waste programs;
- develop a comprehensive plan to divert construction and demolition material from landfills during special projects;
- incorporate resource management language in contracts and ensure contractors are following recycling guidelines;
- identify methods to accurately measure the amount of material that is donated by Skidmore College during campus renovations;
- continue outreach and education efforts, including training and campus campaigns, about waste management and recycling for Skidmore community members;
- investigate feasibility of reusable containers on campus;
- compost post-consumer food waste in the Murray-Aikins Dining Hall;
- expand composting capabilities at larger-scale site; and
- provide avenues for students to borrow or sell items to fellow or incoming students to reduce the amount of new items purchased, as well as ways for students to donate unwanted items to local organizations.





Students volunteer for the second annual Sustainable Service Day

## Focus Area 4: Lands and Grounds

Skidmore currently owns about 1200 acres of land that is distributed across multiple properties with different identities. The North Woods, which is adjacent to the developed portion of campus, is used both by the College for teaching and research and by the Saratoga Springs community for education and recreation. Off-campus parcels include the Denton Road property, site of Skidmore's solar farm, and several wooded properties to the north and west of campus. The campus master plan, *The 2007 Campus Plan: A Vision for the Future*, itself due for revision soon, outlines some of the potential future development that could be undertaken on the main campus and adjacent areas.

### **Goal: Create a comprehensive lands management plan for our lands and grounds**

Current progress: The Campus Sustainability Subcommittee continues to develop a comprehensive lands management plan.

### **Recent Efforts**

To encourage and practice better stewardship of our land, Skidmore:

- developed a Lands and Grounds Working Group;
- continued to develop a new North Woods field guide;
- mapped protected species in the North Woods and created a management plan to protect these communities;
- renewed its Tree Campus USA certification; and
- continued management and removal of several large communities of invasive species, including Japanese knotweed, burning bush, Japanese barberry, and garlic mustard.





## **Future Steps**

To develop a comprehensive land management plan for our lands and grounds, we will:

- develop additional maps of Skidmore properties where needed;
- post signage to delineate Skidmore property boundaries;
- provide input to the campus master plan, although we recognize that the development of a new campus master plan is outside the purview of the CSS;
- engage various stakeholders in conversations about the recreational, academic, and operational potential of Skidmore's wooded parcels; and
- enhance student engagement, possibly in partnership with other organizations, including the New York State Department of Environmental Conservation, to implement the recommendations put forth in our stewardship plan.



Student organizers speak at Saratoga's March for Science

## Focus Area 5: Engagement

We must ensure that our community holds a deep understanding of sustainability, and that collectively we are aware of the progress already achieved on campus and beyond. We must strive to be recognized as an institution that values and practices sustainability in our daily operations and decision-making. While we already have 70 courses focused on sustainability, we will continue to offer new educational opportunities and increase our communication efforts to promote sustainability initiatives across campus and in the greater community.

**Goal: Make sustainability an essential feature of Skidmore's identity and a value that is integrated into all aspects of the College**



### Recent Efforts

To enhance the education of our community and advance sustainability at Skidmore and beyond, Skidmore:

- submitted our first Sustainability Tracking, Assessment & Rating System report to the Association for the Advancement of Sustainability in Higher Education's and received a Silver rating;
- maintained its membership as a Leader in the Reforming the Energy Vision (REV) Campus Challenge;
- received a 94 out of 99 in Princeton Review's Green College's assessment;
- became a Leader in the New York State REV Campus Challenge;
- launched a new sustainability lunch series for faculty members to discuss sustainability-focused research and teaching;
- utilized the Community Garden for place-based environmental education and a long-term wasp research study led by a faculty member in the Biology department;
- student leaders co-organized Saratoga's March for Science rally with Saratoga Springs residents;

- offered over 30 tours and presentations to current students, alumni, and community members;
- organized a coalition building workshop for student leaders to provide tools for effective organizing and encourage collaborations between campus groups;
- hired 24 students in the Sustainability Office to lead campus programs and complete academic internships; and
- engaged numerous students in weekly campus events and volunteer opportunities.

## **Future Steps**

To ensure sustainability is an essential feature of Skidmore's identity, we will:

- continue to complete annual progress reports to track progress toward the College's sustainability goals;
- design and implement creative communication materials for the College's sustainability projects and initiatives, including informative campus signage;
- develop a designation for sustainability-focused and sustainability-related courses in the College catalog;
- develop an institutional sustainable procurement policy;
- increase Skidmore's presence in local, regional, and national publications and recognition opportunities;
- integrate sustainability into student orientation;
- integrate sustainability into new employee orientation;
- conduct campus surveys to assess sustainability literacy among our community members;
- identify methods to track community engagement and participation in sustainability;
- identify methods to track how sustainability efforts have influenced the lives and decisions of our students after graduation; and
- conduct sustainability surveys within the greater community to assess the perception of Skidmore and its relationship to sustainability.

## **In Conclusion**

Significant time and effort was put into the preparation and submission of our first STARS (Sustainability Tracking, Rating and Assessment System) report, and represented a real milestone in our efforts to foster sustainability at Skidmore. AASHE's subsequent awarding of a "Silver" rating to Skidmore was the icing on the cake – an affirmation of Skidmore's sustainability performance to date.

During the year, we continued to demonstrate progress in reducing our greenhouse gas emissions (GHG), and increasing our waste diversion rate. Our rates of heating, cooling and electric usage per student and per square foot also continued to improve modestly. In other targeted areas (e.g. sustainable food and renewable energy usage), however, we demonstrated less progress, and will need to redouble our efforts in order to achieve the ambitious targets we have set in our campus sustainability plan. Indeed, our ability to meet our sustainability goals will hinge, at least in part, on our ability to go beyond the many incremental steps identified in this report, and to identify and implement significant projects, particularly in energy and food waste, that will have large and positive sustainability impacts. The geothermal heating system, when it comes on stream with the new Center for Integrated Sciences, represents one such project that we expect to yield significant positive results.

We hope to build upon these efforts, and look forward to sharing our continued progress in the *2017-2018 Annual Report*.