# Sustainable Campus Index 2017 Embarg





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#### Thank You!

Images in this publication are provided courtesy of this year's STARS rated institutions. We are grateful to the 46 institutions that shared images with us and to all of the colleges and universities that have demonstrated their sustainability commitment through STARS.

Cover: In 2016, Université Laval earned Gold certification for Vélo Québec, a bicycle certification program inspired by Bicycle Friendly America. Full story on page 46.

This page: Loyola's Lake Shore Campus Chapel on the shores of Lake Michigan. Full story on page 53.



The 2017 Sustainable Campus Index recognizes top-performing colleges and universities overall by institution type and in 17 distinct aspects of sustainability, as measured by the Sustainability Tracking, Assessment & Rating System (STARS). The Index also highlights innovative and high-impact initiatives from institutions that submitted STARS reports in the 12 months prior to July 1, 2017.



Niagara College Canada students hike the Wetland Ridge Trail to learn about the environment and sustainability. Photo credit: Taryn Wilkinson



STARS is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. It was developed by the Association for the Advancement of Sustainability in Higher Education (AASHE) with broad participation from the higher education community. STARS participants submit data to earn a Bronze, Silver, Gold or Platinum rating, or recognition as a STARS Reporter. The credits included in STARS span the breadth of higher education sustainability and are organized into four categories: Academics, Engagement, Operations and Planning & Administration. As of July 1, 2017, 768 STARS reports were submitted by 445 institutions in 10 countries, and there were 858 STARS Participants in 34 countries. All reports are publicly accessible at stars.aashe.org.

# **Top Performers by Topic**

The 2017 SCI recognizes top-performing colleges and universities in 17 distinct aspects of sustainability related to academics, engagement, operations, and administration. These lists are determined based on STARS subcategory scores, and include institutions that have a valid STARS report submitted between July 1, 2014 and June 30, 2017.



Bates College students install solar panels on the roof of the College's coastal research facility. Photo credit: Tom Twist



Higher education institutions are uniquely positioned to understand and address sustainability challenges. Colleges and universities help equip students to lead society to a sustainable future by conducting faculty development in sustainability and offering courses, degree programs, and other learning opportunities in sustainability such as living laboratory initiatives, immersive experiences, and sustainability literacy.



Student studies for Environmental Psychology PSYC 405 at Humboldt State University.

Institution	Score	Туре	Location
1. Green Mountain College	99.5%	Baccalaureate	Poultney, Vermont
2. Appalachian State University	95.6%	Master's	Boone, North Carolina
3. <u>Sterling College</u>	94.6%	Baccalaureate	Craftsbury Common, Vermont
4. Colorado State University	94.4%	Doctoral	Fort Collins, Colorado
5. <u>Babson College</u>	90.9%	Baccalaureate	Wellesley, Massachusetts

#### **Average Scores**



# Curriculum 🔁

#### Highlights

Beginning in Fall 2015, all newly matriculating <u>University of Vermont</u> undergraduate students must satisfy a sustainability requirement before they can graduate. Students can meet the requirement by taking a sustainability course, curriculum or co-curricular module approved by the Faculty Senate's Sustainability Curriculum Review Committee (SCRC) and noted by the designation SU in its title. Students can to petition the SCRC for sustainability transfer credit for a course taken at another accredited institution, or a non-course alternative experience. The SU courses are listed online and in the University Catalog.

The California Polytechnic State University

Bioresource Agriculture Engineering 470 course is a Solar System Design class that empowers students to design and install solar PV systems on campus buildings using solar panels donated by the SunPower Corporation. The first pilot project, a 5 kilowatt array on the BRAE building, was installed by students 2016 after the students received solar training. Following the pilot, a group of students sought out and received funding to continue the program with potential to continue the effort indefinitely.

The Leadership in Environmental Stewardship <u>E-badge</u> at <u>Central Community</u> <u>College</u> promotes student learning in environmental stewardship in a way that can be shared with potential employers. The E-badge opportunities at CCC are for all fields of study and for all learners, and are earned by demonstrating proficiencies in both knowledge and applied skills. The combination of E-badge proficiencies create opportunities for learners to become sustainability change-agents, and can give E-badge earners a competitive edge in their field of study. Earned E-badges appear on student co-curricular transcripts.



First-year students weigh waste at University of Vermont, both to teach their peers about what can be composted, and to learn what messages get results. Photo credit: Brian Perkins



Experiental applied learning in beekeeping at Central Community College for Leadership in Environmental Stewardship e-badge. Photo credit: Judith Weston

# Curriculum 🔁

### Highlights

The Sustainability Curriculum project at Concordia University quantifies the extent of sustainability content currently offered, and provides the direction and tools to significantly increase the growth of sustainability focused courses, programs and initiatives. Through comprehensive research projects, reports, speakers, events and workshops, faculty members and departments can strategically integrate sustainability content into courses and programs. The identification and cataloging of existing courses in the different faculties provides a roadmap to students seeking to incorporate knowledge about sustainability into their educational experiences.



Sustainability Curriculum Co-Creation Teaching & Learning Festival at Concordia University. Photo credit: Christina Bell

Humboldt State University is among the first institutions to be recognized in STARS for sustainability course designation in standard course catalogs or listings. A committee of faculty and staff first convened in 2012 to evaluate courses and give them sustainability designations. Courses deemed sustainability-focused or sustainability-related were given a graphical representation of "leaves" next to the entry in the catalog, and class schedules were published with a new column identifying sustainability courses. The course identification process was repeated during the 2016-2017 academic year for all newer courses.



Wildlife class bands wood ducks at Humboldt State University.

By researching sustainability issues and refining theories and concepts, higher education institutions can continue to help the world understand sustainability challenges and develop new technologies, strategies, and approaches to address those challenges. This section covers faculty and department sustainability research and open access policies.



Crystal Tulley-Cordova, University of Utah PhD candidate in Geology and Geophysics, and GCSC graduate fellow collects and analyzes samples for her research on stable isotopes. Photo credit: Cat Palmer

Institution	Score	Туре	Location
Colorado State University	100%	Doctoral	Fort Collins, Colorado
<u>Columbia University</u>	100%	Doctoral	New York, New York
Florida Gulf Coast University	100%	Master's	Fort Myers, Florida
George Washington University	100%	Doctoral	Washington, DC
Stanford University	100%	Doctoral	Stanford, California
SUNY College of Environmental Science & Forestry	100%	Doctoral	Syracuse, New York
Texas A&M University	100%	Doctoral	College Station, TX
Université Laval	100%	Doctoral	Quebec City, QC (Canada)
University of Alberta	100%	Doctoral	Edmonton, AB (Canada)
University of Calgary	100%	Doctoral	Calgary, AB (Canada)
University of Connecticut	100%	Doctoral	Storrs, Connecticut

Top performers in Research include institutions that pursued all credits and earned 100% of points.

#### **Average Scores**



Sustainable Campus Index 2017

# Research

### Highlights

The 2020 Sustainability Scholars program at Indiana University Bloomington was created in partnership between the Office of Sustainability, the Office of Vice Provost for Undergraduate Education, and the Integrated Program and the Environment to provide sustainability research experience for first- and second-year undergraduate students. Students selected as 2020 Sustainability Scholars receive access to world-class faculty in sustainability research and support in refining their sustainability interests, critical thinking skills and future marketability. Scholars receive a \$500 scholarship each semester. The program was recently extended after a successful 2015-2016 pilot year. Research topics thus far have included The Health Risks of Rice Consumption, Restoring Native Prairie with Turf as a Pre-Treatment, and The Waste Stream in Theatrical Production.



Indiana University Bloomington student Lia Bobay works with mentor Adam Fudickar to band and measure birds to track bird migration affected by climate change.

The <u>Global Change and Sustainability</u>

<u>Center</u> (GCSC) at <u>University of Utah</u> was re-organized in 2015 and moved under the Vice President for Academic Affairs and the umbrella of the Sustainability Office. The Center was originally funded on returned overhead from interdisciplinary research grants, but along with the organizational move, GCSC has been given a permanent operational budget and financial support from the budgets of eight colleges. This reorganization represents the institutional evolution to support faculty research, as well as a significant new commitment to sustainability on the part of campus administration.



Crystal Tulley-Cordova, University of Utah PhD candidate in Geology and Geophysics, and GCSC graduate fellow collects and analyzes samples for her research on stable isotopes. Photo credit: Cat Palmer

University of Cincinnati has completed the construction of the Great Miami Groundwater Observatory to continuously monitor water quality for over two million Ohio residents who rely on the Great Miami Buried Valley Aquifer for drinking water. The CV Theis Groundwater Observatory is a catalyst for interdisciplinary field based research to better understand the intricacies of the water cycle and potential threats to our natural environment and public health. The data provides timely quantitative and qualitative information on the dynamic flow of groundwater between the Great Miami River and its adjoining aquifer. The site is a research location for students. water managers, scientists, suppliers and regulators.



CV Theis Groundwater Observatory at University of Cincinnati.

The Fleming College Salmonid Hatchery aims to ensure the future sustainability of Atlantic salmon in Lake Ontario by maximizing genetic diversity in stocked fish. The Atlantic Salmon Restoration Program has been successful in reintroducing an extirpated species of Atlantic Salmon to Lake Ontario through developing this strain of species from DNA research. Fleming has been a key partner in this program for several years and has raised the fish from the egg stage through to the fry and fingerling stage for stocking into the headwaters of Lake Ontario. The spawning returns have found the program to be successful for reintroduction of the species.



Fleming College students release Atlantic salmon raised in the college recirculating aquaculture system (RAS) hatchery as part of the Lake Ontario Atlantic Salmon Restoration Program. Photo credit: Laura Copeland

Engaging in sustainability through co-curricular activities allows students to deepen and apply their understandings of sustainability principles. Co-curricular sustainability offerings help integrate sustainability into the campus culture and set a positive tone for the institution. Equipping faculty and staff with the tools, knowledge, and motivation to adopt behavior changes that promote sustainability is also an essential activity of a sustainable campus.



Niagara College Canada students participating in the *World Water Monitoring Challenge*, an event run by students to monitor water quality throughout campus. Photo credit: Katie Bristow, Niagara College Student

Institution	Score	Туре	Location
1. <u>Berea College</u>	100%	Baccalaureate	Berea, Kentucky
2. Colorado State University (tie)	98.8%	Doctoral	Fort Collins, Colorado
2. University of Connecticut (tie)	98.8%	Doctoral	Storrs, Connecticut
4. Stanford University	97.6%	Doctoral	Stanford, California
5. <u>University of Calgary</u>	96.4%	Doctoral	Calgary, AB (Canada)

New credits and standards were introduced with STARS 2.1 that better recognize top performance and create greater variation in scoring within the Campus Engagement subcategory. A new Assessing Sustainability *Culture* credit was introduced, and standards were expanded in *Staff Professional Development*, allowing partial points for the credit. For this reason, the Top Performers list for Campus Engagement is limited to institutions submitting Version 2.1 reports only.

#### **Average Scores**

Country	United States 267 Canada 32 Other Countries	70.8% 69.4%
	4	58.4%
Institution	Associate 24 Baccalaureate	54.9%
турс	74 Master's 74	69.1%
	Doctoral 131	74.0%
Student	0-1,999 40	69.3%
ETE	2,000-4,999	67.6%
112	5,000-9,999 48	65.5%
	10,000-19,999 67	70.3%
	20,000+ 87	76.1%

Launched in April 2017, the My Cardinal Green individual action network at Stanford University provides a custom-designed online engagement platform and incentive program for the Stanford community. The program begins with an initial survey to generate suggested actions that are most relevant for each participant. Users receive points for completed actions and can earn rewards. The online platform includes realtime metrics to showcase savings collectively and at the individual level. In creating a personal experience that connects users to the broader community, My Cardinal Green helps to establish social norms that drive a shift in attitudes and behaviors.

In fall 2015, <u>Niagara College Canada</u> introduced a sustainability pillar to the college's Leadership Exploration and Development (LEAD) co-curricular program. Students can earn co-curricular hours toward the LEAD sustainability stream by participating in sustainability themed workshops, events and other initiatives taking place throughout the academic year. Through the program, students receive insight into how different organizations manage sustainable initiatives, and are learning to embody active citizenship when participating in sustainable projects in their communities and at Niagara College.

University of Victoria is among the first institutions to be recognized in STARS for its green laboratory efforts. The Green Labs program at UVic is intended to provide researchers with resources and tools to implement sustainable practices without compromising health and safety. In 2014, UVic rolled out a successful energy savings initiative called Set Back and Shut the Sash. Sustainability and green labs awareness are weaved into lab safety training at UVic, and sustainability staff visit individual labs to provide training on shutting the sash and using setback mode to conserve energy.



Staff in the Department of Sustainability and Energy Management at Stanford University show their commitment to "being cardinal green" at Stanford's annual Celebrating Sustainability event on Earth Day 2017.



University of Victoria rolled out a successful *Set Back and Shut the Sash* energy savings initiative in 2014.

Cultivating the Globally Sustainable Self Summit Series is a multi-year, multiinstitution initiative hosted by James Madison University that promotes transformative teaching and learning in research and practice. The Summit Series is centered on five broad and urgent global themes: conflict resolution, human rights, sustainability, global education, and religious/cultural understanding. This effort has brought together leading scholars, educators, and practitioners from around the world to address the crucial problems facing modern society. A book, summit media package, short films, and web-based curricula are currently under development.



Summit series participants at James Madison University explore five broad and urgent global themes: conflict resolution, human rights, sustainability, global education, and religious/cultural understanding. Photo credit: D. Lee Beard

#### Fresh Press is a University of Illinois,

Urbana-Champaign initiative that is looking to fundamentally change the commercial paper product industry to one that is more sustainable. Agricultural residue from the student farm is used to create paper that is sold on-campus, with students involved in growing, harvesting and manufacturing the paper products. In 2016, the first shares of artisan and writing paper were completed, and 75% was sold to Illinois faculty, staff, and students. Artist prints and postcards will be created in Spring 2017, and sales will be reinvested to make the Fresh Press business model a sustainable one.



Two students prepare paper at the University of Illinois, Urbana-Champaign's Fresh Press Fiber Program.



Engagement in community problem-solving is fundamental to sustainability. By engaging with community members and organizations in the governmental, nonprofit, and for-profit sectors, institutions can help solve sustainability challenges. Community engagement can help students develop leadership skills while deepening their understandings of practical, real-world problems and the process of creating solutions.



The Sustainability in Science Museums program at Arizona State University invites professionals from science museums and centers from around the world to be Fellows and learn how to integrate sustainability programs and projects into their facilities. Photo credit: Arizona Board of Regents

Institution	Score	Туре	Location
1. Colorado State University	97.9%	Doctoral	Fort Collins, Colorado
2. <u>Denison University</u>	96.2%	Baccalaureate	Granville, Ohio
3. University of Connecticut	95.5%	Doctoral	Storrs, Connecticut
4. University of North Carolina at Greensboro	95.0%	Doctoral	Greensboro, North Carolina
5. <u>Arizona State University</u>	94.4%	Doctoral	Tempe, Arizona

#### **Average Scores**



The <u>Sustainability in Science Museums</u> <u>Program</u> at <u>Arizona State University</u>

supports science museums to expand their sustainability programming through contentrich trainings, interactive activity kits and other resources that museums can use to promote sustainability science and practice. Sustainability-oriented activity kits educate children and adults on core sustainability science concepts, and a Sustainability in Science Museums Fellowship is also offered. Ultimately, this program is developing a network of science centers and museums that have a shared goal of increasing public understanding and interest in sustainability action on a global scale.

Tools for Social Change is an innovative civic engagement collective comprised of <u>Hobart</u> and <u>William Smith Colleges</u> students, faculty, and staff, as well as Geneva community members. Since February 2015, the group has met weekly to explore issues of race, class, and white privilege. Tools for Social Change hosted multiple non-partisan candidates' night events leading up to local elections, and also advocated for increased participation from diverse groups in the city's comprehensive planning process. The program will continue to evolve and adapt to current issues in order to improve the quality of life for Geneva residents and visitors.

The Sustainability Scholars program at University of Alberta sponsors graduate students to work on applied sustainability research projects with the City of Edmonton. Projects were developed by City of Edmonton staff seeking research to advance their sustainability goals. The applied research conducted by Sustainability Scholars is key to helping the city understand its options for meeting its sustainability goals. The program started in 2015 with 6 graduate students working with the City of Edmonton. In both 2016 and 2017, 18 graduate students worked on projects with the City of Edmonton and the University of Alberta.



The Arizona State University Sustainability in Science Museums program has developed the sustainABLE® Activity Kits to engage families in sustainability practices and principles. Photo credit: Arizona Board of Regents



Amanda Evans (second on right), Sustainability Scholar 2016 at University of Alberta, sorting residential food-related waste.



The Education and Outreach Center at the <u>Colorado State University</u> College of Natural Sciences has been contracted by the National Park Service to develop hands-on <u>STEM</u> <u>kits</u> for 4th-12th grade students at various National Parks. The kits allow students visiting parks in Alaska to learn more about climate change through ice cores and permafrost. The kits are paired with handson workshops and continuing education with local teachers. The project represents a unique collaboration between a university and the National Parks to directly engage children in STEM education using real data to demonstrate climate change.



Teachers Attend a Training Course for Integrating STEM Kits in National Parks. Photo credit: Colorado State University.

Two initiatives at <u>University of Utah</u> engage the larger community in a transition to cleaner energy sources by offering group discounts aimed at decreasing barriers to entry, increasing knowledge and reducing costs. In 2014, the U Community Solar program helped 380 members of the campus community to install solar at their homes, with additional installations completed in 2017. In 2015, community members were offered an opportunity to purchase or lease electric and plug-in-hybrid vehicles at discounted prices through the U Drive Electric program. Seventy-six vehicles were purchased in 2015 and 130 were purchased in 2016.



Amy Wildermuth, University of Utah's chief sustainability officer, with her electric vehicle purchased through the U Drive Electric program. Photo credit: University of Utah Marketing and Communications



Global climate change is having myriad negative impacts throughout the world, including increased frequency and potency of extreme weather events, sea level rise, species extinction, water shortages, declining agricultural production, and spread of diseases. The impacts are particularly pronounced for low-income communities and countries. Institutions that inventory and take steps to reduce their air pollutant emissions can positively impact the health of the campus community, as well as the health of their local communities and regions.



A National Park Service STEM Kit created by Colorado State University.



Institution	Score	Туре	Location
1. <u>Université Laval</u>	100%	Doctoral	Quebec City, QC (Canada)
2. <u>Colby College</u> (tie)	98.5%	Baccalaureate	Waterville, Maine
2. Green Mountain College (tie)	98.5%	Baccalaureate	Poultney, Vermont
4. University of British Columbia	97.0%	Doctoral	Vancouver, BC (Canada)
5. University of Victoria	93.9%	Doctoral	Victoria, BC (Canada)

#### **Average Scores**





In 2014, <u>Yale University</u> announced the formation of a Presidential <u>Carbon Charge Task Force</u>, which examined whether it would be feasible and effective to introduce an internal carbon fee as a component of the university's overall environmental sustainability strategy. Using university finance and operations for applied research, the project aimed to inform energy policy, climate change mitigation, and environmental economics by testing multiple models of carbon pricing. For 6 months during the 2015-2016 academic year Yale conducted a pilot involving 20 university buildings, and in July 2017, it implemented a campus-wide <u>carbon charge</u> encompassing over 250 buildings. Yale was also the first university member of the Carbon Pricing Leadership Coalition (CPLC).

In the fall 2015, <u>Smith College</u> President McCartney announced the formation of a <u>Study Group on Climate</u> <u>Change</u>, a group made up of staff, faculty, trustees, alumni, and students tasked with facilitating a campus wide examination of how Smith can most effectively respond to the challenge of global climate change. Beyond creating a climate action plan, the SGCC considered climate adaptation and mitigation, curriculum and co-curriculum integration, faculty and research, advocacy, investment, and community engagement. The study group spent a year gathering input before a <u>final report</u> was released in spring 2017.



Bob Newton, director of the Smith College Center for the Environment, Ecological Design, and Sustainability, and professor of geosciences, conducting research on Paradise Pond with a student.



The <u>Neutral UF Coalition program</u> at <u>University of Florida</u> allows faculty and staff employees to voluntarily offset the carbon impact of their commutes to and from campus. Commuting employees may enroll in voluntary post-tax payroll deductions to offset their commute through a local non-profit offset partner, We Are Neutral. Just one dollar per pay period (\$26 a year for 12-month employees) can completely offset the average UF commute. 100% of the voluntary deduction amount goes toward offsets, which fund tree plantings on local conservation land and provide energy retrofits in low-income housing in the local community.

In 2014, the <u>California State University</u>, <u>San Marcos</u> REC Outdoor Adventure department established a <u>Carbon</u> <u>Footprint Onset Program</u> to offset the carbon emissions produced when traveling to and from adventures to take more accountability of the program's environmental footprint. The program is designed to deliver the monetary offsets to the CSUSM Student Sustainability Club which, in turn, implements projects to mitigate greenhouse gas emissions and educate the campus community.



Neutral Gator helps University of Florida reduce greenhouse gas emissions through high-impact, local carbon offsets from energy efficiency upgrades of low-income families' homes and native tree plantings in Gainesville, Florida.



# **Buildings**

Buildings are generally the largest user of energy and the largest source of greenhouse gas emissions on campuses. Buildings also use significant amounts of potable water. Institutions can design, build, and maintain buildings in ways that provide a safe and healthy indoor environment for inhabitants while simultaneously mitigating the building's impact on the outdoor environment. This section covers maintenance and operations of existing buildings as well as new building design and construction.



Nova Scotia Community College students in a flexible learning space designed to accommodate multiple trades programs, thus optimizing the usability of the space.

Institution	Score	Туре	Location
1. <u>Nova Scotia Community College</u>	62.3%	Associate	Dartmouth, NS (Canada)
2. <u>University of Minnesota, Morris</u>	60.3%	Baccalaureate	Morris, Minnesota
3. <u>American University</u> (tie)	59.4%	Doctoral	Washington, DC
3. <u>California State University, Sacramento</u> (tie)	59.4%	Master's	Sacramento, CA
3. Appalachian State University (tie)	59.4%	Master's	Boone, North Carolina

#### **Average Scores**





# Buildings

### Highlights

The Deep Green Residence Hall at Berea

<u>College</u> is a LEED Platinum and Living Building certified residence hall which, at the time of submission, scored the highest number of LEED points for a building of its type in the world. Key sustainability features include a 50 KW solar rooftop array, a geothermal heat pump system for heating and cooling, high efficiency plumbing fixtures, a "smart thermal" envelope, sustainable landscaping, no "red list" building materials utilized, and inclusion of locally harvested handmade furniture made by students. Berea College has utilized this building as a major center for tours for professionals around the region.

The Facilities and Engineering Department at Nova Scotia Community College has embedded flexible space design and utilization of buildings through a space utilization analysis across its 13 campuses. NSCC introduced scheduling and space utilization software to facilitate tracking, resulting in an increase in utilization rates at several campuses from 40 to 70 percent. NSCC also implemented an innovative design approach to space management based on three pillars: footprint reduction, flexibility and engagement. Building on the findings of the space analysis, NSCC has conceptualized spaces that were both smaller, and could serve multiple groups.

The Environment and Natural Resources building (ENR2) is University of Arizona's latest LEED Platinum building. It was designed using Arizona's natural landscape and ecology as the model, mimicking the aesthetic and function of a desert slot canyon. Stormwater from the roof flows through a cascade of open-air tubes from floor to floor, watering the vegetation and creating the feeling of a true canyon in a desert thunderstorm. The building is abundant with both passive and active energy and water-saving features, saving approximately 30% on energy over standard building design. ENR2 is the new home to an array of sustainability-focused academic departments and programs.



Berea College students celebrate a job well done after building furniture for the LEED Platinum and Living Building Deep Green Residence Hall using wood sustainability harvested from the Berea College FSC certified forest.



The ENR2 building at University of Arizona was formally dedicated on Sept. 10, 2015. Photo credit: John de Dios.



For most institutions, energy consumption is the largest source of greenhouse gas emissions. Implementing conservation measures and switching to renewable sources of energy can help institutions save money and protect them from utility rate volatility. Renewable energy may be generated locally and allow campuses to support local economic development. Furthermore, institutions can help shape markets by creating demand for cleaner, renewable sources of energy. This section recognizes energy reduction and development and use of clean and renewable energy sources.



Sterling College produces about 80 percent of its energy through solar power using 11 solar trackers on campus in 2016 and uses a mixed-power model of animal and machine on the farm and in the fields.



Institution	Score	Туре	Location
1. <u>University of Vermont</u>	68.3%	Doctoral	Burlington, Vermont
2. University of Ontario Institute of Technology	66.5%	Master's	Oshawa, ON (Canada)
3. <u>Stanford University</u>	64.7%	Doctoral	Stanford, California
4. <u>Bates College</u>	63.5%	Baccalaureate	Lewiston, Maine
5. <u>Bryn Mawr College</u>	63.3%	Baccalaureate	Bryn Mawr, Pennsylvania

#### **Average Scores**





A new Energy Direct Billing budget model went into effect at Cornell University in 2014, making each college/unit on campus responsible for its own utility bill. This model provides a compelling incentive for colleges and units to reduce their energy consumption and increase cost-saving measures. This new budget model facilitates Cornell's Think Big, Live Green campaign, aimed at reducing campus energy use through occupant engagement, and the Energy Conservation Initiative, which creates energy and cost savings through continuous commissioning and capital investment in weatherization, HVAC, lighting controls and equipment. Results from these programs are encouraging, with energy reduction in some buildings exceeding 30 percent.



Students in the living laboratory class "Leadership for Sustainability" at Cornell University design programs to maximize engagement with building data and billing. From left: Leena Morris '19, Claire Kao '20, Ogbo Ngwu '20.

Skidmore College's geothermal energy systems have played a critical role in reducing the institution's greenhouse gas emissions. Over 20 stand-alone geothermal systems and two innovative district systems allow Skidmore to heat and cool about 40% of campus building space (over 703,000 square feet) with renewable energy. Skidmore is completing the construction of our third district geothermal system. Once this system is fully engaged, the College will heat and cool well over 50% of total campus square footage with clean, renewable energy.



Skidmore College Assistant Director of Construction Services, Paul Lundberg poses with one of 20 geothermal nodes at Skidmore College.



In efforts to reduce and eliminate the use of fossil fuels, <u>Bates College</u> has converted one of its boilers in its central steam plant to burn a new wood-based, liquid fuel called Renewable Fuel Oil (RFO). The fuel is produced from cellulosic lignin, a manufacturing wood waste by-product. It is price-competitive with natural gas, relatively inexpensive to retrofit, and has low carbon emissions profile. It is estimated that the RFO boiler will provide 70% of the Campus' heating needs, and will reduce carbon emissions by 3,000 MTCE. Bates is the first College or University to burn this fuel, and one of only three organizations in the United States. The College hopes to expand use of the fuel in the future.

In 2016, <u>Sterling College</u> installed 11 new solar trackers on its campus. Combined with the two solar trackers previously installed, Sterling joined a small group of institutions around the world that produce as much solar energy on campus as what is used. Sterling College worked closely with All Earth Renewables, the Craftsbury community, and the Vermont Agency for Natural Resources for site selection. The solar trackers are also an integral part of the curriculum, as Sterling students observed their installation and track its output for classwork and independent studies.



Bates College students install solar panels. Photo credit: Tom Twist.

# Food & Dining

Institutions can use their food purchases to support local economies, encourage environmentally friendly and humane farming methods, and help eliminate unsafe working conditions and alleviate poverty for farmworkers. These actions help reduce environmental impacts, preserve regional farmland, improve local food security, and support fair and resilient food systems. Dining services can also support sustainable food systems by reducing food waste and diverting food materials from the waste stream, by making low impact dining options available, and by educating customers about more sustainable options and practices.



Student volunteers and learning garden staff host the first farm stand of the season, affectionately known as Portlandia Farmstandia, at Portland Community College Rock Creek campus.

Institution	Score	Туре	Location
1. <u>Sterling College</u>	87.3%	Baccalaureate	Craftsbury Common, Vermont
3. <u>University of Washington, Seattle</u>	70.3%	Doctoral	Seattle, Washington
4. University of Winnipeg	65.7%	Baccalaureate	Winnipeg, MB (Canada)
5. <u>Denison University</u>	62.6%	Baccalaureate	Granville, Ohio
6. Central Carolina Community College	60.0%	Associate	Sanford, North Carolina

#### **Average Scores**



A vertical gardening system was recently installed in the banquet style dining hall at <u>University of</u> <u>Wisconsin-Oshkosh</u> to provide a means of growing produce that could be used in dining operations. Liquid plant nutrients are pumped through the tower and over the plant roots for rapid growth, allowing for fresh, local greens year round. A student internship has been created to maintain and harvest the tower gardens. The initial outlay for the complete system was \$3,015, and the program is capable of expansion based on student input, participation, and funding.

The campus farm and apiary at the <u>College of Lake County</u> have been steadily expanding its local food production. As an independent study practicum, a student recently worked with the horticulture department, campus facilities, and local beekeepers to develop an apiary on campus with eight different hives, including Langstroth, top-bar, and log hives. Honey from the apiary is sold in the college's Café Willow and Lancer Zone bookstores on all 3 college campuses. The campus farm utilizes integrated pest management and organic methods to grow vegetables and greens for sale at the farm market and Café Willow. Fresh Ideas, CLC's food service provider, works to identify and promote items that are grown on campus with a specially designed logo. CLC is able to close the loop by collecting food scraps and returning them to the campus farm for composting.



The campus farm and apiary at College of Lake County.

<u>Black Hills State University</u> and Spearfish community partners are working together to expand the reach and depth of the region's local food economy. The Black Hills Food Hub, a business incubated at BHSU and run by a locally- and women-owned small business, coordinates the needs of cafeterias in the region with local food producers by serving as one point of contact for cafeteria managers to access produce from multiple local farms. The Food Hub benefits a large number of citizens from a wide demographic, and large-quantity commitments from buyers lend unprecedented support to the local food economy.

The goal of the <u>California Polytechnic State University</u> Real Food Cooperative is to supply more real food products to Cal Poly campus and provide students with the opportunity to learn how to manage and establish a food service operation. The student-led club hosts a weekly vending booth that provides gourmet grab-and-go meals, offering peer education on the benefits of eating a plant based diet. The group recently finalized a business plan to reinstate a Community Supported Agriculture produce box that sources organic produce from the Cal Poly farm and other local farmers and then sell shares directly to Cal Poly student, staff and faculty.



Producers from Sturgis, South Dakota, taking part in the Black Hills Food Hub in partnership with Black Hills State University. Photo credit: Bear Butte Gardens



Beautiful and welcoming campus grounds can be planned, planted, and maintained in any region while minimizing the use of toxic chemicals, protecting wildlife habitat, and conserving resources. This section covers campus land management and biodiversity of campus grounds and surrounding lands.



Middlebury College's conserved lands at its Bread Loaf campus are used for numerous educational purposes. Photo credit: Brett Simison
Institution	Score	Туре	Location
1. <u>Chatham University</u> (tie)	100%	Master's	Pittsburgh, Pennsylvania
1. <u>Colby College</u> (tie)	100%	Baccalaureate	Waterville, Maine
1. <u>Université de Montreal</u> (tie)	100%	Doctoral	Montreal, Quebec
4. <u>Keene State College</u>	99.8%	Baccalaureate	Keene, New Hampshire
5. State University of New York at Cortland	99.5%	Master's	Cortland, New York





In 2015, <u>Middlebury College</u> signed a conservation easement over to the Vermont Land Trust establishing <u>permanent protection</u> of 2,100 acres of its' forest lands for the public benefit. This was a significant action that will assure that these lands will always be available to the public and continue to provide the many ecological, cultural, recreational and community benefits they serve. This act of conservation also created the opportunity to quantify the carbon sequestration that will also permanently continue and to apply for credits on a carbon registry to help Middlebury achieve its carbon neutrality goal.



Cross country skiing is one of many uses of the lands conserved by Middlebury College. Photo credit: Brett Simison

Located in a global biodiversity hotspot, Southern Oregon University is a leader in sustainable grounds management with certifications achieved in the National Wildlife Federation's Wildlife Habitat Program, Tree Campus USA and Bee Campus USA. There are currently eight large scale designated pollinator habitat areas on SOU's Ashland Campus, four of which are displayed and signed as Xerces Society Pollinator Habitats. SOU's Roca Creek area is designated as a pesticide free zone and used as an educationally, protected riparian site as a "region of conservation importance". The SOU Farm, a Center For Sustainability, contains a designated wetland.



Southern Oregon University students and professor planting pollinator habitats. Photo credit: Michael Oxendine



The high tunnel garden at Concordia College - Moorhead is an extension of the campus organic garden and experiential learning site, Cornucopia. The region's short growing season, however, makes it challenging for students to benefit from it during the academic year. After receiving funding to build a high tunnel, research showed that a solar-heated air system could extend the growing season. Through additional funding, solar panels were installed to capture the sun's energy and pump heated air underneath the soil. By incorporating solar thermal and passive energy in the high tunnel, the growing season has been extended from Valentine's Day to Thanksgiving.



Solar-powered high tunnel extends the growing season at Concordia College - Moorhead.

In 2016, Macalester College became the first pollinator-friendly institution in Minnesota and among the first in the country to adopt a pollinator-friendly resolution. Student Emily Sylvevstre worked with Facilities Services staff to propose a resolution to Student Government and the Sustainability Advisory Committee. The college adopted the resolution and committed to discontinuing the use of neonicotinoid pesticides, creating pollinator-friendly habitats on campus, and educating Macalester and the broader community about pollinators. Macalester recently acquired honey bee colonies to support the bee population and educate the community about bees.



Kira Liu '17, left, and Emily Sylvestre '16, right, winterizing the bee hives at Macalester College's Katharine Ordway Natural History Study Area. The photo was taken when Emily was working on the pollinator friendly resolution.

## Purchasing

Collectively, institutions spend many billions of dollars on goods and services annually. Each purchasing decision represents an opportunity for institutions to choose environmentally and socially preferable products and services and support companies with strong commitments to sustainability. This section covers general and commodity-specific sustainable purchasing policies, life cycle cost analysis, and purchase of electronics, paper, and cleaning products.



UCalgary's green cleaning program has been recognized by the leading trade association for the cleaning industry worldwide. Photo credit: Riley Brandt, University of Calgary

Institution	Score	Туре	Location
1. <u>Macalester College</u>	98.3%	Baccalaureate	Saint Paul, Minnesota
2. <u>McGill University</u>	95.3%	Doctoral	Montreal, QC (Canada)
3. <u>Berea College</u>	90.0%	Baccalaureate	Berea, Kentucky
4. George Mason University	89.8%	Doctoral	Fairfax, Virginia
5. <u>Université Laval</u> (tie)	89.7%	Doctoral	Quebec City, QC (Canada)
5. <u>University of Calgary</u> (tie)	89.7%	Doctoral	Calgary, AB (Canada)



## Purchasing

## Highlights

<u>University of Calgary</u> has demonstrated leadership for sustainable purchasing in all aspects of its campus operations. Supply Chain Management integrates sustainability into the purchasing processes by requiring preferred vendors to demonstrate their commitment to sustainability. Sustainability is subsequently integrated into the contracts the university holds with preferred vendors. The University of Calgary is a <u>fair trade</u> <u>university</u> and recently became only the second university in Canada to be awarded a unique <u>green cleaning professional</u> <u>designation</u> in 2016.

Sustainability is included in all bid documents to suppliers at University of Saskatchewan, and is included in the weighted evaluation criteria and subsequent contracts. Proposals from contractors should include a description of any corporate sustainability policy and sustainability initiatives already in place, in progress or in the planning stages (both general initiatives within your organization and proposed initiatives specific to the procurement). The university requires Green Seal or Ecologo certifications for de-icers, fertilizers and cleaners. A checklist for sustainable purchasing and a sustainable purchasing guide is available for 36 types of commodity products commonly purchased at the University.

Northern Arizona University's Bookstore (operated by Follett) is the latest concessionaire to stop handing out plastic bags for retail operations, opting instead for a more environmentally friendly paper bag. The new bags are made from 100% Forest Stewardship Council recycled material and are themselves recyclable. Ninety-five percent of the recycled content comes from post consumer waste. The NAU Bookstore also recycles books at the end of the fall semester and continually recycles electronics from the computer store.





#### Smart Purchases Big Impact

Sustainable Purchasing Guide Promotional Materials



sustainability... your university, your world

Cover page of one of the purchasing guides at University of Saskatchewan.



Eco bag at Northern Arizona University Bookstore.

# 🕉 Transportation

Institutions can positively impact human and ecological health and support local economies by modeling sustainable transportation systems. Transportation is a major source of greenhouse gas emissions and other pollutants that contribute to health problems such as heart and respiratory diseases and cancer. Due to disproportionate exposure, these health impacts are frequently more pronounced in low-income communities next to major transportation corridors. In addition, the extraction, production, and global distribution of fuels for transportation can damage environmentally and/or culturally significant ecosystems and may financially benefit hostile and/or oppressive governments.



Auro self-driving electric vehicle at Santa Clara University. Photo credit: Auro

Institution	Score	Туре	Location
1. <u>Columbia University</u>	87.4%	Doctoral	New York, New York
2. University of Washington, Seattle	86.7%	Doctoral	Seattle, Washington
3. <u>Pomona College</u>	77.9%	Baccalaureate	Claremont, California
4. <u>McGill University</u>	77.0%	Doctoral	Montreal, QC (Canada)
5. San Francisco State University	76.0%	Master's	San Francisco, California



# 🕭 Transportation

## Highlights

GO Express Travel has aligned with Indiana University-Purdue University Indianapolis and Indiana University Bloomington to mitigate traffic congestion and decrease fuel consumption and emissions related to commuting between IU and IUPUI. <u>Campus</u> <u>Commute</u> runs non-stop, four times every weekday, with two bus stops at each campus. The route is geared toward faculty and staff (many whom are regular commuters between the two campuses) but is also available to students and community members. IUPUI saves \$47 in business-related travel for every employee that uses this service round-trip between campuses.

The <u>Spartan Superway Project</u> is the latest effort at <u>San José State University</u> to engage students in driving innovation in solar-powered automated transit network (ATN) development. Upon completion, the Superway would carry individuals throughout the metropolitan region in podcars traveling on an unobtrusive elevated guideway under automatic control. Power for the system can be largely derived from solar panels installed above the guideway. The solar-powered ATN is focusing on developing a new curriculum stem in sustainable mobility within departments, and involves participation of students across the globe.

Utah State University has been participating in the National Bike Challenge since 2013 and has won three out of the four years with 200+ cyclists participating. In an effort to involve the community and help combat poor air quality in the Cache Valley, the university collaborated with several organizations to create the Cache Valley Bike Challenge. The May-to-September competition has motivated increased cycling and advocacy for cycling, primarily on campus but also in the three counties served by the Bear River Health Department. The 2016 competition resulted in over 90,000 miles ridden, 32,000 lb CO2 saved, and \$20,000 saved.



Campus Commute at Indiana University-Purdue University Indianapolis' Campus Center Stop.



Utah State University Public Relations celebrates winning the competition between USU departments as a part of the National Bike Challenge. Photo credit: Megan Wilson

# Transportation

### Highlights

In May 2016, <u>Université Laval</u> earned Gold in the first round of certification for Vélo Québec, a bicycle certification program inspired by Bicycle Friendly America that encourages communities and organizations to make cycling a real option in transportation and recreation. Université Laval has distinguished itself through its cycling facilities, overall vision and promotional and awareness-raising activities and resources. The University has bike racks and secure enclosures for more than 2,300 bicycles, a network of more than 7km of cycling tracks and trails, self-service repair kiosks and a co-operative bicycle mechanics workshop (Coop Roue-Libre).

The <u>Autonomous Vehicle Program</u> at <u>Santa Clara University</u> is aimed at transforming the campus into a pedestrian- and public transit-friendly community through the development of an interconnected public transportation network. The University has replaced roads with permeable pavement pedestrian malls, and has partnered with a Silicon Valley startup to operate an electric <u>driverless-shuttle</u> that currently runs in a loop through campus. SCU is a major advocate of planning for the integration of last-mile solutions that would connect the Santa Clara Transit Station and SCU with businesses across the region.



Auro self-driving electric vehicle at Santa Clara University. Photo credit: Auro



Waste reduction mitigates the need to extract virgin materials from the earth, and reduces waste flow to incinerators and landfills which produce greenhouse gas emissions, can contaminate air and water, and tend to have disproportionate negative impacts on low-income communities. Source reduction and waste diversion also save institutions costly landfill and hauling costs. In addition, waste reduction campaigns can engage the entire campus community in contributing to tangible sustainability goals.



University of Vermont Eco-Reps go into the details of food waste collection. There's a surprising amount of liquid getting thrown away. Photo credit: Brian Perkins



Institution	Score	Туре	Location
1. New Mexico State University	92.9%	Doctoral	La Cruces, New Mexico
2. <u>San José State University</u>	92.8%	Master's	San José, California
3. <u>Nova Scotia Community College</u>	89.2%	Associate	Dartmouth, NS (Canada)
4. Grand Valley State University	86.7%	Master's	Allendale, Michigan
5. <u>Mohawk College</u>	77.9%	Associate	Hamilton, ON (Canada)





Through its commitment to utilizing organic waste as a valuable resource, <u>Central</u> <u>Michigan University</u> engages in a full-circle, closed system composting program that also promotes economic prosperity. Material from compost bins is regularly transported to a local Michigan-based business for processing. Here, the waste is transformed into a custom compost known as Dairy Doo, which CMU buys back for use as grounds fertilizer. This practice not only creates a fullcircle, closed system for food waste, but also positively impacts local business and boosts economic prosperity in rural Michigan.

#### Compost Cats is a University of Arizona

program that uses paid student labor to compost organic waste on campus and in the City of Tucson. Since it was established in 2010, the program has grown to be a municipal-scale composting program serving dozens of businesses and a number of special events throughout Tucson. University of Arizona recently signed a three-year intergovernmental agreement with the City of Tucson, with the City providing \$66,000 in funding to Compost Cats, helping to ensure its financial stability. Compost Cats is composting over 4.5 million pounds of organics waste per year.

In March 2016, <u>Stanford University</u> held its first Lab Swap Meet, a one-day event organized by a PhD student in the School of Medicine that invited lab users to donate and exchange items that were in good shape, but no longer usable for research. The inaugural event was a big hit, with approximately 100 labs attending, \$90,000 in research dollars saved, and several tons of waste being diverted from the landfill. Due to the success of the inaugural Lab Swap Meet, the Office of Sustainability decided to institutionalize the event and offer it biannually, once in the fall and once in the spring.



First Drop off of closed-loop complost for Central Michigan University.



Lab users donate their own items and explore other donated items that may be useful to them during Stanford's fall 2016 lab swap meet. Photo credit: Stanford Office of Sustainability



Beginning fall 2015, Oregon State University Housing & Dining Services rolled out a program to completely replace disposable to-go containers with reusable Eco2Go containers made by a local Oregon company. Disposable containers are no longer an option for diners and instead, reusable containers are provided at no cost. During FY16, over 400,000 single use disposable containers were avoided. During the same time period, 60 fewer tons of trash were hauled from compactors outside dining centers. Close to 30,000 Eco2Go containers were put into circulation, supporting the local economy by purchasing from a small Oregon company less than 15 miles away.



Oregon State University has fully transitioned to reusable to go containers, saving over 400,000 disposable containers per year from the landfill. Photo credit: Oregon State University

With support from the campus green fund, Southern Illinois University Carbondale recently installed 27 water bottle fill stations in various buildings around campus in efforts to reduce consumption of single-use plastic water bottles. Using the data monitored by the water bottle refill stations, the university has diverted more than 870,191 plastic water bottles from use as of March 2016. Water refill stations continue to be added to campus locations as other water fountains become outdated. As of August 2017, we have installed a total of 32 stations on campus, diverting a total of more than one million bottles from the waste stream. The Sustainability Office also offers free refillable water bottles to further reducing use of plastic water bottle.



Angela Anima-Korang and Austin Nunn, Southern Illinois University Sustainability Office Team members, uses one of the water bottle refill stations on campus. Photo credit: Steve Buhman



Water conservation, recycling and reuse, and effective rainwater management practices are important in maintaining and protecting finite groundwater supplies. Likewise, pumping, delivering, and treating water is a major driver of energy consumption, so institutions can help reduce energy use and the greenhouse gas emissions associated with energy generation by conserving water. Water conservation and effective rainwater and wastewater management also reduce the need for effluent discharge into local surface water supplies, which helps improve the health of local water ecosystems.



The Water Hub water reclamation and reuse system at Emory University. Photographer credit: Sustainable Water

Institution	Score	Туре	Location
1. <u>Stanford University</u> (tie)	100%	Doctoral	Stanford, California
1. <u>University of Cincinnati</u> (tie)	100%	Doctoral	Cincinnati, Ohio
3. University of Connecticut	99.9%	Doctoral	Storrs, Connecticut
4. Colorado State University	99.5%	Doctoral	Fort Collins, Colorado
5. <u>Université Laval</u>	93.5%	Doctoral	Quebec City, QC (Canada)





<u>University of Tennessee at Knoxville</u> has installed its first rainwater harvesting system to capture and reuse rainwater for indoor use. Rain that falls onto the rooftops of two residence halls is stored in a 35,000 gallon underground cistern. This rainwater travels through five distinct filters before being treated with a chlorine drip to remove impurities and prevent bacteria growth. While the water is technically clean enough to drink, it is only used for washing machine cold cycles, toilet flushing and landscape irrigation. One tank of rainwater provides enough water for 2,991 loads of laundry, 27,343 toilet flushes, or 31 days of irrigation.

In 2014, <u>Loyola University Chicago</u> received a grant to study relative effectiveness of water retrofits versus behavior interventions through a living lab project between the Psychology Department, Residence Life and Facilities. Through the project, 790 physical retrofits resulted in 30 million gallons saved (\$200,000 based on 2015 water rates). The behavior change initiatives saw similar water use reductions, and many students were motivated by 'personal comfort' messages. Students motivated by environmental issues were much more likely to respond to conservation messages. The study was subsequently published and presented at multiple conferences.



As part of a water conservation grant, Loyola hosted a Water Conservation Carnival featuring the 97 year-old face of water conservation, Sister Jean Schmidt. Photo credit: Loyola University Chicago



<u>University of Alabama at Birmingham</u> has come up with a novel way to save the university tens of thousands of dollars and millions of gallons of water. The Facilities Division created a network of tanks and piping that captures and uses ground water and condensate from cooling systems. Utilities recovers fin water from air handlers and groundwater from basements (both previously sent to the stormwater system) to use in the chilled water loop on campus. UAB adds collection locations each year and in 2015, collected over 50 millions gallons of water. This reduced UAB's demand for potable water to be used in industrial applications like cooling, and saved over \$200,000.

Following Governor Jerry Brown's sweeping and comprehensive water reduction goals in response to California's historic drought, <u>University of California, Santa Barbara</u> adopted and exceeded a voluntary 12 percent reduction goal with a 15 percent reduction in potable water use. Sweeping upgrades to more water efficient applications in labs, the continued expansion of the recycled water infrastructure, and the replacement of old water-intensive mechanical equipment with new efficient models are just some of the strategies that have been utilized to achieve this reduction. To date, UCSB has realized a 54 percent reduction in potable water use from its three year baseline.



UC Santa Barbara Water Action Plan Tour. Photo credit: University of California, Santa Barbara

Coordination and planning helps an institution organize, implement, and publicize sustainability initiatives. These efforts provide the infrastructure that fosters sustainability within an institution. Sustainability coordination and planning and participatory governance affords an institution the opportunity to clarify its vision of a sustainable future, establish priorities, and help guide budgeting and decision making.



Yale University Sustainability Action Planning poster session. Photo credit: Beata Fiszer

Institution	Score	Туре	Location
1. <u>Université Laval</u> (tie)	100%	Doctoral	Quebec City, QC (Canada)
1. <u>University of Alberta</u> (tie)	100%	Doctoral	Edmonton, AB (Canada)
1. <u>University of Calgary</u> (tie)	100%	Doctoral	Calgary, AB (Canada)
4. <u>Colorado State University</u> (tie)	96.9%	Doctoral	Fort Collins, Colorado
4. <u>Cornell University</u> (tie)	96.9%	Doctoral	Ithaca, New York
4. <u>University of Connecticut</u> (tie)	96.9%	Doctoral	Storrs, Connecticut
4. <u>University of Nebraska at Omaha</u> (tie)	96.9%	Doctoral	Omaha, Nebraska

New standards were introduced with STARS 2.1 that better recognize top performance and create greater variation in scoring within the Coordination & Planning subcategory. The Sustainability Planning credit has been restructured, and new standards were introduced in the Participatory Governance credit. For this reason, the Top Performers list for Coordination & Planning is limited to institutions submitting Version 2.1 reports only.



The Sustainability Plan 2025 at <u>Yale University</u> reflects the priorities of the institution and creates entry points across disciplines and departments for broad engagement. The Plan lays out a vision for a more sustainable future and outlines nine major ambitions to focus our efforts. To translate these efforts to individual- or department-level action, a goal within the Empowerment ambition has been set to create sustainability action plans tailored to specific schools and departments. The plans for Yale's operational divisions relate to the use and the operation of the campus, and the professional school plans reflect the disciplines, priorities, and physical contexts of each school. The 2017 <u>Progress Report</u> reflects progress from the first year of implementing the Plan and indicates how far along the University is in reaching its goals.

James Madison University is among the first institutions to be recognized for independent peer review of its STARS report. The reviewer checked that all required information was included and consistent with credit criteria and timeframes, identified any response that did not meet the criteria, documented the process, and shared results with JMU. JMU in turn reviewed the suggestions and addressed all of the reviewer's questions before submitting the report. According to the AASHE staff standard review process, James Madison had the most accurate report during the latest calendar year, with a single minor issue identified by AASHE staff that was promptly addressed.

University of Vermont created a tool to make the STARS data collection and submission process much easier. The University created a shared Google Drive file structure for STARS credits, including a "mission control" sheet for tracking progress by credit. This STARS data collection tool allowed the UVM Office of Sustainability to better engage senior leaders and other campus stakeholders in the data collection and review process. Individuals at more than fifteen institutions have requested and received the Google Drive file system directly, and up to 150 individuals at institutions of higher education are now using this tool.

In November 2015, the template used at <u>McGill University</u> for Board and Senate memorandum was expanded to include a question on sustainability issues that are to be considered for motions submitted by Senators to the Senate. Every item that is proposed to McGill governing bodies now highlights whether sustainability implications have been taken into consideration in the development of the proposal and, if pertinent, what impacts (social, economic, environmental) the proposed actions would have on McGill's sustainability efforts.



McGill University is integrating sustainability into governance procedures.



Higher education opens doors to opportunities that can help create a more equitable world, and must be accessible to all regardless of race, gender, religion, socioeconomic status, and other differences. In addition, a diverse body of students, faculty, and staff provide rich resources for learning and collaboration. This section covers campus diversity and equity coordination and assessment, affordability and access for students, discrimination and bias response, diversity recruitment and mentoring, and efforts to increase diversity of faculty in academia.



University of Calgary students visit the Trie Buddha Pai Yuin Temple in Calgary as part of the Kaleidoscope Project. Photo credit: Robert Massey

Institution	Score	Туре	Location
1. <u>Stanford University</u>	98.4%	Doctoral	Stanford, California
2. <u>Colorado State University</u>	98.3%	Doctoral	Fort Collins, Colorado
3. University of Virginia	96.5%	Doctoral	Charlottesville, Virginia
4. <u>Cornell University</u>	96.3%	Doctoral	Ithaca, New York
5. University of Richmond	95.4%	Baccalaureate	Richmond, Virginia



The OER initiative at University of Connecticut has affected several thousand students through the adoption of open textbooks and course redesigns to increase affordability. In September 2016, the Provost provided \$100,000 in award money for faculty who teach large classes to adopt, adapt, or create open textbooks. The UConn Co-op, former independent bookstore at the university, gifted the UConn Library's OER Initiative with \$300,000 for future development of open on campus. UConn has also awarded grants to about 15 faculty for adoptions, adaptations, and creation of new textbooks which will be shared with the world when they are completed.



University of Connecticut students utilizing computer labs to access open resource material online. Photo credit: Sean Flynn/UConn

The <u>Change Makers</u> program at <u>Northwestern</u> <u>University</u> allows professional staff and faculty members to engage in a personal journey to create a more inclusive environment at Northwestern University. Change Makers is designed to supplement and allow information sharing around the diversity of work that is being done around Northwestern regarding inclusion. It differs from other advisory boards, committees or task forces in that Change Makers are change-focused on bringing inclusion to the center and understanding how it is a substantive part of every employees' jobs to create a more inclusive environment.



Students and staff take part in a tree planting at Northwestern University. Photo credit: sustainNU

The Kaleidoscope project at University of Calgary envisions a more pluralistic and inclusive campus community and invites students to engage in learning, conversation and action with others who may have a different background or viewpoint. This year, students participated in a co-curricular program experiencing religious diversity that included visiting over 10 sacred spaces in Calgary; developing critical thinking and practical skills to engage across lines of difference; completing an assessment measuring intercultural competencies; and gaining professional development experience by cultivating skills on religious and cultural competence in the workplace.

In August 2015, the Capital Advisory Committee (CAC) at Portland State University approved the creation of an <u>all-gender</u> restroom policy at Portland State University. Through the policy, at least one multistall and/or single occupancy all-gender restroom will be created in renovated or newly constructed buildings. Buildings that currently have only single-occupancy gender-specific restrooms will be converted to include an all-gender restrooms as funding becomes available. The policy was developed by the Standards Committee and the Campus Planning Office in collaboration with the Office of Global Diversity and Inclusion and the Queer Resource Center.



All Gender Restroom Poster. Photo credit: Bailey Collins, PSU Student

Collectively, colleges and universities invest hundreds of billions of dollars, and these investments have impacts that are both local and global in scope. Institutions with transparent and democratic investment processes promote accountability and engagement by the campus and community. By using the tools of sustainable investment and disclosure, institutions can improve the long-term health of their endowments, encourage better corporate behavior, support innovation in sustainable products and services, support sustainability in their community, and help build a more just and sustainable financial system.



Utility-scale solar farm at University of Illinois, Urbana-Champaign. Photo credit: University of Illinois Facilities & Services

Institution	Score	Туре	Location
1. Lewis & Clark College	82.1%	Baccalaureate	Portland, Oregon
2. <u>Unity College</u>	76.0%	Baccalaureate	Unity, Maine
3. Green Mountain College	73.7%	Baccalaureate	Poultney, Vermont
4. Middlebury College	68.4%	Baccalaureate	Middlebury, Vermont
5. <u>University of California, Merced</u> (tie)	68.1%	Baccalaureate	Merced, California
5. <u>University of California, Riverside</u> (tie)	68.1%	Doctorate	Riverside, California
5. <u>University of California, Santa Cruz</u> (tie)	68.1%	Doctorate	Santa Cruz, California



In May 2016, the University of Massachusetts system and its five campuses, including <u>University of</u> <u>Massachusetts Lowell</u>, became the first major public university system to divest its endowment from direct holdings in fossil fuels. The decision was made by a unanimous vote of the Board of Directors of the UMass Foundation, a separate not-for-profit corporation that oversees an endowment of approximately \$770 million. The UMass Foundation's adoption of this divestment position is among the most aggressive established for any major university—public or private—in the United States.

In 2014, the <u>San Francisco State University</u> Foundation committed to <u>limiting direct investments</u> in companies with significant production or use of coal and tar sands. As part of the divestment commitment, the Foundation agreed to estimate the carbon footprint of the foundation's equity portfolio. The methodology involved gathering the required data from various data sources, calculating the portfolio footprint for companies that publicly report emissions, and estimating the portfolio footprint for companies which do not publicly report emissions. SF State hopes this approach becomes a model for using carbon impact as a decision factor in making new investments.

The <u>Carbon Charge Initiative</u> at <u>Swarthmore College</u> is an internal carbon price, informed by the social cost of carbon reported by the EPA. This calculation generated a fund amount of \$300,000 for the most recent fiscal year. A 1.25% fee on departmental budgets, exclusive of salary and benefits was collected. This revenue served as seed capital for a Green Revolving Fund, which will finance energy efficiency projects on campus to help reduce greenhouse gas emissions. President Smith of Swarthmore College became the second college president in the country to endorse a national price on carbon, and is currently collaborating with other institutions to build support.



Schematic of Swarthmore College's carbon charge on departments. Photo credit: Nathaniel Graf



People define an organization's character and capacity to perform, and achievements are only as strong as that organization's community. Colleges and universities can bolster the strength of their communities by offering benefits, wages, and other assistance that serve to respectfully and ethically compensate workers and by acting to protect and positively affect the wellbeing of the campus community. This section highlights student and employee wellness programs and employee compensation, satisfaction, health, and safety.



Madelyn Phillips, a Student Park Ambassador for the Campus Park Rx program at William & Mary, prescribes time outside to her fellow students with the goal of improving mental and physical health on campus. Photo credit: Dorothy Ibes

Institution	Score	Туре	Location
1. Saint Mary's College of California	100%	Master's	Moraga, California
1. The American College of Greece	100%	Master's	Athens, Greece
3. <u>Seattle University</u>	90.3%	Master's	Seattle, Washington
4. <u>Earlham College</u>	89.1%	Baccalaureate	Richmond, Indiana
5. <u>University of North Carolina, Greensboro</u>	88.9%	Doctoral	Greensboro, North Carolina





The Greater Williamsburg Area Park Rx at <u>College of William & Mary</u> partners with healthcare providers, offering them training and tools to 'prescribe' their patients time in area parks to enhance mental and physical health, and treat and prevent lifestyle driven illnesses. The program launched a new initiative October 2016, where trained Student Park Ambassadors prescribe time outdoors to their peers on the William & Mary campus. The program's user interface estimates that over a three-month timeframe, 24 people were prescribed time in local parks using the program. With the new expansion, this number is expected to grow.

The Healthy Herd Wellness Group at <u>Worcester Polytechnic Institute</u> is a staff-developed and -managed program that goes well above and beyond a typical wellness initiative. The award-winning program incorporates nutrition, fitness, and healthy living to help those who want to attain better physical, emotional, and financial health. The Healthy Herd recently formed a 10-week "Ultimate Challenge" regimen that uses weight training, cardio workouts, and other aerobic activities, guided by three coaches. The Healthy Herd offers seminars and provides resources each year on eating, mediation, parenting, retirement planning, and caring for aging parents.

<u>University of California, Santa Barbara</u> demonstrates leadership in the area of equitable employee compensation, thanks in part to the University of California's <u>Fair Wage/Fair Work Plan</u>. Signed by President Janet Napolitano in July 2015, the plan requires that all University of California employees hired to work at least 20 hours a week be paid at least \$15 per hour over the course of the next three years. The mandated minimum increased to \$13 per hour in October 2015, to \$14 per hour in October 2016, and to \$15 per hour in October 2017. The California state minimum wage increased to \$10 per hour in January 2016.



Worcester Polytechnic Institute staff collaborate to make the Healthy Herd a success. (L-R) Jessica Szymczak, benefits specialist; Deb Ofcarcik, cochair of the Healthy Herd; Eric Chojnowski, benefits administrator; Brian Duffy, lead operating engineer; Connie Aramento, co-chair; and Shavaun Cloran, dietician.

To help combat the issue of growing food insecurity among college students, <u>Oregon State University</u> was the first campus to participate in the federal Supplemental Nutrition Assistance Program (SNAP) at its Cascadia Market location. Students may be eligible for SNAP based on their income levels and ability to meet other requirements. University officials were notified in August 2015 that they met the federal requirements, and the system was established and tested with help from volunteer students who were SNAP eligible. Officials hope Cascadia Market will become a model for other locations.

<u>Portland Community College</u> at Rock Creek created an innovative program to aid students who go hungry on campus. PCC Learning Garden staff recently partnered with campus Dining Services and other organizations to establish a work-for-food program where student volunteers receive food in exchange for volunteer work. PCC staff were able to increase access to fresh, healthy, sustainably grown food using hands-on learning opportunities, implementing incentive-based programs and using the space to teach sustainable farming practices. These innovative practices resulted in PCC Rock Creek earning an <u>AASHE Award</u> in 2015.



To help combat the issue of food insecurity among college students, Oregon State University was the first campus to participate in the federal Supplemental Nutrition Assistance Program (SNAP) at its Cascadia Market location. Photo credit: Oregon State University

## **Overall Top Performers**

The 2017 SCI once again recognizes top performers overall by institution type (Associate, Baccalaureate, Master's, and Doctoral/Research). These lists are determined based on STARS overall score, and include institutions that have a valid STARS report submitted between July 1, 2013 and June 30, 2016.



JMU students take part in a canoeing activity through the University Recreation Department (UREC) Adventure Program, which teaches and follows "Leave No Trace" principles. Photo credit: JMU Technology & Design

# Associate Colleges

#### **Overall Top Performers**

Institution	Rating	Score	Location
1. <u>Nova Scotia Community College</u>	Gold	73.23	Dartmouth, NS (Canada)
2. Kankakee Community College	Gold	67.94	Kankakee, Illinois
3. Portland Community College	Silver	61.96	Portland, Oregon
4. <u>Mohawk College</u>	Silver	57.64	Hamilton, ON (Canada)
5. Fleming College	Silver	56.21	Peterborough, ON (Canada)
6. Central Carolina Community College	Silver	54.08	Sanford, North Carolina
7. Raritan Valley Community College	Silver	52.41	North Branch, New Jersey
8. <u>College of Lake County</u>	Silver	52.21	Grayslake, Illinois
9. Western Technical College	Silver	52.06	La Crosse, Wisconsin
10. <u>Niagara College Canada</u>	Silver	50.53	Welland, ON (Canada)

Associate's colleges include institutions where all degrees are at the associate's level, or where Baccalaureate degrees account for less than 10% of all degrees (adapted from Carnegie Basic Classification).



Nova Scotia Community College scheduling staff optimize space utilization through the College's scheduling software.

#### **Overall Top Performers**

Institution	Rating	Score	Location
1. <u>Sterling College</u>	Gold	78.28	Craftsbury Common, Vermont
2. Middlebury College	Gold	77.55	Middlebury, Vermont
3. Green Mountain College	Gold	76.45	Poultney, Vermont
4. <u>Colby College</u>	Gold	75.65	Waterville, Maine
5. Dickinson College	Gold	74.24	Carlisle, Pennsylvania
6. <u>Oberlin College</u>	Gold	73.13	Oberlin, Ohio
7. University of Minnesota, Morris	Gold	70.84	Morris, Minnesota
8. <u>Furman University</u>	Gold	69.25	Greenville, South Carolina
9. Lewis & Clark College	Gold	68.60	Portland, Oregon
10. <u>Pomona College</u>	Gold	68.35	Claremont, California

Baccalaureate institutions include colleges and universities where baccalaureate degrees represent at least 10% of all undergraduate degrees and where fewer than 50 master's degrees or 20 doctoral degrees are awarded annually (adapted from Carnegie Basic Classification).



Sterling College student, Charles Carrier presents findings from his internship program.

#### **Overall Top Performers**

Institution	Rating	Score	Location
1. Appalachian State University	Gold	77.24	Boone, North Carolina
2. <u>Santa Clara University</u>	Gold	76.21	Santa Clara, California
3. <u>Chatham University</u>	Gold	75.79	Pittsburgh, Pennsylvania
4. <u>Bentley University</u>	Gold	72.56	Waltham, Massachusetts
5. California State University, Sacramento	Gold	72.18	Sacramento, California
6. Thompson Rivers University	Gold	71.58	Kamloops, BC (Canada)
7. Grand Valley State University	Gold	69.45	Allendale, Michigan
8. <u>Seattle University</u>	Gold	69.41	Seattle, Washington
9. <u>Belmont University</u>	Gold	69.35	Nashville, Tennessee
10. <u>California State University, Northridge</u> (tie)	Gold	69.28	Northridge, California
10. Humboldt State University (tie)	Gold	69.28	Arcata, California

Master's institutions include colleges and universities that award at least 50 master's degrees and fewer than 20 doctoral degrees annually (adapted from Carnegie Basic Classification).



Many student organizations at Appalachian State University, including the Gardening Club, were on hand at an Earth Tones event to celebrate Earth Day 2017 and inform the campus community about their sustainable initiatives.
## **Doctoral/Research Institutions**

### **Overall Top Performers**

Institution	Rating	Score	Location
1. Stanford University	Platinum	85.74	Stanford, California
2. <u>Colorado State University</u>	Platinum	85.56	Fort Collins, Colorado
3. <u>Université Laval</u>	Gold	82.53	Quebec, QC (Canada)
4. University of Connecticut	Gold	81.30	Storrs, Connecticut
5. <u>Arizona State University</u>	Gold	81.11	Tempe, Arizona
6. University of Washington, Seattle	Gold	77.43	Seattle, Washington
7. <u>University of Victoria</u>	Gold	76.79	Victoria, BC (Canada)
8. <u>University of Calgary</u>	Gold	76.20	Calgary, AB (Canada)
9. <u>American University</u>	Gold	75.35	Washington, DC
10. University of British Columbia	Gold	75.01	Vancouver, BC (Canada)

Doctoral/research institutions include colleges, universities and institutes that award at least 20 research doctoral degrees annually, including doctoral degrees that qualify recipients for entry into professional practice (adapted from the Carnegie Basic Classification).



Stanford's fountains, which recirculate water, are a popular spot for students to spend time. Photo credit: Linda Cicero

## **Overall Average Scores**





Middlebury College's 2100 acres of conserved land is surrounded by Green Mountain National Forest land. Photo credit: Brett Simison

# Methodology

All data presented in this publication is based on valid STARS 2.0 and 2.1 reports submitted prior to July 1, 2017. Reports submitted after this date will be included in next year's Index. Since STARS Version 1 has been phased out and due to significant differences between versions, only Version 2 reports were considered.

### **Identifying Top Performers**

Top performers within a topic were determined based on percentage of points earned within a subcategory and adherence to credit criteria as outlined in STARS credit criteria. Five top performers are recognized in most subcategories of this report except in cases where scores were tied. AASHE staff reviewed all credits from top-performing candidates within a subcategory to make sure that content provided in that area meets credit criteria. For any identified issues, staff reached out to STARS Liaisons, requesting follow-up within a three-week timeframe. Most institutions addressed the inconsistencies by submitting data revisions to clarify text or revise numbers. Some revisions resulted in score changes, which affected eligibility for inclusion. Institutions that did not address identified issues have been excluded from the final lists. The new Overall Top Performers lists based on institution type in this year's report were not subject to the same review process, largely due to constraints of reviewing so many reports in full. Since overall top performers were often also recognized in one or more topical areas, much of the data from many of these institutions were nonetheless reviewed, in addition to the standard reviews conducted for all reports (learn more about <u>STARS data accuracy</u>).

### **Identifying Highlighted Institutions**

Each section of the Index highlights best practices from institutions that submitted reports in the 12 months prior to July 1, 2016. Highlighted initiatives were selected based on innovative efforts and level of impact in advancing sustainability. Institutions that submit STARS reports annually have the opportunity to be highlighted every year.

### Average Score Data

Each section of this review includes charts displaying average scores by institution type, country, and FTE enrollment. For institutions that submitted multiple reports, the averages include scoring data for institutions' most recent reports only. Institutions that submitted as STARS Reporters were excluded from average score calculations since their scores are not public.

### As of July 1, 2017

#### Platinum

Colorado State University Stanford University



#### Gold

American University Appalachian State University Arizona State University **Babson College Ball State University** Bard College **Bates College Belmont University Bentley University** Berea College California State University, Channel Islands California State University, Northridge California State University, Sacramento **Chatham University Clarkson University** Colby College **Colgate University** Colorado College **Columbia University Concordia University Cornell University Dalhousie University Denison University Dickinson College Emory University** Florida Gulf Coast University



Furman University George Mason University George Washington University Grand Valley State University Green Mountain College Humboldt State University Indiana University Bloomington

#### Gold

Iowa State University Kankakee Community College c Lewis & Clark College Loyola University Chicago **Macalester** College McGill University Middlebury College New Mexico State University North Carolina State University Northern Arizona University Nova Scotia Community College **Oberlin College Oregon State University** Pitzer College Pomona College Portland State University San Jose State University Santa Clara University Seattle University Simon Fraser University Smith College St. John's University, New York State University of New York at Cortland State University of New York College of Environmental Science and Forestrym c Sterling College Texas A&M University The Ohio State University **Thompson Rivers University** Unity College **Universite Laval** University at Albany University at Buffalo University of Alberta University of Arizona University of British Columbia University of Calgary University of California, Merced University of California, Riverside University of California, Santa Barbara University of California, Santa Cruz University of Cincinnati University of Colorado Boulder University of Colorado Colorado Springs University of Connecticut



University of Houston University of Illinois, Urbana-Champaign University of Louisville University of Massachusetts Amherst University of Massachusetts Lowell University of Michigan University of Minnesota, Morris University of Minnesota, Twin Cities University of Missouri University of North Carolina at Chapel Hill University of North Carolina, Greensboro University of Notre Dame University of Ontario Institute of Technology University of Oregon University of South Florida University of Vermont University of Victoria University of Virginia University of Washington, Seattle University of Wisconsin-Milwaukee University of Wisconsin-Oshkosh University of Wisconsin-Stevens Point Virginia Tech Wartburg College Western Michigan University Western University Worcester Polytechnic Institute

#### Silver

**Aquinas College** Auburn University **Baylor University Beloit College** Black Hills State University **Boston University** Bowdoin College Bryant University Bryn Mawr College Bucknell University California Polytechnic State University California State Polytechnic University, Pomona California State University, Fullerton California State University, Los Angeles California State University, Monterey Bay California State University, San Marcos Calvin College **Camosun College** Carleton University Carnegie Mellon University Central Carolina Community College c Central Michigan University Central New Mexico Community College Champlain College Cleveland State University Coastal Carolina University College of Lake County College of William & Mary Durham College Earlham College Eastern Connecticut State University Elon University Endicott College Fanshawe College FIE: Foundation for International Education Fleming College Florida International University Florida State University Frostburg State University George Brown College Gettysburg College **Guilford** College Haverford College Hobart and William Smith Colleges Hope College Humber College Illinois State University Indiana State University Indiana University-Purdue University Indianapolis Ithaca College James Madison University



Keene State College Knox College Lafayette College Lehigh University LIU Post Luther College MacEwan University Madisonville Community College Maryville College Miami University Michigan State University Mills College Missouri State University Missouri University of Science and Technology Mohawk College Muhlenberg College Niagara College Canada Northern Alberta Institute of Technology Northwestern University **Ohio University** Okanagan College **Oklahoma State University** Onondaga Community College Pittsburg State University Polytechnique Montreal Portland Community College Princeton University Principia College Raritan Valley Community College **Rice University Richland Community College** Saint John's University

#### Silver

Saint Louis University Saint Mary's College of California San Francisco State University Selkirk College Sewanee - The University of the South Sheridan College Skidmore College Slippery Rock University Southern Illinois University Carbondale Southern Illinois University Edwardsville Southern Oregon University Southwestern University State University of New York at Geneseo State University of New York at New Paltz Stevens Institute of Technology Stonehill College Swarthmore College The Ohio State University at Lima The Ohio State University at Mansfield The Ohio State University at Marion The Ohio State University at Newark Tufts University **Tulane University** Universidad de Monterrey i Universite de Montreal University of Alabama at Birmingham University of Arkansas University of Central Florida University of Dayton University of Denver University of Florida University of Illinois at Chicago University of Kansas University of Kentucky University of Manitoba University of Miami University of Minnesota, Duluth University of Mount Union University of Nebraska - Lincoln University of Nebraska at Omaha University of Nevada Las Vegas University of North Carolina, Charlotte University of North Carolina, Wilmington University of Richmond University of Rochester University of Saskatchewan University of South Carolina University of South Florida St. Petersburg University of Tennessee at Knoxville University of Texas at Arlington University of Texas at Austin



University of Texas Rio Grande Valley University of the Pacific University of Utah University of Winnipeg University of Wisconsin-Green Bay University of Wisconsin-La Crosse University of Wisconsin-River Falls University of Wisconsin-Stout University of Wisconsin-Whitewater Utah State University Vassar College Villanova University Virginia Commonwealth University Wake Forest University Warren Wilson College Washington and Lee University Wellesley College Wells College Wesleyan University Western Kentucky University Western Technical College Westminster College Whitman College Williams College Yale University York University

### As of July 1, 2017

#### Bronze

Central Community College Concordia College - Moorhead East Carolina University Florida Institute of Technology Georgia College & State University Illinois Central College Joliet Junior College Juniata College Lakehead University Lawrence University Loyalist College Metropolitan Community College Northern Michigan University Nova Southeastern University Ringling College of Art and Design Roosevelt University Soka University of America Sonoma State University South Dakota State University State University of New York at Fredonia Tarleton State University Temple University Tennessee Technological University The American College of Greece The University of Texas at Dallas Transylvania University Universidad Autonoma de Tamaulipas University of Massachusetts Medical School University of Montana University of North Carolina, Pembroke University of Texas at El Paso University of West Georgia Weber State University Western State Colorado University



#### Reporter

Austin College Duke University Emerson College Georgia State University Old Dominion University State University of New York Polytechnic Institute Stony Brook University Texas Tech University University of Alaska Anchorage University of Regina University of Wisconsin-Platteville



## About AASHE

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