

Oregon State University Sustainability Report 2016 Fiscal Year

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Oregon State
University

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Executive Summary

Oregon State University’s steady movement toward a more sustainable campus continued in Fiscal Year 2016 (FY16). OSU continues to garner national attention as a sustainability leader and strives to be in the top 10 colleges and universities in the United States for excellence in sustainability. Since FY10, OSU has relied on a common sustainability assessment system known as the Sustainability Tracking, Assessment and Rating System (STARS). Despite significant growth in student enrollment and building space, Oregon State has six times achieved a Gold rating from STARS.

Fiscal Year	Submission Date	STARS Version	STARS Score
2010	Jan 31, 2011	1.0	69.74
2012	May 11, 2013	1.2	68.95
2013	Apr. 30, 2014	2.0	70.94
2014	Apr.30, 2015	2.0	72.78
2015	Mar. 4, 2016	2.0	73.27
2016	Apr.27, 2015	2.1	72.21

Table 1 - Oregon State University's STARS submissions

STARS Ratings (all versions)	
Platinum	1
Gold	94
Silver	138
Bronze	28
Reporter	12

Table 2 - STARS participant ratings

In May 2016, the STARS assessment tool underwent an upgrade which included a streamlined set of credits, auto-calculated metrics, and a collaborative review and revision process. Where possible, this report both attempts comparisons and examines the limitations of those comparisons. Figure 3 summarizes and trends OSU’s sustainability performance by STARS indicator subcategories for FY16.

OSU's FY16 sustainability performance by STARS subcategories	
Positive trending STARS subcategories, FY15-FY16 <ul style="list-style-type: none"> • Buildings • Energy • Food & Dining • Purchasing • Water • Investment & Finance 	Negative trending STARS subcategories, FY15-FY16 <ul style="list-style-type: none"> • Curriculum • Campus Engagement • Air & Climate • Grounds • Coordination & Planning • Wellbeing & Work
High performing STARS subcategories, FY16 <ul style="list-style-type: none"> • Campus Engagement • Diversity & Affordability • Research 	Low performing STARS subcategories, FY16 <ul style="list-style-type: none"> • Air & Climate • Buildings • Food & Dining • Energy • Investment & Finance • Waste

Table 3 - performance by STARS subcategory

Certain low performing and downward trending areas are due to changes in data availability and other assessment factors, but most indicate actual opportunities for performance improvement. As with many large organizations, some improvements will be more easily attained than others.

In addition to the indicators discussed above, highlights and achievements from FY16 include UHDS full transition to reusable to-go containers, inclusion of SNAP on campus, the creation of the Environmental Arts and Humanities Master’s Degree program, the launch of the “Intro to Permaculture” public education project, the introduction of the Sustainability Minor and growth in the Sustainability Double Degree program, among others.

Introduction

Oregon State University (OSU) inched toward sustainability during Fiscal Year 2016 (FY16). OSU aspires to be in the top 10 colleges and universities in the United States recognized for excellence in sustainability. With performance that puts OSU on the [Sierra Club's Cool Schools list](#), being included in The Princeton Review's Top 50 Green Colleges list and [2016 Guide to 361 Green Colleges](#) (out of around 800 surveyed) and other awards detailed below, sustainability has become business as usual for Oregon State.

This report highlights accomplishments and provides a summary of indicators for the period between approximately July 1, 2015 and June 30, 2016. OSU's sustainability indicators are based largely on the now widely adopted [Sustainability Tracking, Assessment and Rating System](#) (STARS).

Assessment, Awards and Recognition

Recognition from external entities has been key to the visibility of OSU's sustainability success. Increasingly visibility is an effective recruiting tool for new students. In FY10, OSU for the first time participated in STARS, administered by the [Association for the Advancement of Sustainability in Higher Education](#) (AASHE). Used by over 800 higher education institutions, STARS is more comprehensive and standardized than any previous rating or ranking system and serves as the platform for the key performance indicators below. Critically, STARS is also the mechanism by which sustainability indicators are shared with external entities like Sierra Club and Princeton Review, saving staff time and resources, and standardizing – to the greatest degree practicable – the assessment and visibility process. In addition to the STARS assessment, OSU's awards, ratings and rankings for FY16 are listed below. Visit the [sustainability recognition page](#) for information on these and other awards.



The [Princeton Review's 2016 Guide to 361 Green Colleges](#): OSU was recognized for sustainability practices such as food sourcing, transportation, green building, opportunities to focus on the environment and sustainability in curriculum and energy efficiency.

League of American Bicyclists Bicycle Friendly University program: OSU was awarded a Gold designation for providing a bicycle-friendly campus for students, staff and visitors.



Sierra Club gave OSU the third highest green ranking in the state for its 2016 edition of "Cool Schools." This puts OSU 78th in the nation.

Tree Campus USA: OSU has been recognized six years in a row since 2010 for efforts in effectively managing campus trees, developing connectivity with the community beyond campus borders to foster healthy, urban forests, and engaging students in learning opportunities centered on campus and community forestry events.



FY16 Sustainability Highlights

Full transition to reusable to-go containers – STARS Innovation credit

Beginning fall 2015, OSU rolled out a program to completely replace disposable to go containers with reusable containers made by a local Oregon company. During FY16, over 400,000 single use disposable containers were avoided, saving on purchasing and disposal costs. During the same time period, 60 fewer tons of trash were hauled from the compactors outside dining centers to the landfill.



If the 400,000+ single use containers that were diverted had been placed end-to-end it would be enough to line a path the 90 miles from Corvallis to Portland. Close to 30,000 Eco2Go containers were put into circulation over that period, also supporting the local economy by purchasing from a small Oregon company less than 15 miles away.

Improving student food access and security – STARS Innovation credit

Oregon State University was the first campus to participate in the federal Supplemental Nutrition Assistance Program, or SNAP. SNAP participants are now able to purchase food staples at Cascadia Market in the International Living-Learning Center on the OSU campus, using their Oregon Trail cards.

The new program is just one way the university is combating the issue of food insecurity among college students, which is a growing national problem. An OSU research study in 2014 found that 59 percent of students at a nearby Oregon university were food insecure at some point during the previous year, meaning they lacked the ability to acquire nutritionally adequate and safe foods.

University officials were notified in August 2015 that they met the federal requirements for SNAP, and the system was established and tested with help from volunteer students who were SNAP eligible. Officials said they hope Cascadia Market will become a model for other locations.

OSU Joins DOE's Electric Vehicle Workplace Charging Challenge

Oregon State University demonstrated its leadership in workplace sustainability by supporting the development of the national plug-in electric vehicle (PEV) charging infrastructure. OSU is pursuing this goal as part of the [U.S. Department of Energy's Workplace Charging Challenge](#) – a national partnership that aims to increase the number of employers offering workplace charging to 500 by 2018.

To accommodate PEVs, there are currently 21 charging stations spread out at six locations on the OSU Corvallis campus. Through its efforts, OSU is helping to reduce petroleum use and greenhouse gas emissions while also providing a valuable employee benefit.

Hatfield Marine Science Center Featured by the National Wildlife Federation for its hands-on student learning experience



Recently, the National Wildlife Federation released [The Campus Wild: How College and University Green Landscapes Provide Havens for Wildlife and “Lands-on” Experiences for Students](#). The publication includes a list of featured “Remote Colleges and University Properties,” noted for their hands-on student learning. At the beginning of that list was OSU’s Hatfield Marine Science Center (HMSC)!

The piece highlighted Hatfield’s emphasis on marine science, coastal ecosystems, and other oceanographic topics. HMSC is praised for its variety of opportunities for students, who range from community college to post-doctoral.

The Spring Creek Project Received a Creative Heights Grant

OSU’s Spring Creek Project received a \$95,000 grant from the Oregon Community Foundation. The grant was awarded for the Project to oversee the process of “Forest Symphony”, a wind symphony composed by Hip-Hop Artist Paul Miller, inspired by Oregon forests. The Oregon State Wind Ensemble debuted the Forest Symphony in May 2016.

Loosely based on the concept of Antonio Vivaldi’s “Four Seasons,” the work, composed for wind ensemble and turntables, explored a post-minimalist soundscape in which Miller drew from his immersive experience of visiting the H.J. Andrews Experimental Forest during each of the four seasons of the year. Neo-classical in nature, the audience was treated to a work that features the familiar and the modern.



New Environmental Arts and Humanities Master's Degree



After a long process, the new Master's Degree in Environmental Arts and Humanities was approved by Oregon's Higher Education Coordinating Commission.

Housed in the College of Liberal Arts, the new degree is perfect for students interested in both arts/humanities and environmental/natural resource sciences. The degree itself has three main focuses: environmental imagination (arts, communication, creative writing, moral imagination), environmental action (community leadership, movement building, media power, cultural diversity, social justice, the history of structural change), and environmental thinking (moral reasoning, critical thinking about environmental issues, conceptual analysis of complex problems, reasoning with facts and values).

Graduates from the degree will be prepared for positions in environmental NGOs, government and land agencies, advocacy groups, corporations, green business, journalism, conservation and stewardship, formal and informal education, and other environmental positions that require strong, creative communication and reasoning skill sets and humanistic understanding.

The first cohort for the M.A. was Fall 2016. For more information on the new degree, check out the [Environmental Arts and Humanities Initiative](#).

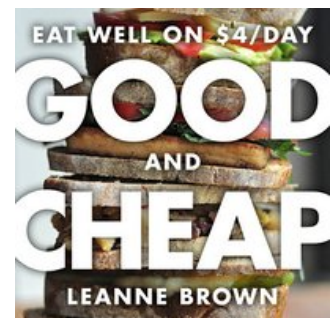
OSU's Sustainability Office Introduces the Alumni Profiles Project

In FY16, the Sustainability Office introduced a new series on the Ecologue, highlighting alumni who were involved with sustainability efforts during their time as students. Through the [Alumni Profiles Project](#), the OSU community can see what a difference OSU's incredible alumni make in solving global challenges!

Improving Food Security at OSU - Leanne Brown

In February, Leanne Brown, author of "Good and Cheap: Eat well on \$4/Day" visited OSU to talk about her book and give cooking demonstrations (which included free samples of food!).

There were two sessions held. The first session, held at McNary Dining Center, opened to students. The first 50 registered participants that attended this workshop, received a free copy of Brown's book "Good and Cheap". The second session was held for faculty and community in the MU Horizon Room.



Intro to Permaculture – A Massive Online Open Course

Oregon State University launched a public education project with the creation of “Intro to Permaculture” — a Massive Open Online Course (MOOC) which ran from May 2 through May 27, 2016. This free course covered the foundations of the permaculture design system in four weeks, with 12 to 16 hours of engagement.



OSU threw the full resources of its development staff at Open Oregon State to create a high--production, online educational experience that included video, images, animation, text, resource lists, links, and interactive activities. When students completed all of the interactive assignments and content quizzes, received a ‘digital badge’ which verified their participation.

The course was taught by Andrew Millison, who has been involved in permaculture practice, design and education for 20 years, and is an instructor in the Horticulture Department at OSU and founder of Permaculture Design International (PDI).

OSU’s Orange Media Network Works Toward More Sustainable Transportation Options

Orange Media Network received a Project Grant from the Student Sustainability Initiative (SSI) in 2015-16 to purchase two cargo trikes to deliver The Daily Barometer in a more sustainable way. Along with the implementation of trike delivery, The Daily Barometer conducted twice a term delivery audits and adjusted its distribution accordingly.

Following a first audit Fall Term, they reduced the press run by 2,000 papers per day. Delivering on trikes aligns holistically with social dimensions of sustainability since the trikes provide a healthy alternative to driving. The use of trikes allows a student to hold the delivery job regardless of whether they own their own vehicle.



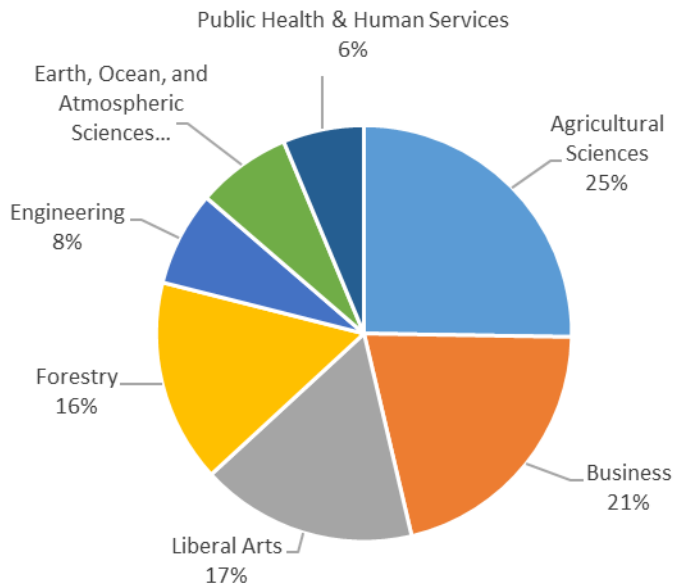
The Sustainability Double Degree

The Sustainability Double Degree (SDD) is up and running on all three OSU campuses. The SDD exposes students to real-world problems and fosters knowledge, skills and abilities to address these problems in communities and workplaces. In step with the interdisciplinary nature of sustainability, the degree is designed to complement all OSU degree programs and be earned as a second bachelors in addition to a major area of study. Students take a sustainability "core" consisting of five courses: environmental science, sustainable

communities, sustainability assessment, and a choice of several economics and sociology courses.

In the academic year 2015-2016, there were a total of 95 students who were enrolled in the SDD consisting of Corvallis campus students (65%), Ecampus students (26%) and Cascades Campus students (9%). The majority of SDD students have senior class standing (73%), 18% are juniors, 8% are sophomores and 1% are first-year. The inter-disciplinary SDD program includes students from primary majors as shown in the chart.

Sustainability Double Degree Students' Primary College



The Sustainability Minor

The sustainability minor was first offer at OSU in Fall 2015. This minor's interdisciplinary approach teaches students to think critically about complex issues facing society and how to develop possible solutions to mitigate them. It includes core sustainability courses and tailored elective courses to expand students' knowledge and experience of their primary major in the context of sustainability principles and frameworks. Completion of the sustainability minor requires 27 credits beyond the 180-credit minimum for graduation.

In the academic year 2015-2016, there were nine students who were enrolled in the sustainability minor consisting of Corvallis campus students (67%), Ecampus students (22%) and Cascades Campus students (11%). The majority of students have senior class standing (56%), 22% are juniors, and 22% are sophomores.

SSI programs create culture of sustainability

SSI Fellowship Program: The Student Sustainability Initiative (SSI) created a new opportunity for students to become a Sustainability Fellow, working with a campus department or a community organization doing research with a faculty mentor working to solve global sustainability challenges.

The Sustainability Fellowship Program pairs students with campus departments and organizations to work on challenges through research and community engagement.

Pollinator Garden Landscape Project: The pollinator garden was an initiative to provide pollinator habitat and promote awareness of the benefits of pollinators such as bees, birds and moths. This project started as a collaboration several years ago between faculty from the Horticulture, Forestry, Campus landscaping and Entomology departments. The garden was installed Saturday, April 23 as part of OSU Center for Civic Engagement’s annual Earth Day of Service.



Continued excellence in solid waste programs

Campus Recycling and its partners continued programming that moved OSU toward waste reduction. Specific highlights are below.



Repair Fairs: The Waste Watchers, a student volunteer team jointly coordinated by Campus Recycling and the Student Sustainability Initiative, ran their fourth year of an event series called the **Repair Fairs**. At these events, volunteers from the on- and off-campus community offered free repairs for common items such as appliances, bicycles, clothing and more. In FY16, four events were offered with an estimated 165 people bringing 157 items, 84 percent of which were fixed – that’s approximately 131 items repaired for reuse. The events also offered a total of 16 sustainability-focused demonstrations, with an estimated total attendance of 142 people.

Trash Talks Series: Campus Recycling started a weekly featured series, Trash Talk Tuesdays – where they answered waste wonderings. Questions were accepted summer/fall of 2015 and video answers were posted on Tuesdays of winter term 2016. The topics covered were:

- What plastics are recyclable?
- Can foil be recycled?
- What about cardboard boxes that contain other materials?
- What lids are recyclable?
- Why aren't disposable coffee cups recyclable?
- Why aren't there more compost bins on campus?
- Trash Talk: Is Styrofoam recyclable on campus?

2016 Residence Hall Move-Out Donation Drive: Campus Recycling, Surplus Property and University Housing and Dining Services again coordinated a [donation drive](#) to give residents the tools to recycle and donate materials they do not want to bring home with them upon moving out. In FY16, 22,967 pounds of donations were collected and processed, much of which were given to local nonprofit organizations.



Continued partnerships with the Corvallis Sustainability Coalition

Oregon State's extensive connections with and support of the [Corvallis Sustainability Coalition](#) included the OSU Sustainability Office again being the primary sponsor of the annual Sustainability Town Hall and many other activities:

- Staffing various committees and action teams, including the Coalition Steering Committee and Executive Committee
- Leadership of several action teams is coordinated by OSU staff, and leverages university resources through these channels
- Using the campus as a living laboratory for Coalition action team projects. Specifically, the Energy Action Team and Water Action Team have catalyzed opportunities in this way
- Promoting Coalition events to the campus community through a wide variety of channels.

Stormwater Assessment: A stormwater assessment was conducted by three OSU students, along with their sponsor, David Eckert, of the Corvallis Sustainability Coalition.

The objectives of their research were to both assess the quality of OSU's stormwater as well as its impact on Oak Creek, an EPA-classified impaired stream.

To conduct the assessment, water was collected from seven different sites scattered around campus, so that the runoff could be studied from different areas and surfaces.

Results showed high levels of zinc and nitrate and acceptable levels of turbidity and conductivity. Along with that, the stormwater had no detectable E. coli. The highest level of most contaminants found was during the first rain and then only decreased after that point.

These results are important because they provide a basis to help OSU eventually become stormwater independent, meaning that we can reuse and treat the water on campus. To view the stormwater quality assessment in detail, you can view the results [here](#).



STARS Key Indicators

OSU continues to experience growth in enrollment and an overall increase in building square footage. Direct comparisons between FY15 and FY16 are made complicated by changes in the STARS assessment tool; these changes are discussed in detail below and throughout this report. Because of these changes, this report focuses on general trends using methods that provide some level of comparability, recognizing the comparisons are imperfect.

Between FY10 and FY16, total student enrollment grew an astonishing 38%, from 21,969 to 30,451. Thirty-six percent of this increase were “distance education only” students enrolled in Ecampus courses; they were not physically present at the Corvallis campus. University building square footage also increased. For 2010, we reported an estimated 7 million square feet. Using more accurate and comprehensive methods for FY16, that number is approximately 9.8 million square feet. Other changes in assessment methods are discussed in more detail throughout this report.

Short narratives for three report subsections follow:

1. areas of significant performance change (large improvements or declines)
2. areas of consistently high performance
3. areas for potential improvement.

In May 2016, AASHE launched STARS 2.1, an update to STARS 2.0 versions. STARS 2.1 provides a streamlined set of credits, auto-calculated metrics, and a collaborative review and revision process. With these changes in the assessment tool, analysis of OSU’s general performance trend is imperfect but not impossible. The following tables show OSU’s STARS category scores for FY16.

STARS 2.1 category name	Points Possible	FY16		FY15- FY16* % Change
		Score	%	
Academics (AC)	58	44.23	76.3%	-6.7%
Engagement (EN)	41	34.15	83.3%	-3.4%
Operations (OP)	70	37.18	53.1%	1.6%
Planning & Administration (PA)	32	22.54	70.4%	-2.6%
Total	201	138.10	68.71%	-2.6%

Table 4 - STARS version 2.1 summary table

*Performance changes between FY15 and FY16 are due in part to changes in the STARS assessment tool.

These highest level category scores reveal:

- Superb performance in Engagement and, to a lesser extent, Academics
- Continued strong performance in Planning & Administration
- Weaker but slightly improved performance in Operations.

As shown in the tables above, OSU’s overall score decreased 2.6% between FY15 and FY16, partly due to changes in the STARS assessment tool.

Like the report for FY14, this report performs analysis at the STARS subcategory level. However, **past analyses** are still relevant to OSU’s progress. While this and subsequent reports focus on subcategory trends, readers are encouraged to explore the full set of credit scores in this document’s appendix.

Subcategories of significant change between FY15 and FY16

This section details changes between FY15 and FY16 performance within STARS subcategories. “Significant change” is considered here to be greater than +/- 5% for STARS subcategory scores; those scores are bolded below in Table 5. The narratives following the table discuss possible reasons for subcategory score changes. As evident in the table, the number of points possible within a STARS subcategory heavily impacts that subcategory’s influence on the institutional score. A lower score in Grounds, for example, is more than offset by an improved score in Curriculum.

STARS 2.1 sub-category name	Points Possible	FY15		FY16		FY15-FY16
		Score	%	Score	%	% Change
Curriculum	40	32.01	80.0%	28.63	71.6%	-8.4%
Research	18	16.09	89.4%	15.60	86.7%	-2.7%
Campus Engagement	21	20.00	100.0%	19.25	91.7%	-8.3%
Public Engagement	20	15.53	74.0%	14.90	74.5%	0.5%
Air & Climate	11	6.71	61.0%	4.93	44.8%	-16.2%
Buildings	8	2.41	30.1%	2.91	36.4%	6.3%
Energy	10	2.82	28.2%	3.95	39.5%	11.3%
Food & Dining	8	2.98	42.6%	4.00	50.0%	7.4%
Grounds	4	3.74	93.5%	3.02	75.5%	-18.0%
Purchasing	6	3.55	59.2%	3.94	65.7%	6.5%
Transportation	7	4.44	63.4%	4.43	63.3%	-0.1%
Waste	10	5.73	57.3%	5.74	57.4%	0.1%
Water	6	3.17	52.8%	4.26	71.0%	18.2%
Coordination & Planning	8	7.5	93.8%	6.75	84.4%	-9.4%
Diversity & Affordability	10	8.77	87.7%	8.55	85.5%	-2.2%
Investment & Finance	7	2.1	30.0%	2.60	37.1%	7.1%
Wellbeing & Work	7	4.99	71.3%	4.64	66.3%	-5.0%
Total	201	142.54	71.3%	141.52	68.71%	-2.6%

Table 5 - STARS subcategory comparison – areas of significant change.
 *Performance changes between FY15 and FY16 are due in part to changes in the STARS assessment tool.

Curriculum (FY15-FY16 change: -8.4%)

The change in this subcategory centers on the changes presented in STARS 2.1, specifically in the Learning Outcomes credit. In STARS 2.1, the Learning Outcomes credit asks that institutions count graduates from sustainability-focused programs and other degree programs that require the successful completion of one or more sustainability courses. In version 2.0, OSU reported graduates from sustainability-focused programs and

other degree programs that require the successful completion of one or more sustainability courses, as well as courses that include sustainability. This change resulted in a lower score, dropping from 6.46 to 2.87 points.

Significantly greater data availability is anticipated as OSU's curriculum proposal system is improved and in it syllabi accumulate. As of this writing, the Sustainability Office has engaged partners within the Faculty Senate and Academic Affairs to advance the use of the curriculum proposal system by including a mechanism by which faculty can flag for review courses that may have sustainability content.

Two credits within the Curriculum subcategory scored no points: Sustainability Literacy Assessment and Incentives for Developing Courses. As in previous years, OSU does not conduct entry or exit surveys to assess sustainability literacy of students before and after their university experience. A representative sample, not necessarily the full student population, would need to be surveyed to earn this credit. Similarly, OSU does not offer incentives for faculty to develop new sustainability courses and/or incorporate sustainability into existing courses or departments. Incentives need to be available to any discipline and may include release time, funding for professional development, and trainings offered by the institution. Incentives for expanding sustainability offerings in academic, non-credit, and/or continuing education courses count for this credit.

Campus Engagement (FY15-FY16 change: -8.3%)

The change in this subcategory centers on the changes presented in STARS 2.1, the addition of a new credit, Assessing Sustainability Culture, and the introduction of opportunities to earn partial points for the credit Staff Professional Development. Oregon State did not pursue the new credit Assessing Sustainability Culture. In STARS 2.0, Oregon State obtained full points for the credit Staff Professional Development as partial points were not allowed. With the introduction of partial scoring in this credit in STARS 2.1, Oregon State did not earn full points.

Oregon State continues to be a place of great opportunity for students who want to become engaged with campus sustainability projects, services and programs. OSU's strong commitment to student engagement around sustainability, led by the Student Sustainability Initiative and supported by Campus Recycling and the Sustainability Office, covered all student oriented credits within this subcategory.

Air and Climate (FY15-FY16 change: -16.2%)

In the Air and Climate subcategory, ten of the eleven available points fall within the Greenhouse Gas (GHG) Emissions credit. As shown in OSU's [annual greenhouse gas inventory reports](#), gross emissions increased since FY15 due to expansion of the physical campus and student enrollment. However, the emissions per student FTE as well as the emissions per 1000 square feet of building space have dropped. President Ray's April 2007 signing of the Carbon Commitment has motivated some action and OSU has been able to capitalize upon other opportunities since 2007. A large portion of OSU's reduction is a result of the Energy Center, OSU's cogeneration facility that produces nearly half of the Corvallis campus' electricity and all steam used for building heat. With cogeneration, or combined heat and power, a majority of steam is created from the "waste" heat that is inherent with the electrical generation process. By capturing this waste heat, efficiencies skyrocket.

Buildings (FY15-FY16 change: +6.2%)

OSU scored well in the Building Design and Construction credit because of attaining some level of LEED certification or equivalence for new buildings in FY16, buoying the university's score in the subcategory.

Even with an increase in score from FY15, the Buildings subcategory continues to be a challenge because OSU has no buildings certified under a green building rating system for existing buildings, like [LEED® for Existing Buildings: Operations & Maintenance \(O&M\)](#) and/or operated and maintained in accordance with formally adopted sustainable operations and maintenance guidelines and policies that cover all of the following:

- Impacts on the surrounding site
- Energy consumption and building-level energy metering
- Usage of environmentally preferable materials
- Indoor environmental quality
- Water consumption and building-level water metering

Energy (FY15-FY16 change: +11.3%)

FY15 saw 1,132,866.40 million Btu (MMBtu) of energy consumed while 1,150,761.20 MMBtu were consumed in FY16. Increased renewable energy consumption helped improve OSU's score in FY16 thanks to the operation of all five of OSU's [ground mounted solar arrays](#), as well as the addition of the photovoltaic array on the roof of the Student Experience Center. Although discontinuation of past significant institutional purchases of renewable energy certificates has hurt OSU's score in this subcategory, the OSU Energy Center and solar arrays have enabled modest increases in electricity consumption from the grid while campus rapidly expands.

Food & Dining (FY15-FY16 change: +7.4%)

Credits for this subcategory fall into two parts: one credit consolidates all food and beverage purchasing practices, while the second credit focuses on sustainable dining policies, commitment programs, and food waste prevention systems.

Although the proportion of OSU food and beverage expenditures that meet sustainability criteria fell, the introduction of data covering Sustainable Dining Initiatives, and Food and Dining Waste, actually increased the Sustainable Dining credit score. Additionally, for the veganism and animal products sourcing credit, data analysis for FY16 indicated the percentage of total dining services food purchases comprised of conventionally produced animal products fell from an estimated 19.0% in FY15 to 7.2% in FY16. But data verification is difficult for food purchases using OSU's existing procurement system. A major factor contributing to a lower-than-verifiable scores in this subcategory is data availability. Institutional-scale food purchasing often presents insurmountable challenges in data and statistical granularity needed to make accurate assessments of food sourcing and sustainability.

Grounds (FY15-FY16 change: -18.0%)

The Landscape Management credit counts number of acres managed under an Integrated Pest Management (IPM) program, managed in accordance with a sustainable landscape management program and/or managed organically, third party certified and/or protected. In FY15, only the land holdings on the contiguous Corvallis campus were considered, yielding an 87% score on this credit. For FY16, all state wide land holdings (Corvallis, Bend, Newport, and Statewide Public Services like Extension) were considered, yielding a 51% score on this credit.

The second of the two credits within Grounds, Biodiversity, focuses on protected areas and vulnerable species, all of which are also included in the Corvallis Land Development Code and for which OSU scored the full two points available. Still, these high scores on a campus with relatively traditional landscape practices, reflect a limitation with the STARS reporting system and challenges quantitatively assessing sustainable landscape practices. More information about OSU’s landscape practices is available at <http://fa.oregonstate.edu/sustainability/operations/natural-features>

Purchasing (FY15-FY16 change: +6.5%)

Although at the higher end of the lower performing spectrum with 57% of available points scored, the Purchasing subcategory suffered from the addition of the Life Cycle Cost Analysis credit that came new with STARS version 2.1. Since OSU does not perform any life cycle analyses on the goods it purchases (few schools do), OSU scored no points for the new credit. Other credit scores within this subcategory are on par with past performance, and most trended slightly upward. Electronics purchasing in particular trended positively, in part due to better and more complete data thanks to analytical support from [EPEAT](#) in Portland, OR, efforts in OSU’s procurement group and continued purchases of predominantly EPEAT Gold registered desktop and laptop computers, displays, thin clients, televisions, and imaging equipment.

Water (FY15-FY16 change: +18.2%)

As with other areas of STARS, it’s valuable to look at a longer trend of the Water subcategory’s largest (and only changing) credit: Water Use. Each year since FY10, OSU has held water consumption lower than the FY05 baseline established by STARS, which awards full points for the Water Use credit when institutions achieve a 30% or greater reduction relative to the baseline.

Reporting Year	Water Use (gallons)
FY05 (baseline year)	267,228,984
FY14	253,188,276
FY15	281,678,100
FY16	257,363,612

Table 6 - OSU Corvallis campus water consumption

OSU’s score in the Water subcategory was buoyed somewhat by achieving all available points (2) for the Rainwater Management credit. Points attained for this credit were from implemented practices like:

- using low impact development as a standard practice to reduce rainwater/stormwater runoff volume and improve outgoing water quality for new construction, major renovation, and other projects
- employing rainwater harvesting
- utilizing porous (i.e. permeable) paving
- installing bio swales on campus (vegetated, compost or stone).

OSU uses non-potable water in place of potable sources for toilet and urinals in Kelley Engineering Center and also for boiler makeup water in the Energy Center. Unfortunately, the use of rainwater is not currently measured.

Coordination, Planning and Governance (FY15-FY16 change: -9.4%)

As with each STARS assessment, OSU has attained full scores for having sustainability staff and committees. In STARS 2.1, the evaluation of sustainability in planning-related documents became much more robust and resulted in a 68% score for the Sustainability Planning credit. Full points cannot be attained until the university develops plans with measureable outcomes that address dining services, purchasing, water, and investment.

Investment (FY16 score: +7.1%)

OSU's Investment subcategory score improved significantly since FY15, due to the introduction of opportunities to earn partial points for the Committee on Investor Responsibility credit in STARS 2.1. This resulted in a 25% score on this credit.

Subcategories of high performance

Categories of “high performance” are those where OSU achieved 80% or more of STARS points. Those subcategories are bolded in the table below.

STARS 2.1 sub-category name	Points Possible	FY15		FY16		FY15-FY16
		Score	%	Score	%	% Change
Curriculum	40	32.01	80.0%	28.63	71.6%	-8.4%
Research	18	16.09	89.4%	15.60	86.7%	-2.7%
Campus Engagement	21	20.00	100.0%	19.25	91.7%	-8.3%
Public Engagement	20	15.53	74.0%	14.90	74.5%	0.5%
Air & Climate	11	6.71	61.0%	4.93	44.8%	-16.2%
Buildings	8	2.41	30.1%	2.91	36.4%	6.3%
Energy	10	2.82	28.2%	3.95	39.5%	11.3%
Food & Dining	8	2.98	42.6%	4.00	50.0%	7.4%
Grounds	4	3.74	93.5%	3.02	75.5%	-18.0%
Purchasing	6	3.55	59.2%	3.94	65.7%	6.5%
Transportation	7	4.44	63.4%	4.43	63.3%	-0.1%
Waste	10	5.73	57.3%	5.74	57.4%	0.1%
Water	6	3.17	52.8%	4.26	71.0%	18.2%
Coordination & Planning	8	7.5	93.8%	6.75	84.4%	-9.4%
Diversity & Affordability	10	8.77	87.7%	8.55	85.5%	-2.2%
Investment & Finance	7	2.1	30.0%	2.60	37.1%	7.1%
Wellbeing & Work	7	4.99	71.3%	4.64	66.3%	-5.0%
Total	201	142.54	71.3%	141.52	68.71%	-2.6%

Table 5 - STARS subcategory comparison – areas of significant change.

*Performance changes between FY15 and FY16 are due in part to changes in the STARS assessment tool.

Because they have been discussed previously in the subcategories of significant change section of this report, the following subcategories will not be included in the discussion here:

- Campus Engagement
- Coordination & Planning

Research (FY16 score: 86.7%)

With OSU’s Carnegie Classification as a high research intensity institution, and as one of only two land, sea, space and sun grant universities in the U.S., high scores in Research are not surprising. For FY16, OSU demonstrated engagement from 45% of departments that conduct research, while in FY15 that number was approximately 51%. The STARS target for full point allocation is 75% of departments that conduct research. For engagement at the individual faculty level, STARS awards full credit for the number of faculty doing sustainability research when 15% or more of faculty are engaged in sustainability research. For both FY15 and FY16, OSU had an astounding 40% of faculty engaged.

Diversity and Affordability (FY16 score: 85.5%)

Oregon State continues to demonstrate strengths in the topics covered by this subcategory. Assessment of diversity initiatives continues to be qualitative and OSU has again scored full points in the diversity related credits of this subcategory. Previous 100% scores have declined slightly due the more rigorous and quantitative Affordability and Access credit, the indicators for which are listed below.

	FY15	FY16
The percentage of entering students that are low-income	36.3	48.0
The graduation/success rate for low-income students	72.2	69.2
The percentage of student financial need met, on average	54.9	66.0
The percentage of students graduating with no interest-bearing student loan debt	13.3	39.0

Table 8 - Indicators that the institution is accessible and affordable to low-income students

Subcategories of potential improvement

This section details areas of potential score improvement and reasons for lower performance in some areas. Generally, subcategories for which the university scored 59% or fewer of available points are included in this section.

STARS 2.1 sub-category name	Points Possible	FY15		FY16		FY15-FY16
		Score	%	Score	%	% Change
Curriculum	40	32.01	80.0%	28.63	71.6%	-8.4%
Research	18	16.09	89.4%	15.60	86.7%	-2.7%
Campus Engagement	21	20.00	100.0%	19.25	91.7%	-8.3%
Public Engagement	20	15.53	74.0%	14.90	74.5%	0.5%
Air & Climate	11	6.71	61.0%	4.93	44.8%	-16.2%
Buildings	8	2.41	30.1%	2.91	36.4%	6.3%
Energy	10	2.82	28.2%	3.95	39.5%	11.3%
Food & Dining	8	2.98	42.6%	4.00	50.0%	7.4%
Grounds	4	3.74	93.5%	3.02	75.5%	-18.0%
Purchasing	6	3.55	59.2%	3.94	65.7%	6.5%
Transportation	7	4.44	63.4%	4.43	63.3%	-0.1%
Waste	10	5.73	57.3%	5.74	57.4%	0.1%
Water	6	3.17	52.8%	4.26	71.0%	18.2%
Coordination & Planning	8	7.5	93.8%	6.75	84.4%	-9.4%
Diversity & Affordability	10	8.77	87.7%	8.55	85.5%	-2.2%
Investment & Finance	7	2.1	30.0%	2.60	37.1%	7.1%
Wellbeing & Work	7	4.99	71.3%	4.64	66.3%	-5.0%
Total	201	142.54	71.3%	141.52	68.71%	-2.6%

Table 5 - STARS subcategory comparison – areas of significant change.

*Performance changes between FY15 and FY16 are due in part to changes in the STARS assessment tool.

Because they have been discussed previously in the subcategories of significant change section of this report, the following subcategories will not be included in the discussion here:

- Air & Climate
- Buildings
- Energy
- Food & Dining
- Investment & Finance

Waste (FY16 score: 57.4%)

Key credits in this subcategory trended positively with higher scores for Waste Minimization and Diversion (+3.8%) than FY15. The change in this subcategory centers on the changes presented in STARS 2.1 including an updated minimum performance threshold for waste minimization, and the allowance of post-recycling residual conversion to count toward scoring. The table below shows progress in the Waste Minimization and Diversion credit.

	FY05	FY15	FY16
Materials recycled	607	1,021	928
Materials composted	196	1,407	1,342
Materials reused, donated or re-sold	121	433	374
Materials disposed in a solid waste landfill or incinerator	3,105	1,713	1,732

Table 10 - Waste Minimization weights. All units are tons.

Appendix

STARS 2.1 Credit Score Detail Table

	Points Possible	FY15		FY16		% Change
		Score	%	Score	%	
Curriculum	40	32.01	80.0%	28.63	71.6%	-8.5%
AC-1: Academic Courses	14	11.55	82.5%	13.76	98.3%	15.8%
AC-2: Learning Outcomes	8	6.46	80.8%	2.87	35.9%	-44.9%
AC-3: Undergraduate Program	3	3.00	100.0%	3.00	100.0%	0.0%
AC-4: Graduate Program	3	3.00	100.0%	3.00	100.0%	0.0%
AC-5: Immersive Experience	2	2.00	100.0%	2.00	100.0%	0.0%
AC-6: Sustainability Literacy Assessment	4	0.00	0.0%	0.00	0.0%	0.0%
AC-7: Incentives for Developing Courses	2	2.00	100.0%	0.00	0.0%	-100.0%
AC-8: Campus as a Living Laboratory	4	4.00	100.0%	4.00	100.0%	0.0%
Research	18	16.09	89.4%	15.60	86.7%	-2.7%
AC-9: Academic Research	12	10.09	84.1%	9.60	80.0%	-4.1%
AC-10: Support for Research	4	4.00	100.0%	4.00	100.0%	0.0%
AC-11: Access to Research	2	2.00	100.0%	2.00	100.0%	0.0%
Campus Engagement *	21	20.00	100.0%	19.25	91.7%	-8.3%
EN-1: Student Educators Program	4	4.00	100.0%	4.00	100.0%	0.0%
EN-2: Student Orientation	2	2.00	100.0%	2.00	100.0%	0.0%
EN-3: Student Life	2	2.00	100.0%	2.00	100.0%	0.0%
EN-4: Outreach Materials and Publications	2	2.00	100.0%	2.00	100.0%	0.0%
EN-5: Outreach Campaign	4	4.00	100.0%	4.00	100.0%	0.0%
EN-6: Assessing Sustainability Culture	1	N/A	N/A	0.00	0.0%	
EN-7: Employee Educators Program	3	3.00	100.0%	3.00	100.0%	0.0%
EN-8: Employee Orientation	1	1.00	100.0%	1.00	100.0%	0.0%
EN-9: Staff Professional Development	2	2.00	100.0%	1.25	62.5%	-37.5%
Public Engagement **	20	15.53	74.0%	14.90	74.5%	0.5%
EN-10: Community Partnerships	3	3.00	100.0%	3.00	100.0%	0.0%
EN-11: Inter-Campus Collaboration	3	2.00	66.7%	2.50	83.3%	16.7%
EN-12: Continuing Education	5	5.00	100.0%	5.00	100.0%	0.0%
EN-13: Community Service	5	1.53	30.6%	2.40	48.0%	17.4%
EN-14: Participation in Public Policy	2	2.00	100.0%	2.00	100.0%	0.0%
EN-15: Trademark Licensing	2	0.00	0.0%	0.00	0.0%	0.0%
EN- Community Stakeholder Engagement		2.00	100.0%	N/A	N/A	
EN- Hospital Network		N/A	N/A	N/A	N/A	
Air and Climate	11	6.71	61.0%	4.93	44.8%	-16.2%
OP-1: Greenhouse Gas Emissions	10	5.71	57.1%	3.93	39.3%	-17.8%
OP-2: Outdoor Air Quality	1	1.00	100.0%	1.00	100.0%	0.0%
Buildings ***	8	2.41	30.1%	2.91	36.4%	6.3%
OP-3: Building Operations and Maintenance	5	0.00	0.0%	0.97	19.4%	19.4%
OP-4: Building Design and Construction	3	1.41	47.0%	1.94	64.7%	17.7%
OP- Indoor Air Quality		1.00	100.0%	N/A	N/A	

Energy	10	2.82	28.2%	3.95	39.5%	11.3%
OP-5: Building Energy Consumption	6	2.78	46.3%	3.89	64.8%	18.5%
OP-6: Clean and Renewable Energy	4	0.04	1.0%	0.06	1.5%	0.5%
Food & Dining ****	8	2.98	42.6%	4.00	50.0%	7.4%
OP-7: Food and Beverage Purchasing	6	1.25	20.8%	2.00	33.3%	12.5%
OP-8: Sustainable Dining	2	1.73	86.5%	2.00	100.0%	13.5%
Grounds	4	3.74	93.5%	3.02	75.5%	-18.0%
OP-9: Landscape Management	2	1.74	87.0%	1.02	51.0%	-36.0%
OP-10: Biodiversity	2	2.00	100.0%	2.00	100.0%	0.0%
Purchasing ***	6	3.55	59.2%	3.94	65.7%	6.5%
OP-11: Sustainable Procurement	3	N/A	N/A	1.75	58.3%	
OP-12: Electronics Purchasing	1	0.93	93.0%	0.99	99.0%	6.0%
OP-13: Cleaning Products Purchasing	1	0.65	65.0%	0.87	87.0%	22.0%
OP-14: Office Paper Purchasing	1	0.48	48.0%	0.33	33.0%	-15.0%
Inclusive and Local Purchasing		0.49	49.0%	N/A	N/A	
Life Cycle Cost Analysis		0.00	0.0%	N/A	N/A	
Guidelines for Business Partners		1.00	100.0%	N/A	N/A	
Transportation	7	4.44	63.4%	4.43	63.3%	-0.1%
OP-15: Campus Fleet	1	0.18	18.0%	0.17	17.0%	-1.0%
OP-16: Student Commute Modal Split	2	1.48	74.0%	1.48	74.0%	0.0%
OP-17: Employee Commute Modal Split	2	0.78	39.0%	0.78	39.0%	0.0%
OP-18: Support for Sustainable Transportation	2	2.00	100.0%	2.00	100.0%	0.0%
Waste ***	10	5.73	57.3%	5.74	57.4%	0.1%
OP-19: Waste Minimization and Diversion	8	1.99	24.9%	4.18	52.3%	27.4%
OP-: Waste Diversion		1.88	62.7%	N/A	N/A	
OP-20: Construction and Demolition Waste Diversion	1	0.86	86.0%	0.56	56.0%	-30.0%
OP-21: Hazardous Waste Management	1	1.00	100.0%	1.00	100.0%	0.0%
Water ***	6	3.17	52.8%	4.26	71.0%	18.2%
OP-22: Water Use	4	1.17	29.3%	2.26	56.5%	27.3%
OP-23: Rainwater Management	2	2.00	100.0%	2.00	100.0%	0.0%
OP-: Wastewater Management		0.00	0.0%	N/A	N/A	
Coordination & Planning	8	7.50	93.8%	6.75	84.4%	-9.4%
PA-1: Sustainability Coordination	1	1.00	100.0%	1.00	100.0%	0.0%
PA-2: Sustainability Planning	4	3.50	87.5%	2.75	68.8%	-18.8%
PA-3: Governance	3	3.00	100.0%	3.00	100.0%	0.0%
Diversity & Affordability ***	10	8.77	87.7%	8.55	85.5%	-2.2%
PA-4: Diversity and Equity Coordination	2	2.00	100.0%	1.33	66.5%	-33.5%
PA-5: Assessing Diversity and Equity	1	1.00	100.0%	1.00	100.0%	0.0%
PA-6: Support for Underrepresented Groups	3	2.00	66.7%	3.00	100.0%	33.3%
PA: Support for Future Faculty Diversity		1.00	100.0%	N/A	N/A	
PA-7: Affordability and Access	4	2.77	69.3%	3.22	80.5%	11.3%
Investment & Finance	7	2.10	30.0%	2.60	37.1%	7.1%
PA-8: Committee on Investor Responsibility	2	0.00	0.0%	0.50	25.0%	25.0%

PA-9: Sustainable Investment	4	1.10	27.5%	1.10	27.5%	0.0%
PA-10: Investment Disclosure	1	1.00	100.0%	1.00	100.0%	0.0%
Wellbeing & Work	7	4.99	71.3%	4.64	66.3%	-5.0%
PA-11: Employee Compensation	3	3.00	100.0%	2.21	73.7%	-26.3%
PA-12: Assessing Employee Satisfaction	1	0.38	38.0%	0.38	38.0%	0.0%
PA-13: Wellness Program	1	1.00	100.0%	1.00	100.0%	0.0%
PA-14: Workplace Health and Safety	2	0.61	30.5%	1.05	52.5%	22.0%