

OREGON STATE UNIVERSITY Sustainability Report

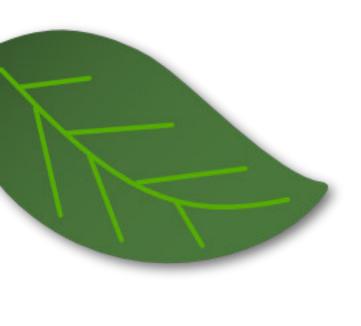
Fiscal Year 2021

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Contents

Executive Summary	.3
Introduction	.4
Assessment, Awards and Recognition	.4
FY21 Sustainability Highlights	
STARS Key Indicators	
Subcategories of significant change between FY20 and FY21	
Subcategories of high performance	. 20
Subcategories of potential improvement	. 22
Appendix: STARS 2.2 Credit Score Detail Table	
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Executive Summary

Oregon State University 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 utilized the Sustainability Tracking, Assessment and Rating System (STARS) to track and report sustainability performance. Oregon State has eleven 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	Feb. 28, 2017	2.1	72.21
2017	Jan. 31, 2018	2.1	72.23
2018	Dec. 20, 2018	2.1	72.61
2019	Dec. 20, 2019	2.1	74.57
2020	Dec. 23, 2020	2.2	74.29
2021	Dec. 8, 2021	2.2	74.49

STARS Ratings (all versions)				
Platinum	9			
Gold	161			
Silver	207			
Bronze	64			
Reporter	23			

Table 1 - Oregon State University's STARS submissions

Table 2 - STARS participant ratings

FY21 marked another unusual year with exceptional circumstances due to COVID-19. On March 18, 2020 OSU moved to remote instruction to protect the health and safety of all OSU community members and to reduce the spread of COVID-19. On March 20, 2020 OSU employees were directed to stay home and work remotely if they were not staffing or accessing a critical in-person function. Therefore, for all of FY21, most OSU operations were done remotely. These circumstances had a significant impact on OSU's operations.

In August 2019, the STARS assessment tool moved to version 2.2, 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. The table below summarizes and trends OSU's sustainability performance by **STARS subcategories for FY21**.

OSU's FY21 sustainability performance by STARS subcategories						
Positive trending STARS subcategories, FY20-	Negative trending STARS subcategories, FY20-					
FY21	FY21					
• Grounds	Curriculum					
Waste	Purchasing					
Investment & Finance						
High performing STARS subcategories, FY21	Low performing STARS subcategories, FY21					
Research	Air & Climate					
Campus Engagement	Buildings					
Water	Food & Dining					
Coordination & Planning	Energy					
	Investment & Finance					

Table 3 - performance by STARS subcategory

Some 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.

Introduction

Oregon State University (OSU) took larger steps toward creating a more sustainable university and community during Fiscal Year 2021 (FY21). With performance that ranks OSU #26 in <u>Sierra's Club Cool Schools 2021</u>, and puts OSU in <u>The Princeton Review's Guide to 416 Green Colleges: 2021 Edition</u>, 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, 2020 and June 30, 2021. OSU's sustainability indicators are based largely on the now widely adopted <u>Sustainability Tracking</u>, <u>Assessment and Rating System</u> (STARS).

Assessment, Awards and Recognition

Recognition from external entities has been key to the visibility of OSU's sustainability success. Increasing visibility is an effective recruiting tool. 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 950 higher education institutions, STARS is more comprehensive and standardized than any other sustainability rating or ranking system for higher education and serves as the platform for the key performance indicators in this report. Critically, STARS is also the mechanism by which data are shared with 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 FY21 are listed below. Visit the



sustainability recognition page for information on these and other awards.



The <u>Princeton Review's 2021 Guide to 416 Green Colleges</u>: OSU was recognized for sustainability practices such as food sourcing, transportation, and green building, as well as opportunities to focus on the environment and sustainability in curriculum and energy efficiency.

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





Sierra Club gave OSU the highest green ranking in the state for its 2021 edition of "Cool Schools". This puts OSU 26th in the nation.

Tree Campus USA: OSU has been recognized ten times since 2010 for 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.



FY21 Sustainability Highlights

Faculty Senate and Sustainability Office hold forum on Carbon Commitment

On January 12, 2021, the Faculty Senate <u>Carbon Commitment Committee</u> and the Sustainability Office <u>held a forum</u> to update the OSU community on the carbon reduction commitment and how OSU is tracking progress toward that goal. Attendees heard about efforts to date, and accomplishments such as policy changes, refined building heating and cooling controls, large scale solar installations and changes at the OSU Energy Center. Most importantly, steps were outlined to encourage climate action within departments, colleges and divisions, that will help OSU meet its decarbonization goal.



Oregon State received \$5.9 million to study environmental health problems



The Pacific Northwest Center for Translational Environmental Health Research was awarded \$5.9 million to support studies aimed at understanding how environmental exposure to chemicals affect human health. The center will be funded by a five-year grant from the National Institutes of Environmental Health Sciences. Participating institutions include Oregon Health & Science University, University of Oregon and the Pacific Northwest National Laboratory. The center includes 50 researchers in more than 20 fields. Much of the research will use unique laboratory facilities at Oregon State, including two core research facilities.

OSU researcher joined 'Ocean Nexus' collaboration with UW to study equity in ocean governance

Oregon State University researcher Ana K. Spalding has received a grant from a recently established ocean research center to study issues of equity and inclusion in ocean governance. The new Nippon Foundation Ocean Nexus Center, an interdisciplinary collaboration between the Nippon Foundation and the University of Washington EarthLab, announced that it will be funding and supporting \$32.5 million worth of research and studies over the next 10 years. Spalding said the Ocean Nexus mission is an important acknowledgement that while scientific understanding of the oceans has improved over time, more attention needs to be given to which voices are



represented in the governance and management of ocean resources — and which voices are excluded.

Oregon scientists teamed up to use big data to address societal challenges



Data scientists from Oregon's three largest universities have received a \$1.4 million National Science Foundation grant to help fellow scientists across the Pacific Northwest address challenges such as earthquake preparedness, securing electrical power systems and improved "Today, environmental health. increasingly powerful computing technologies have opened the pathway for researchers to address major global challenges through use of large data sets and complex models and simulations," said Brett Tyler, the principal investigator on the grant and the director of the Center of Genome Research & Biocomputing at Oregon State University. Tyler will be assisted by two co-principal investigators: Jake Searcy, associate director of artificial intelligence for the University of Oregon's Data Science Initiative and Research Advanced Computing Services; and Jason Podrabsky, a biology professor at Portland State University. The project will establish a team of data analytics and training

professionals at the three universities to disseminate expertise and training materials in data integration, data analytics and machine learning.

OSU data science initiative addresses issues in Oregon's rural communities

The faculty-led, student-driven Oregon State University initiative, Data Science for the Public Good, uses data science to address issues in rural communities and is underway with projects ranging from the impacts of air quality on health in Lane County to regulatory impacts on economic development in eastern Oregon. The initiative leverages OSU's significant expertise, resources and infrastructure to address community needs. It launched with five Young



Scholars teams comprising a total of five graduate students and 10 undergraduate students from five Oregon institutions: OSU, the University of Oregon, Portland State University, Reed College and Southern Oregon University. The projects were identified by local stakeholders through the OSU Extension Service and focus on analyzing data provided by those stakeholders, who are communicating frequently with the data-science research teams working on their project.

OSU College of Engineering hosted Clean Water Virtual Conference



The Oregon State University College of Engineering hosted the <u>Clean Water Virtual Conference</u>, a free public event on Sept. 1 featuring four speakers giving live lectures and more than two dozen video chats with other researchers talking about their projects. The conference was part of the college's Clean and Sustainable Water Technology Initiative. Speakers included Erica Fischer, an assistant professor of civil and construction engineering at OSU, who talked about wildfire impacts on water distribution systems; Jeff Nason, an associate professor of environmental engineering, who discussed engineered nanoparticles in aquatic systems; Stacey Harper, an associate

professor of environmental and molecular toxicology, who presented on the convergence of microplastics and nanoplastics in aquatic environments; and Susanne Brander, an assistant professor in the OSU College of Agriculture, who joined Harper, adding her expertise on how stressors such as pollution and climate change affect aquatic organisms and how ecological and human health are linked.

Oregon State assumed management of cyberinfrastructure for the Ocean Observatories Initiative

Oregon State University assumed management of the data transmission cyberinfrastructure for a national initiative that monitors ocean conditions in real time.

The Ocean Observatories Initiative, led by the <u>Woods Hole Oceanographic</u> <u>Institution</u> and operated by a coalition of universities including Oregon State, consists of five instrumented observatories in the Atlantic and Pacific oceans. The observatories are outfitted with more than 800 instruments that continually collect and deliver data to shore via a cyberinfrastructure



that makes the data available to anyone with an internet connection. The project is funded by the National Science Foundation.

The system measures physical, chemical, geological, and biological properties and processes from the seafloor to the sea surface in key coastal and open-ocean sites. Data collected helps address critical questions about the Earth-ocean system, including climate change, ecosystem variability, ocean acidification, plate-scale seismicity and submarine volcanoes and carbon cycling, with the goal of better understanding the ocean and our planet.

OSU researchers teamed up with Karuk Tribe on new fire planning approach in northern California



Scientists from Oregon State University teamed up with the <u>Karuk Tribe</u> and other partners to develop strategies for managing future wildfires in northern California's Klamath Mountains and restoring the role of beneficial fire in the region.

"Historically, fires were frequent and highly useful for this landscape and the Karuk people," said project leader Skye Greenler, a graduate research fellow in the OSU College of Forestry. "For the last 150 years, we've suppressed fire, and now most of the fires on this landscape are ones we can't suppress, that are often devastating to communities,

ecosystems and cultural resources."

Covering more than 1 million acres along the Klamath and Salmon rivers, the Karuk Tribe's ancestral territory has suffered greatly from the decades of fire suppression and the cessation of indigenous burning practices, researchers say. A 90,000-acre part of its territory near the town of Happy Camp was burned in

a single day by the 2020 <u>Slater Fire</u> in early September as blazes tore through forests near the California-Oregon border.

Leadership by Oregon State helped 14 nations commit to sustainable ocean management by 2025

Leaders of 14 major maritime nations announced <u>their</u> commitment to achieve 100% sustainable ocean management of their national waters by 2025, acting on recommendations of a group of global experts co-chaired by Oregon State University marine ecologist Jane Lubchenco.

Led by the leaders of Norway and Palau, the Ocean Panel also features heads of state and government from Portugal, Ghana, Namibia, Kenya, Chile, Mexico, Jamaica, Canada, Japan, Indonesia, Fiji and Australia. Collectively, those nations



represent nearly 40% of the world's coastlines, 30% of the exclusive economic zones, 20% of the globe's fisheries and 20% of maritime shipping. Together, their national waters cover 30 million square kilometers, a combined area roughly the size of Africa.

Lubchenco, in her role as Expert Group co-chair along with Norwegian oceanographer Peter Haugan of the University of Bergen and Indonesian economist Mari Elka Pangestu, helped coordinate more than 250 experts from 48 countries in the production of 19 peer-reviewed papers plus an Ocean Solutions Report to the Ocean Panel. The three co-chairs also published a <u>paper</u> in the premier scientific journal Nature summarizing the knowledge produced and the policy commitments made.

Oregon State University received \$7.1 million for six more years of long-term forest research



Oregon State University was awarded \$7.1 million from the National Science Foundation for another six years of Iong-term ecological research on the HJ Andrews Experimental Forest on the western slope of the Cascade Range southeast of Corvallis.

The 15,800-acre Andrews Forest was established in 1948 as a U.S. Forest Service experimental forest. It is one of 28 locations funded by the NSF as a long-term ecological research, or LTER, site and was one of the original six established in 1980. The forest is administered cooperatively

by the Forest Service's Pacific Northwest Research Station, the Willamette National Forest and OSU.

New OSU volunteer program tackles statewide native bee inventory

Oregon is the first state in the nation to form a Master Melittologists program of trained community scientists dedicated to preserving and cataloguing bees that are native to the state.

Like OSU Extension Master Gardeners, the <u>Master Melittologist</u> program intensively trains volunteers on the meticulous work of locating and cataloging the bees that no one has seen before. While Oregon is known for honey bees that pollinate much of the food we eat, the



state is also home to about 600 native bees, many that are pollinators, too.

The Master Melittologists program works with the Oregon Bee Atlas, which is responsible for surveying the state's native bee population in partnership with OSU Extension Service, OSU colleges of agriculture and forestry, and the Oregon Department of Agriculture.

Oregon State University wave lab received \$4.9M to continue natural hazards engineering research



The National Science Foundation has awarded the Oregon State University College of Engineering nearly \$5 million for natural hazards engineering research at OSU's O.H. Hinsdale Wave Research Laboratory.

The \$4.9 million, five-year grant is a renewal of a <u>similar award</u> for \$3.8 million received by the College of Engineering in 2015 and part of a national program – the Natural Hazards Engineering Research Infrastructure – that gives scientists access to multiple types of research facilities. It also provides for educational and outreach activities.

The Hinsdale lab features a large wave flume and a directional wave basin, which both simulate waves from hurricanes and tsunamis and allow for a wide range of testing of waves' impact on built and natural environments.

Oregon State University received \$1.58 million to support diversity and sustainability in agriculture

Oregon agriculture is a \$50 billion industry and nearly 14% of Oregonians rely on agriculture for their livelihoods. As a leading economic engine for the state, with communities in every county dependent on agricultural products, the donation of \$1.58 million from Northwest Farm Credit Services aimed to enhance existing programs in the College of Agricultural Sciences that can have immediate impact on the diversity, innovation and sustainability of the industry.



Given the importance of the agricultural sector to many facets of economic, social and environmental

sustainability, Northwest Farm Credit Services noted that it was eager to make a significant investment that would create meaningful opportunity for the most people.

The funding, secured by the OSU Foundation, is geared to address a number of critical needs in agriculture, the diverse communities that depend on it and the long-term sustainability of the industry.

Winter series of music and spoken word mini-concerts call for action on extinction



OSU's <u>Spring Creek Project</u> published 20 four-minute concerts that weave together music and the spoken word to celebrate the creatures that fill the air with sound — frogs, wolves, songbirds, growling grizzly bears — and inspire action to save them.

Videos in the "Music to Save Earth's Songs" series were posted online twice weekly during the series, and remain available online.

The series, free and open to the public, was inspired by a new book from OSU Professor Emeritus Kathleen Dean Moore called "Earth's Wild Music."

OSU's Lubchenco joined White House to lead climate and environment initiatives

Distinguished Professor Jane Lubchenco is once again leading national climate and environmental science efforts as the new deputy director of climate and environment in the White House Office of Science and Technology Policy.

In the newly created role, Lubchenco collaborates with the Biden-Harris administration science and climate advisors to tackle one of the world's most pressing problems. "To me, science means hope and opportunity," Lubchenco said. "I'm eager to work with the stellar team at the White House and across the federal government to craft



evidence-based solutions to climate and environmental challenges – solutions that produce durable outcomes for people, the nation and the world."

Oregon State's Spinrad tapped to serve as NOAA administrator



Richard "Rick" Spinrad, professor and former OSU vice president for research, was nominated by President Joe Biden to serve as Undersecretary of the U.S. Department of Commerce and Administrator of the National Oceanic and Atmospheric Administration.

STATE OF THE COAST His was sworn in on June 22, 2021 as the Undersecretary of Commerce for Oceans and Atmosphere and the 11th NOAA Administrator.

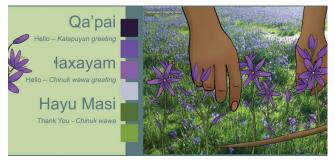
Three assistant professors from OSU College of Engineering won prestigious award from National Science Foundation

Three early-career faculty in the College of Engineering received prestigious National Science Foundation grants, one for studying the use of mass timber for building construction, another for researching the safe production of hydrogen gas from seawater, and the third for improving the species distribution models used by ecologists and natural resource managers.



Erica Fischer, Kelsey Stoerzinger and Rebecca Hutchinson are the recipients of the Faculty Early Career Development, or CAREER, awards from the NSF.

'This IS Kalapuyan Land' exhibition came to Oregon State University



An outdoor museum exhibition and series of talks recognizing native Kalapuya history and land stewardship in Oregon came to Oregon State University May 11.

"This IS Kalapuyan Land" first opened at the Five Oaks Museum in Portland in 2019. The exhibition was guided by Five Oaks' first guest curator, Steph Littlebird Fogel (Grand Ronde, Kalapuya) in collaboration with several Indigenous historians, artists and cultural experts, including OSU College of Liberal Arts instructor David G. Lewis

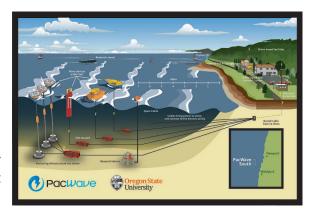
(Chinook, Santiam, Takelma, Grand Ronde).

The exhibition prompts critical thinking around representation of Indigenous history and identity in non-Indigenous institutions. Five Oaks Museum later added a series of signs declaring "This IS Kalapuyan Land" that can be placed as pop-up exhibits in outdoor locations.

Construction began on Oregon State's wave energy testing facility

After nearly a decade of work to obtain regulatory approval, Oregon State University began construction on a wave energy testing facility to be located about seven miles off the coast near Newport.

PacWave South will be the first commercial-scale, utility grid-connected wave energy test site in the United States. The approximately \$80 million facility will offer wave energy developers the opportunity to try different technologies for harnessing the power of ocean waves and transmitting that energy to the local electrical grid.



Power and data cables buried below the seafloor will connect the ocean test site to a shore-based facility in Seal Rock.

OSU's Sustainability Office launched "Our Work" webpage

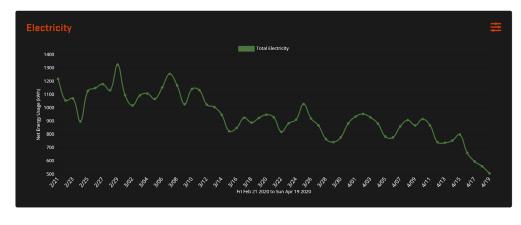


The Sustainability Office spends time helping reduce OSU's carbon emissions, and measuring sustainability indicators across the entire university enterprise. But that's only part of their work! To better showcase and explain the many different programs, projects and tasks they do to advance sustainability at OSU, the Sustainability Office created this

<u>new page</u>. It centers on what their team of two full time employees and five or six student employees accomplish, in partnership with other units like Campus Recycling, Transportation Services and Community Engagement & Leadership. While overwhelming at times, they love what we do. And they hope you do too, because creating a more sustainable society and university should include everyone! To keep up with their work in bite-sized pieces <u>please subscribe to their newsletter.</u>

OSU saved over \$2.7 million on utility bills due to reduced on-site operations

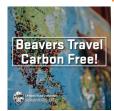
From March 2020 through June 2021, the OSU Sustainability Office estimates OSU saved over \$2.7 million on its utility bills due to reduced on-site operations and proactive work by the Building Controls shop within Facilities Services. With reduced in person operations, OSU heating and cooling controls technicians were able to reduce energy consumption



of nearly every building on campus by allowing building temperatures to fluctuate more than usual without

compromising research or other mission-critical outcomes. Given these changes, OSU has dramatically saved energy, money, carbon emissions and wear and tear on heating and cooling systems. And with a few systemic changes to systems, some of the savings will persist after more on-site operations resume.

Sustainability Office raises money for carbon offsets for student academic travel



The Sustainability Office partnered with the OSU Foundation as part of their annual online day of giving, known as Dam Proud Day. Almost \$1,400 were raised to help support carbon offsets for student academic travel. This is often a request from students and student groups who want to reduce their carbon emissions from unavoidable travel, but either have restrictions on their funding source, or no funding, to achieve that reduction.

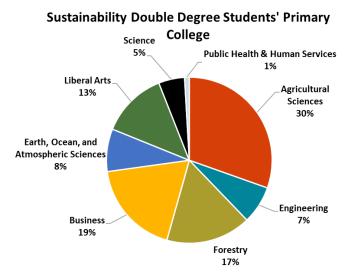
OSU honored for sustainable practices

Oregon State University received a gold rating in the <u>Sustainability Tracking</u>, <u>Assessment and Rating System (STARS)</u> for 2020, as it has every year since 2011. The OSU Sustainability Office received an extra recognition in the 2020 Sustainable Campus Index for submitting last year's report with zero accuracy issues! STARS measures and encourages sustainability in all aspects of higher education. Only two other American universities had no data accuracy issues.



The Sustainability Double Degree

The **Sustainability Double Degree** (SDD) exposes students to real-world problems and fosters knowledge, skills and abilities to address these problems in communities and workplaces. In interdisciplinary with the nature 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 academic year 2020-2021, there were 217 students enrolled in the SDD consisting of Corvallis campus students (37%),



Ecampus students (58%) and Cascades Campus students (6%). The majority of SDD students have senior class standing (60%), 20% are juniors, 9% are sophomores, 2% are freshmen and 8% are post-baccalaureate. The inter-disciplinary SDD program includes students from all academic colleges as shown in the chart.

The Sustainability Minor

The <u>sustainability minor</u> was first offered 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 within the 180-credit minimum for graduation. In academic year 2020-2021, there were 98 students enrolled in the sustainability minor consisting of Corvallis campus students (62%), Ecampus students (30%) and Cascades Campus students (8%). The majority of students have senior class standing (69%), 21% are juniors, and 7% are sophomores, 1% are freshmen, and 1% are post-baccalaureate.

Community Engagement and Leadership Programs Create Culture of Sustainability

Community Dialogues is an initiative offered in partnership with the Office of Institutional Diversity to advance a culture of dialogue and deliberation on campus. It is a once-per-term series which seeks to cultivate connection and deep learning through exploration of critical and contentious issues. Utilizing the National Issues Forum Model, it engages students, faculty, staff, and community members in dialogue which:

- Deepens understanding of critical issues and the tensions within them
- Encourages insight into different perspectives
- Creates connection between participants through their stories and experiences
- Guides exploration of personal ethics, morals, and values
- Inspires socio-political action, both individual and collective



Continued Excellence in Solid Waste Programs

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

Repair Fairs: The Waste Watchers, a student volunteer team coordinated by Campus Recycling, ran their fourth year of an event series called the <u>Repair Fairs</u>. 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 FY21, there was one repair fair with sustainability-focused demonstrations.

FY21 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 FY21, 5,936 pounds of donations were collected and processed.

There was a significant decrease in donations because many residents moved out much earlier than expected because of the COVID-19 pandemic. While we didn't collect as much as previous years, we can all be proud of the almost 3 tons that were donated this year.



Continued Partnerships with the Corvallis Sustainability Coalition

Oregon State's extensive connections with and support of the <u>Corvallis Sustainability Coalition</u> included the OSU Sustainability Office again being the primary sponsor of the annual Sustainability Town Hall, held this past year online. Other activities include:

- Staffing various committees and action teams, including the Coalition Steering Committee and Executive Committee
- OSU staff leading several action teams, leveraging university resources through these channels
- Using the campus as a living laboratory for Coalition action team projects
- Offering OSU students internship opportunities with multiple Coalition projects and programs
- Promoting Coalition events to the campus community through a wide variety of channels.

STARS Key Indicators

OSU continues to experience growth in enrollment and an overall increase in building square footage. Between FY10 and FY21, total student enrollment grew an astonishing 47.07%, from 21,969 to 32,311. Thirty nine 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 FY21, that number is approximately 10.65 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 (improvements or declines greater than +/- 5%)
- 2. areas of consistently high performance
- 3. areas for potential improvement.

The following table show OSU's STARS category scores for FY21.

STARS 2.2 cohorowy name	Points	FY	'21	FY20-FY21
STARS 2.2 category name	Possible	Score	%	% Change
Academics (AC)	58	43.9	75.7%	-3.7%
Engagement (EN)	41	33.0	80.4%	0.6%
Operations (OP)	70	41.6	59.5%	3.1%
Planning & Administration (PA)	32	23.2	72.5%	0.6%
Total	201	141.7	70.49%	0.2%

Table 4 - STARS score summary table

These high level category scores reveal:

- High performance in Academics and Engagement
- Continued strong performance in Planning & Administration
- Weaker performance in Operations.

As shown in the tables above, OSU's overall score increased 0.2% between FY20 and FY21.

Like the report for FY20, this report performs analysis at the STARS subcategory level. However, <u>past</u> <u>analyses</u> 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 FY20 and FY21

This section details changes between FY20 and FY21 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 influences 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.

CTARC 2.2 auto-catagorius nome	Points	F۱	720	F۱	/21	FY20-FY21
STARS 2.2 sub-category name	Possible	Score	%	Score	%	% Change
Curriculum	40	29.7	74.4%	27.5	68.8%	-5.6%
Research	18	16.3	90.7%	16.4	90.9%	0.3%
Campus Engagement	21	16.8	79.8%	17.2	81.7%	1.9%
Public Engagement	20	16.0	79.8%	15.8	79.1%	-0.7%
Air & Climate	11	5.7	52.2%	6.2	56.1%	3.9%
Buildings	8	3.2	39.5%	3.2	39.4%	-0.1%
Energy	10	4.9	49.1%	5.1	51.3%	2.2%
Food & Dining	8	3.5	43.6%	3.5	43.6%	0.0%
Grounds	4	2.1	51.5%	3.1	76.3%	24.8%
Purchasing	6	4.0	65.8%	3.6	60.7%	-5.2%
Transportation	7	4.2	60.0%	4.3	61.3%	1.3%
Waste	10	6.8	67.8%	7.6	75.8%	8.0%
Water	6	5.2	86.3%	5.1	85.3%	-1.0%
Coordination & Planning	8	8.5	94.4%	7.5	93.8%	-0.7%
Diversity & Affordability	10	7.9	79.4%	7.9	78.9%	-0.5%
Investment & Finance	7	2.7	38.9%	3.2	46.3%	7.4%
Wellbeing & Work	7	4.6	65.6%	4.6	65.4%	-0.1%
Total	201	141.99	70.29%	141.68	70.49%	0.2%

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

Curriculum (FY20-FY21 change: -5.6%)

The change in this subcategory results from changing the methodology to count course offerings with sustainability content. In previous years, course syllabi were used to determine if a course had sustainability content. Starting in FY21, too few course syllabi were available, therefore course catalog descriptions were used to determine if a course had sustainability content. This change in methodology resulted in analyzing a higher volume of courses. However, course descriptions in some cases did not provide enough information to determine whether or not a course had sustainability content. In cases were the course description was not detailed enough to make a determination, a course was assumed to not have sustainability content.

Grounds (FY20-FY21 change: +24.8%)

The change in this subcategory results from the new inclusion of an assessment to identify endangered and vulnerable species (including migratory species) with habitats on land owned or managed by OSU.

Purchasing (F20-FY21 change: -5.2%)

The percentage of expenditures on cleaning and janitorial products that are third party certified to meet recognized sustainability standard went from 95.90% in FY20 to 74.01% in FY21.

Waste (FY20-FY21 change: +8.0%)

Key credits in this subcategory trended slightly positive with higher scores for Waste Minimization and Diversion than FY20. In FY21, there was a decrease in total waste generated at OSU, which resulted in a higher score for this subcategory. The table below shows progress in the Waste Minimization and Diversion credit.

	FY05 (base year)	FY20	FY21
Materials recycled	607.00	689.36	315.2
Materials composted	196.00	345.15	93.94
Materials reused, donated or re-sold	121.00	499.87	239.36
Materials disposed in a solid waste landfill or incinerator	3,105.00	1,835.40	1,283.75
Materials disposed in a solid waste landfill or incinerator per full time equivalent student	0.172	0.068	0.049

Table 6 - Waste Minimization weights. All units are tons.

Investment & Finance (FY20-FY21 change: +7.4%)

The change in this subcategory is due to the inclusion of an established and active committee on investor responsibility (CIR) or equivalent body that makes recommendations to fund decision-makers on socially and environmentally responsible investment opportunities across asset classes. The OSU Foundation's Advisory Committee for Public Input on Investments is tasked to address environmental, social, and governance concerns about the Foundation's investment holdings.

Subcategories of high performance

Categories of "high performance" are those where OSU achieved 80% or more of STARS points in the most recent submission. Those subcategories are bolded in the table below.

CTARC 2.2 auto-catagorius nome	Points	F۱	/20	F۱	/21	FY20-FY21
STARS 2.2 sub-category name	Possible	Score	%	Score	%	% Change
Curriculum	40	29.7	74.4%	27.5	68.8%	-5.6%
Research	18	16.3	90.7%	16.4	90.9%	0.3%
Campus Engagement	21	16.8	79.8%	17.2	81.7%	1.9%
Public Engagement	20	16.0	79.8%	15.8	79.1%	-0.7%
Air & Climate	11	5.7	52.2%	6.2	56.1%	3.9%
Buildings	8	3.2	39.5%	3.2	39.4%	-0.1%
Energy	10	4.9	49.1%	5.1	51.3%	2.2%
Food & Dining	8	3.5	43.6%	3.5	43.6%	0.0%
Grounds	4	2.1	51.5%	3.1	76.3%	24.8%
Purchasing	6	4.0	65.8%	3.6	60.7%	-5.2%
Transportation	7	4.2	60.0%	4.3	61.3%	1.3%
Waste	10	6.8	67.8%	7.6	75.8%	8.0%
Water	6	5.2	86.3%	5.1	85.3%	-1.0%
Coordination & Planning	8	8.5	94.4%	7.5	93.8%	-0.7%
Diversity & Affordability	10	7.9	79.4%	7.9	78.9%	-0.5%
Investment & Finance	7	2.7	38.9%	3.2	46.3%	7.4%
Wellbeing & Work	7	4.6	65.6%	4.6	65.4%	-0.1%
Total	201	141.99	70.29%	141.68	70.49%	0.2%

Table 8 - STARS subcategory comparison – areas of high performance.

Research (FY21 score: 90.9%)

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 FY21, OSU demonstrated engagement from 67.1% of departments that conduct research. Similarly, the percentage of the institution's faculty and staff researchers engaged in sustainability research in FY21 was 41.63%.

Campus Engagement (FY21 score: 81.7%)

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 Community Engagement and Leadership, and supported by Campus Recycling and the Sustainability Office, covered all student-oriented credits within this subcategory.

Water (FY21 score: 85.3%)

It is 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)	Water Use per full time equivalent student (gallons)
FY05 (baseline year)	267,228,984	14,865.05
FY17	243,053,624	9,162.50
FY18	256,157,836	9,535.07
FY19	251,054,980	9,375.10
FY20	202,819,452	7,478.59
FY21	205,727,384	7,861.19

Table 7 - OSU Corvallis campus water consumption

Coordination & Planning (FY21 score: 93.8%)

As with each STARS assessment, OSU has attained full scores for 1) having sustainability staff and committees; 2) having formal participatory or shared governance bodies through which students, academic staff, and non-academic staff can regularly participate in the governance of the institution; 3) having women and/or individuals who do not self-identify as men, comprise at least 20 percent of the official members of the institution's highest governing body; and 4) hosting or supporting one or more formal bodies through which external stakeholders (i.e., local community members) have a regular voice in institutional decisions that affect them. Full points cannot be attained until the university has a published plan or plans that include measurable sustainability objectives that address student, employee, or community engagement for sustainability.

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 59.9% or fewer of available points are included in this section.

STARS 2.2 sub-sategowy name	Points	F۱	/20	F۱	/21	FY20-FY21
STARS 2.2 sub-category name	Possible	Score	%	Score	%	% Change
Curriculum	40	29.7	74.4%	27.5	68.8%	-5.6%
Research	18	16.3	90.7%	16.4	90.9%	0.3%
Campus Engagement	21	16.8	79.8%	17.2	81.7%	1.9%
Public Engagement	20	16.0	79.8%	15.8	79.1%	-0.7%
Air & Climate	11	5.7	52.2%	6.2	56.1%	3.9%
Buildings	8	3.2	39.5%	3.2	39.4%	-0.1%
Energy	10	4.9	49.1%	5.1	51.3%	2.2%
Food & Dining	8	3.5	43.6%	3.5	43.6%	0.0%
Grounds	4	2.1	51.5%	3.1	76.3%	24.8%
Purchasing	6	4.0	65.8%	3.6	60.7%	-5.2%
Transportation	7	4.2	60.0%	4.3	61.3%	1.3%
Waste	10	6.8	67.8%	7.6	75.8%	8.0%
Water	6	5.2	86.3%	5.1	85.3%	-1.0%
Coordination & Planning	8	8.5	94.4%	7.5	93.8%	-0.7%
Diversity & Affordability	10	7.9	79.4%	7.9	78.9%	-0.5%
Investment & Finance	7	2.7	38.9%	3.2	46.3%	7.4%
Wellbeing & Work	7	4.6	65.6%	4.6	65.4%	-0.1%
Total	201	141.99	70.29%	141.68	70.49%	0.2%

Table 10 - STARS subcategory comparison – areas of potential improvement.

Because Investment & Finance have been discussed previously in the subcategories of significant change section of this report, it will not be included in the discussion here.

Air & Climate (FY21 score: 56.1%)

In Air and Climate, OSU obtained 4.44 out of 11 points for FY21. As shown in OSU's annual greenhouse gas inventory reports, gross emissions decreased since FY20, mainly due to decreased consumption of purchased electricity, decreased air travel, and fewer commuters to campus. However, OSU net emissions were still 98,512.8 t CO2e, a 15.1% decrease from FY20. Full points are attained by achieving zero adjusted net Scope 1 and 2 GHG emissions, and by including Scope 3 GHG emissions from purchased goods and services, capital goods, and waste generated in operations.

Buildings (FY21 score: 39.4%)

In this category, an institution earns the maximum score by having all eligible building space certified at the highest achievable level under a multi-attribute, green building rating system focused on the operations and maintenance (O+M) of existing buildings, in addition to certification of new construction. Incremental points are awarded based on the percentage of building space that is certified at each level and/or maintained in accordance with a sustainable operations and maintenance policy/program. OSU space is **operated and maintained** in accordance with either a single-attribute or a multi-attribute, sustainable management policy/program, but not **certified** under an O+M rating system. Without certified space, only partial points are available to OSU.

Energy (FY21 score: 51.3%)

FY21 saw 983,840 MMBtu of energy consumed across university properties while 1,054,861 MMBtu were consumed in FY20. This decrease in energy use, which increased OSU's score in this subcategory, was mostly due to the decision to move all instruction to remote mode to protect the health and safety of OSU community members and to reduce the risk and spread of COVID-19. OSU still needs to obtain energy from clean and renewable sources and/or by purchasing unbundled renewable energy products equivalent to 100 percent of total campus energy consumption to get full credit for this category.

Food & Dining (FY21 score: 43.6%)

An institution earns the maximum of 6 points available for this credit when the weighted cost of products that are sustainably/ethically produced and/or plant-based is equivalent to 100 percent or more of total food and beverage expenditures. OSU's percentage of total annual food and beverage expenditures on products that are sustainably or ethically produced was 10.28%. Similarly, OSU's percentage of total annual food and beverage expenditures on plant-based foods was 29.15%.

Data gathering for this category is difficult for food purchases using OSU's existing procurement system. Given staffing shortages in FY21, a full accounting of food purchases was not possible, therefore FY20 information was used.

Appendix

STARS 2.2 Credit Score Detail Table

	Points	FY20		FY21		%
	Possible	Score	%	Score	%	Change
Curriculum	40	29.74	74.4%	27.52	68.8%	-5.6%
AC-1: Academic Courses	14	13.68	97.7%	11.87	84.8%	-12.9%
AC-2: Learning Outcomes	8	4.06	50.8%	3.65	45.6%	-5.1%
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	0.00	0.0%	0.00	0.0%	0.0%
AC-8: Campus as a Living Laboratory	4	4.00	100.0%	4.00	100.0%	0.0%
Research	18	16.32	90.7%	16.37	90.9%	0.3%
AC-9: Research and Scholarship	12	11.32	94.3%	11.37	94.8%	0.4%
AC-10: Support for Research	4	3.00	75.0%	3.00	75.0%	0.0%
AC-11: Open Access to Research	2	2.00	100.0%	2.00	100.0%	0.0%
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Campus Engagement	21	16.76	79.8%	17.15	81.7%	1.9%
EN-1: Student Educators Program	4	2.75	68.8%	3.09	77.3%	8.5%
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	0.00	0.0%	0.00	0.0%	0.0%
EN-7: Employee Educators Program	3	1.76	58.7%	1.81	60.3%	1.7%
EN-8: Employee Orientation	1	1.00	100.0%	1.00	100.0%	0.0%
EN-9: Staff Professional Development	2	1.25	62.5%	1.25	62.5%	0.0%
Public Engagement	20	15.95	79.8%	15.81	79.1%	-0.7%
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	1.95	39.0%	1.31	26.2%	-12.8%
EN-14: Participation in Public Policy	2	2.00	100.0%	2.00	100.0%	0.0%
EN-15: Trademark Licensing	2	2.00	100.0%	2.00	100.0%	0.0%
Air & Climate	11	5.74	52.2%	6.17	56.1%	3.9%
OP-1: Emissions Inventory and Disclosure	3	1.42	47.3%	1.73	57.7%	10.3%
OP-2: Greenhouse Gas Emissions	8	4.32	54.0%	4.44	55.5%	1.5%
Buildings	8	3.16	39.5%	3.15	39.4%	-0.1%
OP-3: Building Design and Construction	3	1.25	41.7%	1.25	41.7%	0.0%
OP-4: Building Operations and Maintenance	5	1.91	38.2%	1.90	38.0%	-0.2%
Energy	10	4.91	49.1%	5.13	51.3%	2.2%
OP-5: Building Energy Efficiency		4.81	80.2%	5.08	84.7%	4.5%
OP-6: Clean and Renewable Energy	6 4	0.10	2.5%	0.05	1.3%	-1.3%

Food & Dining	8	3.49 43.6%	3.49 43.6%	0.0%
OP-7: Food and Beverage Purchasing	6	1.49 24.8%	1.49 24.8%	0.0%
OP-8: Sustainable Dining	2	2.00 100.0%	2.00 100.0%	0.0%
Grounds	4	2.06 51.5%	3.05 76.3%	24.8%
OP-9: Landscape Management	2	1.06 53.0%	1.05 52.5%	-0.5%
OP-10: Biodiversity	2	1.00 50.0%	2.00 100.0%	50.0%
Purchasing	6	3.95 65.8%	3.64 60.7%	-5.2%
OP-11: Sustainable Procurement	3	2.00 66.7%	2.00 66.7%	0.0%
OP-12: Electronics Purchasing	1	0.69 69.0%	0.65 65.0%	-4.0%
OP-13: Cleaning and Janitorial Purchasing	1	0.96 96.0%	0.74 74.0%	-22.0%
OP-14: Office Paper Purchasing	1	0.30 30.0%	0.25 25.0%	-5.0%
Transportation	7	4.20 60.0%	4.29 61.3%	1.3%
OP-15: Campus Fleet	1	0.00 0.0%	0.09 9.0%	9.0%
OP-16: Commute Modal Split	5	3.60 72.0%	3.60 72.0%	0.0%
OP-17: Support for Sustainable Transportation	1	0.60 60.0%	0.60 60.0%	0.0%
Waste	10	6.78 67.8%	7.58 75.8%	8.0%
OP-18: Waste Minimization and Diversion	8	4.90 61.3%	5.72 71.5%	10.3%
OP-19: Construction and Demolition Waste Diversion	1	0.88 88.0%	0.86 86.0%	0.0%
OP-20: Hazardous Waste Management	1	1.00 100.0%	1.00 100.0%	0.0%
Water	6	5.18 86.3%	5.12 85.3%	-1.0%
OP-21: Water Use	4	3.18 79.5%	3.12 78.0%	-1.5%
OP-22: Rainwater Management	2	2.00 100.0%	2.00 100.0%	0.0%
Coordination & Planning	8	8.50 94.4%	7.50 93.8%	-0.7%
PA-1: Sustainability Coordination	1	1.00 100.0%	1.00 100.0%	0.0%
PA-2: Sustainability Planning	4	3.50 87.5%	3.50 87.5%	0.0%
PA-3: Participatory Governance	3	3.00 100.0%	3.00 100.0%	0.0%
PA-4: Reporting Assurance	0	1.00 100.0%	0.00 0.0%	-100.0%
Diversity & Affordability	10	7.94 79.4%	7.89 78.9%	-0.5%
PA-5: Diversity and Equity Coordination	2	1.33 66.5%	1.56 78.0%	11.5%
PA-6: Assessing Diversity and Equity	1	1.00 100.0%	1.00 100.0%	0.0%
PA-7: Support for Underrepresented Groups	3	3.00 100.0%	3.00 100.0%	0.0%
PA-8: Affordability and Access	4	2.61 65.3%	2.33 58.3%	-7.0%
Lucatura et 9 Finance		0.70	0.04	=
Investment & Finance	7	2.72 38.9%	3.24 46.3%	7.4%
PA-9: Committee on Investor Responsibility	2	0.00 0.0%	0.50 25.0%	25.0%
PA-10: Sustainable Investment	4	1.72 43.0%	1.74 43.5%	0.5%
PA-11: Investment Disclosure	1	1.00 100.0%	1.00 100.0%	0.0%
Wellbeing & Work	7	4.59 65.6%	4.58 65.4%	-0.1%
PA-12: Employee Compensation	3	2.01 67.0%	1.57 52.3%	-14.7%
PA-13: Assessing Employee Satisfaction	1	0.39 39.0%	0.36 36.0%	-14.7%
PA-13: Assessing Employee Satisfaction PA-14: Wellness Program		1.00 100.0%	1.00 100.0%	-3.0% 0.0%
PA-14: Welliness Flogram PA-15: Workplace Health and Safety	1 2			
FA-13. WUINPIACE HEAITH AND SAIETY		1.19 59.5%	1.65 82.5%	23.0%