



University of Missouri

The following information was submitted through the [STARS Reporting Tool](#).

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The information presented in this submission is self-reported and has not been verified by AASHE or a third party. If you believe any of this information is erroneous, please see the [process for inquiring](#) about the information reported by an institution.

Institutional Characteristics

Institutional Characteristics

The passthrough subcategory for the boundary

Credit
Institutional Boundary
Operational Characteristics
Academics and Demographics

Institutional Boundary

Criteria

This won't display

"---" indicates that no data was submitted for this field

Institution type:

Doctorate

Institutional control:

Public

Which campus features are present and included in the institutional boundary?:

	Present?	Included?
Agricultural school	Yes	Yes
Medical school	Yes	Yes
Pharmacy school	No	No
Public health school	Yes	Yes
Veterinary school	Yes	Yes
Satellite campus	No	No
Hospital	Yes	No
Farm larger than 5 acres or 2 hectares	Yes	No
Agricultural experiment station larger than 5 acres or 2 hectares	Yes	No

Reason for excluding agricultural school:

n/a

Reason for excluding medical school:

n/a

Reason for excluding pharmacy school:

n/a

Reason for excluding public health school:

n/a

Reason for excluding veterinary school:

n/a

Reason for excluding satellite campus:

n/a

Reason for excluding hospital:

In 2014 the goal was to have the Climate Action Plan and the STARS operational/facilities submission align. The Climate Action Plan boundary was recommended in 2010. The outline is MU owned property of the general bounds of the Main Campus (old 63 on the east, Gustin Golf Course on the west, Tennis Center to south, locust street to north) but excludes Hospital/clinic functions, includes Parking Structures.

Reason for excluding farm:

Farms are occasionally left to the University in estate plans. In some cases, they are developed into research centers that are part of the Agricultural Experiment Station. They are not currently included in the campus Climate Action Plan.

Reason for excluding agricultural experiment station:

We are including the contiguous campus for the STARS report to have consistency with our Climate Action Plan. The Agricultural Experiment Station is located at 19 research sites throughout the state covering nearly 14,000 acres, none of which are on the contiguous campus.

Narrative:

Operational Characteristics

Criteria

n/a

"---" indicates that no data was submitted for this field

Endowment size:

804,900,000 US/Canadian \$

Total campus area:

1,262 Acres

IECC climate region:

Mixed-Humid

Locale:

Large town

Gross floor area of building space:

14,178,920 Gross Square Feet

Conditioned floor area:

10,468,287 Square Feet

Floor area of laboratory space:

2,706,389 Square Feet

Floor area of healthcare space:

235,604 Square Feet

Floor area of other energy intensive space:

628,280 Square Feet

Floor area of residential space:

1,796,987 Square Feet

Electricity use by source::

	Percentage of total electricity use (0-100)
--	---

Biomass	12.80
Coal	34
Geothermal	---
Hydro	---
Natural gas	32.10
Nuclear	---
Solar photovoltaic	---
Wind	9.60
Other (please specify and explain below)	11.50

A brief description of other sources of electricity not specified above:

Electricity purchased from Midwest Independent System Operator (MISO). MISO generation has a diversified fuel mix; 40% Coal, 40% Gas and Oil, 12% Renewable, and 8% Nuclear.

Energy used for heating buildings, by source::

	Percentage of total energy used to heat buildings (0-100)
Biomass	24
Coal	64
Electricity	---
Fuel oil	---
Geothermal	---
Natural gas	12
Other (please specify and explain below)	---

A brief description of other sources of building heating not specified above:

Academics and Demographics

Criteria

n/a

"---" indicates that no data was submitted for this field

Number of academic divisions:

19

Number of academic departments (or the equivalent):

97

Full-time equivalent enrollment:

30,865

Full-time equivalent of employees:

9,071.90

Full-time equivalent of distance education students:

1,785.80

Total number of undergraduate students:

28,858

Total number of graduate students:

9,235

Number of degree-seeking students:

36,376

Number of non-credit students:

54

Number of employees:

10,670

Number of residential students:

6,893

Number of residential employees:

18

Number of in-patient hospital beds:

5

Academics

Curriculum

This subcategory seeks to recognize institutions that have formal education programs and courses that address sustainability. One of the primary functions of colleges and universities is to educate students. By training and educating future leaders, scholars, workers, and professionals, higher education institutions are uniquely positioned to prepare students to understand and address sustainability challenges. Institutions that offer courses covering sustainability issues help equip their students to lead society to a sustainable future.

Credit
Academic Courses
Learning Outcomes
Undergraduate Program
Graduate Program
Immersive Experience
Sustainability Literacy Assessment
Incentives for Developing Courses
Campus as a Living Laboratory

Academic Courses

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution offers sustainability courses and/or courses that include sustainability and makes an inventory of those courses publicly available.

Part 2

Institution's academic departments (or the equivalent) offer sustainability courses and/or courses that include sustainability.

In order to report and earn points for this credit, the institution must conduct a course inventory. The inventory should consist of two parts:

- 1) An inventory of sustainability courses that includes, at minimum, the title, department (or equivalent), and level of each course (i.e. undergraduate or graduate), as well as a brief description if the sustainability focus of the course is not apparent from its title
- 2) An inventory of other courses that include sustainability. The inventory includes, at minimum, the title, department (or the equivalent), and level of each course and a description of how sustainability is integrated into each course.

A course may be a sustainability course or it may include sustainability; no course should be identified as both:

- A sustainability course is a course in which the primary and explicit focus is on sustainability and/or on understanding or solving one or more major sustainability challenge (e.g. the course contributes toward achieving principles outlined in the [Earth Charter](#)).
- A course that includes sustainability is primarily focused on a topic other than sustainability, but incorporates a unit or module on sustainability or a sustainability challenge, includes one or more sustainability-focused activities, or integrates sustainability issues throughout the course.

For guidance on conducting a course inventory and distinguishing between sustainability courses and courses that include sustainability, see *Standards and Terms* and the Credit Example in the [STARS Technical Manual](#). An institution that has developed a more refined approach to course classification may use that approach as long as it is consistent with the definitions and guidance provided.

Each institution is free to choose a methodology to identify sustainability courses that is most appropriate given its unique circumstances. Asking faculty and departments to self-identify sustainability courses and courses that include sustainability using the definitions outlined in *Standards and Terms* or looking at the stated learning outcomes and course objectives associated with each course may provide a richer view of sustainability course offerings than simply reviewing course descriptions, but it is not required.

This credit does not include continuing education and extension courses, which are covered by *EN 11: Continuing Education*.

Figures required to calculate the percentage of courses with sustainability content::

	Undergraduate	Graduate
Total number of courses offered by the institution	3,109	3,038
Number of sustainability courses offered	182	130
Number of courses offered that include sustainability	244	230

Number of academic departments (or the equivalent) that offer at least one sustainability course and/or course that includes sustainability (at any level):

38

Total number of academic departments (or the equivalent) that offer courses (at any level):

97

Number of years covered by the data:

Three

A copy of the institution's inventory of its course offerings with sustainability content (and course descriptions):

[Copy of CURRICULUM_LIST_2013 approved by registrar.xlsx](#)

An inventory of the institution's course offerings with sustainability content (and course descriptions):

see above

The website URL where the inventory of course offerings with sustainability content is publicly available:

<http://catalog.missouri.edu/>

A brief description of the methodology the institution followed to complete the course inventory:

The Environmental Affairs and Sustainability Education Subcommittee accepted a list of 851 courses at MU that show evidence of sustainability related and focused content. These courses resulted from a search of 7,848 courses offered by MU using the definition defined above. Subcommittee members had previously made recommendations for inclusion on the list. Duplicate courses in different departments were not included in the list. The list (attached .xlsx file) is included with this report. Of the 851 sustainability related and focused courses, 96 included a research focus.

How did the institution count courses with multiple offerings or sections in the inventory?:

Each course was counted as a single course regardless of the number of offerings or sections

A brief description of how courses with multiple offerings or sections were counted (if different from the options outlined above):

Each course that had multiple sections or offerings was counted as one course, regardless of how many sections and offerings were available.

Which of the following course types were included in the inventory?:

	Yes or No
Internships	Yes
Practicums	Yes
Independent study	Yes
Special topics	Yes
Thesis/dissertation	Yes
Clinical	Yes
Physical education	Yes
Performance arts	Yes

Does the institution designate sustainability courses in its catalog of course offerings?:

No

Does the institution designate sustainability courses on student transcripts?:

No

Learning Outcomes

Responsible Party

Michael Burden

Sustainability Coordinator

MU Sustainability

Criteria

Institution's students graduate from degree programs that include sustainability as a learning outcome or include multiple sustainability learning outcomes. Sustainability learning outcomes (or the equivalent) may be specified at:

- Institution level (e.g. covering all students)
- Division level (e.g. covering one or more schools or colleges within the institution)
- Program level
- Course level

This credit includes graduate as well as undergraduate programs. For this credit, "degree programs" include majors, minors, concentrations, certificates, and other academic designations. Extension certificates and other certificates that are not part of academic degree programs do not count for this credit; they are covered in *EN 11: Continuing Education*. Programs that include co-curricular aspects may count as long as there is an academic component of the program. Learning outcomes at the course level count if the course is required to complete the program.

This credit is inclusive of learning outcomes, institutional learning goals, general education outcomes, and graduate profiles that are consistent with the definition of "sustainability learning outcomes" included in Standards and Terms.

Institutions that do not specify learning outcomes as a matter of policy or standard practice may report graduates from sustainability-focused programs (i.e. majors, minors, concentrations and the equivalent as reported for *AC 3: Undergraduate Program* and *AC 4: Graduate Program*) in lieu of the above criteria.

"---" indicates that no data was submitted for this field

Number of students who graduated from a program that has adopted at least one sustainability learning outcome:

820

Total number of graduates from degree programs:

8,369

A copy of the list or inventory of degree, diploma or certificate programs that have sustainability learning outcomes:

[CURRICULUM_LIST_2013.xlsx](#)

A list of degree, diploma or certificate programs that have sustainability learning outcomes:

Agriculture/General Agriculture
Agricultural Education
Biochemistry
Fisheries and Wildlife
Food Science and Nutrition
Forestry
Parks, Recreation and Tourism
Plant Sciences
Science and Agricultural Journalism
Soil, Environmental and Atmospheric Sciences
Master of Public Health (MPH)
Sustainable Agriculture
Environmental Studies
Geography
Biological Sciences
Human Environmental Sciences
Geological Sciences
Engineering
Anthropology
Peace Studies

A list or sample of the sustainability learning outcomes associated with degree, diploma or certificate programs (if not included in an inventory above):

The website URL where information about the institution's sustainability learning outcomes is available:

<http://catalog.missouri.edu/degreesanddegreeprograms/>

Undergraduate Program

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution offers at least one:

- Sustainability-focused program (major, degree program, or equivalent) for undergraduate students

And/or

- Undergraduate-level sustainability-focused minor or concentration (e.g. a concentration on sustainable business within a business major).

Extension certificates and other certificates that are not part of academic degree programs do not count for this credit; they are covered in *EN 11: Continuing Education*.

"---" indicates that no data was submitted for this field

Does the institution offer at least one sustainability-focused major, degree program, or the equivalent for undergraduate students?:

Yes

The name of the sustainability-focused, undergraduate degree program (1st program):

Environmental Studies

A brief description of the undergraduate degree program (1st program):

This degree is a good fit for students interested in acquiring a broad understanding of environmental problems and their underlying causes, so that they can work in the fields of advocacy, outreach, policy, and regulation. This degree is offered jointly by Interdisciplinary Studies in Arts and Sciences and Environmental Studies. The degree will be in Interdisciplinary Studies.

For this degree students take an approximately equal number of classes in the natural and applied sciences and in the social and behavioral sciences. In addition, they take an undergraduate seminar focusing on analysis and solution of environmental problems, complete an internship, and do a capstone project analyzing and proposing a solution to a specific problem of their choosing.

The website URL for the undergraduate degree program (1st program):

<http://web.missouri.edu/~umcsnresiwwww/erdegress.shtml>

The name of the sustainability-focused, undergraduate degree program (2nd program):

Environmental Science

A brief description of the undergraduate degree program (2nd program):

Addressing environmental problems such as waste management, land use issues, and water and air quality often requires an interdisciplinary science education as well as an understanding of the social and economic context of the problem. The environmental science emphasis is designed to prepare students for careers as environmental professionals.

Within the environmental science emphasis, students can choose one of three tracks:

water quality

land management

air quality

Students in all tracks take a mixture of natural and applied science courses such as ecology, soil science, forestry, atmospheric science, and fisheries and wildlife.

The website URL for the undergraduate degree program (2nd program):

<http://cafnr.missouri.edu/academics/environ-sci.php>

The name of the sustainability-focused, undergraduate degree program (3rd program):

Sustainable Agriculture

A brief description of the undergraduate degree program (3rd program):

Sustainable agriculture meets the needs of both farmers and consumers by creating agricultural systems that produce food for a growing population in a way that protects the environment and supports healthy, dynamic communities.

The website URL for the undergraduate degree program (3rd program):

<http://catalog.missouri.edu/undergraduategraduate/collegeofagriculturefoodandnaturalresources/agriculture/bs-agriculture-emphasis-sustainable-ag/>

The name and website URLs of all other sustainability-focused, undergraduate degree program(s):

BA in Geography with Emphasis in Physical/ Environmental

<http://catalog.missouri.edu/undergraduategraduate/collegeofartsandscience/geography/ba-geography-emphasis-physical-environmental/>

Does the institution offer one or more sustainability-focused minors, concentrations or certificates for undergraduate students?:

Yes

The name of the sustainability-focused undergraduate minor, concentration or certificate (1st program):

Sustainable Agriculture

A brief description of the undergraduate minor, concentration or certificate (1st program):

The minor in sustainable agriculture is for students interested in exploring agriculture and food systems that promote profit-ability, steward our natural resources, and provide enhanced quality of life for farmers, citizens and communities. A student must complete 15 credits of coursework that introduces concepts of sustainable agriculture, provides practical information on natural resources and food production, and investigates the impact of different philosophical and scientific frameworks on food and agriculture.

The website URL for the undergraduate minor, concentration or certificate (1st program):

<http://catalog.missouri.edu/undergraduategraduate/collegeofagriculturefoodandnaturalresources/additionalminorscertificates/minor-sustainable-agriculture/>

The name of the sustainability-focused undergraduate minor, concentration or certificate (2nd program):

Certificate in Environmental Studies

A brief description of the undergraduate minor, concentration or certificate (2nd program):

Many environmental careers require the kind of discipline-specific education available in traditional majors, but with an added base of knowledge about environmental issues and the skills to address them. The Certificate in Environment Studies provides that base.

The website URL for the undergraduate minor, concentration or certificate (2nd program):

<http://catalog.missouri.edu/undergraduategraduate/interdisciplinaryacademicprograms/additionalminorsandcertificates/undergrad-certif-environmental-studies/>

The name of the sustainability-focused undergraduate minor, concentration or certificate (3rd program):

A brief description of the undergraduate minor, concentration or certificate (3rd program):

The website URL for the undergraduate minor, concentration or certificate (3rd program):

The name, brief description and URL of all other undergraduate-level sustainability-focused minors, concentrations and certificates:

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution offers at least one:

- Sustainability-focused program (major, degree program, or equivalent) for graduate students

And/or

- Graduate-level sustainability-focused minor, concentration or certificate (e.g. a concentration on sustainable business within an MBA program).

Extension certificates and other certificates that are not part of academic degree programs do not count for this credit; they are covered in *EN 11: Continuing Education*.

"---" indicates that no data was submitted for this field

Does the institution offer at least one sustainability-focused major, degree program, or the equivalent for graduate students?:

Yes

The name of the sustainability-focused, graduate-level degree program (1st program):

Resources and Development

A brief description of the graduate degree program (1st program):

The Resources and Development (R&D) emphasis area allows Ph.D. students to develop expertise in the application of economic theory and quantitative methods to problems and issues related to the subjects of natural resource and environmental economics, economic development, and regional economics. The significant overlap among these subjects allows students the flexibility to select courses and research topics relevant to more than one subject.

The website URL for the graduate degree program (1st program) :

<http://www.ssu.missouri.edu/agecon/grad/resources-dev.php>

The name of the sustainability-focused, graduate-level degree program (2nd program):

Public Policy Analysis

A brief description of the graduate degree program (2nd program):

Graduate study in Public Policy Analysis prepares students to evaluate the role of government in a market economy. This would include food and agricultural policy, various regulatory policies (e.g. food and environmental safety, IPR and market structure), and rural development policy and assess the impacts of such domestic and international government interventions. Such skills are suitable for further graduate studies and careers in teaching, research and market analysis at universities, government agencies, and agribusiness. The Public Policy Analysis emphasis benefits from the resources and work of the internationally recognized Food and Agricultural Policy Research Institute (FAPRI), Community Policy Analysis Center (CPAC), Economics and Management of Agrobiotechnology Center (EMAC), and Rural Policy Research Institute (RUPRI).

The website URL for the graduate degree program (2nd program):

<http://www.ssu.missouri.edu/agecon/grad/public-policy.php>

The name of the sustainability-focused, graduate-level degree program (3rd program):

Architectural Studies: Environment and Behavior Studies

A brief description of the graduate degree program (3rd program):

Environment-behavior research explores a variety of environments, linking them to a range of behavioral concerns. This program is suitable for persons who seek careers in research, consulting, and/or teaching in architecture, interior design, and other environmental design disciplines.

A design project leads to the MA and research leads to the MS or PhD degrees.

Emphasis areas in environment and behavior include:

- Design Education
- History of the Designed Environment
- Design Planning and Analysis
- Interior Design Systems
- Universal Design/Accessibility
- Environment and Aging
- Quality of Life and Design
- Health Care Design
- Housing, Neighborhood Design, and Sustainability
- Organizational Systems and Design
- Facility Management and Design
- Programming, Design and Post-Occupancy Evaluation

The website URL for the graduate degree program (3rd program):

http://arch.missouri.edu/academics_ebs.html

The name and website URLs of all other sustainability-focused, graduate-level degree program(s):

Does the institution offer one or more graduate-level sustainability-focused minors, concentrations or certificates?:

Yes

The name of the graduate-level sustainability-focused minor, concentration or certificate (1st program):

Interdisciplinary Graduate Certificate Program in Society and Ecosystems

A brief description of the graduate minor, concentration or certificate (1st program):

Understanding the complex and dynamic interactions between human activities and natural ecosystems is essential for achieving sustainable development. Developing this understanding in the next generation of scientists, educators and resource management professionals is the primary goal of the University of Missouri's interdisciplinary graduate certificate program in Society and Ecosystems.

The website URL for the graduate minor, concentration or certificate (1st program):

<http://www.ssu.missouri.edu/agecon/grad/cert-ecosystems.php>

The name of the graduate-level sustainability-focused minor, concentration or certificate (2nd program):

Conservation Biology

A brief description of the graduate minor, concentration or certificate (2nd program):

The Conservation Biology program is an interdisciplinary community of students, faculty, and conservation professionals. This graduate student-led group provides a graduate certificate program, and organizes a reading group (fall semester) and seminar series (spring semester). The reading groups and seminars promote discussion and communication among students and faculty, and are open to anyone in the community. These events provide students with the opportunity to make connections between their own research, current issues in the field of conservation biology, and the work of other graduate students and faculty members. Generally, the reading group and seminar series are organized around a semester-long theme or topic of relevance to conservation biology.

The website URL for the graduate minor, concentration or certificate (2nd program):

<http://conservbio.missouri.edu/>

The name of the graduate-level sustainability-focused minor, concentration or certificate (3rd program):

A brief description of the graduate minor, concentration or certificate (3rd program):

The website URL for the graduate minor, concentration or certificate (3rd program):

The name and website URLs of all other graduate-level, sustainability-focused minors, concentrations and certificates:

Immersive Experience

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution offers at least one immersive, sustainability-focused educational study program. The program is one week or more in length and may take place off-campus, overseas, or on-campus.

For this credit, the program must meet one or both of the following criteria:

- It concentrates on sustainability, including its social, economic, and environmental dimensions

And/or

- It examines an issue or topic using sustainability as a lens.

For-credit programs, non-credit programs and programs offered in partnership with outside entities may count for this credit. Programs offered exclusively by outside entities do not count for this credit.

See the Credit Example in the STARS Technical Manual for further guidance.

"---" indicates that no data was submitted for this field

Does the institution offer at least one immersive, sustainability-focused educational study program that meets the criteria for this credit?:

Yes

A brief description of the sustainability-focused immersive program(s) offered by the institution:

The College of Agriculture, Food, and Natural Resources offers a sustainability-focused immersive study abroad semester in Costa Rica. Students experience the rain forest first-hand and study agriculture/environment at a world-class international college specializing in sustainable agriculture and natural resource management. EARTH (Escuela de Agricultura de la Región Tropical Húmeda) University has 400 full-time students from throughout Latin America, Asia and Africa. It offers a unique, student-centered experiential-learning system where hands-on experience is stressed.

The website URL where information about the immersive program(s) is available:

<http://cafnr.missouri.edu/study-abroad/costa-rica/>

Sustainability Literacy Assessment

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution conducts an assessment of the sustainability literacy of its students. The sustainability literacy assessment focuses on knowledge of sustainability topics and may also address values, behaviors and/or beliefs. Assessments that focus exclusively on values, behaviors and/or beliefs are not sufficient to earn points for this credit.

Institution may conduct a follow-up assessment of the same cohort group(s) using the same instrument.

This credit includes graduate as well as undergraduate students.

Submission Note:

Reports completed from survey results are available in the Environmental Leadership Office and are available upon request.

"---" indicates that no data was submitted for this field

The percentage of students assessed for sustainability literacy (directly or by representative sample) and for whom a follow-up assessment is conducted:

0

The percentage of students assessed for sustainability literacy (directly or by representative sample) without a follow-up assessment:

100

A copy of the questions included in the sustainability literacy assessment(s):

[Student-Sustainability-Survey-2012 \(3\).pdf](#)

The questions included in the sustainability literacy assessment(s) :

A brief description of how the assessment(s) were developed:

In 2012, a 118-question survey was distributed to a randomized list of student emails intended to serve as a representative sample of the campus. Total respondents were 1385 students. The survey was designed to assess MU student environmental literacy, concerns, and

behaviors for use in program planning and assessment. It was a follow-up to a survey administered in 2009.

A few of the themes of the survey include:

Self-reported environmental behavior

Environmental literacy

Environmental impact self-efficacy

Perception of peer support for environmental behavior

Perception of institutional support for environmental behavior

Emotion component of environmental behavior/environmental activism

Programming – MU specific

New Environmental Paradigm (NEP)

A brief description of how the assessment(s) were administered:

The assessment was administered over the period of 3/26/2012 12:00:00 AM - 10/31/2012 11:59:00 PM and was distributed via email.

A brief summary of results from the assessment(s):

See attached document for questions and quantitative results.

Qualitative Literacy Results:

Question 12: Please indicate your level of agreement with the following statement-I have a pretty good understanding of what environmental sustainability means. More than 83% of respondents agreed with this statement.

*This question provides a good framework to recognize the current understanding of sustainability among the student body. In addition it provides a base for the open ended Question 24 that follows Question 23 below:

Question 23: How closely does the following definition resemble your definition of sustainability? "Environmental sustainability means meeting the needs of the present generation without compromising the ability of future generations to meet their own needs."

Question 24 (206 Answers): Do you have a different definition of environmental sustainability?

This question asked whether respondents have a different definition of sustainability from the standard, "environmental sustainability means meeting the needs of the present generation without compromising the ability of future generations to meet their own needs." This proves to be important in understanding student literacy of sustainability as a whole.

A few examples of their responses include:

* "Action and inaction taken as necessary to improve real nature's ability to withstand the onslaught of human nature. 'Meeting the needs of the present generation' is impossible to do 'without compromising...future generations' since the needs aren't defined and apparently are too vast right now to even be met."

* "Environmental sustainability demands the co-existence of nature and humanity. It seeks human work in order to detain the ongoing destruction of our planet. The future is not an important aspect in environmental sustainability because we have to focus on the present, in my humble opinion."

* "Environmental sustainability requires everyone really consider about not only themselves, but also the people and they do not know ,the animals the plants. We cannot be selfish if you really cares about environmental sustainability, we need to make efforts to help a tree,

a people living in other country, and new generation to live in good and health way."

The questions displayed here are a sample of questions that pertain to sustainability literacy and will be included in the next student survey to serve as a benchmark to illustrate whether an improvement of sustainable literacy exists on campus.

The website URL where information about the literacy assessment(s) is available:

[https://stars.aashe.org/media/secure/125/6/467/2662/Student-Sustainability-Survey-2012%20\(3\).pd](https://stars.aashe.org/media/secure/125/6/467/2662/Student-Sustainability-Survey-2012%20(3).pdf)

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Incentives for Developing Courses

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution has an ongoing program or programs that offer incentives for faculty in multiple disciplines or departments to develop new sustainability courses and/or incorporate sustainability into existing courses or departments. The program specifically aims to increase student learning of sustainability.

Incentives 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.

"---" indicates that no data was submitted for this field

Does the institution have an ongoing incentives program or programs that meet the criteria for this credit?:

Yes

A brief description of the program(s), including positive outcomes during the previous three years:

Mizzou Advantage is a program designed by University of Missouri faculty, students and alumni working together to identify competitive assets that set MU apart from other universities. These assets underlie five dynamic initiatives that collectively are called the Mizzou Advantage. They include:

- *Food for the Future
- *Media of the Future
- *The Convergence of Human and Animal Health
- *Sustainable Energy
- *Understanding and Managing Disruptive and Transformational Technologies

Mizzou Advantage encourages developing new sustainability educational courses related to these five initiatives.

For example:

Students involved in the Food for the Future initiative will capitalize on MU's strengths in plant and animal sciences; food safety and biosecurity; local food systems; food and health research; and food-related topics in the arts, humanities, and social sciences.

With faculty from 40 departments teaching courses related to the environment and sustainability, and the Sustain Mizzou student group coordinating sustainability projects, the Sustainable Energy initiative offers students opportunities to learn about and develop new green technologies like biofuels and nuclear power.

A brief description of the incentives that faculty members who participate in the program(s) receive:

Developing sustainability courses through the Mizzou Advantage program allows faculty members access to Mizzou Advantage grants and fundraising provided by both the University and by outside collaborators. This funding can be used for books, class affiliated trips, guest speakers, etc.

The website URL where information about the incentive program(s) is available:

<http://www.missouri.edu/mizzou-advantage/>

Campus as a Living Laboratory

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution is utilizing its infrastructure and operations for multidisciplinary student learning, applied research and practical work that advances sustainability on campus in at least one of the following areas:

- Air & Climate
- Buildings
- Dining Services/Food
- Energy
- Grounds
- Purchasing
- Transportation
- Waste
- Water
- Coordination, Planning & Governance
- Diversity & Affordability
- Health, Wellbeing & Work
- Investment
- Public Engagement
- Other

This credit includes substantive work by students and/or faculty (e.g. class projects, thesis projects, term papers, published papers) that involves active and experiential learning and contributes to positive sustainability outcomes on campus (see the Credit Example in the [STARS Technical Manual](#)). On-campus internships and non-credit work (e.g. that take place under supervision of sustainability staff or committees) may count as long as the work has a learning component.

This credit does not include immersive education programs, co-curricular activities, or community-based work, which are covered by AC 5: *Immersive Experience*, credits in the Campus Engagement subcategory, and credits in the Public Engagement subcategory, respectively.

"---" indicates that no data was submitted for this field

Is the institution utilizing the campus as a living laboratory in the following areas?:

	Yes or No
--	-----------

Air & Climate	Yes
Buildings	Yes
Dining Services/Food	Yes
Energy	Yes
Grounds	Yes
Purchasing	---
Transportation	Yes
Waste	Yes
Water	Yes
Coordination, Planning & Governance	---
Diversity & Affordability	Yes
Health, Wellbeing & Work	Yes
Investment	No
Public Engagement	---
Other	Yes

A brief description of how the institution is using the campus as a living laboratory for Air & Climate and the positive outcomes associated with the work:

Several areas: Peter Motavalli, professor of soil science, has two active grants for promoting campus as a living lab. There is a weather station on Sanborn Field equipped with an environmental monitoring system for urban location that records temperature, water content, wind speed and direction at different heights. Recently, sensors have been added as student projects developed, some especially looking at air pollution. The station is part of a statewide network of weather stations. The Environmental Science Club maintains some of the data on their site:

<http://envsci.missouri.edu/>

A brief description of how the institution is using the campus as a living laboratory for Buildings and the positive outcomes associated with the work:

From Michael Goldschmidt, assistant professor in architectural studies:

The Department of Architectural Studies includes a class that uses living laboratories for sustainability and ecological design. In ArchSt 4323 Sustainable Technologies, students are required to complete the following class assignments:

- Students are required to collect and sort paper, glass, aluminum, and other materials from Gwynn and Stanley Hall and document the quantities of each and prepare a timeline that follows each type of material from origin to final destination. Students are also required to produce a chart of alternate reuse strategies for each material in lieu of recycling.
- Students are required to create an interior furniture item out of local, free recycled cardboard and a 1 square foot section of recycled material, useable as a wall or ceiling panel.
- In class assignments include:
 - a. work with a wind turbine and photovoltaic panels
 - b. document and study campus rainwater control systems and green roofs
 - c. Use an infrared camera for energy auditing of buildings and use software to estimate energy use of one of their studio projects.

These lab assignments assist students in understanding fundamental concepts and details of comprehensive sustainable strategies for building design and construction.

A brief description of how the institution is using the campus as a living laboratory for Dining Services/Food and the positive outcomes associated with the work:

An undergraduate research team formed in the Spring of 2014 to examine food waste on campus. The project was called Waste Not/Want Not. They collaborated with and were supported by Campus Dining Services.

The research team organized around three general learning objectives.

1. Understand what constitutes food waste.
2. Explore some of the root causes of food waste.
3. Identify ongoing local and regional efforts to address food waste.

Students dedicated 5-8 hours per week to the project and met weekly with an interdisciplinary faculty team (English, Law, Biological Engineering, Engineering), kept daily "food waste" journals, participated in an online discussion board, conducted literature reviews, and, as a team, created a research poster.

*In the fall of 2014 they orchestrated a social media campaign to use what they learned to encourage their peers not to waste and assess their peers' attitudes and motivations related to food waste. They also created posters and table tents to promote the campaign as well. Results will be analyzed and included in the next STARS report.

<http://dining.missouri.edu/food-waste-campaign/>

A brief description of how the institution is using the campus as a living laboratory for Energy and the positive outcomes associated with the work:

Information from Gregg Coffin, associate director of energy management at MU:

University of Missouri's Campus Facilities - Energy Management department has a long history of collaborating with students, faculty, and campus researchers to support both education and research efforts in the areas of energy production, energy conservation, and the use of renewable energy technologies. A sampling of activities at MU over the last few years include:

Energy Facility Tours – Energy Management tours 800 to 1,000 students annually through the campus energy facilities. The facility tours are customized per the request of the instructor or campus organization to enhance the topic they're learning or have interest. Tour requests have increased recently for those wanting to see and learn more about the biomass energy system in the plant.

Class Room Guest Lectures – Department energy professionals are routinely invited into the class room to provide presentations on various energy topics. Most presentations in the past few years have been topics related to biomass energy, wind/solar energy, and energy conservation.

Senior Class Capstone Projects – They support senior level design projects referred to as Capstone Projects when requested. Most recently they helped a Capstone Project Design group by providing them information resources which helped them complete a schematic design of a bio-digester combined with a micro combustion turbine using food waste as the fuel source.

Energy Related Internships – Two years ago they hired a PhD candidate in Bio-Engineering as part of an internship program to support his research thesis to demonstrate that a dynamic computational model could be used to accurately model and analyze a biomass supply chain. The student effectively modeled the biomass supply chain for the Campus's new biomass boiler as part of his research.

Student Employment – The Energy Management department employs MU students on a part time basis to supplement the projects and activities of the department. Typically 6 to 10 students, mostly engineering undergraduates, work in the department part time. This gives these students "real world" experience in the energy industry to prepare them for their future careers.

Energy Related Research Support – Energy Management engineers get engaged in energy related research activities; many of the campus researchers seek input from the department engineers on the viability and applicability of their research to the energy industry. Most of the recent focus has been with the campus Forestry Department with researchers who are researching sourcing of various biomass feed stocks and their applicability as fuel in the energy industry.

On Campus Renewable Energy Projects – In the past couple years, Energy Management significantly increased the campus's renewable energy portfolio which included the installation of three on-campus projects providing students, faculty, and staff resources to learn about and experience renewable energy technologies. The projects are accessible to classes and campus organizations through scheduled facility tours, as well as access to the energy production data via a web based dashboard. The projects include:

-Solar PV – A 34 KW solar photovoltaic system was installed at the campus power plant in late 2012

-Wind Turbine – A 20 kw wind turbine was installed near the campus General Services Building in late 2012

-Solar Thermal – An evacuated tube solar thermal heating system at the power plant to preheat boiler make up water installed in early 2014

A brief description of how the institution is using the campus as a living laboratory for Grounds and the positive outcomes associated with the work:

Biological Sciences Professor Candi Galen had her students use the MU Botanical Garden as part of their capstone research. Seniors spent time getting to know one of the many plants, motoring changes. They also gave tours to Friends of the Garden.

Enos Inniss, professor of engineering, and his students helped design the bioretention area for a new student housing complex (VASH) and have installed monitoring equipment there to collect data.

A brief description of how the institution is using the campus as a living laboratory for Purchasing and the positive outcomes associated with the work:

N/A

A brief description of how the institution is using the campus as a living laboratory for Transportation and the positive outcomes associated with the work:

Graduate students, undergraduates and faculty completed a research project that examined impacts of infrastructure on pedestrian behavior. They used a campus intersection as a control site for the study. Information below is from the research abstract by Courtney Schultz (graduate student), Sonja Wilhelm Stanis, PhD, Stephen Sayers, PhD, Ian Thomas, PhD.

"The purpose of this study was to examine the effect of changes to the built environment to determine whether street crossing infrastructure modifications change pedestrian crossing behaviors or traffic patterns in a low-income and predominately racial/ethnic minority community." from Sonja Wilhem Stanis', professor in Parks, Recreation and Tourism, research abstract.

Methods:

Data collection occurred at one Intervention site (Providence Road) and one Control site (College Avenue) in Columbia, MO. We selected the Control site by examining relevant characteristics of the neighborhood (e.g., size, income level), and the corresponding street (e.g., number of lanes, typical traffic volumes/speeds, pedestrian crossing facilities). Street crossing behaviors were collected using direct observation and assessed the mode of transportation, legality of the crossing (e.g., at intersections/crosswalks or not), as well as race/ethnicity, gender, and age within 5-6 zones at both sites. Magnetic traffic detectors were also embedded in both the Intervention and Control streets during the data collection to capture traffic volume and speed. Data collection ran concurrently at both sites for seven days (Monday-Sunday) over the same two-week period in June 2012 (pre-intervention) and June 2013 (post-intervention), crossing behaviors were recorded for three hours each day (7:30am, 12:30pm, and 3:30pm) while traffic data were collected continuously for 168 hours during the first week.

Descriptive statistics were calculated for all variables. Independent samples t-tests assessed overall changes in pedestrian crossings and traffic volume at each site from 2012 to 2013. Changes in legal/illegal crossings and traffic speed (above the speed limit/below the speed limit) at each site from 2012 to 2013 were analyzed using Pearson's Chi Square.

Conclusions

The replacement of an unsafe pedestrian bridge with an at-grade, signalized pedestrian crosswalk and landscaped median significantly impacted both pedestrian crossing behaviors and vehicular traffic behaviors. Specifically, the installation of the pedestrian crosswalk yielded reduced proportions of illegal crossings (especially among children), and reduced the percentage of vehicles speeding on the highway through the neighborhood at the Intervention site while the percentage of vehicles speeding at the Control site increased. This study suggests that street crossing infrastructure changes do change behavior, which will help inform future street crossing interventions and may be used to guide policies promoting physical activity in similar communities where high-speed arterials are barriers to parks and active living.

Implications for Practice and Policy

By demonstrating increased pedestrian safety and traffic calming, this study adds support to the feasibility of advocacy efforts to reverse transportation practices that favor automobiles at the expense of pedestrian accessibility. These successful outcomes could be used to support advocacy efforts seeking to modify the built environment to increase physical activity in underserved neighborhoods."

A brief description of how the institution is using the campus as a living laboratory for Waste and the positive outcomes associated with the work:

Maryam Nikouei Mehr, a graduate student in engineering, and Ron McGarvey, a professor of engineering, conducted a research project to improve the efficiency of waste collection on campus. This research supported Maryam's MA thesis.

Research identified the potential to reduce the university's solid waste collection contract by \$150,000/year by optimizing the locations and sizes of waste receptacles and the frequency of service. Carbon emissions associated with waste collection trucks would also be reduced.

The University and the City of Columbia are currently implementing the recommendations from the research.

A brief description of how the institution is using the campus as a living laboratory for Water and the positive outcomes associated with the work:

Jason Hubbart, professor of forestry, and several of his students and graduate students monitor water quality, flow rates and examine the effectiveness of stormwater mitigation treatments.

Objectives of the MU stormwater quality program include a) to improve understanding and management of surface runoff and water quality on the University of Missouri Campus, b) to provide science-based guidance for best management practices and future management decisions, c) to improve and sustain water quality and aquatic ecosystem health in local receiving water bodies, and d) to disseminate findings and progress to the greater Institutional community and land managers of the built environment.

http://web.missouri.edu/~hubbartj/index_files/IHLResearch.htm

A brief description of how the institution is using the campus as a living laboratory for Coordination, Planning & Governance and the positive outcomes associated with the work:

N/A

A brief description of how the institution is using the campus as a living laboratory for Diversity & Affordability and the positive outcomes associated with the work:

Information from Marlo Goldstein Hode, Chancellor's Diversity Initiative:

Survey with past participants of Diversity 101 (an online course for faculty and staff) revealed that out of complete responses (n=38): 92% of respondents reported that they felt more confident in their ability to engage with individuals who are different from themselves as a result of participating in this online course; 41% reported initiating changes to department policies or practices to be more inclusive; 75% reported that they have made efforts to speak up when people say things that are inappropriate or offensive; and 89% have made an effort to be mindful of when they are applying biases and to stop and question assumptions.

A new initiative from the Chancellor's Diversity Initiative:

MU Communication faculty and Chancellor's Diversity Initiative staff are collaborating with students in Freshmen Interest Groups on a research project to test what impact six online diversity education lessons and the race of the avatar mentor in each lesson have on student learning and attitudes. (program info from Niki Stanley in CDI).

A brief description of how the institution is using the campus as a living laboratory for Health, Wellbeing & Work and the positive outcomes associated with the work:

Information from Lynn Rossy, health psychologist at MU:

Undergraduate and graduate students are involved in implementing and evaluating wellness programs in several ways, including but not limited to:

--ABSTRACT from American Journal of Health Promotions July/August 2014. Authors: Bush, Hannah;

Rossy, Lynn; Mintz, Laurie; Schopp, Laura

"Purpose. To examine the efficacy of a novel intervention for problematic eating behaviors and body dissatisfaction. Design. Participants enrolled in the intervention or waitlist comparison group were assessed at pre and post 10 weeks. Setting. Midwestern university. Subjects. One hundred twenty-four female employees or partners/spouses. Intervention. Eat for Life is a 10-week group intervention integrating mindfulness and intuitive eating skills. Measures. Self-report questionnaires included the Intuitive Eating Scale, Body Appreciation Scale, Five-Facet Mindfulness Questionnaire, Questionnaire for Eating Disorder Diagnoses, and an author-constructed supplemental and demographic questionnaire. Analysis. Analyses of covariance and ordinal regression measured group differences. Structural equation modeling examined mediation effects. Results. Significant differences between groups were observed for body appreciation ($F(1,121) = 40.17, p = .000$, partial eta squared = .25), intuitive eating ($F(1,121) = 67.44, p = .000$, partial eta squared = .36), and mindfulness ($F(1,121) = 30.50, p = .000$, partial eta squared = .20), with mean scores significantly higher in the intervention group than waitlist comparison group after 10 weeks. The intervention group was 3.65 times more likely to be asymptomatic for disordered eating than the comparison group. Mindfulness served as a partial mediator. Conclusion. The study provides support for an intervention combining intuitive eating and mindfulness for treatment of problematic eating behaviors and body dissatisfaction, with limitations including self-selection and lack of active control group. ABSTRACT FROM AUTHOR

-Nursing students conduct biometric screenings for the campus wellness incentive program for faculty and staff

-At the Missouri Orthopedic Institute, a graduate student piloted a 12-week "Act Healthy" intervention program that examined the effectiveness of peer-support groups in achieving health goals.

A brief description of how the institution is using the campus as a living laboratory for Investment and the positive outcomes associated with the work:

N/A

A brief description of how the institution is using the campus as a living laboratory for Public Engagement and the positive outcomes associated with the work:

N/A

A brief description of how the institution is using the campus as a living laboratory in Other areas and the positive outcomes associated with the work:

Reboot is a mobile/online game created by the Sustainability Office and MU students and is a high-tech scavenger hunt that challenges players to take better care of the Earth. It was funded by a \$24,500 grant through the Interdisciplinary Innovations Fund. The game was held over a 10-week period in the spring semester of 2012. More than 100 people participated in the challenge.

<http://mizzouadvantage.missouri.edu/news/mu-engages-students-community-with-new-high-tech-inter-active-game/>

The website URL where information about the institution's campus as a living laboratory program or projects is available:

Research

This subcategory seeks to recognize institutions that are conducting research on sustainability topics. Conducting research is a major function of many colleges and universities. By researching sustainability issues and refining theories and concepts, higher education institutions can continue to help the world understand sustainability challenges and develop new technologies, strategies, and approaches to address those challenges.

Credit
Academic Research
Support for Research
Access to Research

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Part 1

Institution's faculty and/or staff conduct sustainability research and the institution makes an inventory of its sustainability research publicly available.

Part 2

Institution's academic departments (or the equivalent) include faculty and staff who conduct sustainability research.

Any level of sustainability research is sufficient to be included for this credit. In other words, a researcher who conducts both sustainability research and other research may be included.

In order to report for this credit, the institution should conduct an inventory to identify its sustainability research activities and initiatives.

Each institution is free to choose a methodology to identify sustainability research that is most appropriate given its unique circumstances. For example, an institution may distribute a survey to all faculty members and ask them to self-identify as being engaged in sustainability research or ask the chairperson of each department to identify the sustainability research activities within his or her department. The research inventory should be based on the definition of "sustainability research" outlined in Standards and Terms and include, at minimum, all research centers, laboratories, departments, and faculty members whose research focuses on or is related to sustainability.

"---" indicates that no data was submitted for this field

Number of the institution's faculty and/or staff engaged in sustainability research:

173

Total number of the institution's faculty and/or staff engaged in research:

846

Number of academic departments (or the equivalent) that include at least one faculty or staff member that conducts sustainability research:

34

The total number of academic departments (or the equivalent) that conduct research:

A copy of the sustainability research inventory that includes the names and department affiliations of faculty and staff engaged in sustainability research:

[Copy of Sustainability 112014.xlsx](#)

Names and department affiliations of faculty and staff engaged in sustainability research:

A brief description of the methodology the institution followed to complete the research inventory:

When entering a proposal into our grants module, our researchers have the option of selecting key words that relate to their proposal. We used these same key words to search titles of projects. Key words searched include: sustainability, climate, environment, renewable, habitat, ecology, geology, geography, plant, soil, meteorology and weather. Additionally, any awards from EPA, Fish and Wildlife Service and Forest Service are included.

A brief description of notable accomplishments during the previous three years by faculty and/or staff engaged in sustainability research:

*Ray Semlitsch, Curators Professor of Biological Sciences:

Salamanders Are a More Abundant Food Source in Forest Ecosystems Than Previously Thought: Advanced statistical methods used in study increase previous population estimates

*Charles Nilon, professor of fisheries and wildlife: Businesses Can Help Preserve Endangered Species, Improve Employee Morale With Small Landscape Changes

* Jae W. Kwon, associate professor of electrical and computer engineering and nuclear engineering: First Water-Based Nuclear Battery Developed by MU Researcher Can Be Used to Generate Electrical Energy. Long-lasting batteries could be used for emergency equipment and in spaceflight.

*John Walker, Curators Professor of Biological Sciences and director of the Division of Biological Sciences: Missouri Research Consortium Receives \$20 Million Grant from National Science Foundation to Study Impacts of Climate Variability.

*Scott Peck, associate professor of biochemistry and a researcher in the Bond Life Sciences Center at MU: Plants Send Out Signals Attracting Harmful Bacteria, MU Study Finds. Findings could lead to natural bacterial anti-infectives in food-producing plants

* Chris Wikle, professor of statistics in the MU College of Arts and Science: New Statistical Models Could Lead to Better Predictions of Ocean Patterns and the Impacts on Weather, Climate and Ecosystem

*Tom Johnson, the Frank Miller Professor of Agricultural and Applied Economics in the MU College of Agriculture, Food, and Natural Resources and professor in the MU Truman School of Public Affairs: Small Biomass Power Plants Could Help Rural Economies, Stabilize National Power Grid, MU Study Finds.

*Frederick vom Saal, Curators Professor of Biological Sciences in the College of Arts and Science at MU: Bisphenol A (BPA) at Very Low Levels Can Adversely Affect Developing Organs in Primates, MU Researcher Finds.

*Ray Semlitsch, Curators' Professor of biological sciences in the College of Arts and Science at MU: Salamander Population Size Helps Predict Health of Forest Ecosystems and Inform Forest Management Decisions, MU Study Finds. Researchers suggest a balance between timber harvest and conservation biology.

*Jae Kwon, associate professor of electrical and computer engineering in the College of Engineering at MU: MU Researcher Develops Virtual Wall Which Could Stop the Spread of Oil and Could Help Build Invisible Barrier for Oil Spills.

The website URL where information about sustainability research is available:

<http://sustainability.missouri.edu/topics/research.html>

Support for Research

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution encourages and/or supports sustainability research through one or more of the following:

- An ongoing program to encourage students in multiple disciplines or academic programs to conduct research in sustainability. The program provides students with incentives to research sustainability. Such incentives may include, but are not limited to, fellowships, financial support, and mentorships. The program specifically aims to increase student sustainability research.
 - An ongoing program to encourage faculty from multiple disciplines or academic programs to conduct research in sustainability topics. The program provides faculty with incentives to research sustainability. Such incentives may include, but are not limited to, fellowships, financial support, and faculty development workshops. The program specifically aims to increase faculty sustainability research.
 - Formally adopted policies and procedures that give positive recognition to interdisciplinary, transdisciplinary, and multidisciplinary research during faculty promotion and/or tenure decisions.
 - Ongoing library support for sustainability research and learning in the form of research guides, materials selection policies and practices, curriculum development efforts, sustainability literacy promotion, and e-learning objects focused on sustainability.
-

Submission Note:

Also see:

<http://mizzouadvantage.missouri.edu/energy/>

"---" indicates that no data was submitted for this field

Does the institution have a program to encourage student sustainability research that meets the criteria for this credit?:

Yes

A brief description of the institution's program(s) to encourage student research in sustainability:

Undergraduate Research Teams

The Undergraduate Research Team program seeks to create broadly interdisciplinary learning communities — comprised of faculty mentors and undergraduate students — working together on a problem-based research project. Solving big societal problems will require the expertise of more than one discipline. The program inspires “out of the box” collaborations among typically unrelated fields of study and offers students transferable problem-solving skills, content knowledge, a peer learning experience and a mentoring relationship

between faculty and students.

Some examples include:

Food for the Future

--The Life of the Garden: Exploring the Maturation of Gardens from Literary & Botanical Perspectives

--Food for Thought: Food, Body Image & the Media

--Burgundy Truffle Cultivation in Missouri: A Food-based Catalyst for Transformational Development of Rural Economies

--Waste Not, Want Not interdisciplinary food waste intervention team

Sustainable Energy

--Linkages between Rainfall, Runoff and Sediment Transport

--Stormwater Best Management Practices Monitoring

The website URL where information about the student research program is available:

<https://mizzouadvantage.missouri.edu/education/undergraduate-research-teams/>

Does the institution have a program to encourage faculty sustainability research that meets the criteria for this credit?:

Yes

A brief description of the institution's program(s) to encourage faculty research in sustainability:

Mizzou Advantage acts as a facilitator to faculty research and provides grants and aid in order to identify competitive assets that set MU apart from other universities. These assets underlie four dynamic initiatives that collectively are called the Mizzou Advantage.

-Sustainable Energy

-Food for the Future

-Media of the Future

-One Health, One Medicine

The purpose of Mizzou Advantage is to increase MU's visibility and stature in higher education and to strengthen these areas:

-Quality of faculty and students

-Instructional programs

-Value of an MU degree

-Success of grant proposals

-Fundraising results

-U.S. and Missouri economies

-Venture-capital investment

A network of collaborators — faculty members, centers, departments, corporate partners and other universities — will drive activities related to each competitive asset. MU has a \$6 million annual financial plan to increase the impact of those collaborators, whose efforts will result in more grants and opportunities to recruit the most prominent scholars and scientists. Not only will Mizzou Advantage contribute to MU's status in higher education, it will create jobs and improve the quality of life for Missourians.

The website URL where information about the faculty research program is available:

[STARS Reporting Tool | AASHE](#)

Has the institution formally adopted policies and procedures that give positive recognition to interdisciplinary, transdisciplinary, and multidisciplinary research during faculty promotion and/or tenure decisions?:

Yes

A brief description or the text of the institution's policy regarding interdisciplinary research:

MU establishes myriad opportunities for collaboration across campus. By focusing on real-world problems, our networks secure external funding, recruit top students, attract prominent scholars and scientists, create jobs and improve the quality of life for people throughout the world.

Interdisciplinary research is MU's hallmark. Examples of first-rate collaborative environments include the Center for Studies in Oral Tradition, the Christopher S. Bond Life Sciences Center, the Dalton Cardiovascular Research Center, the Donald W. Reynolds Journalism Institute and the Health Activity Center. Since its inception in 2009, Mizzou's Interdisciplinary Innovations Fund has awarded more than \$400,000 in grants to support student-centered interdisciplinary projects that use information technology to develop innovative approaches to teaching, research and service. MU is one of only five universities nationwide with law, medicine, veterinary medicine and a nuclear research reactor on one campus, fostering collaboration among departments and programs.

The website URL where information about the treatment of interdisciplinary research is available:

<http://gradstudies.missouri.edu/about/interdisciplinary-opportunities/>

Does the institution provide ongoing library support for sustainability research and learning that meets the criteria for this credit?:

Yes

A brief description of the institution's library support for sustainability research and learning:

From Rachel Brekhus, reference librarian at Ellis Library:

"It's (sustainability) an interdisciplinary field, so of course we support it in so far as we support those departments who engage in teaching and research in those courses identified as supporting sustainability, but normally, units that have a dedicated library fund assigned to them are departments or colleges. In the field of History, for instance, our purchasing includes material on environmental history, but those resources are purchased on our History fund. Our large interdisciplinary databases, like Scopus, Academic Search Complete, JSTOR, etc., index and sometimes provide full text for journals dealing with sustainability topics. We are also a state and a federal depository library, so we receive all federal government documents produced by the EPA and other agencies doing work in sustainability, as well as all such documents published by the state of Missouri, e.g., by the Missouri Department of Conservation.

The main URL describing library support for sustainability is:

<http://libraryguides.missouri.edu/sustainability>

However, if you do a search for the word "sustainable" on the general library guides website,

, you will see no fewer than 39 library guides supporting specific course and disciplines with some level of focus on sustainability. For example, you'll see a library guide for an undergraduate General Honors class on "Green Engineering/Sustainable Energy," a subject guide on Rural Sociology, where some work on sustainable agriculture, ecotourism etc. is done, a guide put together by the Engineering librarian containing core resources on Sustainable Development in particular."

The website URL where information about the institution's library support for sustainability is available:

<http://libraryguides.missouri.edu/sustainability>

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution has a formally adopted open access policy that ensures that versions of all future scholarly articles by faculty and staff and all future theses and dissertations are deposited in a designated open access repository.

The open access repository may be managed by the institution or the institution may participate in a consortium with a consortial and/or outsourced open access repository.

"---" indicates that no data was submitted for this field

Total number of institutional divisions (e.g. schools, colleges, departments) that produce research:

13

Number of divisions covered by a policy assuring open access to research:

1

A brief description of the open access policy, including the date adopted and repository(ies) used:

MOspace is the digital institutional repository of the University of Missouri System, and is a joint initiative of the University Libraries, the Office of Library Systems, and the Division of Information Technology. It is a permanent digital storehouse of research and knowledge, focusing on works created by those connected with the University of Missouri. MOspace is a place where faculty, staff and students can store their intellectual output, and depend upon a permanent URL.

MOspace allows the library to preserve and provide open access to items in a more permanent way than posting to a website. The project uses DSpace, an open source application developed at MIT, which provides permanent URLs for documents deposited through it to the MOspace server. The Libraries are committed to this ongoing effort as part of the next generation of library collections.

A copy of the open access policy:

The open access policy:

The Graduate School, which requires deposit of theses and dissertations, but does allow them to be restricted to local access if the author requests. MOspace also accommodates MU authors with federally grant-funded research who need to deposit their results in an open

access repository, although many authors prefer discipline-based repositories like PubMed Central when available.

The libraries have hosted activities for Open Access Week each fall, and the library director has taken forward recommendations on open access policies and support, but no policy, author funding or recommendation has been approved by Faculty Council or the campus academic administration.

Aside from theses and dissertations, the content we have in MOspace has all been recruited or harvested individually.

The website URL where the open access repository is available:

<http://libraryguides.missouri.edu/oajournals>

A brief description of how the institution's library(ies) support open access to research:

The website URL where information about open access to the institution's research is available:

Engagement

Campus Engagement

This subcategory seeks to recognize institutions that provide their students with sustainability learning experiences outside the formal curriculum. Engaging in sustainability issues through co-curricular activities allows students to deepen and apply their understandings of sustainability principles. Institution-sponsored co-curricular sustainability offerings, often coordinated by student affairs offices, help integrate sustainability into the campus culture and set a positive tone for the institution.

In addition, this subcategory recognizes institutions that support faculty and staff engagement, training, and development programs in sustainability. Faculty and staff members' daily decisions impact an institution's sustainability performance. Equipping faculty and staff with the tools, knowledge, and motivation to adopt behavior changes that promote sustainability is an essential activity of a sustainable campus.

Credit
Student Educators Program
Student Orientation
Student Life
Outreach Materials and Publications
Outreach Campaign
Employee Educators Program
Employee Orientation
Staff Professional Development

Student Educators Program

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution coordinates an ongoing peer-to-peer sustainability outreach and education program for degree-seeking students. The institution:

- Selects or appoints students to serve as educators and formally designates the students as educators (paid and/or volunteer),
- Provides formal training to the educators in how to conduct outreach, and
- Offers faculty or staff and/or other financial support to the program.

This credit focuses on programs for degree-seeking students enrolled in a for-credit program. Continuing education and/or non-credit students are excluded from this credit.

This credit recognizes ongoing student educator programs that engage students on a regular basis. For example, student educators may be responsible for serving (i.e. directly targeting) a particular subset of students, such as those living in residence halls or enrolled in certain academic subdivisions. Thus, a group of students may be served by a program even if not all of these students avail themselves of the outreach and education offerings.

Sustainability outreach campaigns, sustainability events, and student clubs or groups are not eligible for this credit unless the criteria outlined above are met. These programs are covered by *EN 5: Outreach Campaign* and *EN 3: Student Life*.

"---" indicates that no data was submitted for this field

Does the institution coordinate one or more ongoing student, peer-to-peer sustainability outreach and education programs that meet the criteria for this credit?:

Yes

Number of degree-seeking students enrolled at the institution:

34,748

Name of the student educators program (1st program):

Environmental Leadership Office Ambassador Program

Number of students served (i.e. directly targeted) by the program (1st program):

34,748

A brief description of the program, including examples of peer-to-peer outreach activities (1st program):

Ambassadors are committed to the development of a sustainable campus. Through peer-education and other outreach activities, Ambassadors provide knowledge, skills, perspective, and values to guide and motivate students to live in a more sustainable manner. The Ambassador Program is a student-driven commitment to peer education and the development of a sustainability-literate student body. Its mission is to foster a campus-wide culture of sustainability and assist the University of Missouri in its goal to improve its ecological footprint. Ambassadors engage Freshmen Interest Groups, Transfer Interest Groups, Mizzou Alternative Breaks, and more with presentations related to their majors and organizations emphasizing how pervasive sustainability is. In addition, they offer tours around campus to highlight the University's sustainable efforts, progress, and milestones.

A brief description of how the student educators are selected (1st program):

An information night is held at the beginning of each semester to anyone interested. Then, students fill out an online application and attend an interview night. They answer questions about the reasons for their interest, availability, dedication, other interests, and what they would like to learn from the program.

A brief description of the formal training that the student educators receive (1st program):

Weekly two hour meetings consist of the examination and discussion of the complexity and challenges of sustainable development from the past and present lifestyles, concepts, practices and beliefs. Contemporary issues of food security, public health, social justice, neoliberal globalization, and environmental degradation are explored through research, investigation, dialogue, and experience. Ambassadors are mentored by experienced participants and are evaluated by their peer audience at each presentation and tour.

A brief description of the financial or other support the institution provides to the program (1st program):

The Ambassador Program is financially supported by the Environmental Leadership Office. Moral support is extended by Residential Life, Residence Hall Association, and the Sustainability Office as they collaborate on events and outreach opportunities.

Name of the student educators program (2nd program):

Green Building Association

Number of students served (i.e. directly targeted) by the program (2nd program):

A brief description of the program, including examples of peer-to-peer outreach activities (2nd program):

USGBC is the University of Missouri chapter for the United States Green Building Association. Mizzou USGBC educates students about sustainability in built environments. As the next generation of design professionals, Mizzou USGBC recognizes the responsibility in the choices its members make.

Activities include events with the Kansas City and St. Louis chapters, socials with professionals in town (great networking experience!), Habitat for Humanity builds, study sessions for LEED accreditation and sustainable field trips. Other events include: CANstruction, Mizzou Homecoming, Shryocks Hayride & Bonfire, BARKitecture, AIA Convention in Washington, DC, Tour of Columbia's Landfill

and City Hall, Boston Architectural Trip, YELANTS Dance Marathon Team, Visit to Nick Peckham's Farm, Extreme Makeover Home Edition-Joplin.

A brief description of how the student educators are selected (2nd program):

A brief description of the formal training that the student educators receive (2nd program):

A brief description of the financial or other support the institution provides to the program (2nd program):

Name of the student educators program (3rd program):

Number of students served (i.e. directly targeted) by the program (3rd program):

A brief description of the program, including examples of peer-to-peer outreach activities (3rd program):

A brief description of how the student educators are selected (3rd program):

A brief description of the formal training that the student educators receive (3rd program):

A brief description of the financial or other support the institution provides to the program (3rd program):

Name(s) of the student educator program(s) (all other programs):

Number of students served (i.e. directly targeted) by all other student educator programs:

A brief description of the program(s), including examples of peer-to-peer outreach activities (all other programs):

A brief description of how the student educators are selected (all other programs):

A brief description of the formal training that the student educators receive (all other programs):

A brief description of the financial or other support the institution provides to the program (all other programs):

Total number of hours student educators are engaged in peer-to-peer sustainability outreach and education activities annually:

The website URL for the peer-to-peer student outreach and education program(s):

Responsible Party

Michael Burden

Sustainability Coordinator

MU Sustainability

Criteria

Institution includes sustainability prominently in its student orientation activities and programming. Sustainability activities and programming are intended to educate about the principles and practices of sustainability. The topics covered include multiple dimensions of sustainability (i.e. social, environmental and economic).

Because orientation activities vary from one institution to another, prominent inclusion of sustainability may not take the same form on each campus. Prominent inclusion of sustainability may also take different forms for different types of students (e.g. undergraduate students, transfer students, graduate students). When reporting for this credit, each institution will determine what prominent inclusion of sustainability means given its particular context. (See the Credit Example in the STARS Technical Manual.)

As this credit is intended to recognize programming and student learning about sustainability, incorporating sustainability strategies into event planning (e.g. making recycling bins accessible or not serving bottled water) is not, in and of itself, sufficient for this credit. Such strategies may count if they are highlighted and are part of the educational offerings. For example, serving local food would not, in and of itself, be sufficient for this credit; however, serving local food and providing information about sustainable food systems during meals could contribute to earning this credit.

"---" indicates that no data was submitted for this field

The percentage of entering students that are provided an opportunity to participate in orientation activities and programming that prominently include sustainability:

100

A brief description of how sustainability is included prominently in new student orientation:

Summer Welcome, Transfer Summer Welcome, and Winter Welcome are all opportunities where incoming students can learn about the various organizations and offices that are sustainability focused and driven to become involved with. For example, the Sustainability Office, Sustain Mizzou, and the Environmental Leadership Office are present in the resource fairs attended by freshmen and transfers at all welcome fairs.

The Fall Welcome Campus Picnic in the Mizzou Rec Center is a zero waste event. The leftover food and compostable serving materials used are transported to Bradford Research Farm to be composted.

The website URL where information about sustainability in student orientation is available:

<http://environmentalleadership.missouri.edu/>

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution has co-curricular sustainability programs and initiatives. The programs and initiatives fall into one or more of the following categories:

- Active student groups focused on sustainability
- Gardens, farms, community supported agriculture (CSA) or fishery programs, and urban agriculture projects where students are able to gain experience in organic agriculture and sustainable food systems
- Sustainable enterprises that include sustainability as part of their mission statements or stated purposes (e.g. cafés through which students gain sustainable business skills)
- Sustainable investment funds, green revolving funds or sustainable microfinance initiatives through which students can develop socially, environmentally and fiscally responsible investment and financial skills
- Conferences, speaker series, symposia or similar events related to sustainability that have students as the intended audience
- Cultural arts events, installations or performances related to sustainability that have students as the intended audience
- Wilderness or outdoors programs (e.g. that organize hiking, backpacking, kayaking, or other outings for students and follow Leave No Trace principles)
- Sustainability-related themes chosen for themed semesters, years, or first-year experiences (e.g. choosing a sustainability-related book for common reading)
- Programs through which students can learn sustainable life skills (e.g. a series of sustainable living workshops, a model room in a residence hall that is open to students during regular visitation hours and demonstrates sustainable living principles, or sustainability-themed housing where residents and visitors learn about sustainability together)
- Sustainability-focused student employment opportunities offered by the institution
- Graduation pledges through which students pledge to consider social and environmental responsibility in future job and other decisions
- Other co-curricular sustainability programs and initiatives

Multiple programs and initiatives may be reported for each category and each category may include institution-governed and/or student-governed programs.

"---" indicates that no data was submitted for this field

Does the institution have one or more co-curricular sustainability programs and initiatives that fall into the following categories?:

	Yes or No
--	------------------

Active student groups focused on sustainability	Yes
Gardens, farms, community supported agriculture (CSA) or fishery programs, or urban agriculture projects where students are able to gain experience in organic agriculture and sustainable food systems	Yes
Student-run enterprises that include sustainability as part of their mission statements or stated purposes	Yes
Sustainable investment funds, green revolving funds or sustainable microfinance initiatives through which students can develop socially, environmentally and fiscally responsible investment and financial skills	No
Conferences, speaker series, symposia or similar events related to sustainability that have students as the intended audience	Yes
Cultural arts events, installations or performances related to sustainability that have students as the intended audience	Yes
Wilderness or outdoors programs that follow Leave No Trace principles	Yes
Sustainability-related themes chosen for themed semesters, years, or first-year experiences	Yes
Programs through which students can learn sustainable life skills	Yes
Sustainability-focused student employment opportunities offered by the institution	Yes
Graduation pledges through which students pledge to consider social and environmental responsibility in future job and other decisions	No
Other co-curricular sustainability programs and initiatives	Yes

The name and a brief description of each student group focused on sustainability:

Sustain Mizzou is a non-partisan 501 (c) 3 non-profit organization run by student volunteers at the University of Missouri-Columbia. The mission is to promote a sustainable way of life at the University of Missouri-Columbia through education, cooperation, and local action regarding the environment.

Over the last few years Sustain Mizzou has run a successful football tailgate recycling program, a Local Food Drive, a state-wide student conference, a recycled notebook program, a lecture program where students can learn more about specific topics, a stream team, and much more.

The website URL where information about student groups is available:

<http://www.sustainmizzou.org/>

A brief description of gardens, farms, community supported agriculture (CSA) or fishery programs, and urban agriculture projects where students are able to gain experience in organic agriculture and sustainable food systems:

Tigers for Community Agriculture partners with Bradford Research Farm to engage students in growing produce sustainably. The group is part of a full-circle system that uses compost from the campus dining facilities to grow food that is then sold back to the dining halls and donated to Tiger Pantry.

The Children's Learning Garden, part of the The MU Child Development Laboratory (CDL), is an educational setting for community children and a teaching and research laboratory for University students, faculty and staff. The CDL operates a full-day, full-year teacher-training lab school affiliated with the Department of Human Development and Family Studies (HDFS) within the College of Human Environmental Sciences (HES).

The website URL where information about the organic agriculture and/or sustainable food systems projects and initiatives is available:

<http://environmentalleadership.missouri.edu/tigersforcommunityagriculture/>

A brief description of student-run enterprises that include sustainability as part of their mission statements or stated purposes:

Quirks is a consignment store at the University of Missouri where students, faculty, staff, and alumni can sell their one-of-a-kind, hand-crafted items.

The website URL where information about the student-run enterprise(s) is available:

<https://www.facebook.com/MizzouQuirks/info?tab=overview>

A brief description of the sustainable investment or finance initiatives:

n/a

The website URL where information about the sustainable investment or finance initiatives is available:

STARS Reporting Tool | AASHE

A brief description of conferences, speaker series, symposia or similar events related to sustainability that have students as the intended audience:

The Social Justice Symposium is a one day conference designed to create conversation about three core aspects of social justice: awareness, advocacy, and activism. The day's schedule includes a keynote speaker, lunch, and multiple breakout sessions with varying topics that include ethnicity, culture, women's empowerment, LGBTQ, ability, serving our veteran population, and sustainability.

The website URL where information about the event(s) is available:

<http://leadership.missouri.edu/sjs/>

A brief description of cultural arts events, installations or performances related to sustainability that have students as the intended audience:

Recycle Mountain is an art installation demonstrating how much waste the University disposes of in the form of recyclables in speakers circle (a common space on campus).

The website URL where information about the cultural arts event(s) is available:

<http://www.sustainmizzou.org/sustainability-week.html>

A brief description of wilderness or outdoors programs for students that follow Leave No Trace principles:

Venture Out offers an onsite climbing course that focuses on the fundamentals of climbing, belaying, rappelling, guidebook interpretation, and climbing ratings. Team building courses build trust, strengthen relationships, improve communication and develop problem solving skills for MU Students.

During outdoor activities, Venture Out makes it a point to follow Leave No Trace Principles.

Leave no trace principles are:

- *Plan Ahead and Prepare
- *Travel and Camp on Durable Surfaces
- *Dispose of Waste Properly
- *Leave What You Find
- *Minimize Campfire Impacts
- *Respect Wildlife
- *Be Considerate of Other Visitors

"When rock climbing or training we make sure to bring everything back, including trash. When we climb we minimize our impact on the wall and anchor points by never altering the natural landscape. If we hold a training in a park we make sure we are not disturbing the other people around or the wildlife. We always try to make it seem like we were never there when we leave."

-Bryan Goers

Venture Out Coordinator

Sustain Mizzou organizes a stream clean camping trip every year. Students enjoy a camping trip and the next morning volunteer to clean up sites along Missouri's finest rivers.

The website URL where information about the wilderness or outdoors program(s) is available:

<http://ventureout.missouri.edu/>

A brief description of sustainability-related themes chosen for themed semesters, years, or first-year experiences:

The Environmental Leadership Office has monthly themes for each semester that events, campaigns, and other campus initiatives are related around.

The website URL where information about the theme is available:

<http://environmentalleadership.missouri.edu/>

A brief description of program(s) through which students can learn sustainable life skills:

Sustain Mizzou is a non-partisan 501 (c) 3 non-profit organization run by student volunteers at the University of Missouri-Columbia. Their mission is to promote a sustainable way of life at the University through education, cooperation, and local action regarding the environment.

The website URL where information about the sustainable life skills program(s) is available:

<http://www.sustainmizzou.org/>

A brief description of sustainability-focused student employment opportunities:

The University of Missouri Sustainability Office hires multiple undergraduate and graduate students each year, giving students the tools to implement positively impactful initiatives on campus. They support graduate research in composting, recycling, green roofs, and much more.

The website URL where information about the student employment opportunities is available:

<http://sustainability.missouri.edu/>

A brief description of graduation pledges through which students pledge to consider social and environmental responsibility in future job and other decisions:

n/a

The website URL where information about the graduation pledge program is available:

A brief description of other co-curricular sustainability programs and initiatives:

Sustainability Week is an annual event that is dedicated to broadening the University of Missouri's definition of sustainability, highlighting inherent environmental issues in society, and detailing those, which the University has committed to solving.

The website URL where information about other co-curricular sustainability programs and initiatives is available:

<http://www.sustainmizzou.org/sustainability-week.html>

Outreach Materials and Publications

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution produces outreach materials and/or publications that foster sustainability learning and knowledge. The publications and outreach materials may include the following:

- A central sustainability website that consolidates information about the institution's sustainability efforts
- A sustainability newsletter
- Social media platforms (e.g. Facebook, Twitter, interactive blogs) that focus specifically on campus sustainability
- A vehicle to publish and disseminate student research on sustainability
- Building signage that highlights green building features
- Food service area signage and/or brochures that include information about sustainable food systems
- Signage on the grounds about sustainable groundskeeping and/or landscaping strategies employed
- A sustainability walking map or tour
- A guide for commuters about how to use alternative methods of transportation
- Navigation and educational tools for bicyclists and pedestrians (e.g. covering routes, inter-modal connections, policies, services, and safety)
- A guide for green living and incorporating sustainability into the residential experience
- Regular coverage of sustainability in the main student newspaper, either through a regular column or a reporter assigned to the sustainability beat
- Other

A single outreach material or publication that serves multiple purposes may be counted more than once. For example, a sustainability website that includes tools for bicyclists and pedestrians may be counted in both categories.

"---" indicates that no data was submitted for this field

Does the institution produce the following outreach materials and/or publications that foster sustainability learning and knowledge? :

	Yes or No
A central sustainability website that consolidates information about the institution's sustainability efforts	Yes

A sustainability newsletter	Yes
Social media platforms that focus specifically on campus sustainability	Yes
A vehicle to publish and disseminate student research on sustainability	Yes
Building signage that highlights green building features	No
Food service area signage and/or brochures that include information about sustainable food systems	Yes
Signage on the grounds about sustainable groundskeeping and/or landscaping strategies employed	Yes
A sustainability walking map or tour	Yes
A guide for commuters about how to use alternative methods of transportation	Yes
Navigation and educational tools for bicyclists and pedestrians	---
A guide for green living and incorporating sustainability into the residential experience	Yes
Regular coverage of sustainability in the main student newspaper, either through a regular column or a reporter assigned to the sustainability beat	Yes
Other sustainability publications or outreach materials not covered above	---

A brief description of the central sustainability website:

The university has two websites devoted to sustainability efforts. One is maintained by the MU Sustainability Office and the other is devoted to student-oriented sustainability initiatives and maintained by Student Life:

<http://environmentalleadership.missouri.edu/>

The website URL for the central sustainability website:

<http://sustainability.missouri.edu/>

A brief description of the sustainability newsletter:

Sustain Mizzou sends out a weekly e-newsletter through MailChimp that includes tips on living sustainably and highlights campus and community events related to sustainability, such as film screenings, e-waste drives and general meetings.

The website URL for the sustainability newsletter:

<http://www.sustainmizzou.org/>

A brief description of the social media platforms that focus specifically on campus sustainability:

The Sustainability Office, Environmental Leadership Office and Sustain Mizzou all use Facebook to share sustainability related events and messages.

The website URL of the primary social media platform that focuses on sustainability:

<https://www.facebook.com/MUSustainabilityOffice>

A brief description of the vehicle to publish and disseminate student research on sustainability:

Footprint is a sustainable living magazine published by Sustain Mizzou and includes articles on sustainability and research related to sustainability.

The Office of Undergraduate Research publishes student research on sustainability and highlights student awards related to research.

The website URL for the vehicle to publish and disseminate student research on sustainability:

<http://undergradresearch.missouri.edu/>

A brief description of building signage that highlights green building features :

n/a

The website URL for building signage that highlights green building features :

A brief description of food service area signage and/or brochures that include information about sustainable food systems:

-Can the Waste: encourages students to be more conscious of the amount of food wasted.

-Going Trayless: program implemented by the dining halls that eliminated the use of trays.

-Earthright: publication put together by the campus dining service that educates on food waste and includes tips to reduce waste.

-Signage on waste receptacles to discern between recyclable materials and landfill materials

-Local to Missouri: identifies local foods

The website URL for food service area signage and/or brochures that include information about sustainable food systems:

<http://dining.missouri.edu/earthright/>

A brief description of signage on the grounds about sustainable groundskeeping and/or landscaping strategies:

Mizzou Botanic Garden has joined the Missouri Botanical Garden's Center for Home Gardening and Powell Gardens by bringing to your attention a large selection of plants considered worthy of planting, yet underutilized in the home landscape. Known as Plants of Merit, these plants are marked by signs. They have been selected because of their consistently high performance in the areas of:

pest resistance

growth characteristics

adaptability to a variety of growing conditions

ease of maintenance

Professional horticulturists are continually evaluating new plants and adding to the list each year. By displaying and labeling the Plants of Merit, we hope to increase their appreciation and use in the mid-Missouri home landscape.

-Native Plant Garden--plants native to Missouri

The website URL for signage on the grounds about sustainable groundskeeping and/or landscaping strategies:

<http://gardens.missouri.edu/plants-of-merit/index.php>

A brief description of the sustainability walking map or tour:

There are a few options:

1) Explore Mizzou's campus and learn about our most sustainable spots on the Sustainability Top Ten Tour. Guide yourself on a tour of different sustainability oriented places on campus -- from the biomass boiler and the photovoltaic array to the craft studio -- and you'll discover a host of new places on campus. In addition to the self-guided tour, you can request a guided tour through the Environmental Leadership Office:

<http://environmentalleadership.missouri.edu/presentations-and-tours/>

2) The Tree Trails are a part of the Mizzou Botanic Garden's mission to provide educational opportunities for the campus community and its visitors. The campus boasts many gardens and horticultural diversity to be enjoyed by all.

The trails consist of three loops — the Jesse Hall Loop, through the historic Francis Quadrangle; the Lowry Mall Loop, centering on Ellis Library and areas popular with students; and the Memorial Union Loop, which meanders among early 20th century white limestone

buildings.

Trees on each loop are identified by sequentially numbered plaques. The numbers on the plaques correspond to loop numbers. The number of trees, approximate distance and walking times are shown at the top of each loop map.

The website URL of the sustainability walking map or tour:

<http://sustainability.missouri.edu/involved/topten.html>

A brief description of the guide for commuters about how to use alternative methods of transportation:

The University encourages and promotes many sustainable transportation practices including but not limited to biking, shared-car programs, bus services, and use of alternative fuel vehicles. These programs are highlighted on the Sustainability Office website and also includes a link to the campus bike map.

The website URL for the guide for commuters about how to use alternative methods of transportation:

<http://sustainability.cf.missouri.edu/topics/transportation.html>

A brief description of the navigation and educational tools for bicyclists and pedestrians:

The Bike Resource Center strives to make bicycles a safe and affordable option for commuting, to reduce environmental impact through the use of non-motorized transportation, and to encourage personal health through exercise.

The BRC sets up its free repair shop in the heart of campus (weather permitting). In addition to fixing bikes, representatives from the BRC educate bikers about safety, routes and other resources.

The website URL for navigation and educational tools for bicyclists and pedestrians:

<http://environmentalleadership.missouri.edu/bike-resource-center/>

A brief description of the guide for green living and incorporating sustainability into the residential experience:

The Dashboard Program website includes green living and sustainability guidelines for residents to follow and commit to.

The website URL for the guide for green living and incorporating sustainability into the residential experience:

<http://buildingdashboard.net/mu/>

A brief description of regular coverage of sustainability in the main student newspaper, either through a regular column or a reporter assigned to the sustainability beat:

The Maneater regularly covers sustainability related topics, and articles can be easily accessed through the Maneater website by searching keywords/tags such as "sustainability"

The website URL for regular coverage of sustainability in the main student newspaper, either through a regular column or a reporter assigned to the sustainability beat:

[STARS Reporting Tool](#) | [AASHE](#)

<http://www.themaneater.com/tags/sustainability/>

A brief description of another sustainability publication or outreach material not covered above (1st material):

Environmental online magazine which provides an easily accessible path to sustainability.

The website URL for this material (1st material):

<http://footprintmag.wordpress.com/>

Does the institution produce another sustainability publication or outreach material not covered above? (2nd material):

A brief description of this material (2nd material):

n/a

The website URL for this material (2nd material):

Does the institution produce another sustainability publication or outreach material not covered above? (3rd material):

A brief description of this material (3rd material):

n/a

The website URL for this material (3rd material):

Does the institution produce another sustainability publication or outreach material not covered above? (4th material):

A brief description of this material (4th material):

n/a

The website URL for this material (4th material):

Does the institution produce another sustainability publication or outreach material not covered above? (5th material):

A brief description of this material (5th material):

n/a

The website URL for this material (5th material):

Does the institution produce another sustainability publication or outreach material not covered above? (6th material):

A brief description of this material (6th material):

n/a

The website URL for this material (6th material):

Does the institution produce another sustainability publication or outreach material not covered above? (7th material):

A brief description of this material (7th material):

n/a

The website URL for this material (7th material):

Does the institution produce another sustainability publication or outreach material not covered above? (8th material):

A brief description of this material (8th material):

n/a

The website URL for this material (8th material):

Outreach Campaign

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Part 1

Institution holds at least one sustainability-related outreach campaign directed at students that yields measurable, positive results in advancing sustainability. The sustainability-related outreach campaign may be conducted by the institution, a student organization, or students in a course.

Part 2

Institution holds at least one sustainability-related outreach campaign directed at employees that yields measurable, positive results in advancing sustainability. The sustainability-related outreach campaign may be conducted by the institution or an employee organization.

The campaign(s) reported for this credit could take the form of a competition (e.g. a residence hall conservation competition), a rating or certification program (e.g. a green labs or green office program), and/or a collective challenge (e.g. a campus-wide drive to achieve a specific sustainability target). A single campus-wide campaign may meet the criteria for both parts of this credit if educating students is a prime feature of the campaign and it is directed at both students and employees.

To measure if a campaign yields measurable, positive results, institutions should compare pre-campaign performance to performance during or after the campaign. The following impacts are not sufficient for this credit:

- Increased awareness
 - Additional members of a mailing list or group
-

"---" indicates that no data was submitted for this field

Has the institution held at least one sustainability-related outreach campaign directed at students within the previous three years that has yielded measurable, positive results in advancing sustainability?:

Yes

Has the institution held at least one sustainability-related outreach campaign directed at employees within the previous three years that has yielded measurable, positive results in advancing sustainability?:

Yes

The name of the campaign (1st campaign):

Waste Not, Waste Not

A brief description of the campaign (1st campaign):

The “Waste Not, Want Not” task force is a Mizzou Advantage undergraduate research team involving an interdisciplinary collaboration of students and faculty seeking to understand food waste and how to decrease it on campus.

A brief description of the measured positive impact(s) of the campaign (1st campaign):

Objectives:

The research team will be organized around three general learning objectives.

1. Understand what constitutes food waste.
2. Explore some of the root causes of food waste.
3. Identify ongoing local and regional efforts to address food waste.

Outcomes:

By the end of the second semester, we hope to have achieved the following outcomes.

1. Increase interdisciplinary networking and dialogue on campus about this issue.
2. Synthesize a working definition of food waste.
3. Compile a literature review about food waste.
4. Maintain ongoing writing (journal, Discussion Board) that reflects our learning.
5. Present research poster on findings at the Undergraduate Research and Creative Achievements Forum.
6. Identify possible projects to alleviate food waste.
7. Develop a draft syllabus for a future team-taught course on food waste.
8. Design experiment aimed at measuring sources of food waste.

This is an ongoing project that began in spring 2014 and will continue through 2015. The work has already increased awareness among students regarding food waste.

The website URL where information about the campaign is available (1st campaign):

<http://dining.missouri.edu/food-waste-campaign/>

The name of the campaign (2nd campaign):

RecycleMania

A brief description of the campaign (2nd campaign):

RecycleMania is a friendly competition and benchmarking tool for college and university recycling programs to promote waste reduction activities to their campus communities. Over an 8-week period, colleges across the United States and Canada report the weekly amount of recycling and trash collected and are in turn ranked in various categories based on who recycles the most on a per capita basis, as well as which schools have the best recycling rate as a percentage of total waste and which schools generate the least amount of combined trash and recycling. With each week’s updated ranking, participating schools follow their performance against other colleges and use the results to rally their campus to reduce and recycle more.

National recognition is provided to the winning school in each category on the RecycleMania website and in a national press release. Winning schools receive an award made out of recyclable materials, and win the right to host that category’s special traveling trophy for the coming year.

A brief description of the measured positive impact(s) of the campaign (2nd campaign):

In the spring of 2014, the University of Missouri – Columbia got a new Chancellor. On February 1st R. Bowen Loftin began his new position and it was a huge media blitz of attention on him. He is a bowtie-clad, mustachioed man who is beloved by students of his past appointment. He has an active Twitter account @Bowtieger and we piggy-backed off of his celebrity status on campus and wanted to let the community know right from the start that he supported RecycleMania! Below is the text we used in the postings. Not only did he re-tweet the photo, but so did the official Mizzou Facebook page!

"R. Bowen Loftin thinks you should give recycling a chance-llor! Join us in our effort to make Mizzou a greener place by participating in RecycleMania! Everything you recycle on campus not only reduces waste in the landfill but saves us money, too! Like our page for more awesome MU Sustainability Office updates!"

With our new Chancellor and the adorable pun, we attracted a lot of attention. We had more media call us during this RecycleMania than ever before. We got high profile people at our University to publicly support RecycleMania in order to get full “buy-in” from all levels of campus. More people have visited our Facebook page and called the office to see how they can help.

Spring 2014 was our best performance in RecycleMania. We finished 26th out of 256 schools and recycled at a 50 percent rate, due in part to the campaign and the participation of faculty and staff.

The website URL where information about the campaign is available (2nd campaign):

<http://recyclemaniacs.org/sites/default/files/University%20of%20Missouri%20-%20Columbia.pdf>

A brief description of other outreach campaigns, including measured positive impacts:

Employee Educators Program

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution administers or oversees an ongoing faculty/staff peer-to-peer sustainability outreach and education program.

In the program, employee sustainability educators are formally designated and receive formal training or participate in an institution-sponsored orientation. The institution offers financial or other support to the program.

This credit recognizes ongoing programs that engage employees on a regular basis. For example, employee educators may represent or be responsible for engaging workers in certain departments or buildings. Thus, a group of employees may be served (i.e. directly targeted) by a program even if not all of these employees avail themselves of the outreach and education offerings.

Training and/or professional development opportunities in sustainability for staff are excluded from this credit. These activities are covered in *EN 8: Staff Professional Development*.

"---" indicates that no data was submitted for this field

Does the institution administer or oversee an ongoing faculty/staff peer-to-peer sustainability outreach and education program that meets the criteria for this credit?:

Yes

Total number of employees:

10,670

Name of the employee educators program (1st program) :

Biannual presentation to Building Coordinators

Number of employees served by the program (1st program):

10,670

A brief description of how the employee educators are selected (1st program):

Currently this program is handled exclusively by Sustainability Office staff.

A brief description of the formal training that the employee educators receive (1st program):

Sustainability Office staff meet with building coordinators twice per year to share new programs, report on progress and educate employees on how to improve sustainability efforts in their respective offices. Building Coordinators then share those tips/policy updates with staff in their buildings.

A brief description of the staff and/or other financial support the institution provides to the program (1st program):

The program falls under the general operating budget of the Sustainability Office.

The website URL where information about the program is available (1st program):

<http://sustainability.missouri.edu/>

Name of the employee educators program (2nd program):

Number of employees served by the program (2nd program):

0

A brief description of how the employee educators are selected (2nd program):

n/a

A brief description of the formal training that the employee educators receive (2nd program):

n/a

A brief description of the financial or other support the institution provides to the program (2nd program):

n/a

The website URL where information about the program is available (2nd program):

Name(s) of the employee educator program(s) (all other programs):

Number of employees served by all other programs:

0

A brief description of how the employee educators are selected (all other programs):

n/a

A brief description of the formal training that the employee educators receive (all other programs):

n/a

A brief description of the staff and/or other financial support the institution provides to the program(s) (all other programs):

n/a

The website URL where information about the program(s) is available (all other programs):

Employee Orientation

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution covers sustainability topics in new employee orientation and/or in outreach and guidance materials distributed to new employees, including faculty and staff. The topics covered include multiple dimensions of sustainability (i.e. social, environmental and economic).

"---" indicates that no data was submitted for this field

The percentage of new employees that are offered orientation and/or outreach and guidance materials that cover sustainability topics:

0

A brief description of how sustainability is included in new employee orientation:

n/a

The website URL where information about sustainability in new employee orientation is available:

Staff Professional Development

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution makes available training and/or other professional development opportunities in sustainability to all staff at least once per year.

Separate training opportunities for each department would count for this credit, as long as each staff member has an opportunity to learn about sustainability at least once per year. It is not necessary that each staff member attend such trainings; the credit is based on making training available to all staff.

This credit applies to staff members only; it does not include faculty members.

The following training opportunities are not sufficient for this credit:

- Specialized training for a small group of staff
 - The opportunity to participate in an institutional sustainability committee or group
-

"---" indicates that no data was submitted for this field

Does the institution make available training and/or other professional development opportunities in sustainability to all staff at least once per year?:

Yes

A brief description of the sustainability trainings and professional development opportunities available to staff :

Held every fall, Sustainapalooza is MU's annual sustainability festival, with live music and games. It is open to anyone, but Staff Council has partnered with the Sustainability Office for the last few years to help host and promote the event. It features interactive displays where attendees can learn about sustainability on campus and how they can get involved.

In addition, Sustainability Office staff visit the Staff Council meetings once per semester to provide updates, brief training and solicit feedback. Representatives from Staff Council are responsible for sharing information with staff in their respective areas.

Also, any staff member may apply for staff development funds to attend a sustainability related conference, such as AASHE or Green Sports Alliance.

The percentage of staff that participated in training and/or other professional development opportunities in sustainability during the previous year:

The website URL where information about staff training opportunities in sustainability is available:

http://www.umsystem.edu/ums/hr/hr_professionals_training_and_development

Public Engagement

This subcategory seeks to recognize institutions that help catalyze sustainable communities through public engagement, community partnerships and service. Engagement in community problem-solving is fundamental to sustainability. By engaging with community members and organizations in the governmental, non-profit and for-profit sectors, institutions can help solve sustainability challenges. Community engagement can help students develop leadership skills while deepening their understandings of practical, real-world problems and the process of creating solutions. Institutions can contribute to their communities by harnessing their financial and academic resources to address community needs and by engaging community members in institutional decisions that affect them. In addition, institutions can contribute toward sustainability broadly through inter-campus collaboration, engagement with external networks and organizations, and public policy advocacy.

Credit
Community Partnerships
Inter-Campus Collaboration
Continuing Education
Community Service
Community Stakeholder Engagement
Participation in Public Policy
Trademark Licensing
Hospital Network

Community Partnerships

Responsible Party

Michael Burden
 Sustainability Coordinator
 MU Sustainability

Criteria

Institution has one or more formal partnership(s) with the local community, including school districts, government agencies, non-profit organizations, businesses and/or other entities, to work together to advance sustainability within the community.

Each partnership conforms to one of the following types:

Type of Partnership	Indicators
<p>A. Supportive</p>	<ul style="list-style-type: none"> • <i>Scope:</i> Addresses a sustainability topic or a specific aspect of sustainability (e.g. community garden, environmental remediation, community environmental health and education) • <i>Duration:</i> May be time-limited (short-term projects and events), multi-year, or ongoing • <i>Commitment:</i> Institutional involvement may include financial and/or staff support or may be limited to resource sharing and/or endorsement • <i>Governance:</i> Campus and community leaders or representatives are engaged in program/project development
<p>B. Collaborative</p>	<ul style="list-style-type: none"> • <i>Scope:</i> Addresses one or more sustainability challenge and may simultaneously support social equity and wellbeing, economic prosperity, and ecological health (e.g. a green jobs program in an economically disadvantaged neighborhood) • <i>Duration:</i> May be time-limited, multi-year, or ongoing • <i>Commitment:</i> Institution provides faculty/staff, financial, and/or material support • <i>Governance:</i> Campus and local community members are both engaged in program/project development, from agenda setting and planning to decision-making, implementation and review

C.Transformative

- *Scope:* Catalyzes community resiliency and local/regional sustainability by simultaneously supporting social equity and wellbeing, economic prosperity, and ecological health on a community or regional scale (e.g. “transition” projects and partnerships focused on community adaptation to climate change)
- *Duration:* Is multi-year or ongoing and proposes or plans for institutionalized and systemic change
- *Commitment:* Institution provides faculty/staff and financial or material support
- *Governance:* Partnership has adopted a stakeholder engagement framework through which community members, vulnerable populations, faculty, staff, students and other stakeholders are engaged in program/project development, from agenda setting and planning to decision-making, implementation and review

An institution may have multiple partnerships of each type, however no single partnership may be both supportive and collaborative, collaborative and transformative, or supportive and transformative.

Recognizing the diversity of forms that community partnerships may take, it is not required that a partnership meet all of the criteria listed to be considered supportive or collaborative. A partnership must meet all of the criteria listed to be considered transformative, however. For further guidance in identifying community partnerships that meet the criteria for each type, see the Credit Example in the [STARS Technical Manual](#).

This credit recognizes campus-community partnerships that advance sustainability in an explicit and participatory way. Participatory, community-based research and engaged scholarship around issues of sustainability may be included if it involves formal partnership(s). Although community service activities (e.g. academic service learning, co-curricular service learning and volunteer activities, Work-Study community service and paid community service internships) may involve local partnerships and contribute toward sustainability, they are not included in this credit. Community service is covered by *EN 12: Community Service*.

"---" indicates that no data was submitted for this field

Does the institution have at least one formal sustainability partnership with the local community that meets the criteria as “supportive”?:

Yes

A brief description of the institution’s supportive sustainability partnership(s) with the local community:

The University of Missouri and the Sustainability Office proudly partner with local organizations in many endeavors, including, but not limited to regularly bringing the Columbia Farmer's Market to campus, working with local and regional food banks to improve access to healthy food, and supporting local bike/pedestrian education and infrastructure initiatives. Together we all work towards a more sustainable future. Some of the local organization partnerships include, but are not limited to:

*Jefferson Institute

*GetAbout Columbia

*Mid-Missouri Solid Waste Management District

*U.S. Green Building Council: Missouri Heartland Chapter

*Hinkson Creek Watershed Restoration Project: Show-Me Yards

*Columbia Business Times: Gleaning profit from pollution

*Missouri River Communities Network

*Alternative Community Training

*Ryan Enterprise: Plastic recycling and manufacturing

*Mid-MO Recycling: Electronic waste recycling

*City of Columbia

*Grow Well Missouri

Does the institution have at least one formal sustainability partnership with the local community that meets the criteria as “collaborative”?:

Yes

A brief description of the institution's collaborative sustainability partnership(s):

The University of Missouri collaborated with the city of Columbia's Parks and Recreation Department to conduct a study about crosswalks. The summary of the study is found below:

The Impact of a Signalized Crosswalk on Crossing Behaviors in a Low-Income Minority Neighborhood

by Courtney Schultz¹, Sonja Wilhelm Stanis¹, PhD, Stephen Sayers², PhD, Ian Thomas, PhD

¹Department of Parks, Recreation, and Tourism, University of Missouri. ²Department of Physical Therapy, University of Missouri.

³PedNet Coalition

Background and Purpose

Communities with predominantly low-income and minority populations are effected by the highest levels of sedentary behavior and obesity (Day, 2006). These underserved communities often have limited access to parks and active transportation resultant of high-speed, high-volume streets and an outdated built environment. While studies suggest that sidewalks, crosswalks, and traffic calming measures can increase pedestrian safety (Pucher & Dijkstra, 2003) few studies have evaluated pedestrian crossing behaviors as a result of infrastructure changes. In 2012-2013, the completion of a signalized crosswalk and landscaped median linking low-income housing with a public park provided a natural experiment to examine the effect of an infrastructure project upon active living behaviors.

Objectives

The purpose of this study was to examine the effect of changes to the built environment to determine whether street crossing infrastructure modifications change pedestrian crossing behaviors or traffic patterns in a low-income and predominately racial/ethnic minority community.

Methods

Data collection occurred at one Intervention site (Providence Road) and one Control site (College Avenue) in Columbia, MO. We selected the Control site by examining relevant characteristics of the neighborhood (e.g., size, income level), and the corresponding street (e.g., number of lanes, typical traffic volumes/speeds, pedestrian crossing facilities). Street crossing behaviors were collected using direct observation and assessed the mode of transportation, legality of the crossing (e.g., at intersections/crosswalks or not), as well as race/ethnicity, gender, and age within 5-6 zones at both sites. Magnetic traffic detectors were also embedded in both the Intervention and Control streets during the data collection to capture traffic volume and speed. Data collection ran concurrently at both sites for seven days (Monday-Sunday) over the same two-week period in June 2012 (pre-intervention) and June 2013 (post-intervention), crossing behaviors were recorded for three hours each day (7:30am, 12:30pm, and 3:30pm) while traffic data were collected continuously for 168 hours

during the first week.

Descriptive statistics were calculated for all variables. Independent samples t-tests assessed overall changes in pedestrian crossings and traffic volume at each site from 2012 to 2013. Changes in legal/illegal crossings and traffic speed (above the speed limit/below the speed limit) at each site from 2012 to 2013 were analyzed using Pearson's Chi Square.

Results

Total pedestrian crossings at the Intervention site (Providence Road) increased from 1,464 in 2012 to 1,658 in 2013 ($p < 0.001$). Between 2012 and 2013, the number of legal crossings at the Intervention site increased from 553 (38%) to 795 (48%) ($p < 0.001$). In both years, the majority of observations were pedestrians (1,099 [75%], 2012; 1,316 [79%], 2013) followed by bicyclists (332 [23%], 2012; 310 [19%], 2013). Amongst children and teens, legal crossings rose from 45(25%) to 94(61%) and from 90(23%) to 169(41%), respectively between 2012 and 2013 (both: $p < 0.001$). In addition, total traffic volume at the Intervention site fell slightly from 148,857 vehicles in 2012 to 148,508 in 2013 ($p = 0.01$). Motor vehicles that were traveling above the speed limit of 35 mph decreased from 67,922(46%) in 2012 to 51,339(35%) in 2013 ($p < 0.001$).

There was no change in the number of total pedestrian crossings at the Control site (College Avenue) from 2012 (4,385) to 2013 (4,485) ($p = 0.90$). Legal crossings increased at the Control site, but only by 2% (2,341 [53%] in 2012 to 2,507 [55%] in 2013) ($p = 0.01$). Similar to the Intervention site, pedestrians were most commonly observed (3712 [85%], 2012; 3890 [87%], 2013), followed by bicyclists (640[15%], 2012; 549[12%], 2013). Amongst children, the small number of legal crossings did not significantly change (10 [77%], 2012; 18 [95%], 2013) ($p = 0.135$) but for teens changed from 497(39%) to 162(55%) ($p < 0.001$), respectively between 2012 and 2013. As with the Intervention site, total traffic volume at the Control site fell from 132,428 in 2012 to 124,635 in 2013 ($p < 0.001$). However, motor vehicles that were traveling above the speed limit of 35 mph increased from 64,310 (49%) in 2012 to 73,552 (59%) in 2013 ($p < 0.001$).

Conclusions

The replacement of an unsafe pedestrian bridge with an at-grade, signalized pedestrian crosswalk and landscaped median significantly impacted both pedestrian crossing behaviors and vehicular traffic behaviors. Specifically, the installation of the pedestrian crosswalk yielded reduced proportions of illegal crossings (especially among children), and reduced the percentage of vehicles speeding on the highway through the neighborhood at the Intervention site while the percentage of vehicles speeding at the Control site increased. This study suggests that street crossing infrastructure changes do change behavior, which will help inform future street crossing interventions and may be used to guide policies promoting physical activity in similar communities where high-speed arterials are barriers to parks and active living.

Implications for Practice and Policy

By demonstrating increased pedestrian safety and traffic calming, this study adds support to the feasibility of advocacy efforts to reverse transportation practices that favor automobiles at the expense of pedestrian accessibility. These successful outcomes could be used to support advocacy efforts seeking to modify the built environment to increase physical activity in underserved neighborhoods.

Support/Funding Source

University of Missouri Research Board Grant

Does the institution have at least one formal sustainability partnership with the local community that meets the criteria as “transformative”?:

Yes

A brief description of the institution's transformative sustainability partnership(s) with the local community:

An integrated Stormwater Master Plan with the City of Columbia and the University of Missouri that identifies and employs BMPs (Best Management Practices) and uses BMPs for public education and research to improve water quality in our urban watershed.

A brief description of the institution's sustainability partnerships with distant (i.e. non-local) communities:

The University participates in the St. Louis Higher Education Sustainability Consortium (STL-HESC). This organization is run by campus sustainability champions at higher ed institutions with support from a second tier of agencies, businesses and nonprofits when necessary and called upon. Big plans these days for STL-HESC include forging stronger connections with "Tier II" agencies and businesses and partnering more closely with the St Louis RCGA (Regional Chamber and Growth Association), as well as continuing initiatives with the online course directories, green living guide and other competitions.

The website URL where information about sustainability partnerships is available:

<http://masterplan.missouri.edu/Old/stormwater/>

Inter-Campus Collaboration

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution collaborates with other colleges and universities to support and help build the campus sustainability community.

See the Credit Example in the STARS Technical Manual for guidance on identifying appropriate collaborations.

"---" indicates that no data was submitted for this field

Does the institution collaborate with other colleges and universities to support and help build the campus sustainability community?:

Yes

A brief summary of papers, guides, presentations, and other resources the institution has developed to share their sustainability experience with other institutions:

The following plans and summaries are available to the public online and represent the University's broad efforts to address sustainability:

Climate Action Plan

Campus Master Plan

Environmental Affairs and Sustainability Committee (EASC) Report

Sustainability Task Force Report

Environmental Sustainability Report

Solid Waste & Recycling Report

The names of local, state/provincial, regional, national, or international campus sustainability organizations or consortia in which the institution participates and/or is a member:

The University of Missouri and the Sustainability Office proudly partner with local organizations in many endeavors. Such organizations include:

Association for the Advancement of Sustainability in Higher Education (AASHE)

American College and University President's Climate Commitment (ACUPCC)

St. Louis Regional Higher Education Sustainability Consortium (STL-HESC)

GetAbout Columbia

Mid-Missouri Solid Waste Management District

U.S. Green Building Council: Missouri Heartland Chapter

Hinkson Creek Watershed Restoration Project

Alternative Community Training

Ryan Enterprise: Plastic recycling and manufacturing

Mid-MO Recycling: Electronic waste recycling

Columbia Center for Urban Agriculture (CCUA)

Missouri River Communities Network

Missouri River Relief

Community Garden Coalition

Pednet

Green Sports Alliance

A brief summary of additional ways the institution collaborates with other campuses to advance sustainability :

MU collaborates with the other campus in the UM system (Rolla, UMSL, and UMKC) through quarterly tele-presence conferencing, and through visits to each others' campuses. Together we work on system-wide policy, share best practices and leverage and collective knowledge and experiences to advance sustainability efforts across the UM system.

The website URL where information about cross-campus collaboration is available:

<http://www.missouribotanicalgarden.org/sustainability/sustainability/sustainable-learning/in-schools-universities/sustainability-in-higher-education/stl-higher-education-sustainability-consortium.aspx>

Continuing Education

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Part 1

Institution offers continuing education courses that address sustainability.

Courses that address sustainability include continuing education sustainability courses and continuing education courses that include sustainability. Courses that can be taken for academic credit are not included in this credit. They are covered by the Curriculum subcategory.

Part 2

Institution has at least one sustainability-themed certificate program through its continuing education or extension department.

Degree-granting programs (e.g. programs that confer Baccalaureate, Masters, and Associates degrees) and certificates that are part of academic degree programs are not included in this credit. They are covered in the Curriculum subcategory.

"---" indicates that no data was submitted for this field

Does the institution offer continuing education courses that address sustainability?:

Yes

Number of continuing education courses offered that address sustainability:

51

Total number of continuing education courses offered:

154

A copy of the list and brief descriptions of the continuing education courses that address sustainability:

[Sustainability Related Offerings of MU Extension 2014.docx](#)

A list and brief descriptions of the continuing education courses that address sustainability:

Several courses offered address sustainability. They are highlighted in yellow in the list above. A few examples include:

Missouri Master Gardener: Written at an introductory level, this course provides a foundation in plant structure and function; soils and plant nutrition; plant propagation; fruits; vegetables; herbaceous and woody plants; entomology; plant pathology; landscape design; lawns; and pesticides usage. It is the online version of the core training required for individuals wishing to become certified Missouri Master Gardeners. In addition to completing this course individuals also must devote 30 hours of volunteer service to become certified.

Missouri Beginning Farmers Program

Participants will be able to:

- Identify beginning farming practices that can assist participants to become successful beginning farmers.
- Learn sustainable farming practices from other successful sustainable farmers and educators through webinars
- Gain knowledge from other farmers on beginning farming practices through discussion forums with other farmers and educators.
- Discover answers to their questions about beginning farming practices through webinars from successful farmers and educators.

Does the institution have at least one sustainability-themed certificate program through its continuing education or extension department?:

Yes

A brief description of the certificate program:

MU Extension partners with several of the University's schools and colleges to deliver noncredit continuing education courses, programs and training in a variety of professional trades that contribute to the success of public-sector organizations and private industries throughout Missouri and the nation. One such program is directly related to sustainability:

Community Development Academy (CDA). The CDA includes curricula that address the following issues:

- Keys to sustaining the future of communities
- Grounding development in community
- Understanding the local economy and economic development
- Role of local government in the local economy
- Participatory action research
- Discrimination and community development programming
- Working together: networks, partnerships, coalitions and collaboration
- Building effective community organizations
- Governance and civil society
- The environment and sustaining the future of communities

Year the certificate program was created:

1,996

The website URL where information about sustainability in continuing education courses is available :

<http://extension.missouri.edu/index.aspx>

Community Service

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Part 1

Institution engages its student body in community service, as measured by the percentage of students who participate in community service.

Part 2

Institution engages students in community service, as measured by the average hours contributed per full-time student per year.

Institutions may exclude non-credit, continuing education, and/or part-time students from this credit.

Submission Note:

(Total hours do not include any hours students served through participation in athletics, student organizations, Greek Life, etc.)

"---" indicates that no data was submitted for this field

Number of students engaged in community service:

15,127

Total number of students :

36,376

Does the institution wish to pursue Part 2 of this credit (community service hours)?:

Yes

Total number of student community service hours contributed during a one-year period:

216,968

Does the institution include community service achievements on student transcripts?:

Yes

A brief description of the practice of including community service on transcripts, if applicable:

Students who serve 35 or more hours during the semester through the Office of Service-Learning may earn an "S" designation for service on their transcripts.

Does the institution provide incentives for employees to participate in community service (on- or off-campus)?:

Yes

A brief description of the institution's employee community service initiatives:

Faculty and staff serve as leaders in global service initiatives offered through the Office of Service-Learning. In addition to being a facilitator for students, they provide direct service to communities alongside their students. Programs are offered in Ghana, Thailand, Ireland, Costa Rica, India, South Africa and Ecuador. If accepted, faculty and staff have their travel costs covered and receive a small stipend.

The website URL where information about the institution's community service initiatives is available:

<https://muserves.missouri.edu/>

Community Stakeholder Engagement

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution has adopted a framework for community stakeholder engagement in governance, strategy and operations. The framework includes:

1) Policies and procedures that ensure community stakeholder engagement is applied systematically and regularly across the institution's activities (e.g. planning and development efforts, capital investment projects, and/or other activities and decisions that affect the broader community)

And

2) Established practices to identify and engage relevant community stakeholders, including any vulnerable or underrepresented groups.

Frameworks adopted by entities of which the institution is part (e.g. government or university system) may count for this credit as long as the policies apply to and are followed by the institution.

This credit does not include the engagement of internal campus stakeholders (e.g. students, faculty and staff); internal stakeholder engagement is covered in *PA 3: Governance*.

"---" indicates that no data was submitted for this field

Has the institution adopted a framework for community stakeholder engagement in governance, strategy and operations?:

Yes

A brief description of the policies and procedures that ensure community stakeholder engagement is applied systematically and regularly across the institution's activities:

The University of Missouri's dedication to stewardship at the educational, environmental and fiscal levels originates from its mission of teaching, research, public service and economic development. All planning efforts at Mizzou further support these goals.

MU's master planning process began more than 30 years ago with a devotion to its historic buildings when planning for the future. A commitment to practical renovation and repurposing strategies supports the institution's values and incorporates a practice of fiscal and environmental responsibility.

Mizzou has broadened its role as a steward of the environment by becoming a leader in compact development, and by establishing policies such as a storm water master plan in conjunction with the City of Columbia and Boone County (our local government

stakeholders).

As a public, land-grant university, we consider all citizens of Missouri as our stakeholders. Information about statewide impacts and engagement can be found here:

<http://www.umsystem.edu/about-us>

We send a list of proposed capital improvements to the state legislature periodically to evaluate if they will choose to allocate and distribute funds to those capital improvement projects. Any project with design fees over \$500,000 or construction fees over \$5 million must go to the Board of Curators for approval.

A brief description of how the institution identifies and engages community stakeholders, including any vulnerable or underrepresented groups:

MU Vice Chancellor of Operations and C.O.O. Gary Ward meet monthly with the City of Columbia's Public Works Director, John Glascock and his direct reports to discuss upcoming projects that could impact either party.

List of identified community stakeholders:

City of Columbia

Neighboring residents represented by the their neighborhood associations (Grasslands and East Campus)

Residents of Missouri

A brief description of successful community stakeholder engagement outcomes from the previous three years:

There was City, County, and MU collaboration to study and implement BMPs to improve water quality and aquatic habitat in the Hinkson Creek Watershed. Several monitoring sites were set up and the data collected support research projects and are used to inform public policy.

The website URL where information about the institution's community stakeholder engagement framework and activities is available:

Participation in Public Policy

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution advocates for national, state/provincial, or local public policies that support campus sustainability or that otherwise advance sustainability.

The policy advocacy must be done by the institution, not by students or a student group. This credit acknowledges institutions that advocate for policy changes and legislation to advance sustainability broadly. Advocacy efforts that are made exclusively to advance the institution's interests or projects may not be counted. For example, advocating for government funding for campus sustainability may be counted, whereas lobbying for the institution to receive funds that have already been appropriated may not.

"---" indicates that no data was submitted for this field

Does the institution advocate for national, state/provincial, or local public policies that support campus sustainability or that otherwise advance sustainability?:

No

A brief description of how the institution engages in public policy advocacy for sustainability, including the issues, legislation, and ordinances for or against which the institution has advocated:

Our legislative priorities are developed around our operating and capital budgets and set by the Board of Curators. Generally the University itself does not take formal positions for or against other policy issues although we do sometimes provide testimony for information purposes. We do, however, highlight our efforts to improve energy production using biofuels and alternative energy sources.

A brief description of other political positions the institution has taken during the previous three years:

See above. We do include our power plant, agriculture research center for alternative fuels and bio fuels, and other programs on legislative tours at times.

A brief description of political donations the institution made during the previous three years (if applicable):

We do not make political donations.

The website URL where information about the institution's advocacy efforts is available:

http://www.umssystem.edu/ums/ur/legislative_priorities
STARS Reporting Tool | AASHE

Trademark Licensing

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution is a member of the Fair Labor Association (FLA) and/or the Worker Rights Consortium (WRC).

"---" indicates that no data was submitted for this field

Is the institution a member of the Worker Rights Consortium?:

Yes

Is the institution a member of the Fair Labor Association? :

Yes

Has the institution expressed an intention to participate in the WRC's Designated Suppliers Program? :

No

The website URL where information about the institution's participation in the WRC, FLA, and/or DSP is available:

<http://licensing.missouri.edu/find-mizzou-gear/look-for-the-label/>

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution's affiliated hospital or health system is a member of the Global Green and Healthy Hospitals Network, the Healthier Hospitals Initiative and/or Practice Greenhealth.

This credit includes hospitals and health systems that are formally affiliated with a higher education institution (sometimes called "university hospitals"). Other types of health care providers (e.g. insurers through which an institution obtains health care for its employees) are not included.

Submission Note:

MU Hospitals and Clinics are not included in the institutional boundary

"---" indicates that no data was submitted for this field

Is the institution a member of the Global Green and Healthy Hospitals Network?:

No

Is the institution a member of the Healthier Hospitals Initiative?:

No

Is the institution a member of Practice Greenhealth?:

No

A brief description of the hospital's sustainability initiatives:

The new University Hospital Patient Care Tower is certified LEED Gold and the Missouri Orthopedic Institute is LEED certified. An expansion project on the MOI is pursuing LEED certification.

The website URL where information about the hospital's sustainability initiatives is available:

<http://www.muhealth.org/news/2014-news-releases/mu-health-cares-patient-care-tower-expansion-receives-us-green-b/>

Operations

Air & Climate

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

Credit
Greenhouse Gas Emissions
Outdoor Air Quality

Greenhouse Gas Emissions

Responsible Party

Steve Joos

Senior Finance and Accounting Manager
Energy Management

Criteria

Part 1

Institution has conducted a publicly available greenhouse gas (GHG) emissions inventory that includes, at minimum, Scope 1 and Scope 2 GHG emissions and may also include Scope 3 GHG emissions. The inventory may be validated internally by campus personnel who are independent of the GHG accounting and reporting process and/or verified by an independent, external third party.

Part 2

Institution reduced its adjusted net Scope 1 and Scope 2 GHG emissions per weighted campus user compared to a baseline.

Part 3

Institution's annual adjusted net Scope 1 and Scope 2 GHG emissions are less than the minimum performance threshold of 0.02 metric tons of carbon dioxide equivalent (MtCO₂e) per gross square foot (0.002 MtCO₂e per gross square metre) of floor area.

Performance for Part 3 of this credit is assessed using EUI-adjusted floor area, a figure that accounts for significant differences in energy use intensity (EUI) between types of building space.

For this credit, the following carbon offsets may be counted:

1. Institution-catalyzed carbon offsets (popularly known as "local offsets")
2. Carbon sequestration due to land that the institution manages specifically for sequestration (as documented in policies, land management plans or the equivalent)
3. Carbon storage from on-site composting
4. Third-party verified purchased carbon offsets

Purchased Renewable Energy Certificates (RECs) that are either Green-e Energy certified or meet Green-e Energy's technical requirements and are verified as such by a third party may be counted as zero emissions energy for purposes of Scope 2 GHG accounting.

Purchased carbon offsets and RECs that have not been third-party verified do not count.

Institutions that have sold or transferred emissions reductions, e.g. in the form of verified emissions reductions (VERs), may not count those reductions toward this credit.

"---" indicates that no data was submitted for this field

Does the institution's GHG emissions inventory include all Scope 1 and Scope 2 GHG emissions?:

Yes

Does the institution's GHG emissions inventory include all Scope 3 GHG emissions from any of the following categories?:

	Yes or No
Business travel	Yes
Commuting	Yes
Purchased goods and services	Yes
Capital goods	No
Fuel- and energy-related activities not included in Scope 1 or Scope 2	Yes
Waste generated in operations	Yes

Does the institution's GHG emissions inventory include Scope 3 emissions from other categories?:

Yes

A brief description of the methodology and/or tool used to complete the GHG emissions inventory:

MU used the Campus Carbon Calculator v6.9 from Clean Air-Cool Planet.

Has the GHG emissions inventory been validated internally by personnel who are independent of the GHG accounting and reporting process and/or verified by an independent, external third party?:

Yes

A brief description of the internal and/or external verification process:

Methodologies were analyzed and confirmed by: Jerry P. Bauer, PE* Associate Engineer- Environmental Group Burns & McDonnell
Direct: 816-822-3527 Mobile: 913-558-9224 Fax: 816-822-3494

JBauer@burnsmcd.com

Scope 1 and Scope 2 GHG emissions::

	Performance Year	Baseline Year
Scope 1 GHG emissions from stationary combustion	186,920 <i>Metric Tons of CO2 Equivalent</i>	306,911 <i>Metric Tons of CO2 Equivalent</i>
Scope 1 GHG emissions from other sources	3,837 <i>Metric Tons of CO2 Equivalent</i>	4,574 <i>Metric Tons of CO2 Equivalent</i>
Scope 2 GHG emissions from purchased electricity	34,717 <i>Metric Tons of CO2 Equivalent</i>	39,562 <i>Metric Tons of CO2 Equivalent</i>
Scope 2 GHG emissions from other sources	0 <i>Metric Tons of CO2 Equivalent</i>	0 <i>Metric Tons of CO2 Equivalent</i>

Figures needed to determine total carbon offsets::

	Performance Year	Baseline Year
Institution-catalyzed carbon offsets generated	0 <i>Metric Tons of CO2 Equivalent</i>	0 <i>Metric Tons of CO2 Equivalent</i>
Carbon sequestration due to land that the institution manages specifically for sequestration	0 <i>Metric Tons of CO2 Equivalent</i>	0 <i>Metric Tons of CO2 Equivalent</i>
Carbon storage from on-site composting	0 <i>Metric Tons of CO2 Equivalent</i>	0 <i>Metric Tons of CO2 Equivalent</i>
Third-party verified carbon offsets purchased	15,774 <i>Metric Tons of CO2 Equivalent</i>	0 <i>Metric Tons of CO2 Equivalent</i>

A brief description of the institution-catalyzed carbon offsets program:

The University of Missouri Extension Program uses science-based knowledge and engages people to understand change, solve problems and make informed decisions. Sustainability and environment is a focus of the Extension Program and is involved in a 4-H affiliated program known as The Million Tree Project. The vision is for 1,000,000 new trees to be planted by 4-H youth across the United States and Canada and will result in offsetting greenhouse gas emissions from fossil fuel combustion by absorbing and sequestering about 48,000,000 million pounds of atmospheric carbon dioxide per year. Missouri’s goal is to plant at least 22,000 new trees throughout the state.

A brief description of the carbon sequestration program and reporting protocol used:

see above

A brief description of the composting and carbon storage program:

see above

A brief description of the purchased carbon offsets, including third party verifier(s) and contract timeframes:

Kwhrs of wind power purchased from Crystal Lake Wind Farm. REQ's verified by North American Renewables Registry.

Figures needed to determine “Weighted Campus Users”::

	Performance Year	Baseline Year
Number of residential students	6,893	6,279
Number of residential employees	18	18
Number of in-patient hospital beds	5	0
Full-time equivalent enrollment	30,865	25,089
Full-time equivalent of employees	9,071.90	8,665.10
Full-time equivalent of distance education students	1,785.80	1,259.10

Start and end dates of the performance year and baseline year (or three-year periods):

	Start Date	End Date
Performance Year	July 1, 2013	June 30, 2014
Baseline Year	Jan. 1, 2007	June 30, 2008

A brief description of when and why the GHG emissions baseline was adopted:

Required if end date of the baseline year is prior to 2005.

Gross floor area of building space, performance year:

14,178,920 *Square Feet*

Floor area of energy intensive building space, performance year:

	Floor Area
Laboratory space	2,706,389 <i>Square Feet</i>
Healthcare space	235,604 <i>Square Feet</i>
Other energy intensive space	628,280 <i>Square Feet</i>

Scope 3 GHG emissions, performance year::

	Emissions
Business travel	8,909 <i>Metric Tons of CO2 Equivalent</i>
Commuting	20,334 <i>Metric Tons of CO2 Equivalent</i>
Purchased goods and services	0 <i>Metric Tons of CO2 Equivalent</i>
Capital goods	0 <i>Metric Tons of CO2 Equivalent</i>
Fuel- and energy-related activities not included in Scope 1 or Scope 2	5,487 <i>Metric Tons of CO2 Equivalent</i>
Waste generated in operations	0 <i>Metric Tons of CO2 Equivalent</i>
Other categories (please specify below)	0 <i>Metric Tons of CO2 Equivalent</i>

A brief description of the sources included in Scope 3 GHG emissions from "other categories":

n/a

A copy of the most recent GHG emissions inventory:

[FY14 Calculator_v6 9 - Missouri Data.xlsm](#)

The website URL where the GHG emissions inventory is posted:

[STARS Reporting Tool | AASHE](#)

<http://rs.acupcc.org/progress/761/>

A brief description of the institution's GHG emissions reduction initiatives, including efforts made during the previous three years:

See ACUPCC at

<http://rs.acupcc.org/ghg/2892/>

<http://masterplan.missouri.edu/climate.html>

<http://masterplan.missouri.edu/Old/archive.html>

Outdoor Air Quality

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has adopted policies or guidelines to improve outdoor air quality and minimize air pollutant emissions from mobile sources. Policies and/or guidelines may include, but are not limited to, prohibiting vehicle idling, restrictions on the use of powered lawn care equipment, and other strategies for minimizing mobile emissions.

Policies adopted by entities of which the institution is part (e.g. government or university system) may count for Part 1 of this credit as long as the policies apply to and are followed by the institution.

Part 2

Institution has completed an inventory of significant air emissions from stationary sources on campus. Significant emissions include nitrogen oxides (NO_x), sulfur oxides (SO_x), and other standard categories of air emissions identified in environmental permits held by the institution, international conventions, and/or national laws or regulations.

Submission Note:

- 1http://www.cf.missouri.edu/energy/em_eff/index.html
- 2http://www.cf.missouri.edu/energy/em_renewable/index.html
- 3<http://www.cf.missouri.edu/energy/pdfs/MUGreenPowerPartner2014.pdf>
- 4<http://committees.missouri.edu/environmental-affairs/index.php>

Other standard categories of air emissions identified in permits and/or regulations:

- 1 Tons NH₃
- 6 Tons VOC

"---" indicates that no data was submitted for this field

Does the institution have policies and/or guidelines in place to improve outdoor air quality and minimize air pollutant emissions from mobile sources?:

Yes

A brief description of the policies and/or guidelines to improve outdoor air quality and minimize air pollutant emissions from mobile sources:

As a state institution, and according to state law, MU’s Business Policy and Procedure Manual section 3:200 requires 50 percent of all new vehicles purchased be capable of using alternative fuel. On an annualized basis, at least 30 percent alternative fuel must be used in these vehicles.

Has the institution completed an inventory of significant air emissions from stationary sources on campus?:

Yes

A brief description of the methodology(ies) the institution used to complete its air emissions inventory:

MU holds two Part 70 Air Permits, one for the Power Plant and one for the general campus. As part of the compliance schedule, campus must submit Annual Emissions Inventory Questionnaire report that compiles the following emissions information. Additionally the Power Plant must submit a report of greenhouse gas emissions annually.

Weight of the following categories of air emissions from stationary sources::

	Weight of Emissions
Nitrogen oxides (NOx)	490 <i>Tons</i>
Sulfur oxides (SOx)	5,221 <i>Tons</i>
Carbon monoxide (CO)	149 <i>Tons</i>
Particulate matter (PM)	104 <i>Tons</i>
Ozone (O3)	0 <i>Tons</i>
Lead (Pb)	0 <i>Tons</i>
Hazardous air pollutants (HAPs)	49 <i>Tons</i>
Ozone-depleting compounds (ODCs)	2.50 <i>Tons</i>
Other standard categories of air emissions identified in permits and/or regulations	1 <i>Tons</i>

A brief description of the institution’s initiatives to minimize air pollutant emissions from stationary sources, including efforts made during the previous three years:

MU has taken a leadership role for many years in reducing energy use on our campus with significant results. While campus education and general (E&G) space has grown by 42% since 1990, energy use has been reduced by 19% and greenhouse gas emissions have been reduced by 57% on a square foot basis.¹ MU’s total renewable energy portfolio consists of biomass fuels, on-site wind generation, solar

thermal water heating and solar photo voltaic electric generation, all of which have been initiated or expanded upon in the last three years. Currently, 24% of MU energy portfolio is derived from renewables.²

In February of 2014 MU joined the U.S. EPA's Green Power Partnership and is the #1 generator of green energy when compared to all college and university participants in EPA's Green Power Partnership. MU is currently #8 on site green energy producer compared to all industry in the program.³

In 2009, MU signed the American College & University Presidents Climate Commitment. MU has established an Environmental Affairs and Sustainability Committee whose purpose is to make recommendations to the provost on the development of policies for environmental and sustainability issues, develop formal and informal mechanisms for improved education to enhance environmental and sustainability awareness; and provide a biannual sustainability report to the chancellor⁴.

The website URL where information about the institution's outdoor air quality policies, guidelines or inventory is available:

http://www.cf.missouri.edu/energy/em_eff/index.html

Buildings

This subcategory seeks to recognize institutions that are taking steps to improve the sustainability performance of their buildings. Buildings are generally the largest user of energy and the largest source of greenhouse gas emissions on campuses. Buildings also use significant amounts of potable water. Institutions can design, build, and maintain buildings in ways that provide a safe and healthy indoor environment for inhabitants while simultaneously mitigating the building's impact on the outdoor environment.

Credit
Building Operations and Maintenance
Building Design and Construction
Indoor Air Quality

Building Operations and Maintenance

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Institution owns and operates buildings that are:

1) Certified under a green building rating system for existing buildings, e.g. LEED® for Existing Buildings: Operations & Maintenance (O&M)

And/or

2) 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
- Building-level energy metering
- Usage of environmentally preferable materials
- Indoor environmental quality
- Water consumption
- Building-level water metering

Building space that meets multiple criteria listed above should not be double-counted.

"---" indicates that no data was submitted for this field

Does the institution have any building space certified under the following green building rating systems for existing buildings?:

	Yes or No
LEED for Existing Buildings or another 4-tier rating system used by an Established Green Building Council (GBC)	No
The DGNB system, Green Star Performance, or another 3-tier GBC rating system	No

BREEAM-In Use, CASBEE for Existing Building, or another 5-tier GBC rating system	No
Other non-GBC rating systems (e.g. BOMA BEST, Green Globes)	No

A brief description of the green building rating system(s) used and/or a list or sample of certified buildings and ratings:

Total floor area of eligible building space (operations and maintenance):

14,178,920 *Square Feet*

Floor area of building space that is certified at each level under a 4-tier rating system for existing buildings used by an Established Green Building Council::

	Certified Floor Area
Minimum Level (e.g. LEED Certified)	<i>0 Square Feet</i>
3rd Highest Level (e.g. LEED Silver)	<i>0 Square Feet</i>
2nd Highest Level (e.g. LEED Gold)	<i>0 Square Feet</i>
Highest Achievable Level (e.g. LEED Platinum)	<i>0 Square Feet</i>

Floor area of building space that is certified at each level under a 3-tier rating system for existing buildings used by an Established Green Building Council::

	Certified Floor Area
Minimum Level	<i>0 Square Feet</i>
Mid-Level	<i>0 Square Feet</i>
Highest Achievable Level	<i>0 Square Feet</i>

Floor area of building space that is certified at each level under a 5-tier rating system for existing buildings used by an Established Green Building Council::

	Certified Floor Area
Minimum Level	---
4th Highest Level	---
Mid-Level	---
2nd Highest Level	---
Highest Achievable Level	---

Floor area of building space that is certified at any level under other green building rating systems for existing buildings:

0 Square Feet

Floor area of building space that is maintained in accordance with formally adopted sustainable building operations and maintenance guidelines or policies, but NOT certified:

0 Square Feet

A copy of the sustainable building operations and maintenance guidelines or policies:

The date the guidelines or policies were formally adopted:

May 1, 2012

A brief description of the sustainable building operations and maintenance program and/or a list or sample of buildings covered:

All buildings maintained by central campus funds are administered with stewardship of materials and resources in mind. Equipment is identified for Preventative Maintenance planning to promote long life of equipment and building comfort, building automation systems (where installed) provide the ability to manage energy usage. Cleaning processes are reviewed for safety to staff and the environment and to prolong the life of the materials cleaned.

A brief description of how the institution ensures compliance with sustainable building operation and maintenance guidelines and policies:

Enforcement for the individual standards is part Facility Operations, part EH&S, part PD&C, part Energy Management. Along with the responsible parties in each respective Auxiliary. This is something I plan on working on in the coming months in an attempt to meet the standards of LEED for Existing Buildings Operations and Maintenance.

The campus has a full-time manager for sustainable design and construction who works with Campus Facilities Departments to build consensus and affect change in Campus Facilities Operations as related to sustainability. This manager also develops project-by-project sustainability targets and solutions with design teams while assisting in development of specifications and progress trackers for all new construction and major renovation projects.

The website URL where information about the institution's certified buildings and/or sustainable operations and maintenance guidelines or policies is available:

<http://www.cf.missouri.edu/pdc/sustainablepolicy.html>

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution-owned buildings that were constructed or underwent major renovations in the previous five years are:

1) Certified under a green building rating system for new construction and major renovations (e.g. the LEED® for New Construction and Major Renovations, LEED for Commercial Interiors, LEED for Healthcare, and/or LEED for Core and Shell Green Building Rating Systems)

2) Certified Living under the Living Building Challenge (LBC)

And/or

3) Designed and built in accordance with formally adopted green building guidelines and policies that cover all of the following topics:

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

Building space that meets multiple criteria listed above should not be double-counted.

Submission Note:

Tate Hall Renovation (45,250 sq. ft.) was designed and constructed in accordance with the University of Missouri's Sustainable Design Guidelines and is pursuing a rating of Certified under the 2009 version of LEED for New Construction and Major Renovation.

Construction work on the Tate Hall Renovation was declared complete in June of 2011.

Switzler Hall Renovation (28,080 sq. ft.) was designed and constructed in accordance with the University of Missouri's Sustainable Design Guidelines and is pursuing a rating of Certified under the 2009 version of LEED for New Construction and Major Renovation.

Construction work on the Switzler Hall Renovation was declared complete in July of 2011.

Gwynn Hall Renovation (36,196 sq. ft.) was designed and constructed in accordance with the University of Missouri's Sustainable Design Guidelines and is pursuing a rating of Certified under the 2009 version of LEED for New Construction and Major Renovation.

Construction work on the Tate Hall Renovation was declared complete in November of 2013.

This totals 109,526 sq. ft. in gross floor area for buildings designed and constructed in accordance with the University of Missouri's Sustainable Design Guidelines while also pursuing LEED certification.

Does the institution have any building space certified under the following green building rating systems for new construction and major renovations?:

	Yes or No
LEED or another 4-tier rating system used by an Established Green Building Council (GBC)	Yes
The DGNB system, Green Star, or another 3-tier GBC rating system	No
BREEAM, CASBEE, or another 5-tier GBC rating system	No
The Living Building Challenge	No
Other non-GBC rating systems (e.g. BOMA BESt, Green Globes)	No

A brief description of the green building rating system(s) used and/or a list of certified buildings and ratings:

University of Missouri utilizes a campus-wide approach to sustainable construction through the continued development and implementation of Sustainable Design Guidelines. The MU Sustainable Design Guidelines set standards for design and construction that at minimum meets the requirements of LEED Certified construction.

Total floor area of eligible building space (design and construction):

443,945 *Square Feet*

Floor area of building space that is certified at each level under a 4-tier rating system for new construction and major renovations used by an Established Green Building Council::

	Certified Floor Area
Minimum Level (e.g. LEED Certified)	20,548 <i>Square Feet</i>
3rd Highest Level (e.g. LEED Silver)	0 <i>Square Feet</i>
2nd Highest Level (e.g. LEED Gold)	0 <i>Square Feet</i>

Highest Achievable Level (e.g. LEED Platinum)	<i>0 Square Feet</i>
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Floor area of building space that is certified at each level under a 3-tier rating system for new construction and major renovations used by an Established Green Building Council::

	Certified Floor Area
Minimum Level	<i>0 Square Feet</i>
Mid-Level	<i>0 Square Feet</i>
Highest Achievable Level	<i>0 Square Feet</i>

Floor area of building space that is certified at each level under a 5-tier rating system for new construction and major renovations used by an Established Green Building Council::

	Certified Floor Area
Minimum Level	<i>0 Square Feet</i>
4th Highest Level	<i>0 Square Feet</i>
Mid-Level	<i>0 Square Feet</i>
2nd Highest Level	<i>0 Square Feet</i>
Highest Achievable Level	<i>0 Square Feet</i>

Floor area of building space certified Living under the Living Building Challenge:

0 Square Feet

Floor area of building space that is certified at any level under other green building rating systems for new construction and major renovations:

0 Square Feet

Floor area of building space that was designed and constructed in accordance with green building policies or guidelines but NOT certified:

381,301 Square Feet

A copy of the guidelines or policies :

The date the guidelines or policies were adopted:

Aug. 22, 2011

A brief description of the green building guidelines or policies and/or a list or sample of buildings covered:

To further the Campus' commitment to sustainable design, the University developed a campus-wide approach to sustainable building using LEED as a framework. MU held its first workshop to develop this approach to building facility sustainability in May of 2011. The resulting collection of strategies has become the content of the University's Sustainable Design Guidelines (SDG). Campus Facilities continues to hold workshops with division directors semi-annually in order to review the effectiveness of current policies and update the SDG. The campus as a whole has one LEED certified buildings, and six projects in the process of certification.

A brief description of how the institution ensures compliance with green building design and construction guidelines and policies:

The University reviews the effectiveness of the SDG and sustainability policies semi-annually. Prior to design and construction, Campus Facilities provides a sustainability packet to consultants and contractors. This packet includes a copy of the SDG, a LEED tracker including standards satisfying the SDG, as well as template specifications and logs to report compliance. Consultants and contractors report compliance with these standards during all major phases of design and construction. The campus also has a full-time manager for sustainable design and construction, whose responsibility is to monitor and advance green building practices.

The website URL where information about the institution's certified buildings and/or green building design and construction guidelines or policies is available:

http://sustainability.missouri.edu/pdfs/MU_SDG_Binder_january%202012%20draft.pdf

Indoor Air Quality

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution has an indoor air quality (IAQ) management program that includes regular auditing or monitoring, a mechanism for occupants to register complaints, and action plans to implement any corrective measures required in response to audits, monitoring or complaints.

Policies and plans adopted by entities of which the institution is part (e.g. government or university system) may count for this credit as long as the policies apply to and are followed by the institution.

"---" indicates that no data was submitted for this field

Floor area of building space covered by an indoor air quality (IAQ) management program that meets the criteria for this credit:

14,178,920 *Square Feet*

Gross floor area of building space:

14,178,920 *Square Feet*

A brief description of the institution's indoor air quality program(s):

Indoor Air Quality (IAQ) is simply defined as maintaining an indoor environment that is conducive to getting work done in a safe and healthy way. Environmental Health and Safety is responsible to ensure that people are not exposed to health hazards. Many IAQ complaints are not the result of health hazards but are nuisance issues due to poor circulation, make-up air, humidity, and temperature control. Campus Facilities Facility Operations maintains and coordinates the building's air handler systems that supply a comfortable indoor environment.

IAQ complaints should first be directed to the respective Building Coordinator who will coordinate the necessary resources to address the problem. A list of the campus building coordinators can be found in the campus directory or can be found at their website. If a health hazard is suspected, the building coordinator or Campus Facilities will contact the Industrial Hygiene Office at EHS as a resource to provide IAQ support.

The website URL where information about the institution's indoor air quality program(s) is available:

<http://ehs.missouri.edu/work/indoor-air.html>

Dining Services

This subcategory seeks to recognize institutions that are supporting a sustainable food system. Modern industrial food production often has deleterious environmental and social impacts. Pesticides and fertilizers used in agriculture can contaminate ground and surface water and soil, which can in turn have potentially dangerous impacts on wildlife and human health. The production of animal-derived foods often subjects animals to inhumane treatment and animal products have a higher per-calorie environmental intensity than plant-based foods. Additionally, farm workers are often directly exposed to dangerous pesticides, subjected to harsh working conditions, and paid substandard wages. Furthermore, food is often transported long distance to institutions, producing greenhouse gas emissions and other pollution, as well as undermining the resiliency of local communities.

Institutions can use their purchasing power to require transparency from their distributors and find out where the food comes from, how it was produced, and how far it traveled. Institutions can use their food purchases to support their local economies; encourage safe, environmentally-friendly and humane farming methods; and help eliminate unsafe working conditions and alleviate poverty for farmers. These actions help reduce environmental impacts, preserve regional farmland, improve local food security, and support fair and resilient food systems.

Please note that while dining services can also play an important role in conserving energy and water, reducing waste, and purchasing environmentally preferable materials other than food, STARS measures these impacts across the institution instead of by department; therefore, the benefits of these actions are captured in the Energy, Water, Waste, and Purchasing subcategories, respectively.

Credit
Food and Beverage Purchasing
Low Impact Dining

Food and Beverage Purchasing

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

Part 1

Institution's dining services purchase food and beverages that meet at least one of the following criteria:

- Local and community-based

And/or

- Third party verified to be ecologically sound, fair and/or humane

Food and beverage purchases that meet both criteria listed above (e.g. local community-based products that are Certified Organic) should not be double-counted.

Local community- based products:

- Are sourced from local community-based producers (directly or through distributors)
- Contain raw ingredients (excluding water) that are third party verified and/or locally harvested and produced (e.g. bread made with Organic flour or local honey) and
- Exclude products from Concentrated Animal Feeding Operations (CAFOs), products that have minimal nutritional value (e.g. soda, chewing gum, candies made predominantly from sweeteners), and products from producers that have been convicted of one or more labor law violations within the previous three years

Products that are not local and community-based must be third party verified to count. Recognized third party standards and certifications for food and beverages are outlined in the [STARS Technical Manual](#). Institutions located outside the U.S. and Canada may use additional third party certifications to identify ecologically sound, fair and humane products, provided the certifications are reported in "Notes about this submission".

Part 1 of this credit includes food and beverage purchases for on-campus dining operations and catering services operated by the institution or the institution's primary dining services contractor (e.g. Aramark, Bon Appétit Management Company, Chartwells, Sodexo). On-site franchises, convenience stores, vending services, and concessions are excluded from Part 1.

Part 2

Institution's on-site franchises, convenience stores, vending services, and/or concessions purchase food and beverages that are third party verified and/or locally sourced (i.e. meet the criteria outlined in Part 1).

"---" indicates that no data was submitted for this field

Percentage of dining services food and beverage expenditures that are local and community-based and/or third party verified:

16

A copy of an inventory, list or sample of sustainable food and beverage purchases:

[Local Vendor Items 12-14.pdf](#)

An inventory, list or sample of sustainable food and beverage purchases:

<http://dining.missouri.edu/local-farmers/>

Does the institution wish to pursue Part 2 of this credit (food and beverage expenditures for on-site franchises, convenience stores, vending services, or concessions)?:

No

Percentage of on-site franchise, convenience store, vending services, and concessions food and beverage purchases that are local and community-based and/or third party verified:

0

A copy of an inventory, list or sample of on-site franchise, convenience store, vending machine, and/or concessions food and beverage purchases that are sustainably produced:

An inventory, list or sample of on-site franchise, convenience store, vending machine, and/or concessions food and beverage purchases that are sustainably produced:

<http://dining.missouri.edu/>

A brief description of the sustainable food and beverage purchasing program:

A leading industry trend being embraced by Campus Dining Services is the sourcing of more local products. Specifically, this is targeting not just local products, but those of a higher quality than traditionally sourced items. This ties in perfectly with our efforts to reach out to today's more health conscious consumer. Campus Dining Services has set a goal to continue to increase food purchases coming from the local region.

A brief description of the methodology used to track/inventory sustainable food and beverage purchases:

This is tracked manually by pulling invoices from known local suppliers and identifying local items from our prime vendor through a Zip Code radius search.

Total annual food and beverage expenditures:

9,000,000 US/Canadian \$

Which of the following food service providers are present on campus and included in the total food and beverage expenditure figures?:

	Present?	Included?
Dining operations and catering services operated by the institution	Yes	Yes
Dining operations and catering services operated by a contractor	Yes	No
Franchises	Yes	No
Convenience stores	Yes	No
Vending services	Yes	No
Concessions	Yes	No

Has the institution achieved the following?:

	Yes or No
Fair Trade Campus, College or University status	No
Certification under the Green Seal Standard for Restaurants and Food Services (GS-46)	No
Marine Stewardship Council (MSC) certification	No
Signatory of the Real Food Campus Commitment (U.S.)	No

A brief description of other sustainable restaurant and food service standards that the institution's dining services operations are certified under:

n/a

The website URL where information about the institution's sustainable food and beverage purchasing efforts is available:

Low Impact Dining

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Conventionally produced animal products comprise less than 30 percent of the institution's total dining services food purchases.

Conventionally produced animal products include all food products that contain animal derived (i.e. meat, fish, egg, dairy) ingredients that have not been verified to be sustainably produced. Sustainably produced animal products have been either:

- Third party verified to be ecologically sound and/or humane (see *OP 6: Food and Beverage Purchasing*)

Or

- Verified by the institution to be both ecologically sound and humane (e.g. "Pasture Raised", "Grass Fed" or "Humanely Raised") through a relationship with a local producer

Part 2

Institution:

- Offers diverse, complete-protein vegan options at all meals in at least one dining facility on campus

And

- Provides labels and/or signage that distinguishes between vegan, vegetarian (not vegan), and other items

This credit includes on-campus dining operations and catering services operated by the institution or the institution's primary dining services contractor. On-site franchises, convenience stores, vending machines, and concessions should be excluded to the extent feasible.

Submission Note:

purchase tons of vegetables locally, including from Bradford farms.

"---" indicates that no data was submitted for this field

Percentage of total dining services food purchases comprised of conventionally produced animal products:

80

A brief description of the methodology used to track/inventory expenditures on animal products:

totaling invoices from vendors

Does the institution offer diverse, complete-protein vegan dining options at all meals in at least one dining facility on campus?:

Yes

Does the institution provide labels and/or signage that distinguishes between vegan, vegetarian (not vegan), and other items?:

Yes

Are the vegan options accessible to all members of the campus community?:

Yes

A brief description of the vegan dining program, including availability, sample menus, signage and any promotional activities (e.g. “Meatless Mondays”):

Every operation has vegan options, including black bean burgers and tofu for protein.

MJB

The university employs a tool known as Zoutrition, which allows the user to search every dining area of campus for meal options and filter the results by dietary needs. Using Zoutrition, any student, staff member, or visitor can quickly and easily determine vegan options at any dining area on campus. Many of the campus dining areas provide vegan and vegetarian options. All vegan dining options are clearly labeled and information regarding each food item’s ingredients are easily available online.

A brief description of other efforts the institution has made to reduce the impact of its animal-derived food purchases:

The website URL where information about where information about the vegan dining program is available:

<http://zoutrition.missouri.edu/zoutrition>

Annual dining services expenditures on food:

9,000,000 US/Canadian \$

Annual dining services expenditures on conventionally produced animal products:

Annual dining services expenditures on sustainably produced animal products:

Energy

This subcategory seeks to recognize institutions that are reducing their energy consumption through conservation and efficiency, and switching to cleaner and renewable sources of energy such as solar, wind, geothermal, and low-impact hydropower. For most institutions, energy consumption is the largest source of greenhouse gas emissions, which cause global climate change. Global climate change is having myriad negative impacts throughout the world, including increased frequency and potency of extreme weather events, sea level rise, species extinction, water shortages, declining agricultural production, ocean acidification, and spread of diseases. The impacts are particularly pronounced for vulnerable and poor communities and countries. In addition to causing global climate change, energy generation from fossil fuels, especially coal, produces air pollutants such as sulfur dioxide, nitrogen oxides, mercury, dioxins, arsenic, cadmium and lead. These pollutants contribute to acid rain as well as health problems such as heart and respiratory diseases and cancer. Coal mining and oil and gas drilling can also damage environmentally and/or culturally significant ecosystems. Nuclear power creates highly toxic and long-lasting radioactive waste. Large-scale hydropower projects flood habitats and disrupt fish migration and can involve the relocation of entire communities.

Implementing conservation measures and switching to renewable sources of energy can help institutions save money and protect them from utility rate volatility. Renewable energy may be generated locally and allow campuses to support local economic development. Furthermore, institutions can help shape markets by creating demand for cleaner, renewable sources of energy.

Credit
Building Energy Consumption
Clean and Renewable Energy

Building Energy Consumption

Responsible Party

Steve Joos

Senior Finance and Accounting Manager
Energy Management

Criteria

Part 1

Institution has reduced its total building energy consumption per gross square foot/metre of floor area compared to a baseline.

Part 2

Institution's annual building energy consumption is less than the minimum performance threshold of 28 Btu per gross square foot (2.6 Btu per gross square metre) of floor area per degree day.

Performance for Part 2 of this credit is assessed using EUI-adjusted floor area, a figure that accounts for significant differences in energy use intensity (EUI) between types of building space.

"---" indicates that no data was submitted for this field

Total building energy consumption, all sources (transportation fuels excluded):

	Performance Year	Baseline Year
Total building energy consumption	2,848,556 <i>MMBtu</i>	3,200,296 <i>MMBtu</i>

Purchased electricity and steam:

	Performance Year	Baseline Year
Grid-purchased electricity	148,459 <i>MMBtu</i>	166,386 <i>MMBtu</i>
District steam/hot water	0 <i>MMBtu</i>	0 <i>MMBtu</i>

Gross floor area of building space::

	Performance Year	Baseline Year
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Gross floor area	14,178,920 <i>Gross Square Feet</i>	13,146,549 <i>Gross Square Feet</i>
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Floor area of energy intensive space, performance year::

	Floor Area
Laboratory space	2,706,389 <i>Square Feet</i>
Healthcare space	235,604 <i>Square Feet</i>
Other energy intensive space	

Degree days, performance year (base 65 °F / 18 °C)::

	Degree Days
Heating degree days	5,685
Cooling degree days	3,229

Source-site ratios::

	Source-Site Ratio (1.0 - 5.0; see help icon above)
Grid-purchased electricity	3.14
District steam/hot water	1.20

Start and end dates of the performance year and baseline year (or 3-year periods)::

	Start Date	End Date
Performance Year	July 1, 2013	June 30, 2014
Baseline Year	July 1, 2007	June 30, 2008

A brief description of when and why the building energy consumption baseline was adopted:

Required if end date of the baseline year is prior to 2005.

A brief description of any building temperature standards employed by the institution:

Standard temperature set points for offices and classrooms are 76 degrees for cooling and 70 degrees for heating with adjustment band of +/- 2 degrees.

A brief description of any light emitting diode (LED) lighting employed by the institution:

Approximately 250 LED lights were installed in Jesse Hall's Auditorium and almost all of the internal areas of the recently completed Gwynn Hall Renovation used LED lighting technology. LED lights have also been installed in the dressing rooms in the Fine Arts Building. Outdoor lighting in several areas across campus have also been upgraded using LED technology.

A brief description of any occupancy and/or vacancy sensors employed by the institution:

The majority of building lighting systems use motion sensors to shut off lights and set back temperatures when no motion is detected. Several buildings use light sensors to shut off lights if daylight can be used to light the space. (Daylight Harvesting)

Energy Conservation Program

- Lighting – In 1990 most lighting on campus was either incandescent or low efficiency fluorescent with magnetic ballasts. Today over 99% of the exterior lighting and over 90% of the interior lighting on campus has been converted to high efficiency lighting. Incandescent exit signs have been replaced with LED, reducing energy consumption by 80 – 90%. Daylight harvesting has also been used to automatically turn off interior lights in areas that receive sunlight.
- Motion Sensors – Motion sensors have been installed in thousands of classrooms, offices, conference rooms, and laboratories to turn off lights and set-back thermostats when spaces are unoccupied.

A brief description of any passive solar heating employed by the institution:

none

A brief description of any ground-source heat pumps employed by the institution:

none

A brief description of any cogeneration technologies employed by the institution:

The MU power plant uses a combination of 4 cogenerating steam turbines and 2 combustion turbines with heat recovery to simultaneously generate electricity and steam that is used for heating and cooling.

A brief description of any building recommissioning or retrofit program employed by the institution:

Animal rooms are recertified every three years by measuring air flows and checking room pressure differentials. HVAC controls are adjusted and recalibrated on several buildings a year to ensure ongoing energy savings and occupant comfort as part of an informal recommissioning effort.

A brief description of any energy metering and management systems employed by the institution:

Energy consumption for all campus buildings is metered at each facility. To enhance energy use monitoring; all chilled water meters, and nearly all electric meters are now remotely read. Steam meters are also being upgraded with this technology. Each month energy use data is entered into an automated billing and reporting management system and reviewed by Energy Management staff.

A computerized Building Automation System (BAS) allows remote monitoring and control of building infrastructure. A controls group is responsible for designing, installing, and maintaining building automation systems throughout the campus. These systems allow us to control heating, ventilating, and air-conditioning (HVAC) systems, lighting systems and mechanical equipment in classrooms, offices, residence halls, cafeterias, auditoriums, research facilities, gymnasiums and many other buildings. Currently we monitor and control over 120,000 control points in over 130 buildings consisting of over 9 million square feet. The process control network allows constant monitoring, system adjustments, programming, troubleshooting, and trending.

A brief description of the institution's program to replace energy-consuming appliances, equipment and systems with high efficiency alternatives:

n/a

A brief description of any energy-efficient landscape design initiatives employed by the institution:

n/a

A brief description of any vending machine sensors, lightless machines, or LED-lit machines employed by the institution:

n/a

A brief description of other energy conservation and efficiency initiatives employed by the institution:

Energy efficiency design standards for HVAC systems are implemented on all campus projects to meet or exceed federal and state guidelines including:

- Building envelope insulation, walls, roof, and thermal efficient windows
- Energy Management Control Systems
- Variable volume air and water circulation systems
- Heat recovery on 100% outside air systems
- Occupancy sensors for lighting control and temperature setback
- High efficiency motors
- High efficiency lighting systems

All buildings are fully metered for energy consumption. Metering data is analyzed and energy consumption patterns are identified. Buildings showing potential energy saving opportunities are audited and energy conservation projects are implemented. Window film has been installed on several buildings to reduce radiant heating during the summer months.

During the winter months we take advantage of cold outside air to produce chilled water from “free cooling” heat exchangers to cool research equipment that needs cooling. Prior to installing this free cooling system, electric chillers were run year-round to provide for this need.

We continue with our program to convert fume hood systems to variable air volume.

Presentations and advertisements are used to encourage MU faculty, staff, and students to conserve energy. In addition, engineers in the Campus Facilities - Energy Management Department assist professors with tours and presentations for academic classes. Campus Facilities also educates the public on our energy conservation success.

The website URL where information about the institution’s energy conservation and efficiency initiatives is available:

<http://www.cf.missouri.edu/>

Responsible Party

Steve Joos

Senior Finance and Accounting Manager
Energy Management

Criteria

Institution supports the development and use of clean and renewable energy sources, using any one or combination of the following options.

Option 1:

Generating electricity from clean and renewable energy sources on campus and retaining or retiring the rights to the environmental attributes of such electricity. (In other words, if the institution has sold Renewable Energy Credits for the clean and renewable energy it generated, it may not claim such energy here.) The on-site renewable energy generating devices may be owned and/or maintained by another party as long as the institution has contractual rights to the associated environmental attributes.

Option 2:

Using renewable sources for non-electric, on-site energy generation, such as biomass for heating.

Option 3:

Catalyzing the development of off-site clean and renewable energy sources (e.g. an off-campus wind farm that was designed and built to supply electricity to the institution) and retaining the environmental attributes of that energy.

Option 4:

Purchasing the environmental attributes of electricity in the form of Renewable Energy Certificates (RECs) or other similar renewable energy products that are either Green-e Energy certified or meet Green-e Energy's technical requirements and are verified as such by a third party, or purchasing renewable electricity through the institution's electric utility through a certified green power purchasing option.

Since this credit is intended to recognize institutions that are actively supporting the development and use of clean and renewable energy, neither the electric grid mix for the region in which the institution is located nor the grid mix reported by the electric utility that serves the institution count for this credit.

The following renewable systems are eligible for this credit:

- Concentrated solar thermal
- Geothermal systems that generate electricity
- Low-impact hydroelectric power
- Solar photovoltaic
- Wave and tidal power

- Wind

Biofuels from the following sources are eligible:

- Agricultural crops
- Agricultural waste
- Animal waste
- Landfill gas
- Untreated wood waste
- Other organic waste

Technologies that reduce the amount of energy used but do not generate renewable energy do not count for this credit. For example, daylighting, passive solar design, and ground-source heat pumps are not counted in this credit. The benefits of such strategies, as well as improved efficiencies achieved through using cogeneration technologies, are captured by *OP 1: Greenhouse Gas Emissions* and *OP 8: Building Energy Consumption*.

Transportation fuels, which are covered by *OP 1: Greenhouse Gas Emissions* and *OP 18: Campus Fleet*, are not included in this credit.

Submission Note:

Figures ascertained directly from Campus Facilities-Energy Management Department.

"---" indicates that no data was submitted for this field

Clean and renewable energy from the following sources::

	Performance Year
Option 1: Clean and renewable electricity generated on-site during the performance year and for which the institution retains or has retired the associated environmental attributes	181,341 <i>MMBtu</i>
Option 2: Non-electric renewable energy generated on-site	415,752 <i>MMBtu</i>
Option 3: Clean and renewable electricity generated by off-site projects that the institution catalyzed and for which the institution retains or has retired the associated environmental attributes	67,455 <i>MMBtu</i>
Option 4: Purchased third-party certified RECs and similar renewable energy products (including renewable electricity purchased through a certified green power purchasing option)	0 <i>MMBtu</i>

Total energy consumption, performance year:

2,848,556 *MMBtu*

A brief description of on-site renewable electricity generating devices :

Biomass Fueled Boiler and Auto Extraction Steam Turbine Electric Generator – 14 MW

Wind Turbine – 20 KW

Solar PV Panels – 36.35 KW

A brief description of on-site renewable non-electric energy devices:

Biomass Fueled Boiler - A solar thermal hot water system installed at MU's cogeneration facility collects thermal energy from the sun to heat makeup water for the plant's boilers. This system includes both evacuated tube solar thermal panels, and emerging technology concentrated solar thermal panels. The solar thermal system provides additional renewable energy for MU and serve as an educational tool for MU students and faculty.

A brief description of off-site, institution-catalyzed, renewable electricity generating devices:

10MW - Wind Power from Next Era

A brief description of the RECs and/or similar renewable energy products:

None

The website URL where information about the institution's renewable energy sources is available:

http://www.cf.missouri.edu/energy/em_renewable/index.html

Grounds

This subcategory seeks to recognize institutions that plan and maintain their grounds with sustainability in mind. Beautiful and welcoming campus grounds can be planned, planted, and maintained in any region while minimizing the use of toxic chemicals, protecting wildlife habitat, and conserving water and resources.

Credit
Landscape Management
Biodiversity

Landscape Management

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution's grounds include areas that are managed at one or more of the following levels:

- 1) Managed in accordance with an Integrated Pest Management (IPM) Plan
- 2) Managed in accordance with a sustainable landscape management program

And/or

- 3) Organic, certified and/or protected

The level at which an area of grounds is managed may be determined as outlined in the table below:

Management Level	Standards and/or Certifications Required
1) IPM Plan	IPM plan calls for: <ul style="list-style-type: none">• Using least-toxic chemical pesticides,• Minimum use of chemicals, and• Use of chemicals only in targeted locations and only for targeted species

<p>2) Sustainable Landscape Management Program</p>	<p>The program includes formally adopted guidelines, policies and/or practices that cover all of the following:</p> <ul style="list-style-type: none"> • Integrated pest management (see above) • Plant stewardship - protecting and using existing vegetation (e.g. through the use of a tree care plan), using native and ecologically appropriate plants, and controlling and managing invasive species • Soil stewardship - organic soils management practices that restore and/or maintain a natural nutrient cycle and limit the use of inorganic fertilizers and chemicals • Use of environmentally preferable materials - utilizing reused, recycled and local and sustainably produced landscape materials • Hydrology and water use - restoring and/or maintaining the integrity of the natural hydrology by promoting water infiltration, minimizing or eliminating the use of potable water for irrigation, and protecting/restoring riparian, wetland, and shoreline habitats and lost streams • Materials management and waste minimization - composting and/or mulching waste from groundskeeping, including grass trimmings • Snow and ice management (if applicable) - implementing technologies or strategies to reduce the environmental impacts of snow and ice removal
<p>3) Organic, Certified and/or Protected</p>	<p>Protected areas and land that is:</p> <ul style="list-style-type: none"> • Maintained in accordance with an organic land care standard or sustainable landscape management program that has eliminated the use of inorganic fertilizers and chemical pesticides, fungicides and herbicides in favor of ecologically preferable materials • Certified Organic • Certified under the Forest Stewardship Council (FSC) Forest Management standard • Certified under the Sustainable Sites Initiative™ (SITES™) and/or • Managed specifically for carbon sequestration (as documented in policies, land management plans or the equivalent)

Land that meets multiple criteria should not be double-counted. An area of grounds that does not meet the standards specified for a particular management level should be reported at the next appropriate level for which it does meet the standards. For example, a landscape management program that includes an IPM plan and meets some, but not all, of the other standards listed for a sustainable landscape management plan should be reported at level 1 (IPM Plan).

Submission Note:

Figures required to calculate the total area of managed grounds::

	Area
Total campus area	<i>1,262 Acres</i>
Footprint of the institution's buildings	<i>129 Acres</i>
Area of undeveloped land, excluding any protected areas	<i>209 Acres</i>

Area of managed grounds that is::

	Area
Managed in accordance with an Integrated Pest Management (IPM) Plan	<i>715 Acres</i>
Managed in accordance with a sustainable landscape management program that includes an IPM plan and otherwise meets the criteria outlined	<i>209 Acres</i>
Managed organically, third party certified and/or protected	<i>0 Acres</i>

A copy of the IPM plan:

The IPM plan :

Landscape Services and Athletics uses an Integrated Pest Management program to maintain a healthy and beautiful campus with the least amount of impact on the environment. In conjunction with IPM practices, Landscape Services monitors pest populations by scouting and trapping and uses a variety of methods to control damage. The goal of the Integrated Pest Management program is to preserve and protect the landscape in order to accomplish our mission, while minimizing personal and environmental impacts, and establish sustainable landscape management practices.

A brief summary of the institution’s approach to sustainable landscape management:

The University utilizes a comprehensive landscape management plan that incorporates within it the recycling of all landscape wastes, minimization of potable water irrigation systems, innovative storm water reclamation, the use of native or well adapted non-native plant species, and the goal of reducing maintenance inputs.

A brief description of how the institution protects and uses existing vegetation, uses native and ecologically appropriate plants, and controls and manages invasive species:

The campus landscape includes 209 acres of undeveloped woodlands. The campus also includes restored acreage devoted to collaborative research with the COE and CAFNR in the area of stormwater reclamation and cleanup of waters within one of the campus watersheds. Invasive species are controlled on the 755 acres of maintained property. The University of Missouri is an active member of the Grow Native! Program, an effort of the Missouri Prairie Foundation, and uses native species whenever possible.

A brief description of the institution's landscape materials management and waste minimization policies and practices:

100% of the green waste generated on the campus is either composted in place within the campus landscape or is taken to an off-site composting area run by the city of Columbia. Green waste composted off-site is available to the citizens of Columbia free of charge.

A brief description of the institution's organic soils management practices:

n/a

A brief description of the institution's use of environmentally preferable materials in landscaping and grounds management:

One of the key responsibilities as a nationally recognized botanic garden is public education. The Mizzou Botanic Garden provides this by emphasizing the use of native plants and signage that identifies native plantings. The landscape management plan has limited resources that are focused on specific areas of campus. Outlying areas receive minimal maintenance.

A brief description of how the institution restores and/or maintains the integrity of the natural hydrology of the campus:

The campus has adopted a comprehensive Stormwater Master Plan that identifies current efforts and future opportunities to use best management practices that harvest this water resource and work to clean any storm water that finds its way into the storm sewer system.

A brief description of how the institution reduces the environmental impacts of snow and ice removal (if applicable):

The university has reduced its overall use of sodium chloride on pavements by utilizing magnesium chloride pellets for campus sidewalks. Although this is another form of chloride it is less likely to injure plant materials and minimizes the amount of sodium in the stormwater generated in snow fall.

The equipment that is used to treat sidewalks has been switched from rotary broadcasting types to 'drop' type spreaders that apply magnesium chloride pellets to only the center of the targeted sidewalk. This has reduced by 40% the amount of material applied.

The campus has not used coal cinders, a waste material from the campus power plant, in snow removal operations in more than 8 years.

A brief description of any certified and/or protected areas:

n/a

Is the institution recognized by the Arbor Day Foundation's Tree Campus USA program (if applicable)?:

No

The website URL where information about the institution's sustainable landscape management programs and practices is available:

<http://www.cf.missouri.edu/ls/index.html>

Responsible Party

Michael Burfield

Graduate Research Assistant
Fisheries and Wildlife Sciences

Criteria

The institution conducts one or both of the following:

- An assessment to identify endangered and vulnerable species (including migratory species) with habitats on institution-owned or -managed land

And/or

- An assessment to identify environmentally sensitive areas on institution-owned or -managed land

The institution has plans or programs in place to protect or positively affect the species, habitats and/or environmentally sensitive areas identified.

Assessments conducted and programs adopted by other entities (e.g. government, university system, NGO) may count for this credit as long as the assessments and programs apply to and are followed by the institution.

"---" indicates that no data was submitted for this field

Does the institution own or manage land that includes or is adjacent to legally protected areas, internationally recognized areas, priority sites for biodiversity, and/or regions of conservation importance?:

Yes

A brief description of any legally protected areas, internationally recognized areas, priority sites for biodiversity, and/or regions of conservation importance on institution owned or managed land:

There are three areas under Columbia Parks and Recreation protection directly adjacent to the University of Missouri Main Campus. They comprise 239 acres (96.8 ha) and include Grindstone Nature area (199 acres; 80.6 ha), Capen Park (32 acres; 13 ha), and Grasslands Park (8 acres; 3.2 ha).

The Baskett Wildlife Research and Education Center is a University-owned and managed 2,226 acre (917.4 ha) nature preserve located within the Mark Twain National Forest in Boone County. Baskett is approximately 15 miles from Main Campus and is an integral part of the School of Natural Resources mission of teaching, research, and extension.

The University's objectives for the area were to:

- * Operate and manage the area as an arboretum and wildlife refuge;
- * Conduct investigations, experiments and research studies in botany, zoology, wildlife and game management.

The MU College of Agriculture, Food and Natural Resources Agricultural Research Centers are a system of centers across Missouri, extending CAFNR's research to nearly 14,000 acres to meet the regional research and demonstration needs of agricultural producers and natural resource managers. (

<http://cafnr.missouri.edu/research/outstate.php>

)

Within 20 miles of the University are 28 legally protected areas that are administered by one of the following: the USDA Forest Service, the Missouri Department of Natural Resources, the Missouri Department of Conservation, or the City of Columbia Parks and Recreation Department. These areas cover a total of 31,290 acres (12,668 ha) and average 1,117 acres (452 ha) in size.

Has the institution conducted an assessment or assessments to identify endangered and vulnerable species with habitats on institution-owned or –managed land?:

Yes

Has the institution conducted an assessment or assessments to identify environmentally sensitive areas on institution-owned or –managed land?:

Yes

The methodology(-ies) used to identify endangered and vulnerable species and/or environmentally sensitive areas and any ongoing assessment and monitoring mechanisms:

Working in partnership with the Missouri Department of Conservation, research staff have set aside a 7-acre prairie area adjacent to the Graves-Chapple Research Center (part of the University's out-state research network) in northwest Missouri. A rare, native yucca plant was identified there, and the prairie project allows for research into habitat restoration and management for conservation.

A brief description of identified species, habitats and/or environmentally sensitive areas:

Bobwhite Quail, a culturally significant species in Missouri. Areas near farmland that with proper management can provide habitat for Bobwhite Quail, pollinators such as honeybees, and other species.

In addition, MU agreed to preserve 311 acres of land within the Baskett Wildlife, Research and Education Center for promoting biodiversity in compliance with the University's Sustainable Design Standards (SDG) and Climate Action Plan (CAP) goals.

A brief description of plans or programs in place to protect or positively affect identified species, habitats and/or environmentally sensitive areas:

Farming systems, once beneficial for bobwhite and many other wildlife species, included a diversity of habitats such as fencerows, shrubby cover, crop rotations, fallow/weedy fields, mixtures of native grasses and forbs and inefficient grain handling.

With the increase in farm size, clean and weed-free fields, and more efficient harvest practices, many farmers have been able to stay in business, but quality early successional vegetation that provide habitat for bobwhites and grassland birds has been greatly reduced.

Bradford Research Center works to implement techniques that can be used to enhance wildlife habitat on the farm. For example:

- Farming up to the edge of a wooded draw results in a lack of edge and fencerow habitat which also resulted in poor yields.

- Waterways and diversion channels were formed and are typically planted to tall fescue which although is an excellent guard against erosion it is not a very wildlife friendly grass.
- Unmanaged Native Warm Season Grasses were of little use to bobwhite quail except for escape cover because of a lack of bare ground.
- Natural prairie and wetland remnants were invaded with non-native species such as Reedcanary grass and Sericea Lespedeza which can be invasive and offer little benefit to wildlife.
- Strip disking native warm season grasses in the fall and spring open up the understory for more beneficial forbs (non grass species) and annual grasses which allows bobwhite quail ample bare ground to move through. Annual forbs and grasses are also a source of seed and most importantly a source of insects for baby quail chicks.
- Fall and Spring prescribed burning help reduce the competition of the native warm season grasses and encourages forbs and annual grasses.
- Predominance of tall fescue and little shrubby cover across much of the farm.
- Field border/edge management around crop fields. A mixture of native grasses and forbs are planted in 30-120 borders around field edges to provide food, nesting ground, and cover for bobwhite quail and other species.
- Using a mixture that is heavy with native forbs this area already provides an excellent food source for quail and other bird species.
- Tall fescue has been replaced with native warm and cool season grasses that provide a better food source for bobwhite quail.
- Covey Headquarters have been established at several locations on BREC. These headquarters are a mixture of shrubs that are beneficial to bobwhite quail throughout the year.
- Different mixes of native cool season and warm season grasses were planted in a diversion channel to compare those and tall fescue (middle) for their suitability for erosion control and wildlife benefit. One native cool season grass, Virginia Wildrye (front), emerged quickly and has done quite well.

The website URL where information about the institution's biodiversity policies and programs(s) is available:

Purchasing

This subcategory seeks to recognize institutions that are using their purchasing power to help build a sustainable economy. Collectively, colleges and universities spend many billions of dollars on goods and services annually. Each purchasing decision represents an opportunity for institutions to choose environmentally and socially preferable products and services and support companies with strong commitments to sustainability.

Credit
Electronics Purchasing
Cleaning Products Purchasing
Office Paper Purchasing
Inclusive and Local Purchasing
Life Cycle Cost Analysis
Guidelines for Business Partners

Electronics Purchasing

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has an institution-wide stated preference to purchase computers and/or other electronic products that are EPEAT registered or meet similar multi-criteria sustainability standards for electronic products. This can take the form of purchasing policies, guidelines, or directives.

Policies and directives adopted by entities of which the institution is part (e.g. government or university system) may count for this credit as long as the policies apply to and are followed by the institution.

Part 2

Institution purchases EPEAT registered products for desktop and notebook/laptop computers, displays, thin clients, televisions and imaging equipment.

This credit does not include servers, mobile devices such as tablets and smartphones, or specialized equipment for which no EPEAT certified products are available.

Submission Note:

Information for Part 1 was ascertained from Kevin Bailey, Division of Information Technology.

"---" indicates that no data was submitted for this field

Does the institution have an institution-wide stated preference to purchase computers and/or other electronic products that are EPEAT registered or meet similar multi-criteria sustainability standards for electronic products?:

Yes

A copy of the electronics purchasing policy, directive, or guidelines:

The electronics purchasing policy, directive, or guidelines :

n/a

A brief description of steps the institution has taken to ensure that the purchasing policy, directives, or guidelines are followed:

- 1). The University has only purchased Dell and HP desktop and laptop equipment rated EPEAT-Silver or Gold.
- 2). The University has made available to all IT employees on campus the EPA Power Management EZ GPO(http://www.energystar.gov/index.cfm?c=power_mgt.pr_power_mgt_ez_gpo) via the Active Directory system which we use to control local workstation/laptop policies on campus. This system allows for a central configuration for power management settings and in turn reduces energy consumption.
- 3). The University supports approximately 300 thin client computers in various computerized labs across campus. Instead of having a full desktop PC that uses an average of 60 watts, these device use an average of 20 watts. The actual computing power is moved back to the data center running on servers that host 50-60 virtual desktops apiece.

Does the institution wish to pursue to pursue Part 2 of this credit (expenditures on EPEAT registered electronics)?:

Yes

Expenditures on EPEAT registered desktop and laptop computers, displays, thin clients, televisions, and imaging equipment::

	Expenditure Per Level
EPEAT Bronze	0 US/Canadian \$
EPEAT Silver	0 US/Canadian \$
EPEAT Gold	7,778,000 US/Canadian \$

Total expenditures on desktop and laptop computers, displays, thin clients, televisions, and imaging equipment:

7,778,000 US/Canadian \$

The website URL where information about the institution's electronics purchasing policy, directive, or guidelines is available:

<http://doit.missouri.edu/services/desktop-devices/computer-purchasing>

Cleaning Products Purchasing

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has an institution-wide stated preference to purchase cleaning and janitorial products that are Green Seal™ or UL Environment (EcoLogo)™ certified and/or meet similar multi-criteria sustainability standards for cleaning and janitorial products. This can take the form of purchasing policies, guidelines, or directives.

Policies and directives adopted by entities of which the institution is part (e.g. government or the university system) may count for this credit as long as the policies apply to and are followed by the institution.

Part 2

Institution's main cleaning or housekeeping department(s) and/or contractor(s) purchase Green Seal or UL Environment (EcoLogo) certified cleaning and janitorial products.

Cleaning and janitorial products include, at minimum:

- Cleaning/degreasing agents
 - General-purpose, bathroom, glass, and carpet cleaners
 - Biologically-active cleaning products (enzymatic and microbial products)
 - Floor-care products, e.g. floor finish and floor finish strippers
 - Hand cleaners
 - Sanitary paper products, e.g. toilet tissue, facial tissue, paper towels, napkins, and placemats
 - Plastic film products (e.g. garbage bags/liners)
 - Laundry care products including powder, liquid or pre-measured dosage laundry detergents, stain removers and dryer sheets
 - Specialty surface cleaning products and odor removers, including but not limited to: boat cleaning products; deck and outdoor furniture cleaning products; graffiti removers; metal cleaning products; motor vehicle (automotive/tire/wheel) cleaning products; motor vehicle windshield washing fluid; optical lens cleaning products; oven cleaning products; upholstery cleaning products; and other cleaning products sold for specific specialty uses
-

"---" indicates that no data was submitted for this field

Does the institution have an institution-wide stated preference to purchase third party certified cleaning and janitorial products?:

Yes

A copy of the green cleaning product purchasing policy, directive, or guidelines:

[Detailed Chemical Guidelines.docx](#)

The green cleaning product purchasing policy, directive, or guidelines:

Custodial Services is committed to cleaning to protect health without harming the environment. We seek to achieve this objective by using environmentally friendly chemicals, processes, and equipment that aid in protecting the environment as well as the health and safety of our employees, customers, and visitors to the campus buildings where we clean.

General principles of environmental stewardship for cleaning

In the development of our cleaning policies and processes, we are guided by the following principles.

1. Clean for health first and appearance second.
2. Minimize human exposure to contaminants and cleaning products.
3. Recognize cleaning as an environmental health benefit.
4. Commit to occupational development of cleaning personnel.
5. Communicate the value of healthy buildings.
6. Minimize chemical, particle and moisture residue when cleaning.
7. Ensure worker and occupant safety.
8. Contain and reduce all pollutants entering the building.
9. Dispose of cleaning products in environmentally safe ways.
10. Establish and document routine maintenance schedules.

Green cleaning policy:

To reduce levels of chemical, biological, and particulate contaminants, which can compromise human health, building finishes and systems, and the environment, by implementing effective cleaning procedures.

A brief description of steps the institution has taken to ensure that the purchasing policy, directives, or guidelines are followed:

Environmentally Preferable Cleaning Products and Supplies

Third party certification for routinely used cleaning chemicals

- All routinely used cleaning chemicals (including general purpose cleaners, floor cleaners, bathroom cleaners, glass cleaners and carpet cleaners but not including disinfectant cleaners) shall be certified by either Green Seal or Design for the Environment (DfE) as environmentally preferable cleaning products for institutional use. Disinfectant cleaners will be used only where necessary on surfaces where pathogens can collect and breed such as in restrooms or for cleanups of bloodborne pathogens. Hypochlorites (bleach) will not be used except for certain cleanups of bloodborne pathogens and for certain instances of mold remediation where other products cannot be used.

Does the institution wish to pursue Part 2 of this credit (expenditures on cleaning and janitorial products)?:

Yes

Expenditures on Green Seal and/or UL Environment (EcoLogo) certified cleaning and janitorial products:

302,398.89 US/Canadian \$

Total expenditures on cleaning and janitorial products:

340,288.23 *US/Canadian \$*

Has the institution's main cleaning or housekeeping department(s) and/or contractor(s) adopted a Green Seal or ISSA certified low-impact, ecological (“green”) cleaning program?:

No

A brief description of the institution’s low-impact, ecological cleaning program:

A copy of the sections of the cleaning contract(s) that reference certified green products:

[Detailed Chemical Guidelines.docx](#)

The sections of the cleaning contract(s) that reference certified green products:

The website URL where information about the institution’s green cleaning initiatives is available:

Office Paper Purchasing

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has an institution-wide stated preference to purchase office paper that has recycled content, is certified by the Forest Stewardship Council (FSC), and/or is certified to meet similar multi-criteria sustainability standards for paper. This can take the form of purchasing policies, guidelines, or directives.

Policies and directives adopted by entities of which the institution is part (e.g. government or the university system) may count for this credit as long as the policies apply to and are followed by the institution.

Part 2

Institution purchases office paper with post-consumer recycled, agricultural residue, and/or FSC certified content.

Submission Note:

Printing Services spends \$252,840 on 30% recycled content paper during 2014.

"---" indicates that no data was submitted for this field

Does the institution have an institution-wide stated preference to purchase office paper that has recycled content and/or is certified to meet multi-criteria sustainability standards for paper?:

No

A copy of the paper purchasing policy, directive or guidelines:

The paper purchasing policy, directive or guidelines:

n/a

A brief description of steps the institution has taken to ensure that the purchasing policy, directives, or guidelines are followed :

n/a

Does the institution wish to pursue Part 2 of this credit (expenditures on office paper)?:

Yes

Expenditures on office paper with the following levels of post-consumer recycled, agricultural residue, and/or FSC certified content::

	Expenditure Per Level
10-29 percent	0 <i>US/Canadian \$</i>
30-49 percent	252,840 <i>US/Canadian \$</i>
50-69 percent	0 <i>US/Canadian \$</i>
70-89 percent (or FSC Mix label)	0 <i>US/Canadian \$</i>
90-100 percent (or FSC Recycled label)	0 <i>US/Canadian \$</i>

Total expenditures on office paper :

1,195,926.47 *US/Canadian \$*

The website URL where information about the paper purchasing policy, directive, or guidelines is available:

Inclusive and Local Purchasing

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has an institution-wide stated intent to support disadvantaged businesses, social enterprises, and/or local community-based businesses.

Support could take the form of giving preference during RFP processes, conducting targeted outreach to these businesses about opportunities to work with the institution, and/or other efforts to increase purchases made from such businesses.

Part 2

Institution makes purchases from companies that include disadvantaged businesses, social enterprises and/or local community-based businesses.

Purchases that meet multiple criteria listed above should not be double counted. Food and beverage purchases, which are covered by *OP 6: Food and Beverage Purchasing* and *OP 7: Low Impact Dining*, are not included in this credit.

Submission Note:

Business Policy Manual section 304 --

http://www.umsystem.edu/ums/rules/bpm/bpm300/manual_304

has information on preferential consideration given to these businesses.

"---" indicates that no data was submitted for this field

Does the institution have an institution-wide stated intent to support disadvantaged businesses, social enterprises, and/or local community-based businesses?:

Yes

A copy of the policy, guidelines or directive governing inclusive and local purchasing:

[Purchasing - BPM-304 Preferential Consideration.docx](#)

The policy, guidelines or directive governing inclusive and local purchasing:

Minority and Women Business Enterprise Participation:

It is the policy of the University of Missouri to ensure full and equitable economic opportunities to persons and businesses that compete

for business with the University, including Minority and Women Business Enterprises (M/WBEs). To this end, the University has established participation goals for MBEs and WBEs of the total value of contracts for goods and services. The University expects participation in contracts for goods and services by firms that are certified as Minority and Women Business Enterprises (M/WBEs). This may either be by the primary contractor being a qualified M/WBE or by the utilization of M/WBE suppliers by the primary contractor (second tier purchases). Contractors are required to make a "best effort" in support of the University's policy and documentation demonstrating this effort is required. Upon request of the University, the contractor shall provide semi-annual or annual reports of the financial participation of M/WBEs, either as the primary contractor or as second tier purchases. The report shall include the name(s) and address (es) of the qualified M/WBEs, products or services provided and the total dollar amount or percentage of utilization.

Does the institution wish to pursue Part 2 of this credit (inclusive and local expenditures)?:

Yes

The percentage of total purchases from disadvantaged businesses, social enterprises and/or local community-based businesses:

2.17

The website URL where information about the institution's inclusive and local purchasing policies and/or program is available:

<http://www.umssystem.edu/ums/fa/management/minbusdev/about>

Life Cycle Cost Analysis

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution employs Life Cycle Cost Analysis (LCCA) as a matter of policy and practice when evaluating energy- and water-using products and systems. Practices may include structuring RFPs so that vendors compete on the basis of lowest total cost of ownership (TCO) in addition to (or instead of) purchase price.

"---" indicates that no data was submitted for this field

Does the the institution employ Life Cycle Cost Analysis (LCCA) as a matter of policy and practice when evaluating energy and water-using products and systems?:

No

Does the institution employ LCCA as a matter of policy and practice across the operations of the entire institution (i.e. all divisions)?:

A brief description of the LCCA policy(ies) and practice(s):

The website URL where information about the institution's LCCA policies and practices is available:

Guidelines for Business Partners

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution has and acts on policies, guidelines and/or agreements that set expectations about the social and environmental responsibility of its business partners. The policies, guidelines and/or agreements require new and/or existing vendors and contractors and/or franchisees to adhere to:

1) Minimum environmental standards and practices defined by the institution, for example as outlined by the institution's sustainability policies

And/or

2) Minimum standards and practices governing employee wages, benefits, working conditions and rights that are consistent with fundamental International Labor Organization (ILO) conventions.

All enterprises with employees on-site as part of regular campus operations (e.g. contractors and franchisees) and other standing and/or formal business relationships (e.g. regular vendors and contracted services) are included.

Businesses that produce and/or sell licensed articles bearing the institution's trademarked logo ("licensees") are not included. They are covered in *EN 15: Trademark Licensing*.

The credit acknowledges institutional engagement in selecting its business partners and guiding them toward sustainability. Policies, guidelines or practices of the businesses themselves do not count for this credit in the absence of institutional selection criteria and/or guidance. Requiring compliance with existing legislation does not count on its own, but may be included as part of broader requirements that meet the criteria outlined above.

Policies adopted by entities of which the institution is part (e.g. government or university system) may count for this credit as long as the policies apply to and are followed by the institution.

"---" indicates that no data was submitted for this field

How many of the institution's business partners are covered by policies, guidelines and/or agreements that require adherence to minimum environmental standards?:

None

How many of the institution's business partners are covered by policies, guidelines and/or agreements that require adherence to minimum standards governing employee wages, benefits, working conditions and rights?:

None

A copy of the policies, guidelines, and/or agreements with the institution's business partners (or a representative sample):

The policies, guidelines, and/or agreements with the institution's business partners (or a representative sample):

A brief description of programs and strategies institution has implemented to ensure that the guidelines are followed, including a brief description of instances when the guidelines have changed purchasing behavior, if applicable:

The website URL where information about the institution's guidelines for its business partners is available:

<http://www.umssystem.edu/ums/fa/procurement/campus-supplier-info>

Transportation

This subcategory seeks to recognize institutions that are moving toward sustainable transportation systems. Transportation is a major source of greenhouse gas emissions and other pollutants that contribute to health problems such as heart and respiratory diseases and cancer. Due to disproportionate exposure, these health impacts are frequently more pronounced in low-income communities next to major transportation corridors. In addition, the extraction, production, and global distribution of fuels for transportation can damage environmentally and/or culturally significant ecosystems and may financially benefit hostile and/or oppressive governments.

At the same time, campuses can reap benefits from modeling sustainable transportation systems. Bicycling and walking provide human health benefits and mitigate the need for large areas of paved surface, which can help campuses to better manage storm water. Institutions may realize cost savings and help support local economies by reducing their dependency on petroleum-based fuels for transportation.

Credit
Campus Fleet
Student Commute Modal Split
Employee Commute Modal Split
Support for Sustainable Transportation

Responsible Party

Steve Joos

Senior Finance and Accounting Manager
Energy Management

Criteria

Institution supports alternative fuel and power technology by including in its motorized vehicle fleet vehicles that are:

- A. Gasoline-electric hybrid
- B. Diesel-electric hybrid
- C. Plug-in hybrid
- D. 100 percent electric
- E. Fueled with Compressed Natural Gas (CNG)
- F. Hydrogen fueled
- G. Fueled with B20 or higher biofuel for more than 4 months of the year

And/or

- H. Fueled with locally produced, low-level (e.g. B5) biofuel for more than 4 months of the year (e.g. fuel contains cooking oil recovered and recycled on campus or in the local community)

For this credit, the institution's motorized fleet includes all cars, carts, trucks, tractors, buses and similar vehicles used for transporting people and/or goods, including both leased vehicles and vehicles that are institution-owned and operated. Heavy construction equipment (e.g. excavators and pavers), maintenance equipment (e.g. lawn-mowers and leaf blowers), and demonstration/test vehicles used for educational purposes are not included in this credit.

Vehicles that meet multiple criteria (e.g. hybrid vehicles fueled with biofuel) should not be double-counted.

Submission Note:

Information gathered from Worksheet 2-Missouri State Fleet-Operations filed for the Missouri Department of Natural Resources on 8/29/11 and is available for viewing upon request. Numbers also include a 100% electric vehicle owned by the Sustainability Office that was not included in the report. Vehicle was added into the total number of vehicles in the institutions fleet.

"---" indicates that no data was submitted for this field

Total number of vehicles in the institution's fleet :

Number of vehicles in the institution's fleet that are::

	Number of Vehicles
Gasoline-electric, non-plug-in hybrid	2
Diesel-electric, non-plug-in hybrid	0
Plug-in hybrid	0
100 percent electric	0
Fueled with compressed natural gas (CNG)	0
Hydrogen fueled	0
Fueled with B20 or higher biofuel for more than 4 months of the year	80
Fueled with locally produced, low-level (e.g. B5) biofuel for more than 4 months of the year	0

A brief description of the institution's efforts to support alternative fuel and power technology in its motorized fleet:

The website URL where information about the institution's support for alternative fuel and power technology is available:

Student Commute Modal Split

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution's students commute to and from campus using more sustainable commuting options such as walking, bicycling, vanpooling or carpooling, taking public transportation, riding motorcycles or scooters, riding a campus shuttle, or a combination of these options.

Students who live on campus should be included in the calculation based on how they get to and from their classes.

Submission Note:

Student scooters and mopeds do not require a permit and are harder to track.

"---" indicates that no data was submitted for this field

Total percentage of students that use more sustainable commuting options:

56

The percentage of students that use each of the following modes as their primary means of transportation to get to and from campus::

	Percentage (0-100)
Commute with only the driver in the vehicle (excluding motorcycles and scooters)	44
Walk, bicycle, or use other non-motorized means	13
Vanpool or carpool	0
Take a campus shuttle or public transportation	42
Use a motorcycle, scooter or moped	0.50

A brief description of the method(s) used to gather data about student commuting:

Student commuting data is gathered based on the number of parking permits sold. The MUPD registered 450 bikes for the 2013-2014 academic year, and their officer estimates that represents about 20 percent of student riders on campus.

The website URL where information about sustainable transportation for students is available:

http://parking.missouri.edu/html/main_bus.cfm

Employee Commute Modal Split

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution's employees (faculty, staff, and administrators) get to and from campus using more sustainable commuting options such as walking, bicycling, vanpooling or carpooling, taking public transportation, riding motorcycles or scooters, riding a campus shuttle, telecommuting, or a combination of these options.

Employees who live on campus should be included in the calculation based on how they get to and from their workplace.

"---" indicates that no data was submitted for this field

Total percentage of the institution's employees that use more sustainable commuting options:

33

The percentage of the institution's employees that use each of the following modes as their primary means of transportation to and from campus::

	Percentage (0-100)
Commute with only the driver in the vehicle (excluding motorcycles and scooters)	67
Walk, bicycle, or use other non-motorized means	30
Vanpool or carpool	---
Take a campus shuttle or public transportation	1
Use a motorcycle, scooter or moped	2
Telecommute for 50 percent or more of their regular work hours	---

A brief description of the method(s) used to gather data about employee commuting:

All commuting data is based on parking permits sold.

The website URL where information about sustainable transportation for employees is available:

http://parking.missouri.edu/html/main_bus.cfm

Support for Sustainable Transportation

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

The institution demonstrates its support for active (i.e. non-motorized) transportation on campus in one or more of the following ways:

Option A: Institution:

- Provides secure bicycle storage (not including office space), shower facilities, and lockers for bicycle commuters. The storage, shower facilities and lockers are co-located in at least one building/location that is accessible to all commuters.
- Provides short-term bicycle parking (e.g. racks) within 50 ft (15 m) of all occupied, non-residential buildings and makes long-term bicycle storage available within 330 ft (100 m) of all residence halls (if applicable).
- Has a “complete streets” or bicycle accommodation policy (or adheres to a local community policy) and/or has a continuous network of dedicated bicycle and pedestrian paths and lanes that connects all occupied buildings and at least one inter-modal transportation node (i.e. transit stop or station)

And/or

- Has a bicycle-sharing program or participates in a local bicycle-sharing program

Option B: Institution is certified as a Bicycle Friendly University (at any level) by the League of American Bicyclists (U.S.) or under a similar third party certification for non-motorized transportation.

Part 2

Institution has implemented one or more of the following strategies to encourage more sustainable modes of transportation and reduce the impact of student and employee commuting. The institution:

- Offers free or reduced price transit passes and/or operates a free campus shuttle for commuters. The transit passes may be offered by the institution itself, through the larger university system of which the institution is a part, or through a regional program provided by a government agency.
- Offers a guaranteed return trip (GRT) program to regular users of alternative modes of transportation
- Participates in a car/vanpool or ride sharing program and/or offers reduced parking fees or preferential parking for car/vanpoolers
- Participates in a car sharing program, such as a commercial car-sharing program, one administered by the institution, or one administered by a regional organization
- Has one or more Level 2 or Level 3 electric vehicle recharging stations that are accessible to student and employee commuters
- Offers a telecommuting program for employees, either as a matter of policy or as standard practice
- Offers a condensed work week option for employees, either as a matter of policy or as standard practice
- Has incentives or programs to encourage employees to live close to campus

- Other strategies

"---" indicates that no data was submitted for this field

Does the institution provide secure bicycle storage (not including office space), shower facilities, and lockers for bicycle commuters?:

No

A brief description of the facilities for bicycle commuters:

The campus has multiple covered/secure bike storage locations, as well as an on-campus recreational facility for all full-time students, and paying staff/faculty to utilize that includes shower facilities and lockers.

Does the institution provide short-term bicycle parking (e.g. racks) within 50 ft (15 m) of all occupied, non-residential buildings and make long-term bicycle storage available within 330 ft (100 m) of all residence halls (if applicable)?:

Yes

A brief description of the bicycle parking and storage facilities:

There are more than 5,000 bicycle spaces on campus. Bicycle parking is not allowed along handrails, fences, buildings, trees or light poles. Bicycle parking map:

http://sustainability.missouri.edu/pdfs/Bike_Map.pdf

Does the institution have a “complete streets” or bicycle accommodation policy (or adhere to a local community policy) and/or have a continuous network of dedicated bicycle and pedestrian paths and lanes?:

Yes

A brief description of the bicycle/pedestrian policy and/or network:

The University of Missouri collaborates with the City of Columbia to provide designated “green routes” safe streets for bicyclists.

<https://www.gocolumbiamo.com/PublicWorks/GetAboutColumbia/Biking/documents/2014ColumbiaMissourir>

[BikeMap-Large.pdf](#)

Does the institution have a bicycle-sharing program or participate in a local bicycle-sharing program?:

Yes

A brief description of the bicycle sharing program:

Mizzou Bike Share is free to students. Bicycles can be checked out at the Mizzou Student Center but must be returned one hour before the student center closes.

<http://environmentalleadership.missouri.edu/mizzou-bike-share/>

Is the institution certified as a Bicycle Friendly University by the League of American Bicyclists (U.S.) or under a similar third party certification covering non-motorized transportation?:

No

A brief description of the certification, including date certified and level:

n/a

Does the institution offer free or reduced price transit passes and/or operate a free campus shuttle for commuters?:

Yes

A brief description of the mass transit program(s), (s), including availability, participation levels, and specifics about discounts or subsidies offered (including pre-tax options):

Tiger Line is a shuttle service that runs seven days a week when residence halls are open and is funded through student fees. Routes run every 10 minutes between commuter lots and campus during the day and every 30 minutes to campus, shopping and downtown destinations at night and on weekends.

<http://tigerline.missouri.edu/>

COMO Connect, Columbia's bus system, offers \$100 student semester passes.

<http://www.comoconnect.org/>

Does the institution offer a guaranteed return trip (GRT) program to regular users of alternative modes of transportation?:

No

A brief description of the GRT program:

n/a

Does the institution participate in a car/vanpool or ride sharing program and/or offer reduced parking fees or preferential parking for car/vanpoolers?:

Yes

A brief description of the carpool/vanpool program:

A 12-passenger shuttle van has transported commuters from Boonville to campus each work day since the mid-1970s. Each passenger pays a fixed rate that is used to supply the vehicle, insurance, maintenance costs and fuel.

Does the institution participate in a car sharing program, such as a commercial car-sharing program, one administered by the institution, or one administered by a regional organization?:

Yes

A brief description of the car sharing program:

Mizzou participates in the Enterprise Car Share program.

<http://www.enterprise-carshare.com/car-sharing/program/mizzou>

Does the institution have one or more Level 2 or Level 3 electric vehicle recharging stations that are accessible to student and employee commuters?:

No

A brief description of the electric vehicle recharging stations:

n/a

Does the institution offer a telecommuting program for employees as a matter of policy or as standard practice?:

Yes

A brief description of the telecommuting program:

Telecommuting is at the discretion of the department.

http://www.umssystem.edu/totalrewards/flexible_work_arrangements_overview

Does the institution offer a condensed work week option for employees as a matter of policy or as standard practice?:

Yes

A brief description of the condensed work week program:

A condensed work week is at the discretion of the department and several employees take advantage of this work-life initiative.

http://www.umssystem.edu/totalrewards/flexible_work_arrangements_overview

http://www.umssystem.edu/totalrewards/flexible_work_arrangements_specific_types

Does the institution have incentives or programs to encourage employees to live close to campus?:

No

A brief description of the incentives or programs to encourage employees to live close to campus:

n/a

Does the institution have other incentives or programs to encourage more sustainable modes of transportation and reduce the impact of student and employee commuting?:

No

A brief description of other sustainable transportation initiatives and programs:

n/a

The website URL where information about the institution's sustainable transportation program(s) is available:

<http://parking.missouri.edu/html/main.cfm>

Waste

This subcategory seeks to recognize institutions that are moving toward zero waste by reducing, reusing, recycling, and composting. These actions mitigate the need to extract virgin materials, such as trees and metals. It generally takes less energy and water to make a product with recycled material than with virgin resources. Reducing waste generation also reduces the flow of waste to incinerators and landfills which produce greenhouse gas emissions, can contaminate air and groundwater supplies, and tend to have disproportionate negative impacts on low-income communities. Waste reduction and diversion also save institutions costly landfill and hauling service fees. In addition, waste reduction campaigns can engage the entire campus community in contributing to a tangible sustainability goal.

Credit
Waste Minimization
Waste Diversion
Construction and Demolition Waste Diversion
Hazardous Waste Management

Waste Minimization

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has implemented source reduction strategies to reduce the total amount of waste generated (materials diverted + materials disposed) per weighted campus user compared to a baseline.

Part 2

Institution's total annual waste generation (materials diverted and disposed) is less than the minimum performance threshold of 0.45 tons (0.41 tonnes) per weighted campus user.

This credit includes on-campus dining services operated by the institution or the institution's primary on-site contractor.

Total waste generation includes all materials that the institution discards, intends to discard or is required to discard (e.g. materials recycled, composted, donated, re-sold and disposed of as trash) except construction, demolition, electronic, hazardous, special (e.g. coal ash), universal and non-regulated chemical waste, which are covered in *OP 24: Construction and Demolition Waste Diversion* and *OP 25: Hazardous Waste Management*.

Submission Note:

Baseline year numbers have been gathered from the Solid Waste and Recycling at MU FY 2008 report.

"---" indicates that no data was submitted for this field

Waste generated::

	Performance Year	Baseline Year
Materials recycled	1,686.71 Tons	1,858.50 Tons
Materials composted	86 Tons	83.50 Tons
Materials reused, donated or re-sold	249.04 Tons	17 Tons

Materials disposed in a solid waste landfill or incinerator	5,950.14 <i>Tons</i>	6,100 <i>Tons</i>
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Figures needed to determine "Weighted Campus Users"::

	Performance Year	Baseline Year
Number of residential students	6,893	6,279
Number of residential employees	18	18
Number of in-patient hospital beds	5	0
Full-time equivalent enrollment	30,865	25,089
Full-time equivalent of employees	9,071.90	8,665.10
Full-time equivalent of distance education students	1,785.80	1,259.10

Start and end dates of the performance year and baseline year (or three-year periods):

	Start Date	End Date
Performance Year	July 1, 2013	June 30, 2014
Baseline Year	July 1, 2007	June 30, 2008

A brief description of when and why the waste generation baseline was adopted:

MU signed the ACUPCC in January 2009. The ACUPCC requires 2008 to be used as the baseline year for the University's Climate Action Plan. It made sense to use the same baseline year for waste generation.

A brief description of any (non-food) waste audits employed by the institution:

In 2003 Waste Reduction Strategies conducted a solid waste audit at the University of Missouri - Columbia to determine what actions could be taken in order to reduce both the volume and cost of solid waste collected on campus. The purpose of the study was to determine what solid waste is currently generated, the composition of that waste, and explore ways to reduce that waste and the cost associated with the collection and disposal of that solid waste. Beyond that study done in 2003, the MU Sustainability Office does a variety of "mini audits" looking into the same factors of the sidewalk trash and recycling systems. A class taught in the School of Natural resources also does mini audits, called "Trash Bash" of campus trash and recycling. Recently, in 2013 a doctoral student did a waste audit on Red Campus.

A brief description of any institutional procurement policies designed to prevent waste:

The University of Missouri System came out with a Sustainable Office Shopping guide/brochure to help departments and offices make better choices when it comes to supply purchases, but it is not policy. The brochure promotes, High-Quality. Reusable. Durable. Efficient. Third Party Certified. Less Packaging. Better. By using the Show-Me Shop eProcurement tool. On the vendors' "punch out" catalog sites, sustainable items are identified by an icon. Ordering through the Show-Me Shop saves time, money and energy. UM's group purchasing contracts negotiate the best prices, paperwork costs are dramatically reduced and free delivery saves employees many miles. It's also easier to compare environmentally preferred products and track our progress buying green products.

REDUCE FIRST

Consider whether the product is actually necessary before purchasing.

RECYCLED CONTENT

Choose products that have a high recycled content, if possible.

QUALITY & DURABILITY

Consider purchasing products that are designed to last or are easily upgraded.

EFFICIENCY

Try to choose products that make the best use of their source and create the least amount of waste at the end of their life.

MATERIALS

Try to find products that use or are made of natural or minimally processed materials.

LESS PACKAGING

Avoid products that need high levels of packaging to be shipped.

CHOICE OF VENDOR

Try to use the university's preferred suppliers, or a supplier that is environmentally conscious about their product.

RECYCLABLE:

This product can be collected, separated, or recovered from the solid waste stream and used again.

RECYCLED CONTENT:

This product was made with recovered materials instead of virgin natural resources.

FOREST STEWARDSHIP COUNCIL:

This product is guaranteed to contain wood products harvested from a well-managed forest.

DESIGNED FOR THE ENVIRONMENT:

This product contains environmentally friendly ingredients as designated by the EPA.

GREEN SEAL:

This product has been reviewed for the environmental impacts tied to its use, manufacture, and disposal.

ORGANIC:

This product was not produced using irradiation, specified fertilizers, prohibited pesticides, and GMO's.

FAIR TRADE:

The workers behind this product participate in international markets in ways that are fair and equitable.

ENERGY STAR:

This product met EPA standards for reducing greenhouse gas emissions through energy efficiency.

A brief description of any surplus department or formal office supplies exchange program that facilitates reuse of materials:

Surplus Property is a part of the Procurement Services Department that is responsible for the disposal, re-distribution, and/or sale of used equipment/property that the University of Missouri and other Mid-Missouri government agencies and educational institutions no longer use. The sale of this equipment is handled through public auctions, sales, or online. A Disposal Request through our software must be

completed and approved before items can be picked up. Surplus receives no General Operating(G.O.) funds. All salaries, benefits, operational, marketing and sales costs are paid by the 35% retained from the sale of surplus equipment.

A brief description of the institution's efforts to make materials available online by default rather than printing them:

The University utilizes the Blackboard site which is an online learning community that all courses offered by the university are registered on and all course information and documents are provided through each courses respective link. Students have the ability to upload all work done for each course as well.

A brief description of any limits on paper and ink consumption employed by the institution:

The Print Smart Program was initiated in an effort to reduce the use of printing and misuse of printers. This program has resulted in much greater sustainability-friendly printing habits at MU. Print Smart is a print accounting service that manages printing use in the computing sites. Students use their non-refundable print allowance to print to numerous on-campus printers; the cost of each print job is deducted from that allowance. Students can track your usage and remaining allowance online.

A brief description of any programs employed by the institution to reduce residence hall move-in/move-out waste:

A collaboration between the University of Missouri, the City of Columbia and the University YMCA, Tiger Treasures collects and sells unwanted items donated by students departing for the summer from MU Residential Life facilities and Greek houses. The project diverts tons of material from the landfill and proceeds from the sale benefit local charitable agencies. The Mizzou Tiger Treasures Rummage Sale collects unwanted items from departing students and sells them in the city's largest rummage sale.

A brief description of any other (non-food) waste minimization strategies employed by the institution:

Increasing recycling awareness to our Building Coordinators.

A brief description of any food waste audits employed by the institution:

Each week, 100 consecutive trays are randomly sampled at lunch or dinner. All edible food and beverage are collected and weighted (no peels, bones or ice). The total weight is converted to ounces and divided by 100 to get an average per person. This same process is followed at every all-you-care-to-eat facility.

A brief description of any programs and/or practices to track and reduce pre-consumer food waste in the form of kitchen food waste, prep waste and spoilage:

Campus Dining Services has worked closely with the MU Bradford Research and Extension Center (Bradford Farm) on a full-cycle composting project. CDS sends food waste to Bradford Farm to create the farm's compost material. Then each year, CDS purchases vegetables grown at Bradford Farm to serve across campus. In additional, Bradford Farm uses oil from CDS fryers for bio-diesel in the farm's tractors.

A brief description of programs and/or practices to track and reduce post-consumer food waste:

The University of Missouri initiated a Trayless Dining Week in 2009, and it resulted in large waste reductions. More recently Campus Dining implemented Trayless Dining for Summer Welcome in summer of 2011, response was positive and the continuation of trayless dining was carried over into the Fall and is remains the current practice.

A brief description of the institution's provision of reusable and/or third party certified compostable to-go containers for to-go food and beverage items (in conjunction with a composting program):

We do not currently use any reusable or compostable containers for to-go meals.

A brief description of the institution's provision of reusable service ware for “dine in” meals and reusable and/or third party certified compostable service ware for to-go meals (in conjunction with a composting program):

85% of dining operations offer reusable service ware either exclusively or as an option for customers dining in. One operation (Pavilion @ Dobbs) only uses certified compostable service ware for all dine-in meals.

A brief description of any discounts offered to customers who use reusable containers (e.g. mugs) instead of disposable or compostable containers in to-go food service operations:

Reusable mugs are available for purchase from both retail (cash) and residential (dining plan) operations. Customers receive a cash discount for bringing a reusable mug in retail operations. Customers using a Campus Dining Service mug in residential operations may get their beverage for free.

A brief description of other dining services waste minimization programs and initiatives:

Campus Dining Services uses computerized tracking to anticipate and prepare only the food that is needed. As less food is wasted, less food is purchased and prepared. Continued reduction in waste reduces energy used in storing, transporting, and producing food. Continued reduction in demand lowers costs and frees up agricultural resources for other purposes. Each week, 100 consecutive trays are randomly sampled at lunch or dinner. All edible food and beverage are collected and weighted (no peels, bones or ice). The total weight is converted to ounces and divided by 100 to get an average per person. This same process is followed at every all-you-care-to-eat facility.

The “Waste Not, Want Not” task force is a Mizzou Advantage undergraduate research team involving an interdisciplinary collaboration of students and faculty seeking to understand food waste and how to decrease it on campus. With the support of Campus Dining Services, they are launching a two-week awareness campaign in early November which will involve traditional marketing as well as the use of social media, utilizing the hashtag #RespectZouFood. The team will determine our success by measuring the plate waste generated before and after the intervention and also by tracking the reach of our social media campaign.

The website URL where information about the institution’s waste minimization initiatives is available:

<http://sustainability.cf.missouri.edu/topics/recyclingdetail.html>

Waste Diversion

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution diverts materials from the landfill or incinerator by recycling, composting, reusing, donating, or re-selling.

This credit includes on-campus dining services operated by the institution or the institution's primary on-site contractor.

This credit does not include construction, demolition, electronic, hazardous, special (e.g. coal ash), universal and non-regulated chemical waste, which are covered in *OP 24: Construction and Demolition Waste Diversion* and *OP 25: Hazardous Waste Management*.

Submission Note:

Numbers derived from the Solid Waste and Recycling Report FY2014 and can be provided by the Sustainability Office upon request.

"---" indicates that no data was submitted for this field

Materials diverted from the solid waste landfill or incinerator:

4,049.25 Tons

Materials disposed in a solid waste landfill or incinerator :

5,950.14 Tons

A brief description of programs, policies, infrastructure investments, outreach efforts, and/or other factors that contributed to the diversion rate, including efforts made during the previous three years:

Some of the high impact factors that contribute to our diversion rate is our use of Surplus Property, Tiger Treasures Rummage Sale, composting efforts, Game Day Recycling, and Environmental Health & Safety materials reuse.

Reducing waste has many important ecological and economical benefits. Campus Dining Services uses computerized tracking to anticipate and prepare only the food that is needed. As less food is wasted, less food is purchased and prepared. Continued reduction in waste reduces energy used in storing, transporting, and producing food. Continued reduction in demand lowers costs and frees up agricultural resources for other purposes.

Each week, 100 consecutive trays are randomly sampled at lunch or dinner. All edible food and beverage are collected and weighted (no peels, bones or ice). The total weight is converted to ounces and divided by 100 to get an average per person. This same process is followed at every all-you-care-to-eat facility.

A brief description of any food donation programs employed by the institution:

At the end of the semester, Tiger Pantry encourages students to donate their left over swipes for meals to purchase food from the Emporium (mini mart) for the less fortunate. Also, Tigers for Community Agriculture, donated 506 pounds of produce to Tiger Pantry.

A brief description of any pre-consumer food waste composting program employed by the institution:

The University of Missouri collects pre-consumer food waste from eight dining locations on campus: Baja Grill, Dobbs Pavilion, The Mark, MU Student Center, Plaza 900, Rollins Dining Hall, Sabai and Wheatstone Bistro/Starbucks. Students collect the pre-consumer food waste multiple times per week at those locations and it is brought to the Bradford Farms for curing.

A brief description of any post-consumer food waste composting program employed by the institution:

Campus Dining Services (CDS) has worked closely with the MU Bradford Research and Extension Center (Bradford Farm) on a full-cycle composting project. CDS sends food waste to Bradford Farm to create the farm's compost material. Then each year, CDS purchases vegetables grown at Bradford Farm to serve across campus.

In addition, Bradford Farm uses oil from CDS fryers for bio-diesel in the farm's tractors.

Does the institution include the following materials in its waste diversion efforts?:

	Yes or No
Paper, plastics, glass, metals, and other recyclable containers	Yes
Food donations	Yes
Food for animals	---
Food composting	Yes
Cooking oil	Yes
Plant materials composting	Yes
Animal bedding composting	Yes
Batteries	Yes
Light bulbs	Yes

Toner/ink-jet cartridges	Yes
White goods (i.e. appliances)	Yes
Laboratory equipment	Yes
Furniture	Yes
Residence hall move-in/move-out waste	Yes
Scrap metal	Yes
Pallets	Yes
Motor oil	Yes
Tires	Yes

Other materials that the institution includes in its waste diversion efforts:

Construction and Demolition Waste Diversion

Responsible Party

Hannah Peterson

Graduate Research Assistant
Human Dimensions of Natural Resources

Criteria

Institution diverts non-hazardous construction and demolition waste from the landfill and/or incinerator.

Soil and organic debris from excavating or clearing the site do not count for this credit.

Submission Note:

Information obtained from Chris Wilson, Sustainable Design and Construction Program Manager.

"---" indicates that no data was submitted for this field

Construction and demolition materials recycled, donated, or otherwise recovered:

3,039 Tons

Construction and demolition materials landfilled or incinerated :

308 Tons

A brief description of programs, policies, infrastructure investments, outreach efforts, and/or other factors that contributed to the diversion rate for construction and demolition waste:

The University of Missouri's Sustainable Design Guidelines define rates of diversion for major construction projects. Template specifications, early estimates for project diversion rates, and tracking logs are utilized on major construction and demolition projects. Where possible, approved clean-fill sites for masonry rubble are utilized within the campus boundary or in close proximity to the project site, in order to minimize transportation distance.

Hazardous Waste Management

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has strategies in place to safely dispose of all hazardous, special (e.g. coal ash), universal, and non-regulated chemical waste and seeks to minimize the presence of these materials on campus.

Part 2

Institution has a program in place to recycle, reuse, and/or refurbish electronic waste generated by the institution and/or its students. Institution takes measures to ensure that the electronic waste is recycled responsibly, for example by using a recycler certified under the e-Stewards and/or R2 standards.

"---" indicates that no data was submitted for this field

Does the institution have strategies in place to safely dispose of all hazardous, special (e.g. coal ash), universal, and non-regulated chemical waste and seek to minimize the presence of these materials on campus?:

Yes

A brief description of steps taken to reduce hazardous, special (e.g. coal ash), universal, and non-regulated chemical waste:

Environmental Health and Safety (EHS) coordinates the campus hazardous waste management program.

EHS provides training on materials management to users of hazardous materials, which includes instruction on waste segregation and minimization. Users are encouraged to seek non-hazardous substitutes over their hazardous counterparts whenever possible.

Any unused, but still usable, materials are brought into the EHS Chemical Redistribution Program, where they are kept available for any further University use, and thus are not disposed of as waste.

EHS operates a Mercury Reduction Program, which helps fund the replacement of elemental mercury-containing devices across campus.

Environmental Health and Safety manages universal waste items (fluorescent lamps and recyclable batteries) for all campus properties. In conjunction with The Office of Sustainability EHS has established over 100 battery recycling collection areas.

The University Power Plant has substituted biomass fuel for approximately one third of the coal burned, reducing coal ash production by approximately the same fraction.

EHS has operated a chemical recycling program that takes unwanted excess chemicals from laboratories and returns them free of charge to other interested campus researchers. In 2007, EHS recycled 3,600 chemical containers, which had an avoided purchase cost, adjusted for MU discounts, of \$199,700. EHS also recycled 960 pieces of lab equipment (mostly glassware) with an avoided purchase cost of \$19,600. EHS also removed 10 kilograms of mercury devices from its facilities and replaced them with non-mercury devices at a cost of \$1,400.

Hazardous materials are chemicals that exhibit one or more of the following characteristics: ignitability, corrosivity, reactivity, and toxicity. MU generally uses the most restrictive regulatory definition in identifying hazardous materials. EHS works closely with the Hazardous Materials Management Committee to develop campus policies and review campus issues related to hazardous materials.

A brief description of how the institution safely disposes of hazardous, universal, and non-regulated chemical waste:

EHS collects and manages unwanted hazardous materials. Campus activities are managed through the designation of Principal Investigators and Supervisors as Registered Users, who are responsible for locations where hazardous materials are used or stored. In addition, EHS monitors these locations to assure that hazardous materials are being handled and stored safely.

Hazardous and universal waste materials are disposed of via contracted and bonded disposal companies.

A brief description of any significant hazardous material release incidents during the previous three years, including volume, impact and response/remediation:

None

A brief description of any inventory system employed by the institution to facilitate the reuse or redistribution of laboratory chemicals:

Environmental Health and Safety operates a Chemical Redistribution Program as part of the overall MU Hazardous Material Services program. The objective is to collect surplus chemicals and redistribute them to those who need them. The current inventory of items are available to be viewed online, and is updated weekly.

Does the institution have or participate in a program to responsibly recycle, reuse, and/or refurbish all electronic waste generated by the institution?:

Yes

Does the institution have or participate in a program to responsibly recycle, reuse, and/or refurbish electronic waste generated by students?:

Yes

A brief description of the electronic waste recycling program(s):

Recycling of the following items is available for institutional electronics waste (through receptacles on campus, recycling drives, or other means): batteries, cell phones, computers, light bulbs, printer cartridges, and other e-waste.

In addition to the above items, which are recycled in-house through Procurement, MU also co-sponsors with the Mid-Missouri Solid Waste Management District collection events open to the public on campus for computers, televisions, microwaves and other items.

A brief description of steps taken to ensure that e-waste is recycled responsibly, workers' basic safety is protected, and environmental standards are met:

EHS communicates e-waste requirements to campus through training and its website. MU follows the Missouri E-cycle Standards, also known as MOEST, which were developed to identify common sense strategies that define best management practices for collecting, processing and transporting e-scrap in Missouri that protect the environment.

The website URL where information about the institution's hazardous and electronic-waste recycling programs is available:

<http://ehs.missouri.edu/haz/e-waste.html>

Water

This subcategory seeks to recognize institutions that are conserving water, making efforts to protect water quality and treating water as a resource rather than a waste product. Pumping, delivering, and treating water is a major driver of energy consumption, so institutions can help reduce energy use and the greenhouse gas emissions associated with energy generation by conserving water. Likewise, conservation, water recycling and reuse, and effective rainwater management practices are important in maintaining and protecting finite groundwater supplies. Water conservation and effective rainwater and wastewater management also reduce the need for effluent discharge into local surface water supplies, which helps improve the health of local water ecosystems.

Credit
Water Use
Rainwater Management
Wastewater Management

Responsible Party

Steve Joos

Senior Finance and Accounting Manager
Energy Management

Criteria

Part 1

Institution has reduced its potable water use per weighted campus user compared to a baseline.

Part 2

Institution has reduced its potable water use per gross square foot/metre of floor area compared to a baseline.

Part 3

Institution has reduced its total water use (potable + non-potable) per acre/hectare of vegetated grounds compared to a baseline.

Submission Note:

2005 Water Consumption obtained from data used on the University of Missouri-Columbia Sustainability Green Report Card:

<http://www.greenreportcard.org/report-card-2011/schools/university-of-missouri-columbia/surveys>

/campus-survey

refer to the "Water Management" heading located under the "GREEN BUILDING" section.

Performance Year Water Consumption obtained from the Climate Action Plan Update 2013:

<http://masterplan.missouri.edu/>

Future plan see 06 in :

http://masterplan.missouri.edu/master_plan.html

http://masterplan.missouri.edu/archives/Publications/MP/2010s/MP2013_Map_web.pdf

Student Body and Employee information was derived from the Department of Institutional Research:

<http://ir.missouri.edu/data-set/>

The 2005 student figures can be found at:

http://ir.missouri.edu/data-set/CDS_0506.pdf

see pages 2 and 15

See page 32 of the Climate Action Plan for a description of water reduction.

http://www.cf.missouri.edu/masterplan/images/cap/cap_web.pdf

"---" indicates that no data was submitted for this field

Level of water risk for the institution's main campus:

Medium to High

Total water use::

	Performance Year	Baseline Year
Total water use	308,520,500 <i>Gallons</i>	349,950,000 <i>Gallons</i>

Potable water use::

	Performance Year	Baseline Year
Potable water use	308,520,500 <i>Gallons</i>	349,950,000 <i>Gallons</i>

Figures needed to determine "Weighted Campus Users"::

	Performance Year	Baseline Year
Number of residential students	6,893	6,279
Number of residential employees	18	18
Number of in-patient hospital beds	5	0
Full-time equivalent enrollment	30,865	25,089
Full-time equivalent of employees	9,071.90	8,665.10
Full-time equivalent of distance education students	1,786	1,259.10

Gross floor area of building space::

	Performance Year	Baseline Year
Gross floor area	14,178,920 <i>Square Feet</i>	13,146,549 <i>Square Feet</i>

Area of vegetated grounds::

	Performance Year	Baseline Year
Vegetated grounds	978 <i>Acres</i>	978 <i>Acres</i>

Start and end dates of the performance year and baseline year (or three-year periods):

	Start Date	End Date
Performance Year	July 1, 2012	June 30, 2013
Baseline Year	July 1, 2007	June 30, 2008

A brief description of when and why the water use baseline was adopted:

Water recycled/reused on campus, performance year:

Recycled/reused water withdrawn from off-campus sources, performance year:

A brief description of any water recovery and reuse systems employed by the institution:

The MU Power Plant began using recycled waste water from the plant's water treatment system to supplement the plant's cooling water system.

Also H. Palmer Professor and former chair of the Department of Civil and Environmental Engineering, and Senior Fellow at the Woods Institute for the Environment at Stanford University is teaching and doing research in environmental engineering and water quality with application to water reuse and management of contaminated sediments.

A brief description of any water metering and management systems employed by the institution:

The University of Missouri has a system in place which meters water usage of every building on campus.

A brief description of any building retrofit practices employed by the institution, e.g. to install high efficiency

plumbing fixtures and fittings:

A brief description of any policies or programs employed by the institution to replace appliances, equipment and systems with water-efficient alternatives:

A brief description of any water-efficient landscape design practices employed by the institution (e.g. xeriscaping):

n/a

A brief description of any weather-informed irrigation technologies employed by the institution:

n/a

A brief description of other water conservation and efficiency strategies employed by the institution:

The website URL where information about the institution's water conservation and efficiency initiatives is available:

http://masterplan.missouri.edu/master_plan.html

Rainwater Management

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution uses Low Impact Development (LID) practices as a matter of policy or standard practice to reduce rainwater/stormwater runoff volume and improve outgoing water quality for new construction, major renovation, and other projects that increase paved surface area on campus or otherwise significantly change the campus grounds.

The policy, plan, and/or strategies cover the entire campus. While the specific strategies or practices adopted may vary depending on project type and location, this credit is reserved for institutions that mitigate rainwater runoff impacts consistently during new construction. Implementing a strategy or strategies for only one new development project is not sufficient for Part 1 of this credit.

Part 2

Institution has adopted a rainwater/stormwater management policy, plan, and/or strategies that mitigate the rainwater runoff impacts of ongoing campus operations and treat rainwater as a resource rather than as a waste product.

The policy, plan, and/or strategies address both the quantity and quality (or contamination level) of rainwater runoff through the use of green infrastructure. Though specific practices adopted may vary across the campus, the policy, plan, and/or strategies cover the entire institution. Implementing strategies for only one building or area of campus is not sufficient for Part 2 of this credit.

Policies adopted by entities of which the institution is part (e.g. state government or the university system) may count for both parts of this credit as long as the policies apply to and are followed by the institution.

"---" indicates that no data was submitted for this field

Does the institution use Low Impact Development (LID) practices as a matter of policy or standard practice to reduce rainwater/stormwater runoff volume and improve outgoing water quality for new construction, major renovation, and other projects?:

Yes

A brief description of the institution's Low Impact Development (LID) practices:

MU standard practice requires that all new construction that increases impervious area match pre-construction peak flow conditions. It is a typical goal to provide volume control to mimic the pre-construction conditions. BMPs are designed using nomographs derived from long term rainfall runoff simulations based on local climate data that incorporates actual storm and precipitation characteristics. If the stormwater cannot be effectively managed on site, an offsite location may be selected within the same drainage area.

Has the institution adopted a rainwater/stormwater management policy, plan, or strategies that mitigate the rainwater runoff impacts of ongoing campus operations through the use of green infrastructure? :

Yes

A brief description of the institution's rainwater/stormwater management policy, plan, and/or strategies for ongoing campus operations:

We have implemented a stormwater masterplan that includes future locations for BMPs across campus. As funding is available, or as projects are developed that can contribute to this master plan, these BMPs are installed.

A brief description of any rainwater harvesting employed by the institution:

A cistern at Tucker Hall is used to water plants at the Tucker greenhouse.

Rainwater harvested directly and stored/used by the institution, performance year:

A brief description of any rainwater filtering systems employed by the institution to treat water prior to release:

n/a

A brief description of any living or vegetated roofs on campus:

There is a small green roof on the Life Sciences Building.

A brief description of any porous (i.e. permeable) paving employed by the institution:

There are several porous paving installations on campus, including: Gillett/Hudson and Johnston/Wolpers residence hall; outside of the Sustainability Office; on Traditions Plaza; west of Stankowski Field; and at the corner of Missouri Ave. and Rollins St.

A brief description of any downspout disconnection employed by the institution:

n/a

A brief description of any rain gardens on campus:

The university has four rain gardens on campus, including: Gillett/Hudson residence hall; two at Animal Resource Center; and one at Providence and Stewart Roads.

A brief description of any stormwater retention and/or detention ponds employed by the institution:

Detention basins are located west and south of the Southwest Campus Housing complex. These basins capture and release peak flows from adjacent storm sewers and the residence halls roof drains. A detention basin captures a portion of the runoff from parking lot CG-1 and releases the stormwater at a slower rate.

A brief description of any bioswales on campus (vegetated, compost or stone):

n/a

A brief description of any other rainwater management technologies or strategies employed by the institution:

In an effort to reduce trash, salt and sediment from reaching campus storm sewers, MU Facility Operations routinely sweeps campus sidewalks and streets. In addition, in an effort to reduce the negative stormwater quality impacts from sodium chloride, we have started to use magnesium chloride for snow removal.

MU has established a variety of policies and plans which include storm water considerations. These include the Campus Master Plan, the Campus Design Principles, and the University of Missouri Design Guidelines.

Environmental Health and Safety is responsible for several programs and projects that protect storm water. These include the hazardous materials management program, development of Spill Prevention Control and Countermeasures (SPCC) Plans for management of oil, and a project to label storm drains with special discs.

Recently, a Mizzou Advantage undergraduate research grant gave five students a chance to investigate stormwater best management practices on the MU campus. For more information on this project, refer to:

<http://engineering.missouri.edu/2011/05/mu%E2%80%99s-stormwater-best-management-practices-focus-of-undergraduate-research/>

The website URL where information about the institution's rainwater management initiatives, plan or policy is available:

<http://masterplan.missouri.edu/stormwater/StormwaterFullHighRes.pdf>

Wastewater Management

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution's wastewater is handled naturally on campus or in the local community. Natural wastewater systems include, but are not limited to, constructed treatment wetlands and Living Machines. To count, wastewater must be treated to secondary or tertiary standards prior to release to water bodies.

This credit recognizes natural handling of the water discharged by the institution. On-site recycling/reuse of greywater and/or blackwater is recognized in *OP 26: Water Use*.

"---" indicates that no data was submitted for this field

Total wastewater discharged:

373,801,219 Gallons

Wastewater naturally handled:

373,801,219 Gallons

A brief description of the natural wastewater systems used to handle the institution's wastewater:

All campus wastewater, grey and black, is directed into the City of Columbia's Municipal Sewer system. The City's Sewer system is routed to the wastewater treatment plant (WWTP) west of the City of Columbia, and is treated there. The WWTP's secondary effluent is released into constructed wetlands prior to being released into the Eagle Bluffs Conservation area.

The website URL where information about the institution's wastewater management practices is available:

https://www.gocolumbiamo.com/PublicWorks/Sewer/wwtppg_4.php

Planning & Administration

Coordination, Planning & Governance

This subcategory seeks to recognize colleges and universities that are institutionalizing sustainability by dedicating resources to sustainability coordination, developing plans to move toward sustainability, and engaging students, staff and faculty in governance. Staff and other resources help an institution organize, implement, and publicize sustainability initiatives. These resources provide the infrastructure that fosters sustainability within an institution. Sustainability planning affords an institution the opportunity to clarify its vision of a sustainable future, establish priorities and help guide budgeting and decision making. Strategic planning and internal stakeholder engagement in governance are important steps in making sustainability a campus priority and may help advocates implement changes to achieve sustainability goals.

Credit
Sustainability Coordination
Sustainability Planning
Governance

Sustainability Coordination

Responsible Party

Hannah Peterson

Graduate Research Assistant
Human Dimensions of Natural Resources

Criteria

Institution has at least one sustainability committee, office, and/or officer tasked by the administration or board of trustees to advise on and implement policies and programs related to sustainability on campus. The committee, office, and/or officer focus on sustainability broadly (i.e. not just one sustainability issue, such as climate change) and cover the entire institution.

An institution that has multiple committees, offices and/or staff with responsibility for subsets of the institution (e.g. schools or departments) may earn points for this credit if it has a mechanism for broad sustainability coordination for the entire campus (e.g. a coordinating committee or the equivalent). A committee, office, and/or officer that focuses on just one department or school within the institution does not count for this credit in the absence of institution-wide coordination.

Submission Note:

We used this website to calculate our FTE number:

<http://nces.ed.gov/ipeds/glossary/?charindex=C>

"---" indicates that no data was submitted for this field

Does the institution have at least one sustainability committee, office, and/or officer that focuses on sustainability broadly and covers the entire institution?:

Yes

A brief description of the activities and substantive accomplishments of the committee(s), office(s), and/or officer(s) during the previous three years:

The University of Missouri is dedicated to environmentally sustainable policies and practices that promote responsible stewardship of existing resources and the environment. This includes, but is not limited to, acquiring and using energy-saving, environmentally friendly and renewable/recyclable resources and materials; providing educational programs, resources and incentives for sustainable practices by students, faculty and staff; participating in recycling programs and the safe disposal of materials; researching and testing new sustainable initiatives; and taking proactive steps to preserve and protect natural resources. Each unit or department within the university is encouraged to evaluate current policies and practices on a regular basis with the goal of adopting or improving sustainability.

Some activities and substantive accomplishments that these entities have taken part in include, but are not limited to, the following:

- Improving relationships with other departments of campus, e.g. athletics
- Transitioning to low waste in campus buildings (this is still an ongoing process)
- The reduction of the total number of trash bins on campus
- The amount of purchased renewable energy was more than doubled in the fiscal year of 2013

-The campus outreach event “Sustainapalooza” is in it’s third annual year

Does the institution have at least one sustainability committee?:

Yes

The charter or mission statement of the committee(s) or a brief description of each committee's purview and activities:

The charge to the Environmental Affairs and Sustainability Committee is to make recommendations to the provost on the development of policies for environmental and sustainability issues; develop formal and informal mechanisms for improved education to enhance environmental and sustainability awareness; and provide a biannual sustainability report to the chancellor.

Members of each committee, including affiliations and role (e.g. staff, student, or faculty):

Environmental Affairs and Sustainability Committee:

David Beversdorf, Chair

Sheila Baker, Assistant Professor-Chemical Engineering, Faculty

David Beversdorf, Associate Professor-Radiology, Faculty

Rachel Brekhus, Humanities Research Librarian, Faculty

Bob Broz, Extension Assistant Professor-Ag Extension, Food Science and Nutrition, Faculty

Frances Dickey, Associate Professor-English, Faculty

Tim Evans, Associate Professor-Veterinary Diagnostic Laboratory, Faculty

Moneen Jones, Assistant Research Professor-Plant Sciences, Faculty

Robin Kruse, Associate Professor-Family and Community Medicine, Faculty

Bohumil Svoma, Assistant Professor-Soil, Environment and Atmospheric Science, Faculty

Terrence Grus, Graduate School Director, Staff

Diane Herigon, Medical Student Resident Program Assistant, Staff

Andrew Sommer, Senior Fiscal Analyst-Campus Facilities, Staff

Tony Wirkus, Associate Director of Game Operations-Athletics, Staff

Michael Burfield, Graduate Student-Fisheries and Wildlife, Graduate Professional Council (GPC)

Darren Chapman, Graduate Student-Rural Sociology, GPC

Hemanta Kafley, Graduate Student-Fisheries and Wildlife, GPC

Mike Burden, Sustainability Coordinator, Ex Officio

Paul Coleman, Energy Management Manager, Ex Officio

Todd Houts, Environmental Health and Safety Director, Ex Officio

Jan Weaver, Research Assistant Professor, Ex Officio

Alicia LaVaute, Sr. Recycling & Waste Minimization Specialist, Ex Officio

Mike Burden, Sustainability Coordinator, Support

The website URL where information about the sustainability committee(s) is available:

<http://committees.missouri.edu/environmental-affairs/members.php>

Does the institution have at least one sustainability office that includes more than 1 full-time equivalent (FTE) employee?:

Yes

A brief description of each sustainability office:

Sustainability on the MU campus is a multi-faceted endeavor, involving academia and administration; students, faculty and staff; and partnerships within and outside the institution. The Sustainability Office coordinates these various endeavors, facilitates the development of new initiatives, provides information for campus decision-makers and implements sustainability projects.

Full-time equivalent (FTE) of people employed in the sustainability office(s):

4.52

The website URL where information about the sustainability office(s) is available:

<http://sustainability.cf.missouri.edu/>

Does the institution have at least one sustainability officer?:

Yes

Name and title of each sustainability officer:

Mike Burden, Sustainability Office Coordinator; Alicia LaVaute, Sr. Recycling & Waste Minimization Specialist

A brief description of each sustainability officer position:

The coordinator will work to identify, coordinate and support existing programs, develop communication strategies in support of campus sustainability, and identify and encourage more sustainability initiatives throughout the campus.

The website URL where information about the sustainability officer(s) is available:

Responsible Party

Hannah Peterson

Graduate Research Assistant
Human Dimensions of Natural Resources

Criteria

Institution has current and formal plans to advance sustainability. The plan(s) cover one or more of the following areas:

- Curriculum
- Research (or other scholarship appropriate for the institution)
- Campus Engagement
- Public Engagement
- Air & Climate
- Buildings
- Dining Services/Food
- Energy
- Grounds
- Purchasing
- Transportation
- Waste
- Water
- Diversity & Affordability
- Health, Wellbeing & Work
- Investment
- Other

The plan(s) may include measurable objectives with corresponding strategies and timeframes to achieve the objectives.

The criteria may be met by any combination of formally adopted plans, for example:

- Strategic plan or equivalent guiding document
- Campus master plan or physical campus plan
- Sustainability plan
- Climate action plan
- Human resources strategic plan
- Diversity plan

For institutions that are a part of a larger system, plans developed at the system level are eligible for this credit.

Submission Note:

Curriculum and Research Plans: MU Strategic Plan: One Mizzou, 2020 Vision for Excellence;
<http://strategicplan.missouri.edu/index-plan.php>

Air and Climate/Buildings/Energy Plans: Campus Master Plan/Climate Action Plan;
<http://www.cf.missouri.edu/masterplan/masterplan.html>

Water section from: Stormwater Master Plan 2013;
<http://masterplan.missouri.edu/Old/stormwater/>

"---" indicates that no data was submitted for this field

Does the institution have current and formal plans to advance sustainability in the following areas? Do the plans include measurable objectives?:

	Current and Formal Plans (Yes or No)	Measurable Objectives (Yes or No)
Curriculum	Yes	No
Research (or other scholarship)	Yes	No
Campus Engagement	Yes	Yes
Public Engagement	No	No
Air and Climate	Yes	Yes
Buildings	Yes	Yes
Dining Services/Food	Yes	Yes
Energy	Yes	Yes
Grounds	Yes	No
Purchasing	No	No
Transportation	Yes	Yes
Waste	Yes	Yes
Water	Yes	Yes

Diversity and Affordability	Yes	Yes
Health, Wellbeing and Work	Yes	Yes
Investment	No	No
Other	No	No

A brief description of the plan(s) to advance sustainability in Curriculum:

In the Strategic Plan of the University of Missouri called One Mizzou: 2020 Vision for Excellence, one educational goal is to introduce creative new combinations of curricula that meet modern needs, such as combined BA/BS-Master’s programs, post-baccalaureate certificate programs, summer intensive workshops and others. This includes new sustainability programs, such as Energy Efficiency as a graduate program and an emphasis in sustainable energy in an engineering program.

The measurable objectives, strategies and timeframes included in the Curriculum plan(s):

n/a

Accountable parties, offices or departments for the Curriculum plan(s):

Graduate School Dean, Vice Provost for Undergraduate Studies

A brief description of the plan(s) to advance sustainability in Research (or other scholarship):

In the Strategic Plan of the University of Missouri called One Mizzou: 2020 Vision for Excellence, one research goal is to increase the number of large-scale proposal submissions in Mizzou Advantage focus areas. This goal includes sustainable research projects, for example, Mizzou received funding from the Department of Energy for the biomass proposal US-India Consortium for Development of Sustainable Advanced Lignocellulosic Biofuel Systems.

Mizzou Advantage fosters interdisciplinary collaboration among faculty, staff, students and external partners to address and solve real-world needs and problems in four areas of strength identified at the University of Missouri: Food for the Future, Media of the Future, One Health/One Medicine, and Sustainable Energy. There are many projects that are working towards sustainable solutions for a variety of real-world problems. It is also a goal to continue to offer new research opportunities, and resources for professional development, visiting scholars, and student travel.

The measurable objectives, strategies and timeframes included in the Research plan(s):

n/a

Accountable parties, offices or departments for the Research plan(s):

Provost, Mizzou Advantage Facilitators

A brief description of the plan(s) to advance Campus Engagement around sustainability:

Our goal for improving campus engagement in sustainability is to have measurable, increased attendance to events, participation in student organizations and level of compliance around recycling and sustainability policies.

The measurable objectives, strategies and timeframes included in the Campus Engagement plan:

Here are some of our measurable objectives in Campus Engagement for the next few years:

-Increase Sustainapalooza participants by 50%, or 75 people to 113.

-Increase sustainability presentation numbers from 11 to 15 next year, amount of attendance from 229 to 250, and education retention from the Ambassador Program of the Environmental Leadership Office.

Accountable parties, offices or departments for the Campus Engagement plan(s):

Environmental Leadership Office (engaging students)

The Environmental Leadership Office collaborates with MU students to provide support, resources, education and leadership opportunities, empowering them to get involved and take meaningful action to address environmental issues on campus and beyond. They strive to connect students with environmental issues through informational resource fairs, forums, and local facility tours. The Ambassadors connect with students in Res Life, they advise several established student organizations, and host the Bike Resource Center and Mizzou Bike Share programs. In addition, they promote sustainable agriculture by recruiting volunteers for Tigers for Community Agriculture and by organizing Campus Farmers' Markets.

Sustainability Office (engaging faculty and staff) The University of Missouri embraces its role in providing a healthy and safe learning environment for its students, staff, and faculty. Consistent with MU's mission and values, they are committed to leadership in demonstrating local and global environmental stewardship. MU recognizes the increasing need for policies and practices that reduce greenhouse gas emissions and has signed the American College and University President's Climate Commitment with the goal of making the MU campus carbon neutral. Further, MU has undertaken an ambitious program of environmental sustainability that includes, but is not limited to, the following actions:

Incorporating sustainability and social responsibility in the teaching curriculum; researching, testing, and implementing new sustainability initiatives; and disseminating effective sustainability practices.

Taking proactive steps to preserve, protect, and renew natural resources, both locally and globally, thereby minimizing anthropogenic harm to the environment.

Identifying and utilizing environmentally friendly energy resources and employing a dynamic and proactive energy-conservation program.

Minimizing waste generation, recovering recyclable materials and safely managing necessary waste disposal.

Observing sustainable best practices in campus construction and procurement.

Researching and promoting sustainable practices in the growth, management, and transportation of food.

Promoting clean, efficient, and healthy transportation for all students, staff, and faculty.

A brief description of the plan(s) to advance Public Engagement around sustainability:

Columbia is competing for \$5 million and CHANGE through the Georgetown University Energy Prize. 52 communities across the country have been selected to see who can reduce the most energy per capita over a 2 year period (starting Jan 1, 2015). The CoMo Energy Challenge will call on Columbians to reduce energy use in their homes. Columbia can be successful by working together as a

community and fostering the competitive spirit as a University town.

The measurable objectives, strategies and timeframes included in the Public Engagement plan(s):

Accountable parties, offices or departments for the Public Engagement plan(s):

A brief description of the plan(s) to advance sustainability in Air and Climate:

MU has developed a Climate Action Plan as part of the dedication to achieving carbon neutrality by year 2050. A greenhouse gas inventory was also developed, giving us a baseline from which to start. The Climate Action Plan includes our projections for reducing greenhouse gasses from the Power Plant as well as commuting. This report also projects local food production, waste reduction and recycling metrics.

The measurable objectives, strategies and timeframes included in the Air and Climate plan(s):

MU is projecting a 50% reduction in greenhouse gas emissions by 2019. The greenhouse gas emissions in 2008 were 384,908 metric tons of carbon dioxide equivalent, which is the baseline. The goal by 2019 is to reduce the emissions to 198,668 metric tons of carbon dioxide equivalent, or a 50% reduction. There has already been a 32% carbon emissions reduction as of the fiscal year 2014 from the 2008 base year.

Accountable parties, offices or departments for the Air and Climate plan(s):

The Climate Action Plan is created and updated by the department of Campus Facilities and the Sustainability Office.

A brief description of the plan(s) to advance sustainability in Buildings:

In 2011 MU created Sustainable Building Design Guidelines that are implemented on all building projects. The campus standards result in at minimum LEED equivalent projects. The University evaluates individual projects to determine if it is appropriate for a building to earn LEED certification. The University has taken a campus wide approach to sustainable buildings by developing standards and systems that are applied across projects. In 2014 the University hired a full time Sustainable Buildings Program Manager to further increase the level of sustainability of the university's building portfolio.

The measurable objectives, strategies and timeframes included in the Buildings plan(s):

The overall plan calls for an increase in the level of sustainability of the university's building portfolio. The university is looking for all new construction and major renovation of buildings to have at minimum 50% diversion of waste from landfill, 30% reduction of domestic water use from the baseline, at minimum 50% reduction in irrigation water use, at minimum 25% reduction in energy use from baseline, and use only low emitting paints, sealants, and coatings.

Accountable parties, offices or departments for the Buildings plan(s):

Chris Wilson, Sustainable Building Program Manager - Planning, Design and Construction under Campus Facilities.

A brief description of the plan(s) to advance sustainability in Dining Services/Food:

Earthright is a project dedicated to sustainable practices within Campus Dining Services. Their commitment is to make environmentally thoughtful decisions and actions to continually improve each step they affect in the farm-to-table cycle. Campus Dining Services is currently selecting an internal sustainability coordinator that will lead a team of Earthright Ambassadors from each operation. Their mission will be to identify, implement, and coordinate sustainable practices throughout Campus Dining operations.

The measurable objectives, strategies and timeframes included in the Dining Services/Food plan(s):

Campus Dining is reviewing and revising its standards for purchasing reusable beverage containers and take-out packaging with the goal of reducing or eliminating the use of non-recyclable or non-reusable materials by 2016.

After implementing a trayless policy in 2012, food waste was reduced by 40 percent. Much of the pre-and post-consumer food waste (800 lbs/week) 40 weeks/year is diverted from the landfill as it's taken to Bradford Research Center where it is composted as part of a closed loop system. An increase of the percentage of food waste reduction is being worked toward in the coming years.

Accountable parties, offices or departments for the Dining Services/Food plan(s):

Campus Dining Services, Eric Cartwright

A brief description of the plan(s) to advance sustainability in Energy:

Renewable Energy: Biomass, solar, and wind energy technologies in MU's energy portfolio are helping achieve campus sustainability goals and will result in over 30% of MU's energy coming from renewable energy resources. We have also joined the EPA Green Power Partnership and are listed as the 16th top university using green power, demonstrating our leadership in renewable energy. Our goal is to continue to purchase wind power and increase our renewable energy portfolio. We have recently installed a solar thermal system and hope to find more opportunities to implement renewable energy sources in the near future.

Energy Conservation: While campus education and general space has grown by 42% since 1990, energy use has been reduced by 19% and greenhouse gas emissions have been reduced by 57% on a square foot basis. The Energy Conservation Program has reduced its energy costs by \$6 million a year by implementing proven conservation technologies with a payback of five years or less. Past energy conservation projects include the conversion of heating, ventilation and air conditioning controls from pneumatic to the campus electronic building automatic system. Future goals include the conversion of more heating, ventilation and air conditioning controls to the automatic system. Other goals include measurable energy cost reductions in existing spaces.

Outreach: The Energy Strategies Student Advisory Group (ESSAG) has a mission of advising MU in advancing its leadership in the production and usage of environmentally, fiscally and socially responsible energy. They work on internal education as well as outreach to campus as a whole. Future plans and goals include creating and presenting a comprehensive energy presentation to show to the MU community, and they also plan to give input to the climate action plan.

MU's facility energy management team along with the MU's Energy Strategy Student Advisory Group (ESSAG) are working with an outside consultant to develop a utility masterplan. The utility masterplan focuses on reducing coal use and increasing renewable energy resources.

The measurable objectives, strategies and timeframes included in the Energy plan(s):

Energy Conservation: The ultimate goal of the Energy Conservation Program is to reduce energy costs in existing space by 1 percent annually. (The actual average annual reduction to date has been 1.5 percent).

Other goals include: targeting a 75% reduction of coal use and increasing the use of biomass and natural gas by 2019, and continuing to purchase wind power and increasing the renewable energy portfolio also by 2019.

Accountable parties, offices or departments for the Energy plan(s):

The department of Energy Management in Campus Facilities is responsible for these energy initiatives.

A brief description of the plan(s) to advance sustainability in Grounds:

The University is currently creating a landscape masterplan with an emphasis on sustainability. They are also developing a landscape management plan that incorporates sustainability.

The measurable objectives, strategies and timeframes included in the Grounds plan(s):

n/a

Accountable parties, offices or departments for the Grounds plan(s):

Campus Facilities Landscape Services

A brief description of the plan(s) to advance sustainability in Purchasing:

n/a

The measurable objectives, strategies and timeframes included in the Purchasing plan(s):

n/a

Accountable parties, offices or departments for the Purchasing plan(s):

n/a

A brief description of the plan(s) to advance sustainability in Transportation:

There are a number of programs with plans to advance sustainability in Transportation:

Environmental Leadership Office: The Bike Resource Center at MU strives to make bicycles a safe and affordable option for commuting, to reduce environmental impact through the use of non-motorized transportation, and to encourage personal health through exercise. Trained mechanics offer free bike repair twice weekly during warm weather months. Increased participation by students and employees is the overall goal of the office. They often take attendance at their events.

COMO Connect: The Columbia, Missouri bus system has increased ridership in the past year with improved routes and technology, but the system holds potential for an even larger capacity.

WeCar: WeCar is a car sharing program that Mizzou holds with Enterprise where students and employees can borrow a car for a discounted fee. We hope to increase participation in the coming years and possibly buy a WeTruck for students to haul larger items.

The measurable objectives, strategies and timeframes included in the Transportation plan(s):

Student-only rides topped 710,059 from August 2013 through May 2014. Moving forward, the city and University will track how many individual students that represents. Ongoing monitoring will evaluate the increase in ridership with the new system, which officially launched in August 2014. MU is working toward ways to track not only purchased parking garage permits but also data on alternative transportation usage.

Accountable parties, offices or departments for the Transportation plan(s):

MU Parking and Transportation, COMO Connect, Environmental Leadership Office
Como Connect is a strategic plan for the future of Columbia's transit needs.

A brief description of the plan(s) to advance sustainability in Waste:

The current waste minimization plan is the transition to a campus-wide Low Waste Program. The program has been implemented in several campus buildings which proved to be successful, so the plan is to extend the program to the rest of the campus buildings.

The measurable objectives, strategies and timeframes included in the Waste plan(s):

The Low Waste Program is in its early stages of implementation, and further implementation somewhat relies on the completion of the renovation of Jesse Hall, the main administration building. Jesse Hall is our most recognizable structure on campus and is the location of the office of the Chancellor. When this renovation is complete, which will happen in the spring of 2015, this hall will be our major starting point. We are also conducting a low waste inventory of all the old buildings on campus (that have not been renovated within the past few years) in order to analyze the possibility of a Low Waste program in those buildings.

Accountable parties, offices or departments for the Waste plan(s):

The Sustainability Office is in charge of implementing the Low Waste Program.

A brief description of the plan(s) to advance sustainability in Water:

Mizzou sustains water resource stewardship and has begun implementing its Stormwater Master Plan, providing an adaptable framework that enables the campus community to improve stormwater quality and maintain regulatory compliance. The overall goal is energized by Mizzou's leading research and innovation engine, a key asset in developing solutions to evolving stormwater challenges. Stormwater planners have implemented many management practices that decrease flooding, eroding and harmful runoff, and are continuously looking for other opportunities to implement best management practices. These practices include things like cisterns, swales, pervious pavers and bioretention basins.

The measurable objectives, strategies and timeframes included in the Water plan(s):

An initial BMP-sizing (Best Management Practices) goal is to capture or treat 80 percent of post-construction runoff. For sites not constrained by existing infrastructure or environmental conditions, a 10 percent reduction in runoff volume serves as a guideline for new and redevelopment projects.

Accountable parties, offices or departments for the Water plan(s):

Campus Facilities, and research faculty from forestry and engineering

A brief description of the plan(s) to advance Diversity and Affordability:

The University of Missouri will become a more inclusive, creative and innovative research and learning environment that facilitates the competent functioning of students and employees in a diverse and competitive global society. The goal of the Admissions Office at MU is to have the freshman class mirror Missouri's ethnicity populace in the future.

The measurable objectives, strategies and timeframes included in the Diversity and Affordability plan(s):

Currently the freshman ethnicity on campus is: 79% White, 8.5% African-American, 3.6% Hispanic, 2.5% Asian, 3.1% Multi-Race/Ethnicity, 2.7% Nonresident International, 0.1% American Indian/Alaska Native & 0.3% Unreported. Each year Admissions would like to see an increase in all underrepresented ethnicities, especially African-Americans and Hispanic peoples.

Accountable parties, offices or departments for the Diversity and Affordability plan(s):

The Office of the Chancellor's Diversity Initiative

A brief description of the plan(s) to advance sustainability in Health, Wellbeing and Work:

The University of Missouri is continuously working to implement new and exciting wellness initiatives as well as reinforce and improve existing programs. The Total Rewards packages that the university offers to employees aims to recruit and retain faculty and staff who are engaged, energized and innovative, and who contribute to moving Missouri forward.

The measurable objectives, strategies and timeframes included in the Health, Wellbeing and Work plan(s):

One plan for 2014-2015 is the Wellness Incentive which allows employees to earn up to \$450 in rewards for completing various wellness activities. Another wellness plan that is still being implemented is the Million Step Pedometer Program which is designed to help faculty, staff and their families get up and moving. The program significantly reduces the price of high-quality fitness-tracking devices (like Fitbit), which help encourage and inspire an active and healthy lifestyle.

Accountable parties, offices or departments for the Health, Wellbeing and Work plan(s):

Total Rewards Operations, Human Resources Department, Wellness Department of UMSystem

A brief description of the plan(s) to advance sustainability in Investment:

n/a

The measurable objectives, strategies and timeframes included in the Investment plan(s):

n/a

Accountable parties, offices or departments for the Investment plan(s):

n/a

A brief description of the plan(s) to advance sustainability in other areas:

n/a

The measurable objectives, strategies and timeframes included in the other plan(s):

n/a

Accountable parties, offices or departments for the other plan(s):

n/a

The institution's definition of sustainability:

According to the Environmental Affairs and Sustainability Committee at the University of Missouri, sustainability is achieved when human activities consider social equity, political stability, and economic development while balancing the capacity of ecosystems to absorb disturbance without diminishing ecosystem structure, function, and viability. There are three interrelated aspects:

1. Ecological Sustainability: Interactions of Earth's physical and biological processes, including the relationship and interactions of humans and ecosystems.
2. Economic Sustainability: Systems of production and consumption, and economic viability
3. Social Sustainability: Process and institutions, governance, values, ethics and enhancement of human well-being

Does the institution's strategic plan or equivalent guiding document include sustainability at a high level?:

Yes

A brief description of how the institution's strategic plan or equivalent guiding document addresses sustainability:

MU's Strategic Plan, "One Mizzou: 2020 for Excellence," focuses on three interlocking goals.

-Expand and strengthen programs that improve the lives of the citizens of Missouri, the nation and the world.

-Build the Mizzou Advantage, a set of focused, interdisciplinary initiatives that capitalize on existing strengths and bring new international distinction to MU

-Ensure that MU has the infrastructure and human and financial resources necessary to support innovation and excellence in teaching, research, outreach and economic development

Each of these goals and their associated plans relates directly to the triple bottom line of sustainability.

The website URL where information about the institution's sustainability planning is available:

<http://masterplan.missouri.edu/climate.html>

Responsible Party

Hannah Peterson

Graduate Research Assistant
Human Dimensions of Natural Resources

Criteria

Part 1

Institution's students participate in governance in one or more of the following ways:

- A. All enrolled students, regardless of type or status, have an avenue to participate in one or more governance bodies (through direct participation or the election of representatives)
- B. There is at least one student representative on the institution's governing body. To count, student representatives must be elected by their peers or appointed by a representative student body or organization.

And/or

C. Students have a formal role in decision-making in regard to one or more of the following:

- Establishing organizational mission, vision, and/or goals
- Establishing new policies, programs, or initiatives
- Strategic and long-term planning
- Existing or prospective physical resources
- Budgeting, staffing and financial planning
- Communications processes and transparency practices
- Prioritization of programs and projects

Part 2

Institution's staff participate in governance in one or more of the following ways:

- A. All staff members, regardless of type or status, have an avenue to participate in one or more governance bodies (through direct participation or the election of representatives)
- B. There is at least one non-supervisory staff representative on the institution's governing body. To count, staff representatives must be elected by their peers or appointed by a representative staff body or organization.

And/or

C. Non-supervisory staff have a formal role in decision-making in regard to one or more of the areas outlined in Part 1.

Part 3

Institution's faculty participate in governance in one or more of the following ways:

A. All faculty members, regardless of type or status, have an avenue to participate in one or more governance bodies (through direct participation or the election of representatives)

B. There is at least one teaching or research faculty representative on the institution's governing body. To count, faculty representatives must be elected by their peers or appointed by a representative faculty body or organization.

And/or

C. Faculty have a formal role in decision-making in regard to one or more of the areas outlined in Part 1.

Participatory or shared governance bodies, structures and/or mechanisms may be managed by the institution (e.g. committees, councils, senates), by stakeholder groups (e.g. student, faculty and staff committees/organizations), or jointly (e.g. union/management structures).

Structures or mechanisms adopted by entities of which the institution is part (e.g. government or university system) may count for this credit as long as they apply and are adhered to by the institution.

Submission Note:

Other notable website URLs:

<http://www.umssystem.edu/curators/>

<http://msa.missouri.edu/>

<http://gpc.missouri.edu/>

<http://staffcouncil.missouri.edu/>

<http://facultycouncil.missouri.edu/>

"---" indicates that no data was submitted for this field

Do all enrolled students, regardless of type or status, have an avenue to participate in one or more governance bodies (through direct participation or the election of representatives)?:

Yes

A brief description of the mechanisms through which students have an avenue to participate in one or more governance bodies:

Missouri Students Association (MSA): the recognized undergraduate student government

Graduate Professional Council (GPC): the official student government for all graduate, professional and post-baccalaureate students
[STARS Reporting Tool](#) | [AASHE](#)

Chancellor's Standing Committees: These committees work on a variety of issues around campus and make recommendations to the Chancellor. Students can serve as representatives on these committees.

- Campus Facilities Planning Committee
- Campus Mediation Service Committee
- Campus Parking and Transportation Committee
- Campus Recreation Committee
- Campus Safety Committee
- Campus Space Utilization Committee
- Capital Review Committee
- Family Friendly Campus Committee
- Committee on Committees
- Concerts Committee
- Environmental Affairs and Sustainability Committee
- Honorary Degrees Committee
- Intercollegiate Athletics Committee
- Lectures Committee
- Library Committee
- Minority Affairs Committee
- Missouri Unions Committee
- MU Information Technology Committee
- Persons with Disabilities Committee
- Residence for Tuition Purposes Committee
- Residential Life Committee
- Retiree, Health and other Benefits Advisory Committee
- Revision of Student Records Committee
- Status of Women Committee
- Student Conduct Committee
- Student Fee Capital Improvements Committee
- Student Financial Aid Committee
- Student Organizations Committee
- Student Publications Committee
- Traffic Appeals Committee

Board of Curators: The Board of Curators, the institution's governing body, has one student representative who is appointed by Missouri's Governor and is confirmed by the Senate. This student offers input to help the Board of Curators understand how their decisions may affect students across the University of Missouri System.

Is there at least one student representative on the institution's governing body who was elected by peers or appointed by a representative student body or organization?:

Yes

A brief description of student representation on the governing body, including how the representatives are selected:

The Board of Curators, the institution's governing body, has one student representative who is appointed by Missouri's Governor and is confirmed by the Senate. This student offers input to help the Board of Curators understand how their decisions may affect students across the University of Missouri System.

Chancellor's Standing Committees: To be a student representative on one or more of the Chancellor's Standing Committees, students can apply through Missouri Student Association (MSA) or Graduate Professional Council (GPC), and then will be appointed to a committee(s).

Do students have a formal role in decision-making in regard to the following?:

	Yes or No
Establishing organizational mission, vision, and/or goals	Yes
Establishing new policies, programs, or initiatives	Yes
Strategic and long-term planning	Yes
Existing or prospective physical resources	Yes
Budgeting, staffing and financial planning	Yes
Communications processes and transparency practices	Yes
Prioritization of programs and projects	Yes

A brief description of the formal student role in regard to each area indicated, including examples from the previous three years:

The Board of Curators addresses some and the variety of Chancellor's Standing Committees address each of the areas above, and because there are student representatives on each committee, students are able to have a formal role in the decision-making processes. A few examples are listed below.

- Establishing organizational mission, vision, and/or goals: Board of Curators
- Establishing new policies, programs, or initiatives: Student Organizations Committee, Campus Recreation Committee, Missouri Unions Committee
- Strategic and long-term planning: Campus Facilities Planning Committee, Environmental Affairs and Sustainability Committee,
- Existing or prospective physical resources: Campus Facilities Planning Committee, Campus Parking and Transportation Committee, Campus Space Utilization Committee
- Budgeting, staffing and financial planning: Capital Review Committee, Student Fee Capital Improvements Committee
- Communications processes and transparency practices: Campus Mediation Service Committee, all of these committees practice communication and transparency because they are in communication with the Chancellor
- Prioritization of programs and projects: All committees prioritize their own projects.

Do all staff, regardless of type or status, have an avenue to participate in one or more governance bodies (through direct participation or the election of representatives)?:

Yes

A brief description of the mechanisms through which all staff have an avenue to participate in one or more governance bodies:

Staff Advisory Council (SAC): The SAC mission is to advise the Chancellor on matters of mutual interest to MU staff, provide an appropriate and effective channel for bringing staff concerns and interests to campus administration, and act as a liaison for staff and administration.

Chancellor's Standing Committees: These committees work on a variety of issues around campus and make recommendations to the Chancellor. Staff can serve as representatives on these committees.

- Campus Facilities Planning Committee
- Campus Mediation Service Committee
- Campus Parking and Transportation Committee
- Campus Recreation Committee
- Campus Safety Committee
- Campus Space Utilization Committee
- Capital Review Committee
- Family Friendly Campus Committee
- Committee on Committees
- Concerts Committee
- Environmental Affairs and Sustainability Committee
- Honorary Degrees Committee
- Intercollegiate Athletics Committee
- Lectures Committee
- Library Committee
- Minority Affairs Committee
- Missouri Unions Committee
- MU Information Technology Committee
- Persons with Disabilities Committee
- Residence for Tuition Purposes Committee
- Residential Life Committee
- Retiree, Health and other Benefits Advisory Committee
- Revision of Student Records Committee
- Status of Women Committee
- Student Conduct Committee
- Student Fee Capital Improvements Committee
- Student Financial Aid Committee
- Student Organizations Committee
- Student Publications Committee
- Traffic Appeals Committee

Is there at least one non-supervisory staff representative on the institution's governing body who was elected by peers or appointed by a representative staff body or organization?:

No

A brief description of non-supervisory staff representation on the governing body, including how the representatives are selected:

Chancellor's Standing Committees: To be a staff representative on one or more of the Chancellor's Standing Committees, staff can apply through the Staff Advisory Council, and then will be appointed to a committee(s).

Do non-supervisory staff have a formal role in decision-making in regard to the following? :

	Yes or No
Establishing organizational mission, vision, and/or goals	Yes
Establishing new policies, programs, or initiatives	Yes
Strategic and long-term planning	Yes
Existing or prospective physical resources	Yes
Budgeting, staffing and financial planning	Yes
Communications processes and transparency practices	Yes
Prioritization of programs and projects	Yes

A brief description of the formal staff role in regard to each area indicated, including examples from the previous three years:

The variety of Chancellor's Standing Committees address each of the areas above, and because there are staff representatives on each committee, staff are able to have a formal role in the decision-making processes. A few examples are listed below.

- Establishing organizational mission, vision, and/or goals: Campus Safety Committee, Campus Facilities Planning Committee
- Establishing new policies, programs, or initiatives: Student Organizations Committee, Campus Recreation Committee, Missouri Unions Committee
- Strategic and long-term planning: Campus Facilities Planning Committee, Environmental Affairs and Sustainability Committee,
- Existing or prospective physical resources: Campus Facilities Planning Committee, Campus Parking and Transportation Committee, Campus Space Utilization Committee
- Budgeting, staffing and financial planning: Capital Review Committee, Student Fee Capital Improvements Committee
- Communications processes and transparency practices: Campus Mediation Service Committee, all of these committees practice communication and transparency because they are in communication with the Chancellor
- Prioritization of programs and projects: All committees prioritize their own projects.

Do all faculty, regardless of type or status, have an avenue to participate in one or more governance bodies (through direct participation or the election of representatives)?:

Yes

A brief description of the mechanisms through which all faculty (including adjunct faculty) have an avenue to participate in one or more governance bodies:

Faculty Council: the elected representative organization of the MU Faculty to the University Administration and to the public at large. It organizes those efforts of the faculty that transcend department, school and college, and helps to make the faculty more than a collection of units that share a catalog and a local geography.

Chancellor's Standing Committees: These committees work on a variety of issues around campus and make recommendations to the Chancellor. Faculty can serve as representatives on these committees.

- Campus Facilities Planning Committee
- Campus Mediation Service Committee
- Campus Parking and Transportation Committee
- Campus Recreation Committee
- Campus Safety Committee
- Campus Space Utilization Committee
- Capital Review Committee
- Family Friendly Campus Committee
- Committee on Committees
- Concerts Committee
- Environmental Affairs and Sustainability Committee
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- Revision of Student Records Committee
- Status of Women Committee
- Student Conduct Committee
- Student Fee Capital Improvements Committee
- Student Financial Aid Committee
- Student Organizations Committee
- Student Publications Committee
- Traffic Appeals Committee

Observer to the Board of Curators - The Board Observer is a member of the Executive Committee and represents the Council at meetings of the Board of Curators. The Board Observer reports to the Council on items of interest from meetings of the Board of Curators.

Is there at least one teaching or research faculty representative on the institution's governing body who was elected by peers or appointed by a representative faculty body or organization?:

Yes

A brief description of faculty representation on the governing body, including how the representatives are selected:

Observer to the Board of Curators - The Board Observer is a member of the Executive Committee (of Faculty Council) and represents the Council at meetings of the Board of Curators. The Board Observer reports to the Council on items of interest from meetings of the Board of Curators. A Faculty Council member is elected to be in this position.

Chancellor's Standing Committees: To be a faculty representative on one or more of the Chancellor's Standing Committees, faculty can apply through the Faculty Council, and then will be appointed to a committee(s).

Do faculty have a formal role in decision-making in regard to the following?:

	Yes or No
Establishing organizational mission, vision, and/or goals	Yes
Establishing new policies, programs, or initiatives	Yes
Strategic and long-term planning	Yes
Existing or prospective physical resources	Yes
Budgeting, staffing and financial planning	Yes
Communications processes and transparency practices	Yes
Prioritization of programs and projects	Yes

A brief description of the formal faculty role in regard to each area indicated, including examples from the previous three years:

The variety of Chancellor's Standing Committees address each of the areas above, and because there are faculty representatives on each committee, faculty are able to have a formal role in the decision-making processes. A few examples are listed below.

- Establishing organizational mission, vision, and/or goals: Board of Curators
- Establishing new policies, programs, or initiatives: Student Organizations Committee, Campus Recreation Committee, Missouri Unions Committee
- Strategic and long-term planning: Campus Facilities Planning Committee, Environmental Affairs and Sustainability Committee,
- Existing or prospective physical resources: Campus Facilities Planning Committee, Campus Parking and Transportation Committee, Campus Space Utilization Committee
- Budgeting, staffing and financial planning: Capital Review Committee, Student Fee Capital Improvements Committee
- Communications processes and transparency practices: Campus Mediation Service Committee, all of these committees practice communication and transparency because they are in communication with the Chancellor
- Prioritization of programs and projects: All committees prioritize their own projects.

The website URL where information about the institution's governance structure is available:

<http://committees.missouri.edu/>

Diversity & Affordability

This subcategory seeks to recognize institutions that are working to advance diversity and affordability on campus. In order to build a sustainable society, diverse groups will need to be able to come together and work collaboratively to address sustainability challenges. Members of racial and ethnic minority groups and immigrant, indigenous and low-income communities tend to suffer disproportionate exposure to environmental problems. This environmental injustice happens as a result of unequal and segregated or isolated communities. To achieve environmental and social justice, society must work to address discrimination and promote equality. The historical legacy and persistence of discrimination based on racial, gender, religious, and other differences makes a proactive approach to promoting a culture of inclusiveness an important component of creating an equitable society. Higher education opens doors to opportunities that can help create a more equitable world, and those doors must be open through affordable programs accessible to all regardless of race, gender, religion, socio-economic status and other differences. In addition, a diverse student body, faculty, and staff provide rich resources for learning and collaboration.

Credit
Diversity and Equity Coordination
Assessing Diversity and Equity
Support for Underrepresented Groups
Support for Future Faculty Diversity
Affordability and Access

Diversity and Equity Coordination

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has a diversity and equity committee, office and/or officer tasked by the administration or governing body to advise on and implement policies, programs, and trainings related to diversity and equity on campus. The committee, office and/or officer focuses on student and/or employee diversity and equity.

Part 2

Institution makes cultural competence trainings and activities available to all members of one or more of the following groups:

- Students
 - Staff
 - Faculty
 - Administrators
-

Submission Note:

The University of Missouri (MU, or Mizzou) has made great strides in increasing the diversity of our campus community and nurturing an inclusive campus climate for faculty, students and staff. The broad range of life experiences, values, cultural practices and perspectives in our community establishes an institutional foundation for innovative learning and discovery. It further expands the university's ability to become a globally-recognized epicenter for education, research and entrepreneurship.

As a comprehensive research university, it is essential for our scholarship to reflect our commitment to diversity. Faculty all across campus are actively engaged in research that contributes to a better understanding of the complexity of human experiences, and integrates academic research with the world of policy and action. Researchers are tackling such issues as: Black women's working-class activism and the politics of urban decline; lottery funded scholarships and their effect on access and retention of minority students; designing adaptive clothing for individuals with disabilities to decrease stigma; and creating technology to enhance aging in place. Diversity research is enriched by the work of faculty in the Black Studies and Women's and Gender Studies departments, as well as research centers such as the Cambio Center, Center on Religions and the Professions, the Thompson Center for Autism and Neurodevelopmental Disorders, the Afro-Romance Institute for Languages and Literatures of the African Diaspora, and the Vietnam Institute, among others. Diversity in Action, a program of the Chancellor's Diversity Initiative (CDI), showcases new diversity research in a monthly seminar format.

We believe that our curriculum must offer courses that will prepare all of our students for the increasingly multicultural 21st century. Our schools and colleges are committed to infusing discipline-relevant diversity into the curriculum. This has resulted in such groundbreaking efforts as the Trulaske College of Business' Global Mindset and Multicultural Learning Map and the College of Education's Personal Transformational Pathways. And our students actively seek out a diversity curriculum: an estimated 8000

undergrads are currently signed up for MU's Multicultural Certificate program which gives credit for a multitude of courses, including, for example: Global Animal Agriculture, Blogging the World: the Web in Cultural Context, African Diaspora Folklore, and Theory and Practice of Theatre of the Oppressed. The MU International Center offers more than 300 study abroad programs; and a record 1,371 student studied abroad in 2012, making the University one of only 66 campuses in the country to send more than 1,000 students abroad annually.

Diversity extends to our student body and to the many co-curricular opportunities we offer. The Disability Center, Multicultural Center, Black Culture Center, Women's Center, LGBTQ Center, and Veterans Center provide support and leadership development for the growing number of demographically diverse students and allies we enroll. Student organizations run the gamut from professional organizations (National Association of Black Accountants, National Association of Hispanic Journalists), to affiliation groups (Triangle Coalition, Legion of Black Collegians, Muslim Student Organization) to service organizations (Peer-to-Peer, Enhanced Leaders Inspiring Through Excellence). These student organizations greatly expand our diversity programming and events on campus.

At MU, inclusion and equity are more than a matter of compliance. The University of Missouri is dedicated to creating and maintaining an environment in which no individual is discriminated against based on their race, color, religion, sex, sexual orientation, gender identity, gender expression, national origin, age, disability, or status as a veteran. But that's our floor, not our ceiling. We want all members of our community to feel welcome at Mizzou and to understand their responsibility for making our institution a welcoming place for others.

We are pleased with our progress in improving the ability of members of our community to function successfully in a multicultural climate given that often people are not prepared to deal with others whom they perceive as different from themselves. The Chancellor's Diversity Initiative offers such innovative programming as Diversity 101, a four-week interactive web-based class; Workplace Diversity, a monthly brown-bag skill-building workshop; and superb online professional development modules on conflict resolution and respectful workplaces. We reach into the classroom to improve instructors' cultural competency through our Difficult Dialogue fellows, Guide to Religions (with dates for necessary classroom accommodation), universal design and teaching tips for an inclusive classroom.

"---" indicates that no data was submitted for this field

Does the institution have a diversity and equity committee, office, and/or officer tasked by the administration or governing body to advise on and implement policies, programs, and trainings related to diversity and equity on campus?:

Yes

Does the committee, office and/or officer focus on one or both of the following?:

	Yes or No
Student diversity and equity	Yes
Employee diversity and equity	Yes

A brief description of the diversity and equity committee, office and/or officer, including purview and activities:

The University of Missouri-Columbia has an office called The Chancellor's Diversity Initiative (CDI). The mission of CDI is to integrate diversity and inclusion throughout the University by

- Providing leadership, expertise, and resources to the MU community to further MU's strategic goals.
- Collaborating with others in the campus community to build the infrastructure and capacity for students, faculty and staff to work and learn in an inclusive and welcoming environment.
- Promoting the understanding that diversity is inclusive of a community of people of differing genders, racial-ethnic backgrounds, languages, religious beliefs, sexual orientations, disabilities, national and geographical origins, socio-economic class, veterans' status, and political views; and
- Ensuring that diversity is reflected in the campus climate, curriculum, intellectual discourse, leadership, scholarly products, and recruitment and retention efforts.

CDI's efforts will result in a more inclusive, creative and innovative research and learning environment that facilitates the competent functioning of students, and employees in a diverse and competitive global society.

NB: Each School and College is encourage to write a diversity statement on how they address diversity enhancement and cultural awareness. You can view the list of colleges/school and their statements here

<http://diversity.missouri.edu/about/mission-vision.php>

<http://cdi.missouri.edu/programs-services/>

or

<http://diversity.missouri.edu/learn/training/>

(Link includes opportunities offered by entire campus, not just CDI.)

The full-time equivalent of people employed in the diversity and equity office:

8

The website URL where information about the diversity and equity committee, office and/or officer is available:

<http://diversity.missouri.edu/>

Does the institution make cultural competence trainings and activities available to all members of the following groups?:

	Yes or No
Students	Yes
Staff	Yes
Faculty	Yes
Administrators	Yes

A brief description of the cultural competence trainings and activities:

- Cultural competency and leadership development program—Customized professional development sessions, workshops and coaching for faculty, staff and students to become culturally-competent leaders.
- Diversity 101—a 4-week online class for faculty and staff is a highly interactive introduction to diversity particularly as it pertains to working at MU. A core aspect of the course design is peer-to-peer learning through discussion boards in order to draw upon the rich and diverse experiences of colleagues across campus. Other aspects of the class include videos, reflection journal, and self-guided activities.
- Workplace Diversity Series—offered seven times per year, the Workplace Diversity Series provides staff, supervisors and faculty an opportunity to learn about and discuss various workplace diversity issues with colleagues from across campus. These sessions focus on a wide variety of diversity-related issues and are led by experts from across campus. Sessions take place during the lunch hour so that more people may be able to attend.
- Diversity, Difference and Conflict—A free 20-30 minute online training tool to help participants explore how they approach conflict in the workplace and what effect diversity has on conflict and relationships.
- Diversity in Action seminar series—Seminar series highlighting current research by faculty and graduate students on diversity-related topics.
- You in Mizzou—A dialogue program for MU students that challenges participants to discuss differences and discover similarities in a safe and respectful environment while experiencing the rich diversity of Mizzou and the beliefs of those around them.
- Equity and Hiring Training and Consultation—The MU Equity Office offers customized training and consultation on effective strategies and best practices for faculty search committees as well as training on equity issues in the workplace.
- Safe Space Training—Provided by the MU LGBTQ Resource Center, participants in the training learn about the challenges of homophobia, campus resources, and how to be supportive to members of the LGBTQ community. At the conclusion of the training, participants have the option to display a Safe Space symbol as a signal to LGBTQ individuals that they maintain a safe and affirming environment. Open to all students, staff, faculty and administrators.
- Diversity Peer Educators (MU Multicultural Center)—Diversity Peer Educators offer cultural sensitivity education and training to cultivate a greater sense of respect and understanding of culture. This program challenges students to look at cultural assumptions, stereotyping, and the different "isms" everyone faces, with a critical eye.
- Accessibility and ADA Education Training—Customized training workshops for students, staff, faculty, and administrators on etiquette for respectfully interacting with persons with disabilities; disability rights and current issues; universal design and workplace accommodations.
- Difficult Dialogues Faculty Development Program—This program helps faculty learn and practice classroom techniques in conflict resolution and deliberation; encourage cross-cultural empathy through interactive theatre; and gain awareness of diversity issues in higher education related to race, gender, sexual orientation and religious literacy.
- The Chancellor's Diversity also provides additional custom training and workshops to all divisions on campus upon request.

The website URL where information about the cultural competence trainings is available:

<http://diversity.missouri.edu/learn/training/>

Assessing Diversity and Equity

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution assesses diversity and equity on campus and uses the results to guide policy, programs, and initiatives. The assessment(s) address one or more of the following areas:

1. **Campus climate**, e.g. through a survey or series of surveys to gather information about the attitudes, perceptions and experiences of campus stakeholders and underrepresented groups
 2. **Student diversity and educational equity**, e.g. through analysis of institutional data on diversity and equity by program and level, comparisons between graduation and retention rates for diverse groups, and comparisons of student diversity to the diversity of the communities being served by the institution
 3. **Employee diversity and employment equity**, e.g. through analysis of institutional data on diversity and equity by job level and classification, and comparisons between broad workforce diversity, faculty diversity, management diversity and the diversity of the communities being served by the institution
 4. **Governance and public engagement**, e.g. by assessing access to and participation in governance on the part of underrepresented groups and women, the centrality of diversity and equity in planning and mission statements, and diversity and equity in public engagement efforts
-

"---" indicates that no data was submitted for this field

Has the institution assessed diversity and equity in terms of campus climate?:

Yes

A brief description of the campus climate assessment(s) :

Building on earlier campus climate studies from 2001-2005 and 2009 which studied the experiences of specific populations on campus, the University of Missouri conducted a comprehensive campus climate study of faculty, staff and students in Spring 2012. Data were collected from 3,380 respondents through an online survey and is currently being analyzed.

The 2001-2005 MU Campus Climate Study was a rigorous and comprehensive self-evaluation that provided new information about how majority and minority group members perceived the current climate for diversity at MU for six groups: women, people of color, people with disabilities, lesbian, gay, bisexual and transgender (LGBT) individuals, non-Christian religious minorities, and non-native English speakers.

Data collection for Phase I began in the fall of 2001, which involved MU's participation in the Rankin National Climate Study. There were three simultaneous phases of data collection in 2002, and the fifth and final phase of data collection was completed in February 2005. Data was collected from nearly 6,000 faculty, staff, students and administrators at MU across all five phases of data collection. In addition, three volumes of reports were prepared and disseminated containing nearly 500 pages of findings and information, which can be [STARS Reporting Tool](#) | [AASHE](#)

found here:

<http://diversity.missouri.edu/about/climate/2001-2005/index.php>

Has the institution assessed student diversity and educational equity?:

Yes

A brief description of the student diversity and educational equity assessment(s):

The 2009 campus climate survey was used to provide comparative data for earlier campus climate research from 2001 through 2005. Unlike the previous series of studies, the focus was solely on students. All undergraduate, graduate and professional students were notified and invited to participate via mass e-mail, MU Info and campus promotions. A self-selection of 3,522 or 12 percent of the student population responded. Participants were predominantly undergraduate (77.4 percent), female (66.5 percent), White/European American (80.4 percent), Heterosexual (90.1 percent), and without disabilities (92.1 percent)

When asked about numerical diversity on campus, students of color were less satisfied than white students with the number of students, faculty, and staff. Moreover, students of color were less satisfied with the overall climate than white students. When asked about satisfaction with the overall campus climate related to diversity, the most satisfied groups included White, Christian, Political Conservatives, Political Moderates, Veterans, Men, and Women. The least satisfied groups were Transgender, LGBTQ, People of color, Religious minorities, People with disabilities, Political liberals, Agnostics/atheists, and non-native English speakers.

Experiences of harassment (17.8 percent), embracing diversity (14.5 percent), and satisfaction with numerical diversity (34.8 percent) each accounted for significant variance in predicting student “satisfaction with overall climate” with the full model accounting for 66.9 percent of the variance in student ratings. Despite clear influences related to personal experiences of harassment and the general climate, we found that the degree to which “students in general” and “administrators” were perceived to embrace diversity were important. Moreover, the central predictor of ratings of overall climate were based on “satisfaction with numerical diversity” for students, faculty and staff, which partially mediated the variance accounted for by personal experiences of harassment.

For the complete executive summary, please visit

<http://diversity.missouri.edu/about/climate/index.php>

Survey with past participants of Diversity 101 (an online course for faculty and staff) revealed that out of complete responses (n=38): 92% of respondents reported that they felt more confident in their ability to engage with individuals who are different from themselves as a result of participating in this online course; 41% reported initiating changes to department policies or practices to be more inclusive; 75% reported that they have made efforts to speak up when people say things that are inappropriate or offensive; and 89% have made an effort to be mindful of when they are applying biases and to stop and question assumptions.

MU Communication faculty and Chancellor’s Diversity Initiative staff are collaborating with students in Freshmen Interest Groups on a research project to test what impact six online diversity education lessons and the race of the avatar mentor in each lesson has on student learning and attitudes.

Has the institution assessed employee diversity and employment equity?:

Yes

A brief description of the employee diversity and employment equity assessment(s):

As required by law, the University completes an affirmative action plan which assesses demographic diversity by comparing employee demographics with the demographics of those eligible to seek employment in the identified job group in the identified recruiting region. By law, the appropriate comparator is the job market, not the “communities being served.” The University seeks to remedy underutilization as identified by the Plan.

Additionally, the University seeks to track equity complaints to assess trouble spots and recurring issues. A faculty exit interview system gives departing faculty a final opportunity to alert the University to equity issues that need to be addressed.

Has the institution assessed diversity and equity in terms of governance and public engagement?:

No

A brief description of the governance and public engagement assessment(s):

The University’s strategic plan addresses diversity and creates measures for assessing progress: “Continually strengthen a diverse, safe and inclusive culture that encourages and rewards interaction across demographics, social, and interpersonal differences”

The website URL where information about the assessment(s) is available:

<http://diversity.missouri.edu/about/climate/>

Support for Underrepresented Groups

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has mentoring, counseling, peer support, academic support, or other programs in place to support underrepresented groups on campus.

This credit excludes programs to help build a diverse faculty throughout higher education, which are covered in *PA 7: Support for Future Faculty Diversity*.

Part 2

Institution has a discrimination response policy, program and/or team (or the equivalent) to respond to and support those who have experienced or witnessed a bias incident, act of discrimination or hate crime.

"---" indicates that no data was submitted for this field

Does the institution have mentoring, counseling, peer support, academic support, or other programs to support underrepresented groups on campus?:

Yes

A brief description of the programs sponsored by the institution to support underrepresented groups:

Office of Accessibility and ADA (Americans with Disabilities Act) Education

- The Office of Accessibility and ADA Education works to foster an inclusive and welcoming environment at the University of Missouri for people with disabilities, free of physical, programmatic, informational, and attitudinal barriers. Toward broader goals of inclusion, we emphasize universal design so that University programs, activities, and services are readily available to as many people as possible. In other words, we support the full integration of people with disabilities into all aspects of University life.

Asian Affairs Center

- The University of Missouri's Asian Affairs Center (AAC) reflects the university's formal recognition of the cultural, strategic and economic importance of the nations of the Pacific Rim. The AAC has a mandate to build upon MU's substantial Asian programs, university and alumni linkages, and teaching and research connections in the region to benefit citizens, government entities, and businesses in Missouri and in the region.

Gaines/Oldham Black Culture Center

- The Gaines/Oldham Black Culture Center (GOBCC) is dedicated to providing social and educational programs that reflect the history, heritage and culture of the African Diaspora to all students, faculty, staff and the Mid-Missouri community. Additionally, the GOBCC is

a willing partner with entities endeavoring to make the University of Missouri a more inclusive and welcoming environment for diverse populations through education, outreach, and collaboration. Lastly, the GOBCC envisions itself as an instrument of orientation and instruction on the issues of race, politics, economics, community, art and culture of the African Diaspora.

Chancellor's Diversity Initiative

- The Chancellor's Diversity Initiative's goal is to expand opportunities for faculty, students and staff to engage and thrive in an increasingly diverse environment. It works with administrators at all levels of the campus to focus on institutional change. The office evaluates the campus climate and develops new programs and strategic planning efforts that foster a diverse and inclusive campus environment.

Disability Services

- The University of Missouri Disability Center provides services and accommodations that help students to participate fully in the learning experience and be evaluated on the basis of their abilities. It serves as a resource to and partner with the campus community to remove barriers and promote the principles of universal design.

MU Equity Office

- The MU Equity Office works with MU faculty, staff, and students who believe they may have been subjected to unfair or inequitable treatment for any reason. The office seeks to address bias, including but not limited to discrimination on the basis of considerations prohibited by law or official university policy. We assist individuals who believe they may have been harassed or treated differently from others in the same situation.

Intensive English Program

- The University of Missouri offers non-native speakers of English a high quality program of intensive English training. It is designed to provide individuals as quickly as possible with the English language skills necessary to successfully study for an academic degree in a college or university in the United States.

LGBTQ (Lesbian, Gay, Bisexual, Transgender, Queer) Resource Center

-The University of Missouri's LGBTQ Resource Center respects students as they are; all are welcome. They work to educate about, support, and advocate for sexual and gender minorities at Mizzou. They offer support, events, education, trainings, involvement, leadership, community, and more.

Multicultural Center

The MU Multicultural Center is a safe and comfortable space for students of all identities and backgrounds. As a place for identity exploration and reclamation, the Center truly works to address the needs of underrepresented populations, providing a safe outlet and home away from home.

Student Parent Center

The mission of the Student Parent Center is to provide parenting students with the opportunity to achieve higher education through child care services, family support and connection to campus and community resources that support the parenting students' goals.

Adaptive Computing Technology Center

The Adaptive Computing Technology (ACT) Center is a part of the University of Missouri's Division of IT. They work to ensure that MU students, faculty and staff needing assistive technology have equal opportunity within the classroom and office.

TransAction Team

The TransAction Team is comprised of trans* people and their allies at Mizzou (students, faculty, and staff.) They are committed to ensuring all people have access to safe and inclusive spaces at Mizzou. They are also committed to providing up to date information, resources, and support for the trans* community. (*The University of Missouri utilizes trans* as an umbrella term for people who transgress or transcend our normative notions of gender. This term includes but is not limited to those who identify as transgender, transsexual, bigender, gender queer, gender fluid, two spirit, cross dressers, and gender benders.)

Women's Center

The Mizzou Women's Center provides opportunities for learning, service and support for those who seek to further their understanding of social justice. They welcome students, staff, faculty and members of the local community, regardless of their gender identity.

The website URL where more information about the support programs for underrepresented groups is available:

<http://diversity.missouri.edu/about/diversity-offices.php>

Does the institution have a discrimination response policy and/or team (or the equivalent) to respond to and support those who have experienced or witnessed a bias incident, act of discrimination or hate crime?:

Yes

A brief description of the institution's discrimination response policy, program and/or team:

The MU Equity office oversees the response to what are referred to as "bias incidents" on campus. These "bias incident" reports are available with regard to race, religion, language, sexual orientation, color, gender, gender identity, gender expression, ethnicity, nationality, age, political affiliation, group affiliation, socioeconomic class, physical appearance, and veteran status. The reporting process can be completed online, over the phone, or in person. Bias incidents can be reported by students, faculty, or staff. Appropriate action is then taken according to MU's nondiscrimination policy.

The website URL where more information about the institution's discrimination response policy, program and/or team is available:

<http://equity.missouri.edu/bias-reporting/>

Does the institution offer housing options to accommodate the special needs of transgender and transitioning students?:

Yes

Does the institution produce a publicly accessible inventory of gender neutral bathrooms on campus?:

Yes

Support for Future Faculty Diversity

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution administers and/or participates in a program or programs to help build a diverse faculty throughout higher education.

Such programs could take any of the following forms:

- Teaching fellowships or other programs to support terminal degree students from underrepresented groups in gaining teaching experience. (The terminal degree students may be enrolled at another institution.)
 - Mentoring, financial, and/or other support programs to prepare and encourage undergraduate or other non-terminal degree students from underrepresented groups to pursue further education and careers as faculty members.
 - Mentoring, financial, and/or other support programs for doctoral and post-doctoral students from underrepresented groups.
-

Submission Note:

<http://equity.missouri.edu/recruitment-hiring/resources.php>

<http://diversity.missouri.edu/summit/>

"---" indicates that no data was submitted for this field

Does the institution administer and/or participate in a program or programs to help build a diverse faculty that meet the criteria for this credit?:

Yes

A brief description of the institution's programs that help increase the diversity of higher education faculty:

Diversity of ideas makes this institution, and the knowledge we create through research and disseminate through teaching, better and more vigorous. Diversity of ideas derives from unique individuals, including men and women with various racial-ethnic backgrounds, languages, religious beliefs, sexual orientations, mental and physical disabilities, national and geographical origins, socio-economic classes, and political views.

Therefore, in order to make this institution better and more academically vigorous, men and women with various racial-ethnic backgrounds, languages, religious beliefs, sexual orientations, mental and physical disabilities, national and geographical origins, socio-economic classes, and political views need to be actively sought through the faculty hiring process.

The Chancellor's Diversity Initiative (CDI) is dedicated to enhancing institutional diversity through offering workshops and seminars and forming collaborative partnerships all over campus. The CDI, as well as the Equity office, offer a variety of hiring and recruitment guidelines designed to increase and improve faculty diversity as stated in the MU Diversity mission statement. The CDI actively and aggressively seeks to improve the university's commitment to diversity in higher education faculty.

In addition, the campus hosts various events such as the MizzouDiversity Summit which aids in education of the importance of diversity within the faculty at Mizzou. We also offer an opportunity for faculty to present their diversity related research at our Diversity in Action brown-bag seminar series.

The website URL where more information about the faculty diversity program(s) is available :

<http://equity.missouri.edu/recruitment-hiring/>

Affordability and Access

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has policies and programs in place to make it accessible and affordable to low-income students and/or to support non-traditional students. Such policies and programs may include, but are not limited to, the following:

- Policies and programs to minimize the cost of attendance for low-income students
- Programs to equip the institution's faculty and staff to better serve students from low-income backgrounds
- Programs to prepare students from low-income backgrounds for higher education (e.g. U.S. federal TRIO programs)
- Scholarships provided specifically for low-income students
- Programs to guide parents of low-income students through the higher education experience
- Targeted outreach to recruit students from low-income backgrounds
- Scholarships provided specifically for part-time students
- An on-site child care facility, a partnership with a local facility, and/or subsidies or financial support to help meet the child care needs of students

Part 2

Institution is accessible and affordable to low-income students as demonstrated by one or more of the following indicators:

- A. The percentage of entering students that are low-income
 - B. The graduation/success rate for low-income students
 - C. The percentage of student financial need met, on average
 - D. The percentage of students graduating with no interest-bearing student loan debt
-

"---" indicates that no data was submitted for this field

Does the institution have policies and programs in place to make it accessible and affordable to low-income students?:

Yes

A brief description of any policies and programs to minimize the cost of attendance for low-income students:

Students with dependent children may apply for their childcare to be provided on campus. Students who travel more than 30 miles each way may apply for their transportation costs to be covered. Students may also apply for financial assistance in order to purchase a computer.

The Missouri Student Association sponsors Tiger Pantry, a food assistance program for low income students and staff.

The Missouri Student Association also sponsors Truman's Closet, a program designed to help low income students and staff dress appropriately for job interviews.

The University offers a wide variety of scholarships, grants, and awards. Most of these take financial need into account as indicated on the FAFSA.

The University also offers student employment. MU employs students through regular part-time jobs and through the Federal Work Study Program. Jobs typically are 10 to 15 hours per week, with wages varying by position and skill level.

The MU Office of Student Financial Aid is responsible for the initial awarding of Federal Work Study to eligible students. This opportunity is awarded to students who demonstrate financial need, have filled out the FAFSA, and indicate an interest in part time work.

A brief description of any programs to equip the institution's faculty and staff to better serve students from low-income backgrounds:

The Chancellor's Diversity Initiative provides free workshops and seminars for faculty and staff to instruct them on how to better serve students from a variety of diverse backgrounds, including low-income students. In addition, the Chancellor's Diversity Initiative also provides many free interactive diversity enrichment activities for faculty and staff through their website.

The Difficult Dialogues program assists faculty in discussing divisive topics in their classrooms while maintaining a respectful and nonthreatening atmosphere.

A brief description of any programs to prepare students from low-income backgrounds for higher education:

Academic Retention Services specifically concentrates of assisting low-income and minority students with the transition to college.

The Learning Center provides tutoring and mentoring services for students with low income backgrounds who may need help with lower level math and science courses.

The Mizzou Office for Financial Success is a nonprofit organization that provides a judgment free atmosphere to assist students from all backgrounds with financial planning, household management, and budget.

Mizzou also takes part in the national program called Jumpstart. Jumpstart is a national early education organization that recruits and trains college students and community Corps members to serve preschool children in low-income neighborhoods. Their proven curriculum helps children develop the language and literacy skills they need to be ready for kindergarten, setting them on a path to close the achievement gap before it is too late.

A brief description of the institution's scholarships for low-income students:

University of Missouri MOST (Missouri's 529 Saving Plan) Scholarship

This scholarship is for qualifying students of families who have invested for college through MOST. Students must have financial need as determined by a standard of need applied against the FAFSA; applicants are selected according to their financial need.

Gates Millennium Scholars Program

The Gates Millennium Scholars program provides an opportunity for outstanding minority students with significant financial need to reach their highest potential.

University of Missouri Grant

This institutionally funded, need-based grant is awarded to students showing significant financial need. Award amounts, which range from \$500 to \$5,000, are based on need and hours enrolled.

Access Missouri Financial Assistance Program

This is a need-based program designed to be simple to understand, provide predictable, portable awards, and increase access to the school of choice. Eligibility is determined by the Expected Family Contribution (EFC) as calculated through the Free Application for Federal Student Aid (FAFSA).

A brief description of any programs to guide parents of low-income students through the higher education experience:

Parents are an integral part of the Mizzou family. The university recognizes the critical role they play and strives to create a positive partnership with them. The Office of Parent Relations serves as the primary liaison between the university and MU parents. This office plans, develops and implements specific programs and services designed to inform, educate and assist MU families.

A brief description of any targeted outreach to recruit students from low-income backgrounds:

The Missouri College Advising Corps (MCAC) hires recent MU graduates to work in 26 partner high schools across Missouri. These recent graduates help high school students in the application process, troubleshoot for them when they encounter obstacles and encourage them by believing in their ability to be successful in college. MCAC partner schools have high percentages of students who are the first in their families to attend college, low-income, or at risk of not going to college. MCAC college advisers help students choose colleges that best fit their interests and abilities (and the University of Missouri is one), navigate the process of applying for financial aid, and help them develop confidence to complete a college degree.

The purpose of the Missouri College Advising Corps is:

- To help Missouri students and their families see college as an attainable goal
- To provide information about the college application and financial aid process to students and their families
- To increase college enrollment and graduation among high-ability, low-income high school students
- To encourage community college students to complete their associate's degree and pursue a baccalaureate degree

A brief description of other admissions policies or programs to make the institution accessible and affordable to low-income students:

A brief description of other financial aid policies or programs to make the institution accessible and affordable to low-income students:

The Mizzou Scholarship Fund helps pave the way to help many Mizzou students have access to the University of Missouri. Contributions to the Mizzou Scholarship Fund provide a direct means of making an immediate impact on students' financial aid needs because the funds go directly to the MU Financial Aid Office. The Financial Aid Office determines how to best use the scholarship funds to meet the needs of students. This fund helps meet the needs of the most capable, low-income students and encourages outstanding students to choose Mizzou over other colleges and universities.

A brief description of other policies and programs to make the institution accessible and affordable to low-income students not covered above:

Does the institution have policies and programs in place to support non-traditional students?:

Yes

A brief description of any scholarships provided specifically for part-time students:

Student aid is based on full-time enrollment, but part-time enrollment is often considered for eligibility.

A brief description of any onsite child care facilities, partnerships with local facilities, and/or subsidies or financial support to help meet the child care needs of students:

The MU Child Development Lab (CDL) is an educational setting for community children, and a teaching and research laboratory for University of Missouri students, faculty and staff. The CDL is a full-day, full-year teacher-training lab school of the Department of Human Development and Family Studies (HDFS) within the College of Human Environmental Sciences (HES). The CDL is licensed and accredited.

The CDL serves about 96 families with children from six weeks of age through Pre-K. Promoting high quality child care in a model setting is a primary goal.

A brief description of other policies and programs to support non-traditional students:

The Osher Re-entry Scholarship endowment is a scholarship for non-traditional students who are admitted for their first baccalaureate degree and have experienced a cumulative five-year interruption in their studies.

Adult students who commute more than 30 miles each way to attend MU classes may be eligible for transportation funding.

Does the institution wish to pursue Part 2 of this credit (accessibility and affordability indicators)?:

Yes

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

	Percentage (0-100)
The percentage of entering students that are low-income	18.20

The graduation/success rate for low-income students	57.85
The percentage of student financial need met, on average	59
The percentage of students graduating with no interest-bearing student loan debt	52.37

The percentage of students that participate in or directly benefit from the institution's policies and programs to support low-income and non-traditional students:

The website URL where information about the institution's affordability and access programs is available:

<http://diversity.missouri.edu/learn/scholarships/>

Health, Wellbeing & Work

This subcategory seeks to recognize institutions that have incorporated sustainability into their human resources programs and policies. An institution's people define its character and capacity to perform; and so, an institution's achievements can only be as strong as its community. An institution can bolster the strength of its community by making fair and responsible investments in its human capital. Such investments include offering benefits, wages, and other assistance that serve to respectfully and ethically compensate workers and acting to protect and positively affect the health, safety and wellbeing of the campus community. Investment in human resources is integral to the achievement of a healthy and sustainable balance between human capital, natural capital, and financial capital.

Credit
Employee Compensation
Assessing Employee Satisfaction
Wellness Program
Workplace Health and Safety

Employee Compensation

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution's employees and/or the employees of its on-site contractors are covered by sustainable compensation standards, guidelines, or policies and/or collective bargaining agreements.

A sustainable compensation (or "living wage") standard, guideline or policy is one that addresses wages and benefits in terms of the ability of employees to meet basic needs. For example, a sustainable compensation policy may index hourly wages to a poverty guideline or to local cost-of-living indicators. A labor market survey, salary survey or similar assessment may be used in conjunction with a basic needs/cost-of-living approach, but is not sufficient on its own to count as a sustainable compensation policy.

Part 2

Institution's employees and/or the employees of its on-site contractors receive sustainable compensation.

To earn points for Part 2 of this credit, an institution must assess employee compensation against one or more of the following:

1. A sustainable compensation standard developed or adopted by a committee with multi-stakeholder representation (i.e. its membership includes faculty, staff, and students and may include Human Resources administrators or other parties). The standard need not be formally adopted by the institution.
2. A sustainable compensation standard that is in use in the institution's locality. The standard may be formal (e.g. a "living wage" ordinance covering public employees) or informal (e.g. a standard adopted by a local, regional or national campaign).
3. An appropriate poverty guideline, threshold or low-income cut-off for a family of four.

For institutions that elect to assess compensation against a poverty guideline, threshold or low-income cut-off, sustainable compensation is defined as wages equivalent to 120 percent of the poverty guideline for a family of four. An institution may offset up to 20 percent of the wage criteria with employer-paid benefits that address basic needs (e.g. healthcare and retirement contributions).

Both parts of this credit are based on the total number of employees working on campus as part of regular and ongoing campus operations, which includes:

- Staff and faculty, i.e. all regular full-time, regular part-time and temporary (or non-regular) employees, including adjunct faculty and graduate student employees (e.g. teaching and research assistants). Institutions may choose to include or omit undergraduate student workers.
- Employees of contractors that work on-site as part of regular and ongoing campus operations. Such contractors may include, but are not limited to, providers of dining/catering, cleaning/janitorial, maintenance, groundskeeping, transportation, and retail services.

Construction and demolition crews and other temporary contracted employees may be excluded.

Submission Note:

Employee numbers obtained from the Office of Institutional Research.

Study numbers obtained from Teresa Long, Human Resource Services.

"---" indicates that no data was submitted for this field

Number of employees:

10,670

Number of staff and faculty covered by sustainable compensation standards, guidelines, or policies; and/or collective bargaining agreements:

7,362.30

Does the institution have employees of contractors working on-site as part of regular and ongoing campus operations?:

Yes

Number of employees of contractors working on campus:

24

Number of employees of contractors covered by sustainable compensation standards, guidelines, or policies and/or collective bargaining agreements:

0

A brief description of the sustainable compensation standards, guidelines, or policies; and/or collective bargaining agreements covering staff, faculty and/or employees of contractors:

MU completed the Staff Job Title and Salary Study in 2014 which assessed staff job titles (except service/maintenance job titles) in an effort to consolidate jobs with comparable responsibilities into a single global title as well as ensure sustainable and fair compensation is given to all employees. An internally equitable and externally competitive compensation and classification system for enhanced recruitment and retention of staff was developed through the study. The study reviewed and evaluated over 1,600 job titles affecting over 5,700 campus employees. Using a new Global Grading System (GGS), market data was collected and pay ranges developed to create a new compensation structure.

Human Resource Services runs regular reports to ensure employees are paid into the ranges of their official job title. If an employee is paid below the minimum of the range for the title, then HRS works with departments to ensure the employee is moved up into the range.

HRS also ensures that no employee is paid less than the Federal or State minimum wage rate, whichever is higher and most favorable to the employee. Currently, the Missouri minimum wage is \$7.65/hr.

Does the institution wish to pursue Part 2 of this credit (assessing employee compensation)?:

Yes

Number of staff and faculty that receive sustainable compensation:

2,589

Number of employees of contractors that receive sustainable compensation:

0

A brief description of the standard(s) against which compensation was assessed:

unsure

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid regular, full-time employees:

Employees at the University of MO are paid no less than \$7.65/hour.

The University currently has three salary plans for staff titles all of which pay above the minimum wage:

SALARY PLAN GRADE MINIMUM WAGE RATE

S/M 1 \$ 8.93/hour

GGS 1 \$ 7.65/hour

PAT 1 \$ 9.27/hour

**The University of Missouri System offers a comprehensive benefit programs that gives employees flexibility with the choices involving health and financial security. The benefits offered as a part of the myTotal Rewards package include medical, dental, vision, accidental death and dismemberment, and life insurance programs, long term disability, educational assistance and tuition reduction

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid regular, part-time employees:

see above

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid temporary (non-regular) staff:

Temporary, non-regular staff are not eligible for the University's health and welfare benefits. However, these employees are paid no less than \$7.65 per hour. The University's internal temporary staffing office pays its temporary employees, at minimum, \$9.00/hour.

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid temporary (non-regular, adjunct or contingent) faculty:

see above

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid student employees (graduate and/or undergraduate, as applicable):

Undergraduate students are paid anywhere from \$7.65/hour and up depending on the work they are performing. Graduate students are paid no less than \$13.08/hour.

Student wage guidelines can be accessed here:

<http://hrs.missouri.edu/policies-and-procedures/pay-and-compensation/compensation-and-classification/student-wages-and-titles.php>

And additional guidance on assistantships can be found at:

http://hrs.missouri.edu/docs/Salary%20Wage%20FY14_60313_final.pdf

The local legal minimum hourly wage for regular employees:

7.65 US/Canadian \$

Does the institution have an on-site child care facility, partner with a local facility, and/or provide subsidies or financial support to help meet the child care needs of faculty and staff?:

Yes

Does the institution offer a socially responsible investment option for retirement plans?:

Yes

The website URL where information about the institution's sustainable compensation policies and practices is available:

http://hrs.missouri.edu/docs/Salary%20Wage%20FY14_60313_final.pdf

Assessing Employee Satisfaction

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution conducts a survey or other evaluation that allows for anonymous feedback to measure employee satisfaction and engagement. The survey or equivalent may be conducted institution-wide or may be done by individual departments or divisions. The evaluation addresses (but is not limited to) the following areas:

- Job satisfaction
- Learning and advancement opportunities
- Work culture and work/life balance

The institution has a mechanism in place to address issues raised by the evaluation.

Submission Note:

<http://www.themaneater.com/stories/2014/8/27/mu-releases-faculty-satisfaction-survey-results/>

<http://diversity.missouri.edu/about/climate/>

http://staffcouncil.missouri.edu/SURVEY.word.%20%20All_Respondents_Redacted%202014.docx

51% of Faculty participated in a faculty-only survey from August 2014

9.27% of Staff participated in a staff-only survey from March 2014

"---" indicates that no data was submitted for this field

Has the institution conducted an employee satisfaction and engagement survey or other evaluation that meets the criteria for this credit?:

Yes

The percentage of employees (staff and faculty) assessed, directly or by representative sample:

60

A brief description of the institution's methodology for evaluating employee satisfaction and engagement:

After the announcement of the retirement of Chancellor Brady Deaton and the introduction of the new Chancellor R. Bowen Loftin, the MU Staff Advisory Council decided to gather information from MU staff members to present a snapshot of staff issues and concerns in face of administrative change. The Chancellor's Diversity Office offered to facilitate a survey using questions prepared by the Staff Advisory Council. The resulting online survey was sent to staff during the month of March, 2014. The survey elicited valuable feedback about employee's feelings about the university and topics of concern to be improved upon.

The Staff Advisory Council at the University of Missouri-Columbia was formed by the Chancellor in October 1978. The mission of the Council includes advising the chancellor on matters of mutual interest, and provides an appropriate and effective channel for bringing staff members' concerns and interests to campus administration. The Council acts as a liaison for staff and administration on matters which are initiated by staff, and also on those initiated by the Council. The Council attempts to heighten awareness of contributions made by staff members to the University of Missouri, and recognizes those contributions publicly. It also serves as an information source for staff members regarding policy changes which affect them. The Council does not function as a bargaining unit or a grievance committee.

A brief description of the mechanism(s) by which the institution addresses issues raised by the evaluation (including examples from the previous three years):

Comments were compiled based on topics within the answers for several questions. While several comments discuss the same topic, many were included in the final report as a way to express the concerns of all staff to MU Administration. Please note that there were four comments which included specific names of MU employees. Due to the nature of some of these comments, the Staff Advisory Council chose to redact the names mentioned from the copy of the survey results that will be available to the public. The complete survey results, including individual names, were included in the version of the survey presented to Chancellor Loftin and Interim Vice Chancellor Ward.

The year the employee satisfaction and engagement evaluation was last administered:

2,014

The website URL where information about the institution's employee satisfaction and engagement assessment is available:

<http://staffcouncil.missouri.edu/goals/2007results.pdf>

Wellness Program

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution has a wellness and/or employee assistance program that makes available counseling, referral, and wellbeing services to all members of any of the following groups:

- Students
 - Staff
 - Faculty
-

"---" indicates that no data was submitted for this field

Does the institution make counseling, referral, and wellbeing services available to all members of the following groups?:

	Yes or No
Students	Yes
Staff	Yes
Faculty	Yes

A brief description of the institution's wellness and/or employee assistance program(s):

For faculty and staff, Healthy for Life, the T.E. Atkins University of Missouri Wellness Program, has the long-term goal of developing a world-class wellness program for the university. A steering committee and a work group were appointed in June of 2004, and the UM Board of Curators voted in December 2006 to extend the program from its pilot phase to UMH and the four campuses.

University of Missouri Wellness Program Mission Statement:

To support the university's teaching, research, service and economic development missions by aligning university health care resources to foster a vibrant, healthy climate in which university faculty, staff, retirees and students thrive and flourish.

The UM System's Employee Assistance Program (EAP) is a confidential, professional service provided to all employees, their families, retirees and organizational work units. The EAP provides a variety of services to help employees influenced by a range of personal concerns or stressors. The EAP also assists work units and the larger organization to improve quality and productivity.

The Wellness Resource Center (WRC) uses a comprehensive, campus wide, year-long wellness approach that begins during summer orientation and continues every month throughout the year. Each year, over 200 student programs are delivered in a wide variety of locations including academic classrooms and residence halls. The WRC plans on-going activities and events that support wellness as it relates to issues such as alcohol, tobacco and other drug use, nutrition and fitness, stress and mental health and other wellness issues.

The website URL where information about the institution's wellness program(s) is available:

<http://www.umsystem.edu/curators/wellness/>

Workplace Health and Safety

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Part 1

Institution has reduced its total number of reportable workplace injuries and occupational disease cases per full-time equivalent (FTE) employee compared to a baseline.

Part 2

Institution has fewer than 5 reportable workplace injuries and occupational disease cases annually per 100 full-time equivalent (FTE) employees.

This credit includes employees of contractors working on-site for whom the institution is liable for workplace safety, for example workers for whom the institution is mandated to report injuries and disease cases by a health and safety authority such as the U.S. Occupational Health and Safety Administration (OSHA) or the Canadian Center for Occupational Health and Safety (CCOHS). Injuries and disease cases include OSHA/CCOHS-reportable fatal and non-fatal injuries (or the equivalent) arising out of or in the course of work and cases of diseases arising from a work-related injury or the work situation or activity (e.g. exposure to harmful chemicals, stress, ergonomic issues). See *Sampling and Data Standards*, below, for further guidance on reporting injuries and disease cases.

Submission Note:

FY 2009 was the first year the University collected this data.

"---" indicates that no data was submitted for this field

Please enter data in the table below::

	Performance Year	Baseline Year
Number of reportable workplace injuries and occupational disease cases	446	458
Full-time equivalent of employees	12,566	12,419

Start and end dates of the performance year and baseline year (or three-year periods):

	Start Date	End Date
Performance Year	July 1, 2013	June 30, 2014
Baseline Year	July 1, 2008	June 30, 2009

A brief description of when and why the workplace health and safety baseline was adopted:

Baseline year is FY2009. Six FY worker's compensation experience.

A brief description of the institution's workplace health and safety initiatives:

Risk and Insurance Management (RIM) organizes, coordinates, and implements programs to control risks for all University of Missouri campuses. Workers' Compensation is a piece of RIM that ensures benefits for work related injuries.

The website URL where information about the institution's workplace health and safety initiatives is available:

<http://www.umsystem.edu/ums/fa/management/risk/insurancecoverages-workerscompensation>

Investment

This subcategory seeks to recognize institutions that make investment decisions that promote sustainability. Most institutions invest some of their assets in order to generate income. Together, colleges and universities invest hundreds of billions of dollars. Schools with transparent and democratic investment processes promote accountability and engagement by the campus and community. Furthermore, institutions can support sustainability by investing in companies and funds that, in addition to providing a strong rate of return, are committed to social and environmental responsibility. Investing in these industries also supports the development of sustainable products and services. Finally, campuses can engage with the businesses in which they are invested in order to promote sustainable practices.

Throughout this subcategory, the term “sustainable investment” is inclusive of socially responsible, environmentally responsible, ethical, impact, and mission-related investment.

Credit
Committee on Investor Responsibility
Sustainable Investment
Investment Disclosure

Committee on Investor Responsibility

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

Institution has a formally established and active committee on investor responsibility (CIR) or similar body that makes recommendations to fund decision-makers on socially and environmentally responsible investment opportunities across asset classes, including proxy voting. The body has multi-stakeholder representation, which means its membership includes faculty, staff, and students and may include alumni, trustees, and/or other parties.

Institutions for which investments are handled by the university system and/or a separate foundation of the institution should report on the investment policies and activities of those entities.

A general committee that oversees the institution's investments does not count for this credit unless social and environmental responsibility is an explicit part of its mission and/or agenda.

This credit applies to institutions with endowments of US \$1 million or larger. Institutions with endowments totaling less than US \$1 million may choose to omit this credit.

"---" indicates that no data was submitted for this field

Does the institution have a formally established and active committee on investor responsibility (CIR) or similar body that has multi-stakeholder representation and otherwise meets the criteria for this credit?:

No

The charter or mission statement of the CIR or other body which reflects social and environmental concerns or a brief description of how the CIR is tasked to address social and environmental concerns:

Members of the CIR, including affiliations and role (e.g. student, faculty, alumni):

Examples of CIR actions during the previous three years:

http://www.umssystem.edu/ums/news/media_archives/curators_approves_master_administrator

The website URL where information about the CIR is available:

<https://www.umsystem.edu/curators/committees/>

Responsible Party

Shivani Vaid

Graduate Research Assistant

MU Sustainability Office

Criteria

There are two possible approaches to this credit; institutions may pursue one or both. Institutions for which investments are handled by the university system, a separate foundation of the institution and/or a management company contracted by the institution should report on the combined activities of those entities.

Option 1: Positive Sustainability Investment

Institution invests in one or more of the following:

- **Sustainable industries** (e.g. renewable energy or sustainable forestry). This may include any investment directly in an entire industry sector as well as holdings of companies whose entire business is sustainable (e.g. a manufacturer of wind turbines).
- **Businesses selected for exemplary sustainability performance** (e.g. using criteria specified in a sustainable investment policy). This includes investments made, at least in part, because of a company's social or environmental performance. Existing stock in a company that happens to have socially or environmentally responsible practices should not be included unless the investment decision was based, at least in part, on the company's sustainability performance.
- **Sustainability investment funds** (e.g. a renewable energy or impact investment fund). This may include any fund with a mission of investing in a sustainable sector or industry (or multiple sectors), as well as any fund that is focused on purchasing bonds with sustainable goals.
- **Community development financial institutions (CDFI)** or the equivalent (including funds that invest primarily in CDFIs or the equivalent).
- **Socially responsible mutual funds with positive screens** (or the equivalent). Investment in a socially responsible fund with only negative screens (i.e. one that excludes egregious offenders or certain industries, such as tobacco or weapons manufacturing) does not count for Option 1.
- **Green revolving loan funds** that are funded from the endowment

Option 2: Investor Engagement

Institution has policies and/or practices that meet one or more of the following criteria:

- Has a publicly available sustainable investment policy (e.g. to consider the social and/or environmental impacts of investment decisions in addition to financial considerations)
- Uses its sustainable investment policy to select and guide investment managers
- Has engaged in proxy voting to promote sustainability, either by its CIR or other committee or through the use of guidelines, during the previous three years
- Has filed or co-filed one or more shareholder resolutions that address sustainability or submitted one or more letters about social or environmental responsibility to a company in which it holds investments, during the previous three years

- Has a publicly available investment policy with negative screens, for example to prohibit investment in an industry (e.g. tobacco or weapons manufacturing) or participate in a divestment effort (e.g. targeting fossil fuel production or human rights violations)
- Engages in policy advocacy by participating in investor networks (e.g. Principles for Responsible Investment, Investor Network on Climate Risk, Interfaith Center on Corporate Responsibility) and/or engages in inter-organizational collaborations to share best practices

This credit was marked as **Not Pursuing** so Reporting Fields will not be displayed.

Investment Disclosure

Responsible Party

Shivani Vaid

Graduate Research Assistant

MU Sustainability Office

Criteria

Institution makes a snapshot of its investment holdings available to the public, including the amount invested in each fund and/or company and proxy voting records. The snapshot of holdings is updated at least once per year.

Institutions for which investments are handled by the university system, a separate foundation of the institution and/or a management company contracted by the institution should report on the combined activities of those entities.

This credit was marked as **Not Pursuing** so Reporting Fields will not be displayed.

Innovation

Innovation

These credits recognize institutions that are seeking innovative solutions to sustainability challenges and demonstrating sustainability leadership in ways that are not otherwise captured by STARS.

Credit
Innovation 1
Innovation 2
Innovation 3
Innovation 4

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

1. Innovation credits are reserved for new, extraordinary, unique, ground-breaking, or uncommon outcomes, policies, and practices that greatly exceed the highest criterion of an existing STARS credit or are not covered by an existing STARS credit.
2. In general, innovation credits should have roughly similar impacts or be on the same scale as other STARS credits.
3. Outcomes, policies, and practices that are innovative for the institution's region or institution type are eligible for innovation credits.
4. The innovative practice, policy, program, or outcome must have occurred within the three years prior to the anticipated date of submission.
5. The innovative practice or program has to be something that the institution has already done; planned activities do not count.
6. The innovative practice or program should originate from an area within the defined institutional boundary.
7. An institution can only claim a particular activity as an innovation credit once. When re-submitting for a STARS rating, an innovation credit that the institution submitted previously cannot be re-submitted. An institution that has made significant advancements to a project or program that was previously submitted as an innovation may resubmit based on those advancements if the project or program is still considered innovative.
8. Practices, policies, and programs that were once considered innovative but are now widely adopted (e.g. being the first institution to enact a policy 20 years ago that is now common) may not be claimed as innovation credits.
9. Multiple activities or practices whose sum is innovative can be considered for an innovation credit as long as those activities or practices are related. For example, three innovative waste reduction programs in research laboratories could be listed together under a single innovation credit for Greening Laboratories. Listing a series of unrelated accomplishments or events under a single innovation credit is not accepted.
10. While the practices that led to receiving an award may be appropriate for an innovation credit, winning awards and/or high sustainability rankings in other assessments is not, in and of itself, grounds for an innovation credit. When the innovation is part of a partnership, the summary provided must clearly describe the institution's role in the innovation.

To help ensure that the policy, practice, program, or outcome that the institution is claiming for an innovation credit is truly innovative, institutions must submit a letter of affirmation from an individual with relevant expertise in the associated content area. The letter should affirm how the innovation meets the criteria outlined above.

For example, if an institution claims an innovation credit for water use reduction, the institution might solicit a letter from a hydrologist or a water expert from another campus or organization to verify that the strategy is innovative. An innovation may be affirmed internally by campus personnel who are independent of the policy, practice, program, or outcome. Please note that it is not required that the individual be employed in the higher education sector to submit a letter of verification.

The letter should be specific to a single innovation credit. If an institution is claiming three innovation credits, it would solicit and submit three separate letters, with each letter speaking to the specific innovation credit it addresses.

Title or keywords related to the innovative policy, practice, program, or outcome:

Energy Strategies Student Advisory Group (ESSAG)

A brief description of the innovative policy, practice, program, or outcome :

The ESSAG is advising MU in advancing its leadership in the production and usage of environmentally, fiscally and socially responsible energy; including providing related educational and research. It is comprised mostly of students from the Missouri Student Association, Missouri Energy Action Committee, Sustain Mizzou and the Graduate Professional Council. The leaders in this group include the director and superintendent of the MU Power Plant and the Vice Chancellor for operations. This type of advising group is unique to higher education, we have not been able to find a campus that has a resemblance of this way to consider campus energy options with a small group of students, staff, and power plant directors.

A brief description of any positive measurable outcomes associated with the innovation (if not reported above):

The students in ESSAG give presentations to their peers and discuss campus energy. The ESSAG is also putting out survey's to gauge student interest in renewable energy and their understanding of our power plant. This group in the future will begin to work with the company Confluence to run energy option models for campus.

A letter of affirmation from an individual with relevant expertise:

[MUStars_LOS_OS.pdf](#)

Which of the following STARS subcategories does the innovation most closely relate to? (Select all that apply up to a maximum of 5):

	Yes or No
Curriculum	---
Research	---
Campus Engagement	Yes
Public Engagement	---
Air & Climate	---
Buildings	---

Dining Services	---
Energy	Yes
Grounds	---
Purchasing	---
Transportation	---
Waste	---
Water	---
Coordination, Planning & Governance	Yes
Diversity & Affordability	---
Health, Wellbeing & Work	---
Investment	---

Other topic(s) that the innovation relates to that are not listed above:

The website URL where information about the innovation is available :

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

1. Innovation credits are reserved for new, extraordinary, unique, ground-breaking, or uncommon outcomes, policies, and practices that greatly exceed the highest criterion of an existing STARS credit or are not covered by an existing STARS credit.
2. In general, innovation credits should have roughly similar impacts or be on the same scale as other STARS credits.
3. Outcomes, policies, and practices that are innovative for the institution's region or institution type are eligible for innovation credits.
4. The innovative practice, policy, program, or outcome must have occurred within the three years prior to the anticipated date of submission.
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8. Practices, policies, and programs that were once considered innovative but are now widely adopted (e.g. being the first institution to enact a policy 20 years ago that is now common) may not be claimed as innovation credits.
9. Multiple activities or practices whose sum is innovative can be considered for an innovation credit as long as those activities or practices are related. For example, three innovative waste reduction programs in research laboratories could be listed together under a single innovation credit for Greening Laboratories. Listing a series of unrelated accomplishments or events under a single innovation credit is not accepted.
10. While the practices that led to receiving an award may be appropriate for an innovation credit, winning awards and/or high sustainability rankings in other assessments is not, in and of itself, grounds for an innovation credit. When the innovation is part of a partnership, the summary provided must clearly describe the institution's role in the innovation.

To help ensure that the policy, practice, program, or outcome that the institution is claiming for an innovation credit is truly innovative, institutions must submit a letter of affirmation from an individual with relevant expertise in the associated content area. The letter should affirm how the innovation meets the criteria outlined above.

For example, if an institution claims an innovation credit for water use reduction, the institution might solicit a letter from a hydrologist or a water expert from another campus or organization to verify that the strategy is innovative. An innovation may be affirmed internally by campus personnel who are independent of the policy, practice, program, or outcome. Please note that it is not required that the individual be employed in the higher education sector to submit a letter of verification.

The letter should be specific to a single innovation credit. If an institution is claiming three innovation credits, it would solicit and submit three separate letters, with each letter speaking to the specific innovation credit it addresses.

Title or keywords related to the innovative policy, practice, program, or outcome:

Fracking Chemicals Disrupt Hormone Function

A brief description of the innovative policy, practice, program, or outcome:

University of Missouri researchers have found greater hormone-disrupting properties in water located near hydraulic fracturing drilling sites than in areas without drilling. The researchers also found that 11 chemicals commonly used in the controversial "fracking" method of drilling for oil and natural gas are endocrine disruptors.

Endocrine disruptors interfere with the body's endocrine system, which controls numerous body functions with hormones such as the female hormone estrogen and the male hormone androgen. Exposure to endocrine-disrupting chemicals, such as those studied in the MU research, has been linked by other research to cancer, birth defects and infertility.

A brief description of any positive measurable outcomes associated with the innovation (if not reported above):

The study, "Estrogen and Androgen Receptor Activities of Hydraulic Fracturing Chemicals and Surface and Ground Water in a Drilling-Dense Region," was published in the journal *Endocrinology*.

"More than 700 chemicals are used in the fracking process, and many of them disturb hormone function," said Susan Nagel, PhD, associate professor of obstetrics, gynecology and women's health at the MU School of Medicine. "With fracking on the rise, populations may face greater health risks from increased endocrine-disrupting chemical exposure."

The study involved two parts. The research team performed laboratory tests of 12 suspected or known endocrine-disrupting chemicals used in hydraulic fracturing, and measured the chemicals' ability to mimic or block the effects of the reproductive sex hormones estrogen and androgen. They found that 11 chemicals blocked estrogen hormones, 10 blocked androgen hormones and one mimicked estrogen.

The researchers also collected samples of ground and surface water from several sites, including:

Accident sites in Garfield County, Colo., where hydraulic fracturing fluids had been spilled

Nearby portions of the Colorado River, the major drainage source for the region

Other parts of Garfield County, Colo., where there had been little drilling

Parts of Boone County, Mo., which had experienced no natural gas drilling

The water samples from drilling sites demonstrated higher endocrine-disrupting activity that could interfere with the body's response to androgen and estrogen hormones. Drilling site water samples had moderate-to-high levels of endocrine-disrupting activity, and samples from the Colorado River showed moderate levels. In comparison, the researchers measured low levels of endocrine-disrupting activity in the Garfield County, Colo., sites that experienced little drilling and the Boone County, Mo., sites with no drilling.

"Fracking is exempt from federal regulations to protect water quality, but spills associated with natural gas drilling can contaminate surface, ground and drinking water," Nagel said. "We found more endocrine-disrupting activity in the water close to drilling locations that had experienced spills than at control sites. This could raise the risk of reproductive, metabolic, neurological and other diseases, especially in children who are exposed to endocrine-disrupting chemicals."

A letter of affirmation from an individual with relevant expertise:

Which of the following STARS subcategories does the innovation most closely relate to? (Select all that apply up to a maximum of five):

	Yes or No
Curriculum	Yes
Research	Yes
Campus Engagement	No
Public Engagement	---
Air & Climate	Yes
Buildings	---
Dining Services	No
Energy	Yes
Grounds	---
Purchasing	No
Transportation	No
Waste	---
Water	Yes
Coordination, Planning & Governance	---
Diversity & Affordability	No
Health, Wellbeing & Work	---
Investment	No

Other topic(s) that the innovation relates to that are not listed above:

The website URL where information about the innovation is available:

<http://biology.missouri.edu/news/dr-susan-nagel-crowdfunds-project-on-fracking-and-endocrine-disruptors/>

Responsible Party

Michael Burden
Sustainability Coordinator
MU Sustainability

Criteria

1. Innovation credits are reserved for new, extraordinary, unique, ground-breaking, or uncommon outcomes, policies, and practices that greatly exceed the highest criterion of an existing STARS credit or are not covered by an existing STARS credit.
2. In general, innovation credits should have roughly similar impacts or be on the same scale as other STARS credits.
3. Outcomes, policies, and practices that are innovative for the institution's region or institution type are eligible for innovation credits.
4. The innovative practice, policy, program, or outcome must have occurred within the three years prior to the anticipated date of submission.
5. The innovative practice or program has to be something that the institution has already done; planned activities do not count.
6. The innovative practice or program should originate from an area within the defined institutional boundary.
7. An institution can only claim a particular activity as an innovation credit once. When re-submitting for a STARS rating, an innovation credit that the institution submitted previously cannot be re-submitted. An institution that has made significant advancements to a project or program that was previously submitted as an innovation may resubmit based on those advancements if the project or program is still considered innovative.
8. Practices, policies, and programs that were once considered innovative but are now widely adopted (e.g. being the first institution to enact a policy 20 years ago that is now common) may not be claimed as innovation credits.
9. Multiple activities or practices whose sum is innovative can be considered for an innovation credit as long as those activities or practices are related. For example, three innovative waste reduction programs in research laboratories could be listed together under a single innovation credit for Greening Laboratories. Listing a series of unrelated accomplishments or events under a single innovation credit is not accepted.
10. While the practices that led to receiving an award may be appropriate for an innovation credit, winning awards and/or high sustainability rankings in other assessments is not, in and of itself, grounds for an innovation credit. When the innovation is part of a partnership, the summary provided must clearly describe the institution's role in the innovation.

To help ensure that the policy, practice, program, or outcome that the institution is claiming for an innovation credit is truly innovative, institutions must submit a letter of affirmation from an individual with relevant expertise in the associated content area. The letter should affirm how the innovation meets the criteria outlined above.

For example, if an institution claims an innovation credit for water use reduction, the institution might solicit a letter from a hydrologist or a water expert from another campus or organization to verify that the strategy is innovative. An innovation may be affirmed internally by campus personnel who are independent of the policy, practice, program, or outcome. Please note that it is not required that the individual be employed in the higher education sector to submit a letter of verification.

The letter should be specific to a single innovation credit. If an institution is claiming three innovation credits, it would solicit and submit three separate letters, with each letter speaking to the specific innovation credit it addresses.

Submission Note:

Related research:

<http://cafnrnews.com/2013/03/the-in-between-crops/>

"---" indicates that no data was submitted for this field

Title or keywords related to the innovative policy, practice, program, or outcome:

Mississippi River Basin Healthy Watersheds Initiative (MRBI)

A brief description of the innovative policy, practice, program, or outcome:

The University of Missouri Center for Agroforestry (UMCA) is involved in the Mississippi River Basin Healthy Watersheds Initiative, funded by the USDA Natural Resources Conservation Service (NRCS). UMCA is working with NRCS and other partners such as the Missouri Department of Natural Resources to implement voluntary conservation practices on agricultural farms that improve water quality, restore wetlands, enhance wildlife habitat and sustain agricultural profitability in the Mississippi River Basin. Water quality concerns leading to the hypoxia issue in the Gulf of Mexico have led NRCS to identify the Mississippi River Basin as a top priority to address this issue. UMCA team is engaged in quantifying the benefits of conservation practices by using edge-of-field monitoring on 10 sub-watersheds on farms throughout northern Missouri. Results indicate substantial reduction in nutrient (N and P) loading into streams and rivers from sub-watersheds where conservation practices are installed. The total impacted area would be approximately 2000 acres.

A brief description of any positive measurable outcomes associated with the innovation (if not reported above):

A letter of affirmation from an individual with relevant expertise:

[2014-12-22 MU Gold Letter.pdf](#)

Which of the following STARS subcategories does the innovation most closely relate to? (Select all that apply up to a maximum of five):

	Yes or No
Curriculum	---
Research	Yes
Campus Engagement	---
Public Engagement	Yes
Air & Climate	---

Buildings	---
Dining Services	---
Energy	---
Grounds	---
Purchasing	---
Transportation	---
Waste	---
Water	Yes
Coordination, Planning & Governance	---
Diversity & Affordability	---
Health, Wellbeing & Work	---
Investment	---

Other topic(s) that the innovation relates to that are not listed above:

The website URL where information about the innovation is available:

http://illumination.missouri.edu/s14/watershed_revival

Responsible Party

Alicia LaVaute

Sr. Recycling & Waste Minimization Specialist
Sustainability Office

Criteria

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Submission Note:

"---" indicates that no data was submitted for this field

Title or keywords related to the innovative policy, practice, program, or outcome:

University of Missouri Led Clean Energy Research Consortium of Academic Institutions and Private Sector

A brief description of the innovative policy, practice, program, or outcome:

Researchers have long known that the fertile land of Missouri and the Midwest have the capacity to be powerhouses for biofuel production. What has remained elusive is a way to grow the biomass needed to make biofuel without encroaching on land dedicated to food crops, and how to transport and refine the biomass profitably. Big energy challenges like these require big ideas and even bigger collaborations— and Mizzou’ Advantage researcher Shibu Jose has both.

Jose, director of the Center for Agroforestry at the University of Missouri, is the leader of the Mississippi/Missouri River Advanced Biomass/Biofuel Consortium, a team of more than 40 academic institutions and agricultural and energy companies working to turn the Missouri and Mississippi rivers into a “biomass corridor” that will provide clean energy for the U.S. and economic opportunity for Missouri.

Mizzou Advantage is proud to be a sponsor of Jose’s preliminary research into biomass plantations, as well as a continuing partner in pursuing grants and other opportunities to apply the research to real-world problems in the Midwest and beyond.

The cycle begins with cultivating the marginal land along the rivers, where traditional food crops fail but native biomass crops like cottenwood and miscanthus flourish. MU’s extensive research in biomass crop performance allows the plant selection to be tailored to each site. Because the plants grow close to the river, the material can be transported by barge to refineries — which are also built along the river — at a fraction of the price of trucking it. An affordable way to transport energy crops is essential to making biomass production feasible for growers.

“In the past, we used to do all of these things for the sake of conservation, now we are also telling land owners you can still get that conservation benefit with a crop you can sell; it’s a market-based approach to conservation,” Jose said.

Jose says recently completed preliminary research shows that America’s two great rivers can support an effort to economically take biofuels from plants harvested in waste ground to finished biofuel pumped into fuel tanks. The organization’s next step is to find funding to build a prototype bio-processing facility that will create the first gallon.

If implemented, the plan could create about two-thirds of the 21 billion gallons of biofuels called for in federal goals by 2022, he says.

A brief description of any positive measurable outcomes associated with the innovation (if not reported above):

Jose said the preliminary research shows there are about 116 million acres of marginal land near these rivers that is unsuitable for traditional crops because of flooding, erosion and poor soil. This method of production is environmentally friendly, Jose said. Many of these plants require little to no fertilizer. Most are soil stabilizing plants, holding the soil in place.

Jose estimated that planting biomass crops on six million acres – just five percent of the marginal land available around the rivers – would produce enough raw material to be converted into seven billion gallons of biofuel.

A letter of affirmation from an individual with relevant expertise:

Innovation4.pdf

Which of the following STARS subcategories does the innovation most closely relate to? (Select all that apply up to a maximum of five):

	Yes or No
Curriculum	---
Research	Yes
Campus Engagement	---
Public Engagement	---
Air & Climate	Yes
Buildings	---
Dining Services	---
Energy	Yes
Grounds	---
Purchasing	---
Transportation	Yes
Waste	---
Water	Yes
Coordination, Planning & Governance	---
Diversity & Affordability	---
Health, Wellbeing & Work	---

Other topic(s) that the innovation relates to that are not listed above:

Consortium

The website URL where information about the innovation is available:

<http://cafnrnews.com/2012/07/river-fuel/>