University of Pennsylvania

STARS REPORT

Date Submitted: Preview
Provisional Rating: Gold
Online Report: University of Pennsylvania
STARS Version: 2.1

This is a preview of the final STARS Report.

The final version of the report will be available upon publication, at which time the final rating will be awarded and the data contained in the report will become publicly available on the STARS website.
Wait, Wait! Don’t Print Me!

To reduce paper consumption, this document has been designed to be browsed quickly and easily on computer screens using Adobe Reader. The following special features have been embedded:

Moving Around in the Document

- **Summary of Results Links** - Headings in the Summary of Results are links, which can be clicked to take you directly to the referenced page.
- **Bookmarks** - You can jump to segments of the document quickly and easily using the Bookmarks provided in the document. To access the Bookmarks, click on the "Bookmarks" tab on the left side of the Adobe Reader window – it’s the icon that looks like a sheet of paper with a blue ribbon hanging over the upper left corner.
- **Pages** - You can quickly go to any page listed in the Table of Contents simply by typing the page number into the box that displays the current page number in the Adobe Reader window, and pressing "Return/Enter."

Searching

- Adobe Reader’s search tool allows you to see the results of your search in a menu format, similar to web search engines. Using the menu, you can choose to go directly to the occurrence of the search term that is most relevant to your interest.
  
To access this search tool, press Shift+Ctrl+F, or choose "Search" from the "Edit" menu.

If these features don’t meet your on-screen reading needs, please consider printing only the sections you need, printing double-sided, and using recycled-content paper or paper that has already been printed on one side.
About STARS

The Sustainability Tracking, Assessment & Rating System (STARS®) is a transparent, self-reporting framework for colleges and universities to gauge relative progress toward sustainability. STARS was developed by AASHE with broad participation from the higher education community.

STARS is designed to:

- Provide a framework for understanding sustainability in all sectors of higher education.
- Enable meaningful comparisons over time and across institutions using a common set of measurements developed with broad participation from the campus sustainability community.
- Create incentives for continual improvement toward sustainability.
- Facilitate information sharing about higher education sustainability practices and performance.
- Build a stronger, more diverse campus sustainability community.

STARS is intended to engage and recognize the full spectrum of colleges and universities—from community colleges to research universities, and from institutions just starting their sustainability programs to long-time campus sustainability leaders. STARS encompasses long-term sustainability goals for already high-achieving institutions as well as entry points of recognition for institutions that are taking first steps toward sustainability.

About AASHE

STARS is a program of AASHE, the Association for the Advancement of Sustainability in Higher Education. AASHE is a member-driven organization with a mission to empower higher education to lead the sustainability transformation. Learn more about AASHE.
## Table of Contents

- **Summary of Results**  
  - 5

- **Institutional Characteristics**  
  - Institutional Characteristics  
    - 6

- **Academics**  
  - Curriculum  
    - 14
  - Research  
    - 45

- **Engagement**  
  - Campus Engagement  
    - 58
  - Public Engagement  
    - 98

- **Operations**  
  - Air & Climate  
    - 120
  - Buildings  
    - 131
  - Energy  
    - 141
  - Food & Dining  
    - 153
  - Grounds  
    - 168
  - Purchasing  
    - 177
  - Transportation  
    - 191
  - Waste  
    - 207
  - Water  
    - 222

- **Planning & Administration**  
  - Coordination & Planning  
    - 230
  - Diversity & Affordability  
    - 261
  - Investment & Finance  
    - 293
  - Wellbeing & Work  
    - 303

- **Innovation & Leadership**  
  - Exemplary Practice  
    - 314
  - Innovation  
    - 343
Summary of Results

Provisional Rating: Gold

Institutional Characteristics
- Institutional Characteristics: 0.00 / 0.00

Academics
- Curriculum: 23.48 / 40.00
- Research: 14.44 / 18.00

Engagement
- Campus Engagement: 16.11 / 21.00
- Public Engagement: 15.20 / 20.00

Operations
- Air & Climate: 6.04 / 11.00
- Buildings: 3.95 / 8.00
- Energy: 3.25 / 10.00
- Food & Dining: 2.77 / 8.00
- Grounds: 2.09 / 3.00
- Purchasing: 3.74 / 6.00
- Transportation: 5.64 / 7.00
- Waste: 4.35 / 10.00
- Water: 1.00 / 7.00

Planning & Administration
- Coordination & Planning: 8.00 / 8.00
- Diversity & Affordability: 9.52 / 10.00
- Investment & Finance: 2.67 / 7.00
- Wellbeing & Work: 4.13 / 7.00

Innovation & Leadership
- Exemplary Practice: 4.00 / 7.50
- Innovation: 4.00 / 4.00

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 include data related to an institution’s boundary (defining the campus for purposes of reporting), its operational characteristics (the context in which it operates) and its demographics and academics (programs, students, staff, and faculty). This information provides valuable context for understanding and interpreting STARS data. Thus, all information documented in the sections below will be displayed in the institution's public STARS report.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Boundary</td>
<td>0.00 / Total adjusted for non-applicable credits Close</td>
</tr>
<tr>
<td>Operational Characteristics</td>
<td>0.00 / Total adjusted for non-applicable credits Close</td>
</tr>
<tr>
<td>Academics and Demographics</td>
<td>0.00 / Total adjusted for non-applicable credits Close</td>
</tr>
</tbody>
</table>
Institutional Boundary

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 /</td>
<td>Madeline Schuh</td>
</tr>
</tbody>
</table>

Total adjusted for non-applicable credits

Close

Criteria

Each institution is expected to include its entire main campus when collecting data. Institutions may choose to include any other land holdings, facilities, farms, and satellite campuses, as long as the selected boundary is the same for each credit. If an institution finds it necessary to exclude a particular unit from its submission, the reason for excluding it must be provided in the appropriate reporting field, below.

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

Institution type: Associate (i.e., short-cycle), Baccalaureate, Doctoral/Research, or Master’s:
Doctoral/Research

Institutional control (Public, Private for-profit, or Private non-profit):
Private non-profit

A brief description of the institution’s main campus and other aspects of the institutional boundary used to complete this report:

Penn’s 299-acre (302-acres when the hospital is included) urban campus is located in the West Philadelphia neighborhood known as University City, just across the Schuylkill River from Center City Philadelphia. All Penn facilities except the Morris Arboretum and the New Bolton Center large-animal hospital are located on the University City campus.

Which of the following features are present on campus and which are included within the institutional boundary?:

<table>
<thead>
<tr>
<th>Present?</th>
<th>Included?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural school</td>
<td>No</td>
</tr>
<tr>
<td>Medical school</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Other professional school with labs and clinics (e.g. dental, nursing, pharmacy, public health, veterinary)

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Satellite campus</th>
<th>No</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Farm larger than 5 acres or 2 hectares</th>
<th>No</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Agricultural experiment station larger than 5 acres or 2 hectares</th>
<th>No</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

### The rationale for excluding any features that are present from the institutional boundary:

The geography of Penn's Climate Action Plan 2.0 (CAP2.0), published in 2014, was broadened to include the 82-acre Morris Arboretum, the 700+ acre New Bolton Large Animal Center, and the Hospital of the University of Pennsylvania (HUP). These added affiliated institutions, while part of Penn's overall corporate structure, have their own facilities staff and energy management teams. As such, the University’s facilities division (which includes the Penn Sustainability Office) has less direct control over their operations and management, and the operational metrics associated with these institutions are therefore excluded from this STARS report.

However, these affiliated institutions have completed carbon inventories and have implemented a variety of initiatives related to energy conservation and environmental sustainability. Including an account of their sustainability initiatives in Penn’s Climate Action Plan 2.0, recognizes the good work that has been taking place in parts of the University that were not included in the 2009 Climate Action Plan.

As Penn moves forward in the planning for the third iteration of our sustainability plan, the initiatives at the New Bolton Center, the Morris Arboretum, and HUP will continue to be an important part of the University’s sustainability work.

### Additional documentation to support the submission:

---

### Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor’s, Master’s, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn’s 2009 "Climate Action Plan"). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0".

The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton Large Animal Center has also...
been referenced, and noted as outside the boundary of the main campus in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Operational Characteristics

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 /</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Operational characteristics are variables that provide information about the context in which the institution operates. Report the most recent data available within the three years prior to the anticipated date of submission.

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

Endowment size:
10,700,000,000 US/Canadian $

Total campus area (i.e. the total amount of land within the institutional boundary):
299 Acres

Locale:
Large city

IECC climate zone:
4 - Mixed

Gross floor area of building space:
15,864,661 Gross Square Feet

Floor area of laboratory space:
3,622,403 Square Feet

Floor area of healthcare space:
221,225 Square Feet

Floor area of other energy intensive space, e.g. data centers, food production space, convenience stores:
0 Square Feet

Additional documentation to support the submission:
stars.aashe.org
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 "Climate Action Plan"). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been included and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Academics and Demographics

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 /</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td>Total adjusted for non-applicable credits</td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

This section includes variables that provide information about the institution’s academic programs, students, faculty and staff. Report the most recent data available within the three years prior to the anticipated date of submission. Some population figures are used to calculate “weighted campus user”, a measurement of an institution’s population that is adjusted to accommodate how intensively certain community members use the campus.

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

**Number of academic divisions (e.g. colleges, schools):**
12

**Number of academic departments (or the equivalent):**
326

**Number of students enrolled for credit:**
24,876

**Total number of employees (staff + faculty):**
17,354

**Full-time equivalent student enrollment (undergraduate and graduate):**
21,358

**Full-time equivalent of employees (staff + faculty):**
17,354

**Full-time equivalent of students enrolled exclusively in distance education:**
0

**Number of students resident on-site:**
6,380
Number of employees resident on-site: 
50

Number of other individuals resident on-site, e.g. family members of employees, individuals lodging on-site (by average occupancy rate), and/or staffed hospital beds (if applicable): 
50

Weighted campus users, performance year: 
30,691.50

Additional documentation to support the submission: 
---

Data source(s) and notes about the submission:

http://www.upenn.edu/about/facts
;
https://www.collegehouses.upenn.edu/
;
http://www.upenn.edu/ir/QuickFacts.html

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor’s, Master’s, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn’s 2009 "Climate Action Plan"). This submission documents Penn’s efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University’s "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been included and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Curriculum

Points Claimed  23.48
Points Available  40.00

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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Courses</td>
<td>5.35 / 14.00</td>
</tr>
<tr>
<td>Learning Outcomes</td>
<td>0.13 / 8.00</td>
</tr>
<tr>
<td>Undergraduate Program</td>
<td>3.00 / 3.00</td>
</tr>
<tr>
<td>Graduate Program</td>
<td>3.00 / 3.00</td>
</tr>
<tr>
<td>Immersive Experience</td>
<td>2.00 / 2.00</td>
</tr>
<tr>
<td>Sustainability Literacy Assessment</td>
<td>4.00 / 4.00</td>
</tr>
<tr>
<td>Incentives for Developing Courses</td>
<td>2.00 / 2.00</td>
</tr>
<tr>
<td>Campus as a Living Laboratory</td>
<td>4.00 / 4.00</td>
</tr>
</tbody>
</table>
Academic Courses

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.35 / 14.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Institution has conducted an inventory during the previous three years to identify its sustainability course offerings for current and prospective students. Sustainability course offerings include:

- Courses that have been identified as “sustainability courses” and “courses that include sustainability” using the definitions provided in G. Standards and Terms.
- Courses that have been formally designated as sustainability course offerings in the institution’s standard course listings or catalog.

For each course, the inventory provides:

- The title, department (or equivalent), and level of the course (e.g., undergraduate or graduate).
- A brief description of the course.
- An indication of whether the course is a “sustainability course” or a “course that includes sustainability” (or equivalent terminology).

A course may be a sustainability course or it may include sustainability; no course should be identified as both. Courses for which partial or incomplete information is provided may not be counted toward earning points for this credit. This credit does not include continuing education and extension courses, which are covered by the Continuing Education credit in Public Engagement.

For guidance on conducting a course inventory and distinguishing between sustainability courses and courses that include sustainability, see F. Measurement, G. Standards and Terms, and the Credit Example, below. 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.
Part 1

Institution offers sustainability course content as measured by the percentage of courses offered that are sustainability course offerings.

The total number of courses offered and the number of sustainability course offerings must be counted in the same manner; see *F. Measurement*.
Part 2

Institution offers sustainability course content as measured by the percentage of academic departments (or the equivalent) with sustainability course offerings.

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

Figures required to calculate the percentage of courses offered by the institution that are sustainability course offerings:

<table>
<thead>
<tr>
<th></th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of courses offered by the institution</td>
<td>1,907</td>
<td>1,859</td>
</tr>
<tr>
<td>Number of sustainability courses offered</td>
<td>152</td>
<td>146</td>
</tr>
<tr>
<td>Number of courses offered that include sustainability</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

Percentage of courses that are sustainability course offerings:
10.57

Total number of academic departments (or the equivalent) that offer courses (at any level):
326

Number of academic departments (or the equivalent) that offer at least one sustainability course and/or course that includes sustainability (at any level):
55

Percentage of academic departments with sustainability course offerings:
16.87

A copy of the institution’s inventory of its sustainability course offerings and descriptions:
Course Inventory FY18.pdf

Do the figures reported above cover one, two, or three academic years?:
One

A brief description of the methodology used to determine the total number of courses offered and to identify sustainability course offerings, including the definitions used and the process for reviewing
and/or validating the course inventory:

Penn’s Sustainability Course Inventory is a listing of the sustainability courses that the University of Pennsylvania offers. The Inventory is updated every routinely, and is available on-line through the Penn Sustainability website. The Inventory will be updated during 2018 fiscal year. See

https://www.sustainability.upenn.edu/course-inventory

While not an exhaustive list of all the sustainability courses at Penn, the "Inventory" was created in an attempt to capture the majority of courses across Departments and Schools that address environmental sustainability specifically, and to be used as a guide by students and advisers looking for courses and departments that include sustainability-themed instruction. The "Inventory", therefore may not include many of Penn's courses that focus primarily on such sustainability-related topics as social justice, social equity, business ethics, or governance.

The "Inventory" was compiled by searching for keywords in course titles, and also from direct input from professors and academic partners. It is organized alphabetically by school and department.

The "Inventory" is shared with the Office of the Provost, College House advisers, undergraduate advisers from Penn's four undergraduate schools, and the Penn Admissions Office.

How were courses with multiple offerings or sections counted for the figures reported above?:

Each offering or section of a course was counted as an individual course

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

---

Are the following course types included in the inventory?:

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Yes (included) or No (not included)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internships</td>
<td>No</td>
</tr>
<tr>
<td>Practicums</td>
<td>No</td>
</tr>
<tr>
<td>Independent study</td>
<td>No</td>
</tr>
<tr>
<td>Special topics</td>
<td>Yes</td>
</tr>
<tr>
<td>Thesis / dissertation</td>
<td>No</td>
</tr>
<tr>
<td>Clinical</td>
<td>No</td>
</tr>
<tr>
<td>Program</td>
<td>Response</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Physical education</td>
<td>No</td>
</tr>
<tr>
<td>Performance arts</td>
<td>No</td>
</tr>
</tbody>
</table>

The website URL where information about the programs or initiatives is available:

https://www.sustainability.upenn.edu/sustainability-themes/learning-sustainability

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 "Climate Action Plan"). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Learning Outcomes

Provisional Score | Responsible Party
---|---
0.13 / 8.00 | Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

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 (e.g., covering all graduates from a degree program)
- Course level (if successful completion of the course is required to complete a degree program)

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 the: Continuing Education credit in Public Engagement. Programs that include co-curricular aspects may count as long as there is an academic component of 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 G. Standards and Terms. While they do not necessarily have to use the term “sustainability”, learning outcomes must collectively address sustainability as an integrated concept having social, economic, and environmental dimensions for a program’s graduates to count. Mission, vision and values statements are not sufficient unless the above criteria are met.

Institutions that do not specify learning outcomes as a matter of policy or standard practice may count graduates from sustainability-focused programs (i.e., majors, minors, concentrations and the equivalent as reported for the Undergraduate Program and Graduate Program credits) and other degree programs that do not have specified sustainability learning outcomes, but require the successful completion of one or more sustainability courses (i.e., courses in which the primary and explicit focus is on sustainability as reported for the Academic Courses credit).

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

Total number of graduates from degree programs (i.e. majors, minors, concentrations, certificates, and other academic designations):
7,867

Number of students that graduate from programs that have adopted at least one sustainability learning outcome:
129
Percentage of students who graduate from programs that have adopted at least one sustainability learning outcome:

1.64

Do the figures reported above cover one, two, or three academic years?:

One

Does the institution specify sustainability learning outcomes at the institution level (e.g. covering all students)?:

No

Does the institution specify sustainability learning outcomes at the division level (e.g. covering particular schools or colleges within the institution)?:

No

A list or brief description of the institution level or division level sustainability learning outcomes:

---

Does the institution specify sustainability learning outcomes at the program level (i.e. majors, minors, concentrations, degrees, diplomas, certificates, and other academic designations)?:

Yes

A list or brief description of the program level sustainability learning outcomes (or a list of sustainability-focused programs):

The following degree programs have sustainability learning outcomes

- Masters of Environmental Studies
- Masters of Environmental Building Design
- Masters of Engineering and Applied Sciences: Materials Science and Engineering
- MBA Major in Environmental and Risk Management
- B.A in Earth & Environmental Science
- B.A in Environmental and Risk Management
- B.A in Environmental Geology
- B.A in Environmental Policy
- B.A in Environmental Policy & Management
- B.A in Environmental Studies
- B.A in Environmental Sustainability
- B.A in Urban Environment
- B.A in Economics with a concentration in Environmental Policy and Management
- Energy & Sustainability minor
- Environmental Science minor
- Environmental Studies minor
- Engineering minor in Energy and Sustainability
Occupational & Environmental Health minor
Sustainability & Environmental Management minor
Certificate in Ecological Design
Veterinariae Medicinae Doctoris
Masters in Social Work
Masters in Social Policy
Juris Doctor in Environmental Law
Master of Public Health

In addition, the following organizations promote sustainable learning outcomes within their work

- The Netter Center
- Civic House
- Penn Praxis
- Center for Excellence in Environmental Toxicology
- Kleinman Center
- Penn Program in the Environmental Humanities

Do course level sustainability learning outcomes contribute to the figure reported above (i.e. in the absence of program, division, or institution level learning outcomes)?

No

A list or brief description of the course level sustainability learning outcomes and the programs for which the courses are required:

---

The website URL where information about the programs or initiatives is available:

https://www.sustainability.upenn.edu/sustainability-themes/learning-sustainability

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 "Climate Action Plan"). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Undergraduate Program

Provisional Score | Responsible Party
3.00 / 3.00 | Madeline Schuh
                | Sustainability Analyst
                | Facilities and Real Estate Services

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).

To count, programs must concentrate on sustainability as an integrated concept, including its social, economic, and environmental dimensions.

Extension certificates and other certificates that are not part of academic degree programs do not count for this credit; they are covered in the Continuing Education credit in Public Engagement.

"---" 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 (i.e. an interdisciplinary academic program that concentrates on sustainability as an integrated concept)?:

Yes

Name of the sustainability-focused undergraduate degree program:

Penn School of Arts and Sciences: Earth and Environmental Science, Environmental Studies Major

A brief description of the undergraduate degree program:

The program in Environmental Studies is designed to provide students with the skills to understand and address contemporary environmental issues. The major integrates studies in the natural sciences, humanities, social sciences, policy, and management in order to study complex issues of the environment and humans' interaction with it. Core courses cover environmental and earth science, data analysis, economics and policy, and provide students with the skills and breadth of understanding they need for purposeful study in a concentration. Due to the interdisciplinary approach of the program, graduates go on to work in a variety of fields. Graduate go on to apply their skills to academic research and a broad range of careers, including environmental consulting, “green” finance, government, and education, among others.
Concentrations in: Environmental History and Regional Studies, Environmental Policy and Application, Global Environmental System, Sustainability and Environmental Management

The website URL for the undergraduate degree program:
https://www.sas.upenn.edu/earth/undergraduate/majors

Name of the sustainability-focused, undergraduate degree program (2nd program):
Penn School of Arts and Sciences: Earth and Environmental Science, Earth Sciences

A brief description of the undergraduate degree program (2nd program):
This major gives students a broad understanding of Earth Science. At completion of the program, graduates know the basic physical and chemical processes that operate in and on the planet and understand how direct and indirect methods are used to examine and understand the structure, composition and dynamics of Earth. Graduates appreciate how humans and ecosystems interact with the dynamic Earth, and have an in-depth knowledge of the atmosphere and climate change, the rock cycle, natural hazards and the hydrologic and bio-geo-chemical cycles. Additionally, they understand how to measure and use the structure, sequence and properties of rocks, sediments, and fossils to reconstruct events in Earth's history and identify potential natural hazards or earth resources. Concentrations for the program are in: Environmental Science, Paleobiology, and Geology.

The website URL for the undergraduate degree program (2nd program):
https://www.sas.upenn.edu/earth/majors/earth-science

Name of the sustainability-focused, undergraduate degree program (3rd program):
Wharton School of Business, BA in Economics with a Concentration in Environmental Policy and Management

A brief description of the undergraduate degree program (3rd program):
The Economics Degree with a concentration in environmental policy and management examines the relationship between business and the natural environment, including human health and safety as well as addressing a range of policy issues. This concentration provides an in-depth foundation for those interested in pursuing careers in the growing environmental sector of the economy, whether in private business, government, or environmental consulting. It takes an interdisciplinary approach, drawing on faculty and courses from several Wharton departments.

Students are encouraged to pursue additional coursework on environmental and technological risks in parallel with the Wharton program through the School of Arts and Sciences and the School of Engineering and Applied Science.

The website URL for the undergraduate degree program (3rd program):
https://undergrad-inside.wharton.upenn.edu/envp/

The name and website URLs of all other sustainability-focused, undergraduate degree program(s):
The Department of Earth and Environmental Science offers a number of additional majors - see
Does the institution offer one or more sustainability-focused minors, concentrations or certificates for undergraduate students?:
Yes

Name of the sustainability-focused undergraduate minor, concentration or certificate:
Sustainability and Environmental Management Minor

A brief description of the undergraduate minor, concentration or certificate:
The Minor in Sustainability and Environmental Management is open to undergraduate students in the Schools of Arts and Sciences, Engineering and Applied Science, and the Wharton School of Business.

The website URL for the undergraduate minor, concentration or certificate:
https://www.sas.upenn.edu/earth/minors/sustainability-and-environmental-management-minor

Name of the sustainability-focused undergraduate minor, concentration or certificate (2nd program):
Environmental Science Minor

A brief description of the undergraduate minor, concentration or certificate (2nd program):
The Minor in Environmental Studies is designed to provide students with the skills to understand and address contemporary environmental issues. The minor integrates studies in the natural sciences, humanities, social sciences, policy and management in order to study complex issues of human/environment interactions. Core courses cover environmental and earth science, data analysis, economics and policy, and provide students with the skills and breadth of understanding they need for purposeful study.

The website URL for the undergraduate minor, concentration or certificate (2nd program):
https://www.sas.upenn.edu/earth/minors/environmental-science-minor

Name of the sustainability-focused undergraduate minor, concentration or certificate (3rd program):
Penn Engineering Minor in Energy & Sustainability

A brief description of the undergraduate minor, concentration or certificate (3rd program):
The Energy and Sustainability (ENSU) Minor offered by Penn Engineering provides students with a broad coverage of technical and societal issues confronting the world and in-depth treatment of selected topics in technical areas relevant to energy and sustainability.
The website URL for the undergraduate minor, concentration or certificate (3rd program):
http://www.seas.upenn.edu/undergraduate/degrees/minor-energy.php

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

http://www.sas.upenn.edu/earth/undergraduate/minors

Additional documentation to support the submission:
STARS Academics Supplemental 2017 11 07_1.pdf

Data source(s) and notes about the submission:

Penn Earth and Environmental Science website:
http://www.sas.upenn.edu/earth/

Penn School of Engineering and Applied Science website:
http://www.seas.upenn.edu/undergraduate/degrees/minors.php

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### Graduate Program

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### 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).

To count, programs must concentrate on sustainability as an integrated concept, including its social, economic, and environmental dimensions.

Extension certificates and other certificates that are not part of academic degree programs do not count for this credit; they are covered in the Continuing Education credit in Public Engagement.

"---" 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 (i.e. an interdisciplinary academic program that concentrates on sustainability as an integrated concept)?:**

Yes

**Name of the sustainability-focused graduate-level degree program:**

Masters of Environmental Studies

**A brief description of the graduate-level degree program:**

This program is offered by the School of Arts and Sciences, within the Division of Liberal and Professional Studies. The Master of Environmental Studies (MES) program at the University of Pennsylvania offers a rigorous academic grounding in environmental science and exceptional opportunities to conduct research in the field. In addition, students gain the professional networks and individualized professional development needed to excel as a researcher, policy advocate, teacher, or business executive.

Built with flexibility in mind, students choose from a variety of concentrations or create their own—all with the guidance of world-class faculty and built upon the foundation of Ivy League science courses. Many distinguished professors also influence practices outside the University, bringing their experience and broad networks from the worlds of policy, business
and consulting into the classroom. Working students find meaningful ways to blend their academic and current professional experiences by partnering with faculty to design projects and research that tackle real-world challenges from their workplace.

The website URL for the graduate-level degree program:
http://www.sas.upenn.edu/lps/graduate/mes/

Name of the sustainability-focused, graduate-level degree program (2nd program):
Masters of Environmental Building Design

A brief description of the graduate degree program (2nd program):
This program in the School of Design is a specialized, post-professional degree developed to train architects in the new skills and knowledge required for environmental design. The three-semester course of study, established in 2010, includes coursework on building performance simulation, integrated building design, building envelopes and systems, lighting, daylighting, and the theory and practice of environmental design. Coursework is complemented and extended by a Performance Design Workshop and then explored in depth in an intensive Environmental Design Studio in the summer.

The website URL for the graduate degree program (2nd program):
http://www.design.upenn.edu/architecture/graduate/master-environmental-building-design-mebd

Name of the sustainability-focused, graduate-level degree program (3rd program):
Masters of Business Administration in Environmental and Risk Management

A brief description of the graduate degree program (3rd program):
This program in the Wharton School, founded in 1998, coordinates the MBA in Environmental and Risk Management, the undergraduate concentration in Environmental Policy and Management, and the undergraduate minor in Organizations and Environmental Management.

The website URL for the graduate degree program (3rd program):
https://igel.wharton.upenn.edu/education/mba-major/

The name and website URLs of all other sustainability-focused graduate-level degree programs:
Law and Environmental Studies
https://www.law.upenn.edu/crossdisciplinary/jointdegree/jd-mes-environmental-studies.php

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

**Name of the graduate-level sustainability-focused minor, concentration or certificate:**
Certificate in Ecological Architecture

**A brief description of the graduate minor, concentration or certificate:**
The School of Design offers this cross-departmental certificate in the School of Design as part of the graduate degree coursework in Architecture and related disciplines. Students develop an understanding of the dynamic interaction between the natural and built environments with a program of elective courses in Landscape Architecture, Historic Preservation, City Planning, Engineering, Environmental Science, and Legal Studies.

**The website URL for the graduate minor, concentration or certificate:**
http://www.design.upenn.edu/interdisciplinary-programs/ecological-architecture-certificate

**Name of the graduate-level sustainability-focused minor, concentration or certificate (2nd program):**
Penn Law, Environmental Law

**A brief description of the graduate minor, concentration or certificate (2nd program):**
Environmental law and policy inherently cuts across disciplinary fields, raising legal issues ranging from administrative to property law, and traversing disciplines as varied as economics and the natural sciences.
Students in Environmental Law learn from Law School and University faculty who produce leading research as well as from courses with top practitioners, externships with governmental and nongovernmental organizations, and numerous other experiential learning opportunities.

**The website URL for the graduate minor, concentration or certificate (2nd program):**
https://www.law.upenn.edu/academics/specialty/environmental-law.php

**Name of the graduate-level sustainability-focused minor, concentration or certificate (3rd program):**
Master's in Engineering and Applied Science: Materials Science and Engineering

**A brief description of the graduate minor, concentration or certificate (3rd program):**
Penn was one of the first universities to establish a center for materials research, the Laboratory for Research on the Structure of Matter (LRSM), which has grown to be one of the largest in the nation, and which is opening up new fields in materials science in ceramics, polymers, and metals to non-structured and soft materials. Graduates can be found in positions in industries that range from electronics, manufacturing, and communications to transportation and energy, or pursuing doctoral degrees at Penn and other top-ranked research universities.

**The website URL for the graduate minor, concentration or certificate (3rd program):**
http://www.seas.upenn.edu/prospective-students/graduate/programs/masters/mse.php
The name and website URLs of all other graduate-level, sustainability-focused minors, concentrations and certificates:

https://www.sustainability.upenn.edu/initiatives/learning-sustainability

Additional documentation to support the submission:

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Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 "Climate Action Plan"). This submission documents Penn’s efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been included and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Immersive Experience

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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 is one week or more in length?:

Yes

A brief description of the sustainability-focused immersive program(s) offered by the institution, including how each program addresses the social, economic, and environmental dimensions of sustainability:

Program 1. Penn Summer Abroad Berlin, Germany and Rotterdam, The Netherlands: This program introduces students to the cultural aspects of sustainability in two exemplary European locations—Germany and the Netherlands. In Germany the focus is on the Energy Transition (Energiewende) and the cultural factors that predispose this populace to embrace green politics and sustainable practices, even at personal cost. In the Netherlands the focus is on how cultural factors play a role in the way the Dutch approach issues relating to sea level rise and flooding in a country where 40% of its terrain is at or below sea-level.

This 12-day program, taught exclusively in English, with a preparatory online component, gives students the chance to see sustainability in action in Germany and the Netherlands, two countries widely recognized as leaders in innovative response to climate change. The highlight of the course is travel to Berlin and Rotterdam where students meet local and federal policy makers, sustainability researchers and practitioners. Students also tour sites such as a biodynamic farm, a university...
dedicated to sustainability and amphibious architecture, as well as have an opportunity to enjoy the vibrant outdoor culture of both cities.

Program 2. The Penn Chapter of Engineers Without Borders (PennEWB) is a nonprofit humanitarian organization that partners with developing communities on environmentally and socially sustainable engineering projects. For the past several years, the group focused its efforts on improving the quality and quantity of the water supply in the Bome Valley, a community of about 50,000 people located in the mountainous northwest region of Cameroon.

Students and faculty advisors work for months in advance of the trip to plan the engineering details, and also to understand the social, economic, and environmental dimensions of the challenges faced by the local community. The intent of the program is to build human capacity to sustainably meet the community's basic human needs. Penn students gain an enriched global perspective through the innovative professional and educational opportunities provided. There are over 100 active members in Penn's chapter.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/initiatives/learning-sustainability

Additional documentation to support the submission:
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Data source(s) and notes about the submission:

Program 1:
http://www.sas.upenn.edu/summer/programs/abroad/berlin-rotterdam

Program 2:
http://pennewb.org/

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Sustainability Literacy Assessment

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**Criteria**

Institution conducts an assessment of the sustainability literacy of its students. The sustainability literacy assessment focuses on knowledge of sustainability topics and challenges.

Assessments that primarily address sustainability culture (i.e. values, behaviors, beliefs, and awareness of campus sustainability initiatives) or student engagement in sustainability-related programs and activities are excluded. Cultural assessments are recognized in the Assessing Sustainability Culture credit in Campus Engagement.

Participation by U.S. and Canadian institutions in the National Survey of Student Engagement (NSSE) Sustainability Education Consortium does not count for this credit, but may be reported as an Exemplary Practice in Innovation & Leadership.

An institution may use a single instrument that addresses sustainability literacy, culture, and/or engagement to meet the criteria for this credit if at least ten questions or a third of the assessment focuses on student knowledge of sustainability topics and challenges.

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

**Does the institution conduct an assessment of the sustainability literacy of its students (i.e. an assessment focused on student knowledge of sustainability topics and challenges)?:**

Yes

**Which of the following best describes the literacy assessment? The assessment is administered to:**

The entire (or predominate) student body, directly or by representative sample

**Which of the following best describes the structure of the assessment? The assessment is administered as a:**

Pre- and post-assessment to the same cohort or to representative samples in both a pre- and post-test

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

Penn Sustainability Literacy Assessment Document_1.docx

**A sample of the questions included in the sustainability literacy assessment or the website URL where the assessment tool may be found:**
A brief description of how the literacy assessment was developed and/or when it was adopted:

A one-time survey was developed beginning in May of 2017 as part of a graduate student's capstone project for a Master of Environmental Studies degree. The survey was distributed to all students in September 2017 as part of the research project, although only responses from freshmen were used in the analysis. Questions were developed based on sustainability literacy assessments distributed at other universities, corporations, and government agencies. Model surveys were reviewed for sample questions, including those published by the International Journal of Sustainability in Higher Education and the North American Association for Environmental Education.

A brief description of how a representative sample was reached (if applicable) and how the assessment(s) were administered:

The Masters of Environmental Science student developed the survey to be administered to all incoming Freshman to the University of Pennsylvania. While the survey was distributed to the entire student body, only Freshman responses will be used for the capstone project. She received responses from 500 students (20% of the incoming class).

A brief summary of results from the literacy assessment(s), including a description of any measurable changes over time:

To evaluate the possible correlation between sustainability literacy and behavior change, the survey will be redistributed during the Fall of 2021 to the same students who participated during their Freshman year. As this is the first year for the institution to evaluate sustainability literacy, the results will not be available until 2021.

The website URL where information about the programs or initiatives is available:

Additional documentation to support the submission:

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 "Climate Action Plan"). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website
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### Incentives for Developing Courses

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**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 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?:**

Yes

**A brief description of the program(s), including positive outcomes during the previous three years (e.g. descriptions of new courses or course content resulting from the program):**

The "Integrating Sustainability Across the Curriculum" (ISAC) Program was established in 2012 to help Penn faculty introduce environmental sustainability into existing and new courses. Faculty participants explore sustainability concepts at a one-day workshop in the late spring, and then are partnered with an undergraduate student research assistant to work over the summer integrating sustainability into the course syllabi, lectures, assignments, reading material, and tests.

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

The primary incentive provided to faculty is the provision of the research assistant to assist with selecting course assignments, reviewing readings, preparing presentations, and assisting in formulating test questions, among other duties. The students are paid using funds made available by the Academic Subcommittee of the Penn Environmental Sustainability Advisory Committee, and participation is free for faculty. Each student research assistant is paired with two faculty, and the student works 20 hours a week for each faculty member over eight weeks during the summer.

**The website URL where information about the programs or initiatives is available:**

https://www.sustainability.upenn.edu/get-involved/integrating-sustainability-across-curriculum

stars.aashe.org
Additional documentation to support the submission:

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**Data source(s) and notes about the submission:**

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Campus as a Living Laboratory

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Criteria

Institution is utilizing its infrastructure and operations for multidisciplinary student learning and applied research that contributes to understanding campus sustainability challenges or advancing sustainability on campus in at least one of the following areas:

- Air & Climate
- Buildings
- Energy
- Food & Dining
- Grounds
- Purchasing
- Transportation
- Waste
- Water
- Coordination & Planning
- Diversity & Affordability
- Investment & Finance
- Public Engagement
- Wellbeing & Work
- Other (e.g., arts and culture or technology)

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 (see the Credit Example in the STARS Technical Manual). On-campus internships and non-credit work that take place under supervision of faculty members, sustainability staff, or sustainability committees may count as long as the work has a formal learning component (i.e., there are opportunities to document and assess what students are learning).

This credit does not include immersive education programs, co-curricular activities, or community service, which are covered by the Immersive Experience credit, credits in Campus Engagement, and the Community Service credit in Public Engagement, respectively.

Projects that utilize the local community as a living laboratory to advance sustainability may be included under “Public Engagement”. A single, multidisciplinary living lab project may simultaneously address up to three of the areas listed above.

"---" indicates that no data was submitted for this field
Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Air & Climate?:
Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Air & Climate:

A number of students in the Masters of Environmental Building Design participate in consulting projects in which they review the environmental performance of the campus, including its carbon inventory and emissions. Internships and independent study projects are managed through the Center for Environmental Building + Design within the School of Design, in collaboration with the Division of Facilities and Real Estate Services.

https://www.design.upenn.edu/cebd/projects

Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Buildings?:
Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Buildings:

A number of students in the Masters of Environmental Building Design participate in consulting projects in which they review the environmental performance of buildings. One recent report focused on developing BIM Protocols for the management of University buildings. Internships and independent study projects are managed through the Center for Environmental Building + Design within the School of Design, in collaboration with the Division of Facilities and Real Estate Services.

https://www.design.upenn.edu/cebd/projects

Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Energy?:
Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Energy:

A number of students in the Masters of Environmental Building Design participate in consulting projects in which they review the environmental performance of buildings. One recent report focused on developing Deploying Integrated Design Roadmaps for Advanced Energy Retrofits. Internships and independent study projects are managed through the Center for Environmental Building + Design within the School of Design, in collaboration with the Division of Facilities and Real Estate Services.

stars.aashe.org
Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Food & Dining?:
Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Food & Dining:

The "Addressing Food Waste Service-Research Project" was a service-research project built on work carried out by teams of undergraduate students previously enrolled in the Politics of Food course in the School of Arts and Sciences. The project was conducted in collaboration with Penn Dining and Bon Appetit (Penn's dining vendor), and researched ways to reduce food waste in Penn's dining system. The research site was a dining facility on Penn's campus, where students conducted qualitative and quantitative research. Student researchers reviewed published research and interviewed various stakeholders, observed dining behavior by students over the course of several weeks, identified ways to intervene to reduce plate waste, and piloted a small set of changes to determine most effective strategies for Penn's dining halls.

The existing community garden on campus expanded in 2017 to a one-acre garden, behind Harrison College House, and consists of plant beds with vegetables and herbs as well as landscaped with fruit trees and edible plantings. In addition, the vegetable and herbs are used for the Italian in Residence class. All interested students will be welcome to use and work in the garden.

Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Grounds?:
Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Grounds:

The University of Pennsylvania is situated on a growing and highly urban campus that has over 6,500 trees on 299-acres. Trees play an important ecological role in the urban environment, by improving public health and providing aesthetic benefits to cities. A Penn Masters of Environmental Studies capstone project used the United States Department of Agriculture Forest Service’s software, i-Tree Eco, to quantify the ecosystem benefits Penn's urban forest conveys. Field research teams collected data on location and tree canopy size for 4,086 trees on 160 acres of Penn's core campus during the summer of 2015. The trees within the study area were estimated to store over 1,500,000 lbs. of carbon and their shading reduced campus building annual HVAC costs by over $50,000. This project gave Penn Facilities and Real Estate Services decision makers a more complete assessment of the value of their urban trees. This work informs future tree management practices and creates a platform for ongoing urban forestry research at Penn.

http://repository.upenn.edu/cgi/viewcontent.cgi?article=1065&context=mes_capstones
Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Purchasing?:
Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Purchasing:

Over the course of the 2016/17 academic year the Penn Director of Purchasing Services advised/mentored a senior undergraduate (Environmental Studies, SAS ’17) on her senior thesis. The thesis was titled: "Integrating Sustainability into Supply Chain Decisions at Higher Education Institutions: Lessons from the University of Pennsylvania". As part of her extensive research, the student interviewed a number of Penn staff and suppliers regarding purchasing decisions.

Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Transportation?:
Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Transportation:

Penn, in partnership with Carnegie Mellon University (CMU), is participating in a $14 million, five-year transportation research grant to establish Mobility21, a new national University Transportation Center (UTC). The grant comes from the U.S. Department of Transportation (DoT) and is intended to support improved mobility and traffic/road safety. It is the third DoT national UTC that award Penn and CMU have won together since 2013. The team is a partnership between the School of Engineering and Applied Science and the Design, Law, and Wharton schools, as well as the Children’s Hospital of Philadelphia (CHOP).

See


Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Waste?:
Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Waste:

The student Eco-Reps conducted an Outdoor Recycling & Waste Signage program. The students selected outdoor waste and recycling bins to study over the course of a semester. Students performed waste audits on the bins to evaluate how...
campus users respond to signage and color in their disposal habits. Students found that users were more likely to place waste and recycling in the appropriate bin when receptacles were differentiated by color and with signage. The results of their study resulted in the University beginning to color coordinate bins across campus with recycling tops painted blue and trash, dark green.

**Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Water?:**

Yes

**A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Water:**

In 2017, Penn established the Penn Water Research Center in the Department of Earth and Environmental Science in the School of Arts and Sciences. The aim of the Research Center is to investigate and explore public/private partnerships and best practices in water resource policy and utility management. The Center is headed by Howard Neukrug, the former Commissioner and CEO of Philadelphia Water, where he was responsible for all aspects of utility operations, environmental compliance, engineering, financing, and planning for the water utility serving 2.3 million people. See https://www.sas.upenn.edu/earth/people/howard-neukrug

**Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Coordination & Planning?:**

Yes

**A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Coordination & Planning:**

Since 2007, the Penn Masters of Environmental Studies has offered ENVS 494, Toward Sustainability at Penn. The course, now taught by the Penn Environmental Sustainability Director, gives students an opportunity to research campus operations, policy, academics, and planning with the intent to improve sustainability. In previous years, an end-of-semester presentation has been made to the Penn Executive Vice President and VP for Facilities and Real Estate Services to review student recommendations.

**Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Diversity & Affordability?:**

No

**A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Diversity & Affordability:**

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Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Investment & Finance?:

No

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Investment & Finance:

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Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Public Engagement?:

Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Public Engagement:

Students and faculty frequently collaborate to investigate opportunities for public engagement on Penn's campus around sustainability issues. A senior thesis in 2015, for example, focused on engaging student behavior and sustainability in their homes. The project involved surveys, focus groups, and feedback on the Green Living at Penn program, which was developed by the Penn Sustainability Office in 2014. The outcomes of the work were presented at the 2015 AASHE Conference in Minneapolis.

Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to Wellbeing & Work?:

Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to Wellbeing & Work:

An ongoing research topic in the Penn School of Medicine's Department of Public Health is looking at the environmental determinants of tobacco use on campus. Several campus sites have been selected as test sites to examine the impact of environmental clues (signage, the presence of smoking urns, etc). A three-month project carried out during the spring of 2017 by faculty and staff in the Public Health program showed significant impact of modification of environmental clues.

Is the institution utilizing its campus as a living laboratory for multidisciplinary student learning and applied research in relation to other areas (e.g. arts & culture or technology)?:

Yes

A brief description of the student/faculty projects and how they contribute to understanding campus sustainability challenges or advancing sustainability on campus in relation to other areas:

Penn's Integrated Product Design Master's programs merge the disciplines of design, engineering, and business for the purpose of creating compelling new products and experiences. The program is designed to train students in technology,
Students in the program designed and fabricated an interactive sculpture/social impact project for an on-campus installation designed to raise awareness of food waste and food security. The installation responds to messages sent via social media to provide real-time physical feedback to support community engagement. The students engaged with the Penn facilities department to select an on-campus location to display the installation for several weeks in 2016, after which it was moved to a location in Center City Philadelphia. See

https://www.design.upenn.edu/pennpraxis/post/blossom-interactive-and-running

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 "Climate Action Plan"). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
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<tbody>
<tr>
<td>Research and Scholarship</td>
<td>9.44 / 12.00</td>
</tr>
<tr>
<td>Support for Research</td>
<td>4.00 / 4.00</td>
</tr>
<tr>
<td>Open Access to Research</td>
<td>1.00 / 2.00</td>
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</tbody>
</table>
Research and Scholarship

Provisional Score  | Responsible Party
-------------------|--------------------
9.44 / 12.00       | Madeline Schuh     
                   | Sustainability Analyst   
                   | Facilities and Real Estate Services

Criteria

Institution has conducted an inventory during the previous three years to identify its sustainability research activities and initiatives and makes the inventory publicly available. The research inventory should be based on the definition of “sustainability research” outlined in G. Standards and Terms and include, at minimum, the names and department affiliations of all faculty and staff members engaged in sustainability research. Research for which partial or incomplete information is provided may not be counted toward earning points for this credit.

Part 1

Institution produces sustainability research as measured by the percentage of faculty and staff engaged in research that are engaged in sustainability research.

Part 2

Institution produces sustainability research as measured by the percentage of academic departments that conduct research that include at least one faculty member who conducts 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.

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

Total number of the institution’s faculty and/or staff that are engaged in research (headcount): 4,722

Number of the institution’s faculty and/or staff that are engaged in sustainability research (headcount): 2,042

Percentage of the institution’s faculty and staff researchers that are engaged in sustainability research : 43.24

Total number of academic departments (or the equivalent) that include at least one faculty or staff member that conducts research: 326

Number of academic departments (or the equivalent) that include at least one faculty or staff member that conducts research:
Percentage of research-producing departments that are engaged in sustainability research: 42.94

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

---

The institution’s inventory of its sustainability research that includes names and department affiliations of faculty and staff engaged in sustainability research:

A list of programs and resources on research activities on campus can be found at the following website:

https://www.sustainability.upenn.edu/sustainability-themes/learning-sustainability

. Faculty departments and research information can be found by following the associated links.

A brief description of the methodology the institution followed to complete the research inventory (including the types of faculty and staff included as researchers):

In order to calculate the number of faculty and academic departments involved in sustainability research, the Penn Sustainability Office reached out to academic departments associated with each undergraduate, professional, and academic degree programs offered at Penn to request department-level information on sustainability research. For the purposes of this survey, the Penn Sustainability Office used AASHE’s expanded definition of sustainability to identify ongoing research, including research of social and economic equity as well as research on ecological systems and resilience. Based on this investigation, the Penn Sustainability found that 43% of departments surveyed were involved in sustainability research. The Penn Sustainability Office used this data to extrapolate the number of faculty working in sustainability related research to determine that 2042 or 43% of the 4722 faculty are engaged in sustainability research. Note that this number and percentage of faculty is not based on a faculty-by-faculty survey.

Specific centers and programs with sustainability ingrained in their mission are outlined below.

Penn Institute for Urban Research - penniur.upenn.edu/associates/view-everyone/types/penn-iur-faculty-fellows

The Penn Institute for Urban Research (Penn IUR) is a university-wide entity dedicated to an increased understanding of cities through cross-disciplinary research, instruction, and civic engagement. Penn IUR is dedicated to developing knowledge in three critical areas: innovative urban development strategies; building the sustainable, 21st-century city; and the role of anchor institutions in urban places.

The Penn Center for Energy Innovation -

www.energy.upenn.edu/?q=pennergians

Pennergy: the Penn Center for Energy Innovation was launched in September 2009 under the sponsorship of the University of Pennsylvania’s Schools of Engineering and Applied Science (SEAS) and Arts and Sciences (SAS) and from Penn’s Office
of the Vice Provost of Research. The Center unites faculty and students from SEAS and SAS as well as from other Penn schools, and from neighboring Drexel and Temple Universities. Pennergy brings together world-class researchers to solve scientific and technological problems enabling the efficient use of current energy sources, the practical use of more sustainable energy, and the conversion of energy to different forms. The Center researchers and educators integrate and share their knowledge through energy research, educational, and outreach activities that impact researchers, students, and our community.

Penn Center for Environmental Building + Design:

https://www.design.upenn.edu/cebd/about

The goal of the Center for Environmental Building + Design is to connect the academic and professional worlds of sustainability research. The mission is to develop new knowledge, tools, processes, techniques and continuing education for professionals involved in building energy and technology. The goal is to create healthier, productive, energy efficient strategies that will lead to high performance buildings and sustainable environments.

Energy Efficient Buildings Hub -

www.eebhub.org/about-eebhub/members/university-of-pennsylvania/

Penn faculty participate in research carried out at the Energy Efficient Buildings Hub (EEB Hub), which was established at the Philadelphia Navy Yard by the U.S. Department of Energy as an Energy-Regional Innovation Cluster (E-RIC) in 2011.

Initiative for Global Environmental Leadership -

http://igel.wharton.upenn.edu/about/faculty-and-staff/

The Wharton-led, Penn-wide Initiative for Global Environmental Leadership (IGEL) promotes knowledge for business sustainability through world-class research, transformative teaching and constructive dialogue between top alumni, academic, corporate, government, and non-government organizations. IGEL is a hub for business and sustainability, connecting and leveraging academic capital at Penn to help business leaders of today and tomorrow to create more sustainable industries.

Institute for Environmental Studies -

www.sas.upenn.edu/earth/ies_fr.html

The Earth Science department has the mission of bringing the perspective of the Earth scientist to bear on contemporary problems of natural resources conservation and environmental quality.

Ocean Biogeochemistry & Climate Change, Department of Earth & Environmental Science -

https://climate.sas.upenn.edu
Within the Department of Earth & Environmental Science, this group's research interests are at the frontier of ocean biogeochemistry, ocean ecology and physical oceanography. It researches the oceanic controls on atmospheric CO2 and global climate from inter-annual to millennial time scales, to improve understanding and prediction of:
- Oceanic uptake, storage and release of atmospheric CO2 and other gases;
- Climate-sensitivity of ocean biogeochemical cycles and interactions with ecosystem structure;
- Feedback between ocean carbon cycle, ocean ecosystem structure, ocean circulation and climate.
Their work combines theoretical aspects with running climate change simulations and sensitivity studies (using complex general circulation models or GCMs) on a newly acquired state-of-the-art computer cluster in the Earth and Environmental Science Department at the University of Pennsylvania.

Kleinman Center for Energy Policy:

http://kleinmanenergy.upenn.edu

The Kleinman Center for Energy Policy, developed through the School of Design, works to cultivate policy innovation and promote its application - creating opportunities for students, researchers, and professionals to debate viewpoints, explore options, and develop agendas for decision and action. The Kleinman Center envisions a transition from a fossil-fueled energy system with uncompensated external costs to one that optimizes energy productivity through smart demand, internalized carbon impacts, and sustainable supply.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/sustainability-themes/learning-sustainability

Additional documentation to support the submission:
STARS Academics Supplemental 2017 11 07.pdf

Data source(s) and notes about the submission:

Penn Institute for Urban Research - penniur.upenn.edu/associates/view-everyone/types/penn-iur-faculty-fellows
The Penn Center for Energy Innovation -
www.energy.upenn.edu/?q=pennergians

Penn Center for Environmental Building + Design:
https://www.design.upenn.edu/cebd/about

Kleinman Center for Energy Policy:
http://kleinmanenergy.upenn.edu/events

Initiative for Global Environmental Leadership -
http://igel.wharton.upenn.edu/about/faculty-and-staff/

Institute for Environmental Studies -
www.sas.upenn.edu/earth/ies_fr.html

Vagelos Integrated Program in Energy Research -
http://www.viper.upenn.edu/
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 "Climate Action Plan"). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Support for Research

<table>
<thead>
<tr>
<th>Provisional Score</th>
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<tbody>
<tr>
<td>4.00 / 4.00</td>
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<td>Sustainability Analyst</td>
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<td>Facilities and Real Estate Services</td>
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</table>

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.
- Written 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/or e-learning objects focused on sustainability.

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

Does the institution have an ongoing program to encourage students in multiple disciplines or academic programs to conduct research in sustainability? :
Yes

A brief description of the student research program, including the incentives provided and any positive outcomes during the previous three years:

"Climate Action Plan Research Grants" enable selected undergraduates to participate in summer research projects in sustainability field work under the guidance of a Penn faculty member. Past research project topics ranged from nonprofit sustainability management models to the study of relative sea level on the Georgia coast.

https://www.curf.upenn.edu/content/penn-undergraduate-climate-action-grant

The Integrating Sustainability Across the Curriculum (ISAC) Program was established in 2012 to help Penn faculty introduce environmental sustainability into existing and new courses. Faculty participants explore sustainability concepts at a one-day workshop in the late spring, and then are partnered with an undergraduate student research assistant to work over the
summer integrating sustainability into the course syllabi, lectures, assignments, reading material, and tests. The research assistants work 40 hours a week for eight weeks starting in June.

https://www.sustainability.upenn.edu/get-involved/integrating-sustainability-across-curriculum

**Does the institution have a program to encourage faculty from multiple disciplines or academic programs to conduct research in sustainability topics?**

Yes

**A brief description of the faculty research program, including the incentives provided and any positive outcomes during the previous three years:**

"Integrating Sustainability Across the Curriculum" (ISAC) Program was established in 2012 to help Penn faculty introduce environmental sustainability into existing and new courses. Faculty participants explore sustainability concepts at a one-day workshop in the late spring, and then are partnered with an undergraduate student research assistant to work over the summer integrating sustainability into the course.

http://www.upenn.edu/sustainability/programs/integrating-sustainability-across-curriculum

The Benjamin Franklin Scholars Course Design Grants provide funding for faculty to develop and launch new undergraduate seminar programs, targeted to a select cohort of scholars each year. Four new seminars are launched each year by the Provost. Since the launch of the Climate Action Plan, at least one of the four seminars has been focused on environmental sustainability. The funding is used to pay undergraduate and graduate students to help develop the course theme, syllabus, and reading list. Interdisciplinary courses are preferred.

https://www.sustainability.upenn.edu/news/call-proposals-ben-franklin-scholars-course-design-gr

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

Yes

**A brief description of the institution’s support for interdisciplinary, transdisciplinary, and multidisciplinary research, including any positive outcomes during the previous three years:**

Just months after being inaugurated as Penn’s president in October 2004, Amy Gutmann launched Penn Integrates Knowledge (PIK) with a $10 million anonymous gift. This faculty initiative had a bold, ambitious agenda: to recruit to Penn renowned scholars whose work draws from two or more academic disciplines and whose achievements demonstrate an
ability to thrive at the intersection of multiple fields.  
Now, a decade later, 18 of the world’s most accomplished and unique interdisciplinary scholars call Penn home.  
Distinguished by the diversity of their research and teaching, each of these academic pioneers shares two things: a drive to solve complex, real-world problems and a commitment to working across disciplinary boundaries to find solutions. Each day, these collaborators move across schools and departments. As they pursue their path-breaking work, they widen and deepen Penn's rich tradition of cross-disciplinary scholarship and learning. See

https://pikprofessors.upenn.edu/about-pik

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**Does the institution have ongoing library support for sustainability research and learning?:**
Yes

**A brief description of the institution’s library support for sustainability research, including any positive outcomes during the previous three years:**

The University of Pennsylvania library system has a number of different initiatives, including providing support for courses and research. As an example, professors can request books to be ordered and held on reserve, reducing the financial burden for students and making courses accessible to all students. In addition, the library provides research guides for a number of different departments and programs at Penn, including those with a sustainability focus: Earth and Environmental Studies, City and Regional Planning, Urban Studies, and many more.

Information held at the library related to Philadelphia Studies provides data related to the City of Philadelphia to support research. The information includes Community Health Database, Data & GIS, Esri Data & Maps, Federal Populations Schedules, Statistics, History, and many other data sets.

The library also provides faculty resources for instructional and teaching support through access services, instructional materials and technology, and curriculum support through a number of different programs and resources.

The Penn Center for Teaching and Learning (see

https://www.ctl.upenn.edu

) works to help instructors at Penn excel in their teaching, to enhance the culture of teaching at the university, and, in turn, to increase the quality of education at Penn.

For more information, see

https://guides.library.upenn.edu/hometabs

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**The website URL where information about the programs or initiatives is available:**
https://www.sustainability.upenn.edu/sustainability-themes/learning-sustainability

**Additional documentation to support the submission:**

stars.aashe.org
Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 Climate Action Plan.). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's Climate Action Plan 2.0. The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits.
Open Access to Research

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</table>

Criteria

Institution has a published open access policy that ensures that versions of future scholarly articles by faculty and staff are deposited in a designated open access repository.

The policy may allow for publisher embargoes and/or provide a waiver option that allows faculty to opt-out of the open access license/program for individual articles. Open access policies and programs that are strictly voluntary (opt-in) in nature (including open access policies published by external funding agencies) do not earn points unless the institution also provides financial incentives to support faculty members with article processing and other open access publication charges.

Policies and programs 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.

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

How many of the institution’s research-producing divisions are covered by a published open access policy that ensures that versions of future scholarly articles by faculty and staff are deposited in a designated open access repository? (All, Some or None):

Some

Which of the following best describes the open access policy? (Mandatory or Voluntary):

Voluntary (strictly opt-in)

Does the institution provide financial incentives to support faculty members with article processing and other open access publication charges?:

Yes

A brief description of the open access policy, including the date adopted, any incentives or supports provided, and the repository(ies) used:

A Committee on Open Access Publishing was appointed by the Provost and Senior Vice Provost for Research in December 2009 to examine open access publishing practices and to make recommendations for establishing procedures that better serve the Penn community and the general public. These recommendations were adopted by the Faculty Senate in May 2011. For a full description, see The Almanac March 3, 2010, Volume 56, Number 26 at stars.aashe.org
A copy of the institution's open access policy:
---

The institution's open access policy:

http://guides.library.upenn.edu/oa/whatisoa

The website URL where the open access repository is available:
http://guides.library.upenn.edu/oa/whatisoa

Estimated percentage of scholarly articles published annually by the institution’s faculty and staff that are deposited in a designated open access repository (0-100):
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A brief description of how the institution’s library(ies) support open access to research:

The "Penn Libraries Open Access Fund" supports new experiments in scholarly publishing. The libraries support Penn scholars who want to make their publications openly accessible to all readers immediately upon publication by paying reasonable publication fees required by open-access journals.

The Penn Libraries provide "Open Access Publication Fund" subsidies to eligible applicants on a first-come, first-served basis until all of the designated funds for the academic year have been used. Successful applicants have up to $3,000 per article reimbursed upon the submission of a receipt and proof of payment. The Director for Collections and Liaison Services leads the distribution process.

The website URL where information about the programs or initiatives is available:
http://guides.library.upenn.edu/oa/oapolicies

Additional documentation to support the submission:
---
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 "Climate Action Plan"). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been included and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Campus Engagement

**Points Claimed** 16.11  
**Points Available** 21.00

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.

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<thead>
<tr>
<th>Credit</th>
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<tbody>
<tr>
<td>Student Educators Program</td>
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<td>Student Life</td>
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<tr>
<td>Outreach Materials and Publications</td>
<td>2.00 / 2.00</td>
</tr>
<tr>
<td>Outreach Campaign</td>
<td>4.00 / 4.00</td>
</tr>
<tr>
<td>Assessing Sustainability Culture</td>
<td>0.25 / 1.00</td>
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<tr>
<td>Employee Educators Program</td>
<td>3.00 / 3.00</td>
</tr>
<tr>
<td>Employee Orientation</td>
<td>1.00 / 1.00</td>
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<tr>
<td>Staff Professional Development</td>
<td>0.00 / 2.00</td>
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**Student Educators Program**

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<td>1.86 / 4.00</td>
<td>Madeline Schuh</td>
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<td>Sustainability Analyst</td>
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<td></td>
<td>Facilities and Real Estate Services</td>
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</tbody>
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**Criteria**

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

- Selects or appoints students to serve as peer educators and formally designates the students as educators (paid and/or volunteer);
- Provides formal training to the student educators in how to conduct peer outreach; and
- Supports the program with financial resources (e.g. by providing an annual budget) and/or administrative coordination by faculty or staff.

This credit focuses on programs for degree-seeking students enrolled in a for-credit program. Continuing education students, non-credit students, and other students who are not recognized by the institution as seeking a degree, certificate, or other formal award are excluded.

This credit recognizes ongoing student educator programs that engage students as peers 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 actively participate.

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 the Outreach Campaign and Student Life credits.

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

**Number of students enrolled for credit (headcount):**

24,876

**Total number of students enrolled for credit that are served (i.e. directly targeted) by a student peer-to-peer sustainability outreach and education program (avoid double-counting to the extent feasible):**

11,588

**Percentage of students served by a peer-to-peer educator program:**

46.58

**Name of the student educators program:**

stars.aashe.org
Eco-Reps Program

**Number of students served (i.e. directly targeted) by the program (headcount):**

11,588

**A brief description of the program, including examples of peer-to-peer outreach activities:**

Student Eco-Reps is Penn's environmental leadership program that focuses on raising awareness of environmental issues and impacting the behavior of individuals across campus. Select undergrad students develop educational events, activities, and campaigns aimed at supporting the University's "Climate Action Plan 2.0". Twelve to fifteen students are paid through the Penn Sustainability team to work three to five hours per week during the school year. Students select a project to work on over the course of the year. Previous projects include waste audits, energy conservation, recycling, sustainable dining and consumer habits, community service projects for environmental organizations, and more. Projects vary year to year, depending on student interest and University needs.

**A brief description of how the student educators are selected:**

Students submit a resume and application, including a few short-answer survey questions and a personal statement addressing their background and interest in environmental engagement. Applications are reviewed by the Penn Sustainability Office and the Student Eco-Reps Executive Board. Selection is completed by the end of the academic year to allow Eco-Reps to start their work at the outset of the following academic year.

**A brief description of the formal training that the student educators receive to prepare them to conduct peer outreach:**

Penn's Sustainability Office organizes an off-campus fall camping retreat for all Eco-Reps to review roles and responsibilities. Further training is coordinated at the beginning of the academic year focusing on themes related to Penn's "Climate Action Plan 2.0". Training sessions are run by the University's sustainability staff, and include get-to-know-you activities, environmental games, discussions on topics related to environmental issues, and guidance on how to create connections among their peers.

**A brief description of the financial and/or administrative support the institution provides to the program (e.g. annual budget and/or faculty/staff coordination):**

Penn Sustainability Outreach Manager runs the University’s Student Eco-Reps program, with assistance from the Sustainability Coordinator and two paid student interns.

Funding for the Sustainability Office is approved annual as part of the Penn Executive Vice President's budgeting process.

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

Green Living Certification

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

6,380
A brief description of the program, including examples of peer-to-peer outreach activities (2nd program):

The individual decisions residents living on campus make on a daily basis, even if seemingly small, play a critical role in the University’s sustainability initiatives. The Penn Sustainability Office seeks to recognize these choices and provide on- and off-campus residents with an opportunity to reflect on their environmental impact by offering the "Green Living Certification" program—an environmental certification available for residents living on campus.

Establishing greener lifestyles creates a tangible, positive impact on our campus. By offering "Green Living Certification", residents will be inspired to take further steps towards improving the health of our environment and to provide a model for others to do the same.

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

Self-selecting certification program available to any student living on campus.

A brief description of the formal training that the student educators receive to prepare them to conduct peer outreach (2nd program):

Certification is awarded upon completion of two sections: Required and Optional Actions. The 5 Required Actions are habits that are relatively easy to accomplish and provide the foundation for implementing more difficult sustainable practices. The Optional Actions are organized into 5 categories: Waste Minimization & Recycling; Energy & Water; Transportation; Purchasing; Involvement at Penn. All Optional Actions are assigned points based on a combination of environmental impact, difficulty of implementation, and cost. Based on the number of points achieved, participating students can earn one of three levels for completing the program, bronze, silver or gold. There are 90 possible points.

A brief description of the financial and/or administrative support the institution provides to the program (e.g. annual budget and/or faculty/staff coordination) (2nd program):

The budget is shared with other programs, but up to $4,000 is available to support the "Green Living Program". The Program is sponsored by the Penn Sustainability Office.

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

RA / GA Sustainability Training

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

6,380

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

A two-and-a-half hour training for Resident and Graduate Assistants is available at the start of each academic year. The training is discussion-oriented, with an emphasis on how to engage with residential undergraduate students and ways to provide students with opportunities to participate in environmental activities at Penn. There are over 230 RAs and GAs on campus, and this program is available to all, although typically between 25 and 35 sign
up. The program is held during New Student Orientation, a three-day period in August just before classes begin for the fall semester.

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

Self-selecting certification program available to any RA or GA serving on campus.

A brief description of the formal training that the student educators receive to prepare them to conduct peer outreach (3rd program):

Over the past three and a half years, the Sustainability Office has conducted both in person and is on-line trainings. Self-selecting RAs and GAs are trained to assist undergraduate residents to complete the "Green Living Challenge" as well as other sustainability programs across campus. RA and GAs receive a custom created Sustainability Manual, an in-depth resource to RA/GAs about Penn’s sustainability programs, which includes a guide to living green in campus residence halls.

A brief description of the financial and/or administrative support the institution provides to the program (e.g. annual budget and/or faculty/staff coordination) (3rd program):

Staff coordination from the Sustainability Office. The program expenses are under $1,500 annually.

A brief description of all other student peer-to-peer sustainability outreach and education programs, including the number of students served and how student educators are selected, trained, and supported by the institution:

---

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

2,700

The website URL where information about the programs or initiatives is available:

https://www.sustainability.upenn.edu/get-involved

Additional documentation to support the submission:

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Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor’s, Master’s, and Doctorate levels. Penn is committed to engaging with both the campus and public community on sustainability, with a goal to make climate change and sustainability part of the Penn culture. This commitment and long standing tradition of both campus and public engagement around the issue of
sustainability is seen through campus sustainability groups and community focused centers. Both public and campus engagement organizations partner with the Sustainability Office to create student internships, engage in environmental issues, and build knowledge around sustainability. For a more complete listing of engagement activities on campus, please see EN 10 to EN 14.

The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
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).

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

Are the following students provided an opportunity to participate in orientation activities and programming that prominently include sustainability? :

<table>
<thead>
<tr>
<th></th>
<th>Yes or No</th>
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<tbody>
<tr>
<td>First-year students</td>
<td>Yes</td>
</tr>
<tr>
<td>Transfer students</td>
<td>Yes</td>
</tr>
<tr>
<td>Entering graduate students</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Percentage of all entering (i.e. new) students (including transfers and graduate students) that are provided an opportunity to participate in orientation activities and programming that prominently include sustainability (0-100):

100

A brief description of how sustainability is included prominently in new student orientation (including how multiple dimensions of sustainability are addressed):

"Move-In GREEN", founded in 2012, is Penn’s move-in engagement program dedicated to environmental sustainability. The program gives sophomore, junior, and senior class environmental leaders the opportunity to educate incoming students...
Volunteers help incoming students learn about recycling on campus, ways to reduce their carbon footprint, and opportunities to get involved in sustainability initiatives at Penn. Average annual achievements of the "Move-In GREEN" student volunteers include:

- Hang recycling signs throughout dormitories in advance of student arrival, and work with students, parents, and Penn Housekeeping and Custodial staff to separate and dispose of waste associated with move-in. Student volunteers man tables at dormitories to help educate parents and students about recycling at Penn;
- Contribute to recycling about ten to fifteen tons of cardboard during New Student Orientation, in support of Penn's Housekeeping and Urban Park sustainability efforts;
- Distribute over 500 LED light bulbs to students, educating them about ways to conserve energy on campus;
- Receive over 900 sign-ups annually for Penn Sustainability Office's e-newsletter, which helps to inform students about important sustainability news and events on campus;
- Receive over 400 requests for information about extracurricular environmental groups or sustainability-related courses at Penn.

Sustainability Resident Adviser/Graduate Associate Training & Manual
Since 2012, the Penn Sustainability Office has held a late summer training workshop and/or provided an online training program during Resident Adviser/Graduate Associate orientation about sustainability initiatives on campus and how to get on-campus residents involved in sustainability programs. Students who take part in the training receive a sticker to put outside their room door to signify their involvement in environmental efforts. RA and GAs receive a custom created Sustainability Manual, an in-depth resource to RA/GAs about Penn's sustainability programs, which includes a guide to living green in campus residence halls.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to engaging with both the campus and public community on sustainability, with a goal to make climate change and sustainability part of the Penn culture. This commitment and long standing tradition of both campus and public engagement around the issue of sustainability is seen through campus sustainability groups and community focused centers. Both public and campus engagement organizations partner with the Sustainability Office to create student internships, engage in environmental issues, and build knowledge around sustainability. For a more complete listing of engagement activities on campus, please see EN 10 to EN 14.

The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
### Student Life

<table>
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<tr>
<td>2.00 / 2.00</td>
<td>Madeline Schuh</td>
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<tr>
<td></td>
<td>Sustainability Analyst</td>
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<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
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#### 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 active student groups focused on sustainability?:**

Yes

**A brief description of active student groups focused on sustainability:**

---

stars.aashe.org
STUDENT SUSTAINABILITY ASSOCIATION at PENN - As the official student sustainability umbrella group, the Student Sustainability Association at Penn (SSAP) was founded in 2010 to foster cohesion among multiple pre-existing environmentally-focused student groups, develop strategies for impacting campus sustainability, and create a unified student voice on green issues at Penn. As the student environmental community has grown immensely since the 2009 launch of Penn's Climate Action Plan, the SSAP helps to foster increased collaboration among the 20+ student environmental groups on campus and between students, staff, and faculty working on environmental issues. SSAP meets once a month and all student environmental groups are encouraged to send a representative to attend the meeting.

http://www.ssapenn.com/

ECO-REPS - Penn's environmental leadership program that focuses on raising awareness of environmental issues and impacting the behavior of individuals across the campus through an extensive network of students, faculty, and staff. This program is split into two groups to accommodate staff/faculty and students. The staff/faculty program involves volunteer staff and faculty members while the student program is a group of 10 to fifteen paid student interns.

PENN ENVIRONMENTAL GROUP - The University of Pennsylvania Environmental Group (PEG) is a student run group aiming to increase campus awareness of global environmental issues across the Penn community and throughout the world. PEG seeks to incorporate ideals from a diverse community, and expose the campus community and the world at large to expand knowledge of environmental issues.

COMMUNITECH - CommuniTech is a student organization in the School of Engineering & Applied Sciences that aims to assist neighborhoods in need by supplying them with computers and teaching technology skills to their residents. Their efforts stem from the recognition that the computer has become a central facet of everyday life. CommuniTech regularly holds e-waste recycling drives and computer donation drives.

ENGINEERS WITHOUT BORDERS - PennEWB is a non-profit humanitarian organization established to partner with developing communities worldwide in order to improve their quality of life through sustainable projects. Engineers without Borders is a national program with student and professional chapters; Penn's chapter receives support from professional engineers.

KELLY WRITERS HOUSE - The Kelly Writers House is a center for writers of all kinds from Penn and the Philadelphia region at large. Kelly Writers House is adding green programming to its list of activities.

OIKOS PENN - Oikos is an international student organization for sustainable economics and management. As a leading reference point for the promotion of sustainability change agents, activities include lectures, conferences, simulation games, seminars, case competitions and practice-oriented learning projects. Their activities are conducted within the framework of a constructive and open-minded dialogue.

PENN COMMUNITY AGAINST MOUNTAIN TOP REMOVAL - PCAMTR is a coalition of groups at Penn committed to social and environmental justice. They have joined with Earth Quaker Action Team and members of the university communities at Temple, Swarthmore, Bryn Mawr, and Haverford to put an end to Mountaintop Removal Coal Mining.

PENN INTERNATIONAL SUSTAINABILITY ASSOCIATION - The Penn International Sustainability Association (PISA) was formed to promote awareness of the crucial links between business and sustainability to Penn students. PISA aims to establish connections between students and leaders in sustainable business, policy, and technology; improve student awareness of local, regional, national, and international green businesses and policy initiatives; and further develop a culture of environmental, economic, and social responsibility at the University of Pennsylvania that extends to the local, state, regional, national, and international communities.
PENN GARDEN - The Penn Garden was awarded a Green Fund Grant in Fall 2009 to plan and implement a demonstration vegetable garden and urban agriculture project on Penn's campus.

https://www.sustainability.upenn.edu/get-involved/penn-community-garden

PENN SUSTAINABILITY REVIEW - Penn Sustainability Review is a student-run online and print publication featuring sustainability-related opinion editorials, leadership interviews, and academic papers. PSR aims to provide a platform for all members of the Penn community to exchange knowledge, ideas, and perspectives on wide-ranging sustainability issues. Over the course of every academic year, the PSR team publishes a print publication and maintains regular online editorial updates that incorporate relevant thought-provoking articles. Both the print and online editions of the PSR cover a number of topics including climate change, green architecture, corporate strategic sustainability, resource and energy conservation, public policy, and sustainable technology. PSR was awarded a Green Fund Grant in Fall 2011.

http://www.psrmagazine.org/

PENN VEGAN SOCIETY - The Penn Vegan Society raises awareness on the personal health, animal ethics, and environmental issues related to the production and consumption of food. The group meets several times each semester and organizes social events that are geared toward educating the campus community about the benefits of a vegan diet.

https://www.facebook.com/PennVeg

POWER UP GAMBIA - Founded by a student in the Penn School of Medicine, Power Up Gambia is a non-profit group that aims to provide reliable electricity and water to healthcare facilities in Gambia through development of solar energy. The group works to raise awareness on campus about the lack of reliable electricity in developing countries.

SEAS GREEN - SEAS Green is an environmental club with an engineering focus, run out of the School of Engineering and Applied Sciences.

WHARTON ENERGY CLUB - The Wharton Energy Club enhances recruiting into the energy industry and aims to establish Wharton as a thought leader in the sector, while offering insight into merchant energy, renewable energy, utilities, and traditional oil and gas companies.

http://www.whartonenergyclub.org/

FOSSIL FREE PENN - Penn's student divestment advocacy group focuses on raising awareness of the role of fossil fuel investment has in climate change, and advocates that Penn's endowment be divested of companies that deal in fossil fuels.

http://www.fossilfreepenn.org/
Does the institution have gardens, farms, community supported agriculture (CSA) or fishery programs, and/or urban agriculture projects where students are able to gain experience in organic agriculture and sustainable food systems?:
Yes

A brief description of the gardens, farms, community supported agriculture (CSA) or fishery programs, and/or urban agriculture projects:

The Penn Garden, established through a Penn Green Fund grant, includes as part of its mission to raise awareness about the importance of local foods and community engagement. Students hold workdays in the garden in the spring, summer and fall. Penn’s Urban Nutrition Initiative also uses the Penn Garden group as a teaching tool about gardening and nutrition to high school students.

http://www.upenn.edu/sustainability/programs/green-fund/penn-garden

http://thepenngarden.wordpress.com/

Sustainable Invasive Plant Management at the Morris Arboretum – Targeted Goat Grazing. The Morris Arboretum manages invasive plants in an environmentally sustainable way – with a herd of goats. The Morris examined the use of targeted goat grazing as an alternative to the use of herbicides and power equipment for the control of invasive species in disturbed habitats as part of a pilot program funded through the "Green Fund".

The website URL where information about the gardens, farms or agriculture projects is available (optional):
https://www.sustainability.upenn.edu/get-involved/green-fund/green-fund-projects

Does the institution have student-run enterprises that include sustainability as part of their mission statements or stated purposes (e.g. cafés through which students gain sustainable business skills?)?:
Yes

A brief description of the student-run enterprises:

Penn Sustainability Review: The Penn Sustainability Review (PSR) is a student-run online and print publication featuring sustainability-related opinion editorials, leadership interviews, and academic papers. PSR aims to provide a platform for all members of the Penn community to exchange knowledge, ideas, and perspectives on wide-ranging sustainability issues.

The website URL where information about the student-run enterprises is available (optional):
https://www.sustainability.upenn.edu/get-involved/green-fund/penn-sustainability-review
Does the institution have sustainable investment funds, green revolving funds or sustainable microfinance initiatives through which students can develop socially, environmentally and fiscally responsible investment and financial skills?:
Yes

A brief description of the sustainable investment funds, green revolving funds or sustainable microfinance initiatives:

Through the "Green Fund" Penn students, faculty, and staff can apply for funds for projects that improve the University's environmental performance and reduce campus emissions. Since 2009, this initiative of Penn’s Green Campus Partnership, funded by the Division of Facilities and Real Estate Services, has seeded innovative ideas in environmental sustainability from members of the University community.

Proposed projects must support goals and objectives outlined in Penn’s Climate Action Plan, a long-range strategy, launched in 2009 and updated in 2014, to reduce the University’s carbon footprint and enhance its overall sustainability.

The website URL where information about the sustainable investment funds, green revolving funds or sustainable microfinance initiatives is available (optional):
https://www.sustainability.upenn.edu/participate/penn-community/green-fund

Does the institution have conferences, speaker series, symposia or similar events related to sustainability that have students as the intended audience?:
Yes

A brief description of the conferences, speaker series, symposia or similar events related to sustainability:
The Penn Sustainability Office frequently holds events and/or partners with other campus groups on campus to host lectures.

The Wharton-led, Penn-wide Initiative for Global Environmental Leadership (IGEL) promotes knowledge for business sustainability through research, teaching and dialogue between top alumni, academic, corporate, government, and non-government organizations. IGEL is a hub for business and sustainability, connecting and leveraging academic capital at Penn to help business leaders of today and tomorrow to create more sustainable industries. IGEL organizes annual conferences that include a hands-on workshop component, and a monthly seminar series where business leaders are invited to speak about the best practices in their field. These events create a two-way conversation between faculty, students, and business and NGO professionals. In addition to monthly seminars, IGEL holds several invite-only symposiums a year, open to accepted student applicants, faculty, and invited corporate representatives. Recent symposium topics have included The Circular Economy, the Food/Water/Energy Nexus, and Private/Public Partnerships for Sustainability.

http://igel.wharton.upenn.edu/events/

The Institute for Environmental Studies (IES) is dedicated to improve understanding of key scientific, economic, and political issues that underlie environmental problems and their management. IES addresses the gaps between science and policy, and studies the problems that arise from the lack of integration of traditionally separate disciplines. The Institute is committed
to two specific areas - urban environmental problems and watershed issues. The Institute for Environmental Studies runs a weekly seminar series to promote interactions among faculty, students, and interested members of the community. The talks tend to be interdisciplinary and often cut across departmental and school boundaries.

https://www.sas.upenn.edu/earth/events/past

The Penn Program in Environmental Humanities (PPEH), founded in 2014, is a transdisciplinary program that facilitates environmental dialogue at Penn to create a fresh and unique forum for work on environmental issues. With start-up funding from the Penn Sustainability Office, in 2014 the PPEH supported research fellowships for five undergraduate students, who focused on building the website, writing the program manifesto, and organizing public programming on urban nature at Penn, in cooperation with the Penn Humanities Forum as well as partners in Philadelphia and the Delaware and Schuylkill River Valleys.

In 2015, the PPEH hosted an inaugural artist in residence, Mary Mattingly, who opened the environmental experiential Lab at WetLand on the tidal Schuylkill River, and offered a series of five major public events exploring the environmental humanities: the Curriculum for the New Normal.

In 2016, the PPEH received financial support from the Dean's Office of the School of Arts & Sciences in addition to continued support from the Penn Sustainability Office in Facilities and Real Estate Services, has embarked on a series of faculty hires for a minimum of three positions in the environmental humanities, all tenure track at the assistant professor level. PPEH created a Faculty Working Group of 20+ participating faculty from across campus, hosts new artists in residence, offers competitive year-long research fellowships to graduate and undergraduate students across all Penn's schools, and organizes a broad array of public engagement projects--from a conference on ecological time across the human and natural sciences; to the broadly interdisciplinary Lower Schuykill River Research Seminar; to the assemblage of an Ecotopian Toolkit and Tools to Restore WetLand in a time of rapid climate change; to an installation-as-mobile-archive that is easily re-installed and added to by our community partners; to creating research-quality copies of federal climate and environmental data and building Data Refuge.

The Kleinman Center for Energy Policy Research hold weekly events open to students, as well as symposia and lectures on energy policy. The Kleinman Center's mission is a goal to cultivate innovative energy policy and promote its application—creating opportunities for students, researchers, and professionals to debate viewpoints, explore options, and develop agendas for decision and action.

http://kleinmanenergy.upenn.edu/mission

The Penn Institute for Urban Research (Penn IUR), housed in the School of Design, is dedicated to advancing cross-disciplinary urban-focused research, instruction, and civic engagement on issues relevant to cities around the world. As the global population becomes increasingly urban, understanding cities is vital to informed decision-making and public policy at the local, national, and international levels. Penn IUR hosts symposia, book readings, lectures, and panel discussions on urban issues, including environmental sustainability and urban resilience, regularly on campus.

http://penniur.upenn.edu/
The Penn Center for Water Policy Research launched in 2017, and sponsors research, public events, and publications on global and domestic water policy issues, including managing stormwater, future-proofing source water, and ensuring safe drinking water for urban and rural populations.

http://kleinmanenergy.upenn.edu/former-ceo-philadelphia-water-joins-penn-research-centers-senior-fellow

The website URL where information about the conferences, speaker series, symposia or similar events related to sustainability is available (optional):

https://www.sustainability.upenn.edu/

Does the institution have cultural arts events, installations or performances related to sustainability that have students as the intended audience?:

Yes

A brief description of the cultural arts events, installations or performances related to sustainability:

The Penn Program in Environmental Humanities has collaborated with the Institute of Contemporary Art as well as several experimental theater groups to create custom performances address contemporary environmental issues.

http://www.ppehlab.org/artistsinresidence/

http://www.ppehlab.org/theater/

The website URL where information about the cultural arts events, installations or performances is available (optional):

http://www.ppehlab.org/

Does the institution have wilderness or outdoors programs (e.g. that organize hiking, backpacking, kayaking, or other outings for students) that follow Leave No Trace principles?:

Yes

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

Penn Outdoors organizes and promotes trips, speaking engagements, networking events, film screenings, skills courses, social occasions and fundraisers related to the following activities: hiking/backpacking, camping, climbing, paddling, biking,
caving, fishing, skiing/snowboarding, and alternative sports.

The website URL where information about the wilderness or outdoors programs is available (optional):

http://www.pennoutdoors.org/

Does the institution have sustainability-related themes chosen for themed semesters, years, or first-year experiences (e.g. choosing a sustainability-related book for common reading)?:

Yes

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

The Year of Water (2010). The Provost's Theme year is a Penn program that focuses attention on a specific contemporary issue for the entire Penn Community. The year of water was Penn's first environmentally-themed example.

The website URL where information about the sustainability-related themes is available (optional):

https://www.sustainability.upenn.edu/news/penn-gets-its-feet-wet-year-water

Does the institution have programs through which students can learn sustainable life skills?:

Yes

A brief description of the programs through which students can learn sustainable life skills:

Penn Green Living Certification incentivizes students to adopt greener lifestyles. Students must adopt 5 Required Actions to be considered. By adopting or following various other sustainable behaviors they accrue points. Twenty, 35 and 50 points earn participants bronze-, silver- and gold-level certification respectively. The rewards-based program is organized around activities in:

- Waste Minimization & Recycling
- Energy & Water
- Transportation
- Purchasing
- Involvement at Penn

A certification manual lays out the details and required actions for earning points. These actions range from using CFLs, compact fluorescent lamps, instead of incandescent light bulbs in College Houses, or using a reusable mug or thermos for to-go beverages, to volunteering for an environmental activity. Those achieving gold, silver or bronze certification receive a decal as proof of their accomplishment.

The website URL where information about the sustainable life skills programs is available (optional):

https://news.upenn.edu/news/penn-introduces-green-living-certification-program

Does the institution offer sustainability-focused student employment opportunities?:

Yes
A brief description of the sustainability-focused student employment opportunities offered by the institution:

Penn Sustainability Office provides internships both in the office and in other offices in the city, including with environmental non-profit groups and the City of Philadelphia offices managing environmental issues.

The website URL where information about the student employment opportunities is available:
https://www.sustainability.upenn.edu/

Does the institution have graduation pledges through which students pledge to consider social and environmental responsibility in future job and other decisions?: No

A brief description of the graduation pledges:

---

The website URL where information about the graduation pledges is available (optional):
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Does the institution have other co-curricular sustainability programs and initiatives?: Yes

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

Selected students of the Urban Watershed Curriculum work with Philadelphia schoolteachers in sixth, seventh, and eighth grades to introduce urban watersheds issues through a pilot curriculum in nine public and charter schools. This program started in 2016 and has had twelve student participants as of 2017.

The website URL where information about other co-curricular sustainability programs and initiatives is available (optional):
http://www.phillywatersheds.org/urban-watersheds-curriculum-guide

Estimated percentage of students (full-time and part-time) that participate annually in sustainability-focused co-curricular education and outreach programs (0-100):

---

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:
stars.aashe.org
The University of Pennsylvania is a major research institution, with over 3000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to engaging with both the campus and public community on sustainability, with a goal to make climate change and sustainability part of the Penn culture. This commitment and long standing tradition of both campus and public engagement around the issue of sustainability is seen through campus sustainability groups and community focused centers. Both public and campus engagement organizations partner with the Sustainability Office to create student internships, engage in environmental issues, and build knowledge around sustainability. For a more complete listing of engagement activities on campus, please see EN 10 to EN 14.

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Outreach Materials and Publications

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Criteria

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

- A central sustainability website that consolidates information about the institution’s sustainability efforts
- A sustainability newsletter
- Regular coverage of sustainability in the main student newspaper, either through a regular column or a reporter assigned to the sustainability beat
- 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
- 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 more sustainable 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/or incorporating sustainability into the residential experience
- Other sustainability outreach materials and publications not covered above

This credit is focused on ongoing outreach efforts. Materials and publications designed to promote a specific event or time-limited campaign are excluded and covered by other credits in this subcategory.

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 have a central sustainability website that consolidates information about the institution’s sustainability efforts?:

Yes

A brief description of the central sustainability website (optional):
The Penn Sustainability Office website was launched in September 2009 to serve as a central repository for all sustainability news, information, and initiatives at Penn. The site contains the full "Climate Action Plan", "Climate Action Plan Progress Reports", news and information about the progress being made, links to media coverage, the "On College Green" e-newsletter, and Penn Sustainability Office programs, like Eco-Reps, "Green Fund", etc. It is also a useful source of information guiding individuals on how to improve their green initiatives. The Penn Sustainability Office website has around 100 site visits a day.

The website URL for the central sustainability website:
https://www.sustainability.upenn.edu/

Does the institution have a sustainability newsletter?:
Yes

A brief description of the sustainability newsletter:

The Penn Sustainability Office publishes a e-newsletter, The "Red & Blue on College Green", to provide the Penn community with facts and figures on our progress, as well as helpful tips on how to “green” Penn. It features highlights about those individuals who are demonstrating great success in meeting the goals of the "Climate Action Plan 2.0". The "Red & Blue on College Green" is sent to over 6,500 subscribers.

The website URL for the sustainability newsletter:
https://www.sustainability.upenn.edu/

Does the institution have social media platforms (e.g. Facebook, Twitter, interactive blogs) that focus specifically on campus sustainability?:
Yes

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

The Penn Sustainability Office manages three social media sites: Facebook, Twitter, and Instagram. These sites provide the Penn community with up-to-date sustainability facts, figures, and trending news stories.

The website URL of the primary social media platform focused on sustainability:
https://www.sustainability.upenn.edu/

Does the institution have regular coverage of sustainability in the main student newspaper, either through a regular column or a reporter assigned to the sustainability beat?:
Yes

A brief description of the regular coverage of sustainability in the main student newspaper:

"The Daily Pennsylvanian" frequently covers sustainability initiatives happening across Penn’s campus. A reporter is assigned each semester to Facilities and Real Estate Services, where the Penn Sustainability Office is housed.
The website URL for regular coverage of sustainability in the main student newspaper:
http://www.thedp.com/

Does the institution produce a vehicle to publish and disseminate student research on sustainability?:
Yes

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

“The Penn Sustainability Review” (PSR) is a student-run online and print publication featuring sustainability-related opinion editorials, leadership interviews, and academic papers. PSR aims to provide a platform for all members of the Penn community to exchange knowledge, ideas, and perspectives on wide-ranging sustainability issues. Over the course of every academic year, the PSR team publishes a print publication and maintains regular online editorial updates that incorporate relevant thought-provoking articles. Both the print and online editions of the PSR cover a number of topics including climate change, green architecture, corporate strategic sustainability, resource and energy conservation, public policy, and sustainable technology. PSR was awarded a “Green Fund Grant” in Fall 2011 to support the launch of its first issue.

The website URL for the vehicle to publish and disseminate student research on sustainability:
http://psrmagazine.org/

Does the institution have building signage that highlights green building features?:
Yes

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

“Discover Penn” is a campus-wide cell phone tour that provides an innovative approach to experiencing the campus. The program helps users understand Penn and its people, its art, its buildings, its academics, and its landscape. The program, which started in Fall 2008, currently has fifteen sites that are changed from time to time and that are identified by the red “Discover Penn” signage. The signage provides a phone number and participants who call the number hear recordings by Penn Trustees, faculty, alumni, and those who are experts in their field or who have a close connection to Penn. The messages run approximately 2 minutes long and vary between deep, trivial, serious and lighthearted. The sites are equally diverse, including public art, historic buildings, campus sustainability features, and research milestones. The Music Building, a LEED Gold Building, is one of the stops on this tour, as is the rain garden at Shoemaker Green, a sustainable SITES locations.

The website URL for building signage that highlights green building features:
https://www.sustainability.upenn.edu/tours/penn-sustainability-walking-tours

Does the institution have signage and/or brochures that include information about sustainable food systems?:
Yes

A brief description of the signage and/or brochures that include information about sustainable food systems:
stars.aashe.org
Penn Dining and Bon Appetit regularly places signage in dining halls on campus about their sustainability practices, including local food sourcing.

The website URL for food service area signage and/or brochures that include information about sustainable food systems:
http://cms.business-services.upenn.edu/dining/sustainability/sustainability.html

Does the institution have signage on the grounds about sustainable groundskeeping and/or landscaping strategies employed?:
Yes

A brief description of the signage on the grounds about sustainable groundskeeping and/or landscaping strategies employed:
The Penn Garden has signage that describes the garden and a link to a website to find out more.

The Penn Orchard was established in 2015, and now has over fifty varieties of fruit trees that can flourish in an urban environment. The Penn Orchard provides expository signage.

"Discover Penn" is a campus-wide cell phone tour that provides an innovative approach to experiencing the campus. The program helps users understand Penn in a different and unexpected way - as a place - its people, its art, its buildings, its academics, its landscape. The program, which started in Fall 2008, currently has fifteen sites identified by the red "Discover Penn" signs placed at the locations. The signage provides a phone number and participants who call the number hear recordings by Penn Trustees, faculty, alumni, and those who are experts in their field or who have a close connection to Penn. The sites are equally diverse, including public art, historic buildings, and research milestones. Penn Park and Shoemaker Green are key stops on the “Discover Penn Tour”. The Penn Park stop on recording on the tour is done by Michael Van Valkenburgh, of Michael Van Valkenburgh Associates - the firm that designed Penn Park. The Shoemaker Green recording is given by Jose Alminana, Principal of Andropogon Associates Ltd, the landscape developers of Shoemaker Green. There is also a stop on the tour that discusses Penn as an urban forest, which is recorded by Paul Meyer, Director of the Morris Arboretum.

Associated links:


https://www.sustainability.upenn.edu/news/publicity-penn-garden

https://www.sustainability.upenn.edu/tours/penn-sustainability-walking-tours
stars.aashe.org
The website URL for the signage on the grounds about sustainable groundskeeping and/or landscaping strategies employed:
https://www.sustainability.upenn.edu/tours/penn-sustainability-walking-tours

Does the institution produce a sustainability walking map or tour?:
Yes

A brief description of the sustainability walking map or tour:
The Penn Sustainability Walking Tour highlights LEED Buildings on campus, best practices in stormwater management, Green Fund projects, electric vehicle charging stations, and more.

The website URL of the sustainability walking map or tour:
https://www.sustainability.upenn.edu/tours/penn-sustainability-walking-tours

Does the institution produce a guide for commuters about how to use more sustainable methods of transportation?:
Yes

A brief description of the guide for commuters about how to use more sustainable methods of transportation:
Penn’s compact urban campus is well served by an extensive network of subway, bus, regional rail, national rail, car-sharing, and trolley lines that are located around the campus where public transit stops are never more than a five minute walk from any part of campus. The University provides a number of programs to encourage faculty, staff, students and visitors to utilize public transportation, including discounted, pre-tax transit passes. The Penn Transit Services website has extensive information about public transportation, regional transportation information, carpool options, etc.

The website URL for the guide for commuters about how to use more sustainable methods of transportation:
http://cms.business-services.upenn.edu/transportation/commuter-transit-options/public-transportation.html

Does the institution produce navigation and educational tools for bicyclists and pedestrians (e.g. covering routes, inter-modal connections, policies, services, and safety)?:
Yes

A brief description of the navigation and educational tools for bicyclists and pedestrians:
As an dense, urban campus, Penn prides itself on the creation of an exceptional pedestrian environment, both on and around campus. There are custom designed directional signage throughout campus, and campus maps at key locations to aid in wayfinding.

Penn and the City of Philadelphia have a number of resources for cyclists. In 2017, Penn initiated a commuter benefit for bicycle commuters, making $240 available annually for bike commuters on a reimbursable basis to assist with repairs and equipment purchases. There are three bike repair stations on campus for use by the Penn community. The stations include all necessary tools to perform basic bike maintenance. The university also provides a comprehensive bike map, marking the location of bike stations, bike lanes, and secure parking locations for over 6000 bikes. The University Bike Collective was established in 2013 to represent cyclists on campus and promote bike reform on Penn's Campus. Penn was named a Bike-Friendly Campus in 2014. Bike-Friendly status lasts for four years, after which point Penn must reapply.

Associated links:

http://cms.business-services.upenn.edu/parking/sustainable-commuting/biking.html

https://www.sustainability.upenn.edu/news/penn%E2%80%99s-new-bike-commuter-expense-reimbursement-program

t-program

http://bikeleague.org/sites/default/files/BFU_Master_Award_List_2016.pdf

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

http://cms.business-services.upenn.edu/parking/sustainable-commuting/biking.html

Does the institution produce a guide for green living and/or incorporating sustainability into the residential experience?:

Yes

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

The Resident Assistant/Graduate Associate Sustainability Manual serves as an in-depth resource to RA/GAs about Penn's sustainability programs, and includes a guide to living green in campus residence halls, designed to be shared with their residents. Penn Residential Services also provides information to incoming students on what items to bring to campus, which includes a sustainability component. Upon arrival on-campus, every College House resident receives a re-usable water bottle and shopping/recycling bag with links to sustainability resources on Penn's campus.
The website URL for the guide for green living and incorporating sustainability into the residential experience:
https://www.sustainability.upenn.edu/get-involved/green-living-certification

Does the institution produce other sustainability outreach materials or publications not covered above?:
Yes

A brief description of these materials or publications:
Penn’s sustainability initiatives are often covered in the “Almanac”, the weekly publication of record and opinion for the University of Pennsylvania faculty and staff, with news and service functions - such as calendar posters and special reports - that extend its readership to students and special audiences such as alumni and neighbors.

The website URL for these materials or publications:
http://www.upenn.edu/almanac/

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:
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Outreach Campaign

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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 by 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 by 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 dorm or green office rating 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.

Measurable, positive results typically involve reductions in energy, waste or water use, cost savings and/or other benefits. To measure if a campaign yields measurable, positive results, institutions should compare pre-campaign performance to performance during or after the campaign. Increased awareness or increased membership of a mailing list or group is not sufficient in the absence of other positive results.

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

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

Yes

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

Yes

Name of the campaign:
Power Down Challenge

A brief description of the campaign, including how students and/or employees were engaged:

Every year, the "Power Down Challenge" empowers members of the Penn community to reduce their energy consumption and deepen their understanding of energy issues. During the challenge, Penn and its partners join together for educational events and programs about energy consumption, reduction, and innovation. In connection with the University’s Academic Theme Year, the "Power Down Challenge" in 2017 encouraged members of the Penn community to "signal a change" in their energy consumption habits. The 2017 campaign culminated in a collaborative, campus-wide "Energy Reduction Challenge" on February 22nd, 2017.

During the 2016 "Power Down Challenge", Penn saved 220,640 kWh in 24 hours in the first ever single-day "Energy Reduction Challenge at Penn". In 2017, Penn saved even more, reducing consumption by 11.4%, or 282,350 kWh in the 24-hour period. That's equivalent to 198 metric tons of CO2 emissions, taking 42 cars off the road, or planting 5,143 trees. Facilities and Real Estate Services donated $11,400, the estimated value of the savings, to the Center for Undergraduate Research Fellowship to support "Climate Action Research Grants".

https://www.sustainability.upenn.edu/participate/penn-community/power-down-challenge

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

Penn's campus saved 11.4% normalized (282,350 kWh) and donated $11,400 to the Center for Undergraduate Research Fellowship, "Climate Action Research Grants" as a result of the campaign.

The website URL where information about the campaign is available:
https://www.sustainability.upenn.edu/get-involved/power-down-challenge

Name of the campaign (2nd campaign):
30x30 Campaign

A brief description of the campaign, including how students and/or employees were engaged (2nd campaign):

The "30x30 Challenge" is an effort to encourage the Penn community to get outside, learn about local ecology, and appreciate the beauty of nature.

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

Over 340 Penn Staff and Faculty pledged to spend 30 minutes outside everyday for the entire month of April. Researchers have been documenting what many know intuitively- that nature is good for our health and well-being. Regularly immersing oneself in a natural setting-like a park, forest, or field- can reduce stress while boosting immunity, energy levels, and
In an effort to support pledges and show campus community members the wealth of outdoor spaces, as well as the research, planning, and consideration given to the campus environment, the Penn Sustainability Office organizes a number of campus landscape tours.

The website URL where information about the campaign is available (2nd campaign):
https://www.sustainability.upenn.edu/get-involved/30x30-challenge

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

"ReThink Your Footprint" is the fall waste awareness campaign put on by the university. "ReThink Your Footprint" raises awareness of already-established waste minimization programs and initiatives in this area, inspires students, staff, and faculty to create new activities related to source reduction and recycling, and encourages everyone to rethink their footprint.

The goal of "ReThink Your Footprint" is to raise the level of conversation about waste management beyond solely recycling and into a broader discussion of source reduction and reuse – resulting in greater diversion of campus waste from the landfill. As a University, Penn has already made great strides in managing its trash, recycling, and other waste, and this year we continue to build upon this work.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:
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**Data source(s) and notes about the submission:**

The University of Pennsylvania is a major research institution, with over 3000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to engaging with both the campus and public community on sustainability, with a goal to make climate change and sustainability part of the Penn culture. This commitment and long standing tradition of both campus and public engagement around the issue of sustainability is seen through campus sustainability groups and community focused centers. Both public and campus engagement organizations partner with the Sustainability Office to create student internships, engage in environmental issues, and build knowledge around sustainability. For a more complete listing of engagement activities on campus, please see EN 10 to EN 14.

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Assessing Sustainability Culture

Provisional Score | Responsible Party
------------------|------------------
0.25 / 1.00       | Madeline Schuh   
                  | Sustainability Analyst 
                  | Facilities and Real Estate Services

Criteria

Institution conducts an assessment of campus sustainability culture. The cultural assessment focuses on sustainability values, behaviors and beliefs, and may also address awareness of campus sustainability initiatives.

An assessment that covers a single sustainability topic (e.g. a transportation survey) does not count in the absence of a more comprehensive cultural assessment.

Assessments that exclusively address sustainability literacy (i.e. knowledge of sustainability topics and challenges) or student engagement in sustainability-related programs and activities are excluded. Literacy assessments are recognized in the Sustainability Literacy Assessment credit in Curriculum.

Participation by U.S. and Canadian institutions in the National Survey of Student Engagement (NSSE) Sustainability Education Consortium does not count, but may be reported as an Exemplary Practice in Innovation & Leadership.

An institution may use a single instrument that addresses sustainability literacy, culture, and/or engagement to meet the criteria for this credit if at least ten questions or a third of the assessment focuses on sustainability values, behaviors and beliefs.

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

Does the institution conduct an assessment of sustainability culture (i.e. the assessment focuses on sustainability values, behaviors and beliefs, and may also address awareness of campus sustainability initiatives)?:

Yes

Which of the following best describes the cultural assessment? The assessment is administered to:

A subset of the campus community or a sample that may not be representative of the entire community

Which of the following best describes the structure of the cultural assessment? The assessment is administered:

Without a follow-up assessment of the same cohort or representative samples of the same population

A brief description of how and when the cultural assessment(s) were developed and/or adopted:

During the spring "Power Down" campaign, an energy habits assessment is distributed online. The assessment asks participants about general behaviors and attitudes towards energy consumption on campus including: personal efforts to...
conserve, Penn's efforts to reduce carbon footprint, general literacy about conservation, peer to peer conservation and education, campus sustainability culture, awareness, and many more.

**A copy or sample of the questions related to sustainability culture:**

PDC Survey 2017_2.docx

**A sample of the questions related to sustainability culture or the website URL where the assessment tool is available:**

---

**A brief description of how representative samples were reached (if applicable) and how the cultural assessment is administered:**

The assessment is administered online. Users can access the survey from the Penn Sustainability website and marketing materials. Additionally, members of the Penn Sustainability mailing list receive weekly "Power Down" update emails which include links to the survey.

**A brief summary of results from the cultural assessment, including a description of any measurable changes over time:**

Penn began distributing the assessment in 2015, with 2017 being the first year meaningful changes and analysis can be made. Results of the survey are not published, but are used internally to better target and manage outreach on campus.

**The website URL where information about the programs or initiatives is available:**

https://www.sustainability.upenn.edu/get-involved/power-down-challenge

**Additional documentation to support the submission:**

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# Employee Educators Program

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## Criteria

Institution administers or oversees an ongoing staff/faculty peer-to-peer sustainability outreach and education program that meets the following criteria:

- Employee sustainability educators are formally designated and receive formal training or participate in an institution-sponsored orientation to prepare them to conduct peer outreach to other employees;
- The institution supports the program with financial resources (e.g. by providing an annual budget) and/or administrative coordination by staff or faculty; and
- The peer educators represent diverse areas of campus; the outreach and education efforts of sustainability staff or a sustainability office do not count in the absence of a broader network of peer educators.

This credit recognizes ongoing programs that engage employees as peers 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 actively participate.

Ongoing green office certification programs and the equivalent may count for this credit if they include formally designated and trained peer employee educators (e.g. “green leaders”).

Employee orientation activities and training and/or professional development opportunities in sustainability for staff are excluded from this credit. These activities are covered in the Employee Orientation and Staff Professional Development credits.

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

### Total number of employees (staff + faculty, headcount):

17,354

### Number of employees served (i.e. directly targeted) by a peer-to-peer sustainability outreach and education program (avoid double-counting):

17,354

### Percentage of employees served by a peer-to-peer educator program:

100

### Name of the employee educators program:

Staff and Faculty Eco-Reps

stars.aashe.org
Number of employees served (i.e. directly targeted) by the program (headcount):
17,354

A brief description of the program, including examples of peer-to-peer outreach activities:

The "Staff & Faculty Eco-Reps Program" is a peer education program that provides the tools to improve the environmental sustainability of Penn offices, labs, classroom, and other workplaces. The program includes about 100 active staff and faculty participants across the University representing a diverse set of offices, schools, and centers, and is open on an opt-in basis to any employee.

A six-person Steering Committee helps guide the program, which is led by a three person leadership team working with the Penn Sustainability Office. The program is designed to improve environmental awareness and behavior change, and builds knowledge and leadership across Penn's schools and centers by empowering individuals to champion the goals outlined in Penn's Climate Action Plan 2.0.

Participating staff and faculty volunteers meet monthly to share best sustainable practices between departments, and attend brief trainings by the Penn Sustainability Office on sustainability topics. Eco-Reps then implement change spreading awareness of important sustainability issues and conservation strategies in their respective offices and departments through projects, events, and creative informational campaigns.

A brief description of how the employee educators are selected:

Participating staff and faculty Eco-Rep members are self-selecting volunteers, representing their corresponding school and/or center.

A brief description of the formal training that the employee educators receive to prepare them to conduct peer outreach:

The program has a formal orientation session, which includes descriptions of Penn's "Climate Action Plan 2.0", structure of the Sustainability Office, and "Penn's Environmental Sustainability Advisory Committee".

A brief description of the financial and/or administrative support the institution provides to the program (e.g. annual budget and/or paid faculty/staff coordination):

The Eco-Reps program is supported by the Penn Sustainability Office. Monthly meetings include lunch for participants, as well as fees for occasional speakers and lectures. The annual program budget is $30,000.

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

Number of employees served (i.e. directly targeted) by the program (headcount) (2nd program):
17,354
A brief description of the program, including examples of peer-to-peer outreach activities (2nd program):

Sustainability Coordinators are designated leaders, appointed by Vice Deans or Vice Presidents, to champion environmental sustainability within their Schools and Centers. Sustainability Coordinators help the Penn Sustainability Office to implement sustainability campaigns, serve as members on different advisory committees, and provide expertise on sustainability issues. Members include representatives from the Schools of Arts and Sciences, Wharton, Communications, Design, Dental Medicine, Education, Engineering, Law, Medicine, Nursing, Social Policy and Practice, and Veterinary Medicine, as well as from the following Centers: Business Services, Athletics and Recreation, University Life, Residential Services, the New Bolton Center for Large Animal Veterinary Services, the Morris Arboretum, and the Hospital of the University of Pennsylvania.

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

Sustainability Coordinators are designated by the School or Center Dean, Vice Dean, Vice President, or other senior administrator for their expertise in key sustainability issues.

A brief description of the formal training that the employee educators receive to prepare them to conduct peer outreach (2nd program):

Sustainability Coordinators have a formal orientation session, which includes descriptions of Penn’s "Climate Action Plan 2.0", structure of the Sustainability Office, and Penn’s "Environmental Sustainability Advisory Committee". In addition, sustainability education and training might be part of their formal job description. Coordinators have an annual retreat to plan the year as well as share best practices.

The Sustainability Team also has an annual retreat to plan as well as develop skills.

A brief description of the financial and/or administrative support the institution provides to the program (e.g. annual budget and/or paid faculty/staff coordination) (2nd program):

The Sustainability Coordinators program is supported by the Penn Sustainability Office, the combined annual budget for the two employee educator programs is $17,500 (2016)

A brief description of all other employee peer-to-peer sustainability outreach and education programs, including the number of employees served and how employee educators are selected, trained, and supported by the institution:

---

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

---
The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to engaging with both the campus and public community on sustainability, with a goal to make climate change and sustainability part of the Penn culture. This commitment and long standing tradition of both campus and public engagement around the issue of sustainability is seen through campus sustainability groups and community focused centers. Both public and campus engagement organizations partner with the Sustainability Office to create student internships, engage in environmental issues, and build knowledge around sustainability. For a more complete listing of engagement activities on campus, please see EN 10 to EN 14.

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Employee Orientation

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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

Percentage of new employees (faculty and staff) that are offered orientation and/or outreach and guidance materials that cover sustainability topics (0-100):

100

A brief description of how sustainability is included in new employee orientation (including how multiple dimensions of sustainability are addressed):

All new employees are required to attend an orientation detailing the policies, benefits, and organizations established for staff and faculty. In this half day presentation, sustainability is presented with information on how new staff can become Eco-Reps.

The website URL where information about the programs or initiatives is available:


Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

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## Staff Professional Development

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### Criteria

**Part 1**

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

**Part 2**

Institution’s regular (full-time and part-time) staff participate in sustainability professional development and training opportunities that are either provided or supported by the institution.

For both Part 1 and Part 2 of this credit, the opportunities may be provided internally (e.g. by departments or by the sustainability office) or externally as long as they are specific to sustainability. The opportunities may include:

- Training to integrate sustainability knowledge and skills into the workplace.
- Lifelong learning and continuing education in sustainability.
- Sustainability accreditation and credential maintenance (e.g. LEED AP/GA).

This credit focuses on formal professional development and training opportunities, for example as delivered by trainers, managers, sustainability staff, and external organizations. Peer-to-peer educator programs and employee outreach campaigns are recognized in the *Employee Educators Program* and *Outreach Campaign* credits, respectively and should only be reported in this credit if such programs are formally recognized by the institution as professional development and training, for example in employee performance reviews.

For an external professional development and training opportunity to count, the institution must offer financial or other support (e.g. payment, reimbursement, or subsidy).

This credit applies to staff members only; it does not include faculty members. Faculty professional development in sustainability is recognized in the *Incentives for Developing Courses* credit in Curriculum.

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

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

No

**Does the institution wish to pursue Part 2 of this credit (the rate of employee participation in**
sustainability professional development and training)?:
No

Estimated percentage of regular staff (full-time and part-time) that participates annually in sustainability professional development and training that is either provided or supported by the institution (0, 1-24%, 25-49%, 50-74%, 75% or more):
---

A brief description of any internal sustainability professional development and training opportunities that the institution makes available to staff:
---

A brief description of any external professional development and training opportunities in sustainability that are supported by the institution(e.g. through payment, reimbursement, or subsidy):
---

Estimated percentage of regular staff (full-time and part-time) for which sustainability is included in performance reviews (0, 1-24%, 25-49%, 50-74%, 75% or more):
---

The website URL where information about the programs or initiatives is available:
---

Additional documentation to support the submission:
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Public Engagement

Points Claimed 15.20
Points Available 20.00

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.

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<th>Credit</th>
<th>Points</th>
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<td>Community Partnerships</td>
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<td>Inter-Campus Collaboration</td>
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<td>Continuing Education</td>
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Community Partnerships

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Criteria

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

This credit recognizes campus-community partnerships that the institution supports (materially or financially) and that address sustainability challenges in the broader community. This may be demonstrated by having an active community partnership that meets one or more of the following criteria:

- The partnership is multi-year or ongoing, rather than a short-term project or event;
- The partnership simultaneously supports all three dimensions of sustainability, i.e. social equity and wellbeing, economic prosperity, and ecological health; and/or
- The partnership is inclusive and participatory, i.e. underrepresented groups and/or vulnerable populations are engaged as equal partners in strategic planning, decision-making, implementation and review.

A partnership is considered to be “transformative”, “collaborative”, or “supportive” based on the number of criteria that are met (see D. Scoring).

This credit is inclusive of partnerships with local and distant communities.

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 partnerships and contribute toward sustainability, they are not included in this credit. Community service is covered by the Community Service credit.

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

Name of the institution’s formal community partnership to advance sustainability:

The Netter Center for Community Partnerships

Does the institution provide financial or material support for the partnership?:

Yes

Which of the following best describes the partnership timeframe?:

Multi-year or ongoing
Which of the following best describes the partnership’s sustainability focus?:
The partnership supports at least one, but not all three, dimensions of sustainability

Are underrepresented groups and/or vulnerable populations engaged as equal partners in strategic planning, decision-making, implementation and review? (Yes, No, or Not Sure):
Yes

A brief description of the institution’s formal community partnership to advance sustainability, including website URL (if available) and information to support each affirmative response above:
Examples of partnerships with the Netter Center include:
Coordinated involvement of students in teaching environmental education in local K-12 Schools. In partnership with the Netter Center, the Penn Sustainability Office is recruiting and funding undergrad and grad students to assist three to five hours per week each to implement the Urban Watersheds Curriculum. This pilot curriculum is being implemented in three grades in nine public schools.

http://www.phillywatersheds.org/urban-watersheds-curriculum-guide

As a second initiative, the Netter Center facilitates the temporary hiring of selected student research interns working with local environmental non-profits, such as the Neighborhood Gardens Trust, the Philadelphia Horticultural Society tree tenders, and City Harvest.

Name of the institution’s formal community partnership to advance sustainability (2nd partnership):
The Penn Civic House

Does the institution provide financial or material support for the partnership? (2nd partnership):
Yes

Which of the following best describes the partnership timeframe? (2nd partnership):
Multi-year or ongoing

Which of the following best describes the partnership’s sustainability focus? (2nd partnership):
The partnership supports at least one, but not all three, dimensions of sustainability

Are underrepresented groups and/or vulnerable populations engaged as equal partners in strategic planning, decision-making, implementation and review? (2nd partnership) (Yes, No, or Not Sure):
Yes

A brief description of the institution’s formal community partnership to advance sustainability, including website URL (if available) and information to support each affirmative response above (2nd partnership):
The Penn Civic House is working with the Sustainability Office to develop environmentally themed year-long internships and environmentally themed alternative spring break projects. In 2018, about 15 Penn students are participating in an environmentally themed alternative spring break project.

http://www.vpul.upenn.edu/civichouse/ParticipateinASB.php

**Name of the institution’s formal community partnership to advance sustainability (3rd partnership):**

Penn Program in Environmental Humanities / Lower Schuylkill River Project / Bartram's Farm Internship program

**Does the institution provide financial or material support for the partnership? (3rd partnership):**

Yes

**Which of the following best describes the partnership timeframe? (3rd partnership):**

Multi-year or ongoing

**Which of the following best describes the partnership’s sustainability focus? (3rd partnership):**

The partnership simultaneously supports social equity and wellbeing, economic prosperity, and ecological health

**Are underrepresented groups and/or vulnerable populations engaged as equal partners in strategic planning, decision-making, implementation and review? (3rd partnership) (Yes, No, or Unknown):**

Yes

**A brief description of the institution’s formal community partnership to advance sustainability, including website URL (if available) and information to support each affirmative response above (3rd partnership):**

The Lower Schuylkill River area initiatives include support for low-income residential neighborhoods with non-profit agriculture initiatives and neighborhood improvement programs in current and former industrial lands. Several Penn program collaboratively address the social, environmental, and economic deficiencies in the area, including students and faculty engaged in community organizing, public education, design research, local farming and food security, youth education, and environmental justice issues. The Penn Sustainability Office and the Netter Center sponsor students working at Bartram's Farm, a community-based five-acre farm initiative that benefits local youth and the adjacent public housing development by providing fresh farm produce, education on nutrition and healthy eating, and sustainable business enterprises.

http://www.ppehlab.org/floating/

https://bartramsgarden.org/explore-bartrams/the-farm/

A brief description of the institution’s other community partnerships to advance sustainability:

As part of the Sustainability Office’s summer research internship programs, the Sustainability Office partners with the School of Design to recruit students to work directly for city agencies focused on environmental sustainability, including the Philadelphia Managing Director’s Office Zero Waste project, the City’s Sustainability Office, the Philadelphia Energy Authority, and the Philadelphia Energy Office.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:

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Data source(s) and notes about the submission:

https://www.nettercenter.upenn.edu/

https://www.nettercenter.upenn.edu/programs/moelis-access-science

https://www.nettercenter.upenn.edu/programs/agatston-urban-nutrition-initiative

http://www.vpul.upenn.edu/civichouse/programs.php

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Inter-Campus Collaboration

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### Criteria

Institution collaborates with other colleges and universities in one or more of the following ways to support and help build the campus sustainability community. The institution:

- Is an active member of a national or international sustainability network;
- Is an active member of a regional, state/provincial or local sustainability network;
- Has presented at a sustainability conference during the previous year;
- Has submitted a case study during the previous year to a sustainability resource center or awards program that is inclusive of multiple campuses;
- Has had staff, students, or faculty serving on a board or committee of a sustainability network or conference during the previous three years;
- Has an ongoing mentoring relationship with another institution through which it assists the institution with its sustainability reporting and/or the development of its sustainability program;
- Has had staff, faculty, or students serving as peer reviewers of another institution’s sustainability data (e.g. GHG emissions or course inventory) and/or STARS submission during the previous three years; and/or
- Has participated in other collaborative efforts around sustainability during the previous year, e.g. joint planning or resource sharing with other institutions.

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

### Is the institution an active member of a national or international sustainability network?:

Yes

**The name of the national or international sustainability network(s):**

AASHE, The US Green Building Council, the Ivy Plus Sustainability Consortium, the Global University Leadership Forum

### Is the institution an active member of a regional, state/provincial or local sustainability network?:

Yes

**The name of the regional, state/provincial or local sustainability network(s):**

The Delaware Valley Green Building Council
Has the institution presented at a sustainability conference during the previous year? : Yes

A list or brief description of the conference(s) and presentation(s):
Philadelphia 2030 District, Delaware Valley Sustainability Symposium, Sustainability Leadership Council.

Has the institution submitted a case study during the previous year to a sustainability awards program that is inclusive of multiple campuses? : Yes

A list or brief description of the awards program(s) and submission(s):
The Association of Higher Education Facilities Officers (APPA); presentation of deep energy retrofits at Penn.

Has the institution had staff, students or faculty serving on a board or committee of a sustainability network or conference during the previous three years? : Yes

A list or brief description of the board or committee appointment(s):
Vice Chair of the Philadelphia Civic Design Review Civic Design Review is an opportunity for major development projects to be reviewed in a public forum and evaluated against consistent standards, regardless of where they are located in the city. Civic Design Review elevates Philadelphia’s development process to be parallel with other large metropolitan centers across the nation.

Board of Directors member of the ACE Mentor Program of Eastern Pennsylvania. Founded in 2000, the ACE Mentor Program of Eastern Pennsylvania gives students from local high schools an opportunity to learn about careers in architecture, engineering and construction. Under the mentorship of experienced professionals from leading building industry firms, students work in teams to pursue a range of informative and stimulating after-school activities, including field trips to “in-progress” construction sites, discussions with project managers, education about environmental sustainability in the built environment, tours of professional offices and more. In addition, each team works on a project that addresses “real-life” situations and issues. The 2015-2017 Board of Directors includes Marilyn Jost, the Executive Director of Finance and Administration for Penn’s Division of Facilities and Real Estate Services.

Mayor’s Historic Preservation Task Force Member
Founded in 2017, the Mayor’s Preservation Task Force was established by Mayor Jim Kenney to help shape how the city handles historic preservation in Philadelphia.

http://www.phillyarchaeology.net/paf-activities/historic-preservation-task-force/
Does the institution have an ongoing mentoring relationship with another institution through which it assists the institution with its sustainability reporting and/or the development of its sustainability program?:
Yes

A brief description of the mentoring relationship and activities:
Penn is an active member of the Ivy+ Sustainability Consortium and other sustainability initiatives.

Has the institution had staff, faculty, or students serving as peer reviewers of another institution’s sustainability data (e.g. GHG emissions or course inventory) and/or STARS submission during the previous three years?:
Yes

A brief description of the peer review activities:
Yes, through the Ivy+ Sustainability Consortium, Penn has provided and discussed carbon footprints of member organizations.

Has the institution participated in other collaborative efforts around sustainability during the previous year, e.g. joint planning or resource sharing with other institutions?:
Yes

A brief description of other collaborative efforts around sustainability during the previous year:
IVY Plus Sustainability Consortium Meetings and attendance and participation in the AASHE annual convention.

The website URL where information about the programs or initiatives is available:
---

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:
Penn students, faculty, and staff participate in numerous boards and committees both locally and internationally. The list above does not cover all such activity, but does try to cover the majority of sustainability related work. In addition to the organizations listed above, Penn participates in Gulf ISCN, SRAC, SCUP, APPA, NACUBIO, ASLA, ASUA, AIA, and many others.
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Continuing Education

Provisional Score | Responsible Party
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5.00 / 5.00 | Madeline Schuh  
Sustainability Analyst  
Facilities and Real Estate Services

Criteria

Part 1

Institution has conducted an inventory during the previous three years to identify its continuing education courses that address sustainability. These course offerings may include:

- Continuing education courses that have been identified as sustainability course offerings using the definitions provided in G. Standards and Terms; and/or
- Continuing education courses that have been formally designated as sustainability course offerings in the institution's standard course listings or catalog.

For each course, the inventory provides:

- The title and department (or equivalent) of the course.
- A brief description of the course. Courses for which partial or incomplete information is provided may not be counted toward earning points for Part 1 of this credit.

Courses that are typically taken for academic credit are not included in this credit; they are covered in 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

Total number of continuing education courses offered:

70

Number of continuing education courses offered that address sustainability:
Percentage of continuing education courses that address sustainability:
42.86

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

---

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

Penn has a Masters of Environmental Studies program that offers about 10 to 15 courses per semester, plus summer sessions. The Organizational Dynamics program for mid-career professionals has a sustainability track with three or four sustainability courses offered each semester, plus summer sessions.

CIMS 595 640: MLA Proseminar: Cinema and Politics
PHIL 489 640: Conflict, Ideology, and Public Discourse
PHIL 525 640: MLA Proseminar: Science, Truth, and Democracy
ANTH 478 601: Topics in Paleopathology
ENVS 541 660: Modeling Geographic Objects
URBS 473 601: History & Theory of Community Organizing
ENVS 507 660: Wetlands
ENVS 541 660: Modeling Geographic Objects
ENVS 601 660: Proseminar: Contemporary Issues in Environmental Studies
ENVS 609 660: Creating Gateways to the Land with Smarter Conservation
ENVS 622 660: Environmental Enforcement
ENVS 629 660: The US Water Industry in the 21st Century
ENVS 645 660: Energy Geopolitics in Eurasia
ENVS 648 660: Issues in Food and Agriculture Policy
ENVS 667 660: Intro to Sustainability
ENVS 673 660: The Future of Water
ENVS 676 660: Corporate Sustainability Management & Communication
DYNM 623 001: Building Intercultural Competence in a Global Work Environment

Do the figures reported above cover one, two, or three academic years?:
One

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(s), including the year the program was created:

The Certificate Program in Environmental Health Sciences (EHS) focuses on the mechanistic links that exist between environmental exposures, the molecular and cellular affects that ensue, and diseases of environmental etiology. Emphasis is placed on training in molecular toxicology, environmental and occupational health, molecular epidemiology, toxicogenomics.
toxicoproteomics, and population-based and clinical/translational research. The goal is to explore mechanisms, pathogenesis, prevention and treatment of diseases of environmental etiology. This is achieved by working with world-renowned experts in lung and airway disease, cancer causation, neurodegenerative disease, reproductive and developmental disorders, and cardiovascular disease.

Certificate of Study in Environmental Policy is granted by the Institute for Environmental Studies at the University of Pennsylvania to Penn Law students who successfully complete its requirements. To qualify for the certificate, a student must successfully complete five courses in the general area of Environmental Policy. Two from the Law School, and three from a selection of courses in Environmental Studies.

The website URL where information about the programs or initiatives is available:
http://www.sas.upenn.edu/lps/graduate/mes

Additional documentation to support the submission:
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Data source(s) and notes about the submission:

http://ceet.upenn.edu/training-career-development/environmental-health-sciences-certificate/

https://www.law.upenn.edu/live/files/252-environmentalpolicycertificatepdf

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Community Service

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

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

Number of students enrolled for credit (headcount; part-time students, continuing education, and/or graduate students may be excluded):

24,876

Number of students engaged in community service (headcount):

622

Percentage of students engaged in community service:

2.50

Does the institution wish to pursue Part 2 of this credit (community service hours)? (if data not available, respond 'No'):

Yes

Total number of student community service hours contributed during the most recent one-year period:

31,100

Number of annual community service hours contributed per student :

1.25
The website URL where information about the programs or initiatives is available:
https://www.nettercenter.upenn.edu/abcs-about

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

Does the institution provide incentives for employees to participate in community service (on- or off-campus)? (Incentives may include voluntary leave, compensatory time, or other forms of positive recognition):
Yes

A brief description of the institution’s employee community service initiatives:
Penn Volunteers in Public Service (Penn VIPS) provides volunteer opportunities through the Netter Center for Community Partnerships. Penn VIPS is responsible for providing volunteer activities for faculty, staff and Alumni, and manages a variety of activities that include: creating volunteer activities, informing the University community and the community at-large about available volunteer programs, and managing several University-wide volunteer activities. These activities include, but are not limited to: one day event volunteer opportunities, teaching opportunities, WorkPlace mentoring programs and a guest speaker/career day speakers bureau, Adopt A Family for the Holidays program, MLK day of service events, semester long volunteer programs, and excess item distributions.

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

https://www.college.upenn.edu/service-courses

https://www.nettercenter.upenn.edu/

http://www.vpul.upenn.edu/civichouse/

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Participation in Public Policy

Provisional Score

2.00 / 2.00

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

Institution advocates for public policies that support campus sustainability or that otherwise advance sustainability. The advocacy may take place at one or more of the following levels:

- Municipal/local,
- State/provincial/regional,
- National, and/or
- International.

The policy advocacy must have the implicit or explicit support of the institution’s top administrators and/or governing bodies to count. For example, advocacy by administrators, students, staff, or faculty who are acting as representatives of the institution or its governance bodies may count. Advocacy by students, staff, or faculty conducted in a personal capacity does not count unless it is formally endorsed at the institutional level.

Examples of advocacy efforts include supporting or endorsing legislation, ordinances, and public policies that advance sustainability; active participation in campaigns aiming to change public policy; and discussions with legislators in regard to the above.

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 public policies that support campus sustainability or that otherwise advance sustainability at the municipal/local level?:

Yes

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

As a major research institution and the largest employer in the region, Penn engages in public policy advocacy for sustainability in a variety of ways in Philadelphia and the surrounding region. While the institution has not specifically advocated for or against specific environmental legislation in the past three years, members of the Penn sustainability community and faculty participate in key advocacy discussions through membership in advocacy organizations and
The Penn Sustainability Director serves on the Philadelphia Civic Design Review (CDR) committee, advising the Planning Commission development in the city. The CDR has a sustainability checklist for new construction, created with input from the Penn Sustainability Director, that is used to evaluate projects across the city.

As part of the 2013 renegotiated service agreement between Penn and its district steam provider, Veolia Energy North America, Veolia installed and commissioned two new, natural gas-fired rapid-response boilers. The rapid-response boilers replace an older, less-efficient oil-fired boiler, increasing the overall efficiency of Veolia Energy’s steam service in the central business and University City Districts of Philadelphia, and significantly reducing greenhouse gas emissions. As part of its extended 20-year energy agreement with Penn, Veolia Energy has expanded the scope of services to include innovative conservation and operational improvement initiatives.

**Does the institution advocate for public policies that support campus sustainability or that otherwise advance sustainability at the state/provincial/regional level?:** Yes

**A brief description of how the institution engages in public policy advocacy for sustainability at the state/provincial/regional level, including the issues, legislation, and ordinances for or against which the institution has advocated:**

Penn is the second largest employer in Pennsylvania, and engages in the state-wide public policy advocacy for sustainability in a variety of ways. While the institution has not specifically advocated for or against specific environmental legislation in the past three years, members of the Penn sustainability community and faculty participate in key advocacy discussions through membership in advocacy organizations and non-profits, by providing expert testimony, and by serving as volunteers on non-profit boards. In 2016, the Penn Sustainability Director lectured on Penn's sustainability practices at the American Sustainability Leadership Council in Harrisburg.

**Does the institution advocate for public policies that support campus sustainability or that otherwise advance sustainability at the national level?:** Yes

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

Penn, as part of the Ivy+ Sustainability Consortium, has participated in the White House Council of Environmental Quality round table calls, and participated in President Obama's Act on Climate Pledge to support the work of the American delegation to the COP21 talks in Paris.

**Does the institution advocate for public policies that support campus sustainability or that otherwise advance sustainability at the international level?:** Yes
A brief description of how the institution engages in public policy advocacy for sustainability at the international level, including the issues, legislation, and ordinances for or against which the institution has advocated:

Penn is a member of the International Sustainable Campus Network (ISCN), which provides a global forum to support leading colleges, universities, and corporate campuses in the exchange of information, ideas, and best practices for achieving sustainable campus operations and integrating sustainability in research and teaching. Penn sends at least one representative to the ISCN annual conferences and in 2017, presented a summary of Penn's "Century Bond Energy Retrofit" program.

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

As noted above, the University of Pennsylvania signed the President's Act on Climate pledge, joining over 150 other American colleges and universities, including all seven other members of the Ivy League, to support the American efforts at the COP 21 Climate Talks in Paris. In addition, Penn is a member of the Global University Leadership Forum's Sustainable Campus Network, the US Green Building Council, is a sustaining sponsor of the Delaware Valley Green Building Council, and a member of the Association for the Advancement of Sustainability in Higher Education. All of these organizations participate in advocacy and sharing best practices around environmental sustainability.

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

---

The website URL where information about the programs or initiatives is available:


Additional documentation to support the submission:

---

Data source(s) and notes about the submission:


https://dvgbc.org/our-partners

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Penn culture. This commitment and long standing tradition of both campus and public engagement around the issue of sustainability is seen through campus sustainability groups and community focused centers. Both public and campus engagement organizations partner with the Sustainability Office to create student internships, engage in environmental issues, and build knowledge around sustainability. For a more complete listing of engagement activities on campus, please see EN 10 to EN 14.

The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Trademark Licensing

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00 / 2.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

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

Please note that other initiatives to support fair labor standards in the supply chain are recognized in the Sustainable Procurement credit in Purchasing.

"---" 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

A brief description of the institution’s WRC or FLA membership, including the year membership was last established or renewed:

In the spring of 1999, Penn joined the Fair Labor Association (FLA), an initiative sponsored by the United States Department of Labor and designed to promote the improvement of working conditions for workers. In December of 2000, Penn joined the Worker Rights Consortium, an independent labor rights monitoring organization, conducting investigations of working conditions in factories around the globe. To supplement the FLA and WRC Code, and ensure proper working conditions at Penn licensee facilities, Penn has formed a Task Force to draft a Code of Conduct for Penn licensees.

The website URL where information about the programs or initiatives is available:

http://www.upenn.edu/almanac/volumes/v62/n09/for-comment-code-workplace-conduct.html

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

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Air & Climate

Points Claimed  6.04
Points Available  11.00

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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse Gas Emissions</td>
<td>5.04 / 10.00</td>
</tr>
<tr>
<td>Outdoor Air Quality</td>
<td>1.00 / 1.00</td>
</tr>
</tbody>
</table>
Greenhouse Gas Emissions

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.04 / 10.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

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 also be verified by an independent, external third party and/or validated internally by campus personnel who are independent of the GHG accounting and reporting process.

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 (0.215 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 (see G. Standards and Terms).

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

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

Purchased Renewable Energy Certificates (RECs) or Guarantees of Origin (GOs) may not be counted as carbon offsets. Emissions reductions attributable to RECs and GOs that are either Green-e Energy certified or meet Green-e Energy’s technical requirements and are verified as such by a third party are reported separately (see E. Reporting Fields). Purchased carbon offsets and RECs/GOs that have not been third-party verified do not count.

Institution-catalyzed offsets, on-site composting, and carbon sequestration projects (on and off campus) that are to be counted as offsets must be third party verified or, at minimum, quantified using a method that addresses all of the following accounting issues:

- Selection of a baseline scenario (i.e. what would have happened in the absence of the project?)
- Demonstration of additionality (i.e. the project has resulted in emission reductions or removals in addition to what would have happened in the absence of the project);
- Identification and quantification of relevant secondary effects (i.e. small, unintended GHG consequences of a project, include leakage and changes in GHG emissions up- and downstream of the project);
- Consideration of reversibility (i.e. assessing the risk of reversibility, together with any mitigation or compensation measures included in the project design);
- Avoidance of double-counting (i.e. the reductions giving rise to the offset must occur at sources or sinks not included in the target or cap for which the offset is used).

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. Those transactions are reported separately and net GHG emissions are automatically adjusted upward to reflect the sale or transfer of any institution-generated offsets that have been included as carbon offsets (see D. Scoring).

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

Has the institution conducted a GHG emissions inventory that includes all Scope 1 and 2 emissions? : Yes

Does the institution’s GHG emissions inventory include all, some or none of its Scope 3 GHG emissions from the following categories?:

<table>
<thead>
<tr>
<th>Category</th>
<th>All, Some, or None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business travel</td>
<td>Some</td>
</tr>
<tr>
<td>Commuting</td>
<td>Some</td>
</tr>
<tr>
<td>Purchased goods and services</td>
<td>None</td>
</tr>
<tr>
<td>Capital goods</td>
<td>Some</td>
</tr>
<tr>
<td>Waste generated in operations</td>
<td>Some</td>
</tr>
<tr>
<td>Fuel- and energy-related activities not included in Scope 1 or Scope 2</td>
<td>None</td>
</tr>
<tr>
<td>Other categories</td>
<td>None</td>
</tr>
</tbody>
</table>

A copy of the most recent GHG emissions inventory:

Penn Climate Action Plan 2.pdf
A brief description of the methodology and/or tool used to complete the GHG emissions inventory, including how the institution accounted for each category of Scope 3 emissions reported above:

The Penn GHG emissions inventory is conducted by a research group within the the Penn School of Design: the Center for Environmental Building + Design (CEB+D). The GHG emissions are calculated according to the WRI GHG Protocol with adjustments by the CEB+D to conform the accounting to Penn’s district energy systems. Some emissions categories are estimates and carried forward year-to-year. These estimates and their calculations are being reevaluated and will be appropriately updated.

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?:

No

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

---

Documentation to support the internal and/or external verification process:

---

Does the institution wish to pursue Part 2 and Part 3 of this credit? (reductions in Scope 1 and Scope 2 GHG emissions):

Yes

**Gross Scope 1 and Scope 2 GHG emissions:**

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Scope 1 GHG emissions from stationary combustion</td>
<td>1,620 Metric Tons of CO2 Equivalent</td>
<td>1,620 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Gross Scope 1 GHG emissions from other sources</td>
<td>2,214 Metric Tons of CO2 Equivalent</td>
<td>2,236 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Gross Scope 2 GHG emissions from purchased electricity</td>
<td>121,567 Metric Tons of CO2 Equivalent</td>
<td>145,932 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Gross Scope 2 GHG emissions from other sources</td>
<td>70,360 Metric Tons of CO2 Equivalent</td>
<td>74,925 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>195,761 Metric Tons of CO2 Equivalent</td>
<td>224,713 Metric Tons of CO2 Equivalent</td>
</tr>
</tbody>
</table>
Start and end dates of the performance year and baseline year (or three-year periods):

<table>
<thead>
<tr>
<th></th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Year</td>
<td>July 1, 2016</td>
<td>June 30, 2017</td>
</tr>
<tr>
<td>Baseline Year</td>
<td>July 1, 2013</td>
<td>June 30, 2014</td>
</tr>
</tbody>
</table>

A brief description of when and why the GHG emissions baseline was adopted (e.g. in sustainability plans and policies or in the context of other reporting obligations):

The 2014 baseline was adopted with the release of the CAP 2.0. Some emissions categories are estimates and carried forward year-to-year. These estimates and their calculations are being reevaluated and will be appropriately updated.

Figures needed to determine total carbon offsets:

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third-party verified carbon offsets purchased (exclude purchased RECs/GOs)</td>
<td>0 Metric Tons of CO2 Equivalent</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Institution-catalyzed carbon offsets generated</td>
<td>0 Metric Tons of CO2 Equivalent</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Carbon sequestration due to land that the institution manages specifically for sequestration</td>
<td>0 Metric Tons of CO2 Equivalent</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Carbon storage from on-site composting</td>
<td>0 Metric Tons of CO2 Equivalent</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Carbon offsets included above for which the emissions reductions have been sold or transferred by the institution</td>
<td>0 Metric Tons of CO2 Equivalent</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Net carbon offsets</td>
<td>0 Metric Tons of CO2 Equivalent</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
</tbody>
</table>

A brief description of the offsets in each category reported above, including vendor, project source, verification program and contract timeframes (as applicable):
The University of Pennsylvania entered into an agreement with NextEra Energy Power Marketing LLC to purchase Green-e Energy Certifiable Wind Energy RECs (vintage 2014, 2015, 2016, 2017, and 2018) for 200,000 RECs for each vintage.

**Emissions reductions attributable to Renewable Energy Certificate (REC) or Guarantee of Origin (GO) purchases:**

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions reductions attributable to REC/GO purchases</td>
<td>71,992 Metric Tons of CO2 Equivalent</td>
<td>74,611 Metric Tons of CO2 Equivalent</td>
</tr>
</tbody>
</table>

**A brief description of the purchased RECs/GOs including vendor, project source and verification program:**


**Adjusted net Scope 1 and 2 GHG emissions:**

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted net Scope 1 and 2 GHG emissions</td>
<td>123,769 Metric Tons of CO2 Equivalent</td>
<td>150,102 Metric Tons of CO2 Equivalent</td>
</tr>
</tbody>
</table>

**Figures needed to determine “Weighted Campus Users”:**

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students resident on-site</td>
<td>6,380</td>
<td>6,494</td>
</tr>
<tr>
<td>Number of employees resident on-site</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Number of other individuals resident on-site and/or staffed hospital beds</td>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>Total full-time equivalent student enrollment</td>
<td>21,358</td>
<td>21,296</td>
</tr>
<tr>
<td>Source Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time equivalent of employees (staff + faculty)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17,354</td>
<td>16,710</td>
<td></td>
</tr>
<tr>
<td>Full-time equivalent of students enrolled exclusively in distance education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Weighted campus users</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30,691.50</td>
<td>30,169.75</td>
<td></td>
</tr>
</tbody>
</table>

**Adjusted net Scope 1 and 2 GHG emissions per weighted campus user:**

<table>
<thead>
<tr>
<th>Source Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted net Scope 1 and 2 GHG emissions per weighted campus user</td>
</tr>
<tr>
<td>Performance Year</td>
</tr>
<tr>
<td>4.03 Metric Tons of CO2 Equivalent</td>
</tr>
</tbody>
</table>

**Percentage reduction in adjusted net Scope 1 and Scope 2 GHG emissions per weighted campus user from baseline (0-100):**

18.95

**Gross floor area of building space, performance year:**

15,864,661 Gross Square Feet

**Floor area of energy intensive building space, performance year:**

<table>
<thead>
<tr>
<th>Source Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory space</td>
</tr>
<tr>
<td>3,622,403 Square Feet</td>
</tr>
<tr>
<td>Healthcare space</td>
</tr>
<tr>
<td>221,225 Square Feet</td>
</tr>
<tr>
<td>Other energy intensive space</td>
</tr>
<tr>
<td>0 Square Feet</td>
</tr>
</tbody>
</table>

**EUI-adjusted floor area, performance year:**

23,551,917 Gross Square Feet

**Adjusted net Scope 1 and 2 GHG emissions per unit of EUI-adjusted floor area, performance year:**

0.01 MtCO2e / GSF

**Scope 3 GHG emissions, performance year:**
<table>
<thead>
<tr>
<th>Category</th>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business travel</td>
<td>66,185 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Commuting</td>
<td>11,817 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Purchased goods and services</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Capital goods</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Fuel- and energy-related activities not included in Scope 1 or Scope 2</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Waste generated in operations</td>
<td>4,875 Metric Tons of CO2 Equivalent</td>
</tr>
<tr>
<td>Other categories</td>
<td>0 Metric Tons of CO2 Equivalent</td>
</tr>
</tbody>
</table>

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

Penn's "Climate Action Plan 2.0" is the guiding document for greenhouse gas reductions on campus.

The website URL where information about the programs or initiatives is available:

https://www.sustainability.upenn.edu/

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

Please note, the number of employee residents is an approximation.

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Outdoor Air Quality

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1.00 / 1.00</td>
<td>Madeline Schuh</td>
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<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Part 1

Institution has written policies or guidelines to improve outdoor air quality and minimize air pollutant emissions from mobile sources on campus. Policies and/or guidelines may include prohibiting vehicle idling, restrictions on the use of powered lawn care equipment, and similar strategies.

Policies and guidelines that support cleaner and more fuel-efficient fleet vehicles and more sustainable commuting options are covered by credits in the Transportation subcategory.

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 or else verified that no such emissions are produced. Significant emissions include nitrogen oxides (NOx), sulfur oxides (SOx), and other standard categories of air emissions identified in environmental permits held by the institution, international conventions, and/or national laws or regulations.

"---" 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 on campus?:

Yes

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

Penn complies with the City of Philadelphia’s anti-idling laws for diesel vehicles. City Council and the Philadelphia Parking Authority continue to work together to expand the anti-Idling enforcement efforts that are currently handled by Philadelphia’s Air Management Services. As the local air pollution control agency, Air Management Services monitors air pollutants and enforces city, state, and federal air quality standards. In addition, anti-idling information is included as part of driver training and driver re-training as a best practice.

Penn uses small electric, golf cart style vehicles to move small items across campus and perform maintenance when possible. This reduces the number of full size vehicles operating on campus for maintenance activities.
Has the institution completed an inventory of significant air emissions from stationary campus sources or else verified that no such emissions are produced?:
Yes

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight of Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen oxides (NOx)</td>
<td>0.00 Tons</td>
</tr>
<tr>
<td>Sulfur oxides (SOx)</td>
<td>0.46 Tons</td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>1.93 Tons</td>
</tr>
<tr>
<td>Particulate matter (PM)</td>
<td>1.00 Tons</td>
</tr>
<tr>
<td>Ozone (O3)</td>
<td>---</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>---</td>
</tr>
<tr>
<td>Hazardous air pollutants (HAPs)</td>
<td>---</td>
</tr>
<tr>
<td>Ozone-depleting compounds (ODCs)</td>
<td>---</td>
</tr>
<tr>
<td>Other standard categories of air emissions identified in permits and/or regulations</td>
<td>865.98 Tons</td>
</tr>
</tbody>
</table>

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

The air emissions inventory is developed as part of Penn’s Title V annual air emissions report, prepared for the Pennsylvania Department of Environmental Protection.

The website URL where information about the programs or initiatives is available:

http://www.phila.gov/health/airmanagement/AirAndNoise.html

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Buildings

Points Claimed  3.95
Points Available  8.00

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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Operations and Maintenance</td>
<td>2.00 / 5.00</td>
</tr>
<tr>
<td>Building Design and Construction</td>
<td>1.95 / 3.00</td>
</tr>
</tbody>
</table>
Building Operations and Maintenance

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00 / 5.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

**Criteria**

Institution owns and operates buildings that are:

1) Certified under a green building rating system focused on the operations and maintenance of existing buildings, e.g. LEED®: Building Operations + Maintenance (O+M)

And/or

2) Operated and maintained in accordance with published sustainable operations and maintenance guidelines and policies that include one or more of the following:

- Indoor air quality (IAQ) management policy or protocol
- Green cleaning policy, program or contract
- Energy management or benchmarking program
- Water management or benchmarking program

Energy and water management and benchmarking programs include dashboards, analytics tools, and other mechanisms to assess performance, set goals, create and implement action plans, and evaluate progress. See, for example ENERGY STAR Guidelines for Energy Management and U.S. EPA Portfolio Manager.

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

Building space that is certified under a green building rating system for new construction and major renovation must also be certified under a rating system focusing on operations and maintenance to count as certified space for this credit. For example, a building that is certified under LEED: Building Design + Construction (BD+C) but not LEED: Building Operations + Maintenance (O+M) should not be counted as certified space. Sustainability in new construction and major renovation projects is covered in the Building Design and Construction credit.

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

**Total floor area of building space:**

15,864,661 Square Feet

**Floor area of building space that is certified at each level under a green building rating system for the operations and maintenance of existing buildings used by an Established Green Building Council:**
<table>
<thead>
<tr>
<th>Rating Description</th>
<th>Certified Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEED O+M Platinum or the highest achievable level under another GBC rating system</td>
<td>0 Square Feet</td>
</tr>
<tr>
<td>LEED O+M Gold or the 2nd highest level under another 4- or 5-tier GBC rating system</td>
<td>0 Square Feet</td>
</tr>
<tr>
<td>Certified at mid-level under a 3- or 5-tier GBC rating system (e.g. BREEAM-In Use, CASBEE for Existing Buildings, DGNB, Green Star Performance)</td>
<td>0 Square Feet</td>
</tr>
<tr>
<td>LEED O+M Silver or at a step above minimum level under another 4- or 5-tier GBC rating system</td>
<td>0 Square Feet</td>
</tr>
<tr>
<td>LEED O+M Certified or certified at minimum level under another GBC rating system</td>
<td>0 Square Feet</td>
</tr>
</tbody>
</table>

Floor area of building space that is certified under a non-GBC rating system for the operations and maintenance of existing buildings, e.g. BOMA BESt, Green Globes CIEB:
0 Square Feet

Percentage of building space certified under a green building rating system for the operations and maintenance of existing buildings:
0

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

Of the institution’s uncertified building space, what percentage of floor area is maintained in accordance with a published indoor air quality (IAQ) management policy or protocol? (0-100):
100

A copy of the IAQ management policy or protocol:
---

The website URL where the IAQ policy/protocol may be found:
https://www.facilities.upenn.edu/standards-policies/standards/design-standards

Of the institution’s uncertified building space, what percentage of floor area is maintained in accordance with a published green cleaning policy, program or contract? (0-100):
100
A copy or the green cleaning policy:
Housekeeping Sustainability.pptx

A brief description of how green cleaning is incorporated into cleaning contracts:
Housekeeping staff are trained in sustainable and green cleaning yearly by both Penn Housekeeping management staff and Penn's cleaning contractor, Aramark.

Of the institution's uncertified building space, what percentage of floor area is maintained in accordance with an energy management or benchmarking program? (0-100):
100

A brief description of the energy management or benchmarking program:
The Operations Control Center in Penn's Facilities and Real Estate Services controls and monitors utilities for the entire campus, 365 days a year, 24 hours a day. From this centralized location, staff regulate utility distribution and monitor environmental conditions, temperature, and energy use across campus.

Penn's SCADA (Supervisory Control And Data Acquisition) system monitors and controls critical equipment such as HVAC systems, chiller plants, electrical substations, lighting, and space conditions throughout the campus. The system uses an alarm system that displays a text message when conditions are not within their operating conditions. The Operations Control Center can then adjust the systems accordingly.

The three main utilities for the campus are steam, chilled water, and electric power. Historical energy consumption by building is tracked and recorded monthly by Penn's Energy Management Team to identify trends and opportunities for energy reduction. Between 2012 and 2017, Penn installed steam and electricity sub-meters on buildings. Meters allow for measurement and management of energy use by building which in turn will encourage conservation measures on a building by building basis.

Of the institution's uncertified building space, what percentage of floor area is maintained in accordance with a water management or benchmarking program? (0-100):
100

A brief description of the water management or benchmarking program:
As part of City required benchmarking, Penn records total potable water usage across the university each year. In addition, all buildings follow the Philadelphia plumbing code which requires meters on all public bathroom faucets as well as aerators allowing 2.2 gpm flow rates. Toilets are either 1.6 or 1.28 gpf models.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:
stars.aashe.org
### Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn’s efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University’s "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
## Building Design and Construction

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.95 / 3.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

## 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. LEED®: Building Design & Construction (BD+C)

2) Certified Living under the Living Building Challenge

And/or

3) Designed and built in accordance with published green building codes, guidelines and/or policies that cover one or more of the following:

- Impacts on the surrounding site (e.g. guidelines to reuse previously developed land, protect environmentally sensitive areas, and otherwise minimize site impacts)
- Energy consumption (e.g. policies requiring a minimum level of energy efficiency for buildings and their systems)
- Building-level energy metering
- Use of environmentally preferable materials (e.g. guidelines to minimize the life cycle impacts associated with building materials)
- Indoor environmental quality (i.e. guidelines to protect the health and comfort of building occupants)
- Water consumption (e.g. requiring minimum standards of efficiency for indoor and outdoor water use)
- 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

### Total floor area of newly constructed or renovated building space (include projects completed within the previous five years):
2,145,305 Square Feet

### Floor area of newly constructed or renovated building space certified Living under the Living Building Challenge:
0 Square Feet

### Floor area of newly constructed or renovated building space certified at each level under a rating system
for design and construction used by an Established Green Building Council (GBC):

<table>
<thead>
<tr>
<th>Certified Floor Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEED BD+C Platinum or at the highest achievable level</td>
</tr>
<tr>
<td>under another rating system</td>
</tr>
<tr>
<td>LEED BD+C Gold or at the 2nd highest level under another</td>
</tr>
<tr>
<td>4- or 5-tier GBC rating system</td>
</tr>
<tr>
<td>Certified at mid-level under a 3- or 5-tier GBC rating</td>
</tr>
<tr>
<td>system for design and construction (e.g. BREEAM, CASBEE,</td>
</tr>
<tr>
<td>DGNB, Green Star)</td>
</tr>
<tr>
<td>LEED BD+C Silver or at a step above minimum level</td>
</tr>
<tr>
<td>under another 4- or 5-tier GBC rating system</td>
</tr>
<tr>
<td>LEED BD+C Certified or certified at minimum level</td>
</tr>
<tr>
<td>under another GBC rating system</td>
</tr>
</tbody>
</table>

Floor area of newly constructed or renovated building space certified under a non-GBC rating system for design and construction (e.g. Green Globes NC, Certified Passive House):

452,818 Square Feet

Percentage of newly constructed or renovated building space certified under a green building rating system for design and construction:

100

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

Main Campus Completed LEED Projects:
Smilow Center for Translational Research Laboratory - 500,000 sf (Silver)
Lerner Center for Music Building - 29,200 sf (Gold)
Joe’s Café in Steinberg-Hall Dietrich Hall - 12,000 sf (Gold Cl)
Weiss Pavilion 22,500 sf (Gold)
Golkin Hall for Penn Law School- 40,000 sf (Gold)
Hutchinson Infill Building Gym Renovation- 59,500 sf (Silver)
The ARCH - 29,000 sf (Silver)
Steinberg Hall - Dietrich Hall West Addition and Classrooms -33,800 sf (Gold)
Wharton School Dean's Suite 3,175 (Gold)
Vance Hall 22,500 (Silver)
New College House (198,000 sf) (Gold)
GRW Basement 27,800 (Silver)
3901 Walnut Office Building - 30,000 sf (Gold)
Levin Building – Neuro Behavioral Sciences 78,000 sf (Silver)
Krishna Singh Center for Nanotechnology 72,000 sf (Gold)
Perry World House - 17,900 sf (Silver)

Other LEED Buildings in the University of Pennsylvania System, but not included on the main campus:
Pennovation Center - 58,000 sf (Gold)
The Perelman Center for Advanced Medicine - 360,000 sf (Silver)
Morris Arboretum Horticultural Center - 28,400 sf (Platinum)
Henry A. Jordan Medical Education Center - 371,000 sf
Evo at Cira Center South - 454,000 sf (Gold)
FMC Tower at Cira Center South - 830,000 sf (Gold)

Century Bond Renovation Projects:
Chemistry 1973 Wing
Richards Building
Meyerson Hall
Ryan/Rosenthal
Evans Building

**Floor area of newly constructed or renovated building space that is NOT certified, but that was designed and constructed in accordance with published green building guidelines and policies:**
---

**A copy of the green building guidelines or policies:**
Green Guidelines for Renovations October 2015.pdf

**The green building guidelines or policies:**
---

**Do the green building guidelines or policies cover the following?:**

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts on the surrounding site (e.g. guidelines to reuse previously developed land, protect environmentally sensitive areas, and otherwise minimize site impacts)</td>
<td>Yes</td>
</tr>
<tr>
<td>Energy consumption (e.g. policies requiring a minimum level of energy efficiency for buildings and their systems)</td>
<td>Yes</td>
</tr>
<tr>
<td>Building-level energy metering</td>
<td>Yes</td>
</tr>
<tr>
<td>Use of environmentally preferable materials (e.g. guidelines to minimize the life cycle impacts associated with building materials)</td>
<td>Yes</td>
</tr>
<tr>
<td>Indoor environmental quality (i.e. guidelines to protect the health and comfort of building occupants)</td>
<td>Yes</td>
</tr>
<tr>
<td>Water consumption (e.g. requiring minimum standards of efficiency for indoor and outdoor water use)</td>
<td>Yes</td>
</tr>
<tr>
<td>Building-level water metering</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**A brief description of the green building guidelines or policies and/or a list or sample of buildings covered:**

The intent of the "Green Building guidelines" is to improve environmental practices for building renovation projects across campus that are below the designate thresholds for pursuing LEED certification, including the Morris Arboretum, the New Bolton Center, UPHS projects, and Penn Real Estate projects. The Guidelines are to be followed throughout all phases of applicable renovation projects, and apply to project design, specification, and construction.

In addition to the green guidelines, the University has a robust set of "Engineering Guidelines" which are required on all projects at the University. The "Engineering Guidelines" familiarize Architects and Engineers with the University's design requirements and procedures, preferred system and materials, utility operating characteristics, expectations for life cycle costing, and energy available on campus. Architectural, mechanical, electrical, plumbing, and landscape standards can be found on the Penn Facilities and Real Estate Services website:

https://www.facilities.upenn.edu/standards-policies/standards/design-standards

**A brief description of how the institution ensures compliance with green building design and construction guidelines and policies:**

To ensure compliance with the green building guidelines, Penn Project Managers include a review of the project’s sustainability goals as part of the kick-off meeting agenda, and ensure that the project team is aware of all requirements of Penn’s "Instructions to Design Professionals." Penn's "Instructions to Design Professionals" are incorporated by reference in Penn's Agreements with design professionals on all Penn projects.

At the outset of the project, and no later than the project kick-off meeting, the Project Team identifies a “Green Guidelines Coordinator” (GGC) for the project to fulfill the duties described in this document:

- For LEED projects, the A/E team shall designate the LEED coordinator, and an additional GGC is not needed;
- For projects that require an outside design professional that are not seeking LEED certification, the A/E team shall designate the GGC;
- For projects that do not have an outside design professional, the responsibilities of the GCC will be performed by a designated member of the School / Center staff;
For projects performed by the FRES O&M Small Projects Group, the GGC shall be designated by O&M management and the School / Center.

In addition to the "Green Guidelines for Renovations", the Penn "Engineering Guidelines" include specifications on all engineering related aspects of design and construction, with required compliance on all Penn projects. For example, the Engineering Guidelines specify all HVAC designs must maintain energy efficiency as a key criteria in conformance with the University's Climate Action Plan. When working in existing facilities, the designer should investigate energy savings opportunities which may reach outside the bounds of their projects. The design guidelines address all aspects of mechanical and HVAC systems, as well as many other aspects such as: electrical, fire, plumbing, etc.

The website URL where information about the programs or initiatives is available:
http://www.facilities.upenn.edu/standards-policies/standards/design-guidelines

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Energy

Points Claimed  3.25
Points Available  10.00

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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Energy Consumption</td>
<td>2.45 / 6.00</td>
</tr>
<tr>
<td>Clean and Renewable Energy</td>
<td>0.80 / 4.00</td>
</tr>
</tbody>
</table>
Building Energy Consumption

**Provisional Score**

2.45 / 6.00

**Responsible Party**

Madeline Schuh  
Sustainability Analyst  
Facilities and Real Estate Services

---

**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 65 Btu per gross square foot per Fahrenheit degree day (389 Btu per gross square metre per Celsius 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 (see G. Standards and Terms).

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

**Figures needed to determine total building energy consumption:**

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid-purchased electricity</td>
<td>996,091 MMBtu</td>
<td>1,054,469 MMBtu</td>
</tr>
<tr>
<td>Electricity from on-site renewables</td>
<td>0 MMBtu</td>
<td>0 MMBtu</td>
</tr>
<tr>
<td>District steam/hot water (sourced from offsite)</td>
<td>1,665,286 MMBtu</td>
<td>1,504,528 MMBtu</td>
</tr>
<tr>
<td>Energy from all other sources (excluding transportation fuels)</td>
<td>27,954 MMBtu</td>
<td>27,954 MMBtu</td>
</tr>
<tr>
<td>Total</td>
<td>2,689,331 MMBtu</td>
<td>2,586,951 MMBtu</td>
</tr>
</tbody>
</table>

Start and end dates of the performance year and baseline year (or 3-year periods):
<table>
<thead>
<tr>
<th></th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Year</td>
<td>July 1, 2016</td>
<td>June 30, 2017</td>
</tr>
<tr>
<td>Baseline Year</td>
<td>July 1, 2013</td>
<td>June 30, 2014</td>
</tr>
</tbody>
</table>

**A brief description of when and why the building energy consumption baseline was adopted (e.g. in sustainability plans and policies or in the context of other reporting obligations):**

2014 was adopted as baseline energy consumption year with the issuance of Penn's new "Climate Action Plan 2.0" in the fall of 2014.

**Gross floor area of building space:**

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross floor area of building space</td>
<td>15,864,661 Gross Square Feet</td>
<td>15,493,215 Gross Square Feet</td>
</tr>
</tbody>
</table>

**Source-site ratio for grid-purchased electricity:**

3.14

**Total building energy consumption per unit of floor area:**

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site energy</td>
<td>0.17 MMBtu / GSF</td>
<td>0.17 MMBtu / GSF</td>
</tr>
<tr>
<td>Source energy</td>
<td>0.32 MMBtu / GSF</td>
<td>0.33 MMBtu / GSF</td>
</tr>
</tbody>
</table>

**Percentage reduction in total building energy consumption (source energy) per unit of floor area from baseline (0-100):**

2.16

**Degree days, performance year (base 65 °F / 18 °C):**

<table>
<thead>
<tr>
<th></th>
<th>Degree days (see help icon above)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating degree days</td>
<td>4,023 Degree-Days (°F)</td>
</tr>
<tr>
<td>Cooling degree days</td>
<td>1,761 Degree-Days (°F)</td>
</tr>
</tbody>
</table>
Floor area of energy intensive space, performance year:

<table>
<thead>
<tr>
<th>Category</th>
<th>Floor Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory space</td>
<td>3,622,403 Square Feet</td>
</tr>
<tr>
<td>Healthcare space</td>
<td>221,225 Square Feet</td>
</tr>
<tr>
<td>Other energy intensive space</td>
<td></td>
</tr>
</tbody>
</table>

EUI-adjusted floor area, performance year:
23,551,917 Gross Square Feet

Building energy consumption (site energy) per unit of EUI-adjusted floor area per degree day, performance year:
19.74 Btu / GSF / Degree-Day (°F)

Documentation (e.g. spreadsheet or utility records) to support the performance year energy consumption figures reported above:
...

A brief description of the institution’s initiatives to shift individual attitudes and practices in regard to energy efficiency (e.g. outreach and education efforts):

Penn’s Office of Sustainability, in partnership with numerous Penn community members, runs a number of behavior change programs with the goal of shifting attitudes and practices in regard to energy efficiency. Programs throughout the year include: “30x30 Challenge”, “ReThink”, “Power Down”, “ULT Freezer Rebate”, “Green Living”, “Green Office”, “Creating Canopy”, and many others.

One example with large impact is the the “Power Down Challenge”. Every year, the Power Down Challenge empowers members of the Penn community to reduce their energy consumption and deepen their understanding of energy issues. Throughout the month of February, Penn and its partners join together for educational events and programs about energy consumption, reduction, and innovation. The Power Down Challenge in 2017 encouraged members of the Penn community to “signal a change” in their energy consumption habits. The 2017 campaign culminated in a collaborative, campus-wide Energy Reduction Challenge on February 22nd, 2017.

During the 2016 Power Down Challenge, Penn saved 220,640 kWh in 24 hours in the first ever single-day Energy Reduction Challenge at Penn. In 2017, Penn saved even more, reducing consumption by 11.4%, or 282,350 kWh in the 24-hour period - equivalent to 198 metric tons of CO2 emissions, taking 42 cars off the road, or planting 5,143 trees.

https://www.sustainability.upenn.edu/participate/penn-community/power-down-challenge
A brief description of energy use standards and controls employed by the institution (e.g. building temperature standards, occupancy and vacancy sensors):

Buildings are managed 24 hours per day, 365 days per year from Penn's Operations Control Center using a central Building Management System (BMS) system, allowing operators to detect faults or irregularities in building energy use compared with historical building performance. The system also is used to program setbacks to specific building systems (such as air handling units) to be initiated during times of peak energy use or unoccupied periods.

The SCADA BMS system has approximately 201,500 data points across campus buildings. Newer buildings have a greater number of data points as technology has developed and made installation and monitoring of points easier. In the past few years, Penn has worked to install building level sub-meters to campus buildings and tie their energy use into the SCADA system. This tie-in will help Penn's operations and engineering team better understand building level energy use and address issues quickly.

Over the course of 2013 to 2016, comprehensive lighting upgrades were completed in 45 buildings on campus, installing state of the art lighting systems with occupancy and vacancy sensors.

AirCuity demand ventilation systems are standard for all laboratory and vivarium buildings at Penn, in addition to numerous public and assembly spaces across campus.

A brief description of Light Emitting Diode (LED) lighting and other energy-efficient lighting strategies employed by the institution:

The Penn standard for all exterior pedestrian and security lighting, including on Penn’s primary public walkways and at city streets, is LED fixtures. Facilities and Real Estate Services installs LED technology in most buildings and exterior areas across campus as replacement lights where appropriate. Many lighting projects have been completed using rebates through the local utility company (PECO Energy), which are submitted routinely by facilities staff.

This year, continuing Penn’s “Move-In GREEN” program for the seventh year, over 600 LED bulbs were distributed free to incoming freshmen to use in supplemental lighting (such as desk lamps) that they brought with them from their homes.

A brief description of passive solar heating, geothermal systems, and related strategies employed by the institution:

The only geothermal system in place within the University of Pennsylvania System is located at the Morris Arboretum, which is not included in the boundary of the University, as defined by the STARS report.

The Morris Arboretum Horticulture Center, a 20,840-square foot facility that provides work space for the Arboretum’s horticulture, public programs, and facility staff, is heated and cooled using a ground source heat pump, using only about 1/4 the energy of a typical boiler/air conditioning system. Over 30 heat exchange wells are drilled under parking facilities and nearby open fields to supply the thermal source for the system. The “green” elements of the Horticulture Center provide...
unique opportunities to educate the public about the importance of protecting our natural resources. See http://www.morrisarboretum.org/hort_center.shtml

A brief description of co-generation employed by the institution, e.g. combined heat and power (CHP):

---

A brief description of the institution’s initiatives to replace energy-consuming appliances, equipment and systems with high efficiency alternatives (e.g. building re-commissioning or retrofit programs):

The Penn "Century Bond" program was developed to accelerate the building renovation programs. After a rigorous analysis of Penn buildings and building systems, $200M worth of funds raised through bond sales are being applied towards projects in which energy conservation and deferred maintenance converge - typically deep-energy retrofits and lighting upgrades. Energy savings from the projects are used by the school to pay back the bond interest. The funding for the projects are internally structured, to enable the use of the funds multiple times throughout the 100 year term of the bond. In the first phase, 45 buildings received new high-efficiency lighting, and 10 large buildings are being renovated. More information at:

https://www.pennconnects.upenn.edu/find_a_project/alphabetical/century_bond_alpha/century_bond_projects_overview.php

To optimize Penn's chilled water/air conditioning systems, Penn's chiller plants refrigerate the system cooling water stored in the 10+ miles of underground piping, at night when energy costs are low to provide daytime cooling capacity, reducing Penn's overall energy use and its burden on the regional electrical grid and saving money. In addition, Penn operates an ice storage tank, which freezes at night, to further reduce daytime cooling costs. In 2017, the chilled water plant capacity was expanded by 10,000 tons with the addition of two new steam-driven chillers and associated cooling towers. For more information, see:

https://penncurrent.upenn.edu/2013-08-08/latest-news/keeping-penns-campus-cool

and

https://www.pennconnects.upenn.edu/find_a_project/alphabetical/chiller_plant_alpha/MOD_7_chiller_plant_expansion_overview.php

Penn participates in a number of energy reduction and sustainability focuses programs. The "Ultra-Low Temperature (ULT) Freezer Efficiency Program" was established in 2015 to reduce the number of old and under-utilized freezers and incentivize the purchase of highly efficient ULT freezers, thereby reducing energy use and saving money. To date, this program has helped replace or eliminate 76 freezers on campus. This program is funded by the Division of Facilities & Real Estate
Services and jointly administered by the Sustainability Office and Penn Purchasing. The ULT Freezer Efficiency Program includes incentives for both recycling existing freezers and purchasing new freezers.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/sustainability-themes/conserving-energy

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

The questions regarding energy consumed from all other sources (excluding transportation fuels) is based on an engineering calculation and is not an exact accounting of energy use.

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn’s efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Clean and Renewable Energy

Provisional Score

0.80 / 4.00

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

Institution supports the development and use of clean and renewable energy sources, using any one or combination of the following options.

<table>
<thead>
<tr>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 2: Using renewable sources on-site to generate energy other than electricity, such as biomass for heating.</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td>Option 4: Purchasing the environmental attributes of electricity in the form of Renewable Energy Certificates (RECs), Guarantees of Origin (GOs) or similar renewable energy products that are either Green-e Energy certified or meet Green-e Energy’s technical requirements (or local equivalents) 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.</td>
</tr>
</tbody>
</table>

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 (i.e. the utility’s standard or default product) 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 (e.g. daylighting, passive solar design, ground-source heat pumps). The benefits of such strategies, as well as the improved efficiencies achieved through using cogeneration technologies, are captured by the *Greenhouse Gas Emissions* and *Building Energy Consumption* credits.

Transportation fuels, which are covered by the *Greenhouse Gas Emissions* and *Campus Fleet* credits, are not included.

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

**Total energy consumption (all sources, excluding transportation fuels), performance year:**

2,689,331 MMBtu

**Total clean and renewable electricity generated on site during the performance year and for which the institution retains or has retired the associated environmental attributes:**

0 MMBtu

**A brief description of on-site renewable electricity generating devices:**

---

**Non-electric renewable energy generated on-site, performance year:**

0 MMBtu

**A brief description of on-site renewable non-electric energy devices:**

---

**Total 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, performance year:**

0 MMBtu
A brief description of off-site, institution-catalyzed, renewable electricity generating devices:

---

Total third-party certified RECs, GOs and/or similar renewable energy products (including renewable electricity purchased through a utility-provided certified green power option) purchased during the performance year:

539,118 MMBtu

A brief description of the RECs, GOs and/or similar renewable energy products, including contract timeframes:

In 2013, the University signed a five-year contract to purchase 200M kWh of wind Renewable Energy Credits (RECs) annually. According to the EPA’s accounting of voluntary REC purchases, this offsets over 50% of the emissions from Penn’s total electrical usage.

In the FY18 academic year, the University intends to begin to evaluate a renewable energy purchase on a scale appropriate to the size and needs of the institution.

The website URL where information about the programs or initiatives is available:

https://www.sustainability.upenn.edu/sustainability-themes/conserving-energy

Additional documentation to support the submission:

---

Electricity use, by source (percentage of total, 0-100):

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage of total electricity use (0-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>---</td>
</tr>
<tr>
<td>Coal</td>
<td>---</td>
</tr>
<tr>
<td>Geothermal</td>
<td>---</td>
</tr>
<tr>
<td>Hydro</td>
<td>---</td>
</tr>
<tr>
<td>Natural gas</td>
<td>---</td>
</tr>
<tr>
<td>Nuclear</td>
<td>---</td>
</tr>
</tbody>
</table>
A brief description of other sources of electricity not specified above:

---

Energy used for heating buildings, by source::

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage of total energy used to heat buildings (0-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>---</td>
</tr>
<tr>
<td>Coal</td>
<td>---</td>
</tr>
<tr>
<td>Electricity</td>
<td>---</td>
</tr>
<tr>
<td>Fuel oil</td>
<td>---</td>
</tr>
<tr>
<td>Geothermal</td>
<td>---</td>
</tr>
<tr>
<td>Natural gas</td>
<td>---</td>
</tr>
<tr>
<td>Other (please specify and explain below)</td>
<td>---</td>
</tr>
</tbody>
</table>

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

---

Percentage of total energy consumption from clean and renewable sources:

20.05

Data source(s) and notes about the submission:

90%+ of Penn's building area is heated via the district steam heating loop; however, a few old, residential-scale buildings or parts of buildings are heated via independent fuel oil or natural gas fired boilers/furnaces.
While the Morris Arboretum is not included in the boundary for this report, their LEED Platinum Horticulture Center employs a geothermal system for heating.

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
**Food & Dining**

**Points Claimed** 2.77  
**Points Available** 8.00

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.

Dining services can also support sustainable food systems by preventing food waste and diverting food materials from the waste stream, by making low impact dining options available, and by educating its customers about more sustainable options and practices.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food and Beverage Purchasing</td>
<td>0.89 / 6.00</td>
</tr>
<tr>
<td>Sustainable Dining</td>
<td>1.88 / 2.00</td>
</tr>
</tbody>
</table>
Food and Beverage Purchasing

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.89 / 6.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

**Criteria**

Institution and/or its primary dining services contractor conducts an inventory to identify food and beverage purchases that have the following attributes:

**Third Party Verified.** The product is sustainably and/or ethically produced as determined by one or more recognized food and beverage sustainability standards (see G. Standards and Terms).

**Local & Community Based.** The product does not qualify as Third Party Verified, but meets the criteria outlined in the table below. This category provides a path for campus farms and gardens and small and mid-sized producers to be recognized in the absence of third party certification.

Consistent with the Real Food Standards, a product must meet the following criteria to qualify as Local & Community Based:

<table>
<thead>
<tr>
<th>Single-Ingredient Products</th>
<th>A single-ingredient product must meet ALL of the following criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ownership. Producer must be a privately or cooperatively owned enterprise. Wild-caught seafood must come from owner-operated boats.</td>
</tr>
<tr>
<td></td>
<td>Size. Produce: Gross annual sales for individual farms must not exceed $5 million (US/Canadian). Meat, poultry, eggs, dairy, fish/seafood, grocery/staple items (e.g., grains): Producing company’s gross annual sales must not exceed $50 million (US/Canadian).</td>
</tr>
<tr>
<td></td>
<td>Distance. All production, processing, and distribution facilities must be within a 250 mile (400 kilometre) radius of the institution. This radius is extended to 500 miles (800 kilometres) for meat (i.e., beef, lamb, pork, game).</td>
</tr>
</tbody>
</table>

| Single-Ingredient Products Aggregated From Multiple Sources (e.g., fluid milk) | At least 75 percent of the product (by volume) must meet the Ownership, Size, and Distance criteria outlined above. |
Multi-Ingredient Products (e.g., baked goods)

<table>
<thead>
<tr>
<th>Producing company must meet ALL of the following criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership. Company must be a privately or cooperatively owned enterprise.</td>
</tr>
<tr>
<td>Size. Company’s gross annual sales must be less than or equal to $50 million (US/Canadian).</td>
</tr>
<tr>
<td>Distance. All processing and distribution facilities must be within a 250 mile (400 kilometre) radius of the institution.</td>
</tr>
</tbody>
</table>

AND

At least 50 percent of the ingredients must come from farms meeting the Ownership, Size, and Distance criteria for Single-Ingredient Products outlined above.

Products from intensive livestock operations (e.g., CAFO-permitted facilities in the U.S.) are excluded. Due to the prevalence of industrial livestock production, meat, poultry, egg, and dairy producers should be assumed to be intensive operations unless the institution can verify otherwise through third party certification, transparent information from the supplier, and/or an appropriate regulatory body.

For additional guidance in identifying products that are Local & Community Based, see the Real Food Calculator.

The institution may also choose to identify purchases that have Other Sustainability Attributes (see E. Reporting Fields), i.e., that are environmentally or socially preferable in ways that are not recognized above. Examples include expenditures on products with credible sustainability claims and labels not formally recognized in the Third Party Verified category and products from local companies and regional farms that do not fully meet the Local & Community Based criteria. Although products reported in this category are considered to be conventionally produced and do not count toward scoring, identifying them can provide a more comprehensive picture of the institution’s sustainable purchasing efforts.

Products that meet more than one of the criteria outlined above (e.g., products from small and mid-sized local producers that are Certified Organic) should not be double-counted.

While products with sustainability attributes may be sourced through distributors or other third parties, the attributes of distributors do not count. For example, a product purchased from a local distributor may only be considered local if the product itself meets the criteria outlined above.

Transparency in the supply chain is a fundamental component of a sustainable food system. Products without verifiable sustainability attributes do not count in any of the categories outlined above. For each product that has one or more verifiable sustainability attributes, the inventory provides (at minimum):

- Product description/type.
- Label, brand or producer.

The category in which the product is being counted (e.g., Third Party Verified, Local & Community-Based), and/or a brief description of the specific sustainability attribute(s) for which it is being counted (i.e., information about the producer and any sustainability certifications or claims justifying its inclusion, e.g., “Certified Organic”, “local farm-to-institution program”).
Institutions in the U.S. and Canada with students running the Real Food Calculator may upload Calculator results to fulfill the inventory requirement. Likewise, products that have been formally verified through the use of the Real Food Calculator to be "Real Food A" or "Real Food B" may be counted as “third party verified… or Local & Community-Based” (see E. Reporting Fields).

For transparency and to help ensure comparability across institutions, it is strongly recommended that institutions not reporting Real Food Calculator results use the STARS Food and Beverage Purchasing Inventory template to record their purchases, and upload the results as documentation.

This credit includes food and beverage purchases for on-campus dining halls and catering services operated by the institution or the institution’s primary dining services contractor (e.g., Aramark, Bon Appetit Management Company, Chartwells, Sodexo). Outlets that are unique to the institution or its primary contractor (e.g., retail concepts developed and managed by the institution or contractor) are included. On-site franchises (e.g., national or global brands), convenience stores, vending services, and concessions may be excluded; they are covered in the Sustainable Procurement credit in Purchasing.

**Part 1**

Institution’s dining services purchase food and beverage products that are third party verified under one or more recognized food and beverage sustainability standards or Local & Community-Based.

**Part 2**

Institution’s dining services minimize the purchase of conventional animal products, as measured by the percentage of total dining services food and beverage expenditures on such products.

Conventional animal products include all meat, fish/seafood, poultry, eggs, and dairy products that do NOT qualify in either the Third Party Verified category or the Local & Community-Based category (as outlined above). Please note that products reported in the “other sustainability attributes” category are considered to be conventionally produced.

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

Percentage of dining services food and beverage expenditures on products that are third party verified under one or more recognized food and beverage sustainability standards or Local & Community-Based (0-100):

16.70

Does the institution wish to pursue Part 2 of this credit (expenditures on conventional animal products)? (If data is not available, respond “No”):

No

Percentage of total dining services food and beverage expenditures on conventional animal products (meat, poultry, fish/seafood, eggs, and dairy products that do NOT qualify in either the Third Party Verified or Local & Community-Based category):

62
A brief description of the sustainable food and beverage purchasing program, including how the sustainability impacts of products in specific categories are addressed (e.g. meat, poultry, fish/seafood, eggs, dairy, produce, tea/coffee):

Bon Appetit at Penn Dining believes in preserving the future by purchasing food in a sustainable, socially responsible manner. A sustainable future for food service means flavorful food that’s healthy and economically viable for all, produced through practices that respect farmers, workers, and animals; nourish the community; and replenish the shared natural resources for future generations.

Bon Appetit at Penn Dining purchases the following:
only rBGH-free milk and yogurt;
ground beef from animals fed a vegetarian diet, never given antibiotics or artificial hormones, and from a third-party verified humane source;
poultry from animals raised without the routine use of antibiotics;
pork never given antibiotics and raised without gestation crates;
seafood, wild and farmed, that adheres to the sustainability guidelines for commercial buyers as outlined by the Monterey Bay Aquarium Seafood Watch program
cage-free eggs.

In addition, Penn offers vegan/vegetarian options every day at all its dining facilities.

An inventory of the institution’s sustainable food and beverage purchases that includes for each product: the description/type; label, brand or producer; and the category in which it is being counted and/or a description of its sustainability attribute(s):

OP 7 Part 2.pdf

A brief description of the methodology used to conduct the inventory, including the timeframe and how representative samples accounted for seasonal variation (if applicable):

Penn’s dining and catering provider, Bon Appetit Management Company provided information on its sustainable food purchases.

Percentage of total dining services expenditures on Real Food A (0-100):
---

Percentage of total dining services expenditures on Real Food B (0-100):
---

Which of the following food service providers are present on campus and included in the total food and beverage expenditure figures?:

<table>
<thead>
<tr>
<th>Present?</th>
<th>Included?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Service Description</th>
<th>University of Pennsylvania</th>
<th>Penn State University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dining operations and catering services operated by the institution</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Dining operations and catering services operated by a contractor</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Student-run food/catering services</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Franchises (e.g. national or global brands)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Convenience stores</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Vending services</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Concessions</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**A brief description of purchased food and beverage products that have other sustainability attributes not recognized above:**

The University dining contractor, Bon Appetit, is a food service company with a commitment to: supporting local agriculture, serve seafood which meets Seafood Water guidelines, reducing antibiotic use in farm animals, serving rBGH-free milk, use cage-free eggs, tackling food's role in climate change, addressing farm-workers' rights, use humanely raised ground beef, and phasing out pork raised with gestation crates. Due to their corporate commitment to leadership in sustainability and many other reasons, Bon Appetit is Penn's primary food service company.

**Additional percentage of dining services food and beverage expenditures on conventional products with other sustainability attributes not recognized above (0-100):**

---

**The website URL where information about the programs or initiatives is available:**

http://cms.business-services.upenn.edu/dining/

**Additional documentation to support the submission:**

---

**Data source(s) and notes about the submission:**

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn’s efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0".
Plan 2.0. The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Sustainable Dining

Provisional Score                  Responsible Party

1.88 / 2.00                       Madeline Schuh
                                    Sustainability Analyst
                                    Facilities and Real Estate Services

Criteria

Institution’s dining services support sustainable food systems in one or more of the following ways. The institution or its primary dining services contractor:

- Has a published sustainable dining policy that includes specific criteria to support the procurement of environmentally and socially preferable food and beverage products and/or includes guidelines to reduce or minimize the adverse environmental and social impacts of dining operations;
- Sources food from a campus garden or farm;
- Hosts a farmers market, community supported agriculture (CSA) or fishery program, and/or urban agriculture project, or supports such a program in the local community;
- Has a vegan dining program that makes diverse, complete-protein vegan options available to every member of the campus community at every meal;
- Hosts low impact dining events (e.g. Meatless Mondays);
- Hosts sustainability-themed meals (e.g. local harvest dinners);
- Hosts a sustainability-themed food outlet on-site, either independently or in partnership with a contractor or retailer;
- Informs customers about low impact food choices and sustainability practices through labeling and signage in dining halls;
- Engages in outreach efforts to support learning and research about sustainable food systems; and/or
- Other sustainability-related initiatives (e.g. health and wellness initiatives, making culturally diverse options available)

Part 2

Institution’s dining services minimize food and dining waste in one or more of the following ways. The institution or its primary dining services contractor:

- Participates in a competition or commitment program (e.g. U.S. EPA Food Recovery Challenge) and/or uses a food waste prevention system (e.g. LeanPath) to track and improve its food management practices;
- Has implemented trayless dining (in which trays are removed from or not available in dining halls) and/or modified menus/portions to reduce post-consumer food waste;
- Donates food that would otherwise go to waste to feed people;
- Diverts food materials from the landfill, incinerator or sewer for animal feed or industrial uses (e.g. converting cooking oil to fuel, on-site anaerobic digestion);
- Has a pre-consumer composting program;
- Has a post-consumer composting program;
- Utilizes reusable service ware for “dine in” meals;
- Provides reusable and/or third party certified compostable containers and service ware for “to-go” meals (in conjunction with an on-site composting program);
• Offers discounts or other incentives to customers who use reusable containers (e.g. mugs) instead of disposable or compostable containers in “to-go” food service operations; and/or
• Other materials management initiatives to minimize waste not covered above (e.g. working with vendors and other entities to reduce waste from food packaging).

This credit includes on-campus dining operations and catering services operated by the institution and the institution’s primary dining services contractor.

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

Does the institution or its primary dining services contractor have a published sustainable dining policy?:
Yes

A brief description of the sustainable dining policy:

Penn Dining and Bon Appétit are committed to supporting the plan by managing our food services in a sustainable, socially responsible manner. While Penn Dining and Bon Appétit have partnered since 1998, since 1999 Bon Appétit has been working directly with farmers and ranchers through its Farm to Fork program. In addition, they strive to serve only seafood that meets Seafood Watch sustainability guidelines, and are committed to reducing antibiotic use in farm animals, serving rBGH-free milk, switching to cage-free eggs, tackling food's role in climate change, addressing farmworkers’ rights issues, switching to humanely raised ground beef, and phasing out pork raised with gestation crates.

In addition, Bon Appétit works to minimized the generation of food waste. Kitchen and post-consumer waste is collected and composted in an off-site Recycling Center. Composting has the added benefit of reducing the amount of waste sent to the landfill and contributes to the "Climate Action Plan 2.0" waste diversion goals.

Does the institution or its primary dining services contractor source food from a campus garden or farm?:
No

A brief description of the program to source food from a campus garden or farm:
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Does the institution or its primary dining services contractor host a farmers market, community supported agriculture (CSA) or fishery program, and/or urban agriculture project, or support such a program in the local community?:
Yes

A brief description of the farmers market, CSA or urban agriculture project:
The "Common Market", provides the university with a farm share program. The "Common Market" aggregates local farm products to supply customers with a large variety. Baskets are available for pick-up on campus and are delivered bi-weekly.
Complementing the farmshare program, there is a weekly local farmers market on campus, providing local produce, baked goods, plants, and much more. In addition to these two programs, Penn has an urban food forest in the "Penn Park Orchard", complete with an apiary to provide pollination. The food from the "Orchard" is harvested by staff for non-commercial consumption.

**Does the institution or its primary dining services contractor have a vegan dining program that makes diverse, complete-protein vegan options available to every member of the campus community at every meal?:**
Yes

**A brief description of the vegan dining program:**
Penn has been identified by PETA for the past several years as one of the most Vegan-Friendly Schools in the country. Penn Dining & Bon Appétit offer vegan dining options in every dining location, at every meal. Bon Appétit meets and works with the Penn Vegan Society on a monthly basis to ensure we are up to date on all vegan dining options.

**Does the institution or its primary dining services contractor host low impact dining events (e.g. Meatless Mondays)?:**
Yes

**A brief description of the low impact dining events:**
Penn encourages all events to plan and participate in low waste events. A low waste event is one in which the majority of the waste generated at the event is either composted or recycled. Any scale event, from department-wide gatherings to small staff meetings, staff picnics to lunchtime seminars, can be made low waste (Zero Waste events are not currently feasible for all Penn events due to the closure of the industrial scale composting facility which was able to accept compostable plastics. For this reason, Penn encourage low waste events where reusable service-wear is used.

**Does the institution or its primary dining services contractor host sustainability-themed meals (e.g. local harvest dinners)?:**
No

**A brief description of the sustainability-themed meals:**
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**Does the institution or its primary dining services contractor host a sustainability-themed food outlet on-site, either independently or in partnership with a contractor or retailer?:**
Yes

**A brief description of the sustainability-themed food outlet:**
A local farmers market on campus, providing local produce, baked goods, plants, and much more. Students are able to pay for farmers market items with dining hall voucher points. The farmers market provides produce to both students and faculty/staff.

Does the institution or its primary dining services contractor inform customers about low impact food choices and sustainability practices through labeling and signage in dining halls?:
No

A brief description of the sustainability labeling and signage in dining halls:

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Does the institution or its primary dining services contractor engage in outreach efforts to support learning and research about sustainable food systems?:
Yes

A brief description of the outreach efforts to support learning and research about sustainable food systems:

Scholars and practitioners convened to discuss the new developments on urban food security at the Penn IUR and Wharton IGEL Sustainable, Equitable Urban Food Systems Event in September of 2014. The panel explored topics ranging from eating patterns in population and access to food; economic benefits of food production in employment figures; global food supply and climate change; contrasting healthier products offerings in supermarkets located in low vs high income neighborhoods; public health concerns in food deserts; and food production from urban agriculture.

Does the institution or its primary dining services contractor have other sustainability-related initiatives (e.g. health and wellness initiatives, making culturally diverse options available)?:
Yes

A brief description of the other sustainability-related dining initiatives:

Bon Appétit has a Registered Dietitian Nutritionist on staff, who is is available to speak with students who have general nutrition questions as well as those who have special dietary needs.

Free nutrition services are offered at Campus Health and Student Health Service. Nutrition workshops for student groups are available upon request by Campus Health. Additionally, Student Health Service has two nutritionists on staff who provide:
- General nutrition information including how to eat a healthy diet as a busy student.
- Specific nutrition counseling for medical issues like celiac disease, lactose-intolerance, high cholesterol, high blood pressure, etc.
- Specialized nutrition counseling for patients who have disordered eating patterns, have been diagnosed with anorexia or bulimia or have other concerns relating to these issues.

Does the institution or its primary dining services contractor participate in a competition or commitment program and/or use a food waste prevention system to track and improve its food management?
A brief description of the food recovery competition or commitment program or food waste prevention system:

"Watch Your Waste" is Penn Dining’s waste minimization campaign. The campaign has three different aspects: Municipal Solid Waste reduction, proper disposal of waste, and reduction of the amount of food wasted. Penn Dining works to ensure all materials in the dining areas are recyclable and that all items go in the appropriate bin, whether it is waste, recyclable, or compostable. The final aspect of the program works to encourage diners to eat all the food they take, reducing food waste.

A brief description of the trayless dining or modified menu/portion program:

In an effort to reduce food waste, Penn and its dining partner, Bon Appetit, have removed trays from dining halls. Students are encouraged to “take all they want, eat all they take” as part of Penn's campaign for waste management in the dining halls.

A brief description of the food donation program:

Penn Dining along with Bon Appetit works with Feeding America, Philabundance, and the Salvation Army to address hunger in the Philadelphia community through the donation of food which is prepared, but not served. The food is frozen and then donated to the Salvation Army Pioneers.

A brief description of the food materials diversion program:

All pre-consumer food waste is composted or digested in a mechanical digester in the dining halls. The digester works by kitchen staff putting food scraps in the digester which allows them to be put down the drain and treated in the municipal waste water system. The compost is managed by Organic Diversion, LLC, which supplies high quality compost for agricultural use.
Does the institution or its primary dining services contractor have a pre-consumer composting program?:
Yes

A brief description of the pre-consumer composting program:
All pre-consumer food waste for composting is collected in the kitchens in compostable liners and deposited in green disposal bins to be hauled to an organic recycling center.

Does the institution or its primary dining services contractor have a post-consumer composting program?:
Yes

A brief description of the post-consumer composting program:
Green composting bins are placed at all dishware collection areas in the dining halls. Dining hall customers do not scrap their plates, but instead trained kitchen staff members scrape plates to ensure low contamination levels in the compost.

Does the institution or its primary dining services contractor utilize reusable service ware for “dine in” meals?:
Yes

A brief description of the reusable service ware program:
All of Penn's four primary dining halls are equipped with dish washing stations in kitchens. Dining hall customers place dishes in designated areas where they are collected and washed by kitchen staff. Satellite, smaller "grab-and-go" dinning facilities use some disposable serviceware.

Does the institution or its primary dining services contractor provide reusable and/or third party certified compostable containers and service ware for “to-go” meals (in conjunction with an on-site composting program)?:
Yes

A brief description of the compostable containers and service ware:
Penn Dining operates the "Green2Go" Program in its residential dining cafes to reduce the usage of disposable to-go containers. Students on a dining plan are automatically eligible to participate, and can see their RA or visit either 1920 Commons, New College House, Hill College House, or King's Court English House to pick up a "Key2Green" tag.

Students visit any of the participating locations and present their "Key2Green" key tag to the cashier to receive their first "Green2Go" container. Next time they visit, they simply return the rinsed container to one of the three participating dining cafes and exchange it for another container or for a key tag. Students are charged $2 for a non-reusable container which
encourages use of the reusable ones.

By participating in the program, Penn has eliminated by two-thirds the number of disposable clamshells which make their way into the waste stream at Penn (estimated to be 171,000 annually). The program supports Penn’s waste minimization efforts.

**Does the institution or its primary dining services contractor offer discounts or other incentives to customers who use reusable containers (e.g. mugs) instead of disposable or compostable containers in “to-go” food service operations?:**

Yes

**A brief description of the reusable container discount or incentives program:**

Students can use their UA/Penn Dining reusable mug, to receive “buck a brew” special pricing at non-branded retail operations throughout campus: Houston Market, Joe’s Café, Mark’s Café, NCH Retail and Accenture Café. In addition, they can also refill at any AYCTE operation.

**Has the institution or its primary dining services contractor implemented other materials management initiatives to minimize waste not covered above (e.g. working with vendors and other entities to reduce waste from food packaging)?:**

Yes

**A brief description of other dining services materials management initiatives:**

Penn Purchasing Services promotes an environmentally sustainable supply chain. In collaboration with Penn’s Green Campus Partnership, Purchasing Services works with its suppliers and the Penn community to actively identify and promote products and processes that make a positive sustainability impact. Purchasing Services is a member of the "Sustainable Purchasing Leadership Council" - a non-profit organization whose mission is to support and recognize purchasing leadership that accelerates the transition to a prosperous and sustainable future. The Council’s programs and community of practice will help institutional purchasers to: prioritize opportunities to influence the social, environmental and economic life cycle impacts of purchased goods and services, identify existing leadership standards and approaches that address these priorities, benchmark progress toward goals, and receive recognition for advancement.

On May 19, with "Wash Cycle Laundry", Penn received the 2017 Leadership Award for "Supplier Engagement from the Sustainable Purchasing Leadership Council" (SPLC). This award recognizes the collaboration between Penn and “Wash Cycle Laundry” in its efforts to collaborate and put in place a supplier solution with a multi-faceted sustainability impact. The services provided to Penn by "Wash Cycle Laundry" are innovative, earth friendly, locally sourced, and generate upwardly mobile job opportunities for vulnerable job seekers in the area. This solution also stands as an example of a large anchor institution (Penn) working with a small business ("Wash Cycle Laundry") for mutually beneficial impact. "Wash Cycle Laundry" provides laundry services for Penn's tablecloths, lab coats, kitchen aprons, linens, and other items.

"Wash Cycle Laundry", employs a wide range of sustainable purchasing strategies and document measurable environmental, social, and/or economic benefits. SPLC Executive Director Jason Pearson said “The winners of SPLC’s Leadership Awards exemplify, encourage, and support a constructive cycle of innovation that will define the global marketplace of tomorrow.”
The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:
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Data source(s) and notes about the submission:

Penn's dining contract vendor, "Bon Appetit Management Company", established in 1999 a company-wide commitment to buying locally, called "Farm to Fork". Chefs for Penn dining halls are required to purchase at least 20 percent of their ingredients from small farms and ranches located within 150 miles of their kitchens that are registered through this program. By buying directly from farmers, Penn chefs have much more control over what types of agribusiness are supported with University resources. Priority is given to supporting true family farms, where the owners live on or nearby the land, work it themselves, and therefore are conscientious stewards. In 2011, Bon Appetit defined a new mid-size category for regional meat producers, and also launched a companion seafood program, called "Fish to Fork".

In 2014, Bon Appetit defined a "Locally Crafted" category, for local artisans who support socially and environmentally responsible practices through community entrepreneurship.

Its rules for "Farm to Fork" eligibility for all farms are on the Bon Appetit Company website, at http://www.bamco.com/sourcing/farm-to-fork-criteria/

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
### Grounds

**Points Claimed** 2.09  
**Points Available** 3.00  

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 resources.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
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<tbody>
<tr>
<td>Landscape Management</td>
<td>1.09 / 2.00</td>
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</tbody>
</table>

This credit is weighted more heavily for institutions that own or manage land that includes or is adjacent to any of the following:

- Legally protected areas (e.g. IUCN Category I-VI)
- Internationally recognized areas (e.g. World Heritage, Ramsar, Natura 2000)
- Priority sites for biodiversity (e.g. Key Biodiversity Areas, Alliance for Zero Extinction sites)
- Regions of conservation importance (e.g. Endemic Bird Areas, Biodiversity Hotspots, High Biodiversity Wilderness Areas)

Institutions may identify legally protected areas, internationally recognized areas, priority sites for biodiversity, and regions of conservation importance using the Integrated Biodiversity Assessment Tool (IBAT) for Research & Conservation Planning, the U.S. Information, Planning, and Conservation (IPaC) decision support system, or an equivalent resource or study.

Close
Landscape Management

Provisional Score  
1.09 / 2.00

Responsible Party  
Madeline Schuh  
Sustainability Analyst  
Facilities and Real Estate Services

Criteria

Institution’s grounds include areas that are managed in accordance with:

1) An Integrated Pest Management (IPM) program;

Or

2) An organic land care standard or landscape management program that has eliminated the use of inorganic fertilizers and chemical pesticides, fungicides and herbicides in favor of ecologically preferable materials.

To count, an IPM program must use a four-tiered approach as outlined in G. Standards and Terms. Management programs that employ some IPM principles or techniques but do not include a four-tiered approach should be counted as conventional programs.

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

Total campus area (i.e. the total amount of land within the institutional boundary):

299 Acres

Figures required to calculate the total area of managed grounds:

<p>| Area managed in accordance with an Integrated Pest Management (IPM) program that uses a four-tiered approach | 272.25 Acres |
| Area managed 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 | 26.75 Acres |</p>
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<tr>
<th>Area managed using conventional landscape management practices (which may include some IPM principles or techniques)</th>
<th>0 Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area of managed grounds</td>
<td>299 Acres</td>
</tr>
</tbody>
</table>

A brief description of any land excluded from the area of managed grounds (e.g. the footprint of buildings and impervious surfaces, experimental agricultural land, areas that are not regularly managed or maintained):

All of campus is included in the managed grounds.

Percentage of grounds managed in accordance with an IPM program:

91.05

A copy of the IPM plan or program:

---

A brief description of the IPM program:

Penn practices "Integrated Pest Management", (IPM), which combines environmental, chemical, and structural strategies to address and prevent infestation and reproduction of pests.

After an initial inspection of the problem area by an IPM professional, a solution is implemented which might include treatment with traps, bait, sealing of crevices and gaps, and installation of devices such as door sweeps.

Further information and recommendations to help prevent pests can be found here:

http://cms.business-services.upenn.edu/residential-services/services-a-support/maintenance-a-housekeeping/pest-control.html

Percentage of grounds managed in accordance with an organic program:

8.95

A brief description of the organic land standard or landscape management program that has eliminated the use of inorganic fertilizers and chemical pesticides, fungicides and herbicides in favor of ecologically preferable materials:

The University of Pennsylvania manages its grounds using guidelines that responsibly implement best practices in organic campus management, including 100% native/adaptive plant selection, compost tea applications for lawn and meadow growth, on-campus leaf composting and reapplication as bedding cover, and use of natural predators (such as lady bugs to
control an aphid population). The broadcast use of synthetic pesticides and herbicide applications is prohibited. All site work is carefully studied to provide the best environment for our plant communities which results in little to no pest infestations, and landscape / tree protection protocols are strictly enforced as part of capital project standards.

Penn's urban forest is carefully maintained, with all campus trees entered into a digital inventory, along with maintenance history. In partnership with the US Forest Service Philadelphia Field Station and Penn's Earth and Environmental Science faculty, a thorough calculation of campus tree canopy coverage was completed in 2016, and its ecological services and benefits documented. In recognition of this work, Penn's Campus is a Tree Campus USA Awardee for the eighth year in a row and in 2017 achieved Level 2 Arboretum accreditation through ArbNET, the interactive, collaborative, internationally-recognized community of arboreta and tree professionals. Penn joins a select group of fewer than 23 universities worldwide which have achieved this certification.

https://penncurrent.upenn.edu/news/penn-named-an-arboretum-and-other-green-news

A brief description of the institution's approach to plant stewardship:

Penn prioritizes the use of native plant species in landscaping. The University Landscape Architect always tries to plant as many native plants as possible, as they are adapted to our region and tend to grow well here. They improve our natural ecosystem, tend to require less water and low maintenance, and provide food and habitat for pollinators and other wildlife.

A brief description of the institution's approach to hydrology and water use:

In 2013, Penn completed a campus-wide "Stormwater Masterplan" to promote ecologically-responsible stormwater management practices. Infiltration is a primary stormwater management strategy at Penn, with the use of permeable paving and sand bedding for unit pavers common. To minimize the use of potable water for irrigation, Penn has an extensive system of on-campus underground cisterns, including a 300,000 gallon underground cistern that captures and reuses all stormwater that falls on Penn Park, Penn's 24-acre public park and recreation/athletics center, and a 30,000 gallon cistern at Penn's Shoemaker Green. In addition to these underground cisterns there are a number of others which include: the New College House lawn, two at the Singh Center for Nanotechnology, Perry World House, the Morgan Building, three at the Annenberg Center, and two at Penn Law. Water collected in cisterns is used for irrigation, and prior to storms is released at a controlled rate into the City's combined stormwater sewers to help manage stormwater surge. Penn's new landscapes incorporate soil moisture sensors to limit unnecessary irrigation during wet periods.

In compliance with Philadelphia Water's stormwater requirements, all of Penn's capital projects that disturb 15,000 sf or more are required to manage the first 1" of rain on-site, doing so though a combination of cisterns, bio-swales, rain gardens, and green roofs. At Penn, green roofs are used to absorb stormwater and support rooftop green amenities. There are over two dozen green roofs on Penn's campus.

https://www.facilities.upenn.edu/sites/default/files/Stormwater%20Master%20Plan%20for%20the%20%20University%20of%20Pennsylvania_March%202013_web.pdf
A brief description of the institution's approach to materials management and waste minimization (e.g. composting and/or mulching on-site waste):

Penn's Urban Parks and landscape management team prioritize reuse and waste minimization. Penn stockpiles stone paving materials, granite curbs, and unit pavers in a landscape reuse yard to facilitate reuse in campus landscapes. The front garden of Penn's Civic House, Penn's student volunteer center, for example, exclusively used 100-year old granite curbs salvaged from Penn's campus as pavers and benches in its landscape design.

To reduce the use of fertilizers on campus, the University collects and composts leaves. Some of the leaves are used after a season of curing as top dressing for gardens and plaza plantings every spring. The remainder of the leaves are mixed with water and cured, then used as compost tea (natural fertilizer) which is broadcast on lawns and meadows, reducing the need for inorganic fertilizers, herbicides, and pesticides while boosting soil organic activity. As part of the imminent "Ecological Stewardship Landscape Plan," Penn's consultants measured soil bio-activity at representative campus landscapes to evaluate soil health.

A brief description of the institution's approach to energy-efficient landscape design:

As part of Penn's commitment to sustainability, landscape is designed to incorporate native plants that require less maintenance and use less water. In addition, 25 green roofs, installed on over 12 different buildings, contribute to building related energy reduction goals. The use of shade trees adjacent to south-facing facade, is prioritized to reduce summer heat gain inside buildings. Penn actively manages an extensive street tree program to ensure shading on public walkways, campus paths, and sidewalks, to reduce Philadelphia's urban heat island effect. Campus standards are for street trees to be planted in integrated trenches, not pits, with permeable cobble paving in the tree zone to encourage rainwater infiltration, healthier soils, and more robust development of deep root networks.

A brief description of other sustainable landscape management practices employed by the institution (e.g. use of environmentally preferable landscaping materials, initiatives to reduce the impacts of ice and snow removal, wildfire prevention):

Penn follows a Tree Care Plan that is updated yearly. This plan is developed to document ongoing practices and establish a successful, health, and beautiful urban forest. The West Philadelphia Penn campus is recognized as a Level 2 Arboretum under ArbNet Arboretum Accreditation Program. The Arboretum curates and manages a diverse collection of trees, focused on preserving and sustaining the urban forest for the well-being of the community, environmental benefits, research and educational opportunities. Penn's campus is an urban forest with more than 6,500 trees in its collection, over 240 species of trees and shrubs, ten specialty gardens and five urban parks. The arboretum designation recognizes the importance of Penn's overall landscape stewardship, highlights of which include:
* promoting proper species selection and planning for age and tree species diversity throughout the entire tree population;
* selecting native and adaptive species to aid in creating healthy plant communities and habitat for wildlife;
* developing preventative care, protection, and maintenance plans for high-value trees on campus and, whenever possible, other trees on campus that could be adversely affected by construction activities;
* creating and implementing a regular tree replacement strategy in keeping with the overall campus tree strategy;
* incorporating policies and recommendations from local and national agencies, including but not limited to: Greenworks Philadelphia, Philadelphia Planning Commission's Complete Streets Guidelines, Philadelphia Parks and Recreation (PPR) standards, Philadelphia Street Tree Ordinance, Sustainable Sites Initiative (SITES), and the ANSI A300 Tree Care Standards and associated Best Management Practices;
* establishing a stronger connection between students and staff to the campus and the surrounding neighborhood through
outreach and engagement strategies in partnership with the Penn Sustainability Office, allowing the Penn community to become stewards of their environment, to be educated regarding the importance of trees and different tree species, and to value and respect trees and urban forests.

* To reduce plant and tree damage during the winter, Penn uses EnviroMelt, an environmentally-friendly ice melter, and uses the steam loop to heat pavement at several critical service accessways to eliminate the use of icemelt chemicals.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/initiatives/designing-green

Additional documentation to support the submission:

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Data source(s) and notes about the submission:

In 2016, Penn commissioned a multi-disciplinary consulting team to evaluate all campus landscape maintenance and design practices. The intent of the consultancy is to formulate practice-based recommendations that would allow Penn's facilities team to move toward a 100% organic campus, emphasizing ecological health, biodiversity, and reliance on natural systems. The report, Penn's "Ecological Landscape Stewardship Plan" (ELSP) is under review with the expected completion in 2018.

In addition the ELSP, Penn's main campus was designated as an arboretum under ArbNet. Penn's main campus joins a select few urban universities designated with this designation.

For more information, see
https://www.facilities.upenn.edu/standards-policies/policies/outdoor-space-policy
and [http://Landscape Stewardship placeholder]

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor’s, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Biodiversity

Provisional Score

1.00 / 1.00

This credit is weighted more heavily for institutions that own or manage land that includes or is adjacent to any of the following:

- Legally protected areas (e.g. IUCN Category I-VI)
- Internationally recognized areas (e.g. World Heritage, Ramsar, Natura 2000)
- Priority sites for biodiversity (e.g. Key Biodiversity Areas, Alliance for Zero Extinction sites)
- Regions of conservation importance (e.g. Endemic Bird Areas, Biodiversity Hotspots, High Biodiversity Wilderness Areas)

Institutions may identify legally protected areas, internationally recognized areas, priority sites for biodiversity, and regions of conservation importance using the Integrated Biodiversity Assessment Tool (IBAT) for Research & Conservation Planning, the U.S. Information, Planning, and Conservation (IPaC) decision support system, or an equivalent resource or study.

Responsibility Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

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.

Close
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?:

No

A brief description of the legally protected areas, internationally recognized areas, priority sites for biodiversity, and/or regions of conservation importance:

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Has the institution conducted an assessment or assessments to identify endangered and vulnerable species (including migratory 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 methodologies used to identify endangered and vulnerable species and/or environmentally sensitive areas (including most recent year assessed) and any ongoing assessment and monitoring mechanisms:

As part of the "Tree Campus USA" submission, which is updated yearly by Penn, an assessment of tree care, management, and health as well as an inventory of trees on campus is completed. In addition, the plan evaluates the biodiversity of the tree population and specifies native and adaptive species for planting.

A brief description of identified species, habitats and/or environmentally sensitive areas:

As part of the imminent "Ecological Landscape Stewardship Plan", Penn's campus was comprehensively assessed to better understand the design intent, biodiversity, plant health, soil, and stormwater implications.

A brief description of plans or programs in place to protect or positively affect identified species, habitats and/or environmentally sensitive areas:

The imminent "Ecological Landscape Stewardship Plan" along with the "Tree Care Plan" identify plans and management programs to protect sensitive areas.

The website URL where information about the programs or initiatives is available:

https://www.sustainability.upenn.edu/initiatives/designing-green

Additional documentation to support the submission:

stars.aashe.org
Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Purchasing

Points Claimed  3.74
Points Available  6.00

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.

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<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Procurement</td>
<td>2.50 / 3.00</td>
</tr>
<tr>
<td>Electronics Purchasing</td>
<td>0.32 / 1.00</td>
</tr>
<tr>
<td>Cleaning and Janitorial Purchasing</td>
<td>0.74 / 1.00</td>
</tr>
<tr>
<td>Office Paper Purchasing</td>
<td>0.18 / 1.00</td>
</tr>
</tbody>
</table>
Sustainable Procurement

Provisional Score

2.50 / 3.00

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

Part 1

Institution has written policies, guidelines or directives that seek to support sustainable purchasing across commodity categories institution-wide, for example:

- A stated preference for post-consumer recycled or bio-based content or to otherwise minimize the negative environmental impacts of products and services.
- A stated intent to support disadvantaged businesses, social enterprises and/or local small and medium-sized enterprises (SMEs) or otherwise support positive social and economic impacts and minimize negative impacts.
- A vendor code of conduct or equivalent policy that sets expectations about the social and environmental responsibility of the institution’s business partners (i.e. product and service providers).

Part 2

Institution employs Life Cycle Cost Analysis (LCCA) as a matter of policy and practice when evaluating energy- and water-using products, systems and building components (e.g. HVAC 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.

Please note that LCCA is a method for assessing the total cost of ownership over the life cycle of a product or system (i.e. purchase, installation, operation, maintenance, and disposal). Life Cycle Assessment (LCA), by contrast, is a method for assessing the environmental impacts of a product or service over its life cycle. While LCAs may inform the sustainability criteria recognized in Part 3 of this credit, Part 2 specifically recognizes institutions that employ LCCA.

Part 3

Institution has published sustainability criteria to be applied when evaluating products and services in one or more of the following categories. The criteria address the specific sustainability challenges and impacts associated with products and services in each category, e.g. by requiring or giving preference to multi-criteria sustainability standards, certifications and labels appropriate to the category.

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Chemically intensive products and services (e.g. building and facilities maintenance, cleaning and sanitizing, landscaping and grounds maintenance)</td>
<td>• Published measures to minimize the use of chemicals. • A stated preference for green cleaning services and third party certified products.</td>
</tr>
<tr>
<td>2) Construction and renovation (e.g. furnishings and building materials)</td>
<td>• A stated preference for materials that meet LEED requirements.</td>
</tr>
</tbody>
</table>
3) Information technology (IT) (e.g. computers, imaging equipment, mobile phones, data centers and cloud services)  
- Published measures to reduce the demand for equipment.
- A stated preference for ENERGY STAR or EPEAT registered products.

4) Food services (i.e. franchises, vending services, concessions, convenience stores)  
(Note that dining halls and catering services operated by the institution or the institution’s primary dining services contractor are covered in Food & Dining).
- Including sustainability objectives in contracts with on-site franchises.
- Requiring that franchises pay a living wage to employees.

5) Garments and linens  
- Published labor and human rights standards that suppliers must meet.

6) Professional services (e.g. architectural, engineering, public relations, financial)  
- A stated preference for disadvantaged or community-based service providers.
- A stated preference for B Corporations.

7) Transportation and fuels (e.g. travel, vehicles, delivery services, long haul transport, generator fuels, steam plants)  
- Published measures to minimize the size of the campus fleet or otherwise reduce the impacts of travel or transport.
- A stated preference for clean and renewable technologies.

8) Wood and paper  
- A stated preference for post-consumer recycled, agricultural residue or third party certified content.
- A stated preference for FSC certified printing services.

9) Other commodity categories that the institution has determined to have significant sustainability impacts  
- Strategies designed to address the specific impacts of the commodities, e.g. a stated preference for relevant multi-criteria sustainability standards.

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.

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

**Does the institution have written policies, guidelines or directives that seek to support sustainable purchasing across commodity categories institution-wide?:**

Yes

**A copy of the policies, guidelines or directives:**

---

**The policies, guidelines or directives:**
In keeping with Penn's "Climate Action Plan 2.0", Purchasing Services promotes an environmentally sustainable supply chain. In collaboration with Penn's Sustainability Office, Purchasing Services works with its suppliers and the Penn community to actively identify and promote products and processes that make a positive sustainability impact. Purchasing Services helps drive sustainability in Penn's supply chain by:

- Identifying, enabling, and/or promoting green product solutions
- Working with suppliers to implement green solutions
- Recognizing green purchasing champions in the Penn community
- Tracking individual impact to Penn's sustainability efforts among its staff

A full list of policies, practices, and information can be found on the purchasing webpage at

https://cms.business-services.upenn.edu/purchasing/sustainable-purchasing.html

**Does the institution employ Life Cycle Cost Analysis (LCCA) when evaluating energy- and water-using products and systems?:**

Yes

**Which of the following best describes the institution’s use of LCCA?:**

Institution employs LCCA less comprehensively, e.g. for certain types of systems or projects and not others

**A brief description of the LCCA policy and/or practices:**

A LCCA is incorporated into the design guidelines for Penn's capital projects. The guidelines address the LCCA for electric and mechanical systems and are organized as follows:

a. Code impact,

b. operating costs, including: housekeeping, landscaping, and utility costs. The operating cost analysis must be comprehensive as it will be used to predict utility and maintenance budgets.

c. Maintenance costs

d. Construction costs

e. System life expectancy

f. Rationale for zoning

g. Life Cycle Costs – to include all owning and operating center over a 25 year period. Use standard spreadsheet (available electronically) attached to summarize life cycle costs for each option.

h. Impact upon existing utility infrastructures

**Does the institution have published sustainability criteria to be applied when evaluating chemically intensive products and services (e.g. building and facilities maintenance, cleaning and sanitizing, landscaping and grounds maintenance)?:**

Yes

**A brief description of the published sustainability criteria for chemically intensive products and services:**
Penn's Office of Environmental Health and Radiation Services publishes criteria and guidelines for hazardous materials and biological safety (see

http://www.ehrs.upenn.edu/resources/

and

http://www.ehrs.upenn.edu/media_files/docs/pdf/biosafetymanual2015(version1-1)small.pdf

), including extensive lists for reporting, handling, and transporting/shipping hazardous materials. Penn’s Housekeeping Services provides annual training for housekeepers regarding handling and use of chemically intensive products, and the Urban Parks services team conducts similar training for hazardous materials used in small, select areas for landscape and grounds maintenance. Penn’s “Green Guidelines for Renovations” features a section on the design of interior surfaces, requiring renovation projects to use interior surfaces that can be routinely cleaned using standard, low-toxicity and low-irritant products that meet a number of nationally-recognized emissions and toxicity standards, such as “GreenSeal” and “Environmental Choice” products. These standards apply to all buildings to ensure the quality and consistency of materials and cleaning protocols across the campus. The Guidelines also address indoor air quality by specifying that materials used on interior finishes meet the standards of a number of different, nationally recognized air quality standards. (https://www.facilities.upenn.edu/sites/default/files/Green%20Guidelines%20for%20Renovations%20O
tober%202015.pdf

) Any new construction and major renovation projects must, at a minimum, meet LEED Silver certification.

Does the institution have published sustainability criteria to be applied when evaluating construction and renovation products (e.g. furnishings and building materials)?: Yes

A brief description of the published sustainability criteria for construction and renovation products:

The "Green Guidelines for Renovations", creates standards for renovations to improve environmental practices for building renovation projects across campus and Penn Real Estate Projects. The “Guidelines” are to be followed throughout all phases of applicable renovation projects, and apply to project design, specification, and construction. Renovations with a budget exceeding $100,000 by less than $4 million, total area over 10,000 sf, involving more than one building system, more than 3 specification divisions, and/or require the use of an outside design professional must comply with these guidelines. If renovation projects have a project budget in excess of $4 million then they must meet LEED the University specified LEED Silver minimum.

https://www.facilities.upenn.edu/sites/default/files/Green%20Guidelines%20for%20Renovations%20O
tober%202015.pdf
Does the institution have published sustainability criteria to be applied when evaluating Information technology (IT) products and services (e.g. computers, imaging equipment, mobile phones, data centers and cloud services)?:
Yes

A brief description of the published sustainability criteria for IT products and services:
IT Sustainability at Penn recommends criteria such as small form or all-in-one desktops when possible, new display purchases every other computer replacement cycle instead of every replacement cycle, ENERGY STAR 5.0 compliant desktops, LCD monitors, multiple piece purchases from the same vendor, requesting fewer manuals when bulk purchasing, bulk delivery as opposed to individual delivery, and right sizing monitors for tasks.

Does the institution have published sustainability criteria to be applied when evaluating food services (i.e. franchises, vending services, concessions, convenience stores)?:
Yes

A brief description of the published sustainability criteria for food services:
As part of the consideration criteria for the campus dining vendor, Penn evaluated the sustainability of the vendors. Bon Appetit Management Company's wide range of sustainable practices was part of the decision making process in the Penn's selection.

Does the institution have published sustainability criteria to be applied when evaluating garments and linens?:
Yes

A brief description of the published sustainability criteria for garments and linens:
As part of the laundry services assessment, Penn evaluated sustainability in the decision making process. "Wash-Cycle-Laundry's" triple-bottom line practices was part of the decision making process.

Does the institution have published sustainability criteria to be applied when evaluating professional services (e.g. architectural, engineering, public relations, financial)?:
Yes

A brief description of the published sustainability criteria for professional services:
Sustainability is incorporated into "Instructions to Design Professionals" and the "Design Guidelines". These documents are incorporated by reference in all RFPs and contracts with design professionals.
Does the institution have published sustainability criteria to be applied when evaluating transportation and fuels (e.g. travel, vehicles, delivery services, long haul transport, generator fuels, steam plants)?:
Yes

A brief description of the published sustainability criteria for transportation and fuels:

As a focus of Penn Transit Services (a department within Penn's Business Services Division), a Sustainable Transportation initiative was launched to help reduce vehicle emissions across campus. Penn Transit Services provides information about alternative forms of transportation and facilitating access to a variety of more sustainable commuting options. In an effort to reduce greenhouse gas emissions, and meet the goals of the "Climate Action Plan 2.0", new passenger shuttle vans running on liquid propane have been added to the fleet, buses run on ultra-low sulfur diesel or bio-diesel, and car-sharing and van-sharing platforms have been added to campus commuting options. In addition, electric charging stations have been installed in some garages and benefits are offered to drivers of low-emission vehicles.

In addition to changes made to Penn Transportation's fleet, Penn negotiated changes to the city district steam supplier's steam production. Due to this negotiation, the steam supplier installed natural gas, rapid fire boilers and a cogen plant. These changes have reduced both Penn's greenhouse gas emissions and the regions emissions.

Does the institution have published sustainability criteria to be applied when evaluating wood and paper products?:
Yes

A brief description of the published sustainability criteria for wood and paper products:

Within Penn's "Green Guidelines for Renovations", the following guidelines for wood and laminate used in capital projects apply:
Locally reused or recycled wood products are the most preferred options in all cases.
A. New composite wood and panel products (plywood, particleboard, etc.):
   i. Products shall have no added urea formaldehyde.
   ii. Panel adhesives shall be low-emitting with a maximum VOC content of 50 g/L.
B. FSC Certification: New Wood Trim, Custom Casework, Paneling, Veneer, etc. is to be FSC certified.
C. Location of harvest: Wood harvested or salvaged within 250 miles of campus is generally available for trim work and furniture, and is preferred.
D. Plastic Laminate countertops: Provide products that are "GREENGUARD Indoor Air Quality Certified" or whose emissions are less than the Full Levels listed in "GREENGUARD Indoor Air Quality" (IAQ) Standard for Building Materials, Finishes and Furnishings.

As part of Penn Purchasing, the University has enacted criteria for paper products. While recycled copy paper is the default option in the Penn Marketplace, the website where Penn staff purchase University items, it is not mandatory for schools and centers to use the paper. However, Penn branded letterhead, business cards, envelopes, and note pads all use Mohawk Via, which exceeds EPA standards for recycled fiber content, is "Green Seal Certified", and is manufactured using "Green-e" certified electricity.
Does the institution have published sustainability criteria to be applied when evaluating products and services in other commodity categories that the institution has determined to have significant sustainability impacts?:
Yes

A brief description of the published sustainability criteria for other commodity categories:
Purchasing Services has partnered with Quench USA to offer "Inline Water Filter Systems" to all departments. The Quench system works by UV filtration, purifying and cooling municipal water. This eliminates the need for plastic bottles and bottled water, cutting down on costs and greatly reducing the University's carbon footprint.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Electronics Purchasing

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.32 / 1.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Institution purchases EPEAT registered products for desktop and notebook/laptop computers, displays, thin clients, tablets/slates, televisions and imaging equipment (copiers, digital duplicators, facsimile machines, mailing machines, multifunction devices, printers and scanners).

This credit does not include servers, smartphones, or specialized equipment for which no EPEAT certified products are available.

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

Total expenditures on desktop and laptop computers, displays, thin clients, tablets/slates, televisions, and imaging equipment:

19,700,000 US/Canadian $

Expenditures on EPEAT registered desktop and laptop computers, displays, thin clients, tablets/slates, televisions, and imaging equipment:

<table>
<thead>
<tr>
<th>EPEAT Level</th>
<th>Expenditure Per Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPEAT Gold</td>
<td>3,500,000 US/Canadian $</td>
</tr>
<tr>
<td>EPEAT Silver</td>
<td>4,350,000 US/Canadian $</td>
</tr>
<tr>
<td>EPEAT Bronze</td>
<td>0 US/Canadian $</td>
</tr>
</tbody>
</table>

Percentage of expenditures on electronic products that are EPEAT Gold registered:

17.77

Do the figures reported above include leased equipment?:

No

A brief description of the time period from which the figures reported above are drawn (i.e. one-year time period or representative sample):
The figures are drawn from FY17, spanning July 1, 2016 to June 30, 2017.

The website URL where information about the programs or initiatives is available:

http://www.upenn.edu/computing/greenit/purchasing.html

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

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Cleaning and Janitorial Purchasing

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.74 / 1.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Institution's main cleaning or housekeeping department(s) and/or contractor(s) purchase cleaning and janitorial paper products that meet one or more of the following criteria:

- Forest Stewardship Council (FSC) certified
- Green Seal certified
- UL ECOLOGO certified
- U.S. EPA Safer Choice labeled (formerly Design for the Environment)
- Local equivalents for institutions outside the U.S. and Canada

Cleaning products include general purpose bathroom, glass and carpet cleaners; degreasing agents; biologically-active cleaning products (enzymatic and microbial products); floor-care products (e.g. floor finish and floor finish strippers); hand soaps and hand sanitizers, disinfectants, and metal polish and other specialty cleaning products.

Janitorial paper products include toilet tissue, tissue paper, paper towels, hand towels, and napkins.

Other janitorial products and materials (e.g. cleaning devices that use only ionized water or electrolyzed water) should be excluded from both total expenditures and expenditures on environmentally preferable products to the extent feasible.

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

Total expenditures on cleaning products:
268,380 US/Canadian $

Expenditures on cleaning products that are Green Seal or UL ECOLOGO certified and/or Safer Choice labeled (or local equivalents for institutions outside the U.S. and Canada):
43,993 US/Canadian $

Total expenditures on janitorial paper products:
604,060 US/Canadian $

Expenditures on janitorial paper products that are FSC, Green Seal, and/or UL ECOLOGO certified (or local equivalents for institutions outside the U.S. and Canada):
603,580 US/Canadian $
Percentage of expenditures on cleaning and janitorial products that are third party certified to meet recognized sustainability standards:
74.23

A brief description of the time period from which the figures reported above are drawn (i.e. one-year time period or representative sample):
The figures are drawn from fiscal year 17, spanning July 1, 2016 to June 30, 2017.

The website URL where information about the programs or initiatives is available:
https://cms.business-services.upenn.edu/purchasing/sustainable-purchasing.html

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
### Office Paper Purchasing

<table>
<thead>
<tr>
<th>Provisional Score</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0.18 / 1.00</td>
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<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

### Criteria

Institution purchases office paper with post-consumer recycled, agricultural residue, and/or Forest Stewardship Council (FSC) certified content.

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

### Total expenditures on office paper:

466,127 US/Canadian $

### Expenditures on office paper with the following levels of post-consumer recycled, agricultural residue, and/or FSC certified content:

<table>
<thead>
<tr>
<th>Expenditure Per Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-29 percent</td>
</tr>
<tr>
<td>0 US/Canadian $</td>
</tr>
<tr>
<td>30-49 percent</td>
</tr>
<tr>
<td>176,409 US/Canadian $</td>
</tr>
<tr>
<td>50-69 percent</td>
</tr>
<tr>
<td>2,657 US/Canadian $</td>
</tr>
<tr>
<td>70-89 percent (or FSC Mix label)</td>
</tr>
<tr>
<td>0 US/Canadian $</td>
</tr>
<tr>
<td>90-100 percent (or FSC Recycled label)</td>
</tr>
<tr>
<td>13,289 US/Canadian $</td>
</tr>
</tbody>
</table>

### Percentage of expenditures on office paper that is 90-100 percent post-consumer recycled and/or agricultural residue content and/or FSC Recycled label:

2.85

### A brief description of the time period from which the figures reported above are drawn (i.e. one-year time period or representative sample):

The figures are drawn from FY17, spanning July 1, 2016 to June 30, 2017.
The website URL where information about the programs or initiatives is available:
https://cms.business-services.upenn.edu/purchasing/sustainable-purchasing.html

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Fleet</td>
<td>0.14 / 1.00</td>
</tr>
<tr>
<td>Student Commute Modal Split</td>
<td>1.98 / 2.00</td>
</tr>
<tr>
<td>Employee Commute Modal Split</td>
<td>1.52 / 2.00</td>
</tr>
<tr>
<td>Support for Sustainable Transportation</td>
<td>2.00 / 2.00</td>
</tr>
</tbody>
</table>
Campus Fleet

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.14 / 1.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

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 (including electric assist utility bicycles and tricycles)
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, electric assist cycles, 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.

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

Total number of vehicles (e.g. cars, carts, trucks, tractors, buses, electric assist cycles) in the institution’s fleet:
367

Number of vehicles in the institution's fleet that are:
<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Number of Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline-electric, non-plug-in hybrid</td>
<td>6</td>
</tr>
<tr>
<td>Diesel-electric, non-plug-in hybrid</td>
<td>0</td>
</tr>
<tr>
<td>Plug-in hybrid</td>
<td>0</td>
</tr>
<tr>
<td>100 percent electric</td>
<td>11</td>
</tr>
<tr>
<td>Fueled with compressed natural gas (CNG)</td>
<td>23</td>
</tr>
<tr>
<td>Hydrogen fueled</td>
<td>0</td>
</tr>
<tr>
<td>Fueled with B20 or higher biofuel for more than 4 months of the year</td>
<td>11</td>
</tr>
<tr>
<td>Fueled with locally produced, low-level (e.g. B5) biofuel for more than 4 months of the year</td>
<td>0</td>
</tr>
</tbody>
</table>

**Do the figures reported above include leased vehicles?:**
No

**A brief description of the institution’s efforts to support alternative fuel and power technology in its motorized fleet:**

Penn Transportation operates a propane fueling station at the Pennovation Works campus. The facility, which is the only private propane fueling station in Philadelphia, holds 1,000 gallons of fuel - enough to fuel 15 Penn Transit propane-powered shuttle vans for a week. Propane-powered vehicles produce 30-90% less carbon monoxide and about 50% less toxins and smog producing substances than normal gasoline-powered vehicles. Besides being cleaner-burning, having a fueling station for Penn's shuttles on our campus eliminates the need to drive to a filling station to fuel the vans, further reducing emissions and local congestion. Since propane is over 90% domestically produced, it is more readily available than most other alternative fuels and costs about $1 less per gallon than gasoline. Any campus unit can use this fueling station, and the Penn Transit maintenance shop can convert any gasoline-powered vehicle to propane at its in-house vehicle maintenance facility.

Eight of Penn Transit full-size buses are powered by bio-diesel, and the 15 bi-fuel cutaway shuttle vehicles can run on multiple fuel sources. The shuttle fleet operates on propane supplied from Penn Transit Services’ maintenance facility. We have included these vehicles in the number of vehicles fueled with CNG.

Penn has four electric vehicle charging stations conveniently located both on the main campus and at the University of Pennsylvania Medical System campus to support permit and transient parkers.

In addition, the Facilities department has moved from gasoline trucks to small, electric golf-cart style trucks. So far, there are eleven on campus.
The website URL where information about the programs or initiatives is available:
http://cms.business-services.upenn.edu/transportation/about/sustainable-transportation.html

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
### Student Commute Modal Split

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.98 / 2.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

### 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.

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

#### Total percentage of students (graduate and undergraduate) that use more sustainable commuting options as their primary means of transportation (0-100):

98.80

#### A brief description of the method(s) used to gather data about student commuting, including the timeframe for when the analysis was conducted and how a representative sample was reached, if applicable:

The total percentage of students using sustainable transportation is determined by the number of students purchasing parking passes through the university. Because legal daily street parking in the Penn environs is very limited, the assumption is that students who are not buying parking passes are either walking, biking, or taking public transit to campus. Penn is a dense urban campus with a lot of available nearby rental apartments. Most students do not bring cars to campus.

#### The percentage of students that use each of the following modes as their primary means of transportation to get to and from campus:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percentage (0-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commute with only the driver in the vehicle (excluding motorcycles and scooters)</td>
<td>1.20</td>
</tr>
<tr>
<td>Walk, bicycle, or use other non-motorized means</td>
<td>89.70</td>
</tr>
<tr>
<td>Vanpool or carpool</td>
<td>0</td>
</tr>
</tbody>
</table>
Take a campus shuttle or public transportation | 9.08
Use a motorcycle, scooter or moped | 0

The website URL where information about the programs or initiatives is available:
http://cms.business-services.upenn.edu/transportation/commuter-transit-options/public-transportation.html

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor’s, Master’s, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Employee Commute Modal Split

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.52 / 2.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

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 as their primary method of transportation:

75.80

A brief description of the method(s) used to gather data about employee commuting, including the timeframe for when the analysis was conducted and how a representative sample was reached, if applicable:

The information is based on analysis of Penn’s commuting practices, and is drawn from the numbers of staff and faculty enrolled in Penn’s Commuter Tax Benefit program and Penn’s bike benefit program. The sum of these two programs is then compared to total employees and the numbers of employees who purchase parking passes.

The percentage of the institution’s employees that use each of the following modes as their primary means of transportation to and from campus:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percentage (0-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commute with only the driver in the vehicle (excluding motorcycles and scooters)</td>
<td>24.20</td>
</tr>
<tr>
<td>Walk, bicycle, or use other non-motorized means</td>
<td>50.40</td>
</tr>
<tr>
<td>Vanpool or carpool</td>
<td>2.30</td>
</tr>
<tr>
<td>Activity</td>
<td>Score</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Take a campus shuttle or public transportation</td>
<td>23.10</td>
</tr>
<tr>
<td>Use a motorcycle, scooter or moped</td>
<td>---</td>
</tr>
<tr>
<td>Telecommute for 50 percent or more of their regular work hours</td>
<td>---</td>
</tr>
</tbody>
</table>

The website URL where information about the programs or initiatives is available:

http://cms.business-services.upenn.edu/transportation/commuter-transit-options/public-transportation.html

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
## Support for Sustainable Transportation

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00 / 2.00</td>
<td>Madeline Schuh</td>
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<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

### Criteria

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:

- 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) for all occupied buildings and makes long-term bicycle storage available for students who live on-site (if applicable). Long-term bicycle storage may include bicycle depots/hubs/stations, indoor bicycle rooms, and/or bicycle cages/secure bicycle parking areas. Standard public bicycle racks are not sufficient for long-term storage.
- Has a bicycle and pedestrian plan or policy (or adheres to a local community plan/policy) that sets standards and practices for campus streets to enable safe access for all users (e.g. a “complete streets” or bicycle accommodation policy)
- Has a bicycle-sharing program or participates in a local bicycle-sharing program.
- 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, that reduces employee commuting
- Has incentives or programs to encourage employees to live close to campus
- Other strategies to reduce the impact of commuting (e.g. preferred parking for fuel-efficient vehicles, cash-out of parking programs)

"---" 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?:

---

stars.aashe.org University of Pennsylvania | STARS Report | 199
A brief description of the facilities for bicycle commuters:

---

Does the institution provide short-term bicycle parking for all occupied buildings and makes long-term bicycle storage available for students who live on-site (if applicable)?

Yes

A brief description of the bicycle parking and storage facilities:

Facilities and Real Estate Services provides comprehensive list of bike racks and bike lanes on and near campus, available on an interactive Bicycle Resources map -

https://www.facilities.upenn.edu/maps?location_type=All&search=bicycle&glid=&=Apply

All of Penn's 62 bike corrals which provide parking for over 6,200 bikes are stationed around campus are equipped with video surveillance for security. Sheltered bike corrals are available at several locations on campus, and parking is also available in two parking garages on campus.

Does the institution have a bicycle and pedestrian plan or policy (or adhere to a local community plan/policy) that sets standards and practices for campus streets to enable safe access for all users?

Yes

A brief description of the bicycle and pedestrian plan or policy:

The University Bicycle Policy was re-written and promulgated in 2013, with four goals:
- Enhance pedestrian, vehicular and rider safety;
- Ensure safe ingress/egress to and from all University facilities;
- Reduce bicycle thefts;
- Encourage bicycle registration.
The full policy is available here:

http://www.upenn.edu/almanac/volumes/v60/n31/revisedbicyclepolicy.html

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:
Penn participates in the Philadelphia bike share program, "Indego". This program features over 600 self-service bicycles and 70 bike share stations throughout Philadelphia. Six stations are located on campus: at 40th and Spruce, 38th and Spruce, 36th and Sansom, University City Station and two at the Hospital of the University of Pennsylvania. In addition, there are many other stations surrounding campus and in the nearby West Philadelphia neighborhood.

**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 programs:**

Penn encourages the use of public transportation. To assist commuters who choose to use public transportation, Penn offers discounted options and/or pretax benefits through these programs: the "Commuter Pass Program" (COMPASS), "TransitChek®", "PATCO" "Freedom Pass" and "N.J. Transit". All programs are available to full-time University faculty and staff who are not participating in the parking permit program.

In addition, Penn has extensive free shuttle bus service in the evening hours, which transport students, staff, and faculty throughout the nearby adjacent neighborhoods. A partnership between Penn and Drexel allows students, staff, and faculty to use both campus's services.

**Does the institution offer a guaranteed return trip program to regular users of alternative modes of transportation?:**

Yes

**A brief description of the guaranteed return trip program:**

Penn participates in the "Emergency Ride Home", administered by the "Delaware Valley Regional Planning Commission". The "Emergency Ride Home" service is a safety net for commuters who use public transit, carpool, or vanpool to work on a regular basis. In the event of an unexpected personal or family emergency or illness, unscheduled overtime, or if the regular ride home is not available for certain reasons, registered commuters are provided with a free ride to home, their car or to the place of the emergency.

For more information, see:

http://www.upenn.edu/almanac/volumes/v60/n31/revisedbicyclepolicy.html

**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:**

The Penn Transit website provides information about carpool commuting to campus, and provides significant discounts on parking to carpool program participants. Penn provides access to a free computerized service that enables commuters with
convenient transit services, car pools and vanpool groups for residents of the 5-county Southeastern Pennsylvania region. For more information, see

https://cms.business-services.upenn.edu/transportation/car-pooling/enterprise-carshare.html

**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:**

Since September 2010, Penn has partnered with two car-sharing companies, “Zipcar” and “Enterprise Carshare”. Penn provides discounted membership to departments on campus and, through a special arrangement, allows students under 25 years of age to participate in the car-sharing programs. There are currently well over 50 carshare stations in the immediate vicinity of Penn's campus. For more information, see

http://cms.business-services.upenn.edu/transportation/car-pooling/car-sharing-carpool.html

**Does the institution have one or more Level 2 or Level 3 electric vehicle recharging stations that are accessible to student and employee commuters?:**

Yes

**A brief description of the electric vehicle recharging stations:**

Penn Parking has four fully operational, on-campus electric vehicle charging stations provided by the Blink Network in one of our on-campus surface parking lots, located on the north side of Chestnut Street, east of 34th Street. In addition to the on-campus charging stations, the Hospital of the University of Pennsylvania's Perelman Center for Advanced Medicine has four EV charging station in its garage for patients and visitors. At a nearby lot shared by and jointly managed by the Children's Hospital of Philadelphia and the Hospital of the University of Pennsylvania, charging stations might be installed in the near future.

**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:**

“Flexible Work Options” are a valued tool for supporting employee efforts to balance the demands of work and personal life. They can promote productivity and balance by using non-traditional work hours, locations, and/or job structures. Because the University is a decentralized organization with diverse work environments, no one flexible work arrangement has been
applied because no practice can be appropriate for all situations. Therefore, information is offered in the form of guidelines rather than policy. However, many Penn environments can utilize at least one flexible work arrangement if the job, person, environment, and work situation are appropriate for the arrangement and recommended protocols are followed. Typical flexible work options are flextime (flexible start, stop and lunch times), flexplace (work away from the office, typically at home), compressed work schedules (compressing standard work week hours into fewer days), and part-time and job sharing assignments (less than full-time work, either for a reduced assignment, or a shared one).

Does the institution offer a condensed work week option that reduces employee commuting (as a matter of policy or standard practice)?
Yes

A brief description of the condensed work week option:
"Flexible Work Options" are a valued tool for supporting employee efforts to balance the demands of work and personal life. Penn’s flexible work options promote productivity and balance by allowing staff and faculty to adopt non-traditional work hours, locations, and/or job structures. Because the University is a decentralized organization with diverse work environments, no one flexible work arrangement can apply universally, and no practice can be appropriate for all situations. Therefore, Penn has promulgated guidelines rather than a policy.

Many Penn workplace environments utilize at least one flexible work arrangement if the job, person, environment, and work situation are appropriate for the arrangement and recommended protocols are followed. Typical flexible work options are flextime (flexible start, stop and lunch times), flexplace (work away from the office, typically at home), compressed work schedules (compressing standard work week hours into fewer days), and part-time and job sharing assignments (less than full-time work, either for a reduced assignment, or a shared one).

Does the institution have incentives or programs to encourage employees to live close to campus?
Yes

A brief description of the incentives or programs to encourage employees to live close to campus:
The University’s commitment to urban revitalization and supporting the adjacent West Philly neighborhood is deeply rooted in an understanding that the health and vitality of the University is inextricably linked to maintaining a diverse, safe, and thriving urban community. For a complete summary of Penn’s impact on the local community and economy, see

http://www.evp.upenn.edu/pdf/Penn_Economic_Impact_Powering_PHL_PA.pdf

The following examples demonstrate mechanisms and policies created by Penn to help stabilize and enhance its neighboring West Philadelphia Community, indicating the breadth of support for the community.

* The Office of Penn Home Ownership Services (PHOS) offers eligible employees the opportunity to apply for financing for home purchases as well as for funds for home rehabilitation in the West Philadelphia area. The department also offers refinancing options with lending partners, home improvement grants, loans, educational workshops, and a variety of other resources. Penn Home Ownership Services ensures that the University community receives quality services that will assist prospective buyers and current home owners in making informed decisions. Penn “Home Ownership Services” currently offers two programs - the “Enhanced Forgivable Loan Program” and the “Closing Cost Reduction Program”. Since the University’s commitment to local home ownership began in 1995, over 1400 individuals and families have participated in
these programs.

* Penn promotes its "Enhanced Forgivable Loan" (EFL), a $7,500 forgivable loan, as an incentive for faculty and staff interested in living and/or currently residing in the West Philadelphia community. These loans can be used for closing costs, down payment, to buy down points, and/or for interior or exterior home improvements. In addition, the loan can be used to convert a property from a multi-family to a single-family residence.

* The "Closing Cost Reduction Program" (CCRP) offers mortgage financing options with discounted closing costs (.25% of mortgaged amount) to the University community for the purchase and refinancing of homes. In partnership with its current mortgage partners, PHOS can help eligible University and Health System employees save on closing costs when purchasing a home in West Philadelphia within Penn's boundary area. For more information, see https://www.google.com/search?q=penn+home+ownership+program&sourceid=ie7&rls=com.microsoft:en-US:IE-SearchBox&ie=&oe=&gws_rd=ssl

In addition to directly assisting Penn employees that live in the neighborhood, Penn supports the entire community in a variety of ways. Penn's Community Involvement efforts spend a variety of types of initiatives, including:

* The Penn Graduate School of Education has extensive partnerships with local public schools managed and run by the Philadelphia School District. The Sadie Tanner Mossell Alexander School, named for the first African American woman graduate of Penn's School of Law, a $20M+, award winning K-8 public school open to all neighborhood residents, was built by Penn and turned over to the School District of Philadelphia upon completion. Penn continues to support the school by subsidizing 17 students per year. Penn also supports the Henry C. Lea School, a nearby public elementary school, through pedagogy and teacher assistantships. For more information, see http://www.gse.upenn.edu/in-philly/affiliated-schools

* First Thursdays, hosted by the Office of Government and Community Affairs meets on the first Thursday of the month to disseminate information to the Community about current Penn programs and also provide feedback from the Community to Penn.

* The Netter Center for Community Partnerships, which manages community service learning projects, partners with local Philadelphia public schools, and supports community development (https://www.nettercenter.upenn.edu/)

* The Office of Government and Community Affairs, which provides liaison services to community leaders, local elected representatives, and helps shape local engagement initiatives (http://www.upenn.edu/ogca/)

* The Civic House, Penn's student community service hub for outreach and citizenship (https://www.vpul.upenn.edu/civichouse/)
Penn Volunteers in Public Service, which provides opportunity for staff (https://www.nettercenter.upenn.edu/penn-vips)

Upward Bound and Veterans Upward Bound, to provide pre-college students a head start on higher education (https://www.vpul.upenn.edu/eap/vub/)

For more information, see http://www.upenn.edu/life-at-penn/community

Penn’s Division of Public Safety and Penn Police have an extensive patrol zone for bicycle and patrol cars in the West Philly neighborhood adjacent to Penn, providing police services in collaboration with the Philadelphia Police Department to provide enhanced safety for the residents of the neighborhood. For more information, see https://www.publicsafety.upenn.edu/

In addition, the University has also helped support and create a number of other programs, including: the University City District, tree plantings in the neighborhood, installing street lighting, and many more.

**Does the institution employ other strategies to reduce the impact of commuting (e.g. preferred parking for fuel-efficient vehicles, cash-out of parking programs)?:**

Yes

**A brief description of other strategies to reduce the impact of commuting:**

Penn Parking Services is designating a portion of its parking spaces in our garages for "Low Emission" and "Fuel-Efficient" vehicles. This effort, which is part of Penn’s Sustainable Transportation Initiative, supports members of the Penn Community who to choose to drive low emission vehicles. The spaces are located near the entrance, exit, or elevators as required and are clearly delineated by signage. They are available to low emission and/or fuel-efficient vehicles until 10 AM each day. After 10 AM, other permit holders or paying visitors can make use of these spaces. For more information, see https://cms.business-services.upenn.edu/transportation/about/parking-services-overview/low-emission-vehicles.html
As a benefit to bike commuters, Penn has established a bike commuter reimbursement program to cyclists who bike to work more than 50% of the time. The "Bike Commuter Expense Reimbursement Program" offers bicycle commuting expenses to faculty and staff for any out of pocket eligible expenses, up to $240 annually. Unlike a flexible spending account, reimbursement comes directly from the University and is not set aside from pre-tax pay by the individual program participant.

Pedestrians can request a walking escort 24 hours a day, 365 days a year from the Division of Public Safety. Walking escorts provide services in the West Philadelphia campus and will accompany Penn staff, faculty, or students from one campus location to another, to a parked car, or to a mass transit stop.

Penn has extensive shuttle and van service for faculty, staff, and students who live within a mile of campus, and has a comprehensive resource sharing agreement with several large adjacent institutions, including the the Children's Hospital of Philadelphia, the Hospital of the University of Pennsylvania, Presbyterian Hospital, Drexel University, FMC, and Campus Apartments. These organizations have reciprocal agreements so all staff from these institutions can use each institution's bus and shuttle services (which include fixed route buses that run from 5 pm to midnight into Philadelphia's Center City West neighborhood to the east and to West Philadelphia neighborhoods to the west; door-to-door shuttle services that operate from 5pm to 3 am in the same service area, handi-vans that run on an as-needed basis any time of day, and free shuttles that run between the main campus, the partner hospitals, and Penn's Innovation Center about a mile away all day long. Any member of the Penn community may also use the free Drexel University shuttle and bus service, which has a different and slightly more expansive service area to Center City Philadelphia. For more information, see

https://cms.business-services.upenn.edu/transportation/about/our-network.html

The website URL where information about the programs or initiatives is available:
---

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Waste

Points Claimed  4.35
Points Available  10.00

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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Minimization and Diversion</td>
<td>2.49 / 8.00</td>
</tr>
<tr>
<td>Construction and Demolition Waste Diversion</td>
<td>0.86 / 1.00</td>
</tr>
<tr>
<td>Hazardous Waste Management</td>
<td>1.00 / 1.00</td>
</tr>
</tbody>
</table>
Waste Minimization and Diversion

Provisional Score  |  Responsible Party
2.49 / 8.00        |  Madeline Schuh
                   |  Sustainability Analyst
                   |  Facilities and Real Estate Services

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 0.50 tons (0.45 tonnes) per weighted campus user.
Part 3

Institution diverts materials from the landfill or incinerator by recycling, composting, donating or re-selling.

For scoring purposes, up to 10 percent of total waste generated may also be disposed through post-recycling residual conversion. To count, residual conversion must include an integrated materials recovery facility (MRF) or equivalent sorting system to recover recyclables and compostable material prior to conversion.

This credit includes on-campus dining services operated by the institution or the institution’s primary on-site contractor.

Waste includes all materials that the institution discards, intends to discard or is required to discard (i.e. all materials that are recycled, composted, donated, re-sold, or disposed of as trash) except construction, demolition, electronic, hazardous, special (e.g. coal ash), universal and non-regulated chemical waste, which are covered in the Construction and Demolition Waste Diversion and Hazardous Waste Management credits.

Consistent with the U.S Environmental Protection Agency’s Waste Reduction Model (WARM), the on-site reuse of materials is treated as a form of source reduction for scoring purposes. All materials that are reused on campus are automatically recognized in scoring for Part 1 and Part 2 of this credit. To avoid double counting, reuse therefore does not also contribute to scoring for Part 3 as waste diversion.

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

Figures needed to determine total waste generated (and diverted):

<table>
<thead>
<tr>
<th>Materials</th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials recycled</td>
<td>1,503 Tons</td>
<td>2,182 Tons</td>
</tr>
<tr>
<td>Materials composted</td>
<td>189 Tons</td>
<td>198.07 Tons</td>
</tr>
<tr>
<td>Materials donated or re-sold</td>
<td>50 Tons</td>
<td>28 Tons</td>
</tr>
<tr>
<td>Materials disposed through post-recycling residual conversion</td>
<td>0 Tons</td>
<td>0 Tons</td>
</tr>
<tr>
<td>Materials disposed in a solid waste landfill or incinerator</td>
<td>5,472 Tons</td>
<td>5,737 Tons</td>
</tr>
<tr>
<td>Total waste generated</td>
<td>7,214 Tons</td>
<td>8,145.07 Tons</td>
</tr>
</tbody>
</table>

A brief description of the residual conversion facility, including affirmation that materials are sorted prior to conversion to recover recyclables and compostable materials:

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

<table>
<thead>
<tr>
<th></th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Year</td>
<td>July 1, 2016</td>
<td>June 30, 2017</td>
</tr>
<tr>
<td>Baseline Year</td>
<td>July 1, 2013</td>
<td>June 30, 2014</td>
</tr>
</tbody>
</table>

A brief description of when and why the waste generation baseline was adopted (e.g. in sustainability plans and policies or in the context of other reporting obligations):

The waste generation baseline was adopted to correspond to the release of the “Climate Action Plan 2.0”, in October 2014.

Figures needed to determine "Weighted Campus Users":

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students resident on-site</td>
<td>6,380</td>
<td>6,036</td>
</tr>
<tr>
<td>Number of employees resident on-site</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Number of other individuals resident on-site and/or staffed hospital beds</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Total full-time equivalent student enrollment</td>
<td>21,358</td>
<td>24,725</td>
</tr>
<tr>
<td>Full-time equivalent of employees (staff + faculty)</td>
<td>17,354</td>
<td>16,705</td>
</tr>
<tr>
<td>Full-time equivalent of students enrolled exclusively in distance education</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Weighted campus users</td>
<td>30,691.50</td>
<td>32,644</td>
</tr>
</tbody>
</table>

Total waste generated per weighted campus user:
<table>
<thead>
<tr>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total waste generated per weighted campus user</td>
<td>0.24 Tons</td>
</tr>
</tbody>
</table>

**Percentage reduction in total waste generated per weighted campus user from baseline (0-100):**

5.80

**Percentage of materials diverted from the landfill or incinerator by recycling, composting, donating or re-selling, performance year:**

24.15

**Percentage of materials diverted from the landfill or incinerator (including up to 10 percent attributable to post-recycling residual conversion):**

24.15

**In the waste figures reported above, has the institution recycled, composted, donated and/or re-sold the following materials?:**

<table>
<thead>
<tr>
<th>Material</th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper, plastics, glass, metals, and other recyclable containers</td>
<td>Yes</td>
</tr>
<tr>
<td>Food</td>
<td>Yes</td>
</tr>
<tr>
<td>Cooking oil</td>
<td>Yes</td>
</tr>
<tr>
<td>Plant materials</td>
<td>Yes</td>
</tr>
<tr>
<td>Animal bedding</td>
<td>Yes</td>
</tr>
<tr>
<td>White goods (i.e. appliances)</td>
<td>Yes</td>
</tr>
<tr>
<td>Laboratory equipment</td>
<td>Yes</td>
</tr>
<tr>
<td>Furniture</td>
<td>Yes</td>
</tr>
<tr>
<td>Residence hall move-in/move-out waste</td>
<td>Yes</td>
</tr>
</tbody>
</table>
A brief description of other materials the institution has recycled, composted, donated and/or re-sold:

The University diverts a number of waste streams from the landfill, including: construction debris and waste, electronic waste, wasted food, leaves and campus clippings, shredded paper, and paving materials such as brick and stone. In addition, at all College Houses and numerous academic buildings there are specialty waste receptacles for compact fluorescent lights and batteries. The Sustainability Office maintains a variety of ongoing special recycling projects, such as recycling eyeglasses, shoes, hardcover books, and writing implements. Many offices recycle or compost coffee from break rooms and office kitchens. Local contracts are held with several companies, including Revolution Recovery, E-force, Elemental, and Organic Diversion, to recycle and compost campus materials. In addition, Schools and Centers at the University can choose to donate furniture and office equipment to other Schools and Centers at Penn through Ben's Attic, or to non-profit organizations such as Habitat for Humanity or Goodwill Industries. If donation of furniture and office equipment is not an option, Schools and Centers are encouraged to use Revolution Recovery to dispose of the items.

Materials intended for disposal but subsequently recovered and reused on campus, performance year (e.g. materials that are actively diverted from the landfill or incinerator and refurbished/repurposed):

---

Does the institution use single stream recycling (a single container for commingled recyclables) to collect standard recyclables (i.e. paper, plastic, glass, metals) in common areas?:

Yes

Does the institution use dual stream (two separate containers for recyclables, e.g. one for paper and another for plastic, glass, and metals) to collect standard recyclables (i.e. paper, plastic, glass, metals) in common areas?:

No

Does the institution use multi-stream recycling (multiple containers that further separate different types of materials) to collect standard recyclables (i.e. paper, plastic, glass, metals) in common areas?:

No

Average contamination rate for the institution’s recycling program (percentage, 0-100):

5

A brief description of any recycling quality control mechanisms employed, e.g. efforts to minimize
contamination and/or monitor the discard rates of the materials recovery facilities and mills to which materials are diverted:

In an effort to reduce recycling contamination, Penn uses single stream recycling. All campus bins are required to be placed as a pair, with one recycling and one garbage. For indoor recycling and trash cans, the Penn Sustainability Office provides clear, consistent signage that shows images of common items found on campus to reduce contamination and make recycling easier. All bins and bin liners are color coded: grey, black, or brown for trash, blue for recycling, green for compost, and red for hazardous waste.

From previously performed waste audits, Penn has learned that signage and clearly marked recycling bins reduces contamination and increases recycling rates. Based on these audits and a student Eco-Rep project carried out over several months in 2017, Urban Parks (Penn's outdoor waste management team) has begun painting outdoor recycling bins and equipping them with new, clarified signage.

The average contamination rate for Penn's recycling program was established based on waste audits performed in buildings across campus. These audits will be repeated to determine how recycling is changing on campus. We believe the contamination rate is currently at a higher rate than 5%.

A brief description of the institution's waste-related behavior change initiatives, e.g. initiatives to shift individual attitudes and practices such as signage and competitions:

Every Fall, the sustainability office puts on a "ReThink" campaign which is designed to bring awareness to waste and recycling practices on campus. During "New Student Orientation", the University distributes 1,000 free recycling bins each year to help students have better access to the recycling infrastructure. All student suites receive a free reusable bag for carrying recyclables from their dorm room to the recycling room throughout the year. In addition, the University hosts a large Move-Out initiative each year called "PennMOVES", where students can donate their unwanted clothes, electronics, books, and appliances. The program diverts between 30 – 50 tons of materials each year, to Goodwill Industries which might otherwise end up in a landfill.

A brief description of the institution's waste audits and other initiatives to assess its materials management efforts and identify areas for improvement:

Penn has performed many waste audits in the past four years. Several schools, including the School of Arts and Sciences and the Wharton School of Business, conduct waste audits every year. In addition to these waste audits carried out by School facilities staff and consultants, several student-led waste audits have been carried out to gather information on four targeted buildings that are heavily used by students. These audits provide a deeper understanding of waste and recycling habits on campus. In 2013, a comprehensive set of audits was carried out to gather information about the waste streams in several Schools, including: Medicine, Law, Vet, Arts & Sciences, and Engineering. This set of audits will be repeated in the 2018 - 2019 academic school year.

A brief description of the institution's procurement policies designed to prevent waste (e.g. by minimizing packaging and purchasing in bulk):

Penn's Purchasing Services, administratively located within the Business Services Division, promotes an environmentally sustainable supply chain. Purchasing Services works with its suppliers and the Penn community to actively identify and promote products and processes that make a positive sustainability impact. Purchasing Services is an active member of the
Sustainable Purchasing Leadership Council - a non-profit organization whose mission is to support and recognize purchasing leadership that accelerates the transition to a prosperous and sustainable future. The Council’s programs and community of practice help institutional purchasers: prioritize opportunities to influence the social, environmental and economic life cycle impacts of purchased goods and services; identify existing leadership standards and approaches that address these priorities; benchmark progress toward goals; and receive recognition for advancement.

Purchasing Services helps drive sustainability in Penn’s supply chain by:
- Identifying, enabling, and/or promoting green product solutions
- Working with suppliers to implement green solutions
- Recognizing and promoting green purchasing champions in the Penn community
- Tracking individual impact to Penn's sustainability efforts among its staff

Some examples of the above activities include:
- To reduce packaging waste, Penn Purchasing has worked with the University's office supplier to deliver all office supplies in reusable totes, instead of cardboard boxes.
- Penn Purchasing promotes environmentally-preferred products by highlighting them among other supplies available from many of the University’s preferred contract suppliers. For example, in the on-line Penn Marketplace, green products are highlighted by a symbol indicating their environmental benefits.
- Penn Purchasing has instituted a minimum purchase limit for office supplies of $25. When implemented in 2010, this minimum order requirement was estimated to eliminate over 6,000 purchase orders annually, reducing waste and emissions associated with small or unconsolidated deliveries.
- Penn Purchasing has instituted a 3% discount on purchase orders over $200 to encourage bundled orders
- In an effort to reduce waste associated with common office materials, default printer toner is now made from recycled content; the same is done with copy paper. At this point, almost all schools have adopted the use of recycled content copy paper. Penn's Managed Print program, fully implemented at more than 25% of campus, saves paper, toner, and electricity by reducing unnecessary printing and right-sizing the amount of equipment used in offices.

A brief description of the institution’s surplus department or formal office supplies exchange program that facilitates reuse of materials:

Penn's "Ben's Attic" is an online exchange for surplus Penn property, furniture, lab equipment, electronic equipment, and more. Ben's Attic provides an easy and sustainable way to find a new use for items that are no longer needed by campus departments. The creation of this site was a response to customer requests and in support of the University's "Climate Action Plan" and continued sustainable practices. For more information, see

https://upenn.unl.edu/

A brief description of the institution's platforms to encourage peer-to-peer exchange and reuse (e.g. of electronics, furnishings, books and other goods):

Penn's peer-to-peer exchange system is similar to its surplus platform, Ben's Attic. Penn's "Ben's Attic" is an online exchange for surplus Penn property, furniture, lab equipment, electronic equipment, and more. Ben's Attic provides an easy and sustainable way to find a new use for items that are no longer needed by campus departments. The creation of this site was a response to the customer requests and in support of the University's "Climate Action Plan" and continued sustainable practices. For more information, see
A brief description of the institution’s limits on paper and ink consumption (e.g. restricting free printing and/or mandating doubled-sided printing in libraries and computer labs):

The University currently promotes a Managed Print Services (MPS) with an "opt in" arrangement, which was launched in 2013. To date, many campus offices, departments, and schools have opted in.

MPS greatly reduces the number of desk-side printers, toner use, and paper use at a given office, while still maintaining high quality printing, faxing, and e-mailing services. Participating university offices have seen a 25% decline in total printer costs and reduced electricity and paper use.

In addition to MPS, Purchasing identifies environmentally friendly options online to help staff choose sustainable office materials. For example, the Penn Purchasing website automatically defaults to 30% recycled, 70% FSC-certified copy paper and re-manufactured printer toner. Printer settings default to double-sided and grey tone printing, saving expensive inks and paper. In addition, the Penn purchasing marketplace prompts buyers to select sustainable alternatives, when available. When a print command is sent by a desk computer, the user is able to print the documents on any one of a number of large, high-speed printers, making office workflow more efficient. Print jobs can be modified and resent if a mistake is found or a correction is made, reducing unnecessary printing.

A brief description of the institution’s initiatives to make materials (e.g. course catalogs, course schedules, and directories) available online by default rather than printing them:

All course registration is performed on-line. In addition, the campus personnel directory is located exclusively, online. Several schools, including the Law School, have moved to a digital application process, eliminating paper applications.

As part of the "Green Office Certification" protocol, an optional program in which offices can participate to incorporate sustainability collectively into their office, offices are encouraged to opt out of receiving printed mass mailings and catalogs. Over 100 offices across campus have participated. “Green Office” is further described in section AC - 8, OP - 5, and PA - 2.

A brief description of the institution’s program to reduce residence hall move-in/move-out waste:

Penn hosts a large Move-Out initiative each year called "PennMOVES", through which students can donate unwanted clothes, electronics, furniture, electronics, books, and appliances. The program diverts between 30 – 50 tons of materials each year that might otherwise end up in a landfill to Goodwill Industries. Unopened canned or boxed food is also donated to local food banks.

A brief description of the institution’s programs or initiatives to recover and reuse other materials intended for disposal:

Penn has an internal furniture and equipment sharing program called Ben’s Attic which provides a platform for schools and center to sell items to members of the Penn community. Construction and demolition waste is collected by Revolution
Recovery, a Philadelphia based construction waste management firm that separates the material into recycling and reuse streams. These commodities are then sold, greatly reducing the amount of Penn's construction waste being sent to landfills.

All of the leaves from Penn's 6,000+ trees are collected every year and allowed to decompose at Penn's on-campus landscape yard. The following year, this "top dressing" is used on gardens and planting beds, saving Penn disposal costs and the cost of processed landscape dressing while keeping leaf waste out of the landfill.

The website URL where information about the programs or initiatives is available:
http://www.upenn.edu/sustainability/sustainability-themes/minimizing-waste

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

https://cms.business-services.upenn.edu/purchasing/about/strategic-sourcing/information-technology/478-the-penn-managed-print-services-mps-program.html

https://www.facilities.upenn.edu/sustainability/waste-management-and-recycling

http://cms.business-services.upenn.edu/about-pennmoves

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
## Provisional Score

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.86 / 1.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

### 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.

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

### Construction and demolition materials recycled, donated, or otherwise recovered during the most recent year for which data is available within the previous three years:

226.29 Tons

### Construction and demolition materials landfilled or incinerated during the most recent year for which data is available within the previous three years:

36.60 Tons

### Percentage of construction and demolition materials diverted from the landfill or incinerator through recycling, donation and/or other forms of recovery:

86.08

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:

All new buildings and major renovations at Penn must be LEED Silver minimum, and are required to engage in construction and demolition waste. In addition, every capital project with a budget of greater than $100,000, must abide by the Penn "Green Guidelines for Renovations", which require construction and demolition waste recycling.

### The website URL where information about the programs or initiatives is available:

---

### Additional documentation to support the submission:

---

### Data source(s) and notes about the submission:

stars.aashe.org
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Hazardous Waste Management

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 / 1.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

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 ensures that the electronic waste is recycled responsibly by using a recycler certified under the e-Stewards® and/or Responsible Recycling (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:

Penn's Office of Environmental Health and Radiation Safety (EHRS) centrally regulates the management and disposal of chemicals and other hazardous materials on campus. Among other issues, EHRS provides guidance on bio-safety in labs and research departments, maintains a Chemical Inventory of all hazardous chemicals on campus, and provides instructions on the use of piranha gas-producing solutions. EHRS also manages the storage and safe removal of universal waste, including mercury-containing materials (such as certain devices and lamps), batteries, and compact fluorescent bulbs. Disposal is only by state-approved and licensed vendors, the list of which is maintained by EHRS.

A brief description of how the institution safely disposes of hazardous, universal, and non-regulated chemical waste:

Penn has a waste plan for the disposal of hazardous waste produced in labs and research facilities. Hazardous waste bins are denoted by red bins with standard hazardous waste symbols on the bins. Most hazardous waste is sent for incineration before being sent to landfill, in compliance with local, state, and federal regulations. Penn has strict rules for the disposal of universal waste and radioactive waste as well, managed by the Office of Environmental Health and Radiation Safety.
A brief description of any significant hazardous material release incidents during the previous three years, including volume, impact and response/remediation:

There have not been any material release incidents.

A brief description of any inventory system employed by the institution to facilitate the reuse or redistribution of laboratory chemicals:

The Office of Environmental Health and Radiation Safety (EHRS) offers University laboratories access to chemical inventory software to help Penn research faculty manage their chemical storage. The inventory system greatly improves the ability of individual laboratories to efficiently manage the purchase of hazardous chemicals and reduce the University’s hazardous waste stream.

CISPro® inventory software is a high-performance, relational database system for tracking chemicals and other laboratory supplies. CISPro Live is a hosted, cloud-based solution and is completely web-based.

http://www.ehrs.upenn.edu/programs/labsafety/cheminv/

Does the institution have or participate in a program to responsibly recycle, reuse, and/or refurbish 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), including information about how electronic waste generated by the institution and/or students is recycled:

Penn Computing’s Green IT website,

www.upenn.edu/computing/greenit

provides extensive information on how Penn faculty and staff can recycle their e-waste. Additionally, the University has two preferred vendor contracts with two e-waste recyclers, E-Force and Elemental. Both of these firms were fully vetted with support from Penn’s Department of Environmental Health and Radiation Safety to ensure environmental standards are met. In addition, as of 2017 each vendor provides reporting to the Penn Sustainability Office on the amount of electronic waste removed from the campus. Electronic waste is routinely collected at several disposal sites on campus, and is also collected during the fall "ReThink your Footprint" drive managed by the Penn Sustainability Office, with support from Penn's EHRS Department.

For more information, see
Is the institution’s electronic waste recycler certified under the e-Stewards and/or Responsible Recycling (R2) standards?:
Yes

Electronic waste recycled or otherwise diverted from the landfill or incinerator during the most recent year for which data is available during the previous three years:
19.06 Tons

The website URL where information about the programs or initiatives is available:
https://www.isc.upenn.edu/how-to/crcs-e-waste-recycling-service

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor’s, Master’s, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Points Claimed  1.00
Points Available  7.00

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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Use</td>
<td>0.00 / 5.00</td>
</tr>
<tr>
<td></td>
<td>This credit is weighted more heavily for institutions located in areas of water stress and scarcity and less heavily for institutions in areas with relative water abundance. The points available for this credit are determined by the level of &quot;Physical Risk QUANTITY&quot; for the institution’s main campus, as indicated by the World Resources Institute’s Aqueduct Water Risk Atlas and detailed in the following table:</td>
</tr>
<tr>
<td>Physical Risk QUANTITY</td>
<td>Points Available For Each Part</td>
</tr>
<tr>
<td>Low and Low to Medium Risk</td>
<td>1 ■</td>
</tr>
<tr>
<td>Medium to High Risk</td>
<td>1 ■</td>
</tr>
<tr>
<td>High and Extremely High Risk</td>
<td>2</td>
</tr>
</tbody>
</table>

Rainwater Management  1.00 / 2.00
Water Use

Provisional Score

<table>
<thead>
<tr>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madeline Schuh</td>
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<table>
<thead>
<tr>
<th>Physical Risk QUANTITY</th>
<th>Points Available For Each Part</th>
<th>Total Available Points For This Credit</th>
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</thead>
<tbody>
<tr>
<td>Low and Low to Medium Risk</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Medium to High Risk</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>High and Extremely High Risk</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

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

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.
Level of "Physical Risk QUANTITY" for the institution's main campus as indicated by the World Resources Institute’s Aqueduct Water Risk Atlas:
Medium to High

Total water use (potable and non-potable combined):

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total water use</td>
<td>976,771,800 Gallons</td>
<td>757,800,500 Gallons</td>
</tr>
</tbody>
</table>

Potable water use:

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potable water use</td>
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<td>757,800,500 Gallons</td>
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Start and end dates of the performance year and baseline year (or three-year periods):

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<tr>
<th></th>
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<th>End Date</th>
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<tr>
<td>Performance Year</td>
<td>July 1, 2016</td>
<td>June 30, 2017</td>
</tr>
<tr>
<td>Baseline Year</td>
<td>July 1, 2013</td>
<td>June 30, 2014</td>
</tr>
</tbody>
</table>

A brief description of when and why the water use baseline was adopted:
The water baseline year corresponds to the release of the "Climate Action Plan 2.0", in October of 2014.

Figures needed to determine "Weighted Campus Users":

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students resident on-site</td>
<td>6,380</td>
<td>6,494</td>
</tr>
<tr>
<td>Number of employees resident on-site</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Category</td>
<td>Performance Year</td>
<td>Baseline Year</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Number of other individuals resident on-site and/or staffed hospital beds</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Total full-time equivalent student enrollment</td>
<td>21,358</td>
<td>21,296</td>
</tr>
<tr>
<td>Full-time equivalent of employees (staff + faculty)</td>
<td>17,354</td>
<td>16,710</td>
</tr>
<tr>
<td>Full-time equivalent of students enrolled exclusively in distance education</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Weighted campus users</td>
<td>30,691.50</td>
<td>30,190.50</td>
</tr>
</tbody>
</table>

**Potable water use per weighted campus user:**

<table>
<thead>
<tr>
<th>Column</th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potable water use per weighted campus user</td>
<td>31,825.48 Gallons</td>
<td>25,100.63 Gallons</td>
</tr>
</tbody>
</table>

**Percentage reduction in potable water use per weighted campus user from baseline (0-100):**

0

**Gross floor area of building space:**

<table>
<thead>
<tr>
<th>Column</th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross floor area</td>
<td>15,864,661 Gross Square Feet</td>
<td>15,493,215 Gross Square Feet</td>
</tr>
</tbody>
</table>

**Potable water use per unit of floor area:**

<table>
<thead>
<tr>
<th>Column</th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potable water use per unit of floor area</td>
<td>61.57 Gallons / GSF</td>
<td>48.91 Gallons / GSF</td>
</tr>
</tbody>
</table>

**Percentage reduction in potable water use per unit of floor area from baseline (0-100):**

0
Does the institution wish to pursue Part 3 of this credit? (reductions in total water use per acre/hectare of vegetated grounds):
Yes

**Area of vegetated grounds:**

<table>
<thead>
<tr>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetated grounds</td>
<td>73.90 Acres</td>
</tr>
</tbody>
</table>

**Total water use (potable + non-potable) per unit of vegetated grounds:**

<table>
<thead>
<tr>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total water use per unit of vegetated grounds</td>
<td>13,217,480.38 Gallons / Acre</td>
</tr>
</tbody>
</table>

**Percentage reduction in total water use per unit of vegetated grounds from baseline (0-100):**
0

**A brief description of the institution’s water-related behavior change initiatives, e.g. initiatives to shift individual attitudes and practices such as signage and competitions:**

The Sustainability Office has run several campaigns targeted at reducing water use by students. In 2012, students applied for a Penn "Green Fund Grant" to implement a digital shower timer project, to track water use in showers in two of Penn’s eleven College Houses. The “Digital Shower Timer” Project's goals were to save water and to encourage lifelong sustainable conservation policies. In response, 200 digital shower timers, divided evenly between Hill College House and one of the Quad College Houses, were installed during Summer 2012. The student project team monitored water usage results on a monthly basis. Different signs and techniques were used on different halls of the same dorm and analyzed to discover the most effective timer and signage combination. See

https://www.sustainability.upenn.edu/get-involved/green-fund/digital-shower-timers-project

In 2011, a different Green Fund Grant was awarded to Chi Omega sorority to implement a series of water conservation retrofits at their Chapter house. Retrofits installed over the summer of 2011 included low-flow faucet aerators and showerheads, dual flush toilets, and a rain barrel. In addition to the retrofits, Chi Omega hosted a pledge-based conservation competition between the eight sororities on campus in conjunction with Fall 2011 Greek Week.

In 2011, the Penn Women’s Center installed a rain cistern that captures rainwater used to flush the toilet on the ground floor public toilet in the building. Signage explains how the cistern works and the importance of water conservation.
A brief description of the institution’s water recovery and reuse initiatives:

Several projects across Penn’s campus reuse rainwater for irrigation. Of note are two new open green space projects on Penn’s campus that collect and store rainwater used for irrigating the same planted spaces, helping to reduce water use, improve water quality and minimize runoff. Shoemaker Green, a 2.75 acre public commons, features a 20,000 gallon cistern that captures rainwater. This Green is also designed to capture condensate from air conditioning units in the adjacent building for reuse.

At Penn Park, a 24 acre park for recreation and sports activity, stormwater is captured in a 300,000 gallon cistern, where it is stored and pumped out as needed for irrigation.

The Penn Women's Center has a basement cistern that captures rainwater, which is used to flush the toilet on the ground floor as a demonstration project and to build student awareness.

A brief description of the institution’s initiatives to replace plumbing fixtures, fittings, appliances, equipment, and systems with water-efficient alternatives (e.g. building retrofits):

Penn follows the Philadelphia Plumbing Code as a guide for maximum flow rates, and has updated old fixtures to reduce water waste in all of its older buildings as they are renovated. The current water flow rates are as follows:

In public bathrooms all faucets have 2.2 gpm aerators, toilets are 1.6 or 1.28 gallons per flush, and shower heads are 2.2 gpm.

In 2010, all showers in student residences and the gymnasia were updated to reduce water flow and comply with current standards.

The website URL where information about the programs or initiatives is available:

https://www.facilities.upenn.edu/sites/default/files/Stormwater%20Master%20Plan%20for%20the%20University%20of%20Pennsylvania_March%202013_web.pdf

Additional documentation to support the submission:

---

Data source(s) and notes about the submission:

The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan. 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Rainwater Management

Provisional Score | Responsible Party
------------------|-------------------
1.00 / 2.00       | Madeline Schuh
                  | Sustainability Analyst
                  | Facilities and Real Estate Services

Criteria

Institution uses green infrastructure and low impact development (LID) practices to help mitigate stormwater run-off impacts and treat rainwater as a resource rather than as a waste product.

Policies adopted by entities of which the institution is part (e.g. state/provincial government or the 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

Which of the following best describes the institution’s approach to rainwater management?:

Less comprehensive policies, plans or guidelines that incorporate green infrastructure

A brief description of the institution’s green infrastructure and LID practices:

The Penn "Stormwater Management Plan" describes guidelines for managing existing infrastructure along with a catalog of potential new projects and revised details for best management practices in stormwater management. Penn has implemented many elements of green infrastructure, including over 20 green roofs, bioswales, meadow grass lawns, gardens and lawns where rainwater is allowed to infiltrate into the soil, detention basins, underground cisterns, and permeable paving. The landscape standard for sidewalks adjacent to Penn properties, for example, includes a linear tree pit set with loose-laid cobbles in a sand bed.

Shoemaker Green, a public commons, combines welcoming open spaces of lawns, tree-lined walkways, and sitting areas with robust stormwater management techniques. This green space is both a destination and a heavily-trafficked pedestrian route in the athletics precinct of campus, two blocks from College Green. Shoemaker Green's sustainable site management improves water quality and minimize runoff, reduces the effect of the urban heat island by greening large paved areas, restores biomass on site, increases local biodiversity, and improves the overall environment for the community.

The 24-acre Penn Park, completed in 2011 and built on the site of a former brownfield, increased the green/open space on campus by 20 percent. One of the appealing features of Penn Park is the return of vegetation and plant life to an area that was paved in asphalt and an industrial site for decades. Specific native and adaptive plants are used throughout the site to reduce irrigation requirements. Of the 548 trees planted in Penn Park at its completion, species included: catalpa, hackberry, swamp white oak, white pine, metasequoia, larch and balsam pine. These species were selected with specific attention to where they appear relative to their position on the land, with trees that prefer wet soil conditions planted in the lower levels, and hedgerow trees, which are more drought resistant, planted along the top of the landforms. A cistern was installed as part of Penn Park that can hold up to 300,000 gallons of rainwater that is used for irrigation. In 2015, an orchard was planted at the south end of Penn Park, as well as a strawberry patch. Each year, new species are added in the orchard, which now includes apples, pears, pawpaws, peaches, almond, and other fruit bearing trees.
In addition to Shoemaker Green and Penn Park, many new construction buildings on campus feature green roofs and cisterns for stormwater management. Of note is New College House which was completed in 2016 and features nine green roofs with 95 percent water retention abilities. The large sloping lawn of the dormitory features a below grade cistern for stormwater management and irrigation and also provides a tenth green roof and open lawn for the campus.

A copy of the institution’s rainwater management policy, plan, and/or guidelines:
Stormwater Master Plan for the University of Pennsylvania_March 2013.pdf

A brief description of the institution’s rainwater management policy, plan, guidelines and/or practices that supports the responses above:
---

The website URL where information about the programs or initiatives is available:
http://www.facilities.upenn.edu/sites/default/files/Stormwater%20Master%20Plan%20for%20the%20University%20of%20Pennsylvania_March%202013_web.pdf

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor’s, Master’s, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn’s efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Planning & Administration

Coordination & Planning

Points Claimed 8.00
Points Available 8.00

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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability Coordination</td>
<td>1.00 / 1.00</td>
</tr>
<tr>
<td>Sustainability Planning</td>
<td>4.00 / 4.00</td>
</tr>
<tr>
<td>Participatory Governance</td>
<td>3.00 / 3.00</td>
</tr>
</tbody>
</table>
Sustainability Coordination

Provisional Score

1.00 / 1.00

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

Institution has at least one sustainability committee, office, and/or officer tasked by the administration or governing body to advise on and implement policies and programs related to sustainability on campus. The committee, office, and/or officer focuses on sustainability broadly (i.e. not just one sustainability issue, such as climate change) and covers 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 one aspect of sustainability (e.g. an energy efficiency committee) or has jurisdiction over only a part of the institution (e.g. “Academic Affairs Sustainability Taskforce”) does not count toward scoring in the absence of institution-wide coordination.

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

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:

Penn President Amy Gutmann's signed the "American College and University Presidents' Climate Commitment" in 2007, the first Ivy League President to do so, and in doing so charged the development of a strategic plan outlining the University's goals for carbon reduction. To carry out this mission, the "Environmental Sustainability Advisory Committee" (ESAC), chaired by the Vice President of the Division of Facilities and Real Estate Services, was formed, and held its first meeting in May, 2008.

ESAC is a representative group of faculty, staff, and students who advise the President and senior leadership on environmental sustainability issues. This committee is comprised of senior administrators as at-large members, School and Center Sustainability Coordinators, the Sustainability Office, students, and representatives from seven subcommittees, School and Center: Academics, Physical Environment, Energy and Utilities, Purchasing, Waste Minimization, Transportation, and Outreach and Engagement. These subcommittees developed recommendations for short- and long-term actions that were incorporated into Penn's initial Climate Action Plan in 2009, and the second iteration, the Climate Action Plan 2.0, which was issued in 2014.

ESAC was given a new role after the launch of the University's Climate Action Plan - and continues to meet no less than once per year, with each subcommittee meeting no less than once each semester to discuss current work, challenges, and achievements in each of the plan’s seven initiatives. In addition, the seven subcommittee co-chairs continue to meet once
per semester to collaborate on initiatives and share progress. These ongoing meetings ensure effective implementation of the plan and provide an opportunity to strengthen Penn’s initiatives through regular communication and collaboration.

In addition to the campus leadership and steering function provided by ESAC, Penn has many supporting committees and organizations that support sustainability at Penn through administrative decision-making, advocacy, research, and leadership. These committees include:

* The Sustainability Coordinators, comprised of representatives from Schools and key Centers that work to align their work to the goals of Penn's CAP2.0.
* The Student Sustainability Association at Penn, Penn's student-led umbrella group for environmental and sustainability extra-curricular activities.
* The Bicycle Committee, with representatives from Penn's Divisions of Facilities and Real Estate Services, Business Services, and Public Safety, as well as other key campus stakeholder.
* The University Council's Facilities Committee, which includes campus sustainability as one of its annual charges.
* Solid Waste Management Working Group, made up as volunteers from across campus collaborating on waste minimization efforts.
* The Tree Advisory Committee, with representatives from the Morris Arboretum, the Office of the University Architect, and other key stakeholders, working to keep Penn's tree population healthy and to expand Penn's tree canopy on campus.
* Staff and Faculty Eco-Reps Steering Committee, a team of six volunteer leaders who manage and help direct the activity of Penn's Eco-Reps.

Members of each committee, including affiliations and role (e.g. staff, student, or faculty):

ESAC Committee (at large members):
Anne Papageorge, Chair and Vice President, Facilities and Real Estate Services Division (FRES)
Marie Witt, Vice President of the Business Services Division (BSD)
Faramarz Vakilizadeh, Executive Director of Operations & Maintenance, FRES
Tony Sorrentino, Assistant Vice President, Office of the Executive Vice President
Marilyn Jost, Executive Director of Administration, FRES
Beth Winkelstein, Vice Provost for Education, Office of the Provost
Matt Lane, Executive Director, Facilities Planning and Science Operations, School of Arts and Sciences
Ira Winston, Executive Director, School of Engineering and Applied Science
Edwin Datz, Executive Director of Real Estate, FRES
Bob Lundgren, University Landscape Architect, FRES
Alex Waegel, Center for Environmental Building + Design, Penn Design
Paul Meyer, Executive Director Morris Arboretum, BSD
Heidi Wunder, Assistant Director of Communications, FRES
Subcommittee Co-chairs
John Keene (Academics), Professor of City & Regional Planning, Penn Design / Environmental Studies, School of Arts and Sciences
Jane Dmochowski (Academics), Faculty, Earth & Environmental Science School of Arts & Sciences
David Hollenberg (Physical Environment), University Architect, FRES
Eric Weckel (Physical Environment), Executive Director of Space Planning & Operations, Perelman School of Medicine
Bill Braham (Utilities & Operations), Professor of Architecture / Center for Environmental Building + Design, Penn Design
Ben Suplick (Utilities & Operations), Director of Energy Operations, FRES
Brian Manthe (Transportation), Director of Transportation, BSD
Craig Roncace (Waste Minimization), Director of Urban Parks, FRES
Sara King (Waste Minimization), Associate Director, Sustainability & Project Management, School of Arts & Sciences
Mark Mills (Purchasing), Director of Purchasing, BSD
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:

The four-person Sustainability Office staff report to the University Architect as do the two-person landscape design team. An additional five-person energy team reports to the Executive Director of Operations & Maintenance. All staff is housed within the Division of Facilities and Real Estate Services.

In addition, ten of Penn's 12 Schools have appointed a Sustainability Coordinator to develop and manage sustainability initiatives within each School. Several of Penn's critical administrative centers also have appointed Sustainability Coordinators, including the Department of Recreation and Intercollegiate Athletics, the Morris Arboretum, the New Bolton Large Animal Center, the Vice Provost of University Life, the Division of Business Services, Residential Services, and the Office of Government and Community Affairs.

Full-time equivalent (FTE) of people employed in the sustainability office(s):
4

Does the institution have at least one sustainability officer?:
Yes
Name and title of each sustainability officer:
Daniel Garofalo, Director; Julian Goresko, Sustainability Manager; Madeline Schuh, Sustainability Analyst; Elizabeth Main, Sustainability Coordinator

Does the institution have a mechanism for broad sustainability coordination for the entire institution (e.g. a campus-wide committee or an officer/office responsible for the entire campus)?:
Yes

A brief description of the activities and substantive accomplishments of the institution-wide coordinating body or officer during the previous three years:
The Sustainability Office has four main functions: setting sustainability goals, tracking & reporting sustainability metrics, educating & engaging the campus community, and supporting efforts throughout the campus to meet the "Climate Action Plan" goals.

The Sustainability Office completes quarterly metrics tracking sustainability goals for senior leadership, organizes campus-wide awareness campaigns, oversees the work of outreach organizations such as Student Eco-Reps, Staff/Faculty Eco-Reps, School and Center Sustainability Coordinators, and provides support to and coordination with allied professionals, faculty, and administrators across the University working on sustainability issues.

Some examples of recent years include:
* In the spring of 2017, Penn's main, academic campus was designated a Level 1 arboretum under ArbNet certification and has since increased to Level 2, recognizing the efforts of the University to create and maintain a diverse physical environment on campus.
* Penn was also recognized for the eighth year in a row as a "Tree Campus USA" award recipient.
* In 2017, Penn earned the Clean Air Council's 2017 "Clean Commute Award" for exemplary sustainability in commuting and transit.
* Penn's Shoemaker Green was one of the world's first public landscapes to be awarded the Sustainable Sites designation for its exemplary landscape planning and stormwater management.
* Penn now has over 20 LEED-certified green buildings or renovations projects, and in 2017, Penn's New College House won the Delaware Valley Green Building Council's "Groundbreaker Award" for exemplary accomplishment in green building.
* Penn has been named a "Bike-Friendly University" (Silver rating) since 2014. The rating is good for four years, after which point the University will reapply.

Job title of the sustainability officer position:
Environmental Sustainability Director

Job description for the sustainability officer position:
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Job description for the sustainability officer position:
Penn's first Sustainability Director was appointed by President Amy Gutmann in 2009, and is responsible for implementing the "Climate Action Plan 2.0", Penn's roadmap for improved environmental performance and carbon emissions reduction. Today, the Sustainability Director supports environmental improvement in the built environment, energy and utilities, transportation, purchasing, waste reduction, communications, and academics.
Job title of the sustainability officer position (2nd position):
Sustainability Manager

Job description for the sustainability officer position (2nd position):
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This position also serves as an adviser and manager to many groups across campus, including the Environmental Sustainability Advisory Committee (ESAC), the Sustainability Coordinators, and the Student Sustainability Association at Penn (SSAP). The Sustainability Manager reports to Penn’s Environmental Sustainability Director and helps oversee day-to-day functions of the office while contributing to institutional planning, strategic development, campus operations, and outreach initiatives for the University’s Climate Action Plan 2.0, an institutional framework for holistic sustainability.

Job title of the sustainability officer position (3rd position):
Sustainability Analyst and Sustainability Coordinator

Job description for the sustainability officer position (3rd position):
---

The Sustainability Analyst tracks and provides data analysis of campus wide sustainability metrics, works to visualize and publish sustainability data, and updates campus sustainability reporting. In addition, the Analyst contributes program support towards Penn’s "Climate Action Plan 2.0" initiatives.

The Sustainability Coordinator is responsible for coordinating programs and outreach initiatives for students, faculty, and staff in support of the University's "Climate Action Plan 2.0". Specifically, the coordinator assists in managing the Eco-Reps programs, the "PennGreen Pre-Orientation" program, and the annual "ReThink your Footprint" waste minimization and awareness campaign.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/our-commitment/our-team

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:
In addition to the sustainability officers listed above the following people are also sustainability officers:
In the Energy Team: Ben Suplick, Director; Andrew Zarynow, Energy Manager; Tom Poole, Utility Engineer; Jeff Clemmenson, Recommissioning Coordinator/ Energy Engineer
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor’s, Master's, and Doctorate levels. Penn is committed to reducing emissions and energy use, as stated in the 2014 "Climate Action Plan 2.0". This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
### Sustainability Planning

**Provisional Score**

4.00 / 4.00

**Responsible Party**

Madeline Schuh  
Sustainability Analyst  
Facilities and Real Estate Services

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**Criteria**

Institution has published one or more written plans that include measurable sustainability objectives addressing one or more of the following areas:

- Curriculum
- Research
- Campus Engagement
- Public Engagement
- Air & Climate
- Buildings
- Energy
- Food & Dining
- Grounds
- Purchasing
- Transportation
- Waste
- Water
- Diversity & Affordability
- Investment & Finance
- Wellbeing & Work
- Other (e.g. arts and culture or technology)

The criteria may be met by any combination of published 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.

"---" indicates that no data was submitted for this field
Does the institution have a published strategic plan or equivalent guiding document that includes sustainability at a high level? : Yes

A brief description of how the institution’s strategic plan or equivalent guiding document addresses sustainability:

The Penn Compact 2020: In her inaugural address in 2006, Penn President Amy Gutmann outlined the Penn Compact, a vision for Penn that focused on increased access for students, the integration of knowledge from the arts and sciences into Penn's professional schools, and leadership locally, regionally, and globally. In 2016, President Gutmann renewed the priorities of the University by publishing the Penn Compact 2020, which strengthens and enhances the University's commitment to the principals cited by Dr. Gutmann in 2006: Increase Access, Integrate Knowledge, and Engagement Locally, Nationally, and Globally. The Penn Compact 2020 principles are summed up in three values that Dr. Gutmann says make Penn unique—inclusion, innovation, and impact.

INCLUSION: In 2007, Penn introduced an all-grant, no-loan aid package that eliminated loans for financially eligible students from the United States, Mexico, and Canada. In addition, the Compact 2020 expands the Penn World Scholars program, which brings outstanding international undergraduate students to campus. The Action Plan for Faculty Diversity and Excellence commits Penn to recruiting, retaining, and mentoring diverse faculty members. Open Learning at Penn will continue to expand with online education initiatives that highlight some of the University’s most compelling courses. By ensuring that Penn's student body and faculty remain diverse and the campus remains an inclusive environment, Penn supports the social equity goals of sustainability articulated in the Climate Action Plan 2.0.

INNOVATION: One of President Gutmann's signature initiatives has been the Penn Integrates Knowledge (PIK) program, which recruits faculty whose research and teaching exemplify interdisciplinary work. In the Penn Compact 2020, the PIK program continues, as does Penn's long legacy of interdisciplinary classes and programs. As an outgrowth of the PIK program, Penn created a new Pennovation Center, an 23-acre incubator campus, where University discoveries are applied to social needs. As a trans-disciplinary program, Penn's commitment to environmental sustainability remains a primary focus of academics and scholarship at Penn.

IMPACT: Penn's primary impact locally, regionally, and globally is through the work of its students and faculty. Penn's sustainability impact is profound, through faculty sustainability scholarship and also the work of our students. Penn's Climate Action Plan research grants, Undergraduate Mentorship Research Grants, and Sustainability Internships provide students working in the field of sustainability to have an impact in Philadelphia, across our region, and around the world.

In a second aspects of engagement, the University is implementing its Penn Connects 2.0 master plan, to create an innovative and beautiful urban campus with vibrant living and learning spaces that make a positive impact on the local community. Building on President Gutmann’s original PennConnects plan, which added over half a million square feet of new space to campus since since 2009 while increasing open space by 25 percent, Penn Connects 2.0 reinforces the University’s sustainability objectives as outlined in its Climate Action Plan 2.0.

http://www.pennconnects.upenn.edu/
https://www.sustainability.upenn.edu/our-commitment/our-plan

http://www.upenn.edu/almanac/volumes/v61/n19/pdf/sas-strategic-plan.pdf

A copy of the strategic plan:
---

The website URL where the strategic plan is publicly available:
http://www.pennconnects.upenn.edu/

Does the institution have a published sustainability plan (apart from what is reported above)?
Yes

A copy of the sustainability plan:
---

The website URL where the sustainability plan is publicly available:
https://www.sustainability.upenn.edu/our-commitment/our-plan

Does the institution have a published climate action plan (apart from what is reported above)?
Yes

A copy of the climate action plan:
---

The website URL where the climate action plan is publicly available:
https://www.sustainability.upenn.edu/our-commitment/our-plan

Does the institution have other published plans that address sustainability or include measurable sustainability objectives (e.g. campus master plan, physical campus plan, diversity plan, human resources plan)?
Yes

A list of other published plans that address sustainability, including public website URLs (if available):
Ecological Landscape Stewardship Plan - this plan is in final draft form. When released, it can be found on the Penn Sustainability website.

Stormwater Master Plan

http://www.facilities.upenn.edu/sites/default/files/Stormwater%20Master%20Plan%20for%20the%2020University%20of%20Pennsylvania_March%202013_web.pdf

Penn Compact 2020:

https://president.upenn.edu/penn-compact/penn-compact-landing

Penn Connects 2.0
As outlined above, Penn Connects 2.0 is the campus master plan, to create an innovative and beautiful urban campus with vibrant living and learning spaces that make a positive impact on the local community.

https://www.pennconnects.upenn.edu/growing_greener/penn_connects_2.0.php

Taken together, do the plan(s) reported above include measurable sustainability objectives that address Curriculum?:
Yes

A list or sample of the measurable sustainability objectives that address Curriculum and the published plans in which each objective is included:

The Penn Climate Action Plan and Climate Action Plan 2.0 (CAP 2.0) address Academics and Curriculum one of its seven initiatives. The CAP 2.0 aims to:
• make climate change and sustainability part of the curriculum and educational experience available to all students;
• support faculty teaching, learning, and research into the impact of principles of sustainability on all fields of knowledge; and
• inform the entire University community of the principles of sustainability and its three key constituent pillars: environmental protection, economic prosperity, and equitable distribution of resources.
In addition to the goals of the CAP 2.0, the Penn’s Schools – including in particular Arts and Sciences, Design, Engineering and Applied Science, and Wharton – are committed to advancing strategic academic planning around sustainability and energy research.
A centerpiece of Penn’s sustainability scholarship is advancing innovative, interdisciplinary research. The intent is to foster interdisciplinary research that will act as a campus-wide catalyst for efforts that link innovation to impact, support multidisciplinary research projects, and attract distinguished visiting faculty and post-doctoral researchers. This process will foster a continual dialogue between natural science and social science researchers exploring the drivers for decisions on energy use and environmental policy, in close concert and coordination with other Penn academic centers such as the Kleinman Center for Energy Policy and the Penn Institute for Urban Research (PIUR) in the School of Design, and the
Wharton School’s Initiative for Global Environmental Leadership (IGEL).
The Vagelos Institute will have a key role to play as a central point of contact to ensure that students benefit from the research opportunities and vast array of curricular options offered on these topics. The latter include a rapidly expanding number of academic programs, including the dual degree Vagelos Integrated Program in Energy Research (SAS and SEAS); a University-wide Minor in Sustainability and Environmental Management; a SEAS Minor in Energy and Sustainability; and an array of master’s degree programs, including the Masters of Environmental Building Design in the School of Design, and the SAS Masters of Environmental Studies and Masters of Organizational Dynamics with a concentration in Sustainable Development.

In support of these integrative goals, Penn has committed to building and honing faculty strengths in sustainability and environmental scholarship. The University is committed to significant investments in faculty hires to lead in energy-related and environmental research. The School of Engineering and Applied Science is advancing “Water, Energy and Food” as among its focal themes for interdisciplinary hiring, and will collaborate closely with SAS in building capabilities in energy capture, storage and conversion. SAS is working to create linkages among natural science departments around the areas of evolution, ecology, and physiology; is focusing hiring in the social sciences around historical and contemporary policy and the ethics of energy production and environmental issues; and is building strengths in the humanities around a nascent core in eco-criticism and the Penn Program in Environmental Humanities in SAS. The University is also firmly committed to developing new educational programs by establishing curricula, coordinated across disciplines, to educate the next generation of responsible citizens and leaders. As befits an institution dedicated to the close integration of leading-edge research and teaching, Penn’s new research initiatives are designed to benefit our students – undergraduates and graduate students alike – through opportunities for focused, project-based learning and through new courses that cross disciplinary boundaries.

Some examples of recent initiatives promoting sustainability scholarship and curriculum development include:

- The Vagelos Integrated Program in Energy Research, established in 2012, a dual undergraduate degree in SAS and SEAS, which in 2017 graduated its largest class yet. Participating students began conducting individualized research in the summer of their first year and continued doing so until graduation. See

  https://www.viper.upenn.edu/

- Perry World House, Penn’s center for global scholarship, collaborates with Penn’s Schools and academic Centers in identification and recruitment of scholars who bring expertise in sustainable development to global issues. The Penn Institute for Urban Research organized several events with Perry World House about sustainable urban development around the world and sent a Penn delegation to the UN Conference on Housing and Sustainable Development (Habitat III) in Quito, Ecuador. See

  http://penniur.upenn.edu/

- Penn’s School of Design is one of four partners in a five-year, $7.5 million grant from the US Department of Transportation – Cooperative Mobility for Competitive Mega-regions – that aims to advance research, education, and technology-transfer initiatives to improve the mobility of people and goods in urban and rural communities of mega-regions. See

  https://www.design.upenn.edu/city-regional-planning/graduate/work/cooperative-mobility-competitive-megaregions

- The Initiative for Global Environmental Leadership, based in Wharton, hosted the annual international conference on The
Future of Education in Business Sustainability, part of its mission to bring together interdisciplinary research with business practices to address pressing environmental challenges around the world. See

https://whartonigel.wordpress.com/2017/05/03/wharton-igel-10th-anniversary-dinner-conference-th
e-future-of-education-in-business-sustainability/

In April 2018, IGEL will host a conference examining the consequences of extreme climatic disruption for business and democracy.

share

Building and honing faculty strengths. Please note that this section applies to 2017 hires.

• The School of Engineering and Applied Science appointed five new professors with specialties in research in energy and sustainability, especially using nanotechnology to advance sustainable energy storage and energy conversion, who join more than a dozen existing faculty members with strong research programs in these areas.
• The Energy Science cluster in the School of Arts and Sciences hired three new faculty members, who work across the Departments of Chemistry; Earth and Environmental Science; and Physics and Astronomy.
• In Penn’s School of Design, Prof. Richard Weller, Chair of Landscape Architecture, published the widely read and reviewed Atlas for the End of the World, a four-year research project using maps and essays to examine the intersection of urban growth and endangered biodiversity around the world, and is now working with the UN Secretariat for the Convention on Biological Diversity to help achieve 2020 global conservation targets.

Additional examples of Penn’s work to develop new educational programs include:
• The new Penn Program in Environmental Humanities received a multi-million dollar grant in 2017 from the Mellon Foundation and began to implement a new Environmental Humanities undergraduate minor and graduate certificate, as well as a cluster hire in Environmental Humanities that will work across seven School of Arts and Sciences departments.
• Penn’s School of Engineering and Applied Science introduced six new or substantially updated courses in energy and sustainability, along with its vibrant Energy and Sustainability minor and undergraduate specialization in Energy Conversion and Storage.
• Wharton offers a significant range of options to meet student demands for sustainability curriculum in business studies, including an undergraduate concentration in Environmental Policy and Management, an MBA major in Environmental and Risk Management, and a dual MBA/Master of Environmental Studies degree.
• The School of Design updated the existing Masters of Environmental Building Design program, renaming the program the Master of Science in Design (MSD) with a concentration in Environmental Building Design.

Taken together, do the plan(s) reported above include measurable sustainability objectives that address Research?:

Yes

A list or sample of the measurable sustainability objectives that address Research and the published plans in which each objective is included:

stars.aashe.org
Initiated in 2012, the Integrating Sustainability Across the Curriculum program (ISAC) is an eight-week summer program teaming undergraduates with faculty to refine an existing course or develop a new course that incorporates sustainability as an academic theme. A key component of ISAC is a faculty workshop held at the beginning of the program.

This workshop engages faculty participants in an exercise examining the concepts of environmental sustainability in a variety of disciplines. Resource experts are invited to discuss how sustainability has been incorporated into their field and daily work. The collaboration between faculty members and students is one of the strongest features of this program. Each research assistant is paired with two faculty members and works over the course of eight weeks to help them integrate sustainability into their existing or new courses.

**Taken together, do the plan(s) reported above include measurable sustainability objectives that address Campus Engagement?:**
Yes

**A list or sample of the measurable sustainability objectives that address Campus Engagement and the published plans in which each objective is included:**

The mission of outreach and engagement in the Climate Action Plan 2.0 at Penn is to build a culture of sustainability that informs all constituents of University life. The Penn Sustainability Office achieves this goal through structured and measurable initiatives, including:
- the Staff/Faculty Eco-reps program;
- the Student Eco-reps program;
- the support and development of Sustainability Coordinators within Schools and Centers;
- reward and recognition programs, including Green Office Certification, Green Living at Penn, and Green Labs programs;
- Programs and campaigns during the year, including move-in/out programs for campus residents, social media activity, several awareness and engagement campaigns including those focused on energy conservation, nature and outdoor engagement, waste minimization, and healthy living.

**Taken together, do the plan(s) reported above include measurable sustainability objectives that address Public Engagement?:**
Yes

**A list or sample of the measurable sustainability objectives that address Public Engagement and the published plans in which each objective is included:**

As part of the Climate Action Plan Academics Initiatives, Penn is focusing on a long-term goal of influencing public policy and corporate/professional/ nonprofit leadership as an ongoing initiative through the following steps:

a. Promote faculty leadership among peer institutions, government, and the general public.
b. Look for opportunities to feature Penn faculty expertise at public fora, symposia, and conferences.
c. Position Penn as a regional/international leader and resource in sustainability.
d. Provide opportunities for Penn faculty and students to take active roles in sustainability-oriented organizations.
e. Create an alumni sustainability network and develop a mechanism to report on the achievements and influence of Penn alumni in this field.

Some examples of measurable sustainability outcomes that address Public Engagement are listed below.
Penn's student Eco-Reps engage in year-long sustainability projects, many of which are oriented toward public outreach and engagement. 2016 projects are published on the Penn Sustainability website (https://www.sustainability.upenn.edu/sustainability-impact-projects), and included partnerships with a local community-based farm, the City of Philadelphia Recycling Office, the School District of Philadelphia, the City of Philadelphia Parks and Recreation Department, and area environmental non-profits.

In addition, the Penn Sustainability Office has partnered with academic departments to place over a dozen university students in sustainability research positions with regional non-profits, academic centers, and city agencies, including the Pennsylvania Horticulture Society (working on community gardens, urban tree canopies, and community greening), Bartram’s Farm, a non-profit urban farm working on community health food sovereignty, the City of Philadelphia Parks and Recreation Department (working on recycling in parks and at recreation centers), the City of Philadelphia Sustainability Office, the City of Philadelphia Energy Office, and the City of Philadelphia Planning Commission. The intent of these sustainability fellowships is to improve regional environmental performance while providing real-world learning experiences to graduate and undergraduate students at Penn interested in sustainability issues.

Penn’s Sustainability Office has also worked with the School District of Philadelphia to place students working on sustainability issues in local K-12 classrooms, assisting teachers and school administrators in bringing sustainability education to some of Philadelphia’s most disadvantaged neighborhoods.

**Taken together, do the plan(s) reported above include measurable sustainability objectives that address Air & Climate?:**

Yes

**A list or sample of the measurable sustainability objectives that address Air & Climate and the published plans in which each objective is included:**

Penn’s commitment to create and maintain a sustainable campus is demonstrated by multiple objectives, in areas including but not limited to: increased ecologically-managed green space, decreased building energy consumption, increased education and awareness, waste management, purchasing, and promotion of sustainable transportation initiatives.

In 2017, Penn's main West Philadelphia campus received accreditation as an Arboretum through the ArbNET accreditation program: See https://news.upenn.edu/news/university-pennsylvania-campus-accredited-arboretum

Also in 2017, Penn was honored by two different organizations for its work towards minimizing emissions from commuting: the Clean Air Council awarded Penn the Clean Commute Award (see http://cleanair.org/clean-air-commute-awards-2017/) and the Delaware Valley Regional Planning Commission awarded Penn its Air Quality Award (see https://www.sustainability.upenn.edu/news/air-quality-award-penn-dvrpc)
Taken together, do the plan(s) reported above include measurable sustainability objectives that address Buildings?:
Yes

A list or sample of the measurable sustainability objectives that address Buildings and the published plans in which each objective is included:

The Penn Climate Action Plan 2.0 identifies a number of building related sustainability items. Since the launch of the 2009 Climate Action Plan, Penn initiated and completed a comprehensive steam and chilled water metering initiative on campus to understand building energy use and better allocate costs, installing approximately 400 steam and chilled water meters over four years a cost of roughly $5M.

Penn's Operations Control Center (OCC) monitors the energy performance of all 180+ buildings on campus, saving more than $5-million annually in energy costs through state-of-the-art central monitoring and control of utilities. From the OCC, Penn engineers control campus-wide chilled water and steam utilities, and air-handling systems in buildings across the campus. Through sophisticated temperature/time optimization, temperature setback, and demand management techniques, Penn is able to avoid costly peak utility charges and conserve energy year-round. For example, on extremely hot summer "red days" when the electricity demands are high, the OCC shuts non-essential equipment down and increases space temperatures. (see https://www.sustainability.upenn.edu/initiatives/conserving-energy).

To achieve the campus energy reduction, Penn performs recommissioning and through the Century Bond program, deep energy retrofits on buildings, spending over $200M on energy retrofits since 2013 in order to reduce utility use and carbon emissions.

All of Penn's new buildings and major renovations are LEED Certified to a minimum of Silver level. As of 2017, over 20 of Penn's building meet this standard.

Taken together, do the plan(s) reported above include measurable sustainability objectives that address Energy?:
Yes

A list or sample of the measurable sustainability objectives that address Energy and the published plans in which each objective is included:

The Climate Action Plan 2.0 targets a reduction of energy usage by 17 percent from the 2007 baseline by 2014. Strategies to meet this goal include:
* Penn's Century Bond program, which will spend over $200M on deep energy retrofits by 2019;
* building recommissioning projects (averaging over 18 retro-commissioning projects annually); and
* behavior change and awareness programs, which aim to educate and inform the campus community about how they can help conserve energy.

Taken together, do the plan(s) reported above include measurable sustainability objectives that address...
Food & Dining?:
Yes

A list or sample of the measurable sustainability objectives that address Food & Dining and the published plans in which each objective is included:

As part of the waste minimization section of the Climate Action Plan 2.0, Penn addresses Food and Dining. Under the plan, both pre- and post-consumer composting was introduced in dining halls. In 2012, Penn Dining introduced a reusable take-out container for residential dining halls to eliminate the use of disposable, single-use take out clamshell containers. Each month in FY2016 and 2017, approximately 11 tons of food waste was diverted from landfills through composting.

Penn’s dining vendor, Bon Appetit, promotes sustainable dining through a variety of programs, including sourcing food from local and small farms, and promoting low-carbon and local dining through specific student awareness campaigns through the year. Penn has been a member of Bon Appetit’s Farm to Fork program for several years. See http://www.bamco.com/sourcing/

Taken together, do the plan(s) reported above include measurable sustainability objectives that address Grounds?:
Yes

A list or sample of the measurable sustainability objectives that address Grounds and the published plans in which each objective is included:

The Climate Action Plan 2.0, details the adoption of sustainable landscape practices across campus. These practices have had a number of significant impacts:
eliminating chemical fertilizers used on campus;
eliminating the use of herbicides and pesticides except to treat spot outbreaks;
adoption of enhanced native species planting standards; and
the reduced use of grass as a groundcover.

Penn’s Urban Parks maintenance teams now treat campus meadows, grass, turf, and plants with “compost tea,” an all-natural amendment that improves soil and vegetation health and discourages weed growth and pest infestation. Penn landscape staff regularly consults with the Morris Arboretums tree specialists to ensure that the 6000+ tree population remains healthy and thriving.

As of 2017, Penn has been recognized as a Tree Campus USA by the Arbor Day Foundation for eight straight years, affirming Penn’s commitment to campus tree management, fostering healthy urban forests, community outreach and the engagement of the student population in these endeavors.
In Spring 2017, Penn's main West Philadelphia campus received accreditation as a level I Arboretum through the ArbNET accreditation program. In the Fall of 2017, the University increased their certification level and was designated as Level II:

https://news.upenn.edu/news/university-pennsylvania-campus-accredited-arboretum
Taken together, do the plan(s) reported above include measurable sustainability objectives that address Purchasing?:
Yes

A list or sample of the measurable sustainability objectives that address Purchasing and the published plans in which each objective is included:

As a result of strategic purchasing, outlined in the Climate Action Plan 2.0, the overall campus waste stream has been reduced dramatically. Penn Purchasing has had a very significant impact on this reduction, through multiple actions, such as:
* implementing a discount for office supply orders over $200 to encourage bulk shipping and to reduce trips to campus and thereby minimizing associated environmental impacts;
* eliminating the use of cardboard boxes in office supply deliveries by replacing them with reusable cartons, greatly reducing the resource use associated with shipping;
* mandatory use of refillable toner cartridges and purchase preferences for the use of recycled-content paper, thereby greening the campus supply chain.

More information on Penn's Sustainable Purchasing Initiatives are here:

https://cms.business-services.upenn.edu/purchasing/sustainable-purchasing.html

Taken together, do the plan(s) reported above include measurable sustainability objectives that address Transportation?:
Yes

A list or sample of the measurable sustainability objectives that address Transportation and the published plans in which each objective is included:

The Penn Transit website at

http://cms.business-services.upenn.edu/parking/sustainable-commuting/biking.html

explains the University’s many clean commute options.

1 Bicycle Commuter Expense Reimbursement Program
Penn is offering qualified Faculty and Staff who commute to work more than 50% in an eligible month, and who do not receive any other commuter benefits, the opportunity to expense their eligible bicycle commuter costs up to $20.00 per month times the number of months eligible (max $240.00/year). Participation in this program requires submitting expense receipts and self-certification of eligibility, consistent with University guidelines and IRS tax policy. This program has sparked broad interest. Its announcement in the fall of 2016 was supported in several University publications and was showcased at various Open House information sessions. Participation in this program requires registering bicycles with the University of Pennsylvania Police Department (UPPD), thereby, contributing to the overall security and recoverability of stolen bicycles.

2. Commuter Transit Benefits
To encourage the use of mass transit, faculty and Staff are eligible to enroll in Penn’s Commuter Tax Benefit program, which allows payroll deduction of commuter costs (i.e. - the Southeast PA Transit Authority (SEPTA) and NJ Transit) at a
discounted pre-tax rate (University discounts 5% and SEPTA discounts 5%). Penn Students are eligible to enroll in Penn’s Student SEPTA pass program. This is also a discounted, pre-tax program. These passes are purchased for individual semesters, thereby ensuring students only pay for what they need.

- Faculty and Staff: 4,017 sustainable transit users
- Students: 1,478 Student SEPTA pass users
- Penn’s percentage of Sustainable Transit users continues to grow at a rate just over 2% a year. At the end of 2016, 48% of commuters were sustainable transit users.

3. Occasional Parking Program
To encourage Penn employees to become sustainable transit users, the Occasional Parking Program (OPP) offers the annual purchase of 10 parking passes at a discounted rate for those times when driving is necessary. Almost 400 employees participate in this program. Discounting this occasional parking ($60.00 for 10 passes) encourages sustainable transit use by acknowledging there are times when driving to and from work may be necessary. By making this limited amount of parking so inexpensive, commuters are offered flexibility while they are enrolled in Penn’s sustainable transit commuter programs.

4. Ride Share
In partnership with Enterprise and ZipCar, the University has four convenient pick-up/park locations with a total of 12 vehicles to support community members who have the occasional need to use a motor vehicle. Having Ride Share options encourages community members from owning or bringing a car to campus while simultaneously supporting program participants’ intermittent need for a car.

5. Carpooling Permit parking is deeply discounted for carpools. There are 121 carpool participants on campus. Savings available for faculty and staff who carpool are:
   - 2 people save 25% on a parking pass
   - 3 people save 50% on a parking pass
   - 4 people save 75%*

6. Van Pools
Working with VRide, the University supports van pools for both University and Hospital faculty and staff. To encourage participation, parking for these vans is provided at a premium location at no charge, and parking for these vans is in designated, oversized spaces for both ease and convenience of the driver and passengers. There are three vans in the program, which support 16 passengers, each.

7. Electric Vehicle Charging Stations
Penn has four electric vehicle charging stations conveniently located to support permit and transient parkers. Electricity is provided at near-cost prices through a third-party network.

8. On and Off-Campus Transportation (Bus & Shuttle)
The University offers a broad range of transit services for safety and convenience, and as an alternative to car ownership. Penn Transit operates on and off campus routes and schedules including specific loops for community members at several locations on and adjacent to campus. Penn features an Integrated Transit Solution that moves its constituents to, from and around campus safely and efficiently within its designated service area. This free service is available to passengers with a valid PennCard, the University’s identification card for students, faculty and staff.

By participating in fairs, information sessions, advertising in the student newspaper (print and online options), and other marketing initiatives, Penn emphasizes its transportation partnership with nearby Drexel University (Drexel students can use Penn transit at no cost and Penn students can ride Drexel transit at no cost), the regional transportation authority (SEPTA), and SEPTA’s local University City Loop bus service (LUCY®).

In cooperation with SEPTA, a new SEPTA Travel Center @ Penn recently opened at the Penn bookstore. This first-of-its kind center is staffed daily with SEPTA personnel able to answer questions about all modes of transportation throughout the University of Pennsylvania | STARS Report | 248
West Philadelphia area and regionally.

9. Alternate Fuel Vehicle Conversions
All new Penn Transit vehicles are environmentally friendly. Consistent with Pennsylvania law, all Penn Buses run on biodiesel fuel. Smaller shuttles are multi-fuel capable via a propane retrofit process that is performed immediately after a vehicle purchase. Penn operates 11 biodiesel buses, 15 multi-fuel shuttles and has its own 1,000 gallon propane refueling station.

10. University Bike Rack Program
The University has over 60 bicycle rack locations which collectively provide parking for over 6,200 bikes. Some of which are in covered locations throughout campus. These racks are managed by our Facilities and Real Estate Services (FRES) Division in cooperation with the Penn Police Department who ensure all bike storage is monitored by CCTV. FRES also offers a convenient and easy-to-read bicycle map showing routes, parking, Indego stations, and bike repair stations throughout campus at

http://www.facilities.upenn.edu/maps

11. Bike Rack Installation on all University Buses
All Penn Transit buses are equipped with bike racks. Passengers riding Penn Buses may use the racks free of charge to store their bikes as they travel on the buses. During events such as Bike To Work Day, Penn’s Bicycle Committee sets up an information booth and offers demonstrations on how to load and unload a bicycle from a rack, using a bus on site as its exhibit area.

12. Bike Repair Station Installation
Penn has three bike repair stations, all conveniently located at bicycle parking corrals. These stations are under CCTV observation and are free of charge. They consist of a holding rack, tools and air pump. Recognizing that using a bicycle to commute has to be convenient, the availability of these repair stations further encourages the use of bicycles on and around campus.

13. Partnership with Philadelphia’s Indego Bike Share Program
There are currently four Indego Bike Share stations on Penn’s campus and the adjacent hospital campus, with space for about 100 bicycles. At the adjacent Hospital of the University of Pennsylvania and the Children's' Hospital of Philadelphia, there are three more stations, with about 50 more bicycle docks. Due to high traffic and frequency of use, one on-campus station has already doubled in size and all are in high demand. Coupled with an Indego station near 30th Street Station, on Drexel’s campus and at the hospital, Penn helps round-out the demand for convenient bicycle sharing in West Philadelphia.

Taken together, do the plan(s) reported above include measurable sustainability objectives that address Waste?:
Yes

A list or sample of the measurable sustainability objectives that address Waste and the published plans in which each objective is included:
The Climate Action Plan sets a goal of minimizing waste and improving recycling, through:
* improved community education through signage and outreach campaigns;
* strategic purchasing policies and practices that reduce packaging and consolidate deliveries;

stars.aashe.org
* appropriate infrastructure in the campus landscape, on adjacent streets, at loading docks, and in buildings, and
* improved tracking of relevant metrics.

**Taken together, do the plan(s) reported above include measurable sustainability objectives that address Water?:**

Yes

**A list or sample of the measurable sustainability objectives that address Water and the published plans in which each objective is included:**

Stormwater management is addressed in the physical environment section of the Climate Action Plan 2.0 as well as Penn’s Stormwater Master Plan, published in 2013. Green roofs, cisterns, rain gardens, and selective planting reduce stormwater run-off and help manage rainwater on campus. The campus-wide Stormwater Masterplan promotes ecologically-responsible stormwater management practices, including the following:
* Infiltration is a primary stormwater management strategy at Penn, with the use of permeable paving and sand bedding for unit pavers common.
* To minimize the use of potable water for irrigation, Penn has an extensive system of on-campus underground cisterns, including a 300,000 gallon cistern that captures and reuses all stormwater that falls on Penn Park, Penn’s 24-acre public park and recreation/athletics center, and a 30,000 gallon cistern at Penn’s Shoemaker Green. Water collected in these and many other cisterns is used for irrigation, and prior to storms is released at a controlled rate into the City’s combined stormwater sewers to help manage stormwater surge.
* Penn's new landscapes incorporate soil moisture sensors to limit unnecessary irrigation during wet periods.

In compliance with the Philadelphia Water Department's stormwater requirements, all of Penn's capital projects that disturb 15,000 sf or more are required to manage the first 1.5 inch of rain on-site, though a combination of cisterns, bio-swales, rain gardens, and green roofs. There are over a dozen large green roofs on Penn's campus, which provide visual and programmatic amenity, enhance biodiversity, and reduce urban heat island effect, in addition to managing stormwater. See

https://www.facilities.upenn.edu/sites/default/files/Stormwater%20Master%20Plan%20for%20the%20University%20of%20Pennsylvania_March%202013_web.pdf

**Taken together, do the plan(s) reported above include measurable sustainability objectives that address Diversity & Affordability?:**

Yes

**A list or sample of the measurable sustainability objectives that address Diversity & Affordability and the published plans in which each objective is included:**

Consistent with the Penn Compact 2020, which seeks to address diversity through inclusion and opportunity for under-represented populations, the Penn Climate Action Plan 2.0 addresses diversity primarily through the Academics Section. This section includes as one of its goals to “inform the entire University community of the principles of sustainability and its three key constituent pillars: environmental protection, economic prosperity, and equitable distribution of resources.”
Improving Diversity and Equity at Penn for students, staff, and faculty is one of the three main goals of President Amy Gutmann's Penn Compact 2020. A 2017 initiative to support first generation and students from low-income families provides services and support to these populations through Penn's cultural resource centers. Among the indicators of success in this effort are the following statistics from the incoming class of 2021:
* 47.9% self-identify as students of color
* 15.9% are international (by home address)
* 12.4% are first generation

See


https://www.vpul.upenn.edu/fgli

http://www.admissions.upenn.edu/apply/whatpenlooksfor/incoming-class-profile

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Taken together, do the plan(s) reported above include measurable sustainability objectives that address Investment & Finance?:

No

A list or sample of the measurable sustainability objectives that address Investment & Finance and the published plans in which each objective is included:

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Taken together, do the plan(s) reported above include measurable sustainability objectives that address Wellbeing & Work?:

Yes

A list or sample of the measurable sustainability objectives that address Wellbeing & Work and the published plans in which each objective is included:

As part of the Climate Action Plan 2.0, for the first time the University of Pennsylvania Health System, New Bolton Large Animal Center, and the Morris Arboretum are included in sustainability planning activities. As per the CAP2.0 goals, a carbon inventory was completed for these entities and will be regularly updated going forward. As a follow up to this accomplishment, there are several new opportunities associated with this engagement:

1. Identify research and administrative centers within the University of Pennsylvania Health System (for example, the Center for Toxicology) that through their missions and in their ongoing work offer academic and outreach opportunities to educate the University community about the link between healthcare and environmental sustainability.
2. Evaluating the sustainability impacts of operations at New Bolton Center and the Morris Arboretum

As an initial project associated with this collaboration, Penn Sustainability Office partnered with Penn’s Campus Health Office and the University Landscape Architect on a research project to investigate the occurrences of smoking on campus, and the impact of environmental clues in the landscape (such as signage and smoking urns) on smoking habits. In part due to the findings of this study, Penn is now a tobacco-free campus. Such initiatives will provide measurable sustainability outcomes that impact the wellbeing and work environment of Penn’s students, staff, and faculty.

There are a number of additional events, programs, and campaigns that support wellbeing and work at Penn, including free bio-metric screening, free flu shots, free counseling and mental health clinics, a variety of exercise and fitness programs, and others.

The Penn Sustainability Program manages the 30x30 Challenge, which recruits participants to spend 30 minutes each day outdoors for 30 days during the month of April. Over 150 people have signed up in each of the last three years.

https://www.hr.upenn.edu/policies-and-procedures/policy-manual/other-policies/tobacco-use-and-smoking-on-campus

https://www.hr.upenn.edu/PennHR/wellness-worklife

https://www.sustainability.upenn.edu/participate/penn-community/30x30-challenge

Taken together, do the plan(s) reported above include measurable sustainability objectives that address other areas (e.g. arts and culture or technology)?:

Yes

A list or sample of the measurable sustainability objectives that address other areas and the published plans in which each objective is included:

Through Outreach & Engagement and Communications, Penn works to accomplish their sustainability goals. Outreach & Engagement: Build a culture of sustainability that informs all constituents of University life. Communications: Create a campaign which communicates clear, concise and accurate public information that informs the broad internal Penn community and key external Penn stakeholders about Penn’s Climate Action Plan and its goals.

Does the institution have a formal statement in support of sustainability endorsed by its governing body (e.g. a mission statement that specifically includes sustainability and is endorsed by the Board of
The formal statement in support of sustainability:

Penn President Amy Gutmann's signing of the American College and University Presidents' Climate Commitment in 2007 charged Penn to develop a strategic plan outlining the University's goals for carbon reduction. To carry out this mission the Environmental Sustainability Advisory Committee (ESAC) was formed. ESAC is a cross-campus collaboration representative of faculty, staff, and students, who advise the President on environmental sustainability issues. This committee is comprised of seven subcommittees: Academics, Physical Environment, Utilities & Operations, Waste Minimization, Transportation, and Outreach & Engagement. These subcommittees developed recommendations for short- and long-term actions to address the Commitment's requirements. These recommendations were reviewed by the members of ESAC and now serve as the backbone of Penn's Climate Action Plan of 2009, and its update, the Climate Action Plan 2.0, completed in 2014.

In 2015, Penn was among 318 institutions of higher education that signed the American Campuses Act on Climate Pledge in advance of the Paris Climate Accord (COP21), affirming the University's commitment to accelerate the global transition to low-carbon energy while enhancing sustainable and resilient practices on our campuses. In June 2017, Penn joined 11 other universities in reaffirming that commitment, recognizing that concerted action is needed at every level to slow, and ultimately prevent, the rise in the global average temperature and to facilitate the transition to a clean energy economy. Penn believes Universities have a critical role to play in reducing our own greenhouse gas emissions, continuing to advance evidence-based understanding of the causes and effects of climate change on the environment, the economy and public health, and developing solutions. Penn President Amy Gutmann's statement affirmed the clear scientific consensus that the climate is changing largely due to human activity, that the consequences of climate change are accelerating, that the imperative of a low carbon future is increasingly urgent, and that Penn remains committed to a broad-based global agreement on climate change.

The institution’s definition of sustainability (e.g. as included in a published statement or plan):

The Penn Sustainability website includes published a definition of sustainability in academics at Penn, written by Penn's Environmental Sustainability Advisory Committee Subcommittee on Academics.

See:

https://www.sustainability.upenn.edu/sites/default/files/downloads/Definition%20of%20Sustainability%20at%20Penn.pdf

Is the institution an endorser or signatory of the following? :

<table>
<thead>
<tr>
<th></th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Earth Charter</td>
<td>No</td>
</tr>
<tr>
<td>Commitment</td>
<td>Status</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>The Higher Education Sustainability Initiative (HESI)</td>
<td>No</td>
</tr>
<tr>
<td>ISCN-GULF Sustainable Campus Charter</td>
<td>Yes</td>
</tr>
<tr>
<td>Second Nature’s Carbon Commitment (formerly known as the ACUPCC), Resilience Commitment, and/or integrated Climate Commitment</td>
<td>Yes</td>
</tr>
<tr>
<td>The Talloires Declaration (TD)</td>
<td>No</td>
</tr>
<tr>
<td>UN Global Compact</td>
<td>Yes</td>
</tr>
<tr>
<td>Other multi-dimensional sustainability commitments (please specify below)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**A brief description of the institution’s formal sustainability commitments, including the specific initiatives selected above:**

In addition to the Climate Action Plan and sustainability initiatives listed above, Penn is a member of the International Sustainable Campus Network (ISCN) and participates in this body through presenting Penn's work in its annual conferences.

In addition, Penn President Amy Gutmann joined eleven other Ivy Universities in reaffirming commitment to climate change mitigation after the US withdrawal from the Paris Agreement.

Penn's Wharton School of Business is the signatory of the UN Global Compact.

**The website URL where information about the programs or initiatives is available:**

https://www.sustainability.upenn.edu/

**Additional documentation to support the submission:**

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**Data source(s) and notes about the submission:**

The University of Pennsylvania is a major research institution, with over 3000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to creating a more sustainable campus as stated in the 2014 Climate Action Plan and Dr. Gutmann's Penn Compact 2020. This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's Climate Action Plan 2.0. The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits.
Participatory Governance

<table>
<thead>
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<th>Provisional Score</th>
<th>Responsible Party</th>
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</thead>
<tbody>
<tr>
<td>3.00 / 3.00</td>
<td><strong>Madeline Schuh</strong></td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria
Part 1

Institution has adopted a framework for engaging internal stakeholders (i.e. students, staff, faculty) in governance. The framework includes:

- Representative bodies through which students, staff and/or faculty can each participate in governance (e.g. student council, staff council, faculty senate);

  And/or

- Elected student, staff and/or faculty representatives on the institution’s highest governing body. To count, representatives must be elected by their peers or appointed by a representative student, staff or faculty body or organization.
Part 2

Institution has adopted a framework for engaging external stakeholders (i.e. local community members) in the institution’s governance, strategy and operations. The framework includes:

- Written policies and procedures to identify and engage local residents in land use planning, capital investment projects, and other institutional decisions that affect the broader community (e.g. development projects that impact adjacent neighborhoods);

  And/or

- Formal participatory or shared governance bodies (e.g. seats on the institution’s governing body and/or a formally recognized board, council or committee) through which community members representing the interests of the following stakeholder groups can regularly participate in institutional governance:
  - Local government and/or educational organizations;
  - Private sector organizations; and/or
  - Civil society (e.g. non-governmental organizations and non-profit organizations).

The bodies and mechanisms reported for this credit may be managed by the institution (e.g. formal boards, committees, and councils), by stakeholder groups (e.g. independent committees and organizations that are formally recognized by the institution), 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.

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

Do the institution’s students have a representative body through which they can participate in governance (e.g. a student council)?
Yes

Do the institution’s students have an elected representative on the institution’s highest governing body?
Yes

A brief description of the bodies and mechanisms through which students are engaged in governance, including information to support each affirmative response above:

Student governance consists of several organizations at Penn, including: Class Boards, Nominations and Elections Committee (NEC), Social Planning and Events Committee (SPEC), Student Activities Council (SAC), Student Committee on Undergraduate Education (SCUE), Undergraduate Assembly (UA), and the Graduate and Professional Student Association (GAPSA). Students elect members of the Class Boards, the Undergraduate Assembly, and GAPSA; members of the other branches are appointed or apply to positions. University Council, the primary governance body at Penn, includes seats for GAPSA and the UA.

Do the institution’s staff members have a representative body through which they can participate in
governance (e.g. a staff council)?:
Yes

Do the institution’s non-supervisory staff members have an elected representative on the institution’s highest governing body?:
Yes

A brief description of the bodies and mechanisms through which staff are engaged in governance, including information to support each affirmative response above:

Each constituency has its own procedure for nominating University Council and committee members. Penn Professional Staff Assembly (PPSA), Weekly-Paid Professional Staff Assembly (WPSA), Graduate and Professional Student Assembly (GAPSA), or the undergraduate Nominations and Elections Committee (NEC), all have mechanisms for participation in Penn’s University Council. Faculty members interested in serving on Council and committees are selected through the Faculty Senate Office.

In late January of each year, a "Call for Volunteers" is published in "The Almanac", listing the Council committees with a brief synopsis of their purview. Anyone interested in serving on committees during the following academic year submits their nominations as directed in the "Call for Volunteers". Constituency chairs send lists of representatives to the Office of the Secretary as they are completed.

Do the institution’s teaching and research faculty have a representative body through which they can participate in governance (e.g. a faculty senate)?:
Yes

Do the institution’s teaching and research faculty have an elected representative on the institution’s highest governing body?:
Yes

A brief description of the bodies and mechanisms through which teaching and research faculty are engaged in governance, including information to support each affirmative response above:

The Faculty Senate was established in 1952 as the representative voice for full-time teaching faculty at the University of Pennsylvania. The University of Pennsylvania embraces a vision of shared governance in which the faculty is regularly consulted on academic issues and faculty decisions heavily influence policies that are under the purview of faculty responsibility.

Does the institution have written policies and procedures to identify and engage external stakeholders (i.e. local residents) in land use planning, capital investment projects, and other institutional decisions that affect the community?:
Yes

A copy of the written policies and procedures:
The policies and procedures:

For over 15 years, the Penn Office of Government and Community Affairs hosts "First Thursday" a formal monthly meeting for member of the community (leaders of non-profit agencies, community organizations, business owners, local elected representatives, and residents). An agenda is set at the start of the year, and each month a different topic is addressed by representative Penn staff, faculty, and/or local leaders. All members of the community are welcome. The typical monthly attendance is over 50 people.

Does the institution have formal participatory or shared governance bodies through which community members representing the interests of the following stakeholder groups can regularly participate in institutional governance?:

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local government and/or educational organizations</td>
<td>Yes</td>
</tr>
<tr>
<td>Private sector organizations</td>
<td>Yes</td>
</tr>
<tr>
<td>Civil society (e.g. NGOs, NPOs)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

A brief description of the bodies and mechanisms through which external stakeholders are engaged in institutional governance (including information about each stakeholder group selected above):

University City District (UCD) is a partnership of several anchor institutions, including Penn, that supports small businesses and residents in the University City area of West Philadelphia. UCD was created largely by the University of Pennsylvania, which maintains a strong role in maintaining the organization. The primary mission of the UCD is community revitalization, and the organization manages several programs that create opportunity, and improves economic vitality and quality of life. They work within a place-based, data-driven framework to invest in world-class public spaces, address crime and public safety, bring life to commercial corridors, connect low-income residents to careers, and promote job growth and innovation.

The University of Pennsylvania Board of Trustees has public and private representation. The Board includes two "Commonwealth Trustees" who are appointed by the PA State House and Senate majority leaders. The current Commonwealth Trustees are currently local business persons. Also the Governor of PA is an ex officio member of the Penn Board of Trustees, and represents the interests of his constituency. Even though Penn is a private organization, the University accepts public funding to support the School of Veterinary Medicine, which provides the only large animal veterinary care in the Commonwealth and includes a bio-containment facility that serves the region in cases of outbreaks of animal disease. More information is at:

https://secure.www.upenn.edu/secretary/trustees/

The website URL where information about the programs or initiatives is available:
The University of Pennsylvania is a major research institution, with over 3000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to creating a more sustainable campus as stated in the 2014 Climate Action Plan and Dr. Gutmann's Penn Compact 2020. This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's Climate Action Plan 2.0. The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been included and referenced as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits.
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.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Diversity and Equity Coordination</td>
<td>1.78 / 2.00</td>
</tr>
<tr>
<td>Assessing Diversity and Equity</td>
<td>1.00 / 1.00</td>
</tr>
<tr>
<td>Support for Underrepresented Groups</td>
<td>3.00 / 3.00</td>
</tr>
<tr>
<td>Affordability and Access</td>
<td>3.74 / 4.00</td>
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</tbody>
</table>
Diversity and Equity Coordination

Provisional Score

1.78 / 2.00

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

Part 1

Institution has a diversity and equity committee, office and/or officer (or the equivalent) tasked by the administration or governing body to advise on and implement policies, programs, and trainings related to diversity, equity, inclusion and human rights on campus. The committee, office and/or officer may focus on students and/or employees.

Part 2

Institution makes cultural competence trainings and activities available to students, staff, and/or faculty.

The trainings and activities help participants build the awareness, knowledge and skills necessary to work effectively in cross-cultural situations. Trainings and activities that focus exclusively on awareness, knowledge or skills do not count.

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

Does the institution have a diversity and equity committee, office, and/or officer tasked to advise on and implement policies, programs, and trainings related to diversity, equity, inclusion and human rights on campus?:

Yes

Does the committee, office and/or officer focus on students, employees, or both?:

Both students and employees

A brief description of the diversity and equity committee, office and/or officer, including purview and activities:

Penn President Amy Gutmann's vision for Penn's future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (https://president.upenn.edu/penn-compact).

The Penn Compact 2020's goal of inclusion strives to improve diversity and equity at Penn for all members of the Penn community. In support of the Penn Compact 2020, the University Schools and Centers have developed numerous initiatives and programs to promote equity and diversity among students, staff, and faculty.
For students, university services include mentoring, counseling, financial aid, peer support, academic support, or other programs to support students from underrepresented groups on campus. Of the incoming freshman class, 12.4% are first generation college students (http://www.admissions.upenn.edu/apply/whatpenlooksfor/incoming-class-profile).

The University also has a "no loan" policy, ensuring student financial aid is met based on financial need through grants and work-study jobs, ensuring no loans are included in a student's financial aid package (http://www.sfs.upenn.edu/finaid/penn-finaid-initiative.html).

Penn's Action Plan for Faculty Diversity and Excellence outlines an extensive plan to recruit, retain, and mentor distinguished and diverse faculty. As part of the initiation of the five-year plan in 2011, Penn committed $100 million to support the plan's implementation. Over the five-year plan, the number of minority faculty has increased by 19.4% and the number of underrepresented minority faculty increased by 30%. The total number of women faculty rose to 32.7% of the total faculty population. More information and further details are reported in the inclusion report: https://provost.upenn.edu/uploads/media_items/inclusion-report.original.pdf.

For staff, Penn has numerous programs and support systems to ensure equity and diversity in hiring and advancement at Penn, including the Office of Affirmative Action and Equal Opportunity (http://www.upenn.edu/affirm-action/).

Along with the Office of Affirmative Action and Equal Opportunity, Penn has a number of resources for staff, including Penn Professional Staff Assembly and the Weekly-Paid Staff Assembly. The staff breakdown at Penn includes In addition, there are also a number of resources for alumni. https://diversity.upenn.edu/resources/

Penn's Committee on Diversity and Equity, which reports to the University Council, aids Penn in fostering and taking full advantage of its diversity as well as in strengthening ties across all boundaries to enrich and enliven the campus community. The Committee advises the Offices of the President, Provost, and the Executive Vice President on ways to develop and maintain a supportive atmosphere on campus for the inclusion and appreciation of diversity among all members of the University community. The Committee reviews and provides advice regarding the University’s equal opportunity and affirmative action programs and policies. The areas in which the Committee reports to the University Council includes diversity within the educational and work settings, integration of staff and faculty into the larger campus community, and ways to foster a campus environment that is inclusive and supportive of difference. The Committee also advises the administration on specific diversity issues that may arise on campus. See the Penn Diversity website at http://www.upenn.edu/life-at-penn/diversity.
Estimated proportion of students that has participated in cultural competence trainings and activities (All, Most, Some, or None):

All

Estimated proportion of staff (including administrators) that has participated in cultural competence trainings and activities (All, Most, Some, or None):

All

Estimated proportion of faculty that has participated in cultural competence trainings and activities (All, Most, Some, or None):

Some

A brief description of the institution’s cultural competence trainings and activities for each of the groups identified above:

Penn President Amy Gutmann's vision for Penn's future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (https://president.upenn.edu/penn-compact). The Penn Compact 2020's goal of inclusion strives to improve diversity and equity at Penn for all members of the Penn community. In support of the Penn Compact 2020, the University Schools and Centers have developed numerous initiatives and programs to promote equity and diversity among students, staff, and faculty.

Students: In 2016, Penn initiated a mandatory online program called "Thrive at Penn" (TAP) that assists students, both undergraduate and graduate, in their Penn experience, with a dedicated web portal for every class, including transfer students and incoming freshmen. TAP prepares students to make healthy choices during their university experience and provides information about resources available to support student success. Topics covered include thriving at a research university; wellness and health; the risks associated with alcohol and other drugs; healthy relationships and sexual violence prevention; and resources specific to student needs during freshman, sophomore, junior, and senior years. See: https://www.nso.upenn.edu/tap

Penn also has a robust and responsive Counseling and Psychological Services office, known as CAPS, available to all students. See more at https://www.vpul.upenn.edu/caps/
In addition, during "New Student Orientation" for freshmen and transfer students, training in cultural competency is presented through two mandatory sessions: Safe Living at Penn, a student-oriented guide to working and relaxing safely at Penn, and "Speak About It", a performance about consent, boundaries, and healthy relationships. Additional trainings focused on cultural competencies, diversity, and equity are run throughout the year at Penn’s Cultural Resource Centers, volunteer agencies, and extra-curricular activities.

There are six cultural resource centers at Penn providing services for underrepresented groups:
- The Greenfield Intercultural Center fosters intercultural understanding at Penn through cross-cultural activism, reflection, and dialogue. This cultural resource also provides resources for First Generation and Low Income (FGLI) Students.
- La Casa Latina, Penn's Center for Hispanic Excellence, promotes awareness of Latino issues, culture, and identity.
- Penn's Lesbian, Gay, Bisexual, and Transgender Center supports the University's LGBT communities through mentoring, workshops, advocacy, and special events.
- Makuu, the Black Cultural Resource Center, is a nexus of advising, leadership development, and programming for Penn students interested in Black culture and the African Diaspora.
- The Pan-Asian-American Community House is a hub of academic, personal, and professional growth for Penn students interested in Asian-American culture and the Asian American Diaspora.
- The Penn Women's Center addresses the evolving needs of Penn's women through programming, advocacy, and community.

In addition, Penn has numerous religious organizations, arts organizations, councils, advisory boards, and student affairs affinity groups available to students from various backgrounds, as well as school-affiliated organizations within Penn's 12 schools. A full listing of these resources, with links to each organization's web page, is available on Penn's diversity website (http://diversity.upenn.edu/resources/).

Staff and Faculty: All staff are required to attend a training on Penn's Principles of Responsible Conduct at least once every three years. The guiding document is available on-line here:

http://www.upenn.edu/audit/oacp_principles.htm

, and includes policies for faculty, staff, and students.

The Human Resources Department is responsible for conducting these trainings in each division and office, including for Penn's 700+ person trades and unionized employees.

The Penn Office of Affirmative Action and Equal Opportunity Programs (OAA/EOP) is responsible for providing educational training programs to assist members of the University community in understanding discrimination, harassment and retaliation. In addition, this office offers information on how to address behaviors that violate University policies, and how to be proactive in creating a respectful and productive work environment. See:

http://www.upenn.edu/affirm-action/policies-handbooks.html

Responsible conduct and respect for the Penn community is also required for all vendors and contractors working on campus, and is written into all contract agreements.
The University of Pennsylvania is a major research institution, with over 3000 degrees granted annually from twelve professional and academic schools at the Bachelor’s, Master’s, and Doctorate levels. Penn is committed to creating a more sustainable campus as stated in the 2014 Climate Action Plan and Dr. Gutmann’s Penn Compact 2020. This submission documents Penn’s efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University’s Climate Action Plan 2.0. The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits.
Assessing Diversity and Equity

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### Provisional Score

1.00 / 1.00

### Responsible Party

Madeline Schuh  
Sustainability Analyst  
Facilities and Real Estate Services

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### Criteria

Institution has engaged in a structured assessment process during the previous three years to improve diversity, equity, and inclusion on campus. The structured diversity and equity assessment process addresses:

1. Campus climate by engaging stakeholders to assess the attitudes, perceptions, and behaviors of faculty, staff, administrators, and students, including the experiences of underrepresented groups;

2. Student outcomes related to diversity, equity, and success (e.g., graduation/success and retention rates for underrepresented groups); and/or

3. Employee outcomes related to diversity and equity (e.g., pay and retention rates for underrepresented groups).

The results of the assessment may be shared with the campus community and/or made publicly available.

An employee satisfaction or engagement survey is not sufficient to meet the campus climate or employee outcome criteria outlined above, but may contribute to the overall structured assessment. Employee satisfaction and engagement surveys are recognized in the Assessing Employee Satisfaction credit.

---

Has the institution engaged in a structured assessment process during the previous three years to improve diversity, equity and inclusion on campus?:

Yes

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A brief description of the assessment process and the framework, scorecard(s) and/or tool(s) used:

The Penn 2017 Diversity report highlights progress on the following topics: Penn’s Financial Investment under the Diversity Action Plan; Faculty Hiring and Departure Rates; Growth of Women and Minorities on the Standing Faculty; Penn’s Standing Compared to Peers; Diminution of the Gender Pay Gap; Significant Increase in Diversity of Academic Leadership; Results of the Faculty Survey; Faculty Development, Climate, and Retention; Pre-doctoral and Post-doctoral fellowships; LGBTQ and Sexuality Studies; Responses to Sexual Misconduct; Support for Families; Veterans on Penn’s Faculty; Individuals with Disabilities; Religious Diversity; Global Engagement; and the Work of the Faculty Senate, University Council, and Penn Students.

See:

http://www.upenn.edu/almanac/volumes/v63/n27/pdf/032117-full-supplement.pdf

The Penn Compact 2020 affirms inclusion as a means toward the essential ends of higher education: equalizing opportunity, educating leaders for all sectors of society, and enriching the experience of all members of the University community. The Penn Diversity website states: “Across 12 Schools, more than 25,000 students, and more than 4,000 faculty members, we become one university: a wide-ranging, ever-changing community that draws its strength from a multitude of races, ethnicity, genders, sexual orientations, historical traditions, ages, religions, disabilities, veteran status, interests, perspectives, and socioeconomic backgrounds.”

The cornerstone of Penn’s initiative to increase access for undergraduate students from all socioeconomic backgrounds is its All-Grant Financial Aid Policy. Penn has awarded nearly $1 billion in grants since implementing the policy in 2008, and the average net cost for aided students to attend Penn today is almost $2,700 less than it was in 2005 (in constant 2005 dollars). In 2016-17, this need-based grant program made it possible for nearly half of Penn’s undergraduate students to attend and graduate from the University without incurring debt.

The critical importance of Penn’s All-Grant Policy is underscored by the Penn Impact 2020 initiative to raise $1 billion for student financial aid by 2020. This unprecedented goal comprises $600 million for undergraduate assistance and $400 million for graduate and professional student assistance, building on the respective $360 million and $110 million raised in the groundbreaking Making History Campaign, which extended from 2007-2012.

Does the assessment process address campus climate by engaging stakeholders to assess the attitudes, perceptions and behaviors of faculty, staff, administrators and students, including the experiences of underrepresented groups?:
Yes

Does the assessment process address student outcomes related to diversity, equity and success (e.g. graduation/success and retention rates for underrepresented groups)?:
Yes

Does the assessment process address employee outcomes related to diversity and equity (e.g. pay and retention rates for underrepresented groups)?:
Yes

A brief description of the most recent assessment findings and how the results are used in shaping policy, programs and initiatives:

Diversity and equity assessments are reviewed by the Office of the Provost, the Office of the President, and the University Council to shape policy, programs and initiatives.

Are the results of the most recent structured diversity and equity assessment shared with the campus community?:
Yes

A brief description of how the assessment results are shared with the campus community:
The results of the 2017 survey have been published in the journal of record for the university, The Almanac, and are available on-line via the Penn Diversity website.

Are the results (or a summary of the results) of the most recent structured diversity and equity assessment publicly posted?:
Yes

The diversity and equity assessment report or summary:
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The website URL where the report or summary is publicly posted:
https://diversity.upenn.edu/diversity-at-penn/reports

The website URL where information about the programs or initiatives is available:
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Additional documentation to support the submission:
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Data source(s) and notes about the submission:

https://diversity.upenn.edu/diversity-at-penn

http://www.upenn.edu/life-at-penn/diversity

https://president.upenn.edu/penn-compact/inclusion

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Support for Underrepresented Groups

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</tr>
</tbody>
</table>

**Criteria**

Institution has one or more of the following policies, programs or initiatives to support underrepresented groups and foster a more diverse and inclusive campus community:

1) A publicly posted non-discrimination statement.

2) A discrimination response protocol or committee (sometimes called a bias response team) to respond to and support those who have experienced or witnessed a bias incident, act of discrimination or hate crime.

3) Programs specifically designed to recruit students, staff and/or faculty from underrepresented groups.

4) Mentoring, counseling, peer support, academic support, or other programs to support students, staff and/or faculty from underrepresented groups.

5) Programs that specifically aim to support and prepare students from underrepresented groups for careers as faculty members (sometimes known as pipeline programs). 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.)
   - 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.
   - Financial, and/or other support programs for doctoral and post-doctoral students from underrepresented groups.

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

**Does the institution have a publicly posted non-discrimination statement?**

Yes

**The non-discrimination statement, including the website URL where the policy is publicly accessible:**

The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University of Pennsylvania does not discriminate on the basis of race, color, sex, sexual orientation, gender identity, religion, creed, national or ethnic origin, citizenship status, age, disability, veteran status or any other legally protected class status in the administration of its admissions, financial aid, educational or athletic programs, or other University-administered programs or in its employment practices.

The Penn Office of Affirmative Action and Equal Opportunity Programs is charged with ensuring that the University meets its obligations as an affirmative action and equal opportunity employer and educational institution.

[stars.aashe.org](http://stars.aashe.org)
Does the institution have a discrimination response protocol or committee (sometimes called a bias response team) 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 protocol or team (including examples of actions taken during the previous three years):

The University recognizes the right of members of the community to raise questions and pursue complaints of discrimination and adheres to a strict policy that prohibits retaliation for doing so. Questions, complaints of alleged discrimination, or concerns regarding these policies or their implementation may be directed to the Executive Director, Office of Affirmative Action and Equal Opportunity Programs.

Does the institution have programs specifically designed to recruit students from underrepresented groups?:
Yes

Does the institution have programs specifically designed to recruit staff from underrepresented groups?:
Yes

Does the institution have programs specifically designed to recruit faculty from underrepresented groups?:
Yes

A brief description of the institution’s programs to recruit students, staff and/or faculty from underrepresented groups:

Penn President Amy Gutmann’s vision for Penn's future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (
The Penn Compact 2020’s goal of inclusion strives to improve diversity and equity at Penn for all members of the Penn community. In support of the Penn Compact 2020, the University Schools and Centers have developed numerous initiatives and programs to promote equity and diversity among students, staff, and faculty.

Towards this end, Penn's Action Plan for Faculty Diversity and Excellence outlines an extensive plan to recruit, retain, and mentor distinguished and diverse faculty. As part of the initiation of the five-year plan in 2011, Penn committed $100 million to support the plan's implementation. Over the five-year plan, the number of minority faculty has increased by 19.4% and the number of underrepresented minority faculty increased by 30%. The total number of women faculty rose to 32.7% of the total faculty population. More information and further details are reported in the inclusion report:


In 2017, the University launched a program for First Generation and Low Income (FGLI) Students to support these underrepresented groups while at Penn and to recruit FGLI students to Penn. For more information, see

https://www.vpul.upenn.edu/fgli

. Of the incoming freshman class, 12.4% are first generation college students (http://www.admissions.upenn.edu/apply/whatpenlooksfor/incoming-class-profile)

The University also has a Mayor’s Scholars program which dates back to 1910, to support student from Philadelphia who come to Penn, and a program to support enrollment and success of veterans of the US armed forces. See

https://www.collegehouses.upenn.edu/life/mayors_scholars

and

http://www.upenn.edu/registrar/veterans/index.html

Does the institution have mentoring, counseling, peer support, academic support, or other programs to support students from underrepresented groups on campus?:
Yes

Does the institution have mentoring, counseling, peer support or other programs to support staff from underrepresented groups on campus?:
Yes

Does the institution have mentoring, counseling, peer support or other programs to support faculty from
underrepresented groups on campus?:
Yes

A brief description of the institution’s programs to support students, staff and/or faculty from underrepresented groups:

Penn President Amy Gutmann's vision for Penn's future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (

https://president.upenn.edu/penn-compact

). The Penn Compact 2020's goal of inclusion strives to improve diversity and equity at Penn for all members of the Penn community.

For Students: In 2016, Penn initiated a mandatory online program called Thrive at Penn (TAP) that assists students in their Penn experience, with a dedicated web portal for every class, including transfer students and incoming freshmen. TAP prepares students to make healthy choices during their university experience and provides information about resources available to support student success. Topics covered include thriving at a research university; wellness and health; the risks associated with alcohol and other drugs; healthy relationships and sexual violence prevention; and resources specific to student needs during freshman, sophomore, junior, and senior years. See:

https://www.nso.upenn.edu/tap

In addition, during New Student Orientation for freshmen and transfer students, training in cultural competency is presented through two mandatory sessions: Safe Living at Penn, a student-oriented guide to working and relaxing safely at Penn, and Speak About It, a performance about consent, boundaries, and healthy relationships.

In 2017, the University launched a program for First Generation and Low Income (FGLI) Students to support these underrepresented groups while at Penn and to recruit FGLI students to Penn. For more information, see

https://www.vpul.upenn.edu/fgli

There are six cultural resource centers at Penn providing services for underrepresented groups:
- The Greenfield Intercultural Center fosters intercultural understanding at Penn through cross-cultural activism, reflection, and dialogue. This cultural resource also provides resources for First Generation and Low Income (FGLI) Students.
- La Casa Latina, Penn's Center for Hispanic Excellence, promotes awareness of Latino issues, culture, and identity.
- Penn's Lesbian, Gay, Bisexual, and Transgender Center supports the University's LGBT communities through mentoring, workshops, advocacy, and special events.
- Makuu, the Black Cultural Resource Center, is a nexus of advising, leadership development, and programming for Penn students interested in Black culture and the African Diaspora.
- The Pan-Asian-American Community House is a hub of academic, personal, and professional growth for Penn students interested in Asian-American culture and the Asian American Diaspora.
- The Penn Women's Center addresses the evolving needs of Penn’s women through programming, advocacy, and community.
In addition, Penn has numerous religious organizations, arts organizations, councils, advisory boards, and student affairs affinity groups available to students from various backgrounds, as well as school-affiliated organizations within Penn's 12 schools. A full listing of these resources, with links to each organization's web page, is available on Penn's diversity website (http://diversity.upenn.edu/resources/).

Penn's College Achievement Program (PennCAP) works closely with a diverse group of academically-talented students, many from low-income and/or first-generation backgrounds, to support their success at Penn. Staff provide coaching, counseling, academic assistance, and cultural enrichment so that students can more confidently move towards their personal and academic goals. For more information, see https://www.vpul.upenn.edu/eap/penncap/

In addition, Penn has several fully staffed Cultural Resources Centers, specifically dedicated to support students from under-represented groups. The Cultural Resource Centers provide trainings focused on cultural competencies, diversity, and equity throughout the year, available to all students. Penn’s Cultural Resource Centers include: The Pan-Asian American Community House, the Greenfield Intercultural Center, La Casa Latina, the LGBT Center, Makuu: the Black Cultural Resource Center, and the Penn Women’s Center. These Centers, located in the geographic core of campus provide counseling, career advice, crisis intervention services, and other support services. For more information, see: http://www.admissions.upenn.edu/life-at-penn/our-diverse-community/cultural-resource-centers

Penn’s Chaplain’s Office and Spiritual and Religious Life Center also provides similar services for members of any religion, available throughout the year. See: https://chaplain.upenn.edu

Staff and Faculty: The Human Resources Department provides support to staff and faculty from under-represented groups, and conducting these trainings in each division and office, including for Penn's 700+ persons trades and unionized employees.

The Penn Office of Affirmative Action and Equal Opportunity Programs (OAA/EOP) is responsible for providing educational training programs to assist members of the University community in recognizing and understanding discrimination, harassment and retaliation. In addition, this office offers information on how to address behaviors that violate University policies, and how to be proactive in creating a respectful and productive work environment. See: http://www.upenn.edu/affirm-action/policies-handbooks.html

For staff and faculty, Penn has numerous programs and support systems to ensure equity and diversity in hiring and advancement at Penn, including the Office of Affirmative Action and Equal Opportunity (http://www.upenn.edu/affirm-action/policies-handbooks.html).
Penn’s Committee on Diversity and Equity, which reports to the University Council, aids Penn in fostering and taking full advantage of its diversity as well as in strengthening ties across all boundaries to enrich and enliven the campus community. The Committee advises the Offices of the President, Provost, and the Executive Vice President on ways to develop and maintain a supportive atmosphere on campus for the inclusion and appreciation of diversity among all members of the University community. The Committee reviews and provides advice regarding the University’s equal opportunity and affirmative action programs and policies. The areas in which the Committee reports to the University Council include diversity within educational and work settings, integration of staff and faculty into the larger campus community, and ways to foster a campus environment that is inclusive and supportive of difference. The Committee also advises the administration on specific diversity issues that may arise on campus.

See the Penn Diversity website at

http://www.upenn.edu/life-at-penn/diversity

and

https://secure.www.upenn.edu/secretary/council/de.html

Penn has a robust support program for staff and faculty from under-represented groups, including the following offices and services:

* African-American Resource Center, which is dedicated to enhancing the quality of life of faculty, staff, and students at the University of Pennsylvania with a particular focus on those of African decent. Any person associated with the university may use its free and confidential services as needed. (see

http://www.upenn.edu/aarc/

);*

* The Vice Provost for Faculty oversees faculty life and the academic personnel process, including recruitment, retention and retirement; appointments, tenure and promotions; enhancement of faculty diversity and gender and minority equity; and resolution of individual faculty issues, including grievances (see


);*

* The Office of the Ombudsman (see:

http://www.upenn.edu/ombuds/
and Penn's School and Center HR Offices, includes services for workplace issues resolution, staff grievances, retaliation, and all related policies and procedures. The Office of the University Ombuds' mission is to ameliorate those conditions that may impede community members from finding satisfaction with their lives at Penn.

* Penn's Central HR office includes services for workplace issues resolution, staff grievances, retaliation, and all related policies and procedures (see https://www.hr.upenn.edu/)

* The "Penn Action Plan for Faculty Diversity and Excellence" outlines an extensive plan to recruit, retain, and mentor distinguished and diverse faculty. As part of the initiation of the five-year plan in 2011, Penn committed $100 million to support the plan's implementation. Over the five-year plan, the number of minority faculty has increased by 19.4% and the number of underrepresented minority faculty increased by 30%. The total number of women faculty rose to 32.7% of the total faculty population. More information and further details are reported in the inclusion report:


Does the institution have training and development programs, teaching fellowships and/or other programs that specifically aim to support and prepare students from underrepresented groups for careers as faculty members?:

Yes

A brief description of the institution’s programs to support and prepare students from underrepresented groups for careers as faculty members:

Penn President Amy Gutmann's vision for Penn's future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (https://president.upenn.edu/penn-compact).

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In addition, Penn has several fully staffed Cultural Resources Centers, specifically dedicated to support students from under-represented groups. The Cultural Resource Centers provide trainings focused on cultural competencies, diversity, and equity throughout the year, available to all students. Penn's Cultural Resource Centers include: The Pan-Asian American Community House, the Greenfield Intercultural Center, La Casa Latina, the LGBT Center, Makuu: the Black Cultural Resource Center, and the Penn Women's Center. These Centers, located in the geographic core of campus provide counseling, career advice, crisis intervention services, and other support services. For more information, see:

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http://www.upenn.edu/affirm-action/policies-handbooks.html

For staff and faculty, Penn has numerous programs and support systems to ensure equity and diversity in hiring and advancement at Penn, including the Office of Affirmative Action and Equal Opportunity (http://www.upenn.edu/affirm-action/) and the resources and direction provided by the Human Resources Department (https://www.hr.upenn.edu/)

Penn’s Committee on Diversity and Equity, which reports to the University Council, aids Penn in fostering and taking full advantage of its diversity as well as in strengthening ties across all boundaries to enrich and enliven the campus community. The Committee advises the Offices of the President, Provost, and the Executive Vice President on ways to develop and maintain a supportive atmosphere on campus for the inclusion and appreciation of diversity among all members of the University community. The Committee reviews and provides advice regarding the University’s equal opportunity and affirmative action programs and policies. The areas in which the Committee reports to the University Council include diversity within educational and work settings, integration of staff and faculty into the larger campus community, and ways to foster a campus environment that is inclusive and supportive of difference. The Committee also advises the administration on specific diversity issues that may arise on campus. See the Penn Diversity website at

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(see

stars.aashe.org
* The Vice Provost for Faculty oversees faculty life and the academic personnel process, including recruitment, retention and retirement; appointments, tenure and promotions; enhancement of faculty diversity and gender and minority equity; and resolution of individual faculty issues, including grievances (see https://news.upenn.edu/news/anita-l-allen-appointed-vice-provost-faculty-penn).

* The Office of the Ombudsman (see: http://www.upenn.edu/ombuds/).

* Penn's Central HR office includes services for workplace issues resolution, staff grievances, retaliation, and all related policies and procedures (see https://www.hr.upenn.edu/).

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**Does the institution produce a publicly accessible inventory of gender-neutral bathrooms on campus?**

Yes

**Does the institution offer housing options to accommodate the special needs of transgender and transitioning students?**

Yes

**The website URL where information about the programs or initiatives is available:**

http://www.vpul.upenn.edu/lgbtc/transresources

**Additional documentation to support the submission:**

stars.aashe.org
The University of Pennsylvania is a major research institution, with over 3000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to creating a more sustainable campus as stated in the 2014 Climate Action Plan and Dr. Gutmann's Penn Compact 2020. This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's Climate Action Plan 2.0. The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton has also been referenced and noted as outside the boundary in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits.
Affordability and Access

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<td>Facilities and Real Estate Services</td>
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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 guide and prepare students and families from low-income backgrounds for higher education (e.g. U.S. federal TRIO programs)
- Scholarships provided specifically for low-income students
- 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 documents its accessibility and affordability to low-income students as demonstrated by one or more of the following indicators:

1. The percentage of entering students that are low-income (e.g., the percentage of students receiving Pell Grant funds as reported in the U.S. IPEDS Student Financial Aid component or the percentage of students receiving the Canada Student Grant for Students from Low-Income Families)
2. The graduation/success rate for low-income students
3. On average, the percentage of need met for students who were awarded any need-based aid (e.g. as reported to the U.S. Common Data Set initiative, item H2)
4. The percentage of students graduating without interest-bearing student loan debt or for whom no out-of-pocket tuition is required (i.e. the percentage of graduates who have not taken out interest-bearing loans)

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

Does the institution have policies and programs 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:

Penn practices need-blind admissions for citizens and permanent residents of the United States, Canada, and Mexico, which means that admissions decisions are not affected by a family’s ability to pay. Penn commits to meeting full demonstrated need for four years and provides loan-free packages for eight academic semesters. If a family’s circumstances remain stable, financial aid remains relatively constant; if circumstances change during the year (such as a parent losing a job), a financial aid package will be adjusted. As all scholarships are need-based, students must complete the financial aid process. Student Financial Services selects recipients based on the scholarship’s criteria; no separate application is necessary. These scholarships are provided through direct gifts to the University and privately endowed funds established by alumni and friends. Named scholarships enable Penn to continue its two-fold commitment to admit students solely on the basis of academic merit, and to meet 100% of a student's financial need.

The cornerstone of Penn’s initiative to increase access for students from all socioeconomic backgrounds is its All-Grant Financial Aid Policy. Penn has awarded nearly $1 billion in grants since implementing the policy in 2008, and the average net cost for aided students to attend Penn today is almost $2,700 less than it was in 2005 (in constant 2005 dollars). In 2016-17, this need-based grant program made it possible for nearly half of Penn’s undergraduate students to attend and graduate from the University without incurring debt.

A brief description of any programs to equip the institution’s faculty and staff to better serve students from low-income backgrounds:

Penn President Amy Gutmann’s vision for Penn’s future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (https://president.upenn.edu/penn-compact).

The Penn Compact 2020’s goal of inclusion strives to improve diversity and equity at Penn for all members of the Penn community. In support of the Penn Compact 2020, the University Schools and Centers have developed numerous initiatives and programs to promote equity and diversity among students, staff, and faculty.

Penn’s Office of Affirmative Action & Equal Opportunities Programs (OAA/EOP) provides central leadership and support for the University’s efforts to achieve an educational and work environment that is diverse in race, ethnicity, interests, abilities and perspectives, as well as educational training programs to assist members of the University community in understanding discrimination, harassment and retaliation. The office ensures the implementation of equal opportunity, affirmative action and nondiscrimination policies through education, training and active partnership with others from the campus and the broader Philadelphia communities. In addition, this office offers information on how to address behaviors that violate University policies, and how to be proactive in creating a respectful and productive work environment. See:

http://www.upenn.edu/affirm-action/policies-handbooks.html

The Office provides educational programs on Penn’s Affirmative Action and non-discrimination policies, as well as specific topics related to affirmative action, non-discrimination, equal opportunity, diversity, disability, sex discrimination and other forms of prohibited discrimination, specifically to provide educational programs tailored to department-specific issues, and to provide technical assistance to University personnel on affirmative action and non-discrimination issues.
The services of the office include, but are not limited to, the following: investigate complaints of harassment and other forms of prohibited discrimination; provide training on affirmative action, equal opportunity and non-discrimination policies; offer suggestions on outreach and recruitment strategies, consult with faculty and staff with disabilities on request for reasonable accommodation, as well as consulting with managers and supervisors who need information on how to provide reasonable accommodation to employees with disabilities.

These services are available for all University and related faculty, staff, students, and collective bargaining staff.

Examples of the training programs offered by OAA/EOP include the following:
- Americans with Disabilities Act (ADA) for Managers
- Americans with Disabilities (ADA) for Faculty
- Creating a Respectful and Productive Work Environment
- Common Ground: Promoting Respectful Workplaces
- Diversity for Leaders
- Diversity Management: Valuing Diversity at Penn
- Managing Intercultural Conflict
- Procedures for Resolving Complaints of Discrimination
- Sexual Harassment Awareness
- Whites Confronting Racism

In addition to these offices, in 2017, the University launched a program for First Generation and Low Income (FGLI) Students to support these underrepresented groups while at Penn and to recruit FGLI students to Penn. Of the incoming freshman class, 12.4% are first generation college students.

http://www.admissions.upenn.edu/apply/whatpenlooksfor/incoming-class-profile

). For more information, see

https://www.vpul.upenn.edu/fgli

A brief description of the institution’s programs to guide and prepare students and families from low-income backgrounds for higher education:

Penn President Amy Gutmann's vision for Penn's future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020.

https://president.upenn.edu/penn-compact

). The Penn Compact 2020's goal of inclusion strives to improve diversity and equity at Penn for all members of the Penn community. In support of the Penn Compact 2020, the University Schools and Centers have developed numerous initiatives and programs to promote equity and diversity among students, staff, and faculty.

In 2017, the University launched a program for First Generation and Low Income (FGLI) Students to support these underrepresented groups while at Penn and to recruit FGLI students to Penn. Of the incoming freshman class, 12.4% are first generation college students.
The Vice Provost for University Life’s (VPUL) Equity and Access Programs nurture the academic aspirations of hundreds of local community members each year, from middle school through graduate study. Youth-based programs such as Talent Search, Upward Bound, and Upward Bound Math Science help to guide promising local middle and high school students toward college. Adult-based programs, including the Educational Opportunity Center and Veterans Upward Bound, assist adult community members seeking to return to education or extend their current educational experiences. These support services help students enhance learning in core academic subjects, manage time, find financial aid, meet mentors, and feel more confident about their abilities. Penn’s Equity and Access Programs provide community members a pipeline of opportunities for educational success.

The Provost Summer Mentorship Program (SMP) is an innovative four-week program geared to inspire first generation underrepresented students in Philadelphia to view higher education as an achievable goal. Students attending this program have the opportunity to participate in five of Penn's professional schools (Dental Medicine, Nursing, Engineering, Medicine, and Law). Over the course of the program, high school students gain first hand exposure to an academic discipline and the opportunity to explore a variety of career opportunities. Since 2009, 255 SMP alumni (STEMMP included) out of 276 SMP alumni are either currently enrolled at or have graduated from a post-secondary institution. Since 2009, 21 total SMP alumni (STEMMP included) are either currently enrolled at or have graduated from the University of Pennsylvania. More information on the program can be found here:

[https://www.vpul.upenn.edu/eap/smp/](https://www.vpul.upenn.edu/eap/smp/)

**A brief description of the institution’s scholarships for low-income students:**

Penn practices need-blind admissions for citizens and permanent residents of the United States, Canada, and Mexico, which means admissions decisions are not affected by a family’s ability to pay. Penn commits to meeting full demonstrated need for four years and provides loan-free packages for eight academic semesters. If a family’s circumstances remain stable, financial aid remains relatively constant; if circumstances change during the year (such as a parent losing a job), a financial aid package will be adjusted. As all scholarships are need-based, students must complete the financial aid process. Student Financial Services selects recipients based on the scholarship’s criteria; no separate application is necessary. These scholarships are provided through direct gifts to the University and privately endowed funds established by alumni and friends. Named scholarships enable Penn to continue its two-fold commitment to admit students solely on the basis of academic merit, and to meet 100% of a student’s financial need.

The cornerstone of Penn’s initiative to increase access for students from all socioeconomic backgrounds is its All-Grant Financial Aid Policy. Penn has awarded nearly $1 billion in grants since implementing the policy in 2008, and the average net cost for aided students to attend Penn today is almost $2,700 less than it was in 2005 (in constant 2005 dollars). In 2016-17, this need-based grant program made it possible for nearly half of Penn’s undergraduate students to attend and graduate from the University without incurring debt.
A brief description of the institution’s targeted outreach to recruit students from low-income backgrounds:

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The Penn Compact 2020 goal of inclusion strives to improve diversity and equity at Penn for all members of the Penn community. In support of the Penn Compact 2020, the University Schools and Centers have developed numerous initiatives and programs that provide mentoring, counseling, peer support, academic support, or other programs to support students from underrepresented groups on campus. In addition, Penn’s Action Plan for Faculty Diversity and Excellence outlines an extensive plan to recruit, retain, and mentor distinguished and diverse faculty (http://provost.upenn.edu/uploads/media_items/diversity-plan-brochure.original.pdf).

The University of Pennsylvania’s Talent Search Program is a federally-funded TRIO Program designed to help eligible students complete high school and enroll in post-secondary school. The Program provides 600 students at West Philadelphia's Beeber Middle School and Overbrook High School with support services that instill within them a college-going culture and promote the academic and personal development necessary for entry into higher education institutions. The Talent Search Program offers a full range of activities and interventions to reduce the gap in college access, including goal setting and decision making; career exploration and academic planning; college selection and scholarship searches; and financial aid information. Students also gain exposure to college life by visiting colleges and universities. Middle school students receive instruction that includes academic counseling and advising; educational workshops; and career exploration activities. High school students receive group and individual advising; assistance with researching colleges; and assistance with completing college, financial aid, and scholarship applications.

McNair Postbaccalaureate Achievement Program: The University of Pennsylvania is proud to be the first Ivy League institution to host the prestigious Ronald E. McNair Postbaccalaureate Achievement Program. This project, also known as the McNair Scholars Program and named in honor of deceased NASA astronaut Dr. Ronald E. McNair, identifies and prepares eligible students for graduate studies leading to the Ph.D. by providing research training and early scholarly experiences to high-achieving undergraduate Penn students. Penn President Amy Gutmann's vision for Penn's future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (https://president.upenn.edu/penn-compact).

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The University of Pennsylvania High School Upward Bound Program is a college preparatory program designed to motivate and prepare students in the program for the successful pursuit of a four-year college education. The goal of the program is to increase the rate at which low-income, first-generation-to-college students enroll in and graduate from a college or university with a bachelor's degree. The mission of the program is to provide high school students in grades 9th – 12th, at the identified high schools, with academic, career and cultural enrichment resources and programming to assist students to graduate from high school and increase the rate at which low income, first generation college students matriculate and graduate from post secondary institutions. Only students from Lamberton, Motivation, Overbrook, Parkway West, Sayre, Strawberry Mansion, and West Philadelphia public high schools are eligible to apply.

Upward Bound Math Science works to help low-income and first-generation-to-college high school students recognize and develop their potential to excel in fields related to Science, Technology, Engineering and Math (STEM). Upward Bound Math and Science program services include: summer programs with intensive math, science, writing and language training; year-round counseling, advisement and academic support services; exposure to research; education or counseling services designed to improve the financial and economic literacy of students; and assistance with application to competitive post-secondary institutions leading to bachelor's degree in a STEM related discipline. Students from University City High and Overbrook High are eligible to apply.

The TRIO Veterans Upward Bound (VUB) Program at the University of Pennsylvania is a FREE, non-credited, non-profit, pre-college program federally funded with a grant from the U.S. Department of Education. The primary goal of TRIO VUB is to prepare eligible veterans to enter college, be successful in college, and to graduate from college. In order for students to be fully prepared for college, TRIO VUB emulates the college experience. High expectations are placed on students while attending TRIO VUB in order to support their success in the Program and later in college. TRIO VUB provides 160 students with a full range of activities and interventions to reduce the gap in college access, including goal setting and decision making; career exploration and academic planning; college selection and scholarship searches; and financial aid information. Students also gain exposure to college life by visiting colleges and universities. Middle school students receive instruction that includes academic counseling and advising; educational workshops; and career exploration activities. High school students receive group and individual advising; assistance with researching colleges; and assistance with completing college, financial aid, and scholarship applications.
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In 2017, the University launched a program for First Generation and Low Income (FGLI) Students to support these underrepresented groups while at Penn and to recruit FGLI students to Penn. For more information, see

https://www.vpul.upenn.edu/fgli

A brief description of the institution’s other policies or programs to make the institution accessible and affordable to low-income students:

University President, Amy Gutmann's vision for Penn's future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (https://president.upenn.edu/penn-compact). The Penn Compact 2020 goal of inclusion strives to improve diversity and equity at Penn for all members of the Penn community. In support of the Penn Compact 2020, the University Schools and Centers have developed numerous initiatives and programs that provide mentoring, counseling, peer support, academic support, or other programs to support students from underrepresented groups on campus. In addition, Penn's Action Plan for Faculty Diversity and Excellence outlines an extensive plan to recruit, retain, and mentor distinguished and diverse faculty.


The University of Pennsylvania's Talent Search Program is a federally-funded TRIO Program designed to help eligible students complete high school and enroll in post-secondary school. The Program provides 600 students at West Philadelphia's Beeber Middle School and Overbrook High School with support services that instill within them a college-going culture and promote the academic and personal development necessary for entry into higher education institutions. The Talent Search Program offers a full range of activities and interventions to reduce the gap in college access, including goal setting and decision making; career exploration and academic planning; college selection and scholarship searches; and financial aid information. Students also gain exposure to college life by visiting colleges and universities. Middle school students receive instruction that includes academic counseling and advising; educational workshops; and career exploration activities. High school students receive group and individual advising; assistance with researching colleges; and assistance with completing college, financial aid; and scholarship applications.

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Penn commits to meeting full demonstrated need throughout the undergraduate years. If a family’s circumstances remain stable, financial aid remains relatively constant; if circumstances change during the year (such as a parent losing a job), a financial aid package will be adjusted.

There is no maximum income cutoff for eligibility for University financial aid. Factors such as family size, student income and assets, parent income and assets (including home equity but not retirement accounts), the number of children in college, and extenuating family circumstances (such as illness or loss of employment) are important considerations in determining financial need.

Does the institution have policies and programs to support non-traditional students?:

Yes

A brief description of the institution’s scholarships provided specifically for part-time students:

Penn President Amy Gutmann's vision for Penn's future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (https://president.upenn.edu/penn-compact).

The cornerstone of Penn’s initiative to increase access for students from all socioeconomic backgrounds is its All-Grant Financial Aid Policy. Penn has awarded nearly $1 billion in grants since implementing the policy in 2008, and the average net cost for aided students to attend Penn today is almost $2,700 less than it was in 2005 (in constant 2005 dollars). In 2016-17, this need-based grant program made it possible for nearly half of Penn’s undergraduate students to attend the University.

Scholarships for part-time students are facilitated through individual schools and centers. The School of Arts and Sciences awards a number of scholarships to matriculated, part-time students on the basis of academic merit, commitment and financial need.
Penn School of Nursing provides scholarships for students enrolled in either a full- or part-time graduate nursing program, employed by University of Pennsylvania Health System (verification required with application), and have a GPA of 3.0 or higher.

Full-time and part-time students in the School of Policy and Practice are eligible for scholarships, based on faculty recommendation.

**A brief description of the institution’s on-site child care facility, partnership with a local facility, and/or subsidies or financial support to help meet the child care needs of students:**

University of Pennsylvania offers a discounted childcare program to Penn faculty, staff, students and University of Pennsylvania Health System employees at its Penn Children’s Center. Penn also offers additional rates at a discounted price to select faculty and staff based on income.

Penn’s Children’s Center is for children ages three months to five years of age and is conveniently located on the University campus. Enrollment in the Penn Children’s Center is open to all members of the University and surrounding communities, with preference given to faculty, staff and students of the University. The center is one of few centers in the area accredited by the National Association for the Education of Young Children (NAEYC).

Penn Children’s Center celebrates cultural, economic, and ethnic diversity through its curriculum and programming, and incorporates learning activities into traditional playtime, through stories, arts and crafts, music and movement, science, physical fitness, and field trips. The center features 13 well-equipped classrooms, computers, an indoor gym, and an outdoor playground. Teachers hold degrees in early childhood education or a related field, and are assisted by classroom aides and university students. The 10,000-square-foot center accommodates 32 infants, 50 toddlers, and 79 preschoolers.

Penn partners with the Parent Infant Center and The Caring Center in the West Philadelphia neighborhood to provide child care options in addition to the Penn Children’s Center. These NAEYC-accredited centers have spaces for 100 more children, half of them reserved for the children of Penn faculty, staff, and students.

In addition to childcare, University of Pennsylvania also provides two additional substantially subsidized childcare benefits to its faculty and staff through a partnership with Care.com.

- Back-up-Care allows Faculty and staff to arrange for temporary backup care in their homes, at an out-of-town business location or at an adult relative’s residence any time (day or night, seven days a week, including holidays). Benefits-eligible faculty and staff members are eligible for up to ten days of backup child or adult care per calendar year. There is a cost to those who utilize this service, but Penn partially offsets the cost through a subsidy program determined based on annual salary.
- Snow Day Child Care provides all-day care for children of Penn faculty and staff members when the University is open but Philadelphia public schools are closed due to inclement weather. Children ages 12 weeks to 12 years are eligible for the program, whether they attend a Philadelphia district school or not. Care is provided at the Penn Children’s Center, the University of Pennsylvania’s licensed day care center.

In addition, a day care facility is currently under construction for the Center for Healthcare Technology which will accommodate 170 children.
A brief description of the institution’s other policies and programs to support non-traditional students:

Penn President Amy Gutmann’s vision for Penn’s future to foster inclusion, innovation and impact is detailed in the Penn Compact 2020 (https://president.upenn.edu/penn-compact).

The Penn Compact 2020’s goal of inclusion strives to improve diversity and equity at Penn for all members of the Penn community. In support of the Penn Compact 2020, the University Schools and Centers have developed numerous initiatives and programs to promote equity and diversity among students, staff, and faculty.

There are six cultural resource centers at Penn providing services for underrepresented groups:
- The Greenfield Intercultural Center fosters intercultural understanding at Penn through cross-cultural activism, reflection, and dialogue. This cultural resource also provides resources for First Generation and Low Income (FGLI) Students.
- La Casa Latina, Penn's Center for Hispanic Excellence, promotes awareness of Latino issues, culture, and identity.
- Penn's Lesbian, Gay, Bisexual, and Transgender Center supports the University's LGBT communities through mentoring, workshops, advocacy, and special events.
- Makuu, the Black Cultural Resource Center, is a nexus of advising, leadership development, and programming for Penn students interested in Black culture and the African Diaspora.
- The Pan-Asian-American Community House is a hub of academic, personal, and professional growth for Penn students interested in Asian-American culture and the Asian American Diaspora.
- The Penn Women's Center addresses the evolving needs of Penn's women through programming, advocacy, and community.

In addition, Penn has numerous religious organizations, arts organizations, councils, advisory boards, and student affairs affinity groups available to students from various backgrounds, as well as school-affiliated organizations within Penn's 12 schools. A full listing of these resources, with links to each organization's web page, is available on Penn's diversity website (http://diversity.upenn.edu/resources/).

Penn's College Achievement Program (PennCAP) works closely with a diverse group of academically-talented students, many from low-income and/or first-generation backgrounds, to support their success at Penn. Staff provide coaching, counseling, academic assistance, and cultural enrichment so that students can more confidently move towards their personal and academic goals. For more information, see https://www.vpul.upenn.edu/eap/penncap/.

Does the institution wish to pursue Part 2 of this credit (tracking accessibility and affordability)? (If data is not available, select 'No'):
Yes

The percentage of entering students that are low-income (0-100):
The graduation/success rate for low-income students (0-100):
91

On average, the percentage of need that was met for students who were awarded any need-based aid (e.g. as reported to the U.S. Common Data Set initiative, item H2) (0-100):
100

The percentage of students graduating with no interest-bearing student loan debt or for whom no out-of-pocket tuition is required (i.e. the percentage of graduates who have not taken out interest-bearing loans) (0-100):
69

Estimated percentage of students that participate in or directly benefit from the institution’s policies and programs to support low-income and non-traditional students (0-100):
28.60

The website URL where information about the programs or initiatives is available:
---

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:
The University of Pennsylvania is a major research institution, with over 3,000 degrees granted annually from twelve professional and academic schools at the Bachelor's, Master's, and Doctorate levels. Penn is committed to teaching environmental sustainability, with a goal to make climate change and sustainability part of the curriculum and educational experience available to all Penn students. (Penn's 2009 "Climate Action Plan"). This submission documents Penn's efforts during the FY17 year and compares them to the FY14 baseline year which corresponds with the University's "Climate Action Plan 2.0". The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton Large Animal Center has also been referenced, and noted as outside the boundary of the main campus in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
Investment & Finance

Points Claimed  2.67
Points Available  7.00

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

Throughout this subcategory, the term “sustainable investment” is inclusive of socially responsible, environmentally responsible, ethical, impact, and mission-related investment.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Committee on Investor Responsibility</td>
<td>2.00 / 2.00</td>
</tr>
<tr>
<td>Sustainable Investment</td>
<td>0.67 / 4.00</td>
</tr>
<tr>
<td>Investment Disclosure</td>
<td>0.00 / 1.00</td>
</tr>
</tbody>
</table>
Committee on Investor Responsibility

Provisional Score

2.00 / 2.00

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

Institution has a formally established and active committee on investor responsibility (CIR) or equivalent body that makes recommendations to fund decision-makers on socially and environmentally responsible investment opportunities across asset classes, including proxy voting (if the institution engages in proxy voting). The body has multi-stakeholder representation, which means its membership includes faculty, staff, and/or students (and may also 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 a regular part of its agenda.

This credit recognizes committees that that regularly make recommendations to fund decision-makers on the institution’s external investments. Committees that only have within their purview green revolving loan funds or similar initiatives to fund campus infrastructure improvements and sustainability committees that occasionally make recommendations to fund decision-makers do not count. Student-managed sustainable investment funds, green fees and revolving funds, and sustainable microfinance initiatives are covered in the Student Life credit in Campus Engagement.

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) that makes recommendations to fund decision-makers on socially and environmentally responsible investment opportunities across asset classes?:

Yes

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:

The Penn Social Responsibility Advisory Committee (Penn SRAC) advises the University Trustees and makes recommendations to the Trustee Proxy Voting Subcommittee of the Executive Committee concerning decisions on Proxy Voting. A Resolution to Establish Procedures for Proxy Voting was passed by the Executive Committee on May 15, 2003. The work of the committee is guided by the Statement on Responsibility Concerning Endowment Securities adopted by the Board of Trustees. The Penn SRAC advises the Trustee Proxy Voting Subcommittee and the President, with the following functions:

stars.aashe.org
* Consider proposals from the University community regarding specific proxy voting, first determining whether or not there is an allegation of substantial social or environmental injury;
* Make clear and concise recommendations to the Trustee Proxy Voting Subcommittee, together with factual findings and analysis, for its consideration on how to vote proxies;
* Respond to specific requests from the Trustee Proxy Voting Subcommittee or President.
* The Social Responsibility Advisory Committee (SRAC) is composed of student, faculty, and staff representatives along with alumni representatives. SRAC designs shareholder engagement policies and practices that advocate improvements to the social and environmental performance of the companies in which Penn has holdings. Two of SRAC’s Guiding Principles are related to Global Climate Change and Sustainability Reporting. For more information, see https://secure.www.upenn.edu/secretary/SRAC.html

**Does the CIR include staff representation?:**
Yes

**Does the CIR include faculty representation?:**
Yes

**Does the CIR include student representation?:**
Yes

**Members of the CIR, including affiliations and role (e.g. student, faculty, staff, alumni):**

Penn SRAC consists of twelve voting members including:
* Four faculty members nominated by the Faculty Senate;
* Four students (two graduates and two undergraduates) nominated by the Undergraduate Assembly (one student), the Nominations and Elections Committee (one student), GAPSA (two students);
* Two alumni representatives appointed by the President;
* Two staff members appointed by the President.

**Examples of CIR actions during the previous three years:**

In the past three years, besides their proxy recommendations, the SRAC has revised two guidelines and added a new guideline.

• **Political Spending, Revised in 2015:**
Support resolutions that ask companies to report on direct or indirect campaign spending. Support resolutions that ask companies to report on direct or indirect lobbying activities. Abstain on resolutions that ask for restrictions on political spending. Abstain on resolutions that ask companies to adopt codified board oversight policies on political spending, unless the conduct of a company in a specific instance merits such a resolution.

• **Resource Extraction, Revised in 2015:**
Support resolutions that ask for monitoring and disclosure of the environmental impacts of the company’s operations, including resolutions that ask for the collection and disclosure of quantitative emissions data. Support resolutions that ask
companies to adopt comprehensive sustainability strategies, including performance indicators, and to publish quantitative assessments of the strategies’ effectiveness. Abstain on resolutions that ask companies to set quantitative emissions reduction targets.

- **Greenhouse Gas Emissions, new in 2017:**
  Support shareholder resolutions seeking company disclosure of greenhouse gas emissions, analyses of the impact of climate change on a company’s business activities, strategies designed to reduce a company’s harmful impact on the global climate, and company support of governmental policies to mitigate climate change and its harmful effects.

**The website URL where information about the programs or initiatives is available:**

https://secure.www.upenn.edu/secretary/SRAC.html

**Additional documentation to support the submission:**

---

**Data source(s) and notes about the submission:**

The submission relies on information related to the main, academic, West Philadelphia campus, but to more fully document efforts across the Penn system, information related to the Morris Arboretum and New Bolton Large Animal Center has also been referenced, and noted as outside the boundary of the main campus in descriptions. The information is used to enrich examples of University efforts and is not intended to be the primary justification for credits. The responses for each of the questions and sub-questions are drawn from University materials, both internal and public documents. Each section notes the website where the information can be found.
## Sustainable Investment

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### 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

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

**Does the institution wish to pursue Option 1 (positive sustainability investment)?:**

No

**Total value of the investment pool:**

---

**Value of holdings in each of the following categories:**

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**A brief description of the companies, funds, and/or institutions referenced above:**

---
Percentage of the institution's investment pool in positive sustainability investments: 0

Does the institution wish to pursue Option 2 (investor engagement)?: Yes

Does the institution have a publicly available sustainable investment policy?: No

A copy of the sustainable investment policy:
---

The sustainable investment policy:
---

Does the institution use its sustainable investment policy to select and guide investment managers?: Yes

A brief description of how the policy is applied, including recent examples:

The Office of Investments provided managers of University investment funds with a private letter in early 2017 outlining Penn's position on climate change and investments in fossil fuel related businesses.

Has the institution engaged in proxy voting, either by its CIR or other committee or through the use of guidelines, to promote sustainability during the previous three years?: No

A copy of the proxy voting guidelines or proxy record:

Trustee Resolution on Proxy Voting.pdf

A brief description of how managers are adhering to proxy voting guidelines:
---

Has the institution 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?: Yes

Examples of how the institution has engaged with corporations in its portfolio about sustainability issues
during the previous three years:

The University of Pennsylvania’s Board of Trustees has endorsed a number of specific measures designed to directly increase Penn’s impact on fighting climate change. The Board of Trustees charged the Office of Investments with considering the impacts of climate change, including the consequences of potential regulatory responses, in its assessment of investments. In 2017, the Penn Office of Investments sent letters to the CEOs of every publicly traded fossil fuel-related investment held in the University’s name. In the letter the University detailed its commitment to accelerating the global transition to low-carbon energy, explained measures the University is taking directly to combat climate change, and described changes to the University’s proxy voting guidelines. Finally, the letter explained that Penn expects its investment managers to ensure that their portfolio companies meet the highest standards of environmental responsibility and carbon risk mitigation.

**Does the institution have a publicly available investment policy with negative screens?:**

No

**A brief description of the negative screens and how they have been implemented:**

---

**Approximate percentage of the endowment that the negative screens apply to:**

---

**Does the institution engage in policy advocacy by participating in investor networks and/or engage in inter-organizational collaborations to share best practices?:**

No

**A brief description of the investor networks and/or collaborations:**

---

**The website URL where information about the programs or initiatives is available:**

https://secure.www.upenn.edu/secretary/divestment.html

**Additional documentation to support the submission:**

---
Investment Disclosure

Provisional Score

0.00 / 1.00

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

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.

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

Does the institution make a snapshot of its investment holdings available to the public?:

Yes

A copy of the investment holdings snapshot:

---

The website URL where the holdings snapshot is publicly available:

http://www.evp.upenn.edu/investments/annual-report.html

Percentage of the total investment pool included in the snapshot of investment holdings at each of the following levels of detail:

<table>
<thead>
<tr>
<th>Details</th>
<th>Percentage (0-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific funds and/or companies</td>
<td>0</td>
</tr>
<tr>
<td>Investment managers and/or basic portfolio composition (i.e. asset classes), but not specific funds or companies</td>
<td>100</td>
</tr>
</tbody>
</table>

Does the institution engage in proxy voting?:

Yes

Are proxy voting records included in the snapshot of investment holdings?:

Yes
The website URL where information about the programs or initiatives is available:
http://www.evp.upenn.edu/investments/annual-report.html

Additional documentation to support the submission:
---
Wellbeing & Work

Points Claimed 4.13
Points Available 7.00

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 offering benefits, wages, and other assistance that serve to respectfully and ethically compensate workers and by acting to protect and positively affect the health, safety and wellbeing of the campus community.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Compensation</td>
<td>1.05 / 3.00</td>
</tr>
<tr>
<td>Assessing Employee Satisfaction</td>
<td>1.00 / 1.00</td>
</tr>
<tr>
<td>Wellness Program</td>
<td>1.00 / 1.00</td>
</tr>
<tr>
<td>Workplace Health and Safety</td>
<td>1.08 / 2.00</td>
</tr>
</tbody>
</table>
Employee Compensation

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
</table>
| 1.05 / 3.00 | Madeline Schuh  
Sustainability Analyst  
Facilities and Real Estate Services |

Criteria

**Part 1**

More than 75 percent of the institution’s employees receive a living wage (benefits excluded).

Include all regular full-time, regular part-time, and temporary (or non-regular) employees (staff and faculty). Institutions may choose to include or omit student workers.

**Part 2**

Institution is able to verify that more than 75 percent of the employees of contractors that work on-site as part of regular and ongoing campus operations receive a living wage (benefits excluded).

Part 2 is only applicable to institutions that have one or more significant on-site contractors, which may include (but are not limited to) regular providers of dining/catering, cleaning/janitorial, maintenance, groundskeeping, transportation, and retail services (e.g. book and supply stores).

**Part 3**

Total compensation provided to the institution’s lowest paid regular (i.e. permanent) employee or pay grade meets or exceeds the local living wage.

Include regular part-time and full-time workers. Newly hired, entry-level employees may be excluded from Part 3 during the first six months of employment. Institutions may choose to include or omit student workers.

To determine the local living wage:

- U.S. institutions must use the Living Wage Calculator hosted by the Massachusetts Institute of Technology to look up the living wage for “2 [working] Adults, 2 Children” for the community in which the main campus is located.
- Canadian institutions must use Living Wage Canada’s standards (if a living wage has been calculated for the community in which the main campus is located) or else the appropriate after tax Low Income Cut-Off (LICO) for a family of four (expressed as an hourly wage),
- Institutions located outside the U.S. and Canada must use local equivalents of the above standards if available or else the local poverty indicator for a family of four (expressed as an hourly wage).

For further guidance, see *F. Measurement*. 
The local living wage (based on a family of four and expressed as an hourly wage):

15.33 US/Canadian $

Percentage of all employees (regular full-time, regular part-time, and temporary workers) that receive a living wage (benefits excluded) (0-100):

100

Does the institution have employees of contractors that work on-site as part of regular and ongoing campus operations?:

Yes

Percentage of employees of contractors that work on-site as part of regular and ongoing campus operations that the institution has verified as receiving a living wage (benefits excluded) (0-100; enter ‘0’ if unknown):

0

The total compensation provided to the institution’s lowest paid regular (i.e., permanent) employee or pay grade meets or exceeds what percentage of the living wage?:

100 percent

A brief description of the minimum total compensation provided to the institution’s lowest paid employee or pay grade, including any in-kind benefits included as part of the total compensation figure:

Minimum total compensation includes base pay and benefits. Base pay is reviewed and set to be internally equitable and market competitive at the 50th and 75th percentiles. Benefit plans include health, prescription, dental, and vision, 3 retirement plans including a matching plan, tuition benefits for employees and eligible dependents, life and disability insurances, paid time off and a Work-life program.

Has the institution made a formal commitment to pay a living wage?:

---

A copy or brief description of the institution’s written policy stating its commitment to a living wage:

The University has a market pricing job classification system to evaluate jobs consistently throughout the University. Salaries are set to be internally equitable and market competitive. The University’s staff jobs are market priced annually to assure that staff compensation is market competitive at the 50th and 75th percentiles. Penn has a library of over 20 third-party salary surveys that are used to price jobs. Data is referenced for the local, regional and national markets to establish competitive compensation.

Has the institution made a formal commitment to provide a living wage to its student employees and/or
graduate teaching/research assistants (e.g. by adopting a student bill-of-rights)?:
---

A brief description of the institution’s commitment to a student living wage:
---

The website URL where information about the programs or initiatives is available:
https://www.hr.upenn.edu/

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

The University’s minimum hourly rate is 63% above both the state and federal minimum wage. There are a limited number of union contracts. The contractual wages are competitive with other labor contracts and the Philadelphia job market. Temporary employees are hired through an agency that partners with the University. Hourly rates are highly competitive.

Penn has conducted a University-wide review of pay equity. Pay equity is maintained on an ongoing basis as part of day-to-day salary administration. All salaries are set by the Compensation department to ensure that internal equity at competitive market wages for new hires and current employees is achieved.

Annual merit increase budgets have been very competitive with the local and national markets and have outpaced the cost of living. In order to keep this competitiveness, the University has awarded merit increases every year, even during the economic downturn in 2008 and 2009.
## 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.

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

### Has the institution conducted a survey or other evaluation that allows for anonymous feedback to measure employee satisfaction and engagement during the previous three years?:

Yes

### Percentage of employees (staff and faculty) assessed, directly or by representative sample (0-100):

100

### A brief description of the institution’s methodology for evaluating employee satisfaction and engagement:

Penn evaluated employee satisfaction by conducting a second University-wide staff engagement survey in February of 2017, highlighting 44 items and receiving input from the Provost, Deans and the Executive Vice President's office. The survey was conducted by a third-party, to ensure the confidentiality of individual responses. The staff engagement survey reflects staff’s satisfaction with performance drivers such as staff engagement, work environment, senior leadership, supervisor/manager, peers, career opportunities, organizational practices, and performance and recognition. Once the survey was administered the collected data was analyzed and reported to senior leaders such as the President, Provost and Executive Vice President and was shared with School/Centers leaders. Once all data was shared with the appropriate parties, action plans were developed based on specific feedback for each organization/area.

### A brief description of the mechanism(s) by which the institution addresses issues raised by the evaluation (including examples from the previous three years):
All survey results are reported back at a summary level to the Divisions and/or Departments to share results in order for departments to develop an action plan to address opportunities highlighted in the analysis.

The website URL where information about the programs or initiatives is available:
https://www.hr.upenn.edu/docs/default-source/learning-and-development/creating-and-maintaining-an-engaged-team.pptx?sfvrsn=0

Additional documentation to support the submission:
Wellness Program

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 / 1.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Institution has a wellness and/or employee assistance program that makes available counseling, referral, and wellbeing services to all students, staff, and/or faculty members.

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

Does the institution have a wellness program that makes counseling, referral, and wellbeing services available to all students?:
Yes

Does the institution have a wellness and/or employee assistance program that makes counseling, referral, and wellbeing services available to all staff?:
Yes

Does the institution have a wellness and/or employee assistance program that makes counseling, referral, and wellbeing services available to all faculty?:
Yes

A brief description of the institution’s wellness and/or employee assistance program(s), including information to support each affirmative response above:

The University of Pennsylvania offers an Employee Assistance Program (EAP) to provide free and confidential one-on-one counseling sessions to our faculty, staff and their immediate family members when personal life issues are interfering with personal well-being. The EAP also provides frequent support to supervisors and leaders when a critical incident occurs in or affects the workplace, such as the death of a colleague or national catastrophe.

Penn also offers our faculty and staff broad-based wellness programming. These programs include on-campus biometric screenings and flu shots; a comprehensive online wellness portal offering a variety of health promotion tools such as, health risk assessments, telephonic health coaching programs, health information, healthy lifestyle videos, nutritional coaching, as well as a multi-faceted quit smoking program that includes free nicotine replacement therapies. In addition Penn also offers a walking program, monthly presentations by health professionals on stress-management and a range of health and well-being topics. To further promote wellness, Penn became a tobacco-free campus in 2017.

The website URL where information about the programs or initiatives is available:
stars.aashe.org
https://www.hr.upenn.edu/pennbenefits

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

Student wellness center:
http://www.vpul.upenn.edu/health.php
Workplace Health and Safety

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.08 / 2.00</td>
<td>Madeline Schuh</td>
</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Part 1

Institution has reduced its total number of recordable workplace injuries and occupational disease cases per full-time equivalent (FTE) employee compared to a baseline.

Part 2

Institution has fewer than 6 recordable 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-recordable 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 F. Measurement, below, for further guidance on reporting injuries and disease cases.

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

Please enter data in the table below:

<table>
<thead>
<tr>
<th></th>
<th>Performance Year</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of recordable workplace injuries and occupational disease cases</td>
<td>120</td>
<td>143</td>
</tr>
<tr>
<td>Full-time equivalent of employees</td>
<td>17,354</td>
<td>16,710</td>
</tr>
<tr>
<td>Number of injuries and cases per FTE employee</td>
<td>0.01</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Start and end dates of the performance year and baseline year (or three-year periods):
**Performance Year** | **Start Date** | **End Date**  
--- | --- | ---  
Performance Year | July 1, 2013 | June 30, 2014  
Baseline Year | July 1, 2016 | June 30, 2017

A brief description of when and why the workplace health and safety baseline was adopted (e.g. in sustainability plans and policies or in the context of other reporting obligations):

The 2014 baseline was adopted to correspond to Penn's CAP 2.0 baseline year of 2014.

**Percentage reduction in workplace injuries and occupational disease cases per FTE employee from baseline (0-100):**

19.20

**Number of workplace injuries and occupational disease cases per 100 FTE employees, performance year:**

0.69

A brief description of the institution’s workplace health and safety initiatives, including how workers are engaged in monitoring and advising on health and safety programs:

The Department of Environmental Health and Radiation Safety (EHRS) monitors and advises on health and safety matters on campus. EHRS regulates and sets standards for: radiation safety, laser safety, environmental programs, general lab safety, biological safety, emergencies, and general health and safety. Regulatory agencies perform unannounced inspections at Penn facilities and can be the result of reporting, investigation, records review, periodic visit, or many other reasons.

Members of the University of Pennsylvania community are accountable to:
- Consider possible environmental and safety impacts when making decisions, including those concerning facilities management and construction projects.
- Emphasize safety education and safe work practices to minimize injuries and illnesses.
- Recognize and respond to any legitimate community concerns about potential environmental health and radiation safety impacts.
- Provide appropriate and timely information to questions raised about environmental health and radiation safety issues.
- Use energy efficiently.
- Reuse and recycle materials when it makes environmental sense to do so.
- Comply with all environmental health and radiation safety laws and regulations, and the University of Pennsylvania Environmental Health and Radiation Safety (EHRS) Program.

Purpose of the EHRS Program is to:
- Provide a summary of the essential elements of each EHRS program.
- Serve as a practical guide to the Penn community on how EHRS programs are managed and how to follow procedures.
- Clarify the roles and responsibilities of Schools, departments and individuals with respect to EHRS activities.
- Serve as an easy-to-use reference tool that lists additional resources, including EHRS procedures, regulations, guidelines, and plans.
Facilitate a process of continually improving and updating the University's EHRS programs through regular revisions to the Plan.

Scope of EHRS Program
The Environmental Health and Radiation Safety (EHRS) Program applies to all schools, departments and divisions of the University of Pennsylvania.

The website URL where information about the programs or initiatives is available:
http://www.ehrs.upenn.edu/

Additional documentation to support the submission:
---
Exemplary practice credits recognize specific initiatives that demonstrate sustainability leadership. Exemplary practices include:

- Emerging best practices that are not otherwise recognized in STARS (e.g. seeking independent review of STARS data prior to submission).
- Initiatives and outcomes that are a step beyond what is recognized in a standard credit (e.g. achieving third party certification for a program or exceeding the highest criterion of an existing credit).
- Exemplary initiatives and outcomes that are only relevant to a minority of institution types or regions (e.g. participation in green hospital networks).
- Exemplary practice credits may be claimed in multiple submissions as long as the criteria are being met at the time of submission.

A catalog of currently available exemplary practice credits is available on the STARS website.

<table>
<thead>
<tr>
<th>Credit</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability Course Designation</td>
<td>0.00 / 0.50</td>
</tr>
<tr>
<td>NSSE Sustainability Education Consortium</td>
<td>0.00 / 0.50</td>
</tr>
<tr>
<td>Academy-Industry Connections</td>
<td>0.50 / 0.50</td>
</tr>
<tr>
<td>Green Athletics</td>
<td>0.00 / 0.50</td>
</tr>
<tr>
<td>Green Event Certification</td>
<td>0.50 / 0.50</td>
</tr>
<tr>
<td>Hospital Network</td>
<td>0.00 / 0.50</td>
</tr>
<tr>
<td>Fair Trade Campus</td>
<td>0.00 / 0.50</td>
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<tr>
<td>Certified Green Cleaning</td>
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<tr>
<td>Green Laboratories</td>
<td>0.50 / 0.50</td>
</tr>
<tr>
<td>Sustainable Dining Certification</td>
<td>0.50 / 0.50</td>
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<tr>
<td>Grounds Certification</td>
<td>0.50 / 0.50</td>
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<tr>
<td>Pest Management Certification</td>
<td>0.00 / 0.50</td>
</tr>
<tr>
<td>Spend Analysis</td>
<td>0.50 / 0.50</td>
</tr>
<tr>
<td>Bicycle Friendly University</td>
<td>0.50 / 0.50</td>
</tr>
<tr>
<td>Campus Pride Index</td>
<td>0.50 / 0.50</td>
</tr>
</tbody>
</table>
Sustainability Course Designation

Provisional Score

0.00 / 0.50

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

Institution formally designates sustainability courses in its standard course catalog or listings.

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

Does the institution formally designate sustainability courses in its standard course catalog or listings?:

No

A brief description of the formal sustainability course designation program, including the methodology used to identify and approve courses for inclusion:

The Penn Office of Sustainability in collaboration with the Office of the Provost publishes an on-line Sustainability Course Inventory every several years. This document includes over 300 courses that are focused in a significant way on environmental sustainability across all 12 undergraduate, professional, and graduate Schools. The Guide also lists all of the courses developed through the Sustainability Office program Integrating Sustainability across the Curriculum and through the Ben Franklin Scholars Course Development Grants. The last Inventory was completed in 2015. An updated Inventory will be completed in the 2018-2019 school year.

There is a Sustainability and Environmental Management minor available to undergraduates in the Wharton Business School, the School of Arts and Sciences (SAS), and the School of Engineering and Applied Sciences (SEAS). About 30 to 40 students graduate with this minor every year. Minors are listed on transcripts, but the individual courses toward a minor are not designated in a specific way.

Penn also has one of the oldest Masters in Environmental Studies programs in the country (started in the 1970s), as well as offering undergraduate, masters, and doctorate degrees in Environmental Science.

There are many environmental certificates and specialized programs associated with undergraduate, graduate, and professional programs at Penn, including:

• The new Penn Program in Environmental Humanities, started in 2014, received a multi-million dollar grant from the Mellon Foundation and began to implement a new Environmental Humanities undergraduate minor and graduate certificate, as well as a cluster hire in Environmental Humanities that will work across seven SAS departments.
• SEAS introduced six new or substantially updated courses in energy and sustainability, along with its vibrant Energy and Sustainability minor, undergraduate specialization in Energy Conversion and Storage, and Vagelos Integrated Program Energy Research (VIPER) started in 2013.
• Wharton offers a broad range of options to meet student demands in this area, including an undergraduate concentration in Environmental Policy and Management, an MBA major in Environmental and Risk Management, and a dual MBA/Master of Environmental Studies degree.
The School of Design updated the existing Masters of Environmental Building Design program in 2010, renaming the program the Master of Science in Design (MSD) with a concentration in Environmental Building Design.

**Does the institution designate sustainability courses on student transcripts?:**

No

**The website URL where information about the programs or initiatives is available:**

https://www.sustainability.upenn.edu/

**Additional documentation to support the submission:**

---
NSSE Sustainability Education Consortium

<table>
<thead>
<tr>
<th>Provisional Score</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0.00 / 0.50</td>
<td>Madeline Schuh</td>
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<td></td>
<td>Sustainability Analyst</td>
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<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Institution has participated as part of the Sustainability Education Consortium when administering the National Survey of Student Engagement (NSSE) within the previous three years.

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

The most recent year the institution participated in the NSSE Sustainability Education Consortium:
---

A brief description of the institution's NSSE Sustainability Education Consortium survey results:
---

The website URL where information about the programs or initiatives is available:
---

Additional documentation to support the submission:
---
Academy-Industry Connections

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50 / 0.50</td>
<td>Madeline Schuh</td>
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<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

**Criteria**

Institution has published policies or guidelines governing industry-sponsored research that preserve academic freedom, autonomy and integrity, and manage potential conflicts of interest. The policies or guidelines:

- Require that all significant consulting contracts (e.g. those worth $5,000 or more a year) be reported to a standing committee charged with reviewing and managing individual and institutional conflicts of interest;

- Prohibit faculty, students, postdoctoral fellows, medical residents, and other academic professionals from engaging in industry-led “ghostwriting” or “ghost authorship”;

- Prohibit participation in sponsored research that restricts investigator access to the complete study data or that limits investigators’ ability to verify the accuracy and validity of final reported results; and

- Ban confidential corporate research (i.e. research that cannot be published).

For more information, see Recommended Principles to Guide Academy-Industry Relationships (AAUP).

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

**Does the institution have published policies or guidelines governing industry-sponsored research that fully meet all of the credit criteria?:**

Yes

**A copy of the policies or guidelines governing academy-industry connections:**

---

**The policies or guidelines governing academy-industry connections:**

Penn's Office of Research Services publishes a Sponsored Projects Handbook, which is designed to assist the faculty and staff of the University of Pennsylvania in the administration of research awards.

**The website URL where information about the programs or initiatives is available:**

http://www.upenn.edu/researchservices/Manual.html

**Additional documentation to support the submission:**
Green Athletics

Provisional Score | Responsible Party
--- | ---
0.00 / 0.50 | Madeline Schuh  
Sustainability Analyst  
Facilities and Real Estate Services

Criteria

Institution has an active green athletics program through which it engages the community around issues of sustainability. The program includes at least four of the following:

- Zero waste and/or carbon neutral athletic events
- A stadium certified under a green building rating system
- A sustainable food and beverage purchasing program that includes athletic event vendors and concessions
- A program to minimize the use of potable water and chemicals in turf maintenance and groundskeeping
- A program to support more sustainable transportation options for athletic events
- Community engagement efforts, e.g. to educate students and fans/supporters about the institution’s sustainability initiatives
- An athletic team certification program

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

Does the institution’s green athletics program include the following?:

<table>
<thead>
<tr>
<th></th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero waste and/or carbon neutral athletic events</td>
<td>No</td>
</tr>
<tr>
<td>A stadium certified under a green building rating system</td>
<td>No</td>
</tr>
<tr>
<td>A sustainable food and beverage purchasing program that includes athletic event vendors and concessions</td>
<td>No</td>
</tr>
<tr>
<td>A program to minimize the use of potable water and chemicals in turf maintenance and groundskeeping</td>
<td>Yes</td>
</tr>
<tr>
<td>A program to support more sustainable transportation options for athletic events</td>
<td>Yes</td>
</tr>
<tr>
<td>Community engagement efforts, e.g. to educate students and fans/supporters about the institution's sustainability initiatives</td>
<td>Yes</td>
</tr>
<tr>
<td>An athletic team certification program</td>
<td>No</td>
</tr>
</tbody>
</table>

**A brief description of the institution’s green athletics program, including the specific initiatives selected above:**

Penn has several programs that support greening athletics programs. The Associate Director of Facilities for the Department of Recreation and Intercollegiate Athletics is a member of Penn’s Sustainability Coordinators Group, which works to align activities in Schools and Centers with Penn’s Climate Action Plan. Initiatives include: Annual sustainability-themed home basketball game during campus-wide campaigns; waste minimization efforts during Penn Relays (attended by over 120,000 spectators annually), donations of used athletics equipment to local schools and recreation leagues. A Penn Green Fund Grant has been used to install low-detergent ozone washers at the Pottruck Recreation Center, saving energy by reducing the use of hot water, and reducing the use of detergent. In addition, buses that transport athletes to away games are part of the Penn Transit fleet and have been converted to run on alternative fuels. Home games are accessible via walking and public transportation due to Penn's location and proximity to mass transit in the City of Philadelphia.

At least once a year, the Penn Men’s Basketball team sponsors a sustainability-themed game at the Palestra, Penn’s storied basketball arena. During half-time, a video describing Penn’s sustainability efforts is shown. During Penn Relays, the oldest and largest track and field competition in the United States held annually at Penn’s Franklin Field, student Eco-Reps work to reduce the event's environmental footprint. Activities in recent years include waste minimization programs and efforts to reduce the use of bottled water. In past years, the Penn Sustainability Office has sponsored specific races to help raise awareness of Penn's efforts in this area.

Penn Park, the 24-acre athletic and recreation facility open to the public and the Penn community, contains two full-size soccer/rugby fields, which are the primary practice fields for several intercollegiate athletic teams, as well as for recreation and intramural team. Penn Park also contains open natural grass fields used for recreation and practice, in addition to the women’s softball field. All water used for irrigation in Penn Park is drawn from a 300,000 gallon cistern that captures rainwater, as described elsewhere in this report. In addition to the sustainability features of Penn Park’s outdoor sports facilities, Hutchinson Gymnasium, originally built in 1928, was renovated in 2015 and certified LEED Gold.

As part of its standard practices (which are being formalized in Penn's forthcoming Ecological Stewardship Landscape Plan), Penn has minimized chemical fertilizer amendments and the use of pesticides and herbicides in Penn Park’s and main campus lawns and gardens. Penn uses compost tea, made on campus, exclusively for lawn and field amendments. Pesticides are only used for spot treatments as required and on trees such as American Elm and Ash, that they are threatened by invasive pests. In 2013, a notable pilot used ladybugs to control aphid populations as opposed to harsh chemicals.

In addition, several Eco-Reps projects in the reporting period of this survey have worked on greening athletic programs and events as their year-long engagement project.
The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

https://www.sustainability.upenn.edu/news/penn-athletics-powers-down

https://www.sustainability.upenn.edu/news/athletics-eco-reps-green-penn-relays


https://www.sustainability.upenn.edu/partner-profiles/dan-schupsky-assistant-coach-%E2%80%93-pe nn-athletics

https://www.sustainability.upenn.edu/programs/green-fund/one-towel-time-ozone-washing-machines- pottruck
Green Event Certification

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50 / 0.50</td>
<td>Madeline Schuh</td>
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<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

**Criteria**

Institution has or participates in a green event certification program and has held one or more certified events in the previous year. The certification program addresses at least four of the following:

- Sustainable transportation options, teleconferencing options, and/or carbon offsets
- Sustainable catering (e.g. sourcing local and third party certified food and beverages, providing vegetarian/vegan options, using reusable/compostable materials)
- Paper consumption (e.g. minimization and recycled/FSC certified content)
- Energy efficiency (e.g. equipment and lighting)
- Waste minimization and diversion
- Communications and/or signage about the sustainable practices

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

**Does the institution’s green event certification program address the following?:**

<table>
<thead>
<tr>
<th>Sustainable transportation options, teleconferencing options, and/or carbon offsets</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable catering (e.g. sourcing local and third party certified food and beverages, providing vegetarian/vegan options, using reusable/compostable materials)</td>
<td>Yes</td>
</tr>
<tr>
<td>Paper consumption (e.g. minimization and recycled/FSC certified content)</td>
<td>Yes</td>
</tr>
<tr>
<td>Energy efficiency (e.g. equipment and lighting)</td>
<td>Yes</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Waste minimization and diversion</td>
<td>Yes</td>
</tr>
<tr>
<td>Communications and/or signage about the sustainable practices</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**A brief description of the institution’s green event certification program, including the specific components selected above:**

The Green Event Guide was developed by the Penn Sustainability Office to help students, faculty and staff in the Penn community host more ecologically sustainable events, whatever their size and scope.

The Green Events guide addresses planning prior to the event, the event itself, and post event clean-up. As part of the pre-event planning, the guide suggests outlining sustainability goals and brainstorming ways in which they can be achieved, such as:

* choosing an outdoor location or space with natural lighting to reduce energy consumption
* setting up the room to maximize thermal comfort and using daylight to reduce unnecessary lighting
* selecting a site with access to public or alternative transportation modes
* including directions for public transit users
* reducing paper use for promotion or making reusable materials
* increasing the use of reusable servicewear items
* selecting a sustainable caterer
* providing recycling and compost receptacles.

**The website URL where information about the programs or initiatives is available:**

https://www.sustainability.upenn.edu/guides-manuals/green-event-guide

**Additional documentation to support the submission:**

---
Hospital Network

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
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</thead>
<tbody>
<tr>
<td>0.00 / 0.50</td>
<td>Madeline Schuh</td>
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<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Institution has an affiliated healthcare facility within its STARS institutional boundary that is a member of:

- The Global Green and Healthy Hospitals Network, and/or
- The Healthier Hospitals Initiative / Practice Greenhealth

This credit includes acute care facilities, 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. clinics and insurers through which an institution obtains health care for its employees) are not included.

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

Is the institution’s affiliated healthcare facility currently a member of a member of the Global Green and Healthy Hospitals Network?:

No

Is the institution’s affiliated healthcare facility currently a member of Healthier Hospitals Initiative / Practice Greenhealth?:

No

A brief description of the healthcare facility’s sustainability initiatives:

---

The website URL where information about the programs or initiatives is available:

---

Additional documentation to support the submission:

---
Fair Trade Campus

Provisional Score

0.00 / 0.50

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

Institution is currently designated as a Fair Trade College or University by Fair Trade Campaigns USA or Fairtrade International/FLO and its members (e.g. Fairtrade Canada).

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

Is the institution currently designated as a Fair Trade College or University?:
No

A brief description of the institution's Fair Trade initiatives, including the year formal designation was achieved and/or renewed:
---

The website URL where information about the programs or initiatives is available:
---

Additional documentation to support the submission:
---
## Certified Green Cleaning

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
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</thead>
<tbody>
<tr>
<td>0.00 / 0.50</td>
<td>Madeline Schuh</td>
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<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

### Criteria

Institution and/or its primary cleaning services contractor uses a green cleaning program that is certified under one of the following:

- Green Seal’s Environmental Standard for Commercial Cleaning Services (GS-42),
- The International Sanitary Supply Association’s (ISSA’s) Cleaning Industry Management Standard for Green Buildings (CIMS-GB)
- An equivalent third party certification program approved by AASHE (email stars@aashe.org to enquire about program equivalence)

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

### Under which of the following is the institution’s green cleaning program certified?:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Seal’s Environmental Standard for Commercial Cleaning Services (GS-42)</td>
<td>No</td>
</tr>
<tr>
<td>The International Sanitary Supply Association’s (ISSA’s) Cleaning Industry Management Standard for Green Buildings (CIMS-GB)</td>
<td>No</td>
</tr>
<tr>
<td>An equivalent third party certification program approved by AASHE</td>
<td>No</td>
</tr>
</tbody>
</table>

### A brief description of the institution’s certified green cleaning program, including the year adopted and/or certified:

As outlined in Penn’s Green Housekeeping Plan, cleaning products and materials shall meet the sustainability requirements outlined in LEED Existing Buildings: Operations & Maintenance IEQ Credit 3.3. (Should criteria be revised in subsequent versions of LEED EB-O&M, the program will strive to meet new requirements.)
Cleaning products covered by the LEED standard include cleaning chemicals, materials and products, floor finishes and strippers, disposable janitorial paper products, trash liners, and hand soap. This LEED requirement is that 30% of total purchases (by cost) meet at least one of the appropriate specified standards listed.

As part of their yearly training, housekeepers are retrained in existing standard cleaning policies, many of which are considered green cleaning, and are trained in any new policies. For example, in the 2017-2018 academic year, Penn housekeeping will transition from using paper towels to washable and reusable microfiber towels, where applicable. Because of the improved cleaning capabilities of microfiber cloths, the switch to microfiber will decrease the use of harsh chemicals and greatly reduce the number of one-time use paper towels being used across campus. As part of this move, housekeeping management staff have begun an extensive training program for housekeepers on the proper use of microfiber cloths. Microfiber cloths will be laundered off-campus by Wash-Cycle-Laundry, a local, triple bottom-line, and sustainable company. The services provided to Penn by Wash-Cycle-Laundry are innovative, earth friendly, locally sourced, and generate upwardly mobile job opportunities for vulnerable job seekers in the area.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/news/power-down-leed

Additional documentation to support the submission:
---
Green Laboratories

Provisional Score | Responsible Party
---|---
0.50 / 0.50 | Madeline Schuh  
Sustainability Analyst  
Facilities and Real Estate Services

Criteria

Institution has or participates in a green laboratory benchmarking or certification program that covers at least three of the following:

- Energy conservation and efficiency, e.g. fume hood ("shut the sash") and freezer maintenance programs
- Water conservation and efficiency
- Chemical use and disposal
- Materials management, e.g. green purchasing guidelines and recycling and reuse programs
- Training for lab users on sustainable practices

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

Does the institution’s green laboratory program address the following?:

<table>
<thead>
<tr>
<th></th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy conservation and efficiency, e.g. fume hood (&quot;shut the sash&quot;) and freezer maintenance programs</td>
<td>Yes</td>
</tr>
<tr>
<td>Water conservation and efficiency</td>
<td>Yes</td>
</tr>
<tr>
<td>Chemical use and disposal</td>
<td>Yes</td>
</tr>
<tr>
<td>Materials management, e.g. green purchasing guidelines and recycling and reuse programs</td>
<td>Yes</td>
</tr>
<tr>
<td>Training for lab users on sustainable practices</td>
<td>Yes</td>
</tr>
</tbody>
</table>

A brief description of the green laboratory program, including the specific initiatives selected above:
Penn’s Green Labs Guide was created by the Sustainability Office, in collaboration with Penn’s Office of Environmental Health and Radiation Safety and Sustainability Coordinators from the School of Arts and Sciences, the Perelman School of Medicine, the School of Engineering and Applied Sciences, and the School of Veterinary Medicine. The Guide provides overall guidelines for lab greening and a checklist for actions to reduce waste, promote recycling, and conserve energy.

Penn’s "Climate Action Plan" provides a framework for greening the day-to-day operations of our University, and the numerous labs on campus provide a prime opportunity to reduce our environmental impact and help us reach our sustainability goals. The variety of campus labs range from small undergraduate classrooms to large medical research facilities. As such, lab greening will vary based on the location, size, and type of research conducted in each lab.

One of Penn’s most successful programs to conserve energy in labs is the Ultra-low Temperature (ULT) Freezer rebate program, which provides an incentive to purchase higher efficiency freezers and to reduce the number of old, under-utilized, and abandoned freezers.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

https://www.sustainability.upenn.edu/sites/default/files/Green%20Labs%20@%20Penn_0.pdf

https://www.sustainability.upenn.edu/news/penn-launches-green-labs-program

https://www.sustainability.upenn.edu/news/green-labs-working-group-takes-lab-waste

## Sustainable Dining Certification

<table>
<thead>
<tr>
<th>Provisional Score</th>
<th>Responsible Party</th>
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</thead>
<tbody>
<tr>
<td>0.50 / 0.50</td>
<td>Madeline Schuh</td>
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<tr>
<td></td>
<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

### Criteria

Institution and/or its primary dining services contractor has at least one on-site dining hall or food service outlet certified by:

- The Food Recovery Network
- The Green Restaurant Association (GRA) (Two Star or higher)
- Green Seal (GS-55 Standard for Restaurants and Food Services)
- Leaders for Environmentally Accountable Foodservice (LEAF)
- Marine Stewardship Council (MSC) Chain of Custody Certification
- Responsible Epicurean and Agricultural Leadership (REAL)

- An equivalent program approved by AASHE (email stars@aashe.org to inquire about program equivalence)

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

**Is at least one on-campus dining hall or food service outlet certified by the following organizations? (at least one positive response required):**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Food Recovery Network</td>
<td>Yes</td>
</tr>
<tr>
<td>The Green Restaurant Association (GRA) (Two Star or higher)</td>
<td>Yes</td>
</tr>
<tr>
<td>Green Seal (GS-55 Standard for Restaurants and Food Services)</td>
<td>No</td>
</tr>
<tr>
<td>Leaders for Environmentally Accountable Foodservice (LEAF)</td>
<td>No</td>
</tr>
<tr>
<td>Certification</td>
<td>No</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Marine Stewardship Council (MSC) Chain of Custody Certification</td>
<td></td>
</tr>
<tr>
<td>Responsible Epicurean and Agricultural Leadership (REAL)</td>
<td>No</td>
</tr>
<tr>
<td>An equivalent program approved by AASHE</td>
<td>---</td>
</tr>
</tbody>
</table>

**A brief description of each certified dining hall or food service outlet, including the year the certification was achieved and/or renewed:**

Penn's dining contract vendor, Bon Appetit Company, established in 1999 a company-wide commitment to buying locally, called Farm to Fork. Chefs for Penn dining halls are required to purchase at least 20 percent of their ingredients from small farms and ranches located within 150 miles of their kitchens that are registered through this program. By buying directly from farmers, Penn chefs have much more control over what types of agribusiness are supported with University resources. Priority is given to supporting true family farms, where the owners live on or near the land, work it themselves, and therefore are conscientious stewards. In 2011, Bon Appetit defined a new mid-size category for regional meat producers, and also launched a companion seafood program, called Fish to Fork. The rules for Farm to Fork eligibility for all farms are on the Bon Appetit Company website, at

http://www.bamco.com/sourcing/farm-to-fork-criteria/

In 2014, Bon Appetite defined a Locally Crafted category, for local artisans who support socially and environmentally responsible practices through community entrepreneurship.
Saxby's Coffee, a local, Philadelphia-based company, manages coffee at a number of on-campus locations, and is Food Recovery Certified. Saxby's partners with Sunday Breakfast Rescue Mission for food recovery.
While the Penn Main Campus dining halls are not Food Recovery certified, they partner with Feeding America member, Philabundance; a Philadelphia organization which provides meals for food insecure community members.

https://www.philabundance.org/learn/about-us/

The Crompton Cafe at the Morris Arboretum of the University of Pennsylvania is a 3 star certified Green Restaurant.

http://www.dinegreen.com/find-restaurants

**The website URL where information about the programs or initiatives is available:**

https://www.sustainability.upenn.edu/

**Additional documentation to support the submission:**

---
Data source(s) and notes about the submission:

http://www.bamco.com/timeline/fish-fork/

http://www.bamco.com/timeline/sustainable-seafood/


http://www.bamco.com/sourcing/farm-to-fork-criteria/

https://www.philabundance.org/learn/about-us/
Grounds Certification

<table>
<thead>
<tr>
<th>Provisional Score</th>
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</thead>
<tbody>
<tr>
<td>0.50 / 0.50</td>
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</tr>
<tr>
<td></td>
<td>Sustainability Analyst</td>
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<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Institution owns and/or manages land that is currently certified under one or more of the following programs:

- Audubon Cooperative Sanctuary Program (ACSP) or ACSP for Golf
- Bee Campus USA
- Forest Stewardship Council (FSC) Forest Management standard
- National Wildlife Federation’s Certified Wildlife Habitat Program
- An Organic standard or Participatory Guarantee System (PGS) endorsed by IFOAM
- SalmonSafe
- Sustainable Sites Initiative (SITES)
- Tree Campus USA (Arbor Day Foundation)
- An equivalent program approved by AASHE (email stars@aashe.org to inquire about program equivalence)

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

Does the institution own and/or manage land that is currently certified under the following programs? (at least one positive response required):

<table>
<thead>
<tr>
<th>Program</th>
<th>Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audubon Cooperative Sanctuary Program (ACSP) or ACSP for Golf</td>
<td>No</td>
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<tr>
<td>Forest Stewardship Council (FSC) Forest Management standard</td>
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</tr>
<tr>
<td>National Wildlife Federation’s Certified Wildlife Habitat Program</td>
<td>No</td>
</tr>
<tr>
<td>An IFOAM-endorsed organic standard or Participatory Guarantee System (PGS)</td>
<td>No</td>
</tr>
<tr>
<td>Program</td>
<td>Certification</td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Salmon-Safe</td>
<td>No</td>
</tr>
<tr>
<td>Sustainable Sites Initiative (SITES)</td>
<td>Yes</td>
</tr>
<tr>
<td>Tree Campus USA (Arbor Day Foundation)</td>
<td>Yes</td>
</tr>
<tr>
<td>Bee Campus USA</td>
<td>No</td>
</tr>
<tr>
<td>An equivalent program approved by AASHE</td>
<td>Yes</td>
</tr>
</tbody>
</table>

A brief description of institution owned and/or managed land that is currently third party certified under one or more of the programs listed above, including the year each certification was achieved and/or renewed:

Penn has achieved Tree Campus USA status in 2017 for the eighth year running and maintains Shoemaker Green in accordance with its SITES certification. Tree Campus USA status affirms Penn's commitment to campus tree management, fostering healthy urban forests, community outreach, and the engagement of students; Shoemaker Green is a public commons and improves water quality, reduces runoff, increases biodiversity, and improves the overall environment for the community.

In addition, the main academic campus of the University of Pennsylvania was designated as an arboretum under ArbNet certification. Please see Innovation D for a full account.

The website URL where information about the programs or initiatives is available:
https://www.sustainability.upenn.edu/

Additional documentation to support the submission:
---

Data source(s) and notes about the submission:

https://www.arborday.org/programs/treecampususa/campuses.cfm

https://www.facilities.upenn.edu/maps/locations/shoemaker-green

http://www.upenn.edu/almanac/volumes/v62/n27/tree-campus-celebration.html
Pest Management Certification

<table>
<thead>
<tr>
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<tbody>
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<td>Sustainability Analyst</td>
</tr>
<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Institution’s integrated pest management (IPM) program and/or contractor is currently certified under one or more of the following programs:

- EcoWise
- GreenPro
- Green Shield

- An equivalent program approved by AASHE (email stars@aashe.org to enquire about program equivalence)

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

Is the institution’s integrated pest management program or contractor currently certified under EcoWise, GreenPro, Green Shield, or an equivalent program approved by AASHE?:

No

A brief description of the institution’s third party certified IPM program or contractor, including the year certification was achieved and/or renewed:

Penn’s pest management consultant, Aardvark Pest Management, practices integrated approach to pest management using practical, pesticide-free solutions to pest problems whenever possible. Aardvark’s long-term commitment to eco-friendly methods and a balanced approach to pest management has been a feature of the company for more than thirty years.

Aardvark recognises that modern pest control is an art form – a skilled combination of learned pest identification, pest management techniques, and investigative skills. Aardvark sees chemical pest-fighting techniques as a last resort, favoring a more environmentally-benign response to campus pests.

The website URL where information about the programs or initiatives is available:

http://aardvarkpestmgmt.com/

Additional documentation to support the submission:

stars.aashe.org
Spend Analysis

<table>
<thead>
<tr>
<th>Provisional Score</th>
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<tbody>
<tr>
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<td>Sustainability Analyst</td>
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<tr>
<td></td>
<td>Facilities and Real Estate Services</td>
</tr>
</tbody>
</table>

Criteria

Institution has conducted a comprehensive spend analysis to assess the sustainability impacts of its purchasing across all significant commodity categories and identify and prioritize opportunities for improvement. Examples include supply-chain carbon footprint analysis and related methodologies that address the environmental, social, and economic performance of the institution’s products and suppliers.

The analysis has been conducted or updated during the three years prior to the anticipated date of submission.

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

Has the institution conducted a comprehensive spend analysis to assess the sustainability impacts of its purchasing across all significant commodity categories and identify and prioritize opportunities for improvement?:
Yes

A brief description of the institution’s comprehensive, sustainability-related spend analysis:

Penn's partner for office supplies and equipment, Office Depot, provides spend analyses of all materials purchased through Office Depot. Office Depot has created an internal ranking system for the sustainability of office products, with dark green being the most sustainable. Penn's Purchasing department uses this information to determine the percent of Penn's spending that is green. In 2018, Penn Purchasing will be working to put in place standardized language across the University's contracts and consider certain category-specific language for target categories.

The website URL where information about the programs or initiatives is available:
---

Additional documentation to support the submission:
---
Bicycle Friendly University

Provisional Score

| 0.50 / 0.50 |

Responsible Party

Madeline Schuh
Sustainability Analyst
Facilities and Real Estate Services

Criteria

Institution is currently recognized by one of the following:

- League of American Bicyclists as a Bicycle Friendly University (Silver level or higher)
- Mouvement Velosympathique (Quebec) at Argent level or higher
- An equivalent third party certification program approved by AASHE (email stars@aashe.org to enquire about program equivalence)

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

What is the institution’s current award level (Bicycle Friendly University, Mouvement Velosympathique, or an equivalent third party certification program approved by AASHE? (Platinum, Gold, Silver or Bronze):

Silver

A brief description of the institution’s bicycle program, including the year the award was achieved and/or renewed:

Penn has a robust program to support bicycle commuting and bicycle use, with parking space on campus for over 6000 bicycles, three Dero-brand bike repair stations, and five IndeGo bikeshare stations on campus. One of the most trafficked bike share locations in the city on IndeGo bikes is on the Penn campus.
In 2017, Penn launched a bicycle commuter reimbursement program to offset minor repair and equipment costs for commuters who use bicycles to get to campus over 50% of the time. The reimbursement is up to $240 annually and provides a strong incentive to support cyclists.
In FY 2013, The University Council Committee on Facilities asked that the Business Services Division take the lead in forming a Bicycle Committee to guide bicycle policy and promote safe use of bicycles for commuting and on campus. Current members of the committee meet several times a year, and include representatives from the Office of the University Architect, the University Landscape Architect, the Sustainability Office, Penn Police, Penn Transit, Student Health, as well as representatives from the Penn Bike Commuters group and student representatives. Major provisions from the updated policy that the Committee issued in 2014 include excerpts from the Pennsylvania and Philadelphia Law, Bicycle Riding Restrictions and Dismount Zones, Parking and Securing of Bicycles, Enforcement, and Registration. The Bike Policy can be found here:

http://www.upenn.edu/almanac/volumes/v60/n31/revisedbicyclepolicy.html

The website URL where information about the programs or initiatives is available:

stars.aashe.org
https://www.facilities.upenn.edu/maps/bike-racks/bicycle-resources

Additional documentation to support the submission:
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Data source(s) and notes about the submission:

<table>
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Campus Pride Index

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<td>0.50 / 0.50</td>
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<td>Sustainability Analyst</td>
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Criteria

Institution is rated at four stars or higher by the Campus Pride Index or an equivalent program approved by AASHE (email stars@aashe.org to enquire about program equivalence).

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

Institution’s current Campus Pride Index rating (3 Stars, 3.5 Stars, 4 Stars, 4.5 Stars, 5 Stars):

5 Stars

A brief description of the institution’s LGBTQ-inclusive policies, programs and practices:

The Lesbian Gay Bisexual Transgender Center enriches the experience and fosters the success of Penn's lesbian, gay, bisexual, and transgender students. The Center assists faculty, staff, and alumni, particularly in their efforts to serve students. The Center increases the general Penn community’s awareness, understanding, and acceptance of its sexual and gender minority members. The primary activities of the Center are outreach and education, supportive services for individuals and campus organizations, including network facilitation, and advocacy for sensitive, inclusive University policies and practices.

The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University of Pennsylvania does not discriminate on the basis of race, color, sex, sexual orientation, gender identity, religion, creed, national or ethnic origin, citizenship status, age, disability, veteran status or any other legally protected class status in the administration of its admissions, financial aid, educational or athletic programs, or other University-administered programs or in its employment practices.

In addition to these policies, the University strives to create a welcoming community to all students, staff, and faculty. Penn has instituted gender neutral bathrooms, gender neutral showers in Hill College House, provides LGBTQ counseling and support groups, campus safety training for campus police and hate crime prevention training, specific LGBTQ-related academic scholarship, and many other programs and resources.


The website URL where information about the programs or initiatives is available:

stars.aashe.org
http://www.vpul.upenn.edu/lgbtc/

Additional documentation to support the submission:
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Innovation

Points Claimed  4.00
Points Available  4.00

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.

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To help verify that the policy, practice, program, or outcome that the institution is claiming for an innovation credit is truly innovative, the institution may submit a letter of affirmation from an individual with relevant expertise in the associated content area or a press release or publication featuring the innovation.

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

stars.aashe.org

University of Pennsylvania | STARS Report | 344
Name or title of the innovative policy, practice, program, or outcome:
Arboretum at the University of Pennsylvania

A brief description of the innovative policy, practice, program, or outcome that outlines how credit criteria are met and any positive measurable outcomes associated with the innovation:

Penn's main, academic campus was accredited as a Level I ArbNet-certified Arboretum as of April 2017, and Level II in November 20107. The Arboretum at the University of Pennsylvania encompasses the entire West Philadelphia campus and is now the second of Penn's two arboretums; joining the Morris Arboretum of the University of Pennsylvania in the Chestnut Hill section of northwest Philadelphia which is the official Arboretum of the Commonwealth of Pennsylvania. It is a Level IV ArbNet-certified Arboretum and is also an accredited museum by having committed to operating according to national standards and best practices as defined by the American Alliance of Museums.

The main Penn campus arboretum curates and manages a diverse collection of trees, focused on preserving and sustaining the urban forest for the well-being of the campus community, residents of the adjacent neighborhood, environmental benefits, and research and educational opportunities. Penn's campus is an urban forest with over 6,500 trees in its collection, over 240 species of trees and shrubs, ten specialty gardens and five urban parks. Penn has dedicated resources and coordinated the care in accordance with a comprehensive tree management program over the course of many years, resulting in Tree Campus USA designation every year since 2009 in addition to the formal recognition as an accredited ArbNet Arboretum in 2017.

To aid people interesting in learning more about the landscape at Penn, The Penn Plant Explorer was developed. The Penn Plant Explorer, an interactive website linked to Penn’s comprehensive tree inventory, allows users to map and interpret Penn’s entire collection of trees, providing specialized campus tree tours, such as the donor sponsored Class Tree tour, significant trees (including an 1873 scion of Penn's Treaty Elm), interesting and unique trees and seasonal interest and edible plants.

The existing work from the Ecological Landscape Stewardship Plan and Sustainable Sites Initiative was used to supplement the Arboretum submission. For more information on both, please see OP 9: Landscape Management.

Which of the following impact areas does the innovation most closely relate to? (select up to three):
Campus Engagement
Air & Climate
Grounds

A letter of affirmation from an individual with relevant expertise or a press release or publication featuring the innovation :

---

The website URL where information about the innovation is available :
http://arbnet.org/morton-register/arboretum-university-pennsylvania

Additional documentation to support the submission:

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**Data source(s) and notes about the submission:**

- https://www.facilities.upenn.edu/about/news/penn-west-philadelphia-campus-accredited-arboretum
- https://www.upenn.edu/spotlights/penns-unique-and-diverse-green-canopy
- https://www.facilities.upenn.edu/services/landscape/penn-plant-explorer
Innovation B

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Name or title of the innovative policy, practice, program, or outcome:
Century Bond Program

A brief description of the innovative policy, practice, program, or outcome that outlines how credit criteria are met and any positive measurable outcomes associated with the innovation:

In March 2012, Penn issued its first 100-year bond, also called a Century Bond, for $300 million at an interest rate of 4.67%, guaranteed for 100 years. Of this, $200 million is allocated for 45 lighting and 17 heating-ventilation-air-conditioning (HVAC) energy conservation projects. Penn's Century Bond funding is specifically allocated to projects in which energy conservation and deferred maintenance converge. To enable Schools and Centers to use the funding, Penn has used a financial structure of zero interest 20-30 year loans to the Schools and Centers which will enable the funding to be used three times over the course of the 100 year bond. The Century Bond program has enabled deep and thorough system retrofits in buildings identified as the worst energy users, often for the first time. Energy conservation projects range in scale from replacing fluorescent lights with LEDs to replacing entire HVAC systems in laboratory buildings.

These projects have significant impact on campus energy use and emissions, as the more efficient systems will require much less energy to operate. Penn Facilities and Real Estate Services has estimated that the initial investments for the lighting projects will pay for themselves in eight years through the cost-reduction savings alone; for the HVAC projects, in an average of 18 years. The remaining bond funds will be invested or used as internal loans for "strategic priorities" such as non-energy related building renovations. The Century Bond's interest will be paid through energy savings, the internal loan interest, and the return on the invested funds.

By 2017, six of the ten buildings in the first round of buildings targeted for Century Bond-financed improvements have been completed. A notable example of the completed buildings is Chemistry 1973, a chemistry lab constructed in 1973. The pre-renovation lab featured over 140 constant volume chemical fume hoods and its original, 40 year old, constant volume air systems for climate control. As part of the renovation, 521 supply and exhaust Phoenix Valves and Strobic fans were installed, six air handlers were replaced, and the air system was renovated to variable air volume all while maintaining occupancy of the building. The post-renovation building reduced energy use and emissions by over 45%, and cut exhaust air flow from the building nearly in half.

Which of the following impact areas does the innovation most closely relate to? (select up to three):
Air & Climate
Buildings
Energy

A letter of affirmation from an individual with relevant expertise or a press release or publication featuring the innovation:
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The website URL where information about the programs or initiatives is available:
http://www.upenn.edu/gazette/0712/gaz03.html

Additional documentation to support the submission:
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### Data source(s) and notes about the submission:

- [https://www.pennconnects.upenn.edu/find_a_project/alphabetical/century_bond_alpha/century_bond_projects_overview.php](https://www.pennconnects.upenn.edu/find_a_project/alphabetical/century_bond_alpha/century_bond_projects_overview.php)


Innovation C

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Name or title of the innovative policy, practice, program, or outcome:
President's Innovation and Engagement Prize

A brief description of the innovative policy, practice, program, or outcome that outlines how credit criteria are met and any positive measurable outcomes associated with the innovation:

As part of the Penn Compact 2020, one of President Amy Gutmann's key goals is to encourage local, national, and global engagement. The President's Engagement and Innovation Prizes encourages all undergraduate students to take advantage of Penn-provided funding to dedicate the early years of their careers to service and working for the public good.

The President's Engagement and Innovation Prizes, established in 2014, are competitively awarded on an annual basis, with an average of 62 seniors applying for the prize. The monetary prize of up to $100,000 for winning projects, plus up to $50,000 in living expenses, empowers Penn seniors to design and implement projects during their first year after graduation. The program enables Penn students to put their knowledge to work for the betterment of humankind, and is a measure of how seriously Penn takes public service, and using knowledge as a force for good in the world.

2017 winners were:
• Students A. Z. and S. B. Project: Y.V.E.T.A (Youth for Vocational Education and Training in Agriculture). In partnership with the Senegalese Ministry of Agriculture, the students lead Project Y.V.E.T.A., an education program in Senegal focused on improving numeracy and literacy skills while providing technical training in agriculture and agri-entrepreneurship.
• Students A. S., C. T., and Y. A. - Project: Lanzando Líderes. The students designed an experimental, community-based, bilingual, culturally inclusive after-school program for Latino high school students in South Philadelphia. The project aims to bridge educational disparities and help students develop self-efficacy to reach their personal, educational and professional goals.
• Students M. H. and I. M. Project: Homeless Health and Nursing, Building Community Partnerships for a Healthier Future. The students integrated innovative healthcare case management into the current program of homeless services offered by the Bethesda Project, a Philadelphia-based nonprofit that provides proactive case management and housing services to the homeless population.
• Student W. F. - Project: Solution Loft. The student used the President’s Innovation Prize as a catalyst for Solution Loft, a company that he co-founded in 2016 to bring the power of software creation to everyone, regardless of technical skills or income level.

2016 winners were:
• Student V. K. - Project: NESARA Agriculture Extension. The student utilized novel, cost-efficient technology, including mobile technology, to help farmers in India boost their productivity.
• Student M. M. - Project: Living HEALthy: Health Expansion Across Libraries. The student partnered with the Free Library of Philadelphia to assist library patrons in obtaining health information, medical counseling and preventive health services. Her project will employ a “one-stop-shopping” approach that will actively disseminate health information, provide care, and allocate resources in an efficient way.
• Student K. P., Coming Home to Continued Care: The student, a senior in the College of Arts & Sciences, helped women about to be released from the all-female Riverside Correctional Facility in Philadelphia apply for and secure health insurance and identification prior to release. The health insurance allowed the women to stay on their much-needed medication, which aided in the re-entry process.

2015 winners were:
• A. L. and M. - Project: Lisle Homegrown Organic Purification. The students developed and implement a rainwater catchment and purification system in Kimana, Kenya, and engaged the community through ongoing support and education.
• J. F. - Project: Home, Heart, Health: Engaging the Community in Bridging the Gap. The student designed, implemented,
and evaluated a comprehensive cardiac rehabilitation model for home care, with the support of the New York University Langone Medical Center and the Visiting Nurse Service of New York. The goal of this one-of-a-kind program is to serve as a much-needed bridge between inpatient and outpatient cardiac rehabilitation, ensuring that patients are steadily progressing along the cardiac rehabilitation continuum.

• Student S. F. - Project: Health and Education in Africa. The student established the Tarkwa Breman Model School for Girls and Community Clinic in the student’s poverty-stricken home village of Tarkwa Breman, Ghana, to serve young girls and citizens in Tarkwa Breman, as well as citizens in the surrounding seven villages.

• Student K. G. - Project: GenHERation: The student worked with GenHERation, a female empowerment network for high school girls. GenHERation provided female students the opportunity to develop advocacy campaigns to address important community issues.

Which of the following impact areas does the innovation most closely relate to? (select up to three):

Curriculum
Research
Campus Engagement

A letter of affirmation from an individual with relevant expertise or a press release or publication featuring the innovation:

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The website URL where information about the programs or initiatives is available:

https://pennpep.upenn.edu/

Additional documentation to support the submission:

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Data source(s) and notes about the submission:

https://pennpep.upenn.edu/about
Innovation D

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Name or title of the innovative policy, practice, program, or outcome:
Executive Vice President's Health and Wellness Initiatives

A brief description of the innovative policy, practice, program, or outcome that outlines how credit criteria are met and any positive measurable outcomes associated with the innovation:

As part of the Executive Vice President's commitment to the health and wellness of the Penn community, a number of initiatives have been instituted across the University to help cultivate a culture of wellness and total well-being. Engaging in the Executive Vice President’s wellness and work-life resources supports employees year-round, and through the changing stages of life and careers. While not a complete list of all available programs, the descriptions below provide examples of the breadth of the program.

- Through the campus-wide "Healthy Penn Partnership", options are available for staff and faculty to help maintain or develop a healthy lifestyle. (http://www.cphi.upenn.edu/HealthyPenn.html)

- Eligible faculty and staff, can participate in the "Penn Healthy You" program, which provides workshops, wellness walks, free fitness classes, and nutrition counseling to make healthy choices easier for employees and their families. (https://www.hr.upenn.edu/PennHR/wellness-worklife/penn-healthy-you)

- The annual "Be in the Know" wellness campaign provides incentives to learn more about individual health status and take action steps to maintain or improve well-being. Through this campaign, eligible Penn employees can earn rewards for making changes to or maintaining a healthy lifestyle. The campaign is divided into three steps for success: biometric screens, an online health assessment, and bonus actions. (https://www.hr.upenn.edu/PennHR/wellness-worklife/be-in-the-know)

In addition, to the “Healthy Penn Partnership” and “Penn Healthy You” programs, Penn’s award winning work-life programs help Penn community members balance the demands of work and home. Services such as back-up care for children and adults, lactation support services (lactation rooms and breast pumps are available at workplaces across campus), flexible work schedules, senior care planning, mental health support, among others, help the Penn community member thrive in all of life’s important roles. In addition, confidential counseling services from the “Employee Assistance Program” can help Penn community members manage changes and challenges as they arise. A full description of the program can be found here: https://www.hr.upenn.edu/PennHR/wellness-worklife

Which of the following impact areas does the innovation most closely relate to? (select up to three):

- Campus Engagement
- Diversity & Affordability
- Wellbeing & Work

stars.aashe.org
A letter of affirmation from an individual with relevant expertise or a press release or publication featuring the innovation:

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Additional documentation to support the submission:

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