

A stylized landscape illustration featuring a dark blue rectangle in the center with the title. The background is a bright blue sky with a large yellow sun, white clouds, and green hills. There are various green trees and two small white houses with red roofs on the right side. The foreground is a green field with a blue body of water at the bottom.

SPU

2015-2016 Sustainability Progress Report



Prepared by the
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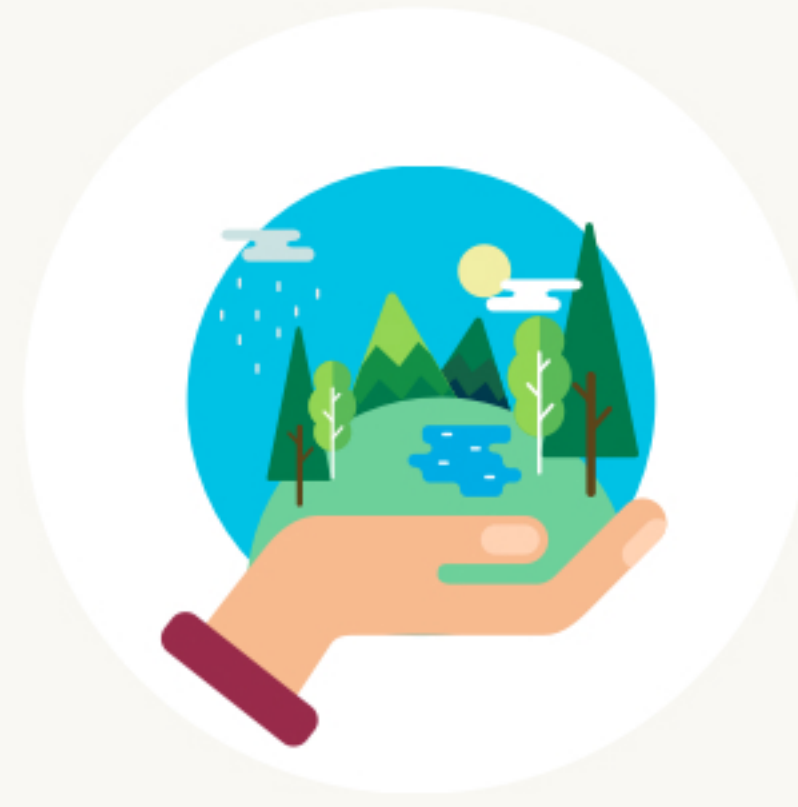


[@sustainSPU](https://twitter.com/sustainSPU)

Our Environmental Footprint

SPU believes transparency and benchmarking are crucial elements of a sustainable campus. Our decisions are guided by tracking University emissions, identifying risks and cost savings, and responding to stakeholder pressures.

We are pleased to report the following impacts:



Greenhouse Gas Emissions



Waste & Water



Transportation

Greenhouse Gas Emissions

Methodology

Over 3 months, the Sustainability Coordinator and office assistant compiled Fiscal Year 2015-2016 (FY1516) utility records, commute miles, and other data for the SPU Greenhouse Gas (GHG) emissions inventory.

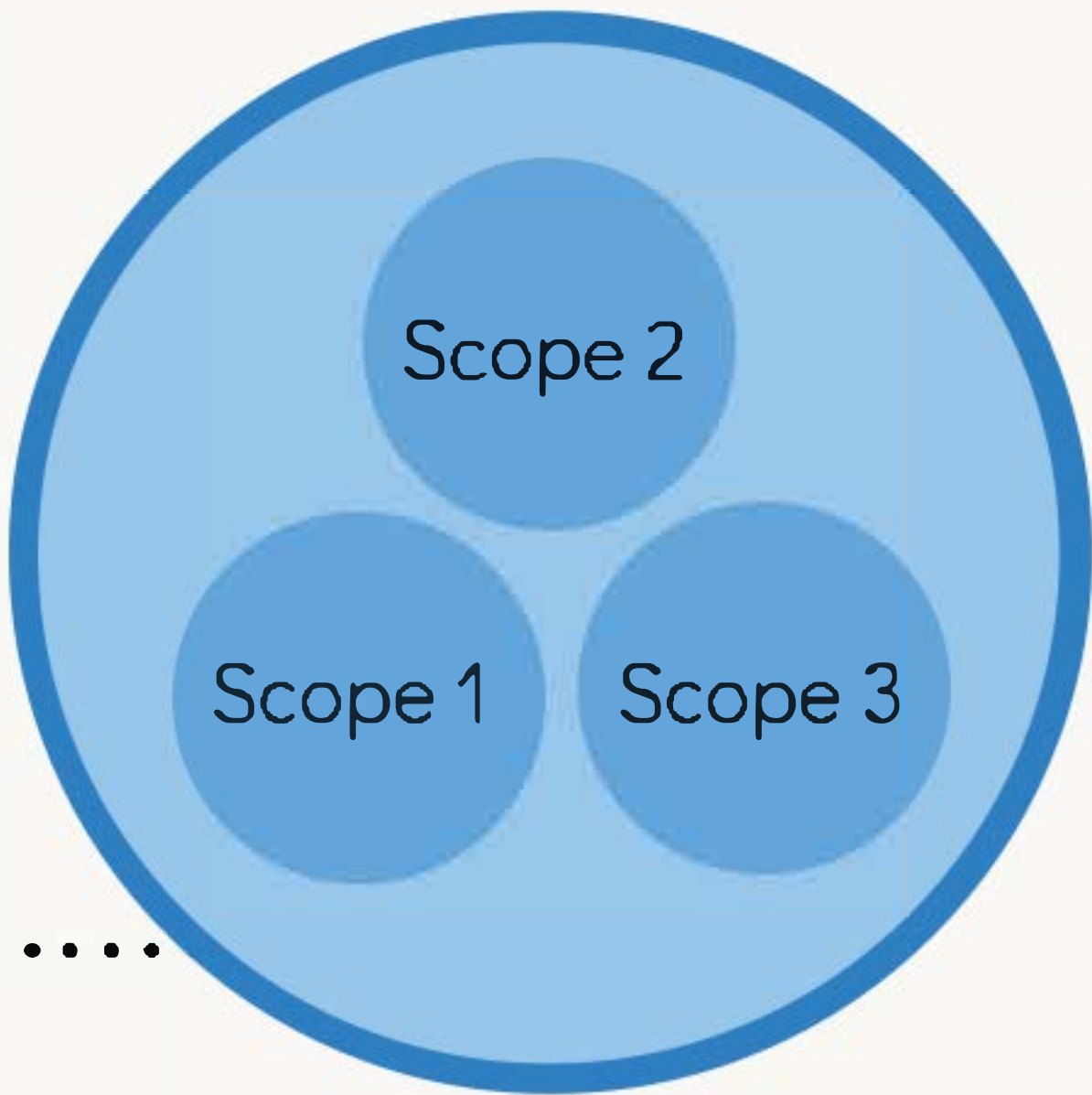


Demographic info such as the number of full-time commuting and non-commuting students, the number of faculty and staff, and physical building square footage was included for accuracy.

Emission sources are categorized into scopes based on SPU organizational and operational boundaries, in accordance with Greenhouse Gas Protocol standards.

Organizational Boundaries

For FY1516, the University GHG Inventory’s organizational boundaries are limited to the SPU main campus, excluding Camp Casey and the Blakely Island Field Station.



Emissions Summary



Scope 1

- Direct emissions from SPU-owned sources
- Natural Gas: 48,571 MMBtu
- Solar: OMH panels generated 3,860 kWh
- University Fleet: 10 EVs; gas & diesel vehicles consumed 5,760 gallons total
- Grounds: fertilizer 4,000 lbs. inorganic and 1,500 lbs. organic



Scope 2

- Indirect emissions from purchased energy
- 12,791,174 kWh consumed
- Low-carbon fuel mix significantly offset GHG emissions
- Unique fuel mix of hydroelectricity, nuclear, and wind energy
- Purchased from Seattle City Light



Scope 3

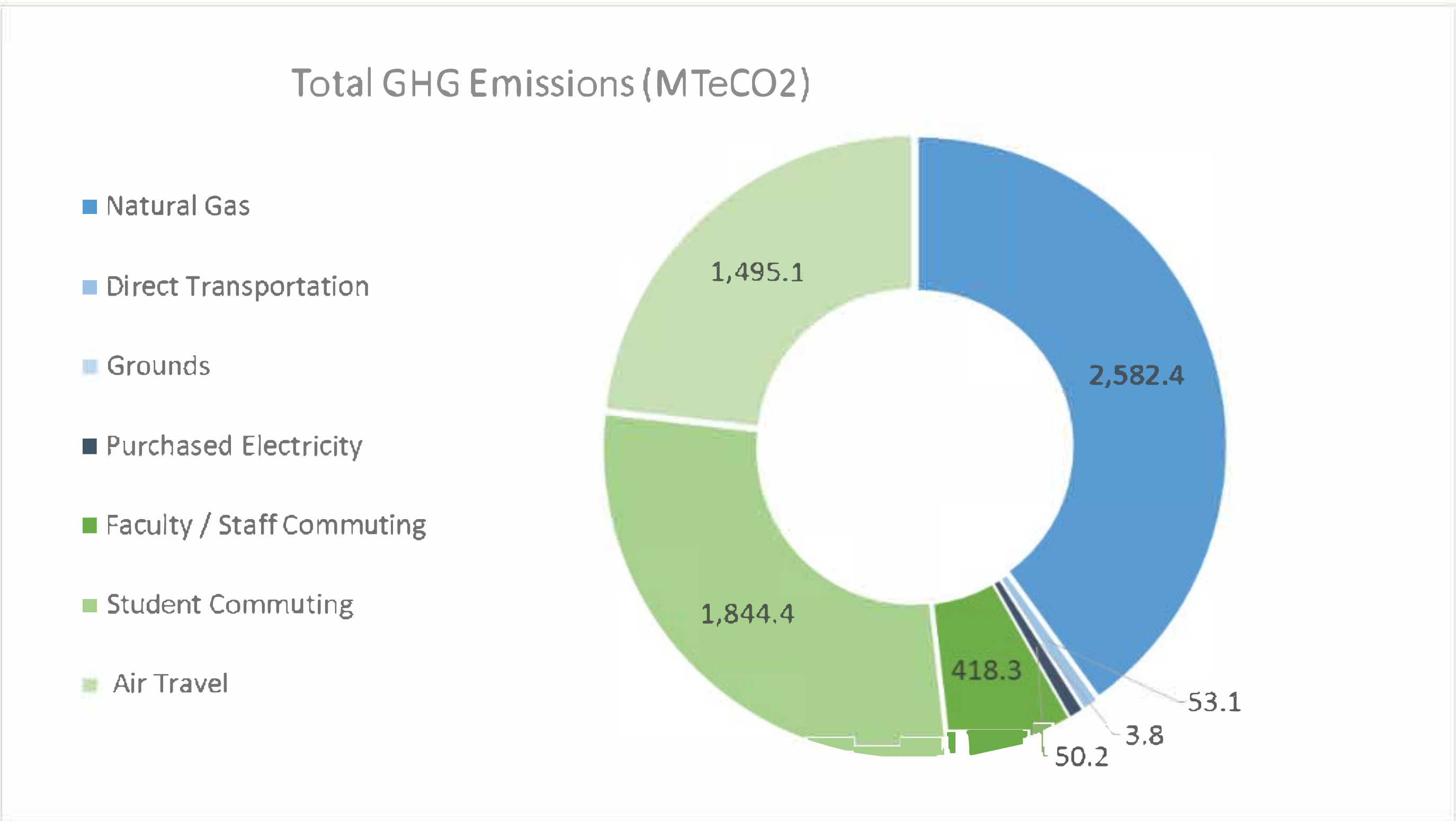
- Indirect emissions from SPU business practices
- Commuting: faculty, staff, student
- Commuting is the 2nd largest GHG emissions source
- Air Travel: Professional, operational, and athletics travel
- Air miles: Employees - 1.8m Athletics - 1.1m



Based on data for each scope, the amount of specific GHGs released into the atmosphere can be measured. Each scope's raw data is multiplied by the Global Warming Potential (GWP), or degree to which a given amount of a GHG contributes to global warming when compared to CO2, which has a GWP of 1.0.

As certain gases are present in the atmosphere for different amounts of time, all GWPs are expressed over various time frames. Total GHG emissions are measured in metric tons carbon dioxide equivalent (MTeCO2).

Below is SPU's FY1516 emissions data:

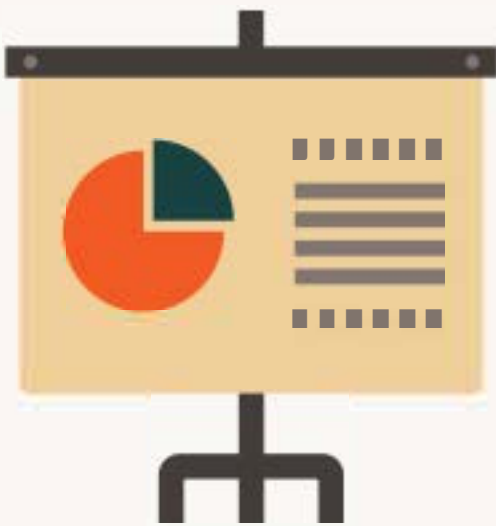


With this GHG Inventory, SPU can measure its progress over time. As a Carbon Commitment signatory, SPU submits regular progress reports to Second Nature, the organization that manages reporting for the Commitment.*

While campus emissions increased slightly from FY1415, our GHG/square foot (5.36 MTeCO2) is less than it was in FY1415 (5.42 MTeCO2). This is likely due to the combination of added square footage, green building design, and energy efficiency projects in the last year.

The GHG data reported to Second Nature is used internally for benchmarking as well as to guide decision making and report back on sustainability efforts.

*<http://reporting.secondnature.org>





Waste & Water

Waste Management

Waste diversion is an important element of sustainable campus management. To measure our waste impacts and guide our sustainability efforts, SPU conducts an annual quantitative and qualitative audit to track the University's waste contribution.

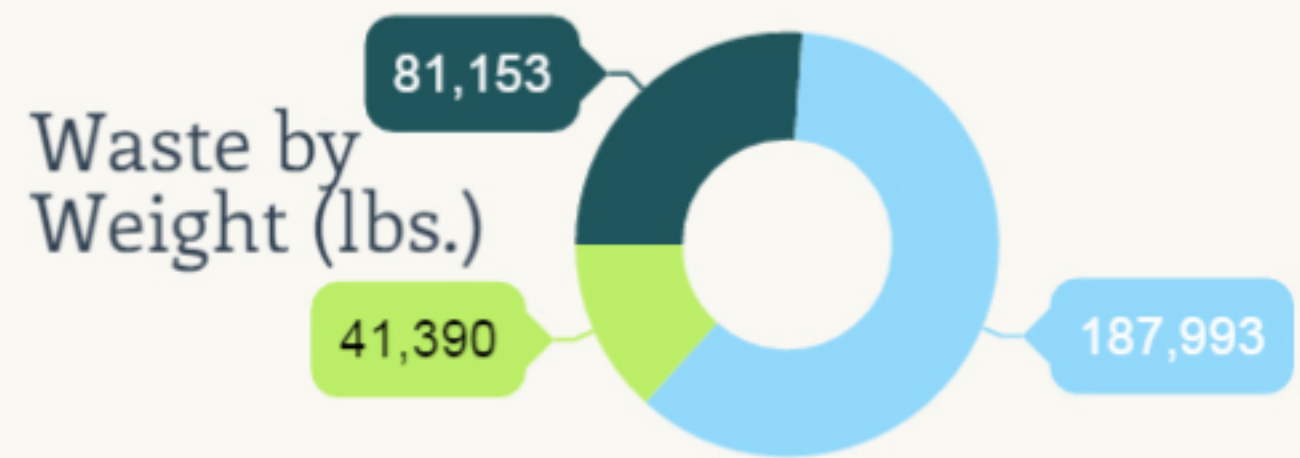
QUANTITATIVE SURVEY

Background



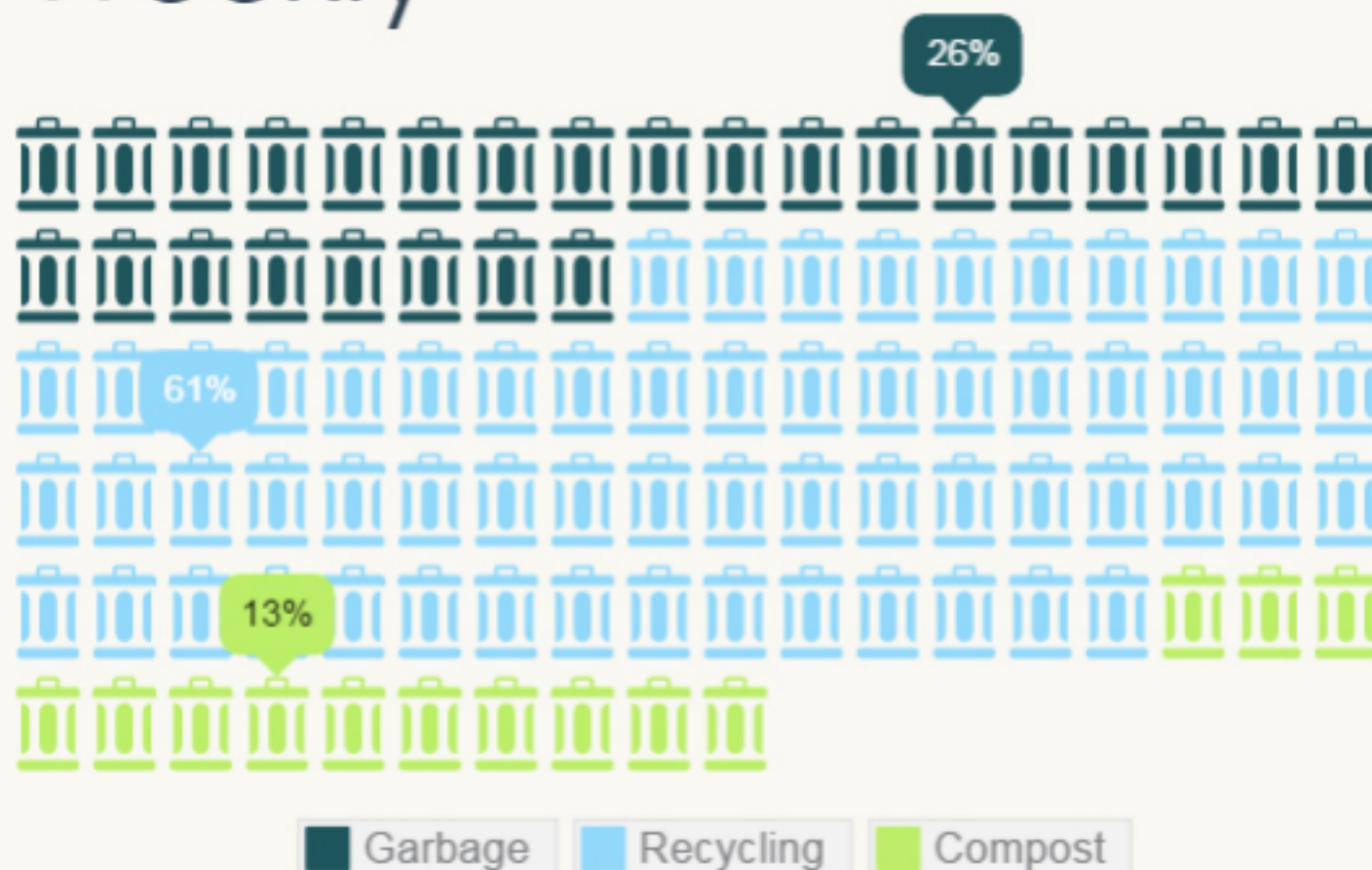
In May 2016, waste was collected and analyzed weekly from Res. Halls, CHA, on-campus dining locations, and academic buildings.

Monthly



About 820 cubic yards or 310,535 lbs. of waste were collected in May. That's equal to 1/4th of an Olympic-sized swimming pool!

Weekly



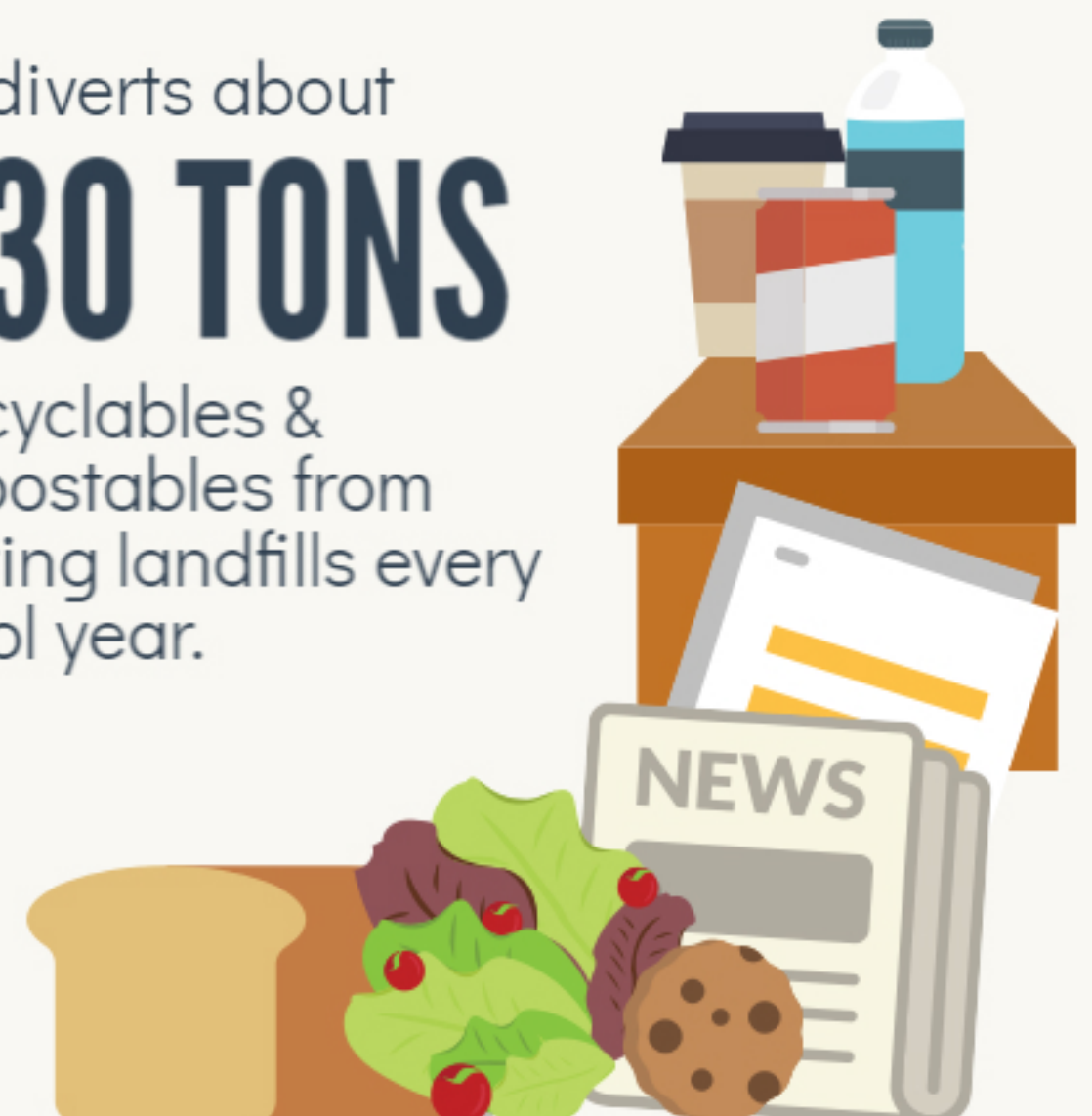
Campus waste generation totaled almost 205 cubic yards or 78,000 lbs. on average.

Yearly

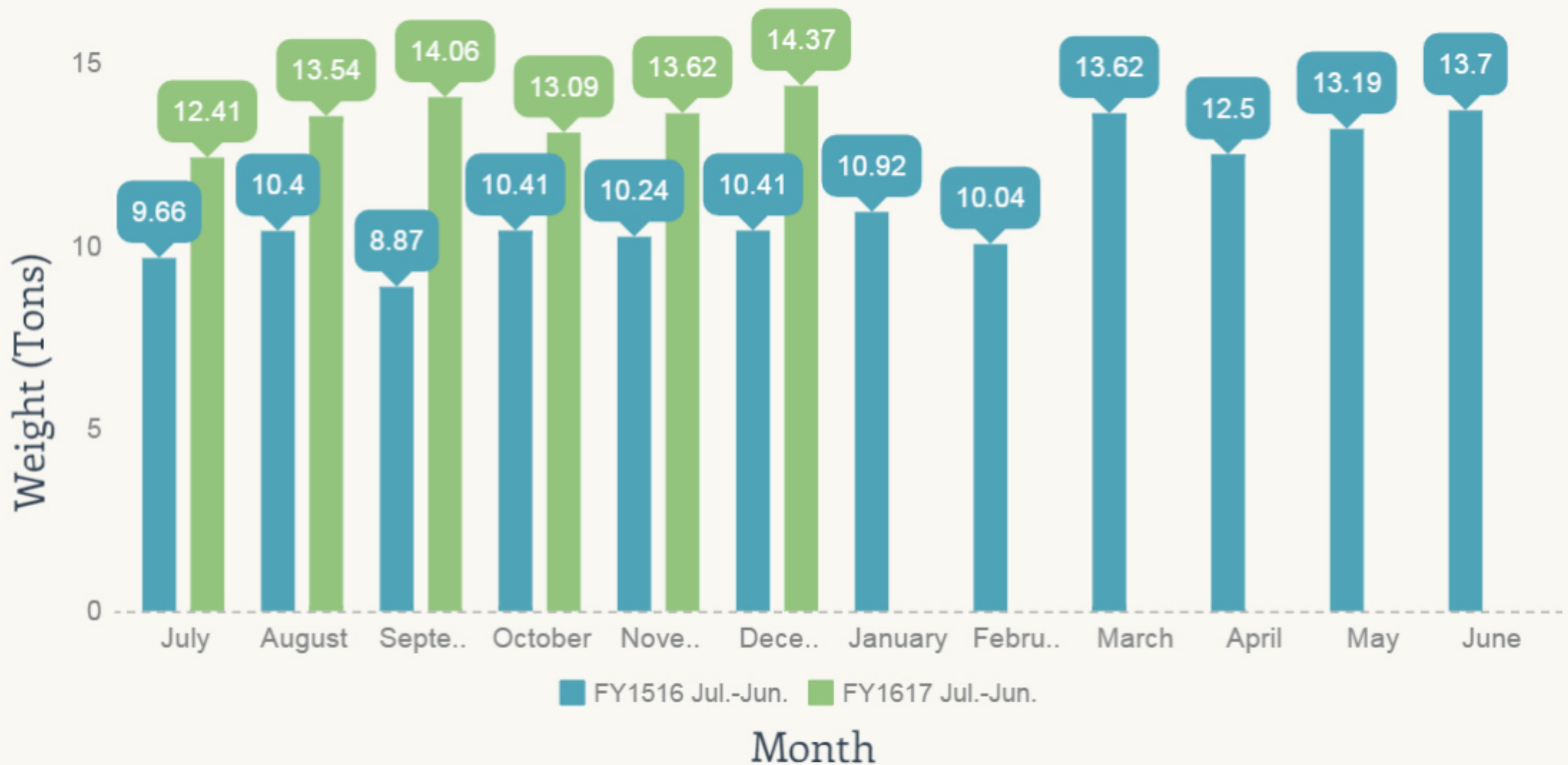
SPU diverts about

1030 TONS

of recyclables & compostables from entering landfills every school year.



SPU Compost by Weight



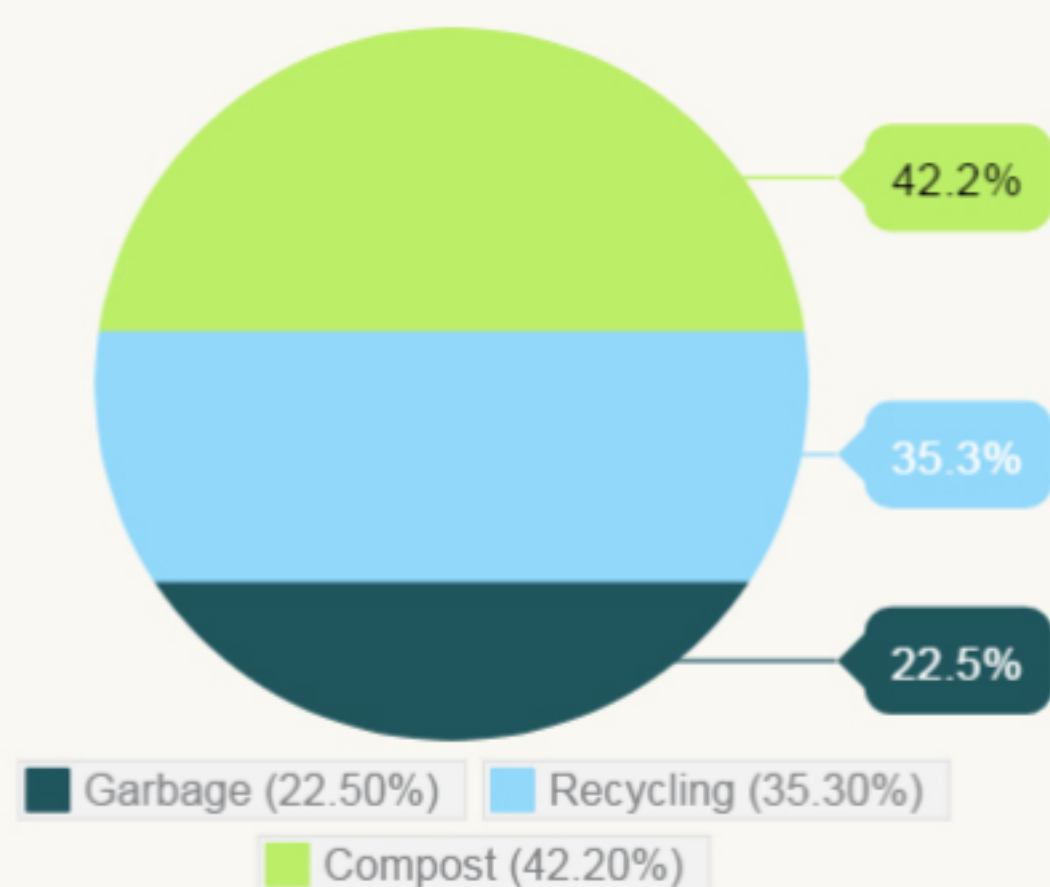
The graph above details our campus compost by tons for the last year and a half. As FY1516 was the inaugural year of the program, FY1617 has already seen significant compost increases.

QUALITATIVE SURVEY

Background

Dumpsters from different buildings were randomly audited to determine how much of the material in garbage bins were sorted correctly.

MISPLACED GARBAGE

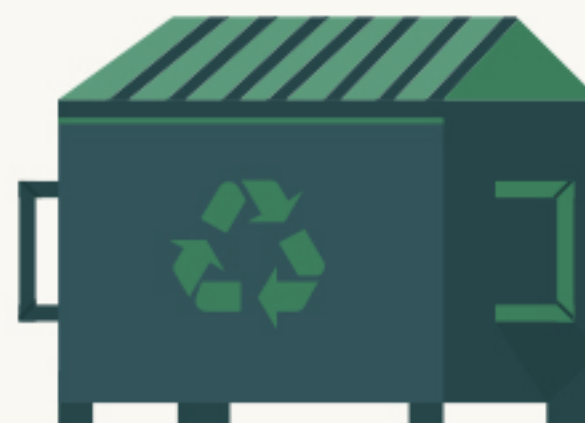


CHA BY THE NUMBERS



23.7%

No change in amount of actual garbage considered garbage from 2015 audit



23.7%

Waste considered recyclable down 3.6% from 2015



52.5%

Waste considered compostable up 3.6% from 2015

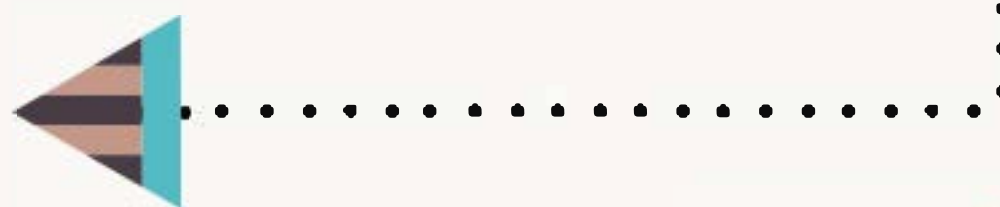
Other Waste Diversion



Since the inception of the first recycling program in 1991, Seattle Pacific University has built a larger network to divert the following items from landfills:

- | | | |
|------------------|-------------------------------|--|
| -Paper | -Grass clippings & yard waste | -University-owned computers & monitors (CIS) |
| -Plastics | -Surplus furnishings | -Printer cartridges |
| -Glass | -Motor oil & filters | -Batteries |
| -Aluminum cans | -Anti-freeze | -Scrap metal |
| -Packing peanuts | -Batteries | -Fluorescent light bulbs |
| -Cardboard | -Used freon | |
| -Food waste | | |

SPU also coordinates recycling and donation efforts with waste haulers as well as local non-profits during end of year Move-Out for campus residence halls, apartments, and housing. These strategies have significantly reduced the amount of gently used clothing, household items, non-perishable food, and regularly recyclable items that would otherwise enter landfills.



Facility and Project Management works with contractors to recycle everyday materials as well as construction and demolition waste.

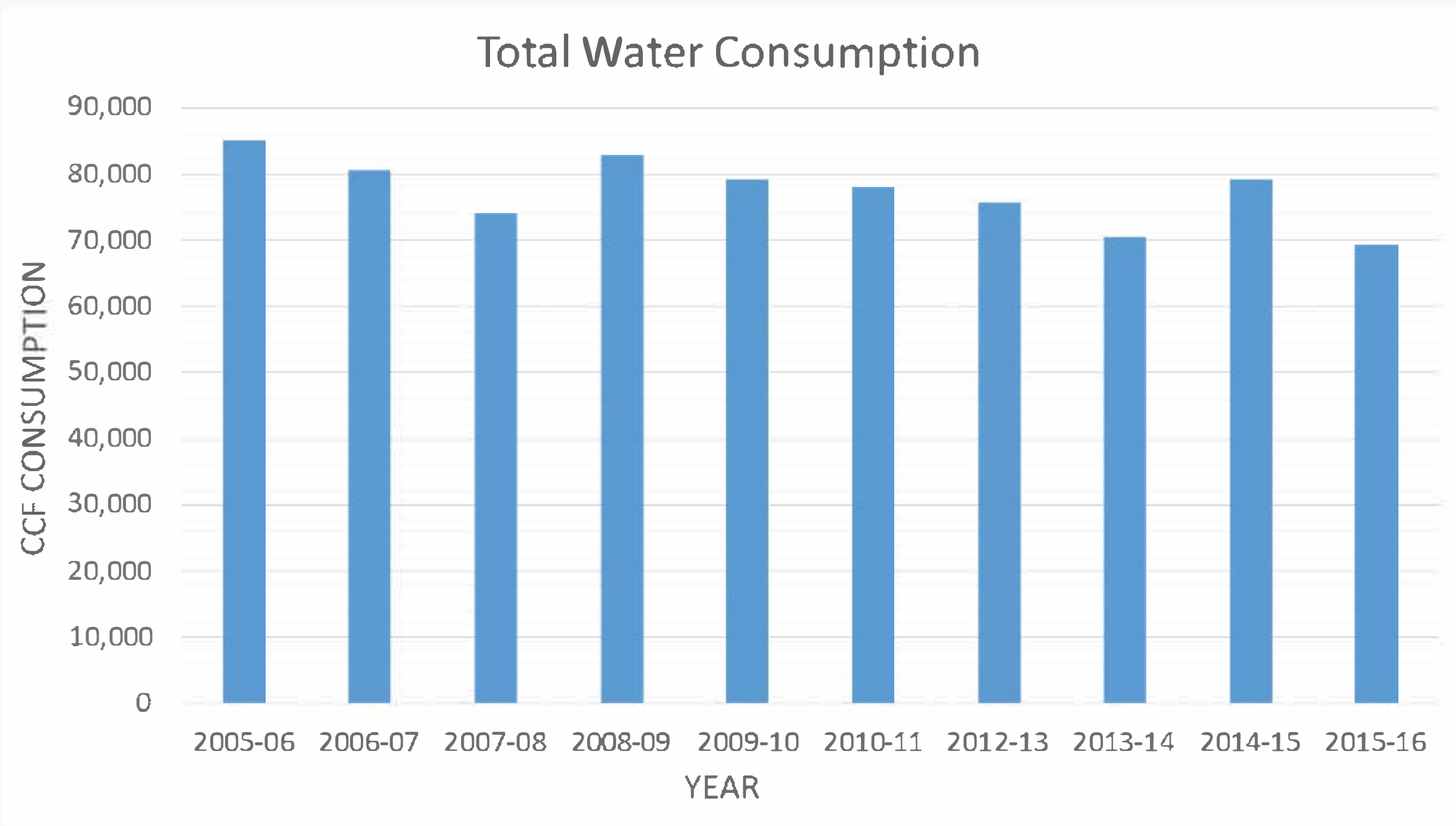
For example, the Cremona Classroom Building, finished in 2011, diverted almost all of its construction waste from entering landfills.



Water



Following is an illustration of SPU’s water consumption based on utility bills received from Seattle Public Utilities.



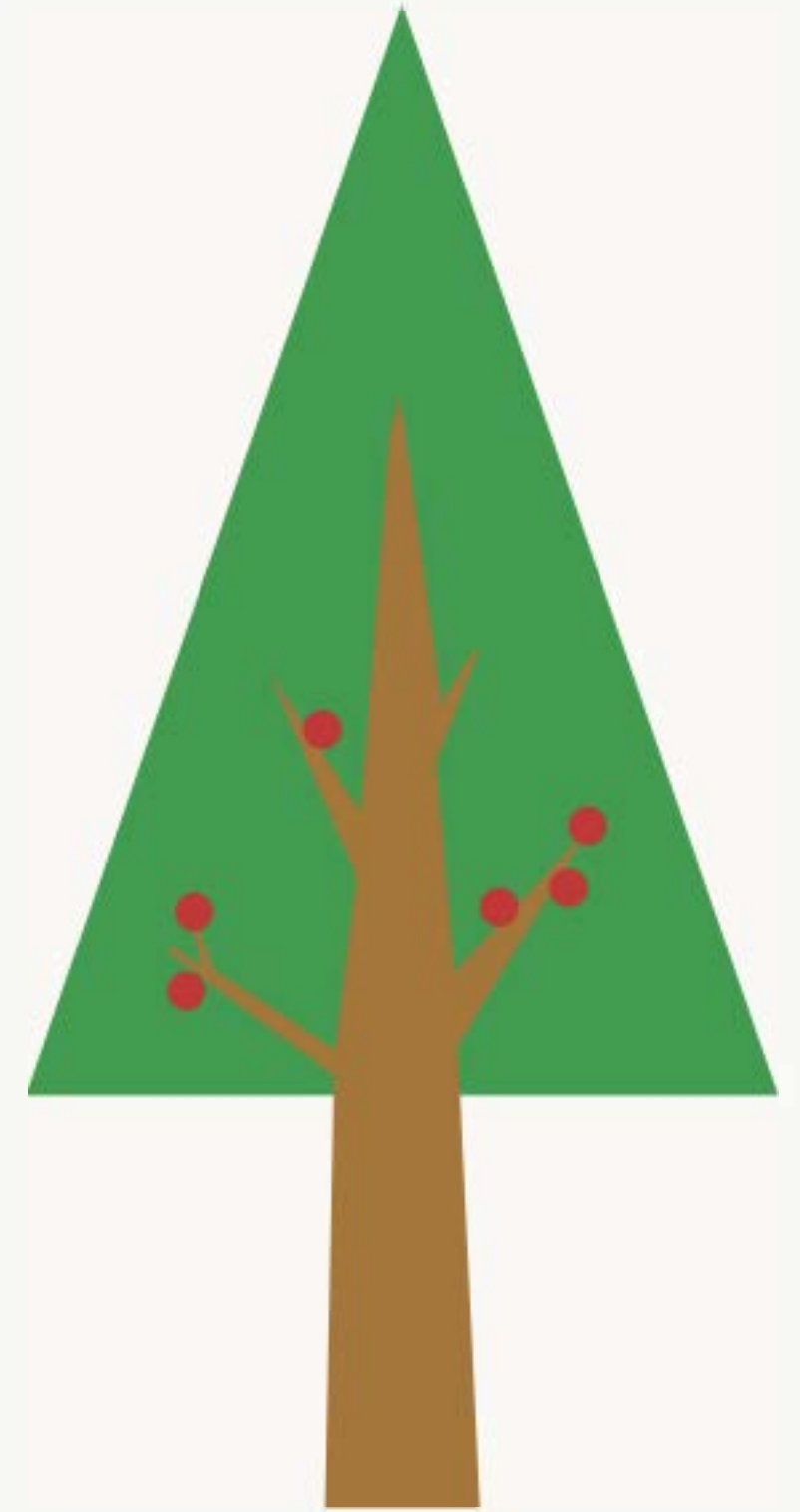
The University has installed filtered water bottle filling stations around campus to reduce the use of disposable plastic bottles. Moreover, low-flow toilets, urinals, faucet aerators, and showerheads have been upgraded systematically in campus buildings.





Grounds Best Practices

- aeration, top-dressing, & over-seeding campus turf to increase water absorption
- use of smart controller weather sensors to monitor campus irrigation
- discretionary use of herbicides and pesticides
- application of organic fertilizer
- mulch application to amend soils & slow weed production
- compost lawn trimmings, leaves, plant debris, & tree trimmings to conserve water and cultivate healthy grounds
- keep campus lawns long to shade the soil, deepen root systems, & reduce evaporation



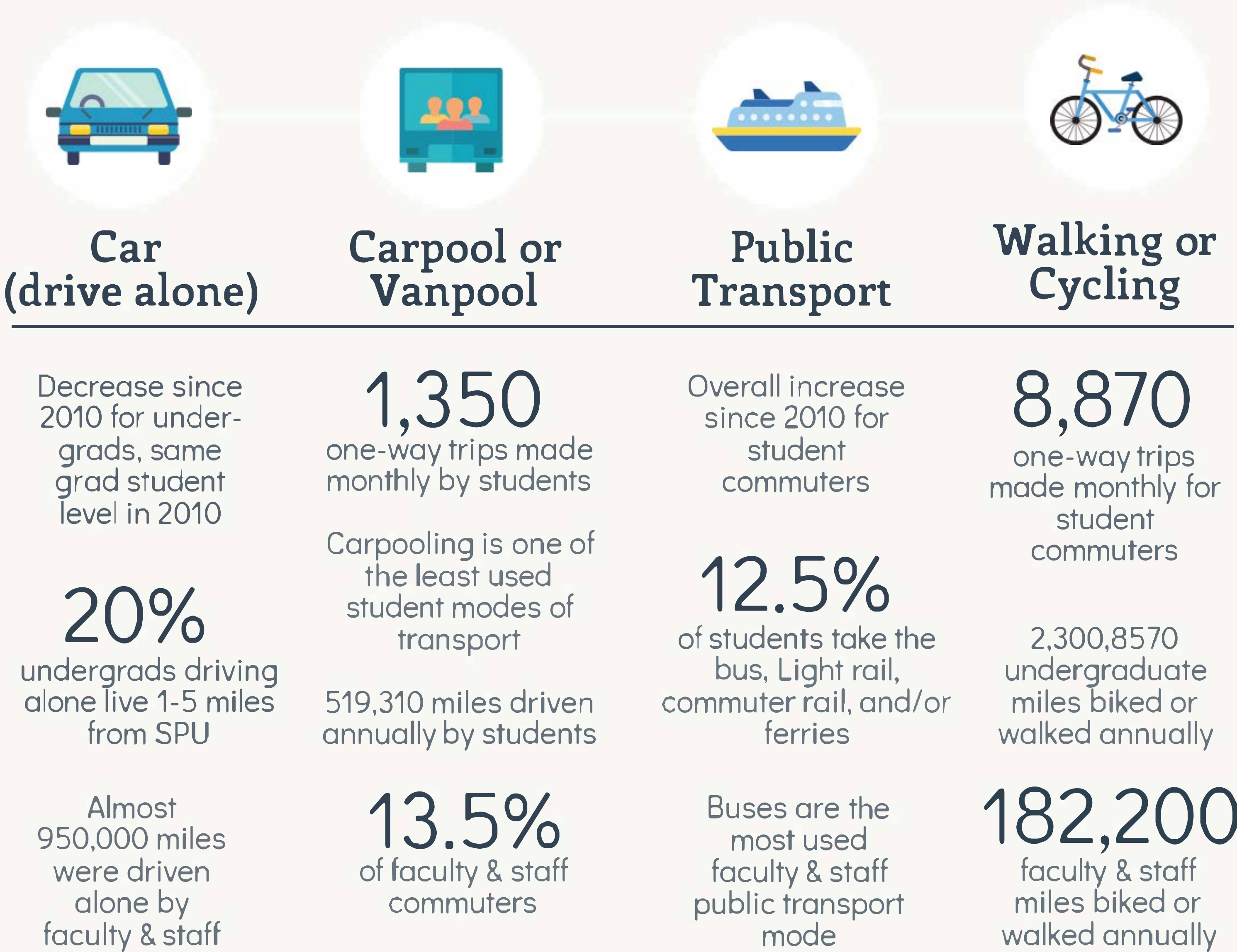
Given SPU's location near the South Lake Washington Ship Canal, effectively mitigating gasoline, oil, fertilizer, road salts, and other chemical runoff is a priority. With the construction of Arnett Hall in 2014, the University implemented a green roof pilot project to improve the quality and quantity of water that re-enters the nearby canal. The green roof is a 1,564 square foot garden that filters and decreases the rainwater that may otherwise exceed the capacity of nearby storm water and sewer systems amidst heavy rainfall. The Arnett green roof may inform construction projects in the future.

Additionally, much of campus is served by a University-owned stormwater system that keeps groundwater out of the public combined sewer system. This helps to prevent combined sewer overflows into the Ship Canal during heavy rains.

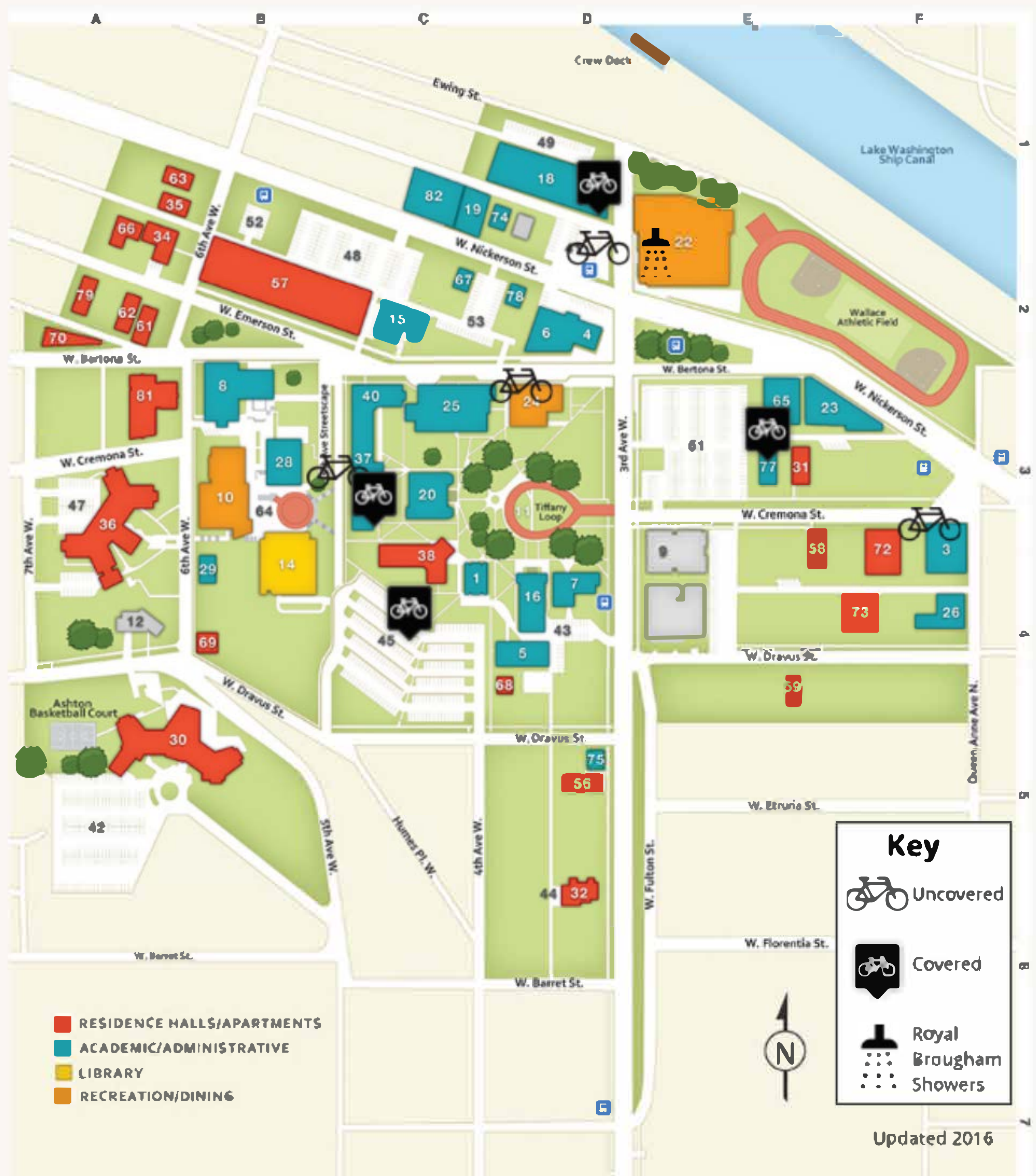


Transportation

Student, Staff, and Faculty transportation to and from campus accounts for our second largest source of GHG emissions. SPU conducts an electronic student commute survey each year. Additionally, a Commuter Trip Reduction (CTR) Survey is distributed to University employees by the Washington Department of Transportation bi-annually. Summary data from both surveys is provided below:



SPU Commuter Bike Racks



Comments & Suggestions

Among top student commuter suggestions:

- Free ORCA cards
- Shuttle service
- Campus parking ease
- Additional bike racks
- Increased carpool coordination

Safety & Security's online Commuter Cafe offers information regarding electric vehicle charging stations, carpool parking pass incentives, Zipcars, discounted ORCA cards, and more.

Education for a Sustainable Future

Curriculum

SPU offers undergraduate majors in Ecology and Appropriate & Sustainable Engineering, as well as a Master's degree in Social and Sustainable Management. An Eco-theology major/minor may be a possibility in coming years. The following classes are also available for undergraduates:

Accounting
- Intl. Accounting
(Study Abroad)

Biology
- Ecology
- Coral Reef Ecology
- Evolutionary Ecology in
the Galapagos
- GIS
- Environmental Physiology
- Marine Ecology
- Aquatic Ecology
- Forest Ecology
- Ecological Restoration
(Workshop)
- Conservation Ecology
- Chemical Ecology
- Sustainability & Science

Business
- Stewardship &
Sustainability
- Integrated Topics
- Climate Change

Economics
- Environmental
Economics

Engineering
- Acoustics
- Systems Design
- Appropriate &
Sustainable
Engineering I, II, III

Family Consumer Science
- Global Impacts of
Design
- Global Sourcing &
Production (Fashion)
- Sustainable Food
Production (Study
Abroad)
- Building Construction
- Sustainability &
Materials

Philosophy
- Global Climate Change:
Scientific, Social & Moral
Implications

Politics
- Global Perspectives
on Women's Issues
- Environmental Policy

Urban Studies
- Intro to GIS
- Intro to Urban
Planning
- The Modern City in
History

University Colloquium
- Varies

Theology
- Biblical Topics:
Creation Care
-Intro to Reconciliation
Studies



Co-Curricular Programming

SPACE (Seattle Pacific Agriculture for the Community and Environment) Club

In its eighth year, the undergraduate SPACE Club meets weekly to tend a community garden space on University property. With raised beds, compost bins, and plans to plant fruit trees, the garden is a space to build community, manage stress, engage with others, and practice food justice. A new partnership with Seattle Pacific Seminary is also in the works.



Students for Sustainability Club

New as an ASSP Club in 2017, this club will meet to discuss, educate, and advocate for issues around sustainability both on campus and off campus.



Sustainability Charette

Over the course of this year, a half-day event was planned for the 2017-2018 school year to bring together students, staff, and faculty in order to collaborate and expand upon SPU's commitment to sustainability.



Chapel

Each quarter there are themes that frame the weekly chapel service. In the future, it is possible that a quarter, or at least a few specific chapel services may be centered around the theological and social implications and responsibilities of Christian environmental stewardship.



Day of Common Learning

As an event that challenges the SPU community to grow, learn, and work together, this event often includes a keynote address along with afternoon sessions. In years past, sustainability-related workshops following the keynote address have increased. Sustainability could be the event theme in the future as well.

