

# Purchasing & Waste Management

One of the primary ways in which Wellesley College affects the environment is through the purchase of goods necessary to operate the college (office supplies, computers, furniture, etc.) and the recycling and disposal of those materials after their use. The flow of such goods at Wellesley is significant: each year the college spends approximately \$250,000 on office supplies, including \$50,000 on paper alone. It purchases approximately 400 computers. The college spends approximately \$150,000 on custodial supplies. And the college pays approximately \$300,000 for waste disposal services: 29 dumpsters on campus are emptied an average of four times each week.

Wellesley College is committed to factoring environmental sustainability into both purchasing decisions and its waste management practices. Historically, however, purchasing decisions at the college have largely been focused on price and quality and have been handled in a decentralized manner. Considering environmental sustainability requires that those considerations be expanded to include the social, environmental, and economic factors across the life cycle of products. In this section, we focus on general purchasing decisions (policies with respect to food, bottled water, fertilizers, and vehicles are addressed in other sections of this plan).

Recycling and waste management at the college are also handled in a decentralized manner. Although these activities are coordinated through the facilities department, waste streams are handled in different ways. While there is data regarding the amount of recycling and composting on campus, there is limited data regarding what percentage of college waste is diverted for recycling, composting, or other uses relative to the overall waste stream. Although there are significant sustainability accomplishments, such as the reuse and composting of landscaping materials, a Sustainable Move-Out collection and Move-In Sale, and the donation of end-of-life computers to non-profit organizations, systematic monitoring of the college's waste stream is critical to advance sustainability at the college.

## **Main Issues/Primary Goals**

1. Develop and follow sustainable purchasing policies focused on high-volume categories, such as paper, toner, computers, and peripherals that encourage reductions in consumption.
2. Develop management strategies for college activities and operations that encourage materials re-use and waste reduction.
3. Systematize waste management to ensure that sustainability is tracked and factored into all waste management decisions.

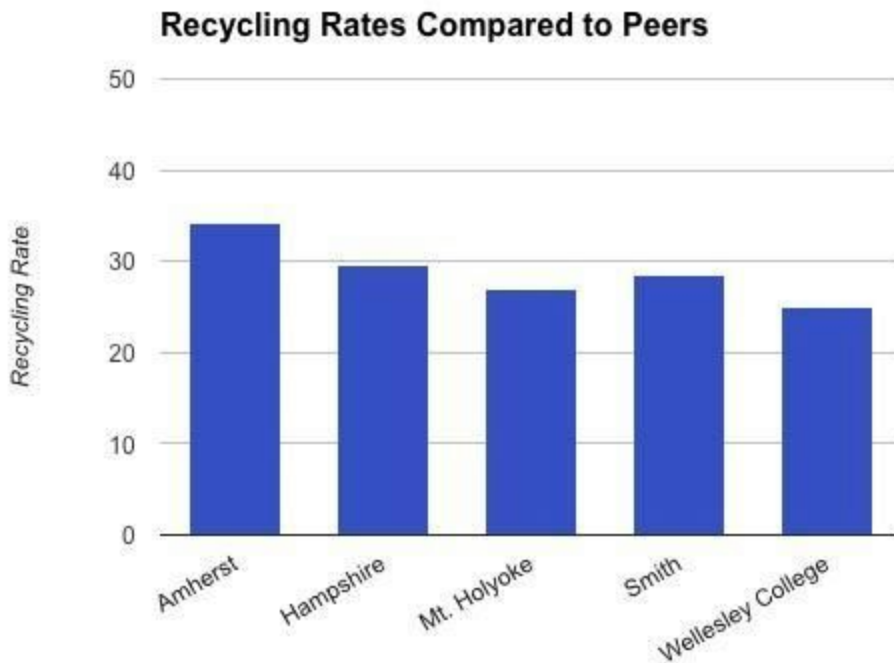
## **How We're Doing**

Some of Wellesley's most important accomplishments with respect to purchasing have been in improvements in efficiency and reductions in the purchase of goods and supplies. Since 2007, office supply deliveries to campus have been limited to four times a week and a 2015 recommended minimum order policy of \$25 will help make delivery runs more efficient. In 2010, LTS phased out printers from

the 21 residential halls. Much of the reduction in purchases has been associated with a transition toward electronic forms of communication. The college has switched to electronic distribution of numerous materials, including applications for admission, reading materials for trustees, and library materials (journals and books). This transition will continue in the near future, as other campus offices transition to electronic handling of personnel records (Human Resources), major declaration forms, and transcripts (Registrar's Office).

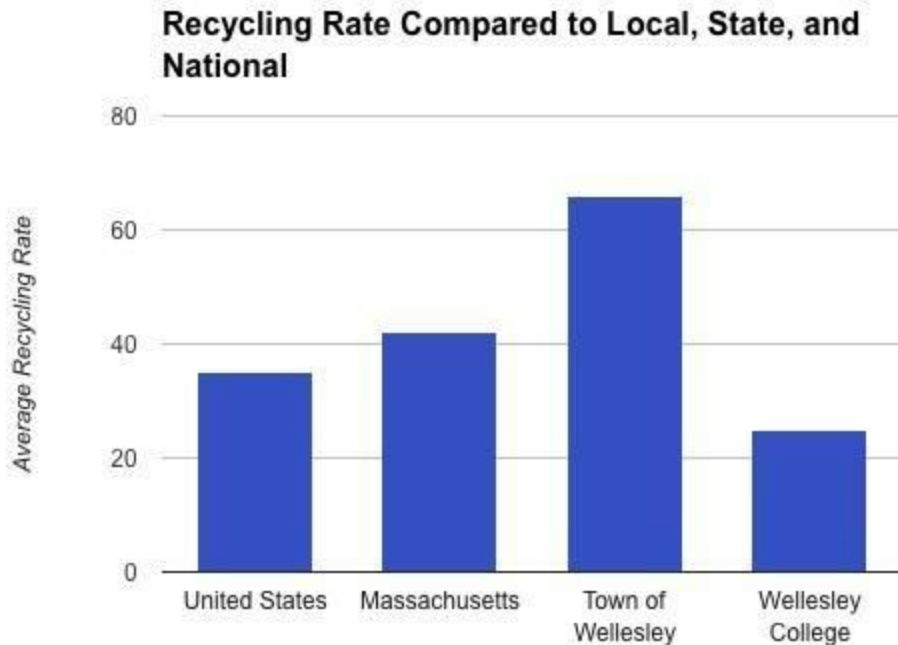
The college has no formal sustainability guidelines with respect to the purchase of office supplies, computers, or other goods, such as furniture. Despite the lack of such standards, the college is already engaging in some sustainable purchasing practices. For instance, 46% of college paper purchases contain at least 30% post-consumer recycled content and paper towels contain 78% post-consumer recycled content. Yet, to encourage such sustainable choices it is necessary to formalize purchasing guidelines that will promote environmental sustainability while managing costs.

The college has improved the sustainability of waste management practices. Between 2008 and 2013, the college estimates it increased recycling to 25% of the waste stream, recycling 220 tons of paper, bottles, and glass in 2013. This puts Wellesley somewhat behind peer institutions, for whom data is available from 2009-2010 (Mt. Holyoke College, n.d.; Willoughby & Bort, 2014).



However, this is significantly lower than the U.S. as a whole (35%), the state of Massachusetts (42%), or the Town of Wellesley (66%) (Girantikanon & Fujiwara, 2010; Massachusetts Department of

Environmental Protection & Massachusetts Executive Office of Energy and Environmental Affairs, 2013; US EPA, 2015). Almost all college waste, however, is sent to a waste-to-energy facility, rather than landfilled (Environmental Studies 300 Capstone Course, 2012).



Although there is much room for improvement, Wellesley had made substantial progress toward reducing waste reduction and re-use. Since 1979 the College has recycled all organic landscaping materials (clippings, leaves, and woody debris) to produce approximately \$75,000 worth of mulch annually. In 2010, the Office of Sustainability launched a Sustainable Move-Out Collection and Move-In Sale that has significantly reduced the waste associated with the end-of-year move out on campus. In 2013, this program resulted in the donation of 6 tons of clothing to Big Brothers Big Sisters of Massachusetts, the sale of 1.75 tons of dorm furnishings to returning students, and the donation of all remaining goods to local charities (Long, 2013). And since 2013, Library and Technology Services has been diverting recently retired computers from recycling to be refurbished and donated to schools and nonprofit organizations in the Boston area and abroad. In 2014, 90 computers were repurposed and donated of approximately 300 computers retired (“Re:Route,” n.d.).

## Recommended Strategies

Phase 1 = Within 2 years of plan being adopted

Phase 2 = Within 5 years of plan being adopted

Phase 3 = Within 10 years of plan being adopted

Abbreviations of Responsible Parties:

\*SUST=The Sustainability Committee

\*\*LTS= Library & Technology Services

\*\*\*EHS=Environmental Health & Safety

### 1. Develop and follow sustainable purchasing policies focused on high-volume categories, such as paper, toner, computers, and peripherals that encourage reductions in consumption.

Issue	Strategy	Responsible Party	Status	Phase
PWM1.1	Make suppliers aware of Wellesley's commitment to green purchasing.	All campus - overseen by Purchasing	In Progress	1

This can be accomplished by putting a statement on the purchasing office website and including language in bids where applicable.

PWM1.2	Educate the campus on the college's green purchasing strategies.	Purchasing, Office of Sustainability	In Progress	1
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A guide to purchasing will help spread the word about the green purchasing guidelines and educate the campus community about environmentally relevant characteristics to consider when making purchases.

PWM1.3	Reduce paper consumption on campus by 10% (Phase 1), 20% (Phase 2), 40% (Phase 3)	All campus - overseen by Purchasing and LTS	In Progress	1, 2, 3
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Strategies for accomplishing this goal include a continued transition to electronic record keeping on campus, encouraging efficiency in classroom-based use of paper, mandating double-sided printing, re-using single-sided paper, and discouraging the purchase of individual printers. There are additional opportunities for reducing paper use on campus, such as how time sheets are kept, academic materials are distributed and collected, etc. This will require the effort of everyone on campus, since no single office oversees the purchase, set-up, and implementation of printing.

PWM1.4	Develop a campaign to encourage reduced paper use in classes (for assignments, readings, and handouts).	SUST, Office of Sustainability	Needs to be Formalized	1
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Without compromising the college's educational mission or the ability of professors to teach how they best see fit, there are opportunities to use paper more efficiently in the classroom context: re-using readings, minimizing unnecessary printing, and electronic assignments are all possibilities. The goal is to develop a campaign to encourage such efficiencies. Currently, printer use peaks at the start of each semester, as students print out course e-readings in bulk. There are opportunities for groups like the PLTC to hold workshops for professors on transitioning to electronic grading

PWM1.5a	Increase post-consumer recycled content of purchased paper: 75% of paper purchases should have at least 30% recycled content..	All campus - supported by Purchasing and LTS	In Progress	1
PWM1.5b	Increase post-consumer recycled content of purchased paper: 90% of paper purchases should have at least 30% recycled content; 25% of paper should have 100% recycled content.	All campus - supported by Purchasing and LTS		2
PWM1.5c	Increase post-consumer recycled content of purchased paper: 95% of paper purchases should have at least 30% recycled content; 50% of paper should have 100% recycled content.	All campus - supported by Purchasing and LTS		3

Concerns have been raised regarding the quality of recycled paper on campus, particularly that it sometimes does not feed through printers as smoothly through printers as does non-recycled paper. This is a concern particularly during humid summer months. Despite this challenge, the primary users of paper on campus (the print shop and copy shop) use almost exclusively recycled paper without problem. With the improving quality of both paper and printers, it is feasible to use more recycled paper on campus.

PWM1.6	Purchase recycled toner and ink cartridges: 30% (Phase 1), 50% (Phase 2), 75% (Phase 3)	All campus - supported by Purchasing and LTS	Needs Planning	1, 2, 3
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Increase the use of recycled toner cartridges will require the support of administrative offices on campus, who order many of these products directly. Increasing the use of recycled toner should also be

addressed in future contracts with companies that lease and service the larger-scale multifunction devices on campus.

PWM1.7	Maintain the minimum order size required for the college’s preferred office suppliers (such as W.B.Mason) at \$25.	All campus - overseen by Purchasing	In Progress	1
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A minimum order size can improve efficiencies in delivery. A \$25 minimum order size was put into place in 2015. Further changes to the minimum order size beyond \$25 would require community input before implementation. There is a risk that if minimum order sizes are imposed from the college’s preferred vendors, purchasers will redirect the purchases to other retailers (such as Amazon) that would not have similar requirements.

PWM1.8	Partner with Boston Consortium Schools to require that office suppliers deliver goods in reusable totes (that they will collect and reuse).	All campus - overseen by Purchasing	Not Started	1
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Schools in other parts of the country have worked with their suppliers to shift away from delivery of goods in cardboard boxes to reusable totes. This goal could best be accomplished in cooperation with other Boston-area schools. This goal should be considered in future negotiations for office supply contracts.

PWM1.9	Purchase EPEAT Certified computers and peripherals. All computers and laptop purchases should meet EPEAT Silver certification. 75% should meet EPEAT Gold (Phase 1); 95% should meet EPEAT Gold (Phase 2); 100% should meet EPEAT Gold (Phase 3)	All campus - overseen by LTS	In Progress	1, 2, 3
PWM1.10	Expand the number of offices participating in the Sustainability Office Program: 25% (Phase 1), 50% (Phase 2), 75% (Phase 3).	All campus - overseen by Office of Sustainability	In Progress	1, 2, 3

In 2015, the Office of Sustainability launched a certification program (“Sustainable Office Certification,” n.d.) to encourage offices to improve sustainable practices.

PWM1.11	To make use of recycled content paper, turned used paper into scratch pads for distribution on campus.	Printing Services	Complete	
PWM1.12	Develop sustainability guidelines for the purchase of furnishings.	SUST, Office of Sustainability, Residential Life, Facilities	Not Started	2

The college currently has no standards in place for the sustainability of furnishings.

PWM1.13	Undertake a review of the sustainability of current cleaning supplies purchased on campus.	Custodial Services; Office of Sustainability	In Progress	2
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The college last reviewed its standard cleaning supplies approximately 2 years ago. At the time, concerns were raised about the effectiveness of green cleaning supplies. In the next five years, custodial services will undertake another review of green cleaning supplies, giving full consideration to products that meet the Green Seal standard in consultation with the Office of Sustainability.

PWM1.14	Increase the amount of post-consumer recycled material in disposable paper products, such as paper towels and toilet paper.	Custodial Services	In progress	
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Custodial services has already shifted to purchasing disposable paper products with a lower environmental impact, including products that are wound tighter (minimizing shipping costs) and lack a cardboard tube (reduce materials use). Bath tissue currently used on campus has 20% post-consumer recycled fiber content. Paper towels currently have 78% post-consumer recycled fiber content and are certified by the Forest Stewardship Council.

**2. Develop management strategies for college activities and operations that encourage materials reuse and waste reduction.**

Issue	Strategy	Responsible Party	Status	Phase
PWM2.1	Recycle all landscape waste to provide mulch and loam	Facilities	Complete	
PWM2.2	Donate books retired from the library	LTS	Complete	
PWM2.3	Refurbish and donate computers at end-of-life	LTS	Complete	

The Re:Route program diverts computers retired from the campus's laboratories, staff, and faculty for refurbishment and donation to nonprofits in the Boston area and abroad. This program is staffed by students and overseen by LTS.

PWM2.4	Increase awareness of the speciality recycling services for e-waste and batteries provided through the library.	LTS, Office of Sustainability, Office of EHS	In Progress	1
PWM2.5	Review campus policy with respect to storing and re-using furnishings	Facilities, Office of Sustainability	In Progress	1

Historically, unused furnishings have been stored on campus at the Distribution Center for re-use. This is an important practice that has facilitated re-use of furnishings, which is environmentally and financially preferable. In light of the increased pace of renovations on campus, it is necessary to think systematically about how the college can ensure reuse is possible and, if not, how best to donate unneeded furnishings and equipment to other organizations.

PWM2.6	Create a campus re-use store.	Office of Sustainability	In Progress	3
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There is strong interest in campus on establishing a campus re-use store, where students could trade unwanted items, including furnishings, clothing, and other goods. The primary hurdle to establishing such a store is space. The Student Aid Society fills this need somewhat with their closet dedicating most of its space to clothing, but for other goods and supplies there is still a lack of space

PWM2.7	Establish a protocol for what constitutes a zero-waste event on campus.	SUST, Office of Sustainability	In Progress	2
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A first-step toward zero-waste events on campus would be to establish criteria for such events: no disposable water bottles, using compostable or recyclable materials, and eliminating trash cans.

PWM2.8	Phase out plastic bags at all retail operations on campus.	Food Services, Bookstore	In Discussion	2
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Plastic bags are being phased out by municipalities across the country. Wellesley can contribute to this effort by banning plastic bags on campus. Advancing this goal will require discussions with the bookstore and food services operations about alternatives such as the sale of reusable or paper bags.



PWM2.9	Expand composting to all dining halls, dormitory kitchens, and other food vendors on campus,	Food Services, Facilities Management	In progress	2
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Currently, all dining halls on campus compost pre- and post-consumer food waste. In the next five years, this will be expanded to include other major sites of food preparation and consumption on campus including dormitory kitchens and other food vendors (college club, campus coffee shops, etc.)

**3. Systematize waste management to ensure that sustainability is tracked and factored into all waste management decisions.**

Issue	Strategy	Responsible Party	Status	Phase
PWM3.1	Establish goals for waste reduction	Facilities, SUST	In Progress	2

Starting this year, Wellesley’s contract with its waste hauler requires that the weight of waste being hauled from campus be reported. Once a baseline has been established, the Advisory Committee on Sustainability and Office of Sustainability will work with stakeholders to establish a goal for waste reduction.

PWM3.2	Comprehensive review of waste management and recycling practices	Facilities, SUST	In Discussion	1
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Wellesley rebid its contract for waste management services in summer 2015 for an initial one-year contract with the potential for long-term renewal. Prior to committing to a long-term contract, the college should undertake a review of how all waste management services could be coordinated, including waste haulage, recycling, and composting, to allow for economies of scale, increased levels of service, potential cost savings, and systematic data reporting. Currently the college pays a flat-rate for waste haulage, regardless of the amount of waste hauled; a contract that included a weight-based rate would provide incentive for the college to reduce waste.

PWM3.3	Regular and publicly reported statistics on waste and recycling collection on campus	Facilities, SUST	Provided in Annual Report but Should more Frequent	1
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An important prerequisite for any contract for waste management on campus should include requirements for reports on the weight of materials collection. Weekly data should be collected and reported to the college at least monthly.

PWM3.4	Review the college's single-stream recycling policy	Facilities, SUST	In Discussion	1
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Wellesley operates a dual-stream recycling process that requires that recyclables be sorted prior to collection. Most other institutions practice single-stream commingled recycling, that allows for common recyclables (glass, paper, cardboard, etc.) to be mixed. Although there are advantages to single-stream recycling, the college should review its practices for potential cost savings and increased collection rates.

PWM3.5	Develop a uniform system for waste management labeling and communication. Standards should be established during Phase I; implementation will take place in Phase II and III (as waste receptacles are replaced).	Facilities, SUST	In Progress	1, 2, 3
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This review should include consideration of labeling and the size of waste containers. Recycling and composting bins in offices and dormitory rooms should be larger in size than trash bins.

### **Financial Implications**

In many instances, the financial implications of more sustainable purchasing are modest. For example, 30% recycled office paper retails for 6% more than non-recycled paper and some refurbished toner cartridges retail for 33% less than non-refurbished options. The price premium of some green products can be offset by reductions in consumption. Alternatively, bundling purchasing shifts together can offset costs too: for instance, the increase in cost for recycled paper could be offset by purchasing lower-cost refurbished toner cartridges (T. Dolan, Purchasing Office of Wellesley College, personal communication, September 24, 2015).

The potential benefits of reducing waste management costs through increased waste diversion are substantial. In recent years, the college has spent more money on managing waste than purchasing office supplies on an annual basis, for instance. Reducing waste haulage through decreases in waste generation and increases in recycling and composting could reduce the college's operating costs. Currently the college contracts out waste management and composting, but handles recycling on campus. A more systematic approach to waste management, including regularly reported figures for waste haulage, will be important steps toward better managing waste and associated costs.

### **Climate Implications**

How the college purchases and handles waste have climate impacts. However, purchasing decisions (including sourcing and delivering goods) are estimated to be a relatively small portion of the college's indirect (scope 3) emissions. A 2008 inventory of Wellesley's greenhouse gas emissions

estimated that less than 4% of the college's annual emissions were a result of the purchase of goods and services (air travel accounted for 87% of the college's scope 3 emissions) (Environmental Studies 300 Capstone Course, 2008).

Currently, the college does not have data regarding the climate implications of waste management at the college. As of 2011, most solid waste from the college was incinerated at the Southeastern Massachusetts (SEMASS) Resource Recovery facility, which generates electricity through waste incineration. Although this process is more expensive than landfilling, it likely offsets fossil-based electricity generation (Environmental Studies 300 Capstone Course, 2008).

The college's current practices of reusing all landscaping materials on campus and composting in dining halls both avoid methane emissions from landfills or carbon dioxide emissions from incineration facilities.

### **Potential Student Involvement**

Students have the opportunity to take a leadership role in affecting the sustainability of purchasing and waste management:

- Students can educate other students during orientation week regarding printing and waste management on campus, involving Dorm Eco-Reps.
- Students can contribute to reductions in paper use on campus.
- Students can contribute to increasing re-use, recycling, and waste reduction.
- Students can take part in the Sustainable Living Certification program ("Sustainable Living Certification (SLC)," n.d.).

### **Sources**

- Environmental Studies 300 Capstone Course. (2008). Climate for Change. Wellesley College. Retrieved from <http://www.wellesley.edu/sites/default/files/assets/departments/environmentalscience/files/es300-2008-wellesley-ghg-audit.pdf>
- Environmental Studies 300 Capstone Course. (2012). Waste Reduction: Ensuring Wellesley's Pursuit of Sustainability Doesn't End Up in the Trash. Wellesley College. Retrieved from <http://www.wellesley.edu/sites/default/files/assets/departments/environmentalscience/files/es300-2012-wastenotwantnot.pdf>
- Girantikanon, T., & Fujiwara, D. (2010, March 14). Recycling in Massachusetts. Retrieved from [http://www.boston.com/news/local/massachusetts/graphics/031410\\_recycling/](http://www.boston.com/news/local/massachusetts/graphics/031410_recycling/)
- Long, K. (2013, June 18). Summer Is Off to a Green Start with New and Repeat Sustainability Projects at Wellesley. Retrieved from <http://www.wellesley.edu/news/2013/06/node/36192>
- Massachusetts Department of Environmental Protection, & Massachusetts Executive Office of Energy and Environmental Affairs. (2013, April). Massachusetts 2010-2020 Solid Waste Master Plan. Retrieved from <http://www.mass.gov/eea/docs/dep/recycle/priorities/swmp13f.pdf>
- Mt. Holyoke College. (n.d.). Five College Comparison of Recycling Tonnage and Metrics FY2009-10. Mt. Holyoke College. Retrieved from <https://www.mtholyoke.edu/sites/default/files/envstewardship/docs/5crecycletonnage0910.pdf>

Re:Route. (n.d.). Retrieved from  
<https://www.wellesley.edu/lts/-new-lts-left-hand-quick-links-/node/68626>

Sustainable Living Certification (SLC). (n.d.). Retrieved from  
<http://www.wellesley.edu/sustainability/-new-page-/sustainable-living-certification-slc-/node/57261>

Sustainable Office Certification. (n.d.). Retrieved from  
<http://www.wellesley.edu/sustainability/sustainable-office-certification/node/59236>

US EPA. (2015). Learn about Waste [Collections and Lists]. Retrieved October 13, 2015, from  
<http://www2.epa.gov/learn-issues/learn-about-waste>

Willoughby, P., & Bort, S. (2014). Wellesley College Sustainability Progress Report 2014. Wellesley College. Retrieved from  
<https://drive.google.com/a/wellesley.edu/file/d/0BzqP82l8FumGcEZCa1R2UG5PZTBzV3NnU2tKWndIcHcxSDh3/view>