Single Stream Recycling Pilot
Results and Conclusions from the 2013 Joint Greening Princeton & Building Services Pilot Program
What is Single Stream?

Right now, most Princeton students can only recycle paper products in their room recycling bins. Plastic, metal, and glass recycling receptacles are located in some hallways, but are not always accessible nor clearly labeled. As a result, most students simply place all their recyclables in their room blue bins or trash can. This results in a very low recycling rate and a great deal of confusion.

Even though janitors still collect recycling waste separately, recyclables already leave campus as a single stream, and the recycling facility in Trenton has made the switch to processing it as one mixed batch rather than separate paper and plastic/glass/metal streams.

Given these facts, an alternative solution for waste collection at the source is Single Stream Recycling. Under this system, all recyclables are placed in one bin, making it much more convenient to recycle. Studies have shown, however, that because of higher risks of contamination, Single Stream recycling systems on college campuses only increase the recycling rate when paired with effective recycling education strategies.
How was the pilot implemented?

In November of 2013, Greening Princeton and Building Services collaborated to launch a pilot program for Single Stream recycling in two dorms: Edwards Hall in Mathey College and 1939 Hall in Wilson College (over 100 rooms total). The switch to single stream collection on the side of the Janitorial staff was paired with an aggressive education and email campaign. Greening Princeton designed and distributed new recycling bin labels and flyers explaining the new system, and GP members spent two weeks knocking on every door to answer students’ questions and educate them about recycling.

Before and after the pilot, GP members also did hallway waste bin audits to determine recycling rates and conducted a survey of residents to assess their feelings about the switch. We proposed that improvements in the overall recycling rate and high student satisfaction with the program would be good grounds for expanding the system across campus.
Audit Results

BEFORE

ALL RECYCLABLES
- RECYCLING: 57%
- LANDFILL: 43%

PLASTIC
- RECYCLING: 16%
- LANDFILL: 52%

PAPER
- RECYCLING: 3%
- LANDFILL: 40%

METAL
- RECYCLING: 19%
- LANDFILL: 21%

GLASS
- RECYCLING: 13%
- LANDFILL: 21%

AFTER

ALL RECYCLABLES
- RECYCLING: 85%
- LANDFILL: 15%

PLASTIC
- RECYCLING: 86%
- LANDFILL: 14%

PAPER
- RECYCLING: 81%
- LANDFILL: 19%

METAL
- RECYCLING: 93%
- LANDFILL: 7%

GLASS
- RECYCLING: 96%
- LANDFILL: 4%

NONRECYCLABLES PER BLUE BIN

*Results are average of 5 days before and after pilot in the 2 dorms, ~30 bins in each dorm daily. Percentages are by number of items rather than by weight.
Survey Results

When asked which system they preferred, 100% of 46 students surveyed said the Single Stream system.

When asked why, students wrote:

“I don’t have to worry about what goes together and what doesn’t!”
“Princeton finally seems to care about recycling! It also raises awareness. A lot of people didn’t seem to realize that our system didn’t used to be single stream.”
“So much easier and I actually recycle bottles now.”
“It makes recycling very, very easy.”
“I think that the single stream system is a good one, and I would like to see it continue, as well as be implemented across campus.”
“I think it would be cool to make all of the university’s recycling single-streamed”
“I think the current single stream system being field tested in 1939 Hall is a great improvement in encouraging recycling at Princeton.”

Compared to the previous system, how much did the single stream system increase the amount you recycle? How clear are the current (Single Stream) recycling guidelines that you received?
Next Steps

Based on these convincing figures—a 20% increase in recycling and 100% student approval—Greening Princeton is certain that Single Stream Recycling is the way for our school to move forward in its recycling system. We believe that, paired with an aggressive educational campaign and a required recycling education component to Freshman Orientation, a Single Stream system could conceivably get our recycling rate up to 80-90%. We would thus urge the administration to implement the following as soon as possible:

1) **expanding single stream to all student housing**
2) **expanding single stream to all university buildings and offices**
3) **collaborating with Greening Princeton, the Office of Sustainability, Residential Colleges, and the Undergraduate Student Government on an awareness campaign to teach students how to recycle**
4) **planning a required freshman orientation activity, as well as RCA recycling training**

In addition to recycling, we envision a more comprehensive plan for dealing with our school’s waste. Next on Greening Princeton’s agenda is the expansion of the composting program to co-ops and rooms with kitchens.

Ultimately, we would like to start a discussion on the possibility of a Zero Waste commitment. A growing number of cities, such as San Francisco, and colleges, such as American University, have made commitments to achieve Zero Waste—nothing going to landfills—by 2020. Setting this kind of goal would force Princeton to reconsider its use of nonrecyclable items and thus make an even bigger impact on the environment. Last year, Greening Princeton held an Earth Day event for 500 people and generated no landfill waste while serving hundreds of scoops of ice cream. While single stream recycling is only one step on the way to achieving this goal, it is an important one.
Greening Princeton seeks to improve the relationship between the University and the environment by first identifying pertinent environmental issues and then creating task forces to develop solutions.

Greening Princeton is unique because of its emphasis on collaboration with university administrators. Greening Princeton initiates projects by contacting the most appropriate administrator(s) and listening to their concerns and constraints to see how we can make our ideas work with their mission.

By bringing in new ideas, assisting with background research, increasing student support for initiatives, and/or advocating for funding, Greening Princeton can greatly accelerate the process of improving and implementing environmentally friendly and socially responsible policies. We have found that building strong relationships not only increases the chances of accomplishing our goals but also increases the responsiveness of the administration and individual administrators to environmental initiatives over the long-term.
WHAT GOES IN THE **BLUE BINS**

**MIXED PAPER & CARDBOARD**

- Office paper and mail *(glossy paper, plastic envelope windows, metal staples and clips are okay)*
- Cardboard and paperboard *(break down/flatten boxes)*
- Newspaper, magazines, posters, paper bags, books *(both hard cover and paperback)*

**PLASTIC & GLASS**

- Plastic containers with recycling codes # 1–7 *(empty and rinse containers; lids are okay, but should be attached)* Also okay are washed solo cups, yogurt, and hummus containers.
- Glass bottles and jars *(empty and rinse out containers; colors are okay)*

**ALUMINUM & AEROSOL**

- Aluminum *(e.g. beverage cans) and steel/tin cans and lids *(empty and rinse out containers)*
- Aerosol cans *(e.g. empty food and household cleaning products)*

**OTHER PLACES TO RECYCLE**

- Cell phones and peripherals; rechargeable batteries; pens: Recycling bins are available on the Frist 100-level
- Ink and toner cartridges: Recycling bins are available in most computer clusters
- Computers, printers, fax machines, TVs, VCRs, DVD players, microwaves: Can be left next to campus dumpsters for recycling
- Grocery and re-sealable plastic bags: Recycling bins are available in laundry rooms and at the U-Store entrance on University Place
- Writing utensils can be recycled at the GreenSpace *(across the stairwell by Cafe Vivian in Frist)*

**WHAT’S NOT RECYCLABLE**

- Napkins, paper towels, tissues
- Plastic utensils
- Paper contaminated with food
- Plastic or wax coated paper and cardboard
- Metal-lined, shelf-stable containers *(like milk cartons)*
- Alkaline batteries