

# Reducing CO<sub>2</sub> Emissions Associated with College Move Out

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For the Environmental Consulting at Olin course at Franklin W. Olin College of Engineering

Championed by Carrie Nugent, Claire Rodgers, Evelyn Matsumoto, Suzanne Alcott, and assisted by many more

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#### Introduction

This report is a product of the class "Interdisciplinary Engineering: Environmental Consulting at Olin". Throughout this class, we worked on a project with the goal of reducing the Olin's carbon dioxide emissions. The project our team formed around was reducing Olin's emissions associated with student move out in the spring. We were assisted by our project champions, Evelyn Matsomoto and Suzanne Alcott, as well as our professors, Claire Rodgers and Carrie Nugent.

Every May, Oliners move out of the dorms, seniors graduate, and the amount of things that get thrown away at Olin triples (See <u>GHG Emissions</u> section). Due to students, (primarily seniors) leaving campus, clothing, towels, lamps, bedding, and other various items are no longer needed after graduation, so they get left behind. These items were explicitly bought to be used at Olin, meaning that the emissions caused by their disposal falls under Olin's Scope 3 emissions.

In order to identify the points of the move out process that could be made more sustainable, conducted extensive research. To do so, we interviewed students, previous move out volunteers, members of Student Affairs and Resources (StAR), as well as members of the facilities department.

In our research, we learned about the social injustices of Olin's move out waste problem. Students leave behind mountains of material wealth in the first floor lounges. Many students think that these items will be donated, but in actuality, within the current system, most of what is left behind is quickly thrown away to prepare for the arrival of the summer camps and conferences. In past years, a small group of volunteers have stepped up to sort these items for donations, but this is not a sustainable plan if those people leave the college. Instead, we need student-led cultural change where the responsibility of what gets left behind shifts from facilities and unpaid volunteers to an organized system that addresses this issue. The following paper details our proposal for a move out donation program that will make this needed cultural shift.

#### Research

#### **Stakeholders**

For the move-out project, we identified three main stakeholder groups that were involved in the move-out process last semester. The three groups were students, facilities (Olin's Aramark contractors), and the StAR (Student Affairs and Resources, which also deals with student housing) office. In order for us to understand the move-out process from different perspectives, we interviewed people from all three sub-groups. We also talked to past volunteers as well. This allowed us to design plans based on the experiences our stakeholders had in the past.

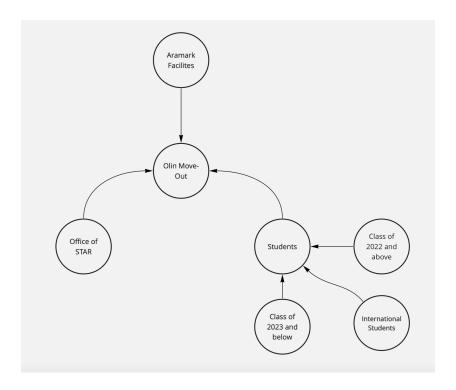


Figure 1: Stakeholder Map

#### **Students**

Our biggest stakeholder in terms of size were the students. In order to create a sample pool that represents the entire population, we decided to break up the students into a few groups such as international students, pre-Covid students (Class of 2022 and above), and post-covid students (Class of 2023 and below). This allowed us to gather data on how the pandemic affected the move-out process and the impact it had for students who had to travel abroad. We also decided to interview first-years to get an understanding of what an ideal move-out would look like for someone who had no expectations or preconceptions. Overall, the students feel very overwhelmed by the whole move out process. It is physically and emotionally exhausting and difficult to do after a week of challenging finals. Seniors also want to spend their last moments on campus with their friends rather than packing alone. This is why we need to focus on making the donation process as clear and user friendly to the seniors as they will be less likely to participate if it is too complicated.

#### **Facilities**

The second stakeholder group were the people in the facilities department. Currently (Fall 2021), Olin's facilities are contractors from Aramark. For this project, we talked to Claire Rodgers, Alex Balestieri, and Tom Curley to represent the facilities team. We learned that

facilities are often overwhelmed during the move-out process as they are responsible for quickly preparing the dorms for the summer camps after the students leave. Facilities takes instructions passed down from the StAR office and carry it out in the student dorms thus they do a lot of leg work for the two other stakeholder groups. This situation makes them sandwiched between the two groups which can lead to frustration and a feeling of being unheard in the community. The facilities team is essential to keeping Olin running but their hard work often goes unnoticed and some students have even been outwardly disrespectful to members of facilities, likely due to race and class biases. In order for our solution to work, we should not create an additional burden for the facilities team.

#### Staff

The last stakeholder group involved is the office of StAR. The main point person in this office is Seth Hodge as he is the Associate Dean of Student Affairs and the move-out process comes under his supervision. StAR is the group that controls the rules for anything being developed in the project thus it was important for us to talk to them so that we could understand our constraints and requirements before making an unachievable plan. There have been past issues in communicating between the staff and students which has caused strain on the working relationship between the two parties. Thus we wanted to make sure to open a means of communication so that we can co-design a solution that fulfills the needs of both groups.

#### **Volunteers**

We also worked with Suzanne Alcott as our project advisor to understand the perspective of a staff volunteer. Robert Weschler, Evelyn Matsumoto, Claire Rodgers and Alex Balestieri, have also volunteered their time to sort donations. Especially during the COVID move-out process, there were a lot of things being left behind by the students due to the time constraint. Rather than throwing everything out, these volunteers help sort, organize, and donate as much as possible to divert items from the trash. Their trailblazing actions have developed many insights into this process. We are so grateful for the hard work and hope to formalize their process before they move on to make change wherever they go next.

#### Insights

From the interviews we conducted with our stakeholder groups, here are the major insights that led to the creation of our solution. Notes from the interviews can be found in the appendix.

#### Students Expect Olin to Take Care of Things

From our interviews with current students, we realized that there was a belief that Olin would donate the items left behind after move-out. In the class of 2022's first year, there was an organized system for summer storage in the penthouses, and then when students left Olin

due to the Covid-19 pandemic, there was a system for storing things on campus that was arranged by StAR and CORe (Council of Olin Representatives). Last year's (Spring 2021's) move out had less people on campus, and there was no summer storage provided by Olin. When we spoke with CORe, a group of student representatives in charge of making student-specific purchases, we realized that the belief among students was that Olin would coordinate summer storage this year and that last year was an exception caused by the pandemic and a smaller move out.

It was not just our interviews of students that revealed this sentiment. Interviews of facilities revealed that students would leave large messes in their rooms and try to donate opened food containers. An interview with a move-out volunteer detailed that students would leave their things in the center of the donation room, instead of in the proper donation areas.

This behavior tells us that students do not expect to have to deal with their own items, and expect Olin and facilities to take care of it. This was a major cultural expectation that needed to change if we were going to make any progress with a plan to reduce move-out waste, as we believe that student perspectives will shift if they are the ones responsible for taking care of the end of life of the projects, compared to the historic team of faculty and staff.

#### Students Have Good Intentions

We found that everyone we interviewed believed that students don't maliciously leave a mess or sort things improperly. There appeared to be a lack of understanding of who is responsible for determining if something can or cannot be donated and that without a witness, the students will leave extra items with the thought that someone else will answer that question for them.

From these findings, we realized that we needed to have our solutions be, in a way, foolproof. We need to make sure that we wouldn't need to re-sort because someone left opened food in the bins, and that our solution could be very easy to do. We wanted to make sure that the effort required to donate items was very low. It was also important for students to feel good about where their items were going, and that as many things as possible could be donated.

#### Olins Donations Are Not a Formalized Process

In our research, we learned that the donation process is formalized at other schools. We looked at the programs at UCLA, Penn, CU Boulder and Oberlin to learn more about how they run a move out donation system.

From these findings, we realized that our solution needed to be an official program at Olin to be sustainable from year to year. This means that the funding must come from a renewing source, all of the procedures are documented and that the program isn't dependent on a specific person who may leave the college. Eventually, we hope that organizing move out donations could be part of someone's official job description, especially if we were to hire a sustainability coordinator in the near future.

#### Freecycle is an Issue

Many of the staff and facilities members that we talked to were very opposed to the current freecycle situation, where students pile their donations (usually clothing) in the first floor lounges of the dorm buildings hoping that other students will take them. At the end of the year, all of the useful items have been picked through and mostly trash remains. Also, people are less likely to take things at the end of the year because they are also moving out. Furthermore, because the seniors move out after the underclassmen, freecycle is often left as a huge mess at the end of the year with no one left to clean it up.

For this project, we will be closing freecycle early and redirecting all items to the donation pods in order to resolve this issue.

#### Students Should Buy Less Things

One solution to reducing waste at Olin that we were not able to implement was in encouraging students to purchase less new items. For the scope of this project, we decided it would be more impactful to address the end of the item's use cycle rather than the beginning due to the additional social components in the donation process.

For future teams, they may want to focus on encouraging students to buy higher quality items at the start of college that will need to be thrown away in 4 years or to acquire those items from more sustainable sources like buying them from the prior year's graduating seniors.

#### Olin's Size Creates an Issue With Sorting and Storage

One big issue for Olin is the small size of the school. During our interview with Seth, the associate dean of student affairs, he explained how Olin lacks physical space to store things for students. In his past jobs at other schools, he mentioned that schools had enough buildings that they could transform facilities to ad-hoc storage locations for the summer/winter break. The big concern for Olin is keeping the dorms and campus clean during the graduation week, and when the rooms are being rented out to camps over the summer.

Due to the lack of storage space and the time constraint, the only possible solution for students is to store their items off campus.

In order to help with this process, our team met with CORe, the student government body, to inform them about the summer storage situation for Summer of 2022 so that they could save a portion of the budget to purchase additional PODs for summer storage. This is important to organize for the students who live far away from campus and need to keep items here over the summer. Students who fly home have to fit everything they own in two suitcases and everything else would have to be thrown away and purchased again next year. If there is not a summer storage option, even more trash will be thrown away at the end of the year and make the environmental issue of Olin's move out waste even worse.

For our project, we realized that our solution needed to be outside of the residence halls. We needed to make sure that any sorting and donation bins were stored in it's own, contained unit.

#### Just Donation Signs Are Not a Solution

In the 2018 and 2019 move-out, Gradbag donations were collected in the EH1 lounge. Bins were placed around the space and were well labeled with posters that spacified what you can and cannot donate and where you should leave your donations. While this did accumulate a large amount of donations from the senior class, they were not organized at all and it took the volunteers many days to sort through it all. Since there was no one there to help, if someone had an item that didn't fit into a specific category, they would just leave the item anywhere in the lounge and expect it to be donated. Also if a bin was overflowing, people would continue to add to the pile without thinking about the person who would have to clean it up.

In our proposed solution, there needs to be a person there to help facilitate the donation process so that the clean up time in the end is reduced.

#### Greenhouse Gas Emissions

Our project focuses on the end of the life of student items at Olin, so we are only focusing on the greenhouse gas emissions caused by the end of the life cycle of the items left behind. Additionally, we are determining that the end-of-life emissions are caused by the incinerator that our garbage goes to.

#### Incineration

In 2019, the average amount of trash taken from Olin to be incinerated is 9.58 tons a month during the active school year¹. While there are slight variations from - 1.13 tons to + 3.47 tons (the latter being due to December's waste calculations, which is inflated due to super senior move-out, general pre-break cleanouts, and the purge of projects from the MAC), this remains fairly constant until the month of May, when move-out and commencement occurs. In May, the amount of waste taken to be incinerated is 29.57 tons. From this numerical as well as supporting anecdotal data from Claire Rodgers, Alex Balestieri, and other previous move-out volunteers, we can estimate that moving out, specifically seniors moving out, causes an additional 20 tons of waste. In 2019, the team diverted 1.840² tons of waste from the incinerator.

According to Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories <sup>3</sup>, incinerating one ton of general municipal waste emits, on average, one ton of CO<sub>2</sub>. As shown by the work of Claire, Alex, and the volunteers, donations can save a lot of CO<sub>2</sub> emissions. They diverted almost 8.4% of potential emissions. If we can expect to donate as much as the team did, then we would help save 1.8 tons of CO<sub>2</sub>. If we hope to get 10% more

donations, or about 2000 lbs, we could save 2 tons of CO<sub>2</sub>. It takes a tree growing for 25 years to sequester 400 lbs of CO<sub>2</sub><sup>4</sup>, meaning that currently Olin would require approximately 50 trees to reclaim its greenhouse gas emissions from a single move-out alone. This also means that with every ton of donations we divert from the incinerator, we knock 2.5 trees off of that number.

# GHG Emissions from Trash Disposal in tons of CO2 20 Average Month in 2019 May 2019

# Figure 2: This graph shows the amount of CO2 emissions created in the month of May compared to an average month at Olin. This increase is due to the amount of waste created from the students moving out of the dorms

#### Transportation

To account for the additional environmental costs of our solution, the transportation of the PODs would arrive on 2 trucks that are coming from 9.8 miles away. According to the Emissions Factors Spreadsheet<sup>5</sup>, a Heavy-Duty Vehicle - Rigid - Diesel - Year 1960-present emits 1.15 kg  $CO_2$  / mile. 4 \* 9.8 miles \* 1.15 kg  $CO_2$ /mile = 45.08 kg  $CO_2$  which is close to 100 lbs of  $CO_2$ .

There are also the emissions for driving there and back to each donation site:

#### Distance from Olin

- Habitat for Humanity 6.8 miles
- Play It Again Sports 6.8 miles
- Animal Rescue League 5.4 miles
- Circle of Hope 2.3 miles

- Make and Mend - 14.2 miles

```
0.39 kg CO_2/mile * 2(6.8 + 6.8 + 5.4 + 2.3 + 14.2) = 27.69 kg CO_2 45.08 kg CO_2 + 27.69 kg CO_2 = 72.77 kg CO_2
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This is negligible in comparison to the tons of CO<sub>2</sub> we would be saving since the transportation emits around 160 lbs of CO<sub>2</sub>.

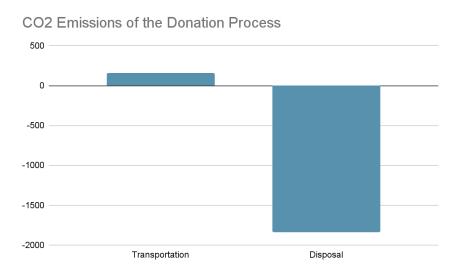


Figure 2: This graph compares the amount of CO<sub>2</sub> emitted from the transportation of the items to the donation centers to the amount of CO<sub>2</sub> not produced by diverting 1,840 lbs of waste from being incinerated. We predict that this amount of CO<sub>2</sub> saved will be even more with our proposed donation collecting solution.

#### **Additional Scope 3 Emissions**

When these items are given to/purchased by the next person, they do not need to purchase a new version of that product. This means that any emissions associated with creating that item again do not get emitted. However, due to the ambiguity, these emissions are very hard to determine, so we have not included these in our Scope III emissions.

Based on the discussion we had on our past assignments, one method to account for these emissions is to find the upper and lower bounds of emissions. This gives us a solid range, one that we know the true number resides in. One such example in our case could be setting the calculation boundaries as cotton t-shirts and small household electronic appliances:

- Total Waste: 29.57 Tons

- Cotton T-shirt

- Cotton T-Shirt Mass = 130 grams<sup>6</sup> -> 0.00013 tons
- Total Waste / Cotton T-Shirt Mass = 227,000 t-shirts
- Emissions<sup>7</sup> (Carbon Emissions Calculator)
  - 568,000.00 kg CO2 28.831.270
  - 3,160 trees absorbing CO2 for 25 years
- Computer Screen
  - Computer Screen Mass = 4 Kg<sup>8</sup> > 0.00440 tons
  - Total Waste / Computer Screen Mass = 6706 computer screens
  - Emissions<sup>7</sup> (Carbon Emissions Calculator)
    - 4,180,000 kg CO2
    - 23,314 trees absorbing CO2 for 25 years

These calculations give us a rough range between 5.68 \*  $10^5$  Kg Co2 and 4.18\* $10^6$  Kg Co2 emitted due to Scope 3 emissions.

#### Sources

<sup>1</sup>Compost totals and overall FY2019 data.xlsx, from Claire Rodgers in the "Eco-Rep" Microsoft Team folder

<sup>4</sup>https://www.sierraclub.org/sierra/2016-2-march-april/ask-mr-green/how-much-carbon-do-trees-really-store

<sup>5</sup> https://ghgprotocol.org/calculation-tools, Emission\_Factors\_from\_Cross\_Sector\_Tools\_March\_2017.xlsx

<sup>6</sup> https://www.hamblyscreenprints.com/weight-of-t-shirt/

8https://remoteworkingwarriors.com/how-heavy-is-a-computer-monitor/

<sup>&</sup>lt;sup>2</sup> Hinh, Karen. Olin's Waste Breakdown by Month. 2019, Olin College of Engineering.

<sup>&</sup>lt;sup>3</sup>Penman, Jim, and Bernt Johnke. "5.3, Emissions From Waste Incineration." Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories, IPCC Task Force on National Greenhouse Gas Inventories, Hayama, Kanagawa, Japan, 2000, pp. 455–468. <a href="https://www.ipcc-nggip.iges.or.jp/public/gp/bgp/5\_3\_Waste\_Incineration.pdf">https://www.ipcc-nggip.iges.or.jp/public/gp/bgp/5\_3\_Waste\_Incineration.pdf</a>

<sup>&</sup>lt;sup>7</sup>http://reutilizayevitaco2.aeress.org/en/

#### **Procedure**

#### Overview

To implement this idea, there needs to be a clear plan of events communicated to whoever is responsible for coordinating the donation process. This person can follow the timeline we have provided below to know when each step needs to take place.

The most important components of coordinating this project are (1) schoolwide communications, (2) purchasing the PODS and other materials and (3) coordinating student employees and volunteers.

#### (1) Schoolwide Communications

Communication to the student body is crucial for this system to work. We have included some examples of emails that you could use in the appendix. We recommend sending the email to all-students as well as staff and faculty as they may have donations to contribute as well. Furthermore, posters with when the donation hours of the PODs should be posted around the school. Finally, the seniors are the most important group to talk to. Try to find time at a senior event to stress the importance of planning early in the move out process and to talk about how the donation pods work.

#### (2) Purchasing the PODS and other materials

A proposed budget can be found in the appendix. We recommend either finding or purchasing 5 large rolling bins and 12 clear, 15-gallon, storage bins (formerly known in the Olin community as "Blue Bins") and clear trash bags to organize the donations within the PODs. There are also posters in the appendix that you should print out and tape to each bin as well as a POD map that shows where each bin should be located within the PODs. We have also heard that Alex has a tent that we could use in case it rains and it would be great to also have a table and chairs for the volunteers. Finally, we also recommend that gloves and snacks are purchased for the volunteers. As well as a meal for the final day before the student team leaves and the staff and faculty volunteers arrive.

#### (3) Coordinating student employees and volunteers

After the initial outreach email is sent out, you will need to select a team of 8 donation reps to stay through commencement and sort the move out donations. Once they are selected, we recommend that you coordinate a meeting to talk more about the responsibilities of the role and give context on the project. Attached in the appendix, the infographic and POD map could be used as visual aids during this meeting. There is also a volunteer sign up sheet that the donation reps could use to coordinate who is taking what shift at the pods to make sure that there will always be 2 reps present.

Once the pods arrive, check in on the reps to see if they feel comfortable managing the donations and make adjustments to the system as problems arise. Early in the process, if the donations are coming in slowly, the donation reps could clean out the West Hall ballroom and the unclaimed East Hall lounge closets as many seniors of past years have hidden items to leave behind there. They should also sort what is left of the freecycle area and create a display that redirects students to the hours of the donation pods and closes off the ability for people to leave things behind in the freecycle area.

The day after commencement, May 16th, you will need all hands on deck as the seniors contribute last minute donations and the student donation reps have to leave as well. This will be the final push to sort all of the items and then to take them to their donation centers. The locations and processes for making each donation can be found in the Donation Collection Places List in the appendix. Some of these processes ask you to schedule a time in advance on when to drop these items off, so we recommend scheduling those times a week before. Finally, make sure that the PODS are empty for when they pick them back up at the end of May.

#### **Timeline**

Late December	Order PODs
Early February	Send email to recruit Faculty and Staff Volunteers
Mid-March	Have a list of candidates to send to StAR for approval for the move-out team
April 1st	Know for sure who is staying late - approved by StAR
Early April	Send email to recruit Faculty and Staff Volunteers
Mid-April	Claire orders the materials from the budget in advance of the PODs arrival
	The pods come April 25-29 and donation bins are purchased and set up by
	the Eco-Reps, volunteers are sent a spreadsheet to sign up for shifts
April 29th	The ECO reps send an email to all students about POD sorting logistics
April 30th	First day of sorting opens with volunteer shifts
May 13th	Last day for 25' - 23' move out
May 15th	Eco-Reps & student volunteers also can volunteer at commencement if
	they wish, priority is sorting
May 16th	Senior and R2 move out time
at noon	
May 16th	Eco-Rep move out time has to be the same as the senior move out time but
at noonish	the R2s could check their rooms last
May 16th	Faculty Staff Student volunteer lunch to transition sorting information
at 1 pm	
May 17th	Schedule pickup times at the donation collection locations
May 17-23rd	Faculty and Staff volunteers take over the final sorting process to empty the
	final donations out of the storage container and drive them to where they
	need to be delivered.
May 25th	The empty PODs are picked up

#### **Funding**

The project will be funded using the Green Initiatives Fund. The Green Initiatives Fund was created by the class of '07 and has roughly \$5,000 a year for sustainability projects. The fund is managed by Claire and has approved us for this academic year. We consider this source of the funding to be a sustainable way to manage our project because the fund is distributed every year and the project is aimed to solve the issues being targeted by the fund. Claire will also be one of the leaders who will be overseeing the move-out process thus she will know if the funds are being used responsibly.

Additionally, we are looking to recruit 8 students who will join us in being donation representatives. We estimate there will be 10-15 hours between April 30th and May 16th. Our plan is to use the Aramark budget of \$1750 to pay the students based on the hourly wages used by Olin:

First-year: \$14.25Sophomore: \$14.75Junior: \$15.25Senior: \$15.75

Our proposed budget is attached in the appendix, but the actual amount spent is likely to be much less than what is proposed. The large rolling bins, storage bins, trashbags, and gloves can likely be borrowed from existing resources at Olin. We recommend prioritizing using existing resources rather than purchasing new ones to reduce the environmental footprint of this project.

#### **Donation Representatives**

The donation reps will be the ones operating and managing the donation process on the ground during the entire move-out process. The group will be led by Claire Rodgers and Evelyn Matsumoto. The main goal of the group will be to cut down on the emissions caused by the end of year move-out by the students every spring. The donation reps will be the ambassadors of sustainability and recycling. The job scope of the donation rep is described below:

- Stay on campus through graduation The bulk of the students take their things to
  donate out on the last day of school before moving out of their room for the summer.
  Thus the students will have to stay through the graduation and help with sorting and
  donating the things being left by students. This also means that we cannot have
  full-time senior donation reps. Seniors are more than welcome to volunteer.
- 2. Distinguish Trash vs Donations One of the big issues at Olin is that students try donating things that can't be reused because they are done with the item. The donation reps will be the ones who will assess the condition of the items being donated before passing it to a donation agency.

- 3. Track and Log donation In order to track the tons of waste being donated and recycled, the donation reps will have to weigh, sort, and neatly organize the items being passed along. This will help develop an idea of how much waste the donation reps are recycling.
- 4. Physically move boxes The organisation process will involve a physical aspect where students will have to move boxes around the recycling pods, and transport the goods to trucks/cars to take to the donation agencies.
- 5. Communicate with the student body about the social and environmental importance of donating and being responsible for your belongings. Being an advocate for sustainability and spreading word-of-mouth about the donation process.

We are looking to recruit 8 students who will join us in being donation reps. Our plan is to use the Aramark budget of \$1750 to pay the students based on the hourly wages used by Olin.

#### **Outreach Plans**

Since this is a student-led initiative, our branding is to be honest but also light hearted. We plan on sending an email to all students in the spring, formally announcing the program and asking for people to sign up to be Donation Reps.

Once the Donation Reps are selected, they could start an Instagram to give tips to students about how to prepare for a mindful move-out process.

Prior to the opening of the PODs, the donation reps will send another email with more details about times that the pods will be open and what can be donated. As well as announcing that the free-cycle will be closing.

We also plan to send an email just to the senior class since seniors are our target audience. Our theory is that seniors are jaded and done with Olin but still care deeply about greater social and environmental issues. Raquel plans on sending the email in the appendix to the seniors that uses a serious but not too serious tone to address how their actions could create social good or harm if they are not mindful of the responsibility for their things.

An email will also be sent to staff and faculty about the program and asking for volunteers after the students are required to leave campus.

Posters should also be made with the official hours of when the donation pods will be open and be placed around the school, especially within the dorms and in the freecycle location.

#### Conclusion

With this plan, we can make a sustainable environmental change in the Olin move out process. Simultaneously we also need a student-led cultural change where the responsibility of what gets left behind shifts from facilities and unpaid volunteers to an organized system that addresses this issue. We can work together to make these changes happen in order to reduce Olin's GHG emissions and do our part in the fight against climate change.

#### **Appendix**

#### **Interviews**

**Evelyn Masumoto** 

#### <u>Master of Sustainability - Eco Champion</u> <u>Volunteer</u>

Academic advisor of the situation - There was a group of students tasked to solve this problem and I was tasked to help give advice on that situation.

This issue is at almost every campus you can find. Her masters were trying to find the bottlenecks in the situations and who has issues with who. Trying to find solutions for that specific campus.

Chadham, University of Pittsburgh, Carnegie Mellon

At the level of Claire, they want to see it get done but it is not their individual job to do it. Having a group where it is in their job description and it is what they are responsible for. Lots of students want to see it happen but there isn't a structure in place to continue it after the students and admins and whoever is there when it happens.

Have one or two hired people to be responsible for this job. Tacking it into the job description of someone who is hired by the college.

Finding someone who really does care about this problem but no one knows whose responsibility it is.

Sometimes there is a summer storage solution for seniors giving away things for freshmen to buy upon arrival in the fall.

Giant goodwill bins that get carted away. Some students leave stuff behind, does that all get thrown away?

Making sure there is someone who will bring the stuff to the thrift store at the end of the moveout process.

#### **Annie Ming Tor**

#### <u>Title: Student - former intern - daughter - sister - female student</u> Stakeholder Group: Student

If Student

Major: E:Product Design - Former Mech-E

Hometown: Pleasanton, CA Graduating Year: 2022 Spring

What is your role in the move out process? Very chaotic, super fast, wasted a lot of things in free-cycle

Had to pack everying thing 2 suitcases to move to Erie, PA - Suitcases were overweight but paid for it anyways.

1 trader joe's bag in Sam's garage

Maia kept a painting

Trash everywhere

Did not sleep the night before moving

Sad to leave the nice trash bin in the freecycle - thinks about it a lot, some clothes, a modsim textbook. Who is taking things from the freecycle at the end?

How do you feel about the move out process?

It happened really fast, really stressed about forgetting things and not knowing where she was packing things.

College students without a car rely on their things to live comfortably.

Didn't want to buy a lot in Erie and was starting a job the next week so it was super stressful and sad that they were leaving their friends. Didn't plan out time to spend with friends.

Do you feel like you can make change in the move out process?

Not at Olin, doesn't know what change to make because everyone's move out is different. A mission would be helpful to advocate for. This year her family will be coming to help her move out and she has a lot more stuff this year.

What would make the move out process better for you?

Planning ahead of time and taking inventory, making sure everything would fit ahead of time. Having a plan for my extra stuff that I wanted to hang on to but didn't have time to find a spot for it.

What is the biggest frustration in the move out process for you? Wasn't able to lift her own suitcases, relied on the help of strangers. Very frustrating. She liked all the stuff she put in free cycle, sad to see it go.

If you could magically change something about the move out process what would it be? I didn't need to sleep for the whole last week of school. Packing the comforter and pillow on the last day. Takes up too much room. Having clothes for the last week.

Free, easy and environmentally friendly to ship anything she wants anywhere!

#### Robert Weschler

#### <u>Title: Volunteer, Artist in Residence, Husband</u> Stakeholder Group: Volunteer

How do you feel about the move out process?

Heard about it through Claire - she was overwhelmed so he went over to help - went over for funzies but then was blown away by how much stuff was left behind.

He was upset that Claire was overwhelmed by it. The first floor lounge was completely full of stuff. An outraged amount of material wealth that was just abandoned. Shocked that it was just Claire left to deal with it.

Helped sort things into piles - 10 humidifiers and 7 water filter pitchers. Totally workable and usable. It was left behind because it shouldn't have been thrown out, but Olin didn't have the infrastructure to deal with it.

A huge bin that was overflowing with shoes from such a small group of people.

A bunch of houseplants were left behind assuming that the staff would water it and it would be taken care of but really they were just going to end up in the trash.

Assumed that with Olin being tiny, it was already handled. Up until then he was really jazzed about the students but this really does create a lot of hate for the students that so much stuff would be left behind. So unthoughtful and antithetical to his experience with students up to that point.

Some parent just told their kid to leave their item in the middle of the common space rather than in the correct spot.

Very hard cutoff date for move out so there isn't a lot of time for students to handle their materials. Too short of a window to move out and not a culture around getting the stuff to the right spot (saying goodbye to friends is more important).

At his residency in Maine, the people there are encouraged to just make their art so they encourage you to just focus on your art and not focus on the move out process. And then they had these crews that cleaned up after them. But it was planned by the institution. No one was being unknowingly exploited and this was the plan and there were people paid to do that.

Olin there is no plan other than the dumpsters. Everyone who was sorting was not being paid to do so. Called around for places to donate things to (school supplies, etc), an animal shelter wanted towels and office supplies. The shelter only needed 2 carloads of stuff, but there was so much more left over.

5-6 dumpsters get filled per year, a metal and a wood dumpster but people just throw things out everywhere. A cultural issue around waste management. Less waste and with more dignity for the planet. Some sort of rehousing space on campus for a material library or thrift shop for stuff. He personally could re-use a lot of the material. Reusing 2x4s and items for specific projects.

When he left college, there were serious penalties for stuff left behind. What is the accounting for it? Since we are small, what can we do about our materials?

This problem just seems wrong. It's so unfair that this was just put on Claire and if she didn't do anything it would just end up in a landfill.

There are people who are willing to do the work and help out here and there - is it a non-financial alumni contribution? Is it a post-graduation party? What is the organizational structure in place? Who are the hired 1-2 students to run the Olin store or put things on craigslist and such. What is the organizational framework? A store, a volunteer run distribution to other nonprofits? How does this pay for itself?

College students are really buying nice stuff, it might be hard to ask them to buy less. Reducing the list of the items purchased for school. A cultural change to not buy more than we use.

Very little of it is actual garbage. A lot of it is still usable. Dave Barrett has been clearing out materials at Edison house this summer. Mostly dumpster but a lot was still really good. How do we make the culture where that kind of waste was frowned upon.

Olin is about materiality and if that is not approached thoughtfully it could be really toxic.

#### Sparsh Bansal

<u>Title: Student - Current Senior - International - He/Him</u> <u>Stakeholder Group: Student</u>

If Student

Major: ECE

Hometown: Delhi, India Graduating Year: 2022

- Senior who has seen the move-out process his first year
  - First-year move-out
    - Store items in the east hall penthouse = 4 x 20 gallons bins
    - Facilities had a spreadsheet to drop things off in the penthouse and the same for picking things back up - (Ashley helped coordinate it)
    - People had enough space that most people didn't get storage units ->
      local students traded bins to help others -> "it was the perfect system"
    - Winter everyone just left their things in their rooms
  - Covid moveout
    - Not too sure why they don't store things "it's so weird they just threw everything out and what for"
    - Forced to leave everything in their room -> facilities moved everything to east hall -> forced to collect everything by May (They were contacted for about 2-3 months about things being thrown after - email sent by Seth)
    - As an international, friends helped them collect things -> "it so confusing how they didn't consider international students"
    - Friends group ended up getting a storage unit
  - Frustrating things
    - No help from facilities we had to buy 100+ bins from the CORE budget for storage -> all of Boston was closed so we really had no options -> no accommodation for international students:((
    - They should let at least first-year stores because they are new to this
- Emails from the past

From: Seth Hodge

Sent: Friday, May 3, 2019 1:34 PM Subject: RE: Hall Closing Information

Our last detailed update on Summer Bin and Monitor Storage.

You may bring your Bins (three 18 gallon bins, or One 50 gallon bin) with secured lids and your computer monitors to the stairwell landing on the 4<sup>th</sup> floor, West Wing of East Hall during the following times. Once in the stairwell, you can check in at the table, get your items labelled, and bring them up one flight to summer storage. Staff members will direct you to the right location to stack your bins and line up your monitors.

We are not accepting any other electronics and are not able to take responsibility for the safety or security of any items stored over the summer. Any items left in attics, stairwells, landings, etc without the official label and without being cataloged will be disposed of. R2's do NOT have access to add things to summer storage.

Date	Description	
Wednesday May 08, 2019	All bins must be removed from class storage	Open 10:00 am-10:00 pm daily by the R2 team
Wednesday May 08, 2019	Bonus early drop off of items to Summer Storage	2:00 pm -4:00 pm
Friday May 10, 2019	First day of general access to Summer Storage	11:00 am - 1:00 pm
Monday May 13, 2019	Storage Access for those leaving after Expo on 13 <sup>th</sup> (afternoon)	2:00 pm -4:30 pm
Tuesday May 14, 2019	Second Opportunity for general access to Summer Storage	2:00 pm -4:00 pm
Monday May 20, 2019	Storage Access for those staying through graduation	9:30 am -11:30 am

#### **Residence Hall Storage**

Students studying away or taking a leave must place all items inside the penthouse in the North Wing of East Hall designated for Study Away. Public Safety and R2s can provide you with access to the penthouse. The penthouse doors should not be left open when you are finished moving. Please secure all penthouse doors and gates when you leave. Do not store your items in class storage areas as these areas will shift at the end of the academic year before you return.

West Hall- Students living in West hall can store approved items in the West Hall West Wing Penthouse, it will remain open through the weekend and will be accessible after that through the R2 on call based on their availability. If you need access please plan in advance and coordinate with the R2

East Hall- Students living in East hall can store approved items in the East Hall North Wing Penthouse. This penthouse has two storage sections. The front section (which was formerly study away/LOA) is still locked awaiting a final clean up of broken glass and garbage left in there. Once cleaned out, it will be opened. The back half (which is currently available) has an entrance against the left wall, it will remain open through the weekend and will be accessible after that through the R2 on call based on their availability. If you need access please plan in advance and coordinate with the R2

**Study Away/LOA**- students currently on study away/loa can store appropriate items in West hall East wing storage, students should work with STAR staff to coordinate access to this space.

#### Krishna Suresh

#### <u>Title: Student - Current First Year - Only Child - He/Him</u> <u>Stakeholder Group: Student</u>

If Student

Major: EC

Hometown: Cincinnati, Ohio

Graduating Year: 2022

- First-year who has only seen one move in drove to college w/ parents (14 hours)
- Timeline before move-in
  - Procrasted and started packing one week before move-in (3 of the blue boxes we were given during move-in)
  - Used the Olin packing list from the Olin website
  - Bought a lamp after move-in didn't know anything about the freecycle in East hall until the hiking trip

- Knows a lot of first-years who were very surprised by the freecycle because no one knew about it
- If he knew about the freecycle definitely would have rescued a lamp
  - If I knew about the freecycle from back home might have not bought some things if I found them in a catalogue of things to be reused (bathroom hampers, things-you-would-thrift)
- First-year impression no summer storage

#### Seth Hodge

Title: Resident Life Coordinator Stakeholder Group: Staff Seth background:

- 1. Worked as resident life coordinator
  - a. UC Santa Cruz
  - b. Clemson
  - c. Emerson
  - d. San Jose

#### Move out interview:

- Occurs over a two week period (one time for returning and one for graduating)
  - Issues
    - people 'move-out' defers for people (exam season)
    - Commencement most important event for students + parents can't have dump around during this period
      - Places to be clean -> public space, lounges (1st level), hallways
      - No dumpsters can be seen from the tent
    - Fire issues all the dumb together is basically a bonfire setup
      - Fire marshal is onto Olin due to lofts, past summer a stretcher could not get through
    - Conference Right after commencement used for conference + events (big money)
    - One parent could not access rooms because of the 1st floor lounge mess
    - People need to understand what can be recycled/donated vs thrown ex half eaten food, mattress toppers (people still leave it because they think it can be recycled)
    - Nobody takes anything from freecycle -> "why would they it's move out"
    - Seniors leaving things because they are leaving college
    - Janitorial staff is under appreciated
    - Big furniture being left behind in the suites -> its hard to donate because all of boston is donating items at the same time to good will
  - Solutions
    - Big bins behind East Hall to store things can be closed so it looks tidy

- Brainstorming session to think about solutions
- Olin tour w/ Seth to explore places
- Having signs for freecycle to sort things as they come in
- Summer storage something that comes and picks up things from campus (Cube something Seth will get back on this)

#### - Misc

- No dates scheduled yet -> too many variables still unknown to plan the full move-out
- Didn't explicitly say anything about summer storage but sounded like a
- Move-in emails -> trying to cut down on people bringing things in
- Job scope landlord vs student life and take care of our well being
- Ideal situation 'broom-swept room', place to freecycle in a clean manner, throw or donate things as needed
- Bigger schools have more space -> not the same issue because commencement + storage places don't overlap
- Wants to have a brainstorming session on this project
- Wants to walk around to look for where to put a pod
- Has to be in a closed bin to look tidy
- He doesn't like free-cycle because it looks messy
- At the end of the year it just looks like trash
- Making sure hallways are clear for stretchers
- Other schools were much bigger so the move out mess was not where graduation was happening

#### Alex Balestieri

Title: Resident Life Coordinator

Stakeholder Group: Staff

Title: Customer Response Manager - Catch all and a bunch of other stuff - Making sure that everything gets done and listening to people on why they didn't get done and then making sure it gets done. Handling work orders, event setup, mailroom.

Stakeholder Group:

What is your role in the move out process?

Checking rooms - making sure it's all in decent shape, getting everything turned over for camps, helping claire with the donations,
Getting ready for the camps.

#### Been through 7 move outs!

The donations really started when Claire started. Before then he was just in the mailroom. We might have just been throwing everything away. Very little recycling.

How do you feel about the move out process? \*shrug\*

Not sure how it could be improved but he could point out a million things in the moment about how it should be changed. A lot of students don't know what can be donated. Students don't understand the scale of work for other people by not throwing things away correctly.

- Miscommunication between what the students think is happening with the trash and what is actually happening

Things that no one wants - Old/broken monitors, half used toiletries, pillows - anything that can't be washed and cleaned

Do you feel like you can make change in the move out process?

Better communication between all the groups involved. Sitting down with all the students in the auditorium and going through what you can and can't donate. People will always ignore the signs.

Some Oliners have a mentality that "if it doesn't directly affect me then it doesn't matter" Fines have never been enforced for leaving your room trashed. Getting people to understand that there is a person on the other hand that is dealing with what you don't want to deal with.

Are we doing a disservice to the student by not having repercussions for trashed rooms? How do we encourage the students to leave rooms in the state that they found it.

Freecycle - it's the worst thing that has ever happened, it just becomes a dumping ground at the end of the year. Most of it is just crap

Pods for sorting/storage is a good idea but there is a cooler company that comes and gets your stuff for you. Someone purchased this service and the CEO came to pick it up himself and brought it to a storage facility. Take a picture of your stuff and they come to pick it up. He might be able to find it in Boston

Storage is a problem here, it has looked like that forever. Seth cleaned out the penthouses in West Hall and they were labeled and cataloged.

#### **Claire Rodgers**

Title: Resident Life Coordinator Stakeholder Group: Staff

- Email sent from student life to 'hey come to pick ur stuff' with a deadline
- All the stuff was left in the north suite -> the stuff that didn't get moved was taken to the bike room
- Alex was not being treated properly -> students have had a chance to grab their stuff but they didn't -> so at some point we need to get rid of the stuff (happened last

summer)

- Alex and Claire worked extra to donate the stuff but it got out of hand
- Now that we are giving stuff back and giving more chances -> it is kinda being disrespectful to the staff
- Stakeholders students, student life, facilities
- Suggestions
  - interview Alex on how to go about the process
  - Aramark is technically a contractor so have diff values (sustainability is a value that they don't have in mind that's fair tbh)
  - there is no top-down mandate to how to go about the move-out plan
  - Suzanne can help compare to the past at Olin
  - Evelyn help us compare to other colleges and see how those plans went
  - Grad Bag -> it worked a little before but not sustainable
  - "a framework would be good" (not a 20 pager)
- Seth "don't want stuff in the common room" hehe fire code ofc
- The bins didn't work in terms of transportation between BOW -> physical thing would work -> why not a fixed 'dumb' on campus
- Last ECO -> swap-box in the bike room or east hall penthouse

#### Aramark:

- Facilities (around 20 21) paycheck comes from Aramark:
- Tom, Claire, James, Alex, Will, (Custodial 9-10 members), one person in the mailroom,
- 5 year contract -> scared of losing job -> ends next June
- Might change from Aramark

#### James Ho

Title: Senior Student

Stakeholder Group: Students

If Student

Major: MechE

Hometown: Seattle, Canada Graduating Year: 2022

- First-year normal moveout (long before covid)
  - Given 3 storage bins -> given a lot of time to move things from room to the penthouse in the west hall
  - People in charge: Seth and the person before him
  - Complains -> having to the move it was a hassle (boxes were heavy)
- Move in freshman year
  - Packing list: essentials + cleaning stuff
  - Olin sent out a list of tools to buy (desnat tools) (never got used)
  - Intentionally packed light but a lot of friends had the issue of overpacking
- Covid moveout
  - 3 days "very disorganised" "told to just get out" -

- Lofts had to be disassembled in the three days given
- Given storage bins to be left in rooms -> idea was to grab the stuff later over the summer (they changed the deadline 3 times to help accommodate)
- If you couldn't fit something in the box it was thrown away -> couch and furniture, laundry baskets, -> given a chance it move but it was 2 weeks
- Brent -> came all the way here to pick up his stuff and other friends (from cali)
   -> moved everything to a storage place (3 trips) 30 mins (UHual for the trips)
- People came to campus to grab things but it was not organized and so people kept missing things
- Facilities left the boxes in the hallway and people had to grab it when they came to campus (study away storage was different) -> facilities tried organising it but it didn't help
- Things to change
  - Kelly worked on a p&m project on this -> a lot of first years bought a lot of incoming waste -> senior already have the stuff but first-years didn't know about the senior things left behind (Kelly is good resource)
  - Senior move out excel sheet -> made by seniors for Olin (can get from Kelly)
  - James Hire people to move stuff if unlimited money and power
  - Brent create a log of stuff being left behind rather than just boxes
  - Brent if no summer storage this year, Olin could partner with a storage place (get some coupons), or at least resources to help students move-out

#### Suzanne Alcott

Title: PGP

Stakeholder Group: STAR

Planned interview: Tuesday 19th, 2021 (During class)

What is your role in the move out process?

Was fascinated by it. She is a bargain hunter, Since she is in STAR, she heard about it through the other staff members. has found some good finds from the move out waste. She took a bench that someone made and used it a bunch of times and it is not the base of the mini pantry in downtown Needham. She has used the hangers for PGP's closet and for her daughter's college packing. She has taken great cleaning supplies. There are other staff that might want to go through the stuff as well if it is organized nicely like the admissions clothing swap. Suzanne and Sally have sold the books through online book stores and then donated the proceeds to the library.

Washed and donated all of the graduation gowns during covid.

Other schools are worse and more messy in the cleanout process. Change the culture of not bringing as much and then leaving it all behind.

How do you feel about the move out process?

Having had 3 kids in college, other schools do it very differently. Always surprised and saddened by everything left behind. It's not organized well, but there is a lot to get done and not a lot of facilities crew to move it all in place.

What happened at the other schools?

Wagner college - packed up the car and everything felt normal except for senior year after graduation. She was appalled by what she saw. Just the trash she had accumulated in her room was hard to find the dumpster to put away.

Everyone else hasn't graduated in normal times yet. Apartments vs dorm move out.

Most people don't know the move out process that there are a few facilities people that have to deal with that.

Do you feel like you can make change in the move out process?

What would make the move out process better for you?

More places to log and keep stuff. Those big bins are difficult to get stuff out of them and they create more of a mess by just throwing stuff in. Smaller bins or maybe a process of putting things away nicely. Specific instructions on how they should be washed or cleaned or folded. Having a waste bin nearby. Hanging racks to hang clothes. Specific bins for certain items. Do you poll the students to find that out?

OCM dorm supplies - college dorm essentials from grad bag

Staff and alumni might be able to donate a few hours to organize and get free lunch. Students could totally donate their guest swipes on the .

We have a sorting problem, it's either going to happen during the moment or at the end.

Could the clothing swap be sooner? Freecycle?

Could we regularly collect clothes for shredding? Look into services that do it. What are the things that people don't want and what do we do with them?

Specific solutions for items in high quantities. What is the flowchart with what items are common and need to be donated?

There is no economic calculation for recycling as an individual household and yet we still do it. Double down on what are the non-economic values to do this. It is hard to find what will have the most impact but the volunteers are the main component if we want to sort all the things. Reducing hours spent for volunteers could have voluntary transfer. Feel good value.

Have oliners leave the hangers in their closet and then tell people not to buy hangers in the fall.

### Budget

Item	Quantity	Unit Price	Total Price	Links
PODS	2	\$189.56	\$379.12	https://www.pods.com/
74 qt. Weathertight Tote Clear Storage Bins	12	\$32.99	\$395.88	https://www.containerstore.com/s/s torage/Boxes/clear-weathertight-tot es/1qd?slug=storage&slug=Boxes&s lug=1q&productId=10026213
Large Rolling Bins	5	\$357.02	\$1785.10	https://store.schoolspecialty.com/OA _HTML/ibeCCtpltmDspRte.jsp?minis ite=10224&item=14737354 or https://www.texontowel.com/p/dand ux-extra-duty-laundry-trucks/
Gloves	2	\$8.39	\$16.78	https://www.target.com/p/nitrile-exa m-gloves-50ct-up-38-up-8482/-/A-8 0813611?ref=tgt_adv_XS000000&AF ID=google_pla_df_free_local&CPNG =Health&adgroup=245-7
Clear Trash Bags	1	\$12.49	\$12.49	https://www.target.com/p/hefty-recy cling-clear-tall-kitchen-drawstring-tr ash-bag-13-gallon-60ct/-/A-7566833 9#Ink=sametab
Heavy Duty Shipping Scale	1	\$45.98	\$45.98	https://www.amazon.com/Accuteck- Digital-Industry-Shipping-ACB440/d p/B00LPUZPII/ref=sr_1_3?crid=3CEC DC04EE0YR&keywords=heavy+duty+ shipping+scale+for+packages&qid=1 639354681&sprefix=heavy+duty+shi pping+scale%2Caps%2C180&sr=8-3
Team dinner	1		\$100	
Snacks			\$50	
Student Employees	8 students, 10-12 hours each	\$14.25-15.75 /hour	\$1750	Aramark Budget
		Total Budget	\$2,785.35	And ~\$1,750 from Aramark

#### **Donation Collection Places List**

Organizat ion Name	Location	Service	Drop Off Hours	Notes
Needha m Commu nity Council	570 Hillside Avenue Needham, MA 02494	Local food pantry and thrift store Clothing, Accessories, Kitchen Items, Linens, Decor Pillow, Dishware, Utensils, Home Decor, Pots & Pans, Holiday Items, Jewelry, Small Kitchen Appliances, Artwork, Mirrors, Small furniture, lamps	Mon & Fri: 10 am-4 pm Tues & Thur:10 am-7pm Saturday: 10 am - 2 pm	3 bag donation limit. Dirt to Shirt has connections here. Donations must be good quality and dropped off during their donation hours
Pickup- My-Dona tion	-	Focus on donating to local thrift stores	Comes to Olin	Need to submit a request based on the items we collect
Fresh Start Furnitur e Bank	16 Brent Dr Hudson, MA 01749	Focuses on home goods and appliances	Saturday: 8:30 - 10:30 (donations)	On a much smaller scale compared to the rest - don't offer pick up
Habitat for Humani ty ReStore	310 Pond St, Ashland, MA 01721	Hand tools, pvc pipe, unopened paint, books, movies, cds, plywood, unopened LED bulbs, home decor, sorted nails & screws, wooden furniture, area rugs, small appliances, building materials	Wednesday – Saturday at the donation drive-thru between 10 AM and 4 PM	
The Salvatio n Army	115 Rumford Ave West Newton, MA, 02465	Household goods, clothes, furniture, appliances,	Comes to Olin	Need to upload an itemised list of the goods collected to their website to get a scheduled pick up from  The next available collection slot is 28th December

				so we have to plan early
Make and Mend	26 Horace St. Somerville, MA 02143	Craft supplies, yarn, stationary, craft books	Thursday, Friday + Saturdays from 10:00-2:00pm https://makea ndmendshop.c om/products/d onate	They pick up donations from 10 miles from Boston, or you can mail the donations or drop off in Somerville
Play it Again Sports	108 River St Waltham, MA 02453	Sports and exercise equipment, bikes, snow gear baseball & softball, volleyball, ice and field hockey, lacrosse, bicycles, winter sports, and soccer	Sun: 11AM-5PM Mon: 10AM-7PM Tue: 10AM-7PM Wed: 10AM-7PM Thur:10AM-7PM Fri: 10AM-7PM Sat: 10AM-6PM	There is also a Dedham location
Animal Rescue League of Boston	55 Anna's Place, Dedham MA 02026	Dog and cat toys, towels, sheets, laundry detergent (high efficiency), dawn dish soap, hand soap, bleach, windex, sponges, pens, sharpies, expo markers	Tuesdays: Open by appointment 2pm-6pm Wednesday-Su nday: Open 1pm-6pm	Contact info dedham-adoption@ar lboston.org   (617) 426-9170
FreeCycl e.org	Online	Anything	All the time	List items online that Needham Community members might want
Needham Buy Nothing, Facebook Marketpla ce.	Facebook Groups	Anything	All the time	Post on facebook marketplace or in Needham local groups, it may take a day to get approved to join the private groups
Goodwill Donatio n Sites	Veterans of Foreign Wars, Lewandas, or Acapulcos	Clothing	Drop off bin	We are unsure if these are current donation sites but there might

				be a bin in the parking lots there.
Circle of Hope	1329 Highland Avenue, Needham, MA 02492	Gently used T-shirts (long and short sleeve), Sweaters, Sweatpants and sweatshirts, Jackets/coats, Winter boots and sneakers, Leggings, Athletic wear, New reusable face masks for adults and children, Unopened hand soap and sanitizer, unopened toiletries	Schedule a drop off time https://www.sig nupgenius.com/go/10c0d49aeae 2ba0ffce9-dona tion	Only takes 3 brown bags, donations go to people experiencing homelessness
Gradbag		Bed lifts, desk organisers, shower caddies, over the door hooks, book ends, and small storage containers, Comforters and blankets, Desk lamps, power strips, surge protectors, and window fans, plastic hangers, sheets & towels, Small rugs, laundry bags, alarm clocks, bulletin boards	They pick it up	Claire knows them
Baystate Textiles	17 Joseph St, Kingston, MA 02364	Any quality clothing, shoes, linens, comforters, pillows, stuffed animals, towels, hats, accessories, totes, duffel bags. NO foam mattress pads or rugs!	We are getting a trailer at Olin for donations and they pick up donations weekly	Suzanne Alcott is organising this

#### **Emails**

#### **Donation Reps Search (Early February)**

Hello folks,

Welcome back to school! Hope everyone had a great and relaxing winter break. We know that the semester is just starting, and moving-out is the last thing on your mind right now. However, we wanted to email with an opportunity for students to become a paid Donation rep. Every spring during the move-out period, there is a lot of chaos caused by students trying to donate / recycle / and getting rid of things.

The move-out every year causes <u>20 TONS</u> of waste (Check out this infographic for more perspective on the waste caused by move-out). As donation reps, you will be working towards sorting the things being donated by your peers in an organized manner so that it can be donated to the ones in need. The basic job scope is layed down below:

- 1. Help sort and track things being donated by students during move-out
- 2. Transport things to donation agencies
- 3. Stay on campus until May 16th (Housing will be provided)
- 4. Paid using the same breakdown as student employees at Olin
- 5. Please reply to this email with any questions you have! We would be more than happy to answer. We will be joined by faculty and staff too to help in the process!

Best Regards,

# All Students (Informing about move-out process) - 3 weeks before move-out

Hello students,

Hope everyone is doing well and hanging on as the academic year comes to an end. Projects, finals, and other commitments are definitely starting to pile on thus we are here to make life a little easier for the students.

This year we will be bringing donation pods to Olin during the move-out process! (Check out this infographic to see how much waste is caused by the move-out every year). The main purpose of these pods is to make the donation process as easy as possible for the students. The donation pods will be managed by your very own donation reps! These pods will be a place to bring everything you want to donate and our team will take care of the rest.

The map below shows where the pods will be placed. We will have the pods on campus from the \_\_\_ to graduation. Please bring your things down between \_\_\_ and \_\_\_ so that our reps can sort them in the respective containers.

Good luck on the final few weeks of school!

#### All Senior Email - Sent by Raquel

**Hey Seniors** 

Over last semester I was working on a project in environmental consulting that calculated the environmental impact of move-out waste produced at Olin every year. When the seniors move out in May, Olin produces **3 times as much trash**, this is close to 20 tons of trash that is mostly made by seniors. In Needham, this trash is incinerated and releases over 20 tons of CO2 into the atmosphere and this amount of waste is produced every year.

While this is hard to hear, all hope is not lost, and through our research we were also able to find a plethora of solutions that could help us to lower the amount of waste produced at the end of the year. It is your job as seniors to lead by example and make the change to create less trash at the end of the year.

Here are actionable things that you can do to reduce your environmental impact during move out:

- 1. Start planning early! I cannot stress this enough, but in the end, if you do not plan, everything will end up in the trash as we live in a society where trash is the default option. If you leave anything in your room or in a lounge after graduation, it will be thrown away.
- 2. Sell/give what you can to underclassmen. The best way you can reduce Olin's trash is to reduce the need for students to buy new things. Selling items to other students creates a circular economy within the Olin community where items can be passed down over the generations instead of being thrown away and the economic wealth stays within the community instead of being syphoned off to corporations. You can use <a href="this spreadsheet">this spreadsheet</a> to add all the senior items in one place.
- 3. \*\*NEW\*\* Donate your items at the Olin Donation Pods. As a part of this class, we have developed a new system for collecting donations at the end of the year that best fits the needs of the students, staff, and facilities team. The PODs will open in May, and there will be specific times announced where you can bring your donations to the pods outside of East Hall where they will be vetted and sorted by paid student employees. The donations will be going to Gradbag, Habitat for Humanity ReStore, circle of hope, and other great organizations. Primarily, the donations will go to Gradbag which is an incredible local organization that makes college care packages, to further a cycle of college materials while promoting equity.

I've always been inspired by your class's dedication to activism, social and environmental justice, so I am asking you to act to help us in a student-led cultural change to reduce Olin's move-out waste.

Your Comrade Raquel

#### Staff & Faculty Volunteer Email

Hello Staff and Faculty,

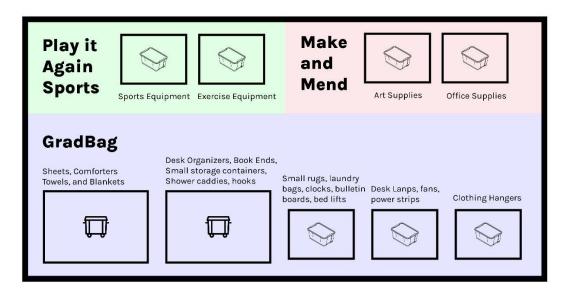
Students as a part of the Environmental Consulting class at Olin a group of students have developed a plan to organize the end-of-year move-out donations and could use your help! We have put together a new process where the items will be sorted in storage PODs as we receive them. Attached is an infographic that explains more about our research and the process.

Since the students have to move out on May 16th, we need your help with sorting the final rush of donations and then in bringing the donated items to the donation centers.

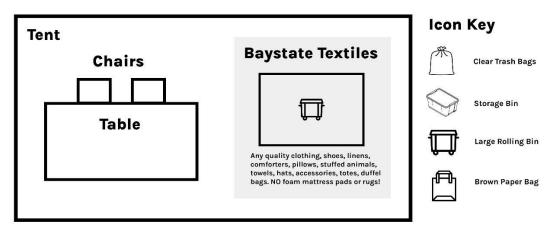
Please reply to this email if you are interested in volunteering in the donation process!

Best Regards,

## **POD Donation Layouts**







# Donation Rep Guide 🎢 🚫







## **Opening Shift Guide:**

In the first shift, open up the PODs, set up the scale, open up the donation tracking sheet on a laptop and place the POD Donation Layout Map on the table. Send out an email, discord or insta post that you are open and wait for students to bring their donations. If anyone had left any donations overnight, please vet and sort those items.

## Step 1: Vet the Items

When a student comes to you with their donations, go through each item and check that it is of respectable quality and if it is a type of item that we are collecting for donations. If any part of it is broken or falling apart, tell them that they need to throw it away or find it another home.

## Step 2: Weigh the Items

Tare the scale with the bin on it and then place all of the vetted items into the bin. Record the weight of all of the items donated in the spreadsheet. It doesn't matter what is being weighed, we just need a total weight of all of the donations in the end.

## Step 3: Sort the Items

Next use the POD Donation Layout Map to find the right bin for each item that has been donated. If there is a line of students donating their items, you can place them in the sorting area. If a bin is full, try to find another bin to store more items on top of the full bin.

## Step 4: Tidy Up

Use the downtime inbetween students to sort the items in the sorting area and organize the items within each bin. Make sure there is a clear pathway to walk to the back of each POD and that there are no items outside of the PODs. You can also bag the Baystate Textile donations and bring them to the designated trailer.

## **Bored? Clean Other Spaces at Olin**

Check the freecycle area to see if anyone has left anything there instead of bringing it to the PODs. You can also organize the unlabeled East Hall lounge closets or the ball room to find more donations. Feel free to brainstorm and try out new ways of encourage more people, especially the seniors, to donate in advance of the final move out day.

## **Closing Shift Guide:**

At the end of the day, return the scale, papers and Baystate Textiles bin to the PODs and lock the door.

# Volunteer Sign Up Sheet

Shift Day/Time	Person 1	Person 2	Notes
April 30th, TBD 2-hour	Everyone	Everyone	First day of sorting
May 1st, TBD 2-hour			
May 2nd, TBD 2-hour			
May 3rd, TBD 2-hour			
May 4th, TBD 2-hour			
May 5th, TBD 2-hour			
May 6th, TBD 2-hour			
May 7th, TBD 2-hour			
May 8th, TBD 2-hour			
May 9th, TBD 2-hour			
May 10th, TBD 2-hour			
May 11th, TBD 2-hour			
May 12th, 12:30-3			1 day before '25-'23 move out
May 12th, 3-5:30			1 day before '25-'23 move out
May 12th, 5:30-8			1 day before '25-'23 move out
May 13th, 12:30-3			'25-'23 move out day
May 13th, 3-5:30			'25-'23 move out day
May 13th, 5:30-8			'25-'23 move out day
May 14th, 12:30-3			Day before commencement
May 14th, 3-5:30			Day before commencement
May 14th, 5:30-8			Day before

			commencement
May 15th, 3-5:30			Commencement
May 15th, 5:30-8			Commencement
May 16th Start at 9 am	Everyone	Everyone	Student to staff volunteer transition lunch at 1 pm. Students must move their things out of their dorm by noon.

## **New Posters**

Gradbad Posters can be found in the Canvas Files



Working small appliances and clean furniture only!

#### **Appliances**

#### Less than 8 years old:

- Cook Tops
- Dishwashers (never installed/certified lead free)
- Dryers
- Microwaves
- Refrigerators
- Small Appliances
- · Stoves (free-standing)
- Washers

#### **Architectural Items**

- Columns
- Mantles
- · Stained Glass Windows

#### **Automobiles**

Donate your old car, truck, boat, RV, motorcycle or other vehicle (running or not!). Call 1-877-277-4344, or visit the Cars for Homes website.

#### **Building Materials/Tools**

- Garden Tools
- Lawn Mowers
- Lumber (drop off only)
- · Nails, Screws, etc.
- · Power Tools (with safety guards)
- Shingles (new only; quantity of ten bundles or more)
- Snow Blowers

#### **Cabinets**

- Bathroom Vanities
- Kitchen Cabinets (all hardware intact)
- Medicine Cabinets

#### **Doors/Windows**

- Doors (All types, new)
- · Shutters (interior and exterior)
- · Windows (new/never installed)

#### **Flooring**

- Engineered Flooring
- Hardwood, Wall and Floor Tile (100 sq ft minimum)
- · Linoleum (new only)
- Rugs

#### **Furniture**

- Bed Frames
- Buffet Servers/Sideboards (as part of set)
- Bureaus/Dressers/Clothing Armoires
- Coffee/End Tables
- Conference Tables
- Decorative Clocks
- Desks (3' x 5' or smaller)
- File Cabinets
- Framed Mirrors
- Head/Foot Boards
- Outdoor Furniture
- · Tables and Chairs
- Upholstered Furniture (not ripped, worn, broken or faded)

#### **Hardware**

- Cabinet/Door Knobs
- Electrical Hardware
- Locks
- Hinges
- Window Hardware

#### **Home Decor**

- Artwork
- Books
- Cutlery
- Decorative Accessories
- · Dishes, Pots/Pans
- Glassware
- Shades/Blinds
- Vases
- Wall Hangings

#### Lighting

- Ceiling Fans/Lights
- · Chandeliers/Pendant Lights
- Desk/Floor Lamps
- Lights

# MAKE@Mend

# **Donation Bin**

Clean and Reusable Arts and Craft supplies only!

# The Knit-ty gritty!!



#### Art + Craft

pencils, colored pencils, markers, drawing pens (please no basic or branded pens), erasers, sharpeners, acrylic paint, oil paint, watercolor paints, paintbrushes, clean canvases, pastels, charcoal, crafting clay, ink and ink pads, printmaking tools, calligraphy tools, hand tools, scissors, cutting mats, beads + jewelry making supplies, art storage containers, cigar boxes



#### **Fibers**

thread, knitting + crochet tools, sewing needles, aida cloth, fabric (larger than 10" x 10", please no scraps!), elastic, zippers, leather, pins, lace, hemp, embroidery floss, rotary cutters, scissors, stencils, yarn, patterns (modern + unused), vintage and modern notions and tools



#### Stationery

watercolor paper, craft paper, scrap booking paper, wallpaper (samples), sketchbooks, notebooks, stationery, envelopes, post-it notes, glue, tape, memo books, rulers, cards, stamps, stickers, ink pads



#### Rooks

art related books, coloring books, sewing books, vintage books + maps, collage materials, vintage magazines (please no modern craft magazines), handmade books and zines



**New** and **Gently Used** towels, sheets, and blankets.





#### **DOGS & PUPPIES**

- · Kongs (all sizes)
- Training treats
- Pill pocketsPeanut butter
- Toys (squeaky, rope & plush)
- Food puzzles
- Leashes
- Poop bags
   Kuranda dog beds



# CATS & KITTENS • Cat toys

- Cat nip
- Treats
- Pill pockets
- Cardboard scratching posts/pads
  Grooming tools
  Brushes

- Cat litter (non-clumping)
- Cat Beds



- Food (rabbits, guinea pigs, rats, birds, etc)
   Chew toys and treats
   Carefresh bedding
   Bird toys
   Hidey houses
   Corner litter boxes

- · Heavy ceramic food bowls



- · Black rubber bowls/feeding tubs
- Water buckets
- Pitchforks
- Wheelbarrows
   Brushes



## **COMMUNITY OPERATIONS**

- Trucatch traps
   Canned cat & dog food

#### MISC.

- Towels, sheets, blankets (new/gently used)
   Laundry detergent (high efficiency)
   Dawn dish soap
- Hand soap
- Bleach
- Windex
- SpongesPaper towels
- Pens, sharpies, expo markers
- White copy paper
   Gift cards (petco, gas, grocery)



Quality and Used sports equipment



#### **Shop Gear**

Baseball & Softball

Golf

Ice Hockey Skates

Ice Hockey

Lacrosse

Soccer

Downhill Skiing

Football

Snowboarding

Exercise & Fitness

Racquet Sports

Winter Outerwear

Disc Golf

DISC GOLI

Bicycles

Ice Hockey Goalie

Inline Skates

Water Sports

\_

Cross Country

Track & Field

Basketball

Wrestling

Accessories

Footwear

Field Hockey

Skateboards

Ice Hockey Sticks

Motocross

cles Camping & Climbing

Wetsuits

Athletic Apparel

Boxing

Martial Arts

Street Hockey

Hunting & Fishing

Volleyball

Toys & Games

Broomball & Curling

Spirit Wear

Rugby

Paintball

#### We Buy, Sell and Trade Top Brands

Adidas
Axe Bats
Champro
Evo Shield
Louisville Slugger
Nike
Tanner Tees

All Star Baden deBeer Franklin Marucci PowerNet Under Armour

Allison Badger Sportswear Demarini G-Form Miken Rawlings Wilson Augusta Bownet Easton Lizard Skins Mizuno Rip-It Worth



Brand new and casual clothing in **excellent** condition.



Circle of Hope is a nonprofit organization based in Needham, Massachusetts. The mission of Circle of Hope is to provide homeless children, women, and men in Boston and Metro West with clothing and necessities in order to preserve and enhance overall health and personal dignity. By continually providing seasonally appropriate clothing, shoes, linens, and basic toiletries to 26 carefully vetted homeless shelters and clinics, Circle of Hope gives the most vulnerable members of our community the opportunity to protect themselves from the dangers of illness and disease that come from being homeless in New England. When the COVID-19 pandemic erupted in Massachusetts in March 2020, Circle of Hope immediately pivoted toward disease prevention. Last year, Circle of Hope gave brand new clothing, hygiene essentials, and PPE to 24,000 people experiencing homelessness. Read more about Circle of Hope...

#### NEW DONATIONS WE ACCEPT

- New reusable face masks for adults and children
- Unopened hand soap and sanitizer, unopened toiletries (shampoo, conditioner, body wash, body lotion, deodorant, feminine hygiene products, toothpaste, toothbrushes)
- Fully-assembled COVID Kits, Welcome Baby Bags, and Dignity Bags
- New sheets, comforters, and towels
- · New underwear and socks for all ages
- New casual clothing for all ages and sizes, including T-shirts (short and long sleeve), sweatpants, sweatshirts, jackets, sneakers, baby
  clothing, coats, winter boots, leggings, and athletic wear.

For the months of October and November, in addition to accepting brand new items, we will accept donations of gently used casual clothing in excellent condition for all ages. We can accept no more than 3 paper grocery bags or white kitchen trash bags of gently used clothing per drop-off. No black trash bags, please. There is no bag limit for brand new donations.

#### GENTLY USED DONATIONS WE ACCEPT

- T-shirts (long and short sleeve)
- Sweaters
- · Sweatpants and sweatshirts
- Jackets/coats
- · Winter boots and sneakers
- Leggings
- Athletic wear

#### DONATIONS WE DO NOT ACCEPT

- Button-down shirts
- Dresses
- · Business clothing/formalwear
- · Out-of-season clothing
- Used socks or underwear
- Items with tears, stains, missing buttons, broken zippers
- Bathing suits

## Infographic

# Move-out Waste at Olin College

In 2019, Olin College produced 3x as much trash in May, compared to prior months. This is due to students moving out of the dorms.

To reduce Olin's carbon footprint, we are proposing a system to facilitate the donation process in order to divert more move-out waste from landfills.

90%

of what is left behind is from graduating seniors

# Donations from 2019 in Numbers

797 hangers



118 sheets + blankets



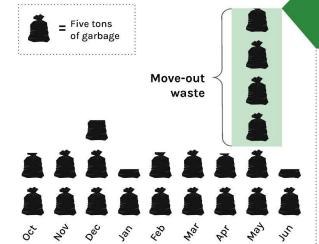
48 desk organizers



725 lbs of clothing



## Olin's Trash in FY19

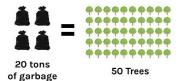


Hinh, Karen. Olin's Waste Breakdown by Month. 2019, Olin College of Engineering

We have the potential to divert 20 tons of waste from landfills.

## CO<sub>2</sub> Emissions

20 tons of incinerated garbage results in 20 tons of CO₂ emissions.¹ This is equal to 50 trees growing for 25 years to offset the emissions.²



1. https://www.ipcc-nggip.iges.or.jp/public/gp/bgp/5\_3\_Waste\_Incineration.pdf 2. https://www.sierraclub.org/sierra/2016-2-march-april/ask-mr-green/how-much-carbon-do-trees-really-store

# **Proposed Donation Process**

A student brings an item to donate to the pods Donation Reps determine what can be donated Donation Reps sort the donations in the storage pods

Donations are brought to donation centers















Made by Raquel, Stella, and Sushmit

