

COMPOST CONNECTIONS



How can we encourage more household composting among off-campus students?



A report by the Spring 2025
Practicing in Food Systems class
ENV 190/ANTH 159

WHO WE ARE AND WHAT WE DID

- We are a group of students taking ENV190/ANTH159 (Practicing in Food Systems), a practicum course for students in the Food Systems & Nutrition minor as well as others interested in food studies and sustainability issues. See next slide for names.
- In this year's iteration of the course, we talked in depth about what has worked in the composting environment (including at Tufts), speculations, and projects that have either worked, failed, or fallen somewhere in between.
- To gain some experience with a real-world project, we designed a six-week program called “Compost Connections” to encourage composting by off-campus student households, supported by free kitchen bins, bags, and guidance about what, where, and how to compost.



All photos by Cathy Stanton unless noted otherwise.

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We are grateful for information and support from:

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- **Amy Donovan, Franklin County Solid Waste Management District**
- **and the SPIRIT Fund, Office of Undergraduate Education, for funding our final pizza party with project participants**



Back of house tour at Dewick-MacPhie

GOALS

- Overall, we wanted to foster more composting by Tufts students in the present and future.
- More specifically, we wanted to get a sense of whether juniors living in off-campus housing would compost (or compost more) if given materials and guidance about how to connect with composting facilities on the campus.
 - We focused on juniors living off-campus for two reasons: (1) they are farther away from the on-campus resources for composting (primarily the collection bins around campus) and (2) they will be at Tufts for at least one more year, so new learning and habits fostered through this project can have some continuity.
- As the project developed, we also began thinking of ways that we could support conversations and critical questioning about composting and organics recycling in general (for example, the advantages and disadvantages of aerobic vs anaerobic methods).

SIGN-UP SURVEY AND GRAPHICS

To attract sign-ups, we created a logo and poster that we posted around campus and shared with our own contacts and people in aligned networks. The poster linked to a brief [sign-up survey](#) to help us assess participants' eligibility. The info included the number of people in a household, location (Medford or Somerville), and whether a participant or housemate plans to be enrolled next year. We aimed to attract 16-18 households, to allow us two contacts per “connector.”

Posters went out via email and social media via the Office of Sustainability, Environmental Studies Program, Sustainable CORE Fellows, Office of Residential Life and Learning, Food and Nutrition minors list, and other relevant contacts.



MATERIALS



We investigated buying commercially-available kitchen compost bins but found out that Tufts Dining gets lots of food in plastic bins that are about the right size for a kitchen (about 3 gallons). Staff at Dewick and Hodgdon collected 20+ bins and lids for us.



After cleaning the bins, we created informational labels and taped them onto the bins. We ordered two-gallon compost bags for about \$100 and loaded each bin with ~20 compost bags. The Environmental Studies Program funded the cost of the bags.

INFOGRAPHIC

COMPOST CONNECTIONS



Composting Guide

Step 1: Your Compost Container

As a part of **Compost Connections**, you received a small collection container for your home and compostable bags. Line your container with a bag, and you're ready to collect food scraps!



Step 2: Collecting Food Scraps

DO Compost:



Dairy, Eggs, Eggshells Fruits & Veggies; Flowers

Meat, Fish, Bones Baked Goods & Pasta

Tea Bags, Coffee/Filters, Pits/Shells, food-soiled napkins, and anything else certified BPI compostable!

Don't Compost:



Coffee Cups, Cutlery, Plastics, Cleaning Supplies

Step 3: Bring the Bag to a Bin!

Using the **Compost Connections** Map, locate your nearest On-Campus Bin. Every few days, or as needed, bring your tied compostable bag and drop it in the bin!

This is the infographic that we placed on the bins. We wanted the graphic to be pretty simple, so people didn't have to spend much time following the guidelines. It outlines what should and shouldn't go into your compost bin and the step-by-step process from the moment you get the container to the time you take the bag out to drop it off at an on-campus composting bin.

The "what to compost" question can be surprisingly complex! The answer depends on where the food scraps are ultimately going and how they're being processed. Because we were encouraging students to utilize Casella's bins, we followed their guidelines for what to include and exclude.

EXPLORING THE CAMPUS BINS

We observed compost bins around campus for the first two weeks of the semester to get a sense of how they were being used. We also talked with staff in Facilities and the Office of Sustainability, as well as a former Eco-Rep (now Sustainable CORE Fellow) in our class.

- Some of the bins were frequently used and emptied. Others seemed un- or under-used, or used incorrectly (eg used for regular trash disposal).
- We found one bin that was no longer being emptied by Casella; staff at an adjacent business were emptying it into their trash when it was filled or smelly. Facilities arranged with Casella to get this location back on their route.

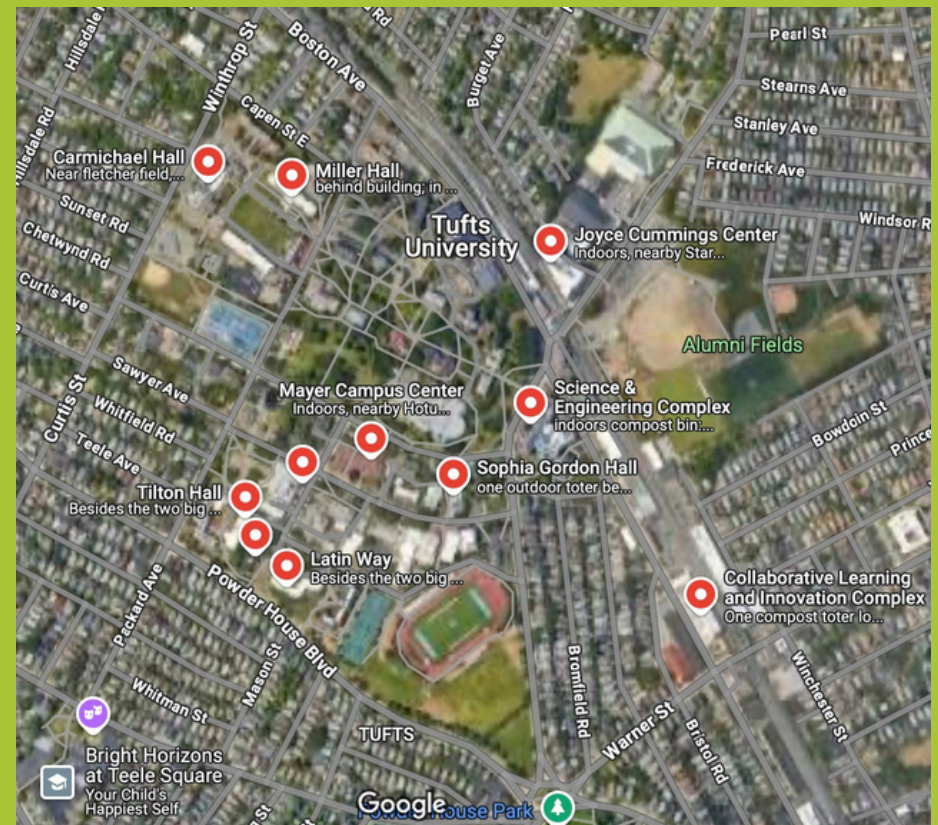


Tucker Livingston



OUR COMPOST BIN MAP

The Office of Sustainability already has an Eco Map showing compost bin locations, but we found that it was not completely up to date. We created our own [compost bin map](#) in a Google map based on our participants' addresses. Luckily all of our participants lived in three main areas so mapping the bins closest to them was fairly simple. We also created [a separate document](#) with photos and descriptions of the bin locations to help people spot them.



“COMPOST CONNECTOR” ROLE

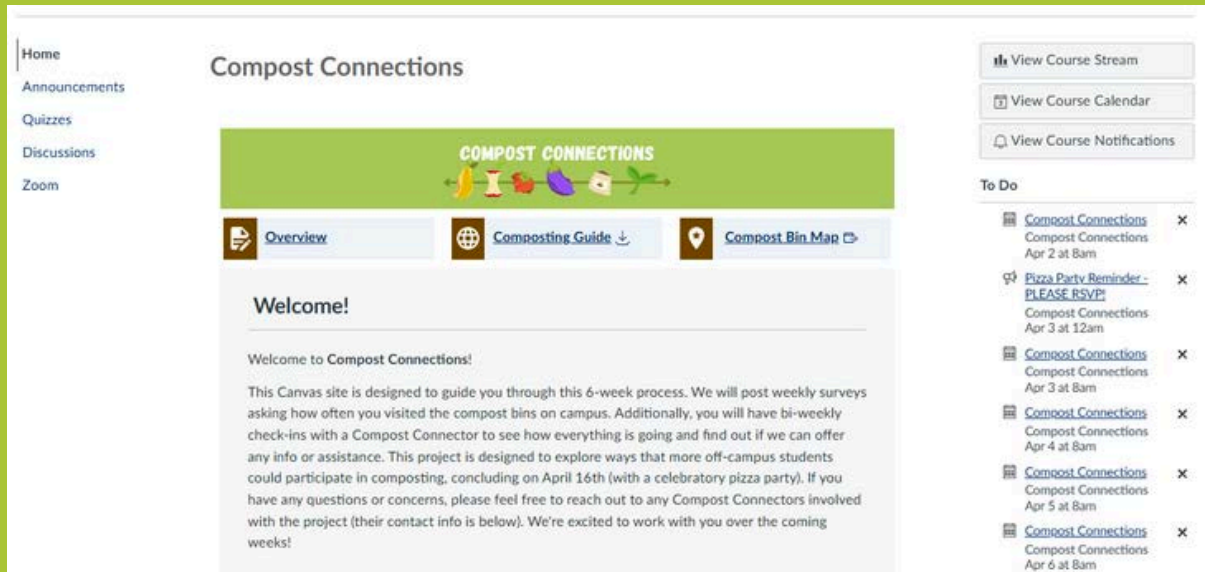
For each household, in the spirit of our project name, each of the ENV190 students acted as a “compost connector” to the individual who signed up for the project. Our job as “connectors” was to deliver all the materials needed for participants to compost at Tufts, and to answer questions as needed, when problems or hypotheticals arose.

Participants also took part in biweekly check-ins with their given connector, to get an idea of how things were going, if there were any issues, and if any questions had popped up. We also prompted some of our own questions in these meetings to aid this report.



Photo contributed by a participating household

CANVAS SITE



We set up a project-specific Canvas site that we used as a hub for information, communications, and resources. We are happy to pass this along to Residential Life and Learning now.

It included contact information for participants and “connectors”, links to our customized bin location map, composting tips and tricks, weekly feedback surveys, and reminders about things like emptying kitchen compost before Spring Break and our wrap-up pizza party.

Students in our class were enrolled as teachers so we could all edit the site. Participants in the project were enrolled as students.

PARTICIPANTS

We enrolled 16 households with a total of 60 students. All of the households were in Somerville.

- For students living in Medford, we directed them to the city's pilot municipal composting program, which provides free bins and pickup through Garbage to Garden.

Our target participants were Tufts students living off campus who are going to be enrolled next year. This meant that the majority of people who signed up were juniors, but we did have a small number of sophomores as well.

- Our goal was to ensure our participants would still be involved in the Tufts community after completing our six-week project, so they could keep their bins and continue composting after this semester.

PRE-SURVEY

We sent out a Pre-Survey to help build a profile of the participants.

- We asked about class year, majors and minors, off-campus address (to help us guide them to the nearest bin), and how they heard about our project.
- We also asked about prior experiences with composting, including how confident they were about what can be composted and which benefits of composting resonated with them most.

We received responses from 15 of our 16 enrolled households.

PRE-SURVEY RESULTS



- 80% of participants indicated that they had a moderate-to-high amount of composting experience



- 93% of participants had moderate-to-high confidence in knowing what could and could not be composted



- When asked which benefits of composting resonated most with them, “Reducing food waste” and “Supporting circular/closed loop systems and nutrient cycling” were the two most-selected reasons

PARTICIPANT CHECK-INS

- Each member of our class was assigned to work with two participating households and communicate with them directly.
- To collect feedback from participants throughout the project, we designed weekly quizzes through Canvas as well as organized face-to-face check-ins using Zoom.
- In the face-to-face check-ins, we asked questions regarding how the process was going, how involved their housemates were, their challenges, and if they had any additional questions about our project. These conversations helped assess what changes we could make and allowed for connections to be made between students and participants.
- The weekly Canvas quizzes asked participants to share how many bags of compost they had filled and any issues or complications they came across.
- We had a low response rate on the Canvas quizzes, so we prioritized the responses from the face-to-face check-ins on Zoom.



FINDINGS & RECOMMENDATIONS



KEY FINDINGS

There seems to be enthusiasm on campus for composting. With very little nudging, people did it when provided with the resources, information, and support.

We don't know how representative our participants were of the campus as a whole, but our sense is that the interest is real and widespread.

Overall, people seemed happy to be doing this on their own. Our sense was that students may not need a lot of hand-holding once they have the kit and general information.

Most of the people who signed up had existing compost experience.

The main motivation was to get the composting kit, rather than for peer support.

Participants reported bringing at least one bag of compost a week to campus.

We saw a mix of household participation. In some households, all housemates composted, in others only one or two did.

Most participants reported no issues or complications throughout the project. Peer support was most helpful during the project launch, primarily for kit distribution.

Some participants were disappointed, even dismayed, when they learned that their food scraps were being anaerobically digested rather than composted in windrows to make soil (see supplemental materials for discussion about this).

QUOTES/ANECDOTES

A participant felt this experience was habit-building, and expects to continue composting.

“Lovin the
compost
life”

“I already wanted something like this before, it's just like having all the practical things set up for us.”

“I’m more conscious about how much waste I’m making in general.”

“We're loving being able to compost!!”

“I was able to fix the issue of our house's compost bags being too small to fit around the bin. I just put 2 screws into the outside of our bin so that the bag can hook onto them. We had an issue of food not landing in the bag and getting all smelly and gross because it wasn't getting emptied, but this fixed it!”

RECOMMENDATIONS

We have three types of recommendations:



- LOGISTICAL
- INFORMATIONAL
- EDUCATIONAL

LOGISTICAL RECOMMENDATIONS

- It would be amazing if Res Life could try to keep the program going in some form!
- Make kitchen compost containers, compost bags, and information available to interested students living off-campus each year.
- Provide 4 or 5 gallon bags. The 2-gallon ones we bought were too small for our bins.
- Actual kitchen compost containers would be easier to use. The lids on our re-purposed bins were hard to open and close.
- Add a peer role (eg an intern) who could drop off materials to households that sign up.
 - If that person is comfortable sharing their phone number, they could be a “compost hotline” for questions/concerns.
- If possible, have someone (again, an intern?) walk around campus and confirm that the compost toters on the Eco-Map are actually there and being serviced by Casella (look inside to get a sense of this). Share any unserviced bin locations with Facilities.

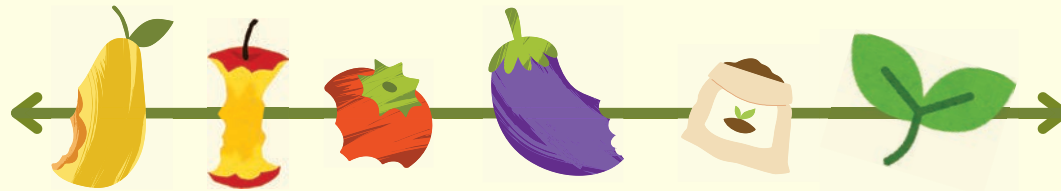
INFORMATIONAL RECOMMENDATIONS

- Add an opt-in composting option to the off-campus housing survey.
- Keep our Canvas site active as a resource page for off-campus students who are composting in their houses. It could also be used for Announcements and other timely communications.
 - The site provides basic information about how Tufts composts now. This will likely need to be revisited and updated occasionally.
 - The more general information about composting and anaerobic digestion will likely stay more useful over time.
- Keep an eye on what is happening with municipal composting efforts in both Medford and Somerville and share that info with students.
 - Medford's pilot curbside composting program still had room for new enrollments as of spring 2025.
 - Somerville is currently planning a similar pilot program.
 - One of the projects that Somervillians can vote on in the 2025 participatory budgeting process would provide community drop-off compost bins, of a type that Boston already uses.
 - With luck, all off-campus residents will have access to composting soon!

EDUCATIONAL RECOMMENDATIONS

- Be straightforward about where Tufts' organic material currently goes, and clear about the distinction between aerobic and anaerobic composting (see supplemental materials). Don't shy away from the fact that people may find the anaerobic process disappointing.
- Use this as a starting-point for students to learn more about composting, and about how options and programs are continually evolving at Tufts and in our host communities.
- Acknowledge that individual and household-scale changes won't solve all the environmental challenges we face, but emphasize that individual behaviors and practices *do* matter, including in changing our own relationship to what and how we waste.
- There are many connections between these issues and Tufts classes in Environmental Studies and many other departments. Suggest that students investigate these and find out about the Sustainable CORE Fellows program and other ways to get involved in campus sustainability efforts.

SUPPLEMENTAL MATERIALS



Composting at Tufts

How composting works (and why it's complicated)

Resource list

(Items above are also posted in the Canvas site.)

Three posters from our April 2025 wrap-up party

COMPOSTING AT TUFTS

- Tufts started composting in 1994 when Dining director Patti Klos arranged with a pig farmer from Tewksbury to pick up food scraps and waste from the dining halls.
- Over time Tufts has worked with different companies and projects on composting. Management has been shared among different areas of the university (Dining, Facilities, Office of Sustainability, Events).
- In 2020 Tufts began contracting with Casella Waste Systems, a large regional company based in Vermont, for hauling our trash and recycling, including organics recycling. C&W janitorial staff empty the small bins in dorms and offices and take them to the large “toters” that Casella empties.
- Our organic materials go to a “depackaging” facility that separates recyclable organics, digests them anaerobically, and turns them into a slurry that goes to the wastewater treatment plant in Lawrence, MA (see “How Composting Works” slides).
- Organic material from campus lawn and tree trimming is actually much greater in volume than our food waste. This material is picked up by J&J Materials and taken to a facility in Plymouth, MA, where it is composted into soil.



Tucker Livingston



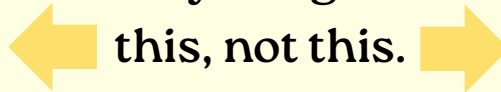
HOW COMPOSTING WORKS

- What we call “compost” is both a process and a product.
- As a process, “composting” refers to how humans help to speed up the natural decomposition of all organic matter (i.e. anything that grows). The actual decomposition is done by various smaller beings (microbes, worms, nematodes, etc), who literally digest and excrete the material, breaking it down into smaller bits and recycling the nutrients it contains.



Photo from Black Earth Compost

When most people think of composting, they imagine this, not this.



Casella depackaging machine
photo by Burlington Free Press (2021)

- But humans help create hospitable environments for decomposition in different ways, for different reasons.

HOW COMPOSTING WORKS

AEROBIC COMPOSTING balances moisture and air in bins or piles by mixing wet (sometimes called “green”) and dry (“brown”) materials, adding water as needed, and turning the materials to allow oxygen to circulate. This can be done in bins or piles, including large outdoor piles called “windrows.” The end product of aerobic composting is a soil-like mix that is a prized fertilizer and soil-builder.

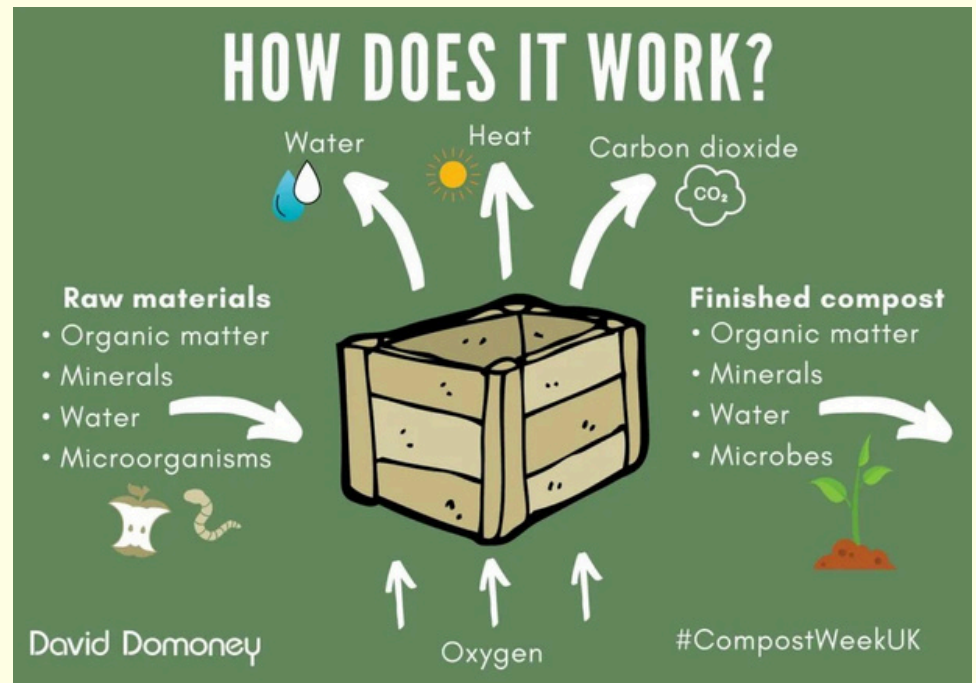
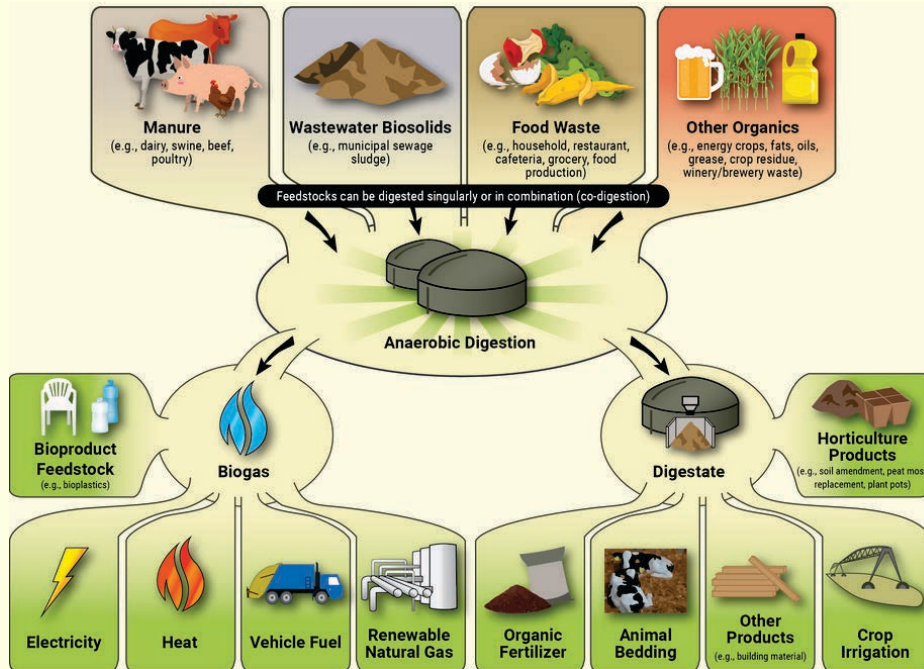


Image: David Domoney

HOW COMPOSTING WORKS



Anaerobic digestion

Image: [Environmental Protection Agency](#)

ANAEROBIC DIGESTION is done in closed vessels, where a different type of microbes break down the material without needing oxygen. This creates two products: (1) a biogas made up of CO₂ and methane, which can be captured and used as a power or heat source, and (2) organic solids that can be processed into various products, including soil amendments for fertilizer.

The slurry that Casella makes from Tufts' organic materials is added to the wastewater treatment process in Lawrence, enabling more effective digestion of solids (i.e. human poop) in the water. The methane gas produced during digestion also powers the machinery involved, making the overall treatment of sewage much more efficient in terms of energy use. It's much less "earthy" than aerobic composting, but responds to the challenges of scale and cost involved in modern systems.

WHY IT'S COMPLICATED

- There's a huge imbalance between the amount of organic scraps and waste being generated, especially in densely-populated places, and the available land and cost of transportation and labor to process it all aerobically.
- Anaerobic digestion at least keeps organic materials out of landfills and creates usable products with some ecological benefits.
- There are efforts at all levels (including by municipalities and universities) to support large-, mid-, and small-scale options for organics recycling. These efforts involve budgeting and funding considerations, public/private partnerships (eg Medford's partnership with Garbage to Garden), and environmental justice questions about where processing sites are located and who does the actual work.



Tufts' veterinary campus in Grafton is often suggested as a site where we could compost campus organic waste. But it would take a tremendous amount of institutional commitment to address the cost and logistics of collecting, transporting, and processing.

RESOURCE LIST

- Composting 101 from the National Resources Defense Council is a good basic overview of the composting process, especially aerobic composting.
- Here's a seven-day mini-curriculum about composting from the Institute for Local Self-Reliance.
- In ENV 190 we read Composting Utopia: Experimental Infrastructures for Organics Recycling in New York City by Guy Schaffer. This was a really good scholarly resource that opens up a lot of the biggest practical and political questions around composting, including about labor and environmental justice. It's available as an e-book through Tisch Library.

PIZZA PARTY POSTERS (1)

PRACTICING IN FOOD SYSTEMS: PROJECT OVERVIEW

COMPOST CONNECTIONS



GOALS

- Support compost habit-building for Tufts students living off-campus
- Investigate the behaviors, challenges, and motivations that influence composting practices
- Create a final report with actionable insights to support and expand future off-campus student composting efforts

WHAT WE DID

- Created a peer-based program
- Provided off-campus juniors and their housemates with kitchen compost containers, compostable bags, information, and support
- Highlighted on-campus compost bin locations

IMPACT



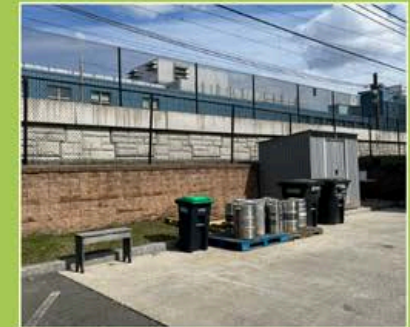
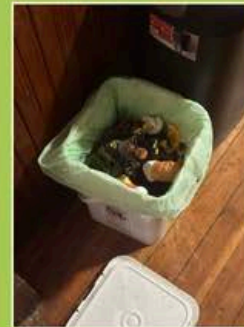
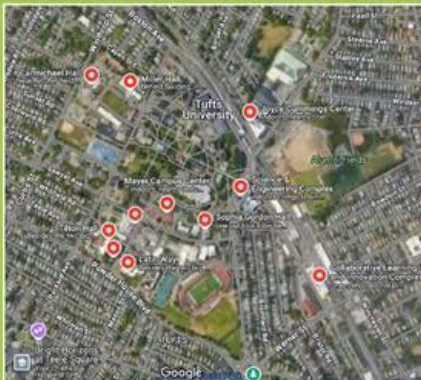
6 WEEKS



16 HOUSEHOLDS
(60 PEOPLE)



- Self-reported increase in regular composting
- Data and recommendations shared with Residential Life and Learning



PIZZA PARTY POSTERS (2)

COMPOST CONNECTIONS



GARBAGE TO GARDEN

Live in Medford?
Sign up now to
get a free
compost bin and
weekly home
pickup through
Garbage to
Garden!

COMMERCIAL COMPOSTING OPTIONS

Paid commercial
composting services
used by local
residents include:

Bootstrap Compost
Black Earth Compost
Garbage to Garden
(Somerville)

SOMERVILLE ON THE HORIZON

Somerville is planning
to pilot a municipal
compost service in
the near future.

Stay tuned!

There's also a community
compost station proposal on
the list of projects
residents can vote on
through the participatory
budgeting process.

PIZZA PARTY POSTERS (3)

Composting at Tufts

GOOD

- Compost bins in many different locations across campus
- Tufts Dining has composted or anaerobically digested its food scraps since the early 1990s
- Compost bins at all major on-campus events to minimize waste

BAD

- Outcome is not soil - instead, it's biogases and "engineered soil components" like fertilizer pellets
- Not a closed-loop system - compost is not used to grow food or improve soils in the communities where it's collected

UGLY

- Large-scale compost facilities pose environmental justice issues. Ex: Peninsula Compost Facility in Delaware was shut down due to fires, constant smells in disadvantaged neighborhoods, and heaps of mismanaged contaminants.

It's important to consider composting organizations that focus on environmental justice and community building through recycling organic materials

COMPOST CONNECTIONS

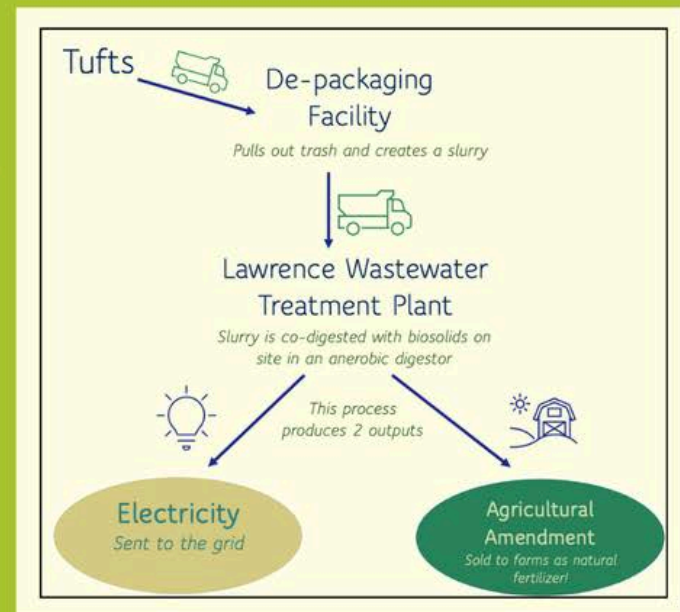


Image Property of Tufts Office of Sustainability