



UCLA Sustainability Action Research



CHS Waste Accountability

TEAM LEADS: SURYA MAN, JESSICA DARFLER
TEAM MEMBERS: MARY KOUTURES, MAYUKHA TALINKI,
KYRA PRASAD, SAM YU, KEVIN YANG
STAKEHOLDER: JADE GOEGEBUER

Introduction

Hospitals and research facilities generate some of the most complex waste streams of any institution. In the U.S. alone, academic medical centers can produce millions of pounds annually, posing significant challenges for human health and environmental sustainability (Barmore, 2025). In the fiscal year of 2022, UCLA Health, UCLA's academic healthcare system, produced more than 11 million pounds of waste, and has remained consistently high in subsequent years (UCLA Health, 2026). Consequently, sustainability efforts at UCLA remain incomplete without addressing waste in these facilities. The Center for Health Sciences (CHS), one of the largest facilities within UCLA Health, houses a wide range of medical laboratories, clinical facilities, professional health schools, and more. Unfortunately, due to CHS's size and complexity, there is a significant gap in the understanding of non-hazardous waste generation and sorting practices by facility managers and sustainability staff.

The CHS Waste Accountability Team aims to address these research gaps by investigating three key questions: What are the common trends and reasons for improper diversion in CHS's waste management system? How can the team integrate quantitative and qualitative data to further examine these trends? What barriers exist to proper sorting and waste reduction, and how can these barriers be addressed through educational campaigns, structured resource offerings, and new sustainability strategies? To answer these questions, this study draws upon previous research in waste management, including in higher education institutions and research facilities, which have established methods that can be adapted to the CHS building. These methods include visual waste audits, surveys, and interviews, all of which are utilized in this research (Çetin et al., 2025; Jason et al., 2024). Beyond quantifiable measurement, this

research aims to understand the underlying barriers to proper waste sorting through direct engagement with laboratory personnel. By intentionally including laboratories within CHS, the study aims to identify knowledge gaps specific to these research environments, ensuring that the resulting deliverables are relevant and actionable.

The team is also collaborating with the UCLA Green Labs program, an initiative that facilitates sustainable lab practices by providing labs with a comprehensive assessment of their practices. They provide recommendations, materials, and resources to meet sustainability requirements in action categories of Energy, Cold Storage, and Water. Green Labs is piloting “Waste” as a new action category with the hope to bestow sustainable labs with a Waste badge. The team will promote the Green Labs program and through deliverables and engagement with CHS Lab personnel. Ultimately, our team seeks to promote sustainable policy implementation, develop targeted educational initiatives, and contribute directly to UCLA's broader sustainability objectives.

Methods

In order to answer our research questions, we conducted data collection with three methodologies: visual waste audits, a survey, and interviews.

Our first method of data collection was visual waste audits which were conducted in the hallways of CHS as well as laboratories. This method was chosen to elucidate the gap between building waste management policy and day-to-day practice. Using waste grabbers, contents of waste bins were mixed and analyzed. These bins included three stream waste bins (those consisting of landfill, compost, and recycling), as well as out of place landfill and recycling bins. Each bin was photographed before and after mixing to gauge its waste composition and so the team could determine if waste was diverted correctly. The relative contamination rate of each bin

was estimated, defined as the percentage of pieces of waste placed in the incorrect bin. The first set of visual waste audits were done on a Monday evening of Week 10 of Winter quarter, from 5pm to 7pm on the floor A and 4. These floors were previously determined to be analyzed, as they showed to have the highest concentrations of research laboratories in CHS. We conducted our second set of waste audits on a Thursday evening of Week 4 of Spring Quarter. Visual waste audits provided important data on the inconsistencies of waste sorting between floors and helped to identify areas of the CHS that needed the most improvement. To avoid bias in our estimates of contamination rates, Athens Services Waste Disposal Guide, the Los Angeles waste service company, was referenced. This guide familiarized the team with the exact waste types that should be placed in each waste stream and standardized the audit for each team member.

Interviews were also conducted with a diverse group of individuals to gain deeper insight into waste management practices and education gaps. These interviews included the Thermo Fisher Scientific vendor representative for UCLA (a vendor that is widely used across CHS laboratories), lab personnel from CHS, as well as personnel from non-CHS laboratories. In the interview with Thermo Fisher Scientific's vendor representative, Nahee Kim, the team focused on questions that pertained to the interviewee's anecdotal experience with labs. Many of these questions focused on the degree to which labs demonstrated interest in sustainability when choosing lab equipment. Additionally, to understand how vendors are adopting sustainable practices, we inquired about an estimate of sustainable packaging used in lab equipment orders, as well as the process of sourcing sustainable or second-hand lab equipment. The interviews with lab personnel Vivian (Yifan) Li from the Medina Lab (non-CHS lab) in the Terasaki Life Science Building and Alberto Lopez from the Kulkarni Lab (CHS lab) from different labs allowed us to gain insights on general laboratory waste practices and potential barriers to effective waste

disposal that are faced in research labs. The possible implementation of more sustainable equipment and infrastructure was also examined, something that would decrease waste generation in labs, and instead promote more waste diversion. Results from the lab audits and interviews were used to provide visual deliverables for labs with recommendations and resources for sustainable waste management, as well as to help them initiate the process of becoming involved with the Green Labs program.

In addition to visual waste audits interviews, an online survey was made available to laboratory personnel on UCLA's campus. The purpose of this survey was to collect data regarding waste management behavior. The survey was promoted with flyers, shown in **Figure 5**, that were pasted around various floors of the CHS building, specifically on bulletin boards, or on the walls next to lab offices and next to elevators. In order to obtain a wider range of responses from undergraduates conducting lab research at UCLA, flyers were pasted around elevators in dormitories. To garner more survey responses, mass emails were sent to CHS lab personnel, the flyer was posted on the SAR social media page, and spread the word to personal connections working in labs at UCLA. Survey questions were mainly in the form of multiple choice and short free-response questions, as seen below in **Figure 6** of the Appendix. These questions examined the participant's opinions of managing lab waste, knowledge of UCLA's Green Labs program, concerns on CHS waste practices, and waste sorting knowledge through an interactive quiz. To incentivize responses, we applied for and received \$1,000 in funds from The Green Initiative Funding (TGIF), which was distributed as 10 Bruincard deposits of \$100 each and one \$50 Veggiegrill Gift Card (for those who do not have a Bruincard). We used the results from different methodologies to create concrete recommendations for sustainable waste management in UCLA's CHS building.

Equity, Diversity, and Inclusion (EDI) was a key consideration throughout the team's research, especially in the survey process. By including participants from a wide range of roles, from primary investigators to undergraduate research assistants, the team sought to develop more effective and inclusive deliverables. A demographic section was included to collect basic background information of CHS respondents, including status at UCLA, to ensure we received responses from a balanced group of individuals to compare their responses. Perspectives from various stages of academics, from undergraduate all the way to faculty/staff, provide vastly unique opinions, knowledge, and insights shaped by their experiences. We kept the survey completion time between 5-10 minutes and left the survey response window time open for a relatively long time, closing the survey on Friday, May 29. This optimized the amount of responses, 75 in total.

Results

By applying the methods described above, we successfully conducted waste audits, a survey, and interviews, which provided valuable insights into the sustainability performance of the CHS building and identified opportunities for improvement.

During the waste audit process, two key findings were identified: (1) four out of eighteen three-stream waste bins contained only a single waste bag instead of three separate bags for recycling, compost, and landfill, and (2) inconsistencies were found in trash bag colors across different waste categories. These issues indicate a need for improved oversight, standardized management practices, and more effective supervision of waste collection systems.

The analysis of the waste audit data reveals significant contamination across all waste streams. Contamination rates, defined as the proportion of waste incorrectly disposed of in a

given bin, were approximately 30% for recycling, 20% for compost, and 50% for landfill waste. These rates are clearly displayed in **Figure 1**. The landfill stream exhibited the highest level of contamination. One possible explanation is that some locations provide only landfill bins, limiting opportunities for proper waste segregation. Overall, the results suggest that waste sorting errors and contamination remain as substantial challenges for personnel within the CHS building. Increasing occupant awareness and providing additional educational initiatives may help improve waste management performance and reduce contamination rates.

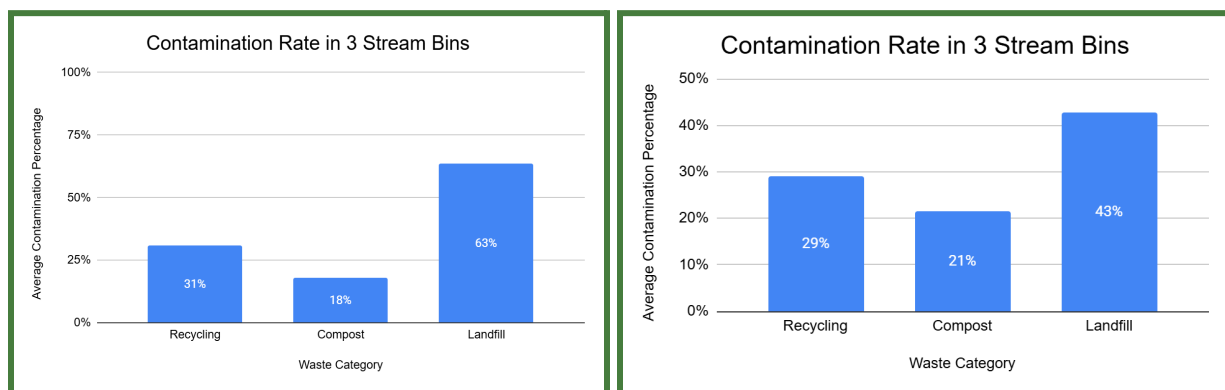


Figure 1. Three Stream Waste Bin Contamination Rates for Waste Audits 1 (left) and 2 (right)

As the visual waste audits examined the overall hallways of the CHS building, the laboratory information survey gave us insight into waste management inside of individual labs (**Figure 6** of the Appendix). By examining participants' attitudes toward waste sorting and Green Lab practices, as well as their knowledge of waste management, we conducted analyses across different demographic groups. Although respondents reported several barriers to sustainable behavior, the majority expressed a willingness to actively reduce waste generation.

As illustrated in **Figure 2**, laboratory personnel outside the CHS building demonstrated a stronger understanding of waste sorting procedures than those in CHS. In the survey, participants

were asked to sort common lab waste items between the landfill, recycling, and compost bins. A larger proportion of non-CHS respondents correctly classified where waste should be thrown away between the three categories, whereas CHS building occupants showed less understanding of proper waste segregation. Furthermore, students generally outperformed faculty members in waste sorting knowledge, suggesting that educational background, training exposure, or engagement with sustainability initiatives may influence waste management practices.

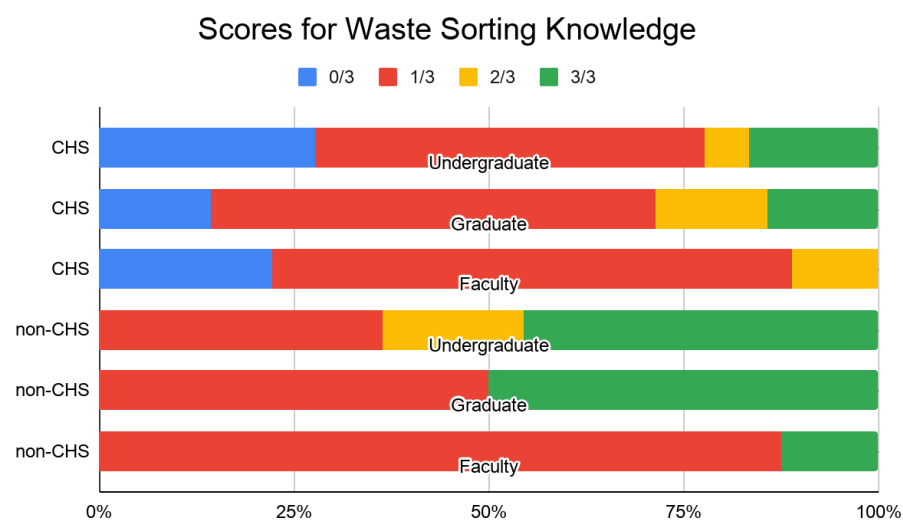


Figure 2. Analysis of Survey Responses on Waste Categorization Knowledge

Our lab personnel interviews allowed us to gain in-depth insight regarding the specific thought-processes and needs of labs. Through our lab personnel interview with Alberto Lopez from the Kulkarni Lab, we learned that labs wanted to play a greater role in advancing sustainability, but didn't know how to get started. This signified a need for greater UCLA Green Labs promotion and the necessity of more convenient and easily accessible resources. Through our lab personnel interview with Vivian (Yifan) Li from the Medina Lab, we learned that labs require greater clarity when it comes to waste diversion policy. As this was the Medina Lab's

first year at UCLA (moved from Penn State) we were able to discuss differences between waste management policy such as the inability to recycle pipette tip boxes at Penn State vs. ability to do so at UCLA. With differing waste management policy at various institutions, it is especially important for UCLA to implement clear lab waste signage. This could come in the form of lab waste signage for recyclable and compostable items in particular. Based on our interview, this signage should include clear definitions for “clean” and “decontaminated” in terms of recyclable waste. Finally, through our interview with Nahee Kim, we learned that vendors are primarily working towards reducing waste in packaging rather than focusing on reusable supplies. This is due to the heavy prioritization of sterility and soundness of research in laboratories.

Deliverables

Our finalized deliverables included a Green Labs Open House, Lab Waste Signage, Informational Handouts, and a Waste Management Pocket Guide. We first hosted an open house at the Center of Health Sciences to educate lab personnel and other CHS employees regarding Green Labs programs and possible ways to get involved.

For our deliverables, we wanted to focus on resources for waste management and diversion on UCLA campus, aimed at lab personnel in particular. Knowing our SAR project could only continue until the Spring Quarter, we wanted to direct labs interested in sustainability to a more permanent fixture on campus, UCLA Green Labs. With the help of Bonny Bentzin and Ria Mehra, we organized a Green Labs Open House in the CHS building that allowed lab personnel to gain more information on Green Labs’ initiatives, and the action steps to obtain sustainability category badges. At the Green Labs Open House, we provided flyers with general information on Green Labs (**Figure 3**) and Waste Management Handbooks (**Figure 8**). The front

of the Waste Management Handbook outlined the three categories of waste and provided examples of common waste items found in labs. The back of the handbook detailed step-by-step instructions on how to contact UCLA Green Labs and obtain action category badges in sustainability. Additionally, there are QR codes for special waste pick-up requests and waste sorting websites on the backside of the handbook.

Challenges

One of the main challenges the CHS Waste Accountability Team faced at the start of the SAR project was developing and condensing a scope that encompassed both our stakeholder's goals and our individual goals as researchers. The main goal of our project is to conduct visual waste audits in the CHS building, understand challenges within the three-stream process, and propose suggestions to improve waste sorting. We were also interested in including Green Labs initiatives, individual lab audits and education, and vendor representative interviews into our project in addition to visual waste audits in order to fulfil personal goals for our SAR experience. We wanted to work directly with lab personnel and receive a human perspective on the waste management inside the building. Our SAR experience would improve by working directly with individuals in the CHS building and contributing to education on sustainable waste management instead of simply focusing on systemic, building-wide initiatives.

Another significant challenge faced was the massive size and complexity of the CHS building during our first attempted waste audit, turned trial run. For context, the CHS is the second-largest public building in the nation, second to the Pentagon, with about 27 total miles of hallways between the nine floors (Donahue, 1999). In our project proposal, we planned to audit six of the nine total floors for the building. Within one hour of our trial waste audit, we had

completed about three hallways of the entire building. We decided to end the audit prematurely to regroup and devise a new plan that would account for the time constraints of the SAR program. Through team discussion and stakeholder meetings, we decided to focus on two floors with heavy laboratory presence for our visual waste audits. The first waste audit attempt was categorized as a trial run, so that the auditing process could be standardized and focused on the two selected floors in the future. The two floors gave us a comprehensive view of the building's overall waste sorting practices and common problems. What we have learned from our trial waste audit allowed us to move forward in our research with intention and better knowledge of the project's design.

Our overall knowledge on where waste should be placed in the three stream process was another challenge we faced as a group. It was difficult to decide amongst ourselves if an item was supposed to be placed in the compost, landfill, or recycling bin, which skewed our contamination results. We met as a team after our waste audit trial run to standardize our waste sorting knowledge and create a guide of common items we would see in future audits. We referred to the Athens Services waste sorting page online to accurately understand where items should be placed within the three-stream waste system, as it is the waste collection and recycling company partnered with UCLA. Based on our research, we discovered that most lab equipment, such as pipette tips and PCR tubes, are recyclable items through Athens Services, but were commonly placed in the landfill bins.

Another challenge we faced toward the end of our project was lack of time to produce several deliverables. Based on our research and results, we determined that waste signage in labs on UCLA campus would improve waste management and waste diversion, but we unfortunately did not have the proper time to create meaningful signage for the labs on top of the Green Labs

open house and pamphlet deliverables. Waste signage for the CHS building and UCLA labs could be a great opportunity for future SAR projects in the future.

Discussion

Our team's work will further UCLA's Sustainability Plan Goals of achieving at least 90% waste diversion and reducing waste generation to less than 0.85 lbs/per person/per day (citation here). The results of our three methodologies have allowed us to create recommendations for our stakeholder in terms of facilities management, generate feedback for UCLA Green Labs programming, and create a variety of resources addressing recurring barriers to effective waste management.

A key finding from our waste audits includes the suggestion that janitorial training for CHS workers (and possibly workers in other facilities) may require reform or increased frequency to mitigate inconsistent waste diversion practices. The three-stream waste system must be standardized within and across buildings to support the university's waste diversion efforts. Through our interviews and survey, we have found that labs require long-term lab waste sorting signage, due to a lack of knowledge in the diversion of lab equipment and supplies. This opens opportunities to develop permanent and unique bin signage and increased bin infrastructure in all research buildings. Further, our findings reveal opportunities for greater marketing of Green Labs and new strategies to make its programs mainstream. There is clear interest in the Green Labs program and lab sustainability on campus, that can be encouraged by helpful resources and reminders to labs. Additionally, labs would benefit from a campus-wide standardized take-back program for recyclable lab equipment that cannot go through the three-stream system, as well as a campus-wide standardized recycling program for latex gloves. Moving forward, our team

hopes to see Green Labs expand and implement our suggestions for their Waste Reduction Certification program. Based on our visual waste audits, we hope to see properly lined three-stream bins in the hallways of the CHS building and fewer stray bins. We suggest that future SAR teams partner with UCLA Green Labs to further the program's efforts, as there are great opportunities to promote their initiatives. One future project team could focus on styrofoam packaging, as discussed with our stakeholder. There is also opportunity for future projects focused on the creation of standardized lab waste signage and lab-specific three-stream waste bins.

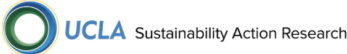
Ultimately, our project contributes to the abundance of work being done to improve waste reduction and diversion throughout campus. We believe our work in a campus research building and inside laboratories fills a long-existing gap in terms of sustainable waste management. Despite various efforts from SAR, UCLA Sustainability, and on-campus organizations, there is still much work to be done in order for UCLA to reach its Zero Waste goals. We believe our deliverables and recommendations will have long-lasting impacts that will facilitate increased waste reduction and diversion for years to come.

Appendix

Figure 3. Center for Health Sciences Green Labs Open House Flyer



The flyer is designed with a torn-edge, scrapbook-like aesthetic. It features a large green arrow pointing right at the top left. The UCLA Sustainability Action Research logo is in the top right. The main title 'Laboratory Sustainability' is in a large, bold, black font. A photo of two women in lab coats is framed with a green scalloped border. Text boxes are styled to look like pieces of paper or cardboard, with some having torn edges. A QR code is prominently displayed in the middle right. The bottom section has a green background with white text.



Learn more about Laboratory Sustainability



**Introducing
Green Labs**



Green Labs at UCLA partners with laboratories and research teams to assess current lab practices and provide quality improvement support aimed at increasing sustainability. Through a year-long certification cycle, labs implement sustainable practices in areas such as energy, water, and cold storage efficiency, while receiving resources including toolkits, progress trackers, in-lab materials, and regular guidance from the Green Labs team. Participating labs can earn Blue or Gold Certification for successfully adopting both basic and advanced sustainability measures.

In addition to getting certified, labs may receive rewards, including physical certificates, cling decals, digital badges, and financial incentives (as funding allows).

CHS Waste Accountability

The SAR CHS Waste Accountability team has been working with UCLA Green Labs on the Waste Action Category. This category of the Green Labs program has been implemented to incentivize waste reduction and diversion in labs. Based on results from our surveys, lab staff interviews, and visual waste audits results we will consult UCLA Green Labs on effective measures and infrastructure that can be implemented on UCLA's campus to reduce waste mismanagement in labs.



**GREEN LABS
INTEREST FORM**

ABOUT SAR: We are a student-led research team under UCLA Sustainability assessing current waste management policies at CHS. We will develop targeted educational campaigns and practical recommendations that promote sustainable waste sorting and diversion.

Learn more here:
<https://sustain.ucla.edu/green-labs/>

Figure 4. Interest in Improving Sustainable Lab Practices

Name *

Your answer _____

Role in Lab *

☐ Principal Investigator

☐ Lab Manager

☐ Project Scientist

☐ Postdoctoral Student

☐ Research Technician

☐ Graduate Student

☐ Undergraduate Student

☐ Research Volunteer

☐ Other: _____

Name of Lab or PI *

Your answer _____

What is the best email to contact your lab? *

Your answer _____

Which of the following are you interested in? *

☐ Completing a 5-minute survey

☐ Interviewing with the SAR team (20 minutes)

☐ Getting a free waste audit done for your lab (e.g. review of the types and amounts of waste produced)

☐ Obtaining a Green Labs Certification (further info: <https://sustain.ucla.edu/green-labs/>)

☐ Obtaining further resources for sustainable lab waste management

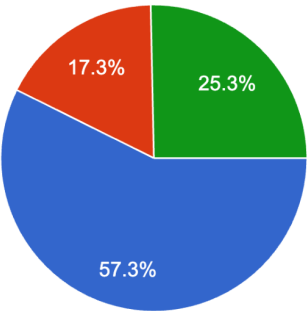
Figure 5. Lab Waste Management Interest and Knowledge Promotion Flyer



Figure 6. Lab Waste Management Interest and Knowledge Survey and Results

Current Status

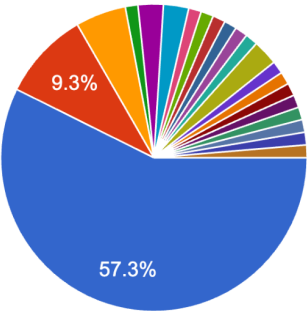
75 responses



- Undergraduate Student
- Graduate Student
- Postdoctoral Student
- Faculty or Staff

What is your role in lab?

75 responses

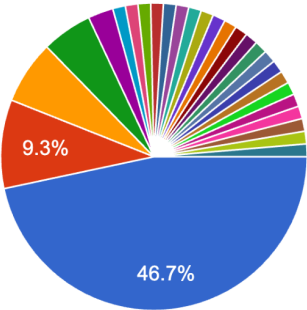


- Research Volunteer
- Graduate Student Researcher
- Laboratory Manager
- Principal Investigator
- Project Scientist
- SRA
- Staff
- Hospital lab tech 3

1/3

In which building is your primary research laboratory located?

75 responses

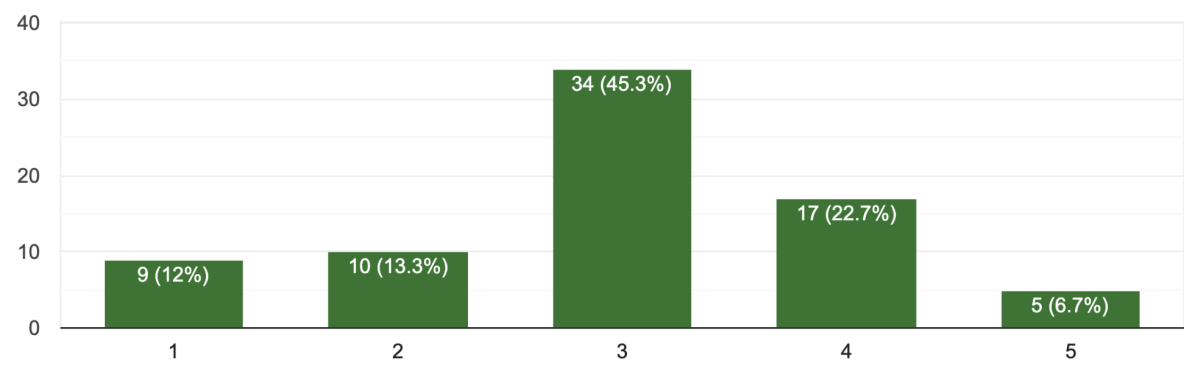


- Center for Health Sciences (CHS) building
- MRL
- Boelter Hall
- Terasaki
- Young Hall
- Boyer
- Geology Building
- Off-Campus

1/4

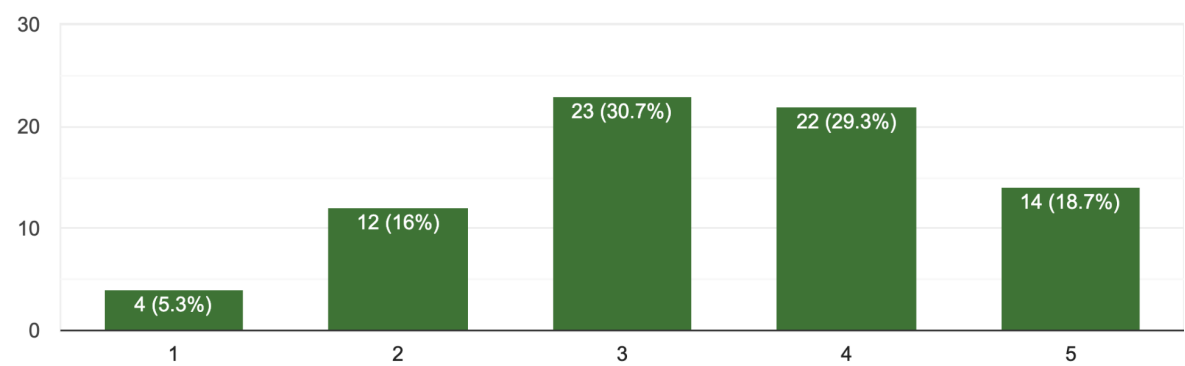
To what extent do you think your lab generates non-hazardous solid waste compared to other labs?

75 responses



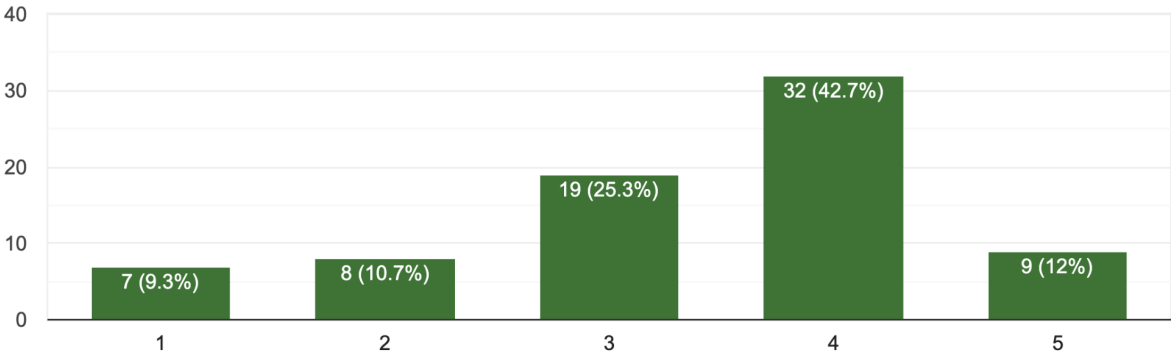
How often do you actively try to reduce waste while in lab?

75 responses



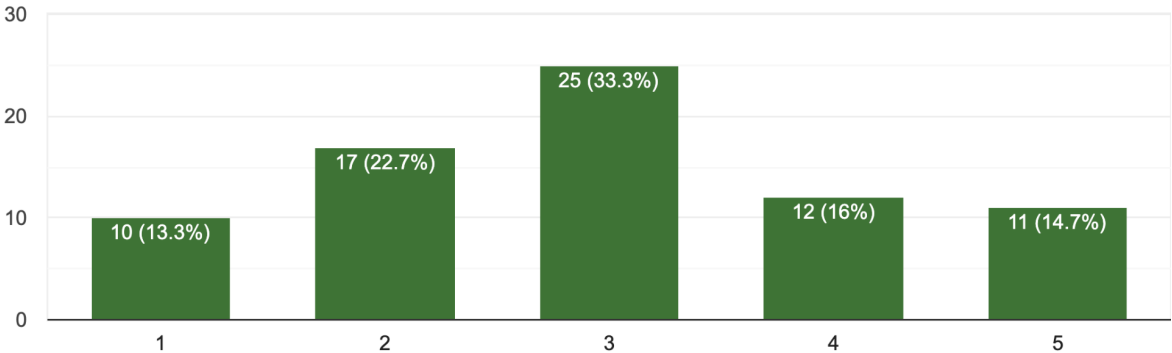
How much of the supplies you personally use in lab is single-use?

75 responses



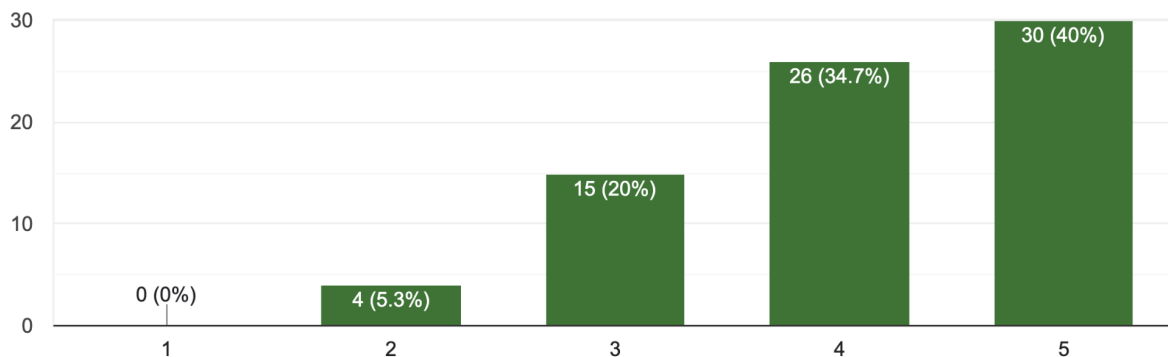
To what extent do you believe your lab prioritizes waste reduction and sustainability through its daily activities?

75 responses



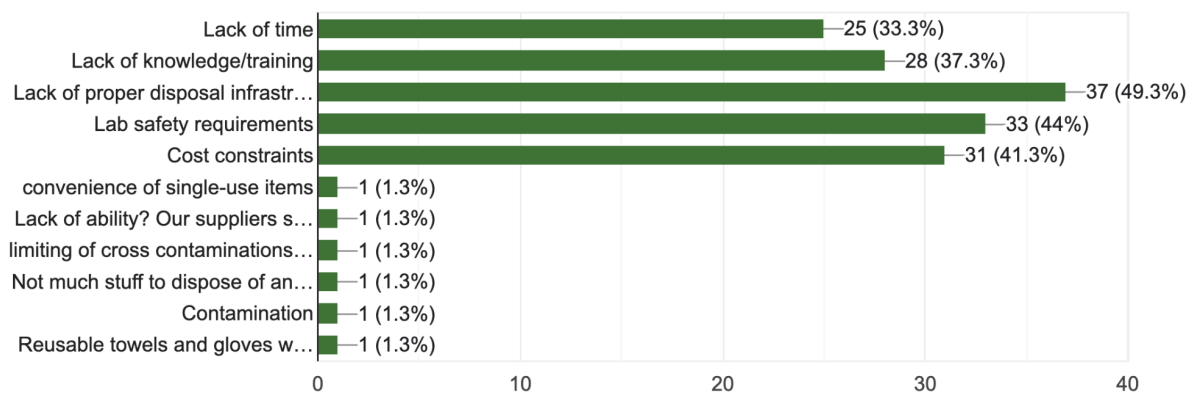
How interested are you in taking steps to reduce non-hazardous waste in your lab?

75 responses



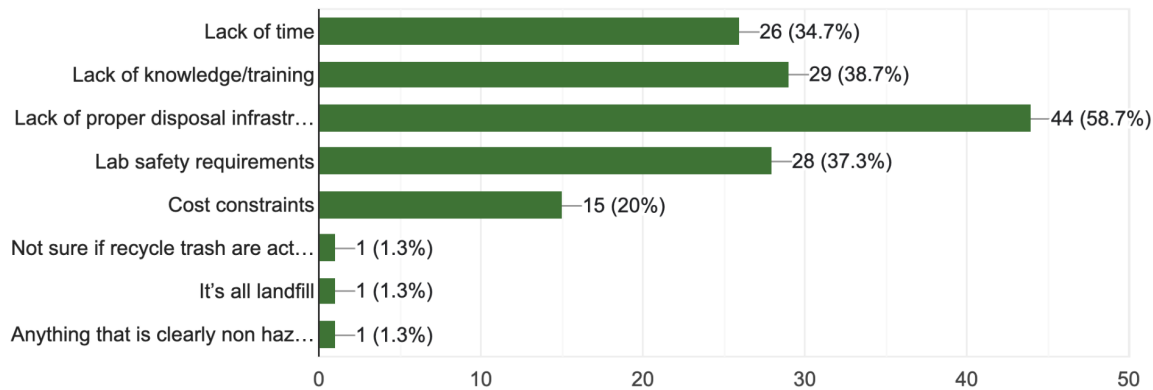
What are the main barriers to reducing waste generation in your lab? (Select all that apply)

75 responses



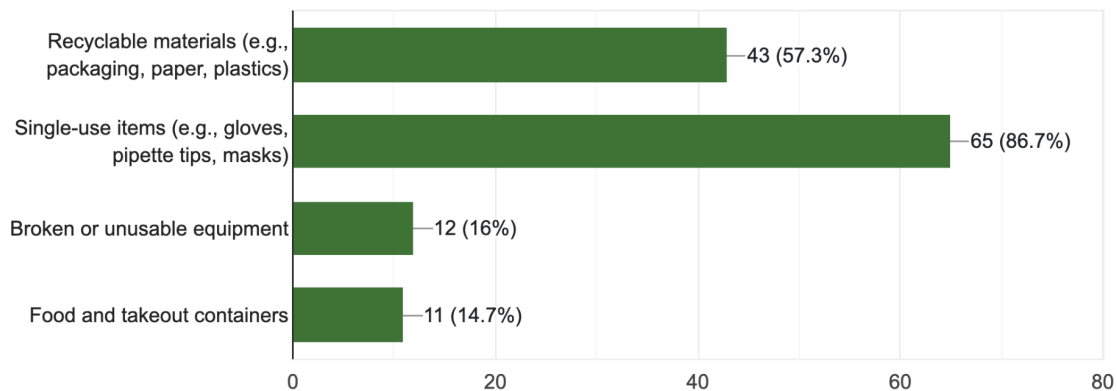
What are the main barriers to properly sorting waste (landfill, recycling, compost) in your lab?
(Select all that apply)

75 responses

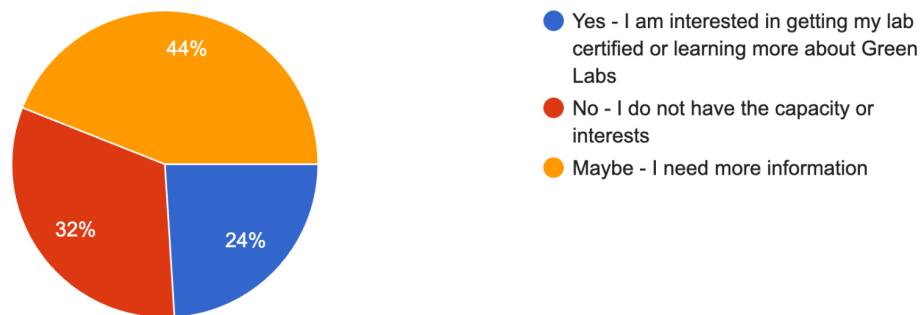


What are the main sources of non-hazardous waste in your lab? (Select all that apply)

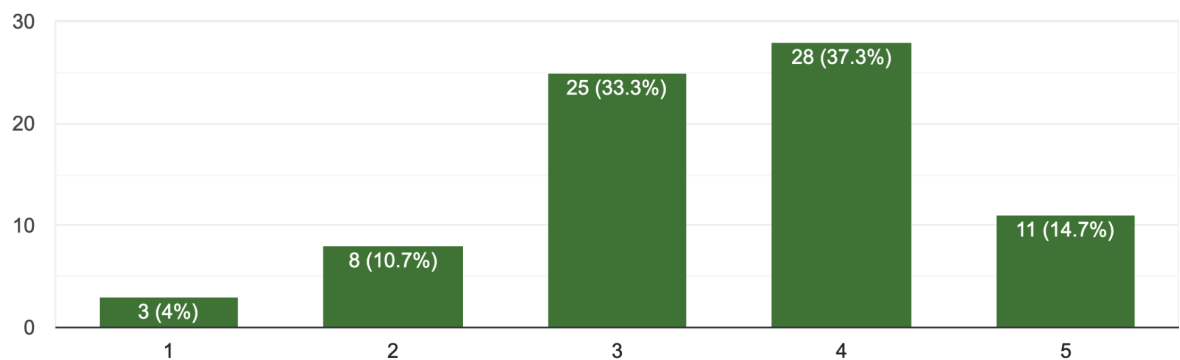
75 responses



The UCLA Green Labs program is a sustainable initiative that provides labs with a comprehensive assessment of their practices and the recommendat...ou interested in learning more about Green Labs?
75 responses

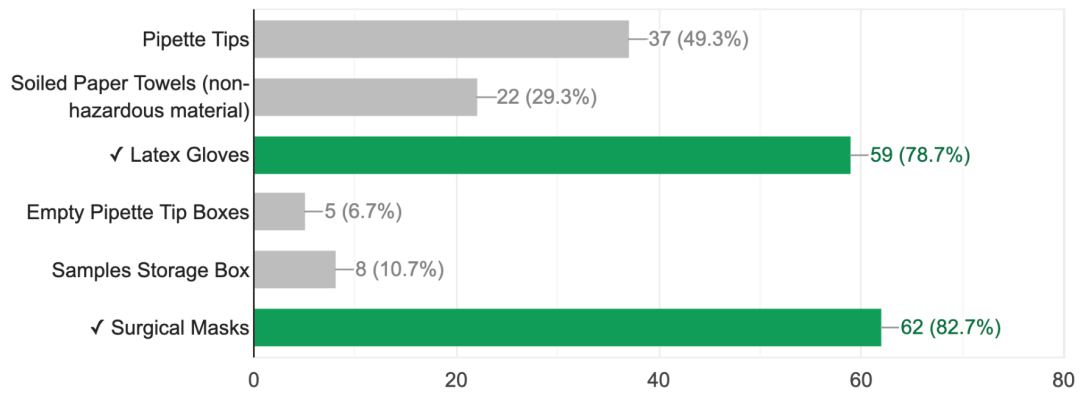


How confident are you in correctly sorting non-hazardous lab waste (recycling, compost, landfill)?
75 responses



Which of the following items should be placed in the landfill stream?

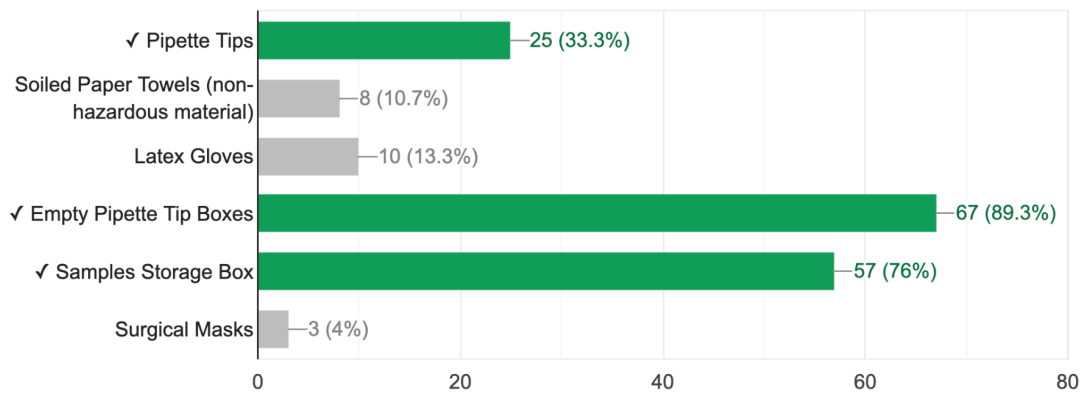
15 / 75 correct responses



\

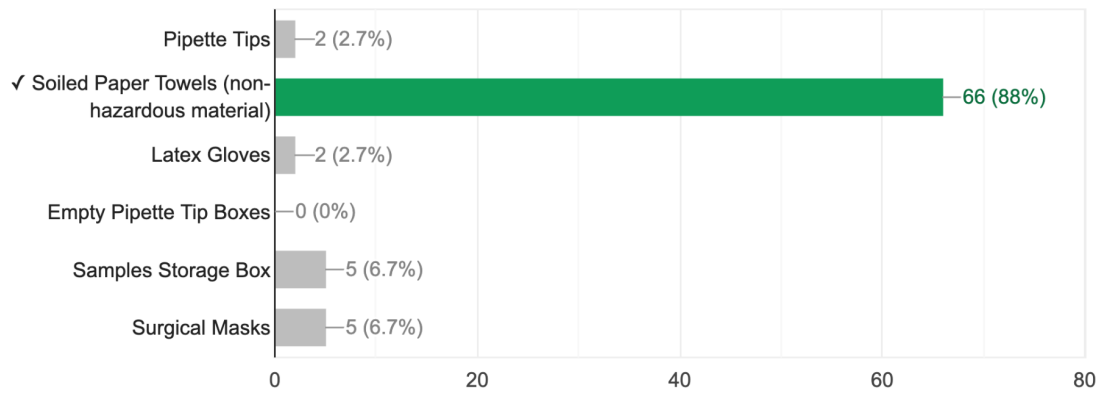
Which of the following items should be placed in the recycling stream?

15 / 75 correct responses



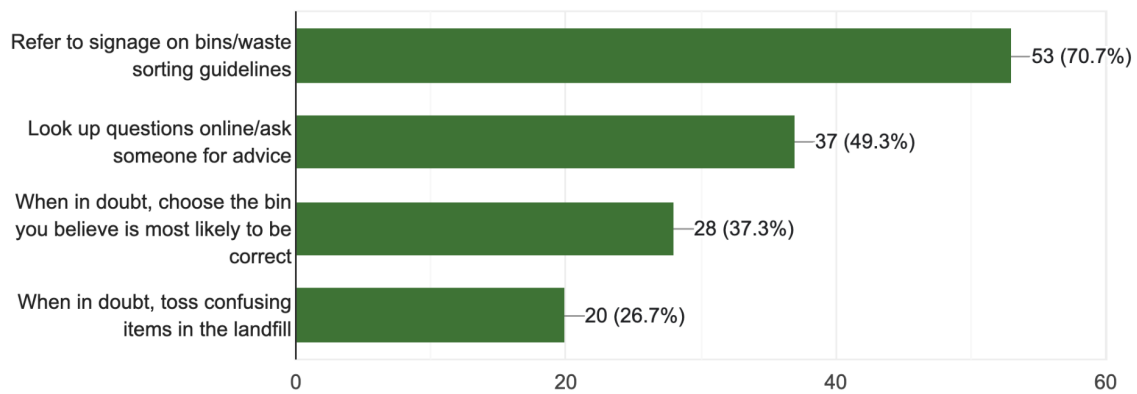
Which of the following items should be placed in the compost stream?

61 / 75 correct responses



When you are unsure of something related to waste disposal, what is most frequently your next action?

75 responses



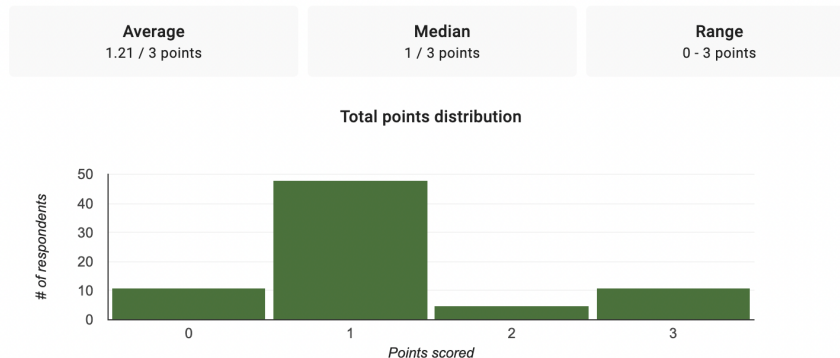


Figure 7. Lab Vendor Sustainability Interview Questions

Lab Vendor Sustainability Interview Questions:

1. Tell us about yourself: What is your role with Thermo Fisher and UCLA?
 - a. How are you connected to laboratories around campus?
2. What have you observed through your interactions with labs in terms of sustainability?
 - a. What do you know about current sustainability practices in labs?
 - b. Are there any barriers that you think stand in the way of lab sustainability?
3. As someone in purchasing, what do you believe to be the biggest opportunity for waste reduction?
 - a. What is something you think labs could improve on when it comes to buying single use products?
 - b. How do you see labs adopting more sustainable practices (i.e. How would this occur? What groundwork/incentives/resources need to be in place?)
4. Do you know any labs that have voiced interest in sustainability?
 - a. Are there any you think we should be in contact with/would be interested in working with us?

Figure 8. UCLA Green Labs Waste Management Handbook



STEPS TO GET INVOLVED



- Scan the QR Code to Sign the Interest Form**
Green Labs will contact you with additional information
- 
<https://tinyurl.com/nwx7fec9>
- Comprehensive Assessment**
Green Labs will evaluate your lab's current waste management practices.
- Reduction**
Green Labs will provide targeted recommendations and educational resources to help reduce your environmental impact.
- Certification**
After 9 months, labs that implement basic practices for each category will earn a Blue Certification. Labs that go beyond will earn a Gold Certification!

GREEN LABS CERTIFICATION REQUIREMENTS

- Energy**
Turning off inactive equipment, keeping fume hoods closed, and using LED lights when possible.
- Cold Storage**
Increasing ULT Freezers from -80 C to -70 C and replacing old, less efficient freezers to reduce energy consumption.
- Water**
Implement closed-loop cooling systems, install low-flow aerators, and only use DI water when necessary.

HELPFUL LINKS AND DOCUMENTS

- Facilities Service Request Form**

Pick-up requests for refrigerators, metals, lab glass, bulky items, etc.
- UCLA Specialty Recycling Info**

Additional info for hazardous, universal, and specialty waste
- UCLA Green Labs**

Additional info on Green Labs certification and resources.
- Athens Waste Services**

A guide on compostable, recyclable, general landfill, and more

TRACK YOUR PROGRESS


Log your lab's behavioral practices to see what steps remain to get certified. Green Labs will check-in with emails and meetings to ensure you're on track towards a greener future!

Figure 9. Sustainability in Labs Interview with Lab Personnel Questions

Sourcing:

1. Where do you source the majority of lab instruments/equipment/supplies?
2. When sourcing equipment, have you ever considered the sustainability of various options/vendors?
3. What are the most significant factors of consideration when sourcing instruments/equipment/supplies?
4. Do you buy any of your lab instruments/equipment/supplies in bulk?

Waste Production/Diversion

1. What processes/experimental work-ups generate the most waste in your lab?
2. In the future, would you be willing to switch to reusable lab equipment if given the option?
 - a. Do you see your lab being able to adopt a three-stream waste diversion system in the lab?
3. Would you consider participating in a buy-back or take-back program for applicable waste streams, such as pipette tip recycling, tip box packaging take-back, and glove recycling?
4. Do lab members receive any waste management training/education when they first enter the lab?

Current/Past Efforts

1. Have you heard of Green Labs or any other program/organization for lab sustainability?
2. UCLA Sustainability encourages labs to take action towards sustainable waste protocols and reduce their waste production through different incentives. An example of this is the Green Labs program, where labs can be certified in Energy, Cold Storage, and Water reduction. Is that something you/your lab would consider pursuing?
3. Do you have any ideas for how you can reduce waste that we haven't discussed here?
4. Would you be interested in attending future meetings or workshops about lab sustainability hosted at UCLA?
5. Have you encountered or do you foresee any potential challenges toward implementing waste management strategies (e.g. implementing the three-stream bin infrastructure)?

Acknowledgements

We would first like to thank Jade Goegebuer, our advisor for the project and the Zero Waste Manager at UCLA. We appreciate her guidance in developing our research scope, connecting us with other contacts, and general knowledge of waste management on campus.

We would also like to thank Bonny Bentzin, the Deputy Chief Sustainability Officer at UCLA, and Ria Mehra, Green Labs Sustainability Analyst and SAR Communications Director, for their support in connecting with labs on campus and planning the Green Labs Open House in CHS with us.

For our interviews, we would like to thank Vivian (Yifan) Li from the Medina Lab, Alberto Lopez from the Kulkarni Lab, and Nahee Kim from Therm Fisher Scientific for attending our interviews and giving us an expanded view on sustainability in lab settings.

Additionally, we would like to thank Dr. Carl Maida and Dr. Cully Nordby, our SAR faculty directors. We especially appreciated their expertise and advice for scientific data collection for our research methods.

Last but not definitely not least, we want to give a huge thanks to our SAR Program Directors, Allie Quan and Campbell Baker, as well as our SAR Communication Directors, Chloe Ng-Lee and Ria Mehra. We are so thankful for their knowledgeable lectures and endless help during class time.

Works Cited

Barmore, R., & Stewart, J. (2025, January 31). *The Importance of Solid Waste Management in Urban Areas*. BurCell Technologies.

Donahue, Ann. "Main." *Los Angeles Business Journal*, 19 Sept. 1999,

labusinessjournal.com/news/main-6/.

Plotts, P. (n.d.). Extruded polystyrene foam vs. Styrofoam: What's the difference? Foam Equipment & Consulting Co.

<https://www.foamequipment.com/blog/bid/33863/what-is-styrofoam>

UCLA Health. (2026). *Waste Reduction*. Sustainability.

<https://www.uclahealth.org/sustainability/our-progress/waste-reduction#:~:text=Healthcare%20is%20the%20second%20most,Recycling%20&%20Diversion%2C%20and%20Compost>