

240809 Meeting Minutes

Attendees: Kate Malecek, Tatiana Solovieva, Ben Ben, Tasha Cammidge, Henry P, Miles Stone, Genevieve Gandara, Dennis Ko, Raj Mukkamala, Alyssa Player, Vijaya Kumar, Sejun Kim, Annie Lam, Cate Holmes

This month, [RSVP here](#) to order drinks from [Amara Cafe](#) - we will be getting [cookies from Susie Cakes that support local animal shelters during August!](#) **The deadline for submitting your drink order is Thursday 9am, and note we can't order anything with ice cream.** I will also bring a kettle so we can boil hot water and I will bring some yummy hot chocolate packets and tea bags for folks to enjoy! If you prefer, BYOT. **Please remember to bring your laptops.**

Will update [Restaurant Guide](#) (released in October) and our [Coffee, Breakfast, and Dessert Guide](#) (posted in December!).

- Amara Cafe lets you order in advance (even the night before) which is nice for organizing
- Uses plastic straws 😞
- SusieCakes had recyclable/compostable packaging

Introductions ...

Million Advocates for Sustainable Science Petition

- International Institute for Sustainable Laboratories (I2SL) along with My Green Lab are petitioning to change funding granting agency policy to promote sustainable research
- By signing the letter you can help transform how science funding organizations set expectations for efficiency, resiliency, and sustainability in the way scientific research is conducted
- Reached 1000+ signatures!

Green Labs Monthly Tip: Lab Plastic Waste Diversion Techniques

- Conduct a waste audit
 - Want to talk about this next time in more detail!
- Use glassware instead!!
- Reuse plastic containers (for example conical tubes) if possible
- Pipette tip refills (they have less plastic AND less packaging) OR buy loose conical tubes etc that lack plastic/Styrofoam stands
- Send packaging back
 - Styrofoam take-back programs from [NEB](#) and [Sigma-Aldrich](#) (see below for more information on Styrofoam recycling!).
 - You can also [recycle Corning, Falcon, Axygen product packaging](#).
- Recycle
 - Recycle using our [Genesee or TipOne recycling programs](#)
 - Encourage vendors who don't participate in these programs to do so!
 - Recycling programs such as TerraCycle and PolyCarbin (uses pipette tip boxes that are from recycled materials)
 - Recycle coffee pods (like [Nespresso](#))

- Good article in [LabConscious](#)
- **Anyone else have strategies?**

Updates

- **21 Certified labs!! WHOOOOO**
 - Please get CERTIFIED TODAY! To get certified, finish the easy, 30-minute [Green Labs Certification](#) and submit it to sustainability@caltech.edu.
 - Certified Labs-exclusive event planned for April!
- Lots of media lately
 - [California Tech Article “Caltech Orange Needs a Hint of Green”](#)
 - [Caltech Weekly Article “Caltech on Path to Decarbonize”](#)
- We should use this energy from the campus to encourage sustainable practices!!

Updates – Pilot Programs

- Lomi Composter Update
 - GSA update...! Composting in the Catalina’s
 - RSI: 3 Lomis installed in August 2024!!
 - 207 kg of dirt (1036 kg (or 2285 lbs!) food waste)
 - Chen B1 Lomi down for repairs – sending food waste to other Lomis this month (but keeping track of food volumes!)
 - Donation of \$345 worth of supplies!!
- Pipette Tip Box Recycling
 - 3,118 gallons of plastic waste (1,400 lbs!) diverted *
- -70°C/-80°C Comparison Pilot
 - 5 labs involved, collaborating with NIH
- PolyCarbin (recycled pipette tip boxes for pilot)
 - Initial order replaced 31 pounds of crude oil and reduced 122 pounds of CO2E via sustainable procurement
 - NOTE: KM/JA says their Beacon does not work with these tips, so GL will take them back and redistribute (either to schools or other labs), make sure they can use non-LTS sets, perhaps also community colleges? Reach out to LEAF program to see if they are interested,
 - VK: often high schools can take only limited amounts of supplies
- 2024 [Freezer Challenge](#)– next year make a higher priority!
 - KM: fold this into the spring clean campaign next year also
 - January 1 – July 1, 2024
 - Labs compete to improve freezer efficiency, sample accessibility, reduced risks, cost-savings, and energy-savings for their lab’s cold storage!
 - Fun, free program
 - Scored on different categories (like defrosting freezers or inventorying)
 - Awards given at I2SL for the winners!
 - Will provide internal prizes, AND a popsicle party in the summer!

Fume Hood MASH/STS Summer Program

- Caltech Green Labs summer program will be a combination of two programs: 1) [this study from MIT](#), and 2) [this program by CU Boulder](#). We hope to build and install sensors, educate users,

and run a fun reward-based campaign for users who show the greatest commitment and improvement.

- GG (our intern!!) will be running this program over the summer
- Plan is approved by Facilities, EHS, BBE and Sustainability AND SAFETY!
- Genevieve has made updates to the original model and has made 24 sensors!
- Installed 21
 - o BI (2), Noyes (2), Kerckhoff (1), Broad (10), Schlinger (2), Chen (1), Keck (2), Linde (1)
- Turning on buzzers next week or the week after?
 - o If issues we will just track height data
- Make more for future use? Maybe a working session
- Idea to incorporate data collection, so the first few weeks of the pilot would be making the sensors, then installing them without the buzzers, collect data for 2 weeks, then turn on sensor buzzers for 1 week, then have the competition for 2 weeks
 - o Genevieve has made several updates to the original model

Updates – Events

- Lightning Talks September 20 1-3pm
 - o Vendor sponsor Eppendorf!
 - o If you want to present or volunteer, please let me know!
 - o Social media – do a #labwaste event where folks take pictures of the waste they create in a day? Perhaps AFTER the event all attendees do this?
 - o Updates on the -70/-80 comparison
 - o Presentation on the fume hood pilot project results
 - o Topics?
 - (from last time) KM: dining guides topic update, cleanup event
 - (from last time) JA: revive/start the GL flip book, ways to incorporate GL into safety for trainees from day 1, especially now that we have a new safety office person (Manali)
 - JL: should be able to put some slides together and get the data finalized by then for year 1

Updates – Social Media

- Highlighting the Spring Clean Event (JA presented latest post about the Clean Up Event)
- [Follow us on social media](#)
- Do you have time to [film a short video](#) or [write a blog post](#) I2SL is asking for videos or blogs, and there is a \$500 stipend available!
- Letters to the editor California Tech (<https://tech.caltech.edu/about/>)
- JA presented her slides (see Drive for details) and made a case for social media at Caltech
- [TC will create a folder in the Drive for this](#) so we can collaborate and make sure we are covering interesting topics
- **Organizing August 16 working session Chen B115!!**
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- Next social media post on Styrofoam Event
- JA: we've been tagged in some cool things including international competitions and such, so follow us!!

Styrofoam Recycling Pilot Program

- Made some progress this month.... Notes from last meeting:

- We now have space in the Holliston yard, and have confirmed costs for the program, TC will do a proper writeup and present it next time!
- KM: could have a roaming bin rather than multiple bins, would reduce cost and require fewer volunteers
- [Sign the petition!](#)
- [Technical bulletin from I2SL](#)
- [LCA of Styrofoam](#)
- [How to do LCAs](#)
- Support granted
 - Space in Holliston for storing Styrofoam
 - Sustainability and BBE
 - Transportation to move waste to vendor (can move 3 3-yard dumpsters at a time for a fee)
- Lawn Bowling Event
 - August 20 12-3pm (cleanup at 11, takedown 3-4)
 - GG/TS/VK Adjust signage to make dropoff of Styrofoam more clear
 - VK: add a starburst beside the bowling part and add instructions
 - DK: send us the poster and we will post in CCE buildings
 - TC/GG will post in BBE buildings next week
 - NEB is our sponsor!
 - What other activities should we have? Depends on volunteers
 - VK: can come help
 - TS: can come to set up
 - Styrofoam bowling
 - Competition between labs? Scoring? Prizes?
 - Making/taking down Styrofoam pins or something similar
 - Education
 - Dropoff bins with educational tools to train users
 - Can this be recycled? Competition
 - Trivia?
 - Prizes for most Styrofoam dropped off!
 - Should we get a vendor to host? If so, who?
 - What kinds of food (if any) do we want?
 - Education tools?
 - Posters? Unwrapping stations?
 - Pictures of the event would be amazing!
 - From last time
 - JA: may also be a good idea to have examples of what to do and what not to do, in real life, as this will make a big impact and let folks know what to do
 - TC: decided not to do the “build-our-own-pins” and take the tape off etc since we don’t want to make a mess and waste more tape etc
 - KM: also want to break down cardboard boxes, often have labels on them so we can find labs that are not doing this correctly and ask them to do it properly
 - KM: NEB would be a good vendor to get for this, see if there is a sustainability contact ?

- Proposed models (group voted last week)
 - o **Model 2: Roaming Weekly Dropoff Locations:** We have a dropoff day, once a week (say Wednesday) in a different building (so week 1 at Chen, week 2 at Broad, week 3 at BI, week 4 at Alles, then returning to Chen etc) that the volunteer for that building walks over from the dropoff point to the Holliston yard. We MAY be able to get dumpsters for that day dropped off, but this is an extra expense for the pilot. Labs need to store Styrofoam for some time.
- Still need to do
 - o One volunteer per building if needed (could advertise for this) AND/OR volunteers to transport Styrofoam
 - o [VOLUNTEER HERE](#)
 - o Support from mail room staff – mostly received already
 - o Contact building managers for lab manager lists?
 - o Determine when launch will be (perhaps Early August?)
 - o Determine length of pilot (3-6 months depending on funds)
 - o Buildings involved? 1-4 depending on plan
 - Chen
 - Broad
 - BI
 - Alles
- Buildings involved? 1-4 depending on plan
 - o Chen (TC)
 - o Broad (CH!)
 - o BI (Beacon Lab)
 - o Alles (VK)
 - o Schlinger (DK)

Green Event Initiative

- Maybe launch this in 2025
- Some good program examples include [UCLA](#) and [Yale](#)



- Carbon counter
 - o GG will try to build
 - Has chips with different colours, and labels for each city/street to determine distance, each slot is a different method of commute (walk, bike, car, etc).

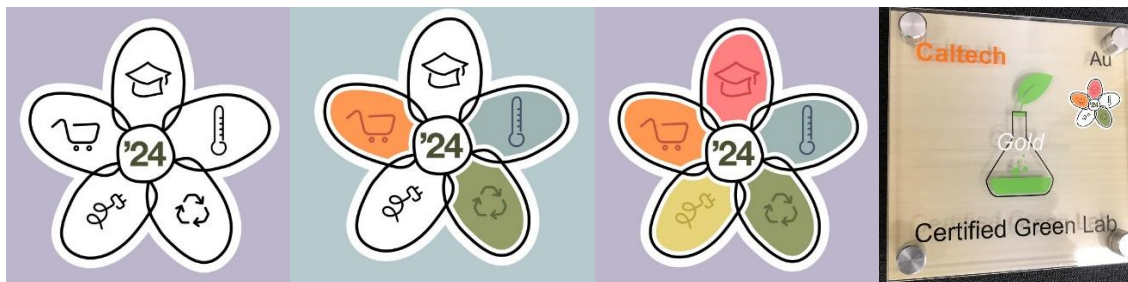
- TS: pilot it during lab meetings
- JL: really useful to keep track of data, and show how offsets could work, certain amount of carbon we are willing to “spend” to get folks to change behaviours
- JL: my lab is doing a retreat now, so we could see what kinds of food we are serving, how we are getting there, audit the retreat, and incentivize and normalize behaviours, if a lot of folks participate this will change behaviours
- TS: awareness would be really good, even at a normal lab meeting, what we ate and how you got there, as an exercise and how it turns out and make them think about it
- VK: start to give options and have a reference to see what is counted, see what we get, what is the food like, what kinds of utensils, how they commute, reuse things etc, if they recycle/compost etc
 - TC: this could be a really cool lightning talk topic!
- Green Event Certification form?
 - What are conditions?
 - If conditions are met they get a certificate to post at their event
 - Required to use the carbon counter and report back
 -

Fact Sheets Updates

- Rough drafts will be posted to the [Drive](#) for:
 - Energy Vampire *
 - Lynchpin fact sheet?
 - Energy Star
 - KM: like the upright version of the graph, it is easier to read
 - Fume Hood
 - Recycling
 - Cold Storage
 - Purchasing
 - TechMart Green Designation
- Spent rest of time working on engagement resources
- **Homework**: finalize email templates, start work on slides, go through the rest of the fact sheets

GROUP WORKED ON ENGAGEMENT PROGRAM AS DIRECTED BY KATE MALECEK

- STICKERS!!
 - MS presented ideas to the group, pictures below



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- TS: very cute
- TC: can even use sticker paper we already have to print them
- MS: will have the one with the white background be the main sticker, then add coloured patch stickers as requirements are met for each category (5 from previous meetings, including education, cold storage, recycling, energy efficiency, purchasing)
- MS: modelled after the original GL logo designs
- TC: is this motivational? – group nodded YES
- CH: what happens when you get all 5? Could make the middle sparkly or gold or something
 - o TC: or holographic!
- MS: yes, the middle could definitely be used, it is boring now
- TC: will send to KM for feedback
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- Quick walkthrough and feedback of existing Fact Sheet(s) webpage, TC will continue to incorporate feedback from last time and finalize for next meeting
- Next year want to add even more, so come with ideas

For next time

- Certification
 - o Takes ½ hour
 - o Very simple!
 - o See <https://greenlabs.caltech.edu> for the form
 - o Get a plaque!
 - o Green Labs will give you bins and signage for your lab!
 - o Only for Green Labs Certified labs
 - Stickers
 - Can order stickers through us and we will print them and drop them off!
 - Three sizes (but fully customizable) and three colours/messages (1", 1.5", 2")
 - Help encourage behavioural changes
 - Recycling bins
 - “slim jim” style
 - o
- Photos!
- Work on Action Plan
- Anything Else?

Working meeting August 16th – working on social media posts and fact sheets and Styrofoam building!!

Next Meeting September 13th 12pm-1:30pm Chen 240

Bring a friend and get a RocketBook!

