

**Project:** TMC Compost

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**School:** Engineering

**Role:** Student

**Description:** We propose funding an outdoor compost bin for the Tufts Mountain Club Lodge in Lincoln, NH. Over 700 students, alumni, and Tufts guests enjoy the TMC Lodge each year along with seven to ten special groups. Currently, we separate recycling and trash at the Lodge. Yet cooking meals for big weekends (100+ people, seven times per year) generates a significant amount of waste (10 bags of trash per month). Guests frequently ask, “Where is the compost?” Our next step, in line with TMC and Tufts’ mission of sustainability and expanding composting efforts on campus, is to provide on-site composting. The compost system will include a permanent, 4x4’, outdoor wooden bin, indoor compost bucket, and educational material for guests. The bin design comes from an online blueprint, altered to support heavy snow loads and resist small critters. Construction materials will come from local hardware stores and salvaged wood stores. In the Lodge, guests will collect compost in a plastic five-gallon bucket, guided by posters with compost instructions. During Lodge work weekends each semester, we’ll make repairs to the bin and package decomposed compost for donating to the Tufts Garden Club. The project will be built into TMC and Lodge infrastructure, which will ensure its longevity and success. For example, all Lodge caretaker training (two students who run the Lodge each weekend) will go over compost duties. Two positions within TMC executive board, the Lodge Director and Stewardship Director, would be responsible for the care and education of the composting system. We see this as a low-cost, 100% student-led project. There are opportunities for community involvement: for students to learn new skills (basic carpentry and composting) and collaborate across organizations. Lodge composting will reduce the carbon footprint our hundreds of annual guests and is a positive step for expanding Tufts green mission.

**People Involved:** TMC would be the primary group involved, but we’d rely on support from student organizations such as the Eco Reps, Tufts Bikes, Crafts Center, and Garden Club as well as the Office of Sustainability and the Bray Shop. The TMC Executive Board will publicize work days, organize transportation, and store materials. For composting advice, we will consult the Tufts Eco Reps and Program Director Tina Woolston. Before construction, we’ll hold an open call for students with basic carpentry skills and specifically reach out to Tufts Bikes, Crafts Center, and Mechanical Engineering students. We will also consult with salvaged woodyards in Boston for prices and suggestions on best materials. We plan to meet with a Civil or Mechanical Engineering professor (such as Dr. Andrew Ramsburg) to review the final blueprint before building. We’ll use the Bray Shop to build the bin during one weekend in the spring. To celebrate the compost bin’s completion, we intend to hold a two-hour “The Lodge Now Composts!” event in the Campus Center. We will contact Campus Center staff in the initial stages of the project to plan a date. Logistics to consider are transportation of the bin and materials and designing an informational sandwich board. We can easily collaborate with the Tufts Eco Reps for this event, many of who are involved already in the Tufts Mountain Club. Our current plan is to donate the fully decomposed compost to the Tufts Garden Club for on-campus projects. Another option is to donate soil to local farms in the Lincoln community (after checking that composting temperatures rise above a certain threshold to kill pathogens); rich topsoil is scarce in New Hampshire. **Budget:** Our estimated budget is \$1,210. We’ve split the project budget into five categories : (1) bin construction, (2) maintenance and repair, (3) operation, (4) educational components, and (5) Campus Center event. The most expensive piece

will be buying initial materials and sufficient materials to repair and operate the bin for at least five years. Please see attached budget Excel Spread Sheet for more details.

**Timeline:** January to early February 2020: Planning and Meeting - Contact key groups– Tufts Eco Reps, Office of Sustainability, Bray Shop, - - Tufts Garden Club, Civil Engineering Department, Campus Center staff - Meet with TMC Executive Board - Release plan to build compost bin to Tufts community - Site bin on Lodge property - Update Caretaker Training to include compost responsibilities - Meet with Eco Reps -Suggestions for outdoor composting (methods and final destination) - Discuss opportunities for collaboration - Open call for amateur campus carpenters on social media - Research and finalize bin blueprint - Design composting signs for inside and outside the Lodge - Create “Lodge Composting Guide” Google Document  
Mid to Late February 2020: Collecting Materials - Buy materials - Salvage wood from local sources  
March 2020: Construction and Signs - Build compost bin in Bray Shop - Move to Office of Sustainability or 17 Chetwynd (TMC House) for storage - Finalize composting signs, printing, laminating - Print and laminate TMC Composting Guide for Lodge  
Late March 2020: Share Project and Begin Composting - “The Lodge Now Composts!” event at the Campus Center (2-4 pm) - Move compost bin and materials to Lodge and install - Update email to Lodge Community  
April – May 2020: Educating and Monitoring - Monitor through “Compost Status” sheet to be filled out weekly by Caretakers - Make needed repairs - Correct Lodge guests’ composting habits (ie. have a caretaker in charge of the compost during cleanup) - Email “Summer Composting” guidelines to Lodge community - Send “End-of-semester Compost Feedback Survey” for feedback - Record compost statistics from “Compost Status” into Google Spreadsheet for community viewing  
September 2020: Repairs and System Adjustments - Site visit and necessary repairs - Implement suggestions from “Compost Feedback Survey” - Adjust Caretaker responsibilities as needed - Resend “How to Compost at the Lodge” email to Lodge community  
October 2020: Educating and Monitoring Continue: - Monitoring - Making repairs - Correcting compost habits - Recording compost amounts  
May 2020: - Dig out compost, bag, and bring to campus OR - Arrange drop off to local Lincoln farm

**Benefit to Tufts Community:** In my past three years on campus, I've seen Tufts sustainability efforts start to expand beyond the Medford campus, to the SMFA, Boston, and Grafton Campus. This is another extension of Tufts sustainability and Lodge sustainability - our green presence off-campus . Planning, constructing, installing, and operating a compost bin is a fantastic opportunity for collaboration between different groups of students. Students will be brought together during the planning phases, excursions to buy materials, meeting with an engineering professor, and building of the compost bin itself. This project is empowering. It also will give back; within two years, we will have ready-made compost to donate to the Tufts Garden Club or a Lincoln community member.