

Primary Contact Name: Anna Szendrenyi and Annie Gorden
Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

The Green Initiative Fund

University of California, Berkeley

2012 Grant Application

General Information

Project title: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

Sponsoring Organization/Fiscal Agent:

For Sponsoring Organization/Fiscal Agent, please submit a completed "Project Approval" form. Project Approval forms will not be counted toward your application page limit.

Total amount requested from TGIF: \$40,270

Amount Requested as: Grant Loan (Estimated payback period of loan in months: ___)

How did you hear about this grant?

We heard about the TGIF grant through experience with projects that received the TGIF grant, namely 'The Road to a Campus-Wide Composting System: Achieving Critical Mass.' We were also reminded of the grant through sustainability listserves.

Project Description

- 1. Please give a brief history of this project/your organization. Describe the overall purpose (goals) of the project.**

The Compost Alliance was founded in Fall 2010 by a group of concerned students working to promote sustainability by diverting compostable waste from landfills. Since Spring 2011, funding from TGIF (and other grants) has allowed us to establish composting in the first round of buildings on campus including service, set-up, equipment, and educational outreach. As of March 2012 the Compost Alliance has been incredibly successful in the implementation of compost systems in nine (9) buildings on campus, and by June we will have implemented over fifteen (15+). The Compost Alliance (CA) has educated more than 500 people since the program began in earnest in Summer 2011. It is estimated that more than 17,900 pounds (lbs) of waste have been diverted from disposal in the landfills, and that 1,306.7 kilograms (kg) of CO₂E have been diverted from being released into the

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Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

atmosphere. The Compost Alliance program is more than half-way through its initial stage of achieving the 'critical mass' necessary to justify 'in-house' collection of compostable materials. By June 2012, the Compost Alliance will have completed this first stage of attaining critical mass.

The Compost Alliance understands that we cannot subsist on grant funding in perpetuity. Additionally, the Compost Alliance realizes that now that compost collection has been established in a number of campus buildings, we must find funding for both institutionalization of compost collection on campus as well as the Compost Alliance. The aim of this year's project will be to institutionalize both compost collection at UC Berkeley and the Compost Alliance program. During this time we will also continue to implement buildings, but a focus of the program will be working on financial and institutional models for integration within Campus Recycling and Refuse Services (CRRS) and Physical Plant - Campus Services (PP-CS).

The work of the Compost Alliance has been successful because it bridges together campus stakeholders. In the past there have been multiple student attempts to implement compost collection and processing systems, but they were ultimately unsuccessful because these efforts did not integrate staff and student stakeholders.

The Compost Alliance is making fundamental changes in the ways in which campus waste is managed, while simultaneously encouraging cooperation and collaboration amongst students, staff, and faculty. The 2012-2013 TGIF-funded Compost Alliance program will work to continue collaboration as well as embark on a new project of integration.

2. What will be the process for implementing your project? Describe the key components and steps of your project.

Upon the completion of Phase I in June 2012 we will have reached 'critical mass,' and the focus of Phase II will be the significant expansion of compost collection systems into many more buildings as well as the institutionalization of the Compost Alliance program within PP-CS and CRRS.

For the expansion of the program into more buildings, the process for each individual building will be:

- Meet with building managers and custodians to garner support and understand their particular needs and inputs with regards to a compost program
- Conduct preliminary waste audit and assessment
- Implement compost system by working closely with staff and custodians and placing compost bins and signage in restrooms, kitchenettes, and common areas
- Education and outreach by:
 - designing posters and outreach materials to be posted on bins, sent to students, staff, and faculty, and posted in restrooms and on bulletin boards
 - advertising the new program through newsletters, articles, and other media

Primary Contact Name: Anna Szendrenyi and Annie Gorden

Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

- holding brown bag lunches and other events to discuss the importance of waste diversion and sustainability
- Conduct another waste audit to assess the level of success and identify strategic areas for improvement
- Improve recycling systems and education

We realize that we cannot always rely on TGIF for funding, which is why one of our main goals for the year is transitioning from dependence on TGIF to integration within PPCS. For the institutionalization of the program and integration into PPCS/CRRS we plan to accomplish the following:

- Monthly meetings with Custodial Services to discuss integration and expansion of the program on a sustainable level (Bob Newell, Jim Mathwin, Nick Figeira, Ali Mansour)
- Give formal presentations with most current numbers (external costs, tonnage, etc.) for justifying institutionalization to CACS, PP-CS upper management, and other relevant and interested bodies
- Formal meetings with Vice-Chancellor Ed Denton to attain long-term campus funding and institutional support for a campus composting system, including signs, bins, bags, and student work
- Send Berkeley Composters Letter of Approval (nearly 20+ Facilities Services managers) to Chancellor Robert Birgeneau
- Discuss ideas for a campus-support campaign
- Formal Meeting with current Chancellor Robert Birgeneau (or his successor) to attain final approval for institutionalizing composting campus-wide

Metrics and Measurability

3. Which aspects of campus sustainability will your project address, and why is addressing these sustainability components important? Does your project tie into any current campus sustainability initiatives or help the campus reach specific sustainability goals? How does your project go above and beyond the requirements already mandated by UC Berkeley and/or state law?

While our previous project focused on achieving critical mass by creating the foundations for an institutionalized waste diversion program for the University, our current project seeks to move beyond solely implementing systems to integrating compost into campus day-to-day operations.

We are now at the stage where buildings are reaching out to us, as they voluntarily seek to participate in the campus movement toward more sustainable waste diversion options. Not only are we shifting the campus mentality towards waste diversion, making it a priority for a large number of staff, students, and faculty alike, we are also helping shift campus culture toward sustainability by encouraging the formation of green teams and networking with other student groups.

Primary Contact Name: Anna Szendrenyi and Annie Gorden

Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

As UC Berkeley is exempt from city and state mandates regarding recycling and composting, the goals of the project will help the campus emerge as a leader among universities nation-wide as a model for institutionalized waste diversion. Although UC Berkeley has already set goals of 75% waste diversion by 2012 and 'Zero Waste' by 2020 as highlighted in the 2009 Campus Sustainability Plan, it is still highly unlikely that such goals will be reached unless the efforts of the Compost Alliance and CRRS continue to implement a more comprehensive and institutionalized compost and recycling system. The Compost Alliance seeks to help UC Berkeley achieve its stated goals by increasing the diversion rate by another 25%, bringing total waste diversion to 75% and helping to entrench UC Berkeley as a leader of the sustainability movement in one of the most progressive cities in America.

Our previous project ('Phase I') helped lay the groundwork for sustainable waste diversion, and now, with the help of this grant, we plan to extend this ethic of sustainability and culture of environmental stewardship to encompass the entire campus. With 'Phase II' of our project, we seek to finish bringing a majority of campus buildings on board with composting and recycling systems, allowing current diversion from landfills to jump from 48% to approximately 75% (with perfect composting and recycling behavior). Not only would such improvements (1) reduce environmental damage from landfills including toxic soils, water pollution, and the release of two very potent greenhouse gases (CO₂ and CH₄) and (2) promote the cycling and recycling of waste materials through the consumption chain, but also such increases in waste diversion will (3) help save campus a substantial amount of money (roughly \$300,000/year) both in the short-term and in the long-term.

Through the focus on raising awareness and educational outreach to staff, faculty, and students, we plan to emphasize that 'Phase II' is especially key in cultivating and propagating a culture of proactive individuals knowledgeable in the importance of diverting waste. Regular exposure to alternative waste diversion options will help extend such awareness and engagement as part of the broader spectrum of building sustainability on campus and beyond.

- 4. What quantifiable sustainability impacts will your project have and what will be the cost savings to the campus? How will you measure these impacts after your project is implemented in order to see if you have met your goal(s)?** *Please also use the CalCAP Statistics spreadsheet for your calculations and submit it separately from your application. The [2010 Campus Sustainability Report](#) contains additional information on campus resource usage.*

Assuming perfect composting behavior, we will improve total waste diversion on campus from 42% to 63%. This represents approximately 2,000 tons of additional waste diversion out of a total of nearly 9,700 tons of waste (prior to diversion) produced on campus. A campus wide compost system will eliminate an estimated 292 MTCO₂e (292,000 kgCO₂e) in addition to mitigating other environmental damage factors stemming from landfills. Moreover, bringing internal collection of composting (as opposed to contracting out) and consolidating equipment/supply purchases will reduce both fixed and variable costs of composting per building and, as composting volume increases, reduce costs through economies of scale.

Primary Contact Name: Anna Szendrenyi and Annie Gorden

Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

In order to evaluate program success, we measure performance by the diverted tonnage of waste on a per building basis. We measure the impact of the compost systems through waste audits conducted before and after implementation (and follow-up waste audits where necessary). Successful implementation will provide a diversion rate of >75% of paper towel waste from restrooms, and significantly improved food waste diversion from kitchenettes.

Program performance is also measured upon education levels of students, staff, and faculty on a campus-wide basis. Ongoing surveys are being gathered in order to produce a continuous trend of education levels on campus. The trends extracted from these surveys are analyzed against the baseline measurement of prior education levels. Based on the results from building inhabitant input and from waste audits, the Compost Alliance re-focuses and re-targets educational campaigns and operations for events, signage, and bin placement. These changes are noted and analyzed, and are specially tailored on a case-by-case basis to fit the needs of areas that are determined to need adjustment or improvement. We also create and post newsletters that inform building occupants of the benefits of composting and recycling as well as proper composting and recycling behaviors. Furthermore, we inspect buildings on a regular basis to ensure that systems in place are functioning properly, proactively taking note of problem areas to be targeted in the continuing educational outreach that is central to the success of our program.

Project Education, Outreach, and Publicity Plan

Note: This section is about letting the campus know what your project has accomplished after you've met your project goals. If outreach and education are the primary goals of your project and you have sufficiently answered these questions in the Project Description and Metrics & Measurability sections, you may leave these questions blank.

5. What is your plan for publicizing your project on campus? In addition to TGIF, who will you report your information to?

We plan to allocate a larger amount of our resources to educational outreach as part of the new push for perfect composting and recycling behavior from the input side of the disposal chain. We plan to create and distribute newsletters informing the campus of the new infrastructural changes to waste disposal as well as give presentations to wider audiences on the basics of best compost and recycling practices. Lastly, we hope to use a variety of media sources, including educational videos and public service announcements at athletic and social events, to further educate and inform campus community members of the new waste diversion systems. We also plan to continue efforts from before including:

- Improved and universal signage and posters
- Utilizing our position as a registered student group to conduct meetings, information sessions, and other outreach programs
- Bathroom readers on the availability of and proper usage of compost and recycling bins

Primary Contact Name: Anna Szendrenyi and Annie Gorden

Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

- Creating and maintaining a website which highlights the goals of the project and provides a forum for information dissemination
- Submitting articles to campus media including The Daily Cal, Bright Green News, etc.

In addition to reporting information to TGIF, we will also report our information to Lin King, Robert Newell, CACS, and StopWaste. We also hope to use the new recycle.berkeley.edu website to share our information and network with other interested staff, student, and faculty members who may be interested in partnering with us or using our information as an educational case study.

6. Do you have any specific outreach goals? If so, how will they be measured?

We hope to create and implement a survey to gauge the effectiveness and overall impact on campus community members of the aforementioned publicity venues. We plan to send out both electronic surveys as well as conduct ‘in the field’ surveys. We will attempt to measure the permeation of our educational outreach efforts via the absolute number of campus community members actively participating in composting and recycling.

Project Approvals *(Projects will not be considered without the relevant approvals).*

7. Do any aspects of your project require approval from an entity on or off campus? If so, please explain. (For example, a project which affects campus grounds or buildings must be approved by the Vice Chancellor for Facilities Services) For each described entity, please submit a completed “Project Approval” form. Project Approval forms will not be counted toward your application page limit.

Our project requires the approval and partnership of Physical Plant—Campus Services (PPCS) and Lin King from Campus Recycling and Refuse Services (CRRS). These groups will help with the logistical issues of compost collection (custodial & building pick-up) as well on advising on topics such as education and interactions with staff members and facilitating a smooth transition to alternative waste diversion options, namely composting. Our partnership with these groups is pivotal in the ultimate goal of institutionalizing these compost collection systems.

Project Team

8. Please identify the project leader(s) as well as the member of the project team responsible for reporting TGIF project updates (if different from the project leader). For each entity listed, please submit a completed “Project Approval” form. If you want to list additional team members, please add the entries. Additional team member information will not count toward your page limit.

Primary Contact Name: Anna Szendrenyi and Annie Gorden

Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

Name	Annie Gorden
Title and department	Compost Alliance Coordinator
Project Role	Compost Alliance Coordinator
Phone	909-800-0537
Email	anniegorden4@gmail.com
Relevant experience or knowledge for this project	-Annie has been a part of the Compost Alliance since Spring 2011, and has helped install composting in 9 buildings so far. She was also the Compost Specialist for Greening the Greeks, installing composting and recycling systems in over 17 large houses.

Name	Anna Szendrenyi
Title and department	Compost Alliance Coordinator
Phone	707-548-0528
Email	anna.szendrenyi@berkeley.edu (preferred)
Relevant experience or knowledge for this project	-Anna worked as GO! Team Coordinator and Class Coordinator for Building Sustainability at Cal (BS@C) for three semesters. -She helped with composting and recycling implementations in buildings across campus before Compost Alliance was founded.

9. If your project team is partnering with other organizations, departments, individuals, or other stakeholders, please explain their involvement and include their contact information.

In addition to CRRS, PP-CS, and Facilities Services (FS), the Compost Alliance hopes to work with the Office of Sustainability on educational aspects (through an informal partnership) and the Chancellor's Advisory Committee on Sustainability (CACS) to help inform policy suggestions and waste reduction goals.

10. How much of your project will students be involved in? What roles will students play in your project? Does your project target involvement of a certain section of the student body?

Our project is nearly completely student-run and operated (~85%). Though we have close ties with hired staff from CRRS and campus building managers (FS), we rely on students to follow through with the logistics, assessment, education, and outreach goals of the project.

Their tasks include:

- Coordinating with building managers, staff, and custodians and meeting with other key stakeholders
- Conducting waste audits to ascertain the effectiveness of the system and providing recommendations for improvement
- Exploring and garnering sources of funding to support implementation costs

Primary Contact Name: Anna Szendrenyi and Annie Gorden

Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

- Publicizing the need for and implementation of a comprehensive compost and recycling systems
- Identifying buildings and bin locations for a successful progressive roll-out plan
- Reviewing and evaluating current efforts and pilots
- Designing signage
- Designing posters and outreach materials to be widely distributed
- Working on other forms of outreach including holding outreach programs and advertising through newsletters, articles, presentations, and other media.

Budget

List all budget items for which funding is being requested under the appropriate category. Include cost and total amount for each item requested. Please be as detailed as possible.

Item	Cost per Item	Quantity	Total Request
<i>Equipment and Construction Costs</i>			
Slim Jim bins	\$33	500	\$16,500
Signage and stickers cost (per bin)	\$10	500	\$5000
<i>Publicity and Communication</i>			
Miscellaneous education/outreach (printing, kick-off events, volunteer picnic, etc.)	\$500	1	\$500
<i>Personnel and Wages</i>			
Program Coordinators (\$13/hour, 8 hours/week, 45weeks)	\$4,680	2	\$9,360
Intern (\$11/hour, 6 hours/week, 45 weeks)	\$2, 970	3	\$8,910
TOTAL			\$40,270

11. If your project is implemented, does it require any on-going funding after its completion? What is your strategy for supporting the project after this initial period to cover replacement, operational, and renewal costs?

This year, one of the Compost Alliance's main goals is to institutionalize the program to increase its sustainability. The project has been supported by individual building budgets, as well as grants acquired by the Compost Alliance. This August we will be seeking approval from Vice Chancellor Denton and PP-CS to fund the compost collection systems campus-wide and to bring the collection in-house. Costs for composting will decrease once composting is collected internally. Furthermore, in partnership with Campus Recycling and Refuse Services, the Compost Alliance has been improving recycling systems in buildings. This process generates revenue to fund the compost program, as well as reduces landfill waste and moves the campus closer to achieving the zero waste goals. Additionally, the

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Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

campus will have an incentive to compost waste rather than to landfill it as the compost tipping fee is now less expensive than the landfill tipping fee.

12. List all non-TGIF sources you are pursuing for funding, volunteer time, in-kind donations, etc.

Source/Description	Amount	Date Request submitted	Date received / date funding will be announced
Custodial/Staff Services	Variable	Ongoing	Ongoing
Lin King's Support/Time	1-2 Hours/ week	N/A	Ongoing
Kimberli Williams's Support/Time	1 Hours/week	N/A	Ongoing
StopWaste funding for campus-wide universal signage	\$5000	January 2012	January 2012

Project Timeline

13. Please complete the following table to describe your project timeline. List milestones chronologically. For the "Timeframe" column, please estimate how long each task will take to be completed.

Effort 1: Continuing with New Building Timelines

Task	Timeframe (# of wks to completion)	Estimated completion date
Project Start Date		May 2012
Phase 1- Contact building managers (5 buildings)	5	May 2012
Phase 1- Waste audits	5	June 2012
Phase 1- Implement compost systems	4	June 2012
Phase 1- Follow-up waste audits, surveys, continuing education	2	July 2012
Phase 2- Contact building managers (5 buildings)	5	August 2012
Phase 2- Waste audits	5	August 2012
Phase 2- Implement compost systems	4	September 2012
Phase 2- Follow-up waste audits, surveys, continuing education	1	September 2012
Phase 3- Contact building managers (4 buildings)	5	October 2012
Phase 3- Waste audits	5	October 2012

Primary Contact Name: Anna Szendrenyi and Annie Gorden

Project Name: The Road to a Campus-Wide Compost System: Institutionalizing In-House Compost at Cal

Phase 3- Implement compost systems	4	November 2012
Phase 3- Follow-up waste audits, surveys, continuing education	2	December 2012
Phase 4- Contact building managers (4 buildings)	5	December 2012
Phase 4- Waste audits	5	February 2013
Phase 4- Implement compost systems	2	March 2013
Submit final report to TGIF	4	April 2013
Phase 4- Follow-up waste audits, surveys, continuing education	2	April 2013
TGIF grant money depleted	1+ year	June 2013

Effort 2: Institutionalizing Composting for the Long-Term

Task	Timeframe (# of wks to completion)	Estimated completion date
Project Start Date		May 2012
Monthly Meeting for Updates with Custodial Services (Bob Newell)	2	May 2012
Track number of compost bags and extra custodial labor for composting system in each building	8	early July 2012
Monthly Meeting for Updates with Custodial Services (Bob Newell)	2	June 2012
Determine total cost of compost bags and extra custodial labor per building per month	2	mid July 2012
Prepare formal presentation with most current numbers (external costs, tonnage, etc.) for justifying institutionalization	2	late July
Monthly Meeting for Updates with Custodial Services (Bob Newell)	2	July 2012
Formal Meeting with Vice-Chancellor Ed Denton to attain long-term campus funding for a campus composting system	2	mid August 2012
Monthly Meeting for Updates with Custodial Services (Bob Newell)	2	Aug 2012
Send Composters Letter of Approval (nearly 20+ Facilities Services Managers) to Chancellor Robert Birgeneau	4	late August 2012
Formal Meeting with current Chancellor Robert Birgeneau to attain final approval for institutionalizing composting campus-wide	3	early September 2012
Monthly Meeting for Updates with Custodial Services (Bob Newell)	2	September 2012
Follow-Up Meeting with Vice-Chancellor Ed Denton to finalize terms for long-term campus funding for a campus composting system	2	early October 2012
Formal Meeting with new Chancellor to reaffirm approved institutionalized composting system for campus	3	early February 2013