

Organics Management Guide Submission

Name: Julia Garcia

Title: Environmental Specialist

Organization: NJDEP

Email Address: Julia.Garcia@dep.nj.gov

Website: Respondent skipped this question

Select the Primary Entity Type Please identify the category that best represents your project: Academic Institutions

Questions:

- 1. Background: Provide context for the program, project, or policy — why it was developed, when it began, and the problem or opportunity it addresses.**

New Jersey's Solid Waste Recycling Enhancement Act (REA) Higher Education Research Grant Program funds projects that support the objectives of the state Recycling Enhancement Act (N.J.S.A. 13:1E-96(b)(5)). This program provides grants to institutions of higher education for recycling demonstration, research or education, including professional training. Funding for this program comes from the \$3.00 per ton tax on solid waste accepted for disposal or transfer at solid waste disposal facilities, as established in New Jersey's Recycling Enhancement Act.

In 2022, Bergen Community College and its partner, New Jersey Composting Council, were awarded funding under this REA grant program to demonstrate that a large commuter college with more than 11,000 students can collect a majority of the food waste and soiled compostable food service ware generated on campus and convert it to compost using covered aerated static pile (ASP) technology.

- 2. Summary: Briefly describe the initiative, including its goals, location, and primary outcomes.**

From August 2022 to July 2025, Bergen Community College implemented a behavior change campaign to increase recycling of food waste generated in the cafeterias of the main college campus and one high school, conducted annual waste audits, and tested the

feasibility of substituting compostable food service ware for wood chips in their existing composting process to determine the most effective strategy for managing post-consumer food waste containing these types of materials.

The Bergen Community College Green Team and faculty conducted composting experiments using both a Rocket accelerated aerobic in-vessel composter unit and accelerated aerobic static piles (batch process). The experiments found that a mixture of 50% food waste, 25% woodchips, and 25% compostable food service ware by mass achieved the greatest compost quality using either the Rocket composter or aerated static pile. While both methods of composting worked well with this ratio, the best compost quality was achieved when this ratio of materials was processed in the Rocket composter for ten days followed by an additional 30-days of composting in the aerated static piles before curing.

Waste audits were also conducted to assess the composition of waste generated on campus. A behavior change campaign was implemented to increase recycling rates, which consisted of issuing campus newsletters, purchasing new waste receptacles with clear signage, hosting student workshops, and sharing social media posts.

As a result of this project, a Campus Compost Manual was developed to provide guidance to students and staff with information necessary to develop or enhance food waste composting programs on school campuses. A video demonstrating the composting process was also developed and is available online. The project successfully achieved its goals of increasing the amount of food waste composted from its main campus cafeteria from 20% to 50% and within the high school from zero to 20%.

3. Percent of Overall Diverted Material: If available, include data or estimates on the portion of the community or organization's total diverted material no longer associated with the waste stream that this program or policy addresses.

The project successfully achieved its goals of increasing the amount of food waste composted from its main campus cafeteria from 20% to 50% and within the high school from zero to 20%. Additionally, results of the campus waste audits found that 42.2% of the college's waste is compostable, and 28% is recyclable, which means that the school has the potential to divert up to 70% of its waste from the landfill.

4. Key Program Elements or Policy Provisions: Describe the structure and main components of your program or policy. Explain the investments origins (who,

how much). Please include as many of the following elements as applicable: What types of materials are being managed? (e.g., surplus recoverable foods, food scraps, wasted food. How are these materials managed? Who is responsible for managing them? (Organizations, agencies, businesses, or other entities) What products are generated, and how are they utilized or managed? (e.g., compost, animal feed, energy products) Who funds the management of these materials? (Funding sources, grants, partnerships) Who generates these materials? (Identify the origin: households, institutions, businesses, etc.)

This program focused on managing both pre- and post-consumer student cafeteria food scraps and compostable food service ware. For the composting experiments, an electric shredder and mulcher were used to help manage the size of compostable food service ware prior to composting. Food waste was either added to a Rocket accelerated aerobic in-vessel composter, accelerated aerobic static pile, or combination of both with various ratios of food waste, compostable food service ware (e.g., paper plates), and wood chips to test effectiveness of the composting process. The results of this experiment found the ideal ratio for achieving the highest quality compost in a reasonable amount of time was 50% food waste, 25% compostable food service ware, and 25% wood chips (by mass) when using the Rocket composter for ten days followed by an additional 30 days in the aerated static piles prior to curing. The initial purchase of the composting equipment was funded by the NJDEP REA Grant, and maintenance is upheld on a voluntary basis.

Several initiatives took place to change student and faculty behaviors regarding how they discard their waste. By purchasing new trash, recycling, and composting receptacles with clear signage indicating what materials belong in each bin, students and staff were well equipped to discard their post-consumer waste materials properly. Information was also shared with the campus community via the student newspaper, social media posts, and electronic newsletters. Additionally, campus composting and recycling was promoted by hosting special events, such as an awareness campaign utilizing a mascot, Oscar the Compost Grouch, who guided students in the cafeteria to the correct waste receptacle and raised awareness about food waste recycling and composting.

- 5. Regulatory Impact: Describe how laws, policies, regulations, and/or code have affected your program or project. This may include positive, negative, or neutral impacts. Consider noting which regulations apply, how they influenced implementation or operations, any challenges or barriers encountered, and how compliance requirements shaped program decisions.**

This project supports the state's goal to reduce the amount of food waste generated in 2017 by 50% by the year 2030.

6. Measurable Increase in Supply: Include data or qualitative outcomes showing growth in collection, diversion, or reuse volumes if available.

The project successfully achieved its goals of increasing the amount of food waste composted from its main campus cafeteria from 20% to 50% and within the high school from zero to 20%.

7. Behavior Change: Describe whether the initiative resulted in measurable behavior change and explain how you determined this. If behavior change occurred, outline the strategies that proved most effective. Please include any available data or evidence that supports your findings.

Through newsletters, signage, hosting workshops, and social media posts, this program educated the students on campus about proper source separation of food waste (and other recyclables) and composting, which resulted in increased rates of food waste recycling on campus. Long-term behavior changes were not evaluated as part of this project.

8. Benefits and Impacts (Economic, Environmental, and Social): Describe the economic, environmental, and social sustainability impacts of the program, policy, or initiative. This may include both positive and negative outcomes. You may address impacts such as costs or savings, job creation, waste reduction, emissions, resource conservation, community engagement, equity, or public health. Please include data or qualitative observations where available and note any trade-offs or challenges.

Not specified.

9. How Stakeholder Buy-In Was Achieved: Explain how the program gained support from key stakeholders (e.g., government agencies, businesses, residents, nonprofits).

The project team experienced general resistance and/or indifference from the campus community to correctly separate food waste, trash, and recyclables in the correct receptacles. A behavior change campaign, as described above, was implemented in addition to purchasing new receptacles with clear signage.

10. Stakeholders' Perspectives and Dynamics at Play: Highlight collaboration dynamics, challenges, or differing stakeholder interests and how they were addressed.

NJ Composting Council partnered with Bergen Community College on this project to provide their composting expertise.

11. Lessons Learned: Share what worked well, what didn't, and recommendations for others seeking to replicate your approach.

The composting experiments found that the ideal ratio of materials for composting food waste with compostable food service ware was 50% food waste, 25% compostable food service ware, and 25% wood chips (by mass). This was most effective when using the Rocket composter for ten days followed by an additional 30 days in the aerated static piles prior to curing. Additionally, the material was best processed after shredding the compostable food service ware (e.g., paper plates) as opposed to mixing the food service ware intact. Otherwise, the paper formed masses that created large anaerobic areas in the compost mixture.

This project allowed the college to enhance their existing composting process to include certain post-consumer waste (compostable food service ware) and increase the total amount of food waste recycled on campus. The behavior change campaign raised student awareness surrounding the importance of diverting food waste from disposal to landfills and gave them the opportunity to become involved in composting.