State of Hawai‘i
Department of Education

Annual Report on Composting Pilot Project Working Group

December 2024

Act 207, Session Laws of Hawai‘i 2018, requires the composting pilot project working group to annually report on its findings and recommendations.

School-Composting Pilot Program 2025

Act 207, Session Laws of Hawai‘i 2018, established a composting grant pilot working group and provided funding for a grant program. Subsequently, since 2019, the Hawai‘i State Department of Education (Department) Hawai‘i School Composting Grant Program (Program) has administered a grant pilot for composting at public schools and public charter schools.

Status of Composting Grant Program

The Department solicited applications for supplies, equipment, and technical guidance support. To date, a total of 25 schools have received support from the Program in the form of technical guidance or tangible goods related to composting and food waste prevention (see Table 1 for a list of schools participating in the Program). Participating schools received personalized recommendations from composting experts for their campus based on the schools' access to labor, land area, school population, administrative support, teacher engagement, and student interest. These schools are able to apply to the Program for funds to cover supplies and equipment based on the scale and scope of their new or existing composting and organics diversion systems. Salaries were not eligible for funding due to restrictions in Department budgetary rules, so staff time to manage each campus program needs to be funded directly by the school's external funding sources or donated as volunteer labor.

Table 1. Completed and Pending Program Applications to Date, October 2024

School	Composting and Bioconversion Strategies in Use
‘Aiea Intermediate School	Milk Waste Collection
Castle High School	Green Waste, Food Waste Static Pile Composting
Fort Shafter Elementary School	Green Waste, Food Waste Static Pile Composting, Vermicomposting
Haʻikū Elementary School	Green Waste, Food Waste Static Pile Composting, Vermicomposting
Hauʻula Elementary School	Green Waste, Vermicomposting
Hōnaunau Elementary School	Green Waste, Food Waste Collection, Vermicomposting, Bokashi/Microorganisms, Vermicast Tea
Jefferson Elementary School	Green Waste, Food Waste Collection
Kaimukī Middle School	Green Waste, Food Waste Static Pile Composting, Vermicomposting, Vermicast Tea
Kaiser High School	Green Waste, Food Waste Collection, Vermicomposting

Kamaile Academy Public Charter School	Green Waste
Ka Waihona o Ka Naʻauao (Public Charter School)	Green Waste, Food Waste Static Pile Composting, Food Waste In-Vessel Composting
Maʻemaʻe Elementary School	Milk Waste Collection
Mililani High School	Green Waste, Food Waste In-Vessel Composting, Static Pile Composting, Vermicomposting, Bokashi
Nānākuli High and Intermediate School	Green Waste, Bokashi, Corrugated Cardboard
Puʻuhale Elementary School	Milk Waste Collection
Sunset Beach Elementary School	Green Waste, Food Waste Static Pile Composting, Vermicomposting
Waiʻanae Intermediate School	Green Waste
Waikīkī Elementary School	Green Waste, Food Waste Collection, Vermicomposting, Bokashi/Microorganisms, Vermicast Tea
Waikoloa Elementary & Middle School	Green Waste, Food Waste Collection
Waipahu Intermediate School	Green Waste, Food Waste Collection, Vermicomposting, Bokashi/Microorganisms, Vermicast Tea, L.A.B production from recovered milk
Windward Zero Waste School Hui	
Enchanted Lake Elementary School	Green Waste, Food Waste Collection, Vermicomposting
Kaʻelepulu Elementary School	Green Waste, Milk Waste Collection, Food Waste Collection, Vermicomposting
Kailua Intermediate School	Green Waste, Milk Waste Collection, Food Waste Collection, Vermicomposting
Kainalu Elementary School	Green Waste, Milk Waste Collection, Food Waste Collection, Vermicomposting, Vermicast Tea
Kaʻōhao School (Public Charter School)	Green Waste, Food Waste Collection, Vermicomposting, Bokashi/Microorganisms, Vermicast Tea

The following sections summarize efforts undertaken by the program through 2024 in support of school composting, as well as highlighting schools that are doing great work in their own composting projects that are not financially supported by the program. Additionally, the report outlines the schools receiving support and equipment, including updates since the 2023-2024 legislative report.

As of July 1, 2024, $38,875.59 was expended in fiscal year 2024. Total expenditures have been $197,406.81, leaving $87,593.19 of the original appropriation. No additional funds have been subsequently appropriated.

Category	*Description*	*Billed*
Professional Services	Engineering Charges	$520.41
Reimbursable Expenses	12 Pour Away Boxes	$1,202.90
	Expense Data	$3,836.64
Subconsultants	Efficiency First, LLC	$31,871.24
	Tree Solutions & Environmental	$1,444.40
Grand Total		**$38,875.59**

Development of Standardized Campus Composting Guidelines and Agreements

In an effort to create uniform standards and expectations for Department schools interested in food scrap recovery and campus composting, Program advisors developed a proposed classification system for organic resource recovery and campus composting strategies that interested schools may consider undertaking on their campuses. Currently, these drafted guidelines and resources are not formalized and remain pending while the Program assesses its capacity to implement proposed measures district-wide through administrative rules and other means. The program has worked on the following:

1. Drafting of school organics diversion tier system by scale and scope that could be refined and formatted into a decision tree for determining which program tier would work best for each school. These tiers can be broken down into education/demonstration priority and diversion priority, in which most or all of a school's compostable material is managed on campus.

   These tier strategies are as follows:

   - Tier 1 - training students to separate compostable materials for educational purposes only with no processing
   - Tier 2 - organics collection for third-party pickup and offsite processing (piggeries or composting operations)
   - Tier 3 - one to two on-campus composting piles, bokashi buckets, and/or vermicomposting systems

- Tier 4 - small-scale in-vessel composting machines that accelerate the composting process, to the diversion priority which would be a school aiming to collect and manage all of their food scraps and other compostable materials on-campus through compost piles, in-vessel composting machines, bokashi, or vermicomposting.

2. Drafting of operational guidelines for each proposed tier, such as recommendations on cafeteria sorting station strategies, siting of campus composting systems, projected labor requirements, compost system recipes and maintenance, community outreach strategies, pathogen testing, product distribution, and agreements with the Office of Facilities and Operations (OFO).
3. Research of cost and budgeting considerations by tier and composting system/technology - and how many schools could be supported at each tier with remaining program funds.

Grant Program Research and Resource Development

The program has supported grant program research and resource development in the following ways:

1. Drafting of the Memorandum of Understanding between OFO and the school wishing to pursue diversion-scale programs.
2. Research on containerized (in-vessel) technologies and their applicability on school campuses of various sizes and potential for on-island design and construction by school stakeholders, including students. In particular, the Green Mountain Technologies (GMT) Intermodal Earth Flow for diversion-scale strategies, GMT Earth Cubes for small-scale in-vessel composting programs, and open-source plans for automated rotary drum in-vessel composting machines.
3. Research on existing guides and curriculum available for school composting program development and student education - including a conversation with School Garden Hui (SGH) and School Garden Circle (SGC) teams on opportunities to utilize their existing curriculum/resources and strategies for tying in school composting goals to school garden initiatives.
4. Drafting a new outreach onboarding plan for distribution statewide to ensure schools are aware of the availability of funds, resources, and guidance from the program.
5. Development of cafeteria waste audit and reporting protocols for new program schools.
6. Planning for statewide school composting program mapping initiative in collaboration with the SGH, Farm to School Hui, and SGC, including initial research on contact lists for individual school cafeteria managers and garden coordinators.

Resource Sharing & Management of Invasive Species in Mulch and Compost

Public schools produce a high volume of landscaping greens and mulch through periodic campus tree trimming and maintenance. Contracted landscape companies are ultimately responsible for the disposal of the trimmings and mulch. These “greens” are a valuable resource and essential ingredient in composting, and there is potential to redirect them to schools with composting programs. The Program advisory team aims to:

1. Catalog which school campuses are producing “greens” and mulch, as well as the volume, type, and frequency of generation.

2. Identify which schools would benefit from the delivery of “greens” for their composting programs, as well as their volume, frequency, and material type needs.
3. Develop standards of transport, storage, and maintenance of mulches and finished compost on school campuses that will prevent the spread of invasive species, such as Coconut Rhinoceros Beetles and Little Red Fire Ants.
4. Develop a plan for connecting Department-contracted tree trimmers and schools requiring “greens” to ensure that valuable resources can go to schools that need them and be diverted from disposal.