

STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

December 29, 2020

The Honorable Ronald D. Kouchi, President
and Members of the Senate
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki, Speaker
and Members of the House of Representatives
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:
For your information and consideration, I am transmitting the annual report on the "Composting Pilot Project Work Group" pursuant to Act 207, Session Laws of Hawaii 2018. In accordance with Section 93-16, Hawaii Revised Statutes, I am also informing you that the report may be viewed electronically at: <http://www.hawaiipublicschools.org/VisionForSuccess/SchoolDataAndReports/StateReports/Pages/Legislative-reports.aspx>.

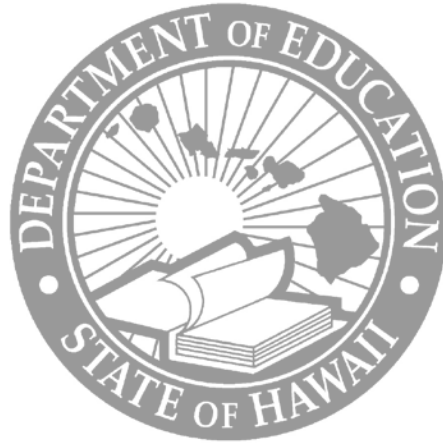
Sincerely,

A handwritten signature in blue ink, appearing to read "CK", representing Dr. Christina M. Kishimoto.

Dr. Christina M. Kishimoto
Superintendent

CMK:at
Enclosures

c: Legislative Reference Bureau
Office of Facilities and Operations



State of Hawaii
Department of Education

Annual Report on Composting Pilot Project Working Group

December 2020

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

The composting pilot project working group convened its inaugural meeting on November 22, 2019. The working group consists of sixteen individuals representing a diverse cross-section of expertise from both governmental and community-based organizations.

Composting Pilot Project Work Group

The Composting Pilot Project Work Group (Working Group) was initially convened on November 13, 2019 at a planning charrette. The current makeup of the Working Group is provided in the table below:

<u>Name</u>	<u>Organization</u>	<u>Office</u>	<u>Title</u>
Alan Gottlieb			Community Volunteer
Allyn Tam	Hawaii State Department of Education	Office of Facilities and Operations/Auxiliary Services Branch	Energy Conservation Coordinator
Bob Leinau			Community Volunteer
Brian Miyamoto	Hawaii Farm Bureau Federaton		Executive Director
Jay Bost	University of Hawaii	GoFarms Hawaii, Windward Oahu Program	Farm Coach and Site Manager
Jennifer Milholen	Kokua Hawaii Foundation		Waste Reduction Coordinator
Jeremy Koki	Hawaii State Department of Education	Office of Facilities and Operations/Auxiliary Services Branch	Auxiliary Services Specialist
Jess Hay	Hawaii State Department of Health		Environmental Engineer
Kalani Matsumura	University of Hawaii at Manoa	College of Tropical Agriculture and Human Resources	Extension Agent
Lauren Kaupp	Hawaii State Department of Education	Office of Curriculum and Instructional Design	Education Specialist, Science
Lene Ichinotsubo	Hawaii State Department of Health	Solid Hazardous Waste	Environmental Engineer
Miles Yoshioka			Community Volunteer
Natalie McKinney	Kokua Hawaii Foundation		Executive Director
Randall Tanaka	Hawaii State Department of Education	Office of Facilities and Operations	Assistant Superintendent
Theodore J. K. Radovich, Ph.D.	University of Hawaii at Manoa	Department of Tropical Plant and Soil Sciences	Extension Specialist, Researcher & Professor
Todd Low	Hawaii State Department of Agriculture	Aquaculture Development	Special Projects

Program Information Material

An internal information packet for the program containing a roadmap, composting manual with supplemental information, program talking points, and an application rating rubric were developed on December 19, 2020.

Program Application Evaluation Criteria

On February 27, 2020, by consensus, the Working Group developed the following criteria weights for evaluating program applications:

Section	Consensus Weights
Applicant Information	18.13
Sustainability	31.25
Educational	30.00
Data Collection and Reporting	20.63
Total (Must Equal 100.00)	100.00

* figures are rounded to nearest hundredths

Applicant Information

Composting Type	3.50
Program Type	3.88
Uses of Finished Product	3.38
Expected Involvement	3.88
Office of Facilities and Operations to apply program funds	3.50
Total (Must Equal 18.13)	18.13

* figures are rounded to nearest hundredths

Sustainability

Needs Assessment	15.00
Sustainability Plan	16.25
Total (Must Equal 31.25)	31.25

Educational

Educational Component	10.00
Curricular Focus	9.63
Grade Level Focus	4.75
Educational Description	5.63
Total (Must Equal 30.00)	30.00

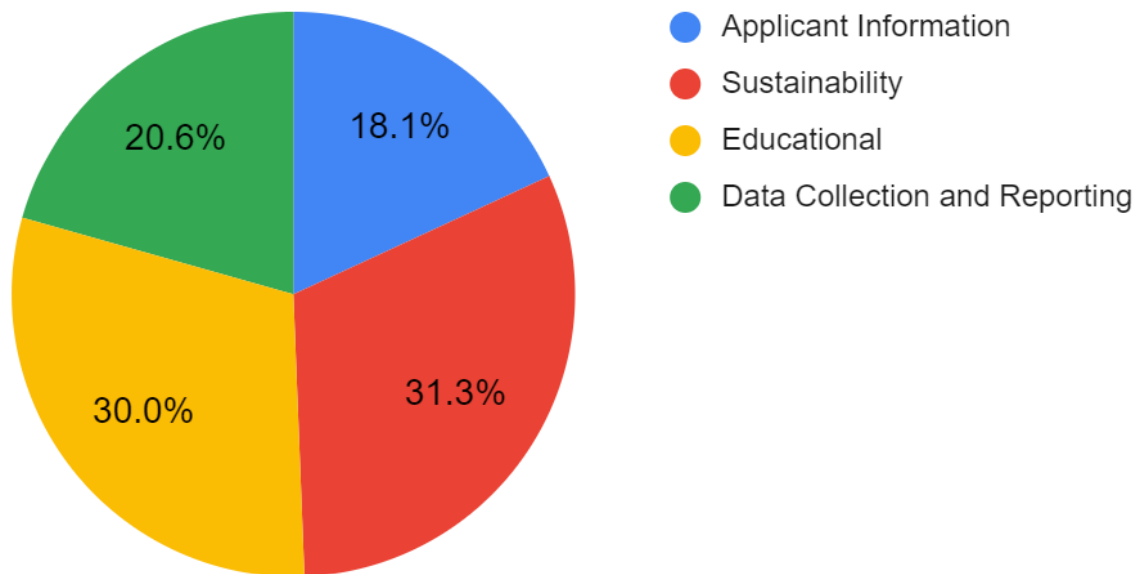
* figures are rounded to nearest hundredths

Data Collection and Reporting

Project Goals	5.13
Evaluation Responsibility	5.13
Data Collection and Reporting Plan	5.25
Data Collection Methods	5.13
Total (Must Equal 20.00)	20.63

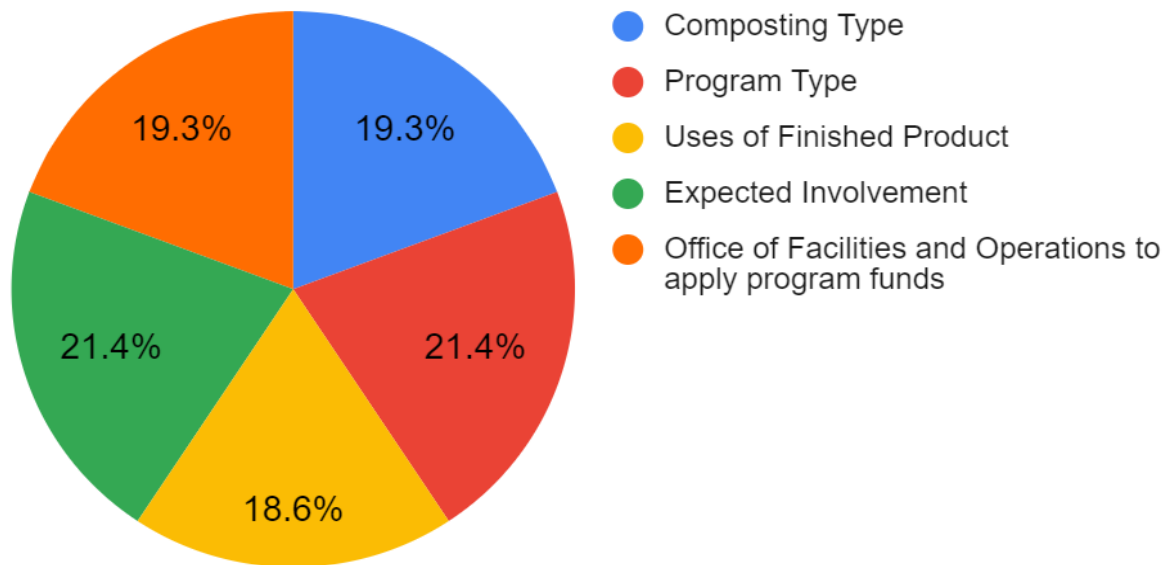
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Section Weights



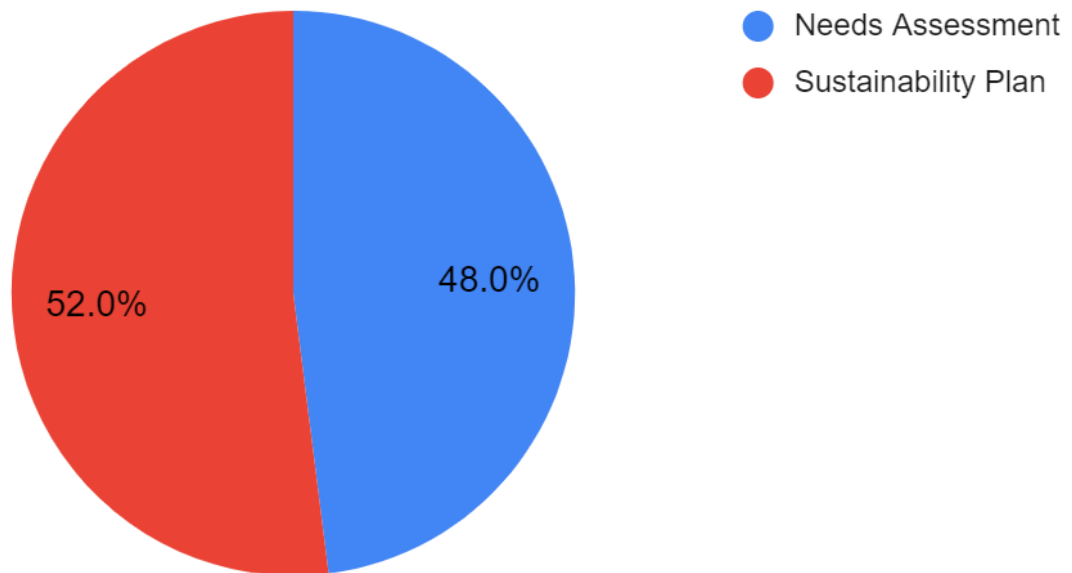
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Applicant Information Weights



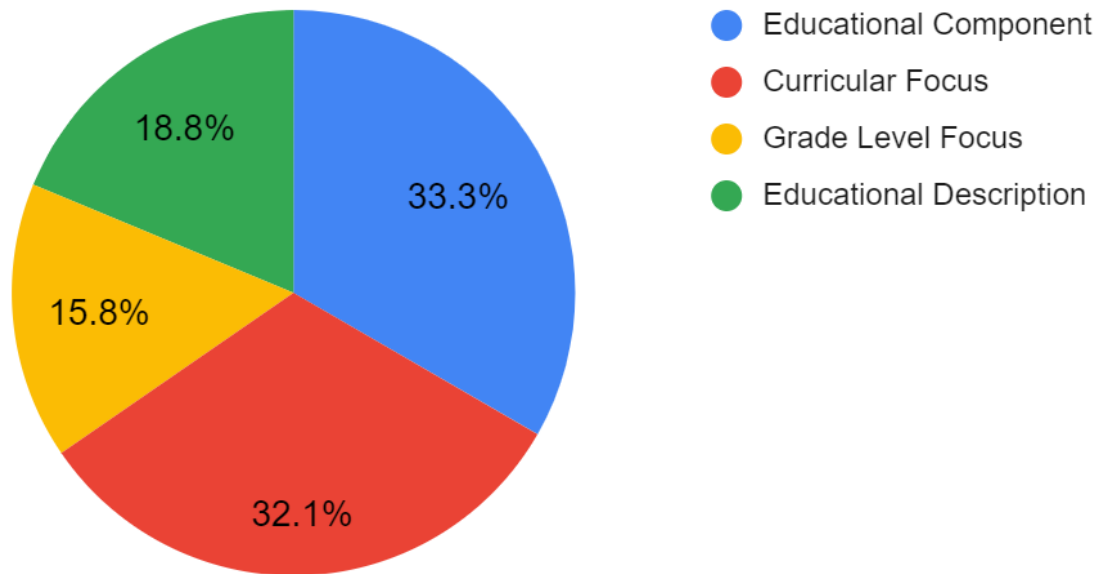
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Sustainability Weights



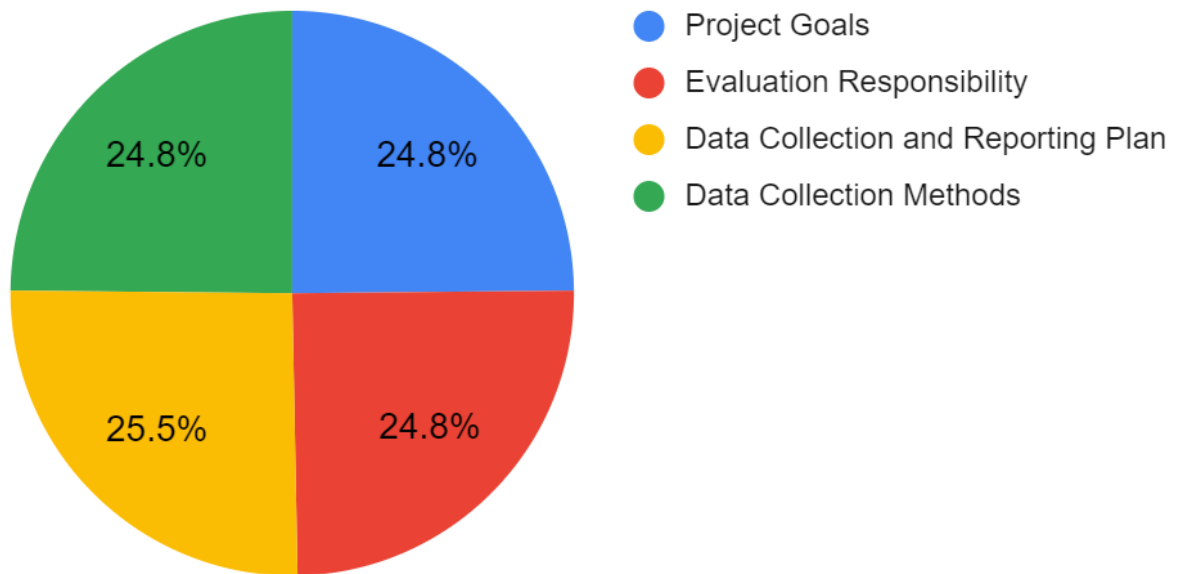
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Educational Weights



* figures are rounded to nearest tenths

Data Collection and Reporting Weights



* figures are rounded to nearest tenths

Program Application Form

A program application form was created from the criteria weights developed by the Working Group. This application was posted online on February 27, 2020 for the purpose of beta testing by members of the Working Group.

Program Rollout

On March 13, 2020, the program was rolled out through an online webinar and an online program application form.

Program School Waste Data Collection Form

On March 17, 2020, a school waste data collection form was implemented to assist schools in collecting and storing waste data for their needs assessments.

Program Applications to Date

Thus far, there have been 11 applicants to the pilot program. A summary of the applications is provided in the table below:

Submission	School Name	Composting Type
03/24/2020	Enchanted Lake Elementary	Green Waste, Food Waste, Vermiculture
03/24/2020	Kaohao Elementary	Green Waste, Food Waste, Vermiculture, Bokashi/Microorganisms, Vermicast Tea
03/25/2020	Waikoloa Elementary and Intermediate	Food Waste
03/25/2020	Kailua Intermediate	Green Waste, Food Waste, Vermiculture
03/26/2020	Kaelepulu Elementary	Green Waste, Food Waste, Vermiculture
03/27/2020	Honaunau Elementary	Green Waste, Food Waste, Vermiculture, Bokashi/Microorganisms, see below
03/27/2020	Kainalu Elementary	Green Waste, Food Waste, Vermiculture
04/01/2020	Waianae Intermediate	Green Waste
05/11/2020	Waipahu Intermediate	Green Waste, Food Waste, Vermiculture, Bokashi/Microorganisms
06/19/2020	Kaimuki Intermediate	Green Waste, Food Waste, Vermiculture
10/10/2020	Kaiser High	Green Waste, Food Waste, Vermiculture

The following table summarizes the anticipated participation for each pilot program:

School Name	Expected Involvement [Students]	Expected Involvement [Teachers]	Expected Involvement [Other school staff]	Expected Involvement [Other community partners]
Enchanted Lake Elementary	100+	0–10	0–10	0–10
Kaohao Elementary	100+	21–50	21–50	21–50
Waikoloa Elementary and Intermediate	51–100	0–10	0–10	0–10
Kailua Intermediate	100+	0–10	0–10	0–10
Kaelepulu Elementary	100+	0–10	0–10	21–50
Honaunau Elementary	100+	0–10	0–10	0–10
Kainalu Elementary	100+	21–50	21–50	11–20
Waianae Intermediate	11–20	0–10	0–10	0–10
Waipahu Intermediate	100+	0–10	0–10	0–10
Kaimuki Intermediate	100+	0–10	0–10	0–10
Kaiser High	100+	0–10	0–10	0–10

The following table indicates the use of funds by each pilot program:

School Name	Office of Facilities and Operations to apply program funds
Enchanted Lake Elementary	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure.
Kaohao Elementary	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure.
Waikoloa Elementary and Intermediate	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure, • For professional services to assist in program development or expansion, • For support services from the OFO.
Kailua Intermediate	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure.
Kaelepulu Elementary	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure.
Honaunau Elementary	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure, • For professional services to assist in program development or expansion, • For support services from the OFO.
Kainalu Elementary	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure, • For support services from the OFO.
Waianae Intermediate	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure, • For professional services to assist in program development or expansion, • For support services from the OFO.
Waipahu Intermediate	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure.
Kaimuki Intermediate	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure.
Kaiser High	<ul style="list-style-type: none"> • For goods and equipment to develop or expand composting infrastructure, • For professional services to assist in program development or expansion, • For support services from the OFO.

Program Expenses to Date (November 20, 2020)

The costs expended are provided in the table below:

<i>School Name</i>	<i>Composting Supplies Delivered to Schools</i>	<i>Cost</i>
Enchanted Lake Elementary	Share Chipper/ Shredder	\$1,958
Honaunau Elementary	Supplies delivered	\$4,866
Kaelepulu Elementary	Share Chipper/ Shredder	\$1,958
Kailua Intermediate	Share Chipper/ Shredder	\$1,958
Kaimuki Intermediate	Supplies delivered	\$3,200
Kainalu Elementary	Share Chipper/ Shredder	\$1,958
Kaiser High	Waiting to Schedule Site visit	\$0
Kaohao Elementary	Share Chipper/ Shredder	\$1,958
Various	5 each, moisture meter, compost thermometer and probe handle	\$1,151
Waianae Intermediate	List of suppliers not provided. No supplies ordered at this time.	\$0
Waikoloa Elementary and Intermediate	Supplies delivered	\$2,676
Waipahu Intermediate	Supplies delivered	\$1,181
Grand Total		\$22,862

Program Status (November 2020)

Due to the COVID-19 pandemic, the food waste composting component of the pilot program will be implemented upon the return of students to school campuses.

To achieve a successful and sustainable schools composting program, additional resources or positions for program oversight and monitoring are required to integrate curriculum standards for various grade levels, provide training for faculty and community members, and to garner and maintain the commitment of students, faculty, parents, and community members. Furthermore, the development of an ongoing or phased implementation model is necessary to collect data, measure results, and refine a process that is duplicable and sustainable for all Hawaii State Department of Education schools.

Grade	Discipline	Standard
K	Science	K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
	Science	K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.
1	Science	SS.1.2.8.5 Explain how people improve their communities and the environment
2	Science	2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
		2-PS1-3 Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.
	Social Studies	SS.2.2.14.1 Explain how human activities impact the environment
		SS.2.4.8.3 Develop logical solutions to various community problems
3	Social Studies	SS.3.4.9.1 Compare ways that people are addressing the issue of limited natural resources
4	Social Studies	SS.4.4.7.2 Explain how core values of the early Hawaiians are applicable to modern-day Hawai'i
5	Science	5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
		5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
		5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.
Middle School	Science	MS-LS2-3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
		MS-PS1-2 Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.
High School	Science	HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.
		HS-LS2-4 Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.
		HS-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.