



Jacobs

Source Reduction Working Group Final Report

May 2024
City and County of Honolulu
Department of Environmental Services



Client Review Draft Source Reduction Working Group Final Report

Client name: City and County of Honolulu Department of Environmental Services
Project name: Consultant Services for Source Reduction Working Group
Project no: CCHSRWG1
Document no: 240109150803_7c669895 **Project manager:** John Padre
Version: 3 **Prepared by:** Emily Stone and Lyndsey Lopez

Document History and Status

Version	Date	Description	Author	Checked	Reviewed	Approved
1	1/19/24	Client Review Draft	Stone and Lopez			
2	2/6/24	Client Review Draft with additional figures	Stone and Lopez			
3	3/18/24	SRWG Member Review Draft	Stone and Lopez			

Jacobs Engineering Group Inc.

1003 Bishop Street
Suite 1340
Honolulu, HI 96813
United States

T +1.808.943.1133
F +1 808.954.4400
www.jacobs.com

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Executive Summary

Overview and Background

This Source Reduction Working Group Report (Report) summarizes the purpose, procedures, and recommended actions of the City and County of Honolulu (City) Department of Environmental Services (ENV) Source Reduction Working Group (SRWG) to improve O'ahu's solid waste management system. The City's *2019 Integrated Solid Waste Management Plan [ISWMP] Update* (CCH 2019a) prioritized the establishment of an SRWG for collaboration between various government, business, and community stakeholders to discuss and determine source reduction recommendations. Throughout 2023 and 2024, the SRWG collaborated to identify the best approaches to achieve source reduction and ultimately reduce the amount of waste generated. After some initial discussion, the SRWG chose to focus on identifying source reduction strategies for the following three waste types:

- Construction and demolition (C&D) waste
- Photovoltaic (PV) panel waste
- Product packaging and food waste/organics

Summary of Recommended Actions

Recommended source reduction actions were developed over a course of several months, five SRWG meetings, several permitted interaction group (PIG) meetings, and additional research. The following recommended actions represent the final list of actions developed by the SRWG.

Overall

- Evaluate funding strategies.

Construction and Demolition Waste Recommended Actions

- Adopt a diversion regulation and/or deconstruction ordinance.
- Work towards streamlining the permitting process for C&D material management for reuse.
- Work towards establishing staging and storing areas for C&D waste materials for reuse.
- Educate and involve stakeholders.

Photovoltaic Panel Waste Recommended Actions

- Educate owners about PV panel maintenance.
- Consider establishing a Statewide Stewardship Program.
- Consider subsidizing shipping costs to ship PV panel waste to the mainland for recycling.
- Explore extended producer responsibility (EPR).
- Consider supporting or incentivizing secondary market programs for reuse of functional PV panels.

Product Packaging and Food Waste/Organics Recommended Actions

- Initiate reusable container and mobile washing program.
- Continue evaluating product packaging source reduction needs and options.
- Incentivize food donations.
- Increase food reuse and organics recycling.

Acknowledgments

The SRWG was made possible by the time and knowledge sharing provided by the following 10 members of the working group, who brought representation from O'ahu's stakeholder groups in the areas of government, environment, sustainability, education, culture, and industry.

- Government – City and County of Honolulu
 - Michael O'Keefe, Department of Environmental Services
 - Hayley Cook, Office of Climate Change, Sustainability and Resiliency
- Government – State of Hawai'i
 - Lene Ichinotsubo, Department of Health, Solid and Hazardous Waste Branch
- Environmental and Sustainability Representative
 - Nicole Chatterson, Zero Waste O'ahu
 - Quinn Vittum, Re-use Hawai'i
- Educational/Cultural Representative
 - Amy Brinker, Kamehameha Schools, Sustainability
- Industry Representatives
 - Jessica Leorna, Building Industry Association of Hawaii (BIA Hawaii); SRWG member from Meeting 1 through Meeting 3
 - Allen Evans, Island Demolition/Refrigerant Recycling
 - Lauren Zirbel, Hawaii Food Industry Association
 - Tina Yamaki, Retail Merchants of Hawaii

The SRWG would like to acknowledge the following guest speakers, who presented at the PIG meetings and provided their valuable industry knowledge to inform and spark discussion from the group:

- Dr. Michael Cooney, University of Hawai'i at Mānoa Hawai'i Natural Energy Institute
- Brian Gold, Inter-Island Solar Supply
- Laura Takahashi, Kamehameha Schools
- Eric Tamashiro, Bowers + Kubota

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Acronyms and Abbreviations

BIA Hawaii	Building Industry Association of Hawaii
C&D	construction and demolition
City	City and County of Honolulu
DFWO	Disposable Food Ware Ordinance
DOH	Hawai'i State Department of Health
ENV	[City and County of Honolulu] Department of Environmental Services
EPA	United States Environmental Protection Agency
EPR	extended producer responsibility
EU	European Union
HB	House Bill
HRS	Hawai'i Revised Statutes
ISWMP	Integrated Solid Waste Management Plan
LD	Legislative Document
MSW	municipal solid waste
P.L.	Public Law
PEO	public education and outreach
PIG	permitted interaction group
PV	photovoltaic
REO	recycling education and outreach
Resilience Office	Office of Climate Change, Sustainability, and Resiliency
ROH	Revised Ordinances of Honolulu
SB	Senate Bill
SRWG	Source Reduction Working Group

1. Introduction

The City and County of Honolulu (City) Department of Environmental Services (ENV) is determined to identify the most effective strategies for managing solid waste while also protecting public health and the environment. To improve O'ahu's solid waste management system, a key component includes source reduction initiatives that involve collaboration with stakeholders from governmental agencies, business, industry, non-governmental organizations, policy makers, and residents. To guide and increase source reduction efforts, the City has established a Source Reduction Working Group (SRWG) that aims to determine the best approaches and provide recommendations that promote reduction of waste generation. The SRWG met during 2023 and 2024 and focused on the following three main topics:

- Construction and demolition (C&D) waste
- Photovoltaic (PV) panel waste
- Product packaging and food waste/organics

2. Background

2.1 What is Source Reduction?

Source reduction can be defined as actions that reduce the generation of waste, waste disposal, and waste toxicity. According to Hawai'i Revised Statutes (HRS) Chapter 342G-1, source reduction is also defined as "the design, manufacture, and use of materials to (1) minimize the quantity or toxicity, or both, of the waste produced; and (2) reduce the creation of waste either by redesigning products or by otherwise changing societal patterns of consumption, use or waste generation." These actions can be done at various levels spanning from the manufacturer, legislative, industrial or business, and consumer level.

The following provides examples of source reduction at various levels:

- **Manufacturing Level:** Manufacturers can redesign product packaging to use less material.
- **Legislative Level:** Honolulu City Council passed Bill 40 (now Revised Ordinances of Honolulu [ROH] Chapter 34, Article 13), the Disposable Food Waste Ordinance (DFWO), which promotes source reduction by replacing single-use, polystyrene foam food ware with reusable products as an option. In addition, under the DFWO, food vendors may only provide or distribute disposable service ware for prepared food or beverage upon request or affirmative response of a customer or person being provided the prepared food or beverage. This could result in the reduction of distribution and use of disposable service ware.
- **Industrial or Business Level:** Some local businesses have been established with sustainability and zero waste as their objective. These stores sell environmentally friendly products and feature refill stations for common toiletries.
- **Consumer Level:** At the consumer level, reduced purchasing, reuse, and repair are common source reduction actions. Because the plastic bag ban mandated by ROH Chapter 34, Article 14 (as amended) requires a minimum of 15 cents charge per allowable bag, customers often opt to bring their own reusable bag avoiding the additional fee.

2.2 Why is Source Reduction Important?

Source reduction is at the top of the U.S. Environmental Protection Agency (EPA) waste hierarchy (EPA 2023a) (Figure 1) and is important for managing waste at the most upstream part of waste management. As such, source reduction is the environmentally preferred method to manage waste. HRS Chapter 342G states that “each county shall consider the following solid waste management practices and processing methods in their order of priority:

1. Source reduction;
2. Recycling and bioconversion, including composting; and
3. Landfilling and incineration.”

Therefore, in accordance with the HRS, the City considers source reduction as the highest priority for solid waste management, followed by recycling, composting, energy recovery, and landfilling. Source reduction and reuse also play important roles in meeting the goals of the Aloha+ Challenge, a statewide commitment endorsed by the Mayor of Honolulu with the Governor of the State of Hawai'i (State), county mayors, and the State Legislature to achieve six sustainability goals for 2030. One of these Aloha+ Challenge goals is to reduce the solid waste stream before disposal by 70 percent, through source reduction, recycling, bioconversion, and landfill diversion methods. Source reduction is a key strategy for City and State to reduce waste.

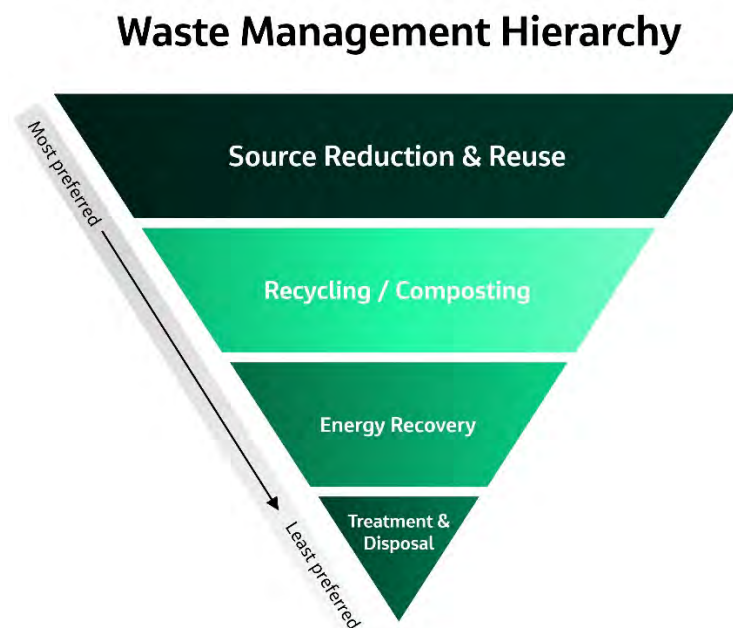


Figure 1. EPA Waste Management Hierarchy

A waste composition study was prepared for O’ahu in 2017, with the results published as the *2017 Oahu Waste Composition Study* (CCH 2018). This study provided information about the types of materials present in the waste stream that are currently being disposed of at H-POWER¹ and at the landfill. Figure 2 shows the overall results of this study, which provide potential focus areas for source reduction efforts.

¹ The Honolulu Program of Waste Energy Recovery (H-POWER) is a City-owned waste-to-energy facility.

Detailed Waste Composition Results in 2017: Overall

Material	Estimated Percent	+/-	Estimated Tons	Material	Estimated Percent	+/-	Estimated Tons
Paper	22.7%		180,645	Glass	1.5%		12,147
Uncoated Corrugated Cardboard	6.5%	1.5%	51,967	HI-5 Glass Containers	0.5%	0.1%	3,756
Newspaper	1.5%	0.8%	21,070	Non-HI-5 Glass Containers	0.6%	0.2%	4,814
Paper Bags	0.6%	0.1%	5,131	Other Glass	0.5%	0.2%	3,578
White and Colored Ledger Paper	0.9%	0.3%	7,056	Inerts and C&D Materials	14.7%		116,691
Mixed Recyclable Paper	5.5%	1.1%	43,298	Untreated Wood	1.6%	1.3%	12,634
Compostable Paper	5.7%	0.8%	45,660	Treated Wood	3.4%	1.1%	27,042
Other Paper	1.9%	0.9%	15,462	Pallets	5.9%	3.1%	46,722
Plastic	9.8%		78,137	Gypsum Wallboard	0.7%	0.8%	5,325
HI-5 Plastic PET Containers	0.4%	0.1%	2,795	Asphalt Roofing	0.0%	0.0%	117
Non-HI-5 Plastic PET Containers	0.3%	0.0%	2,551	Asphalt Paving	0.0%	0.0%	0
HI-5 Plastic HDPE Containers	0.0%	0.0%	201	Concrete	0.1%	0.0%	749
Non-HI-5 Plastic HDPE Containers	0.6%	0.1%	4,391	Ceramics	0.4%	0.4%	3,483
Other Bottles/Containers	1.0%	0.2%	7,912	Sand/Soil/Rock/Dirt	0.1%	0.1%	887
Mixed Rigid/Durable Plastics	1.8%	0.4%	14,146	Other C&D Material	2.5%	1.2%	19,731
Plastic Bags	0.1%	0.0%	838	Household Hazardous Waste	0.6%		4,822
Other Plastic Film/Wrap	4.4%	0.6%	35,339	Pesticides/Herbicides	0.0%	0.0%	25
Expanded Polystyrene	0.8%	0.2%	6,268	Paints/Adhesives/Solvents	0.0%	0.0%	370
Other Plastic	0.5%	0.1%	3,698	Household Cleaners	0.0%	0.0%	145
Metal	4.6%		36,662	Other Automotive Products	0.1%	0.1%	526
HI-5 Aluminum Containers	0.2%	0.0%	1,372	Batteries	0.0%	0.0%	389
Non-HI-5 Aluminum Containers and Scrap	0.3%	0.1%	2,345	Other HHW	0.4%		3,366
HI-5 Bi-metal Containers	0.0%	0.0%	236	Other Materials	10.4%		82,930
Tin/Steel Containers	0.5%	0.1%	4,065	Sewage Sludge	2.5%		19,733
Other Ferrous Metals	2.5%	2.2%	19,726	Sewage Screenings/Grit	0.2%		1,368
Other Non-Ferrous Metals	0.3%	0.2%	2,167	Industrial Sludges	0.2%		1,753
Other Metals	0.8%	0.2%	6,750	Tires	0.1%	0.1%	828
Organics	35.5%		282,334	Furniture	1.2%	0.3%	9,652
Food Waste-Vegetative	8.3%	1.3%	65,980	Appliances	0.3%	0.3%	2,455
Food Waste-Non-Vegetative	11.8%		93,853	Covered Electronic Devices	1.1%	0.8%	8,723
Green Waste	6.0%	1.1%	47,880	Non-Covered Electronic Devices	0.1%	0.1%	1,064
Stumps	0.2%	0.1%	1,402	Auto Fluff	2.7%		21,756
Textiles	2.9%	0.5%	23,238	Mixed Residues	2.0%		15,598
Carpet	0.5%	0.4%	4,107	Totals	100.0%		794,368
Other Organics	5.8%		45,875	Sample Count			312

Adapted from City and County of Honolulu 2017 Waste Composition Study by Cascadia Consulting Group, June 2018

Figure 2. Overall Results from 2017 Waste Composition Study

As further described in the City's 2019 *Integrated Solid Waste Management Plan [ISWMP] Update* (CCH 2019a), the City's current source reduction efforts focus on public education to increase awareness of existing source reduction resources and encourage residents and businesses to prevent waste at the source. The plan stated that future source reduction efforts will require further evaluation of economic, social, and environmental factors to determine feasibility and support from stakeholders beyond the City for implementation. The formation of a working group was one of the recommendations from the plan. Additional links to background information such as the 2019 ISWMP Update, the 2017 *Oahu Waste Composition Study*, and other information on source reduction are provided in **Appendix F**.

3. Purpose of the Source Reduction Working Group

3.1 2019 ISWMP Remit

The City's 2019 ISWMP Update (CCH 2019a) established the following goals:

- Reduce per-capita waste generation 25 percent by 2030, from 6.5 pounds per day to 4.9 pounds per day.
- Reduce carbon emissions from the waste stream by substantially reducing or eliminating carbon-based single-use plastics and polystyrene from the waste stream going to H-POWER and landfill by 2030.

The 2019 ISWMP Update identified the establishment of an SRWG as a top strategy for the City to implement during the life of the ISWMP to reach these goals. The ISWMP stated the following:

"The City recognizes that a successful source reduction program will require ongoing collaboration with stakeholders throughout O'ahu, including the state and federal governments, business and industry, research and education, non-governmental organizations, policy makers, and residents. Many source reduction initiatives require further evaluation of economic, social, and environmental factors to determine feasibility, as well as support from stakeholders outside the City to achieve implementation. The City is committed to stepping up source reduction efforts and continuing the discussion begun with stakeholders through the development of this Plan by establishing a Source Reduction Working Group (SRWG), which will meet quarterly (or as often as determined by the SRWG itself) and focus on developing quantifiable targets for source reduction, identifying metrics and milestones to track progress, and evaluating the feasibility and practicality of potential source reduction initiatives."

"The SRWG can further assess the City's quantifiable targets for source reduction and identify metrics and milestones to track progress and evaluate the feasibility and practicality of potential source reduction initiatives. Recommendations from the SRWG will be given weight and preference when working to meet source reduction goals."

3.2 Overall Purpose

The SRWG brings together representatives from various stakeholder groups with expertise in the fields of government, environment, sustainability, education, culture, and industry. **Appendix A** includes a sample invitation letter from the Mayor's office, and **Appendix B** provides information on the SRWG membership. The working group Charter Document (**Appendix C**) tasks its members to do the following:

- Identify potential best approaches to source reduction initiatives.
- Provide recommendations for programs and policies to reduce waste generation.
- Develop quantifiable targets for source reduction and identify metrics and milestones to track progress.
- Facilitate coalitions between ENV, industry, educational institutions, non-governmental organizations, and communities to discuss and achieve source reduction.
- By the close of the SRWG, establish or lay the foundations for a self-sustaining long-term stakeholder coalition that discusses source reduction needs over time.

The rules that were developed to support this charter and guide the SRWG are included in **Appendix D**.

A successful source reduction program for O’ahu will require ongoing discussions and coordination that extends beyond the 1-year appointed term for the SRWG. As such, the long-term goal of the SRWG is to transition to a permanent, self-sustaining, stakeholder-led group that discusses source reduction needs for O’ahu over time. While such a goal may not be attainable in 1 year, SRWG members will strive towards this goal and, at a minimum, lay the foundations for continued source reduction coordination.

4. Methodology

4.1 Members

The SRWG is composed of a body of stakeholder members appointed by the Mayor (Table 1). The membership initially included ten members, but was eventually reduced to nine by the end of the process. Members were selected for their leadership and expertise in the governmental, environmental/sustainability, educational, cultural, and industrial fields. Members are passionate about source reduction and understand the value of comprehensive waste reduction for O’ahu’s environment, public health, and economy.

Table 1. Members

Member Name and Title ^a	Member Organization
Michael O’Keefe, Deputy Director	City and County of Honolulu Department of Environmental Services
Hayley Cook, Policy and Research Manager	City and County of Honolulu Office of Climate Change, Sustainability, and Resiliency
Lene Ichinotsubo, Acting Chief	Hawai’i State Department of Health – Solid and Hazardous Waste Branch
Nicole Chatterson, Director	Zero Waste O’ahu
Quinn Vittum, Executive Director	Re-use Hawai’i
Amy Brinker, Sustainability Manager	Kamehameha Schools
Jessica Leorna, Chief Executive Officer ^b	Building Industry Association of Hawaii
Allen Evans, President	Island Demolition/Refrigerant Recycling
Lauren Zirbel, Executive Director	Hawaii Food Industry Association
Tina Yamaki, President	Retail Merchants of Hawaii

^a Note that all membership ends automatically at the end of the SRWG process, after SRWG Meeting 5.

^b Jessica Leorna’s membership in the SRWG ended prior to completion of the SRWG process, after SRWG Meeting 3.

4.2 Process

4.2.1 Overall

The SRWG held five meetings over calendar year 2023 and the beginning of calendar year 2024 (**Appendix E**), all facilitated by Lyndsey Lopez of Jacobs. SRWG members attended meetings either in-person or virtually and engaged in productive group discussions. The SRWG Charter Document (**Appendix C**) describes the group’s official rules and expectations for member engagement during meetings. Members formed and participated in permitted interaction groups (PIGs) to explore topics in greater depth and engaged in discussions and research to formulate recommendations for potential source reduction initiatives. Each PIG focused on a particular waste type to concentrate their efforts on

specific strategies targeted for those waste types. PIG members drafted initial recommendations for the larger working group's consideration, and all group members had the opportunity to provide comments and edits in subsequent meetings. All SRWG meetings were open to the public and public comments were solicited at every meeting.

Appendix E presents meeting agendas, meeting materials, and summaries for the five SRWG meetings. The following sections provide a brief overview of the meeting processes.

4.2.2 Permitted Interaction Groups

The SRWG convened in Meeting 2 (additional information on this is provided in Section 4.2.3.2, SRWG Meeting 2) and voted to focus on the following topics:

- C&D waste
- Product packaging and food waste/organics
- PV panel waste

A PIG was formed for each topic, with each PIG tasked to investigate ways to incentivize source reduction for the topic, policies or regulations needed, and public education strategies. In subsequent SRWG meetings, PIG members presented their findings and discussed them with the full complement of SRWG members to form recommendations to promote source reduction.

4.2.3 Meetings

4.2.3.1 SRWG Meeting 1 (April 19, 2023)

The SRWG members were introduced and were provided an overview of the purpose and goals of the SRWG by facilitator Lyndsey Lopez. Members reviewed the SRWG Charter Document (**Appendix C**) and rules (**Appendix D**) and adopted the documents by vote. Members engaged in initial discussion of source reduction topics for the group to consider.

4.2.3.2 SRWG Meeting 2 (June 28, 2023)

Prior to Meeting 2, members filled out a survey prepared by the consultant group (**Appendix E**). The survey polled member interest in different waste types to prioritize throughout the term of the SRWG. At Meeting 2, members reviewed the survey results, discussed source reduction topics for the group to consider, and voted on the top three waste types to focus on. The members formed three PIGs, with the scope of each PIG dedicated to one waste type. These three PIGs are further described in the following sections.

4.2.3.3 PIG Meetings

- C&D Waste PIG
 - Members: Quinn Vittum, Michael O'Keefe, Allen Evans, Nicole Chatterson, Jessica Leorna
 - Meeting 1: The group discussed the current state of C&D waste on O'ahu, anticipated upcoming issues with C&D waste management due to the closure of the PVT landfill, and research areas to investigate further.
 - Meeting 2: The group discussed policies for deconstruction and waste diversion in other counties and states, wooden pallets, education and involvement of stakeholders, transfer stations, film industry waste, and guest speakers to invite.

- Meeting 3: Guest speakers Laura Takahashi from Kamehameha Schools and Eric Tamashiro from Bowers + Kubota shared their experiences and lessons learned from the demolition of the Keauhou Beach Hotel.
- PV Panel Waste PIG
 - Members: Hayley Cook, Allen Evans, Lene Ichinotsubo, Jessica Leorna, Quinn Vittum
 - Meeting 1: The group discussed the current state of PV panel waste on O'ahu, anticipated upcoming issues with PV panel waste management due to the 25-year lifespan of panels and upcoming first large wave of decommissioned panels, and research areas to investigate further.
 - Meeting 2: The group discussed the *Recommendations on Waste Management of Clean Energy Products in Hawai'i* report (Hawai'i Natural Energy Institute 2022), the KumuKit and Re-use Hawai'i secondary market for reuse of functional used PV panels, and industry knowledge shared with SRWG member Allen Evans by Josh Powell from Revolusun.
 - Meeting 3: Guest speaker Dr. Michael Cooney from the University of Hawai'i at Mānoa Hawai'i Natural Energy Institute shared his current research and findings about establishing a Statewide Stewardship Program to handle, manage, and fund the recycling of PV panel waste at end-of-life. Second guest speaker Brian Gold from wholesale distributor Inter-Island Solar Supply shared information on their in-house recycling program to receive, sort, and ship PV panel waste to a partnering mainland recycling facility.
 - Meeting 4: The SRWG PV panel PIG members met separately to follow-up and discuss the points brought up in the previous meeting by guest speakers Dr. Cooney and Brian Gold. The group discussed several topics including extended producer responsibility (EPR), the Statewide Stewardship Program, subsidizing shipping costs, collecting and storing panels, and EPA funding.
- Product Packaging and Food Waste/Organics PIG
 - Members: Hayley Cook, Nicole Chatterson, Tina Yamaki, Lauren Zirbel, Amy Brinker
 - Meeting 1: The group discussed opportunities to explore further, including policies for residential and commercial food waste, incentives for businesses to pursue Hawai'i Green Business certification, updating the language in the Good Samaritan Law to encourage food donations, implementing EPR, and connecting food scraps to pig farmer operations.
 - Meeting 2: The group continued discussions of the previous meeting's topics, as well as additional topics including reusable container programs (and traveling washing facilities), Food Packaging Transparency Act, and a new food waste diversion project in Chinatown in downtown Honolulu.
 - Meeting 3: The group narrowed down the strategies to present for SRWG Meeting 3 and mapped out a potential implementation timeline for all strategies. Strategies included seeking EPA funding, mobile dishwashing and food service ware project, food donation incentive program, and future recommendations for packaging and food waste.

4.2.3.4 SRWG Meeting 3 (November 28, 2023)

Between Meetings 2 and 3, the PIGs met separately to engage in discussions, conduct research, hear from selected guest speakers, and develop source reduction considerations. At Meeting 3, the PIGs brought forth these considerations to the larger group. Lyndsey Lopez presented the findings of each of the PIGs as well as considerations on behalf of the PIGs. Following the completion of Meeting 3, the PIGs were dissolved.

4.2.3.5 SRWG Meeting 4 (December 4, 2023)

At Meeting 4, the members had the opportunity to discuss the considerations of each of the PIGs, share their thoughts and opinions, and suggest modifications to the considerations. The members voted to move forward with the considerations that received five or more votes to be included in the SRWG Report as recommendations with the opportunity for the members to comment on the draft of the report.

4.2.3.6 SRWG Meeting 5 (May 10, 2024)

At Meeting 5, the members discussed comments on the draft report and adopted the SRWG Report as revised.

5. Recommended Actions

The working group has identified multiple ways for government, consumers, and industry stakeholders to advance source reduction and help improve O'ahu's solid waste management system. Some of the identified recommendations will be able to be implemented more quickly, while others may require future steps and evaluations to continue assessing feasibility. All recommendations rely on continued engagement and participation from the stakeholders that were part of this working group or some form of new, long-term, self-sustaining coalition.

Section 5.1 presents an overarching recommendation as to funding, while recommendations by PIG topic (that is, C&D waste, PV panel waste, and product packaging and food waste/organics) are summarized in Sections 5.2 through 5.4, respectively. Table 2 in Section 5.5, Implementation Summary, summarizes all the recommended actions, associated owners/partners, and potential milestone dates. For the vote count on recommended actions provided under Member Support in each section, note that attendance at Meeting 4 (where this was determined) included eight of the nine SRWG members.

5.1 Evaluate Funding Strategies

The SRWG recommends the overarching initiative to evaluate funding strategies for all recommendations supported by the SRWG. The SRWG recognizes that new source reduction initiatives will require money for development and ongoing implementation. One example of a funding source is federal grant funding from the EPA. The Infrastructure Investment and Jobs Act, also known as the Bipartisan Infrastructure Law, provides \$275 million for Solid Waste Infrastructure for Recycling grants from fiscal years 2022 to 2026. The Bipartisan Infrastructure Law also provides \$75 million to fund a Recycling Education and Outreach (REO) Grant Program from fiscal years 2022 to 2026. Federal EPA grants provide a unique opportunity within the next few years for investment into new source reduction initiatives and strategies. City entities such as ENV and the Office of Climate Change, Sustainability, and Resiliency (Resilience Office) could work together and potentially partner with other government entities and stakeholder groups to apply for grant funding from the EPA in the upcoming years.

5.1.1 Impact and Benefits

Funding for source reduction initiatives will allow government agencies and industry stakeholders to pursue new strategies and ideas with high potential for large island-wide impacts on reduced waste generation. Long-term funding sources will have longstanding impacts on the implementation of source reduction programming to reduce waste in landfills and move towards a more sustainable circular economy.

5.1.2 Example

In 2023, the EPA awarded over \$2.1 million in grant money for Hawai'i's recycling infrastructure. The County of Hawai'i Department of Environmental Management was awarded \$1,522,130 to design and implement a city-scale reusable foodware and refillable bottle system in Hilo for the community. The Hawai'i State Department of Health (DOH) was awarded \$673,004 to develop a statewide waste characterization study of the four major counties' solid waste disposal stream.

5.1.3 Implementation

Because grants are one-time payments and are not sustainable long-term funding sources, grant money should be put towards initiatives that benefit from one-time investments, rather than initiatives that require ongoing funding. For instance, grant funding could go towards one-time capital improvements, development of a new education and outreach campaign, or establishment of new programs that would be self-sustaining in the future. Grant money (unless paired with other long-term funding) should not go towards establishing new programs or services that could end later due to insufficient funding.

In addition to grants, other sustainable funding strategies should also be evaluated to support source reduction initiatives long-term. Some of the recommendations below will require ongoing funding beyond one-time grant opportunities. For example, consumers could pay a fee for disposal of PV panels to support sustainable long-term funding that matches the level of PV panel waste stream at a given time. Further exploration is needed to identify and seek out funding for various source reduction initiatives, and different funding methods may work for different initiatives.

5.1.4 Member Support

At Meeting 4, six SRWG members voted yes in support of evaluating funding strategies for C&D waste initiatives, six members voted in support of this action for PV panel waste initiatives, and seven members voted in support of this action for product packaging & food waste/organics initiatives.

5.2 Construction and Demolition Waste Recommended Actions

C&D materials represent a significant amount of material in the waste stream, as illustrated in **Figure 3**. Between 2018 and 2022, C&D represented 25 to 41 percent of the total waste stream tonnage. Of this, 185,000 tons of C&D were landfilled in 2022. The following sections describe recommended actions for C&D waste.

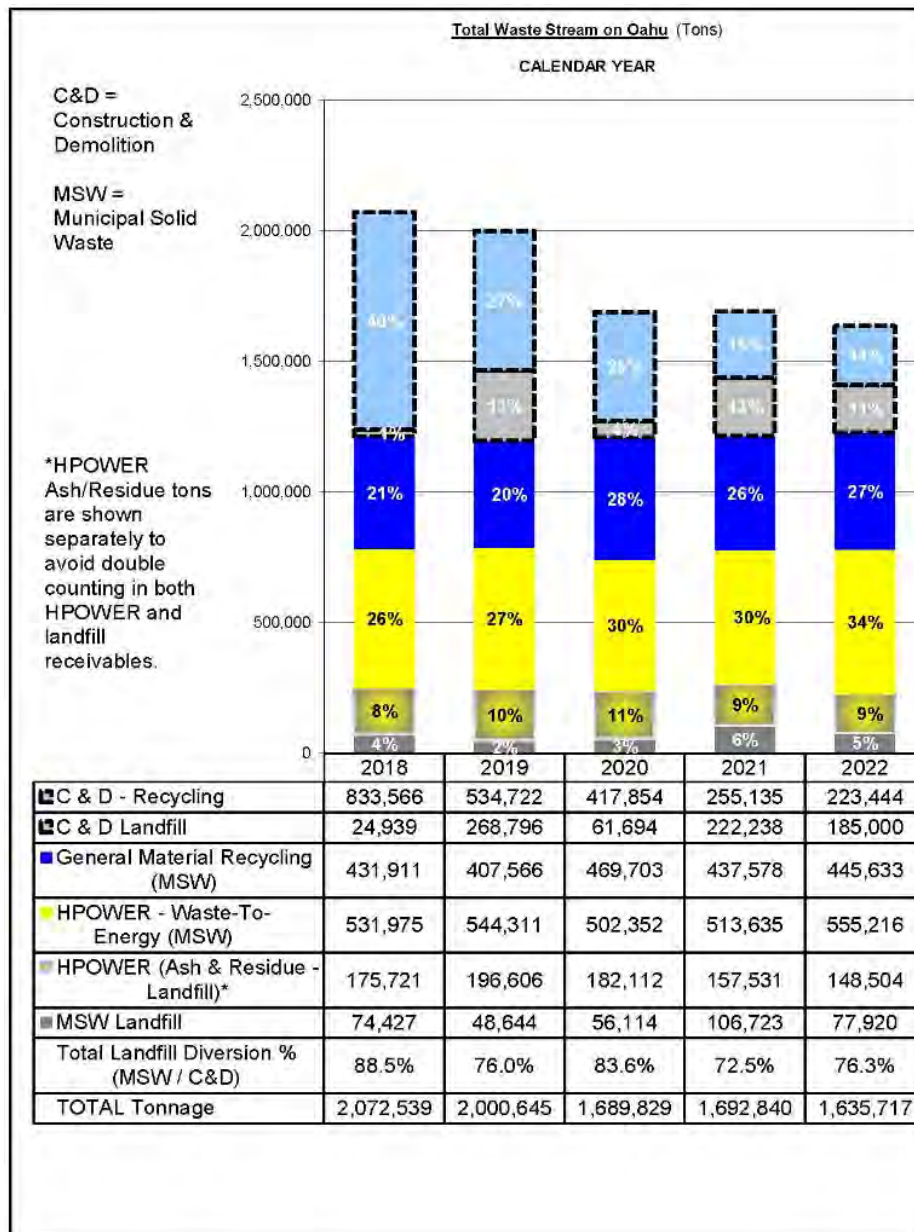


Figure 3. Portion of Waste Stream Associated with C&D

5.2.1 Adopt a Diversion Regulation and/or Deconstruction Ordinance

Diversion of C&D waste involves diverting waste away from landfills through salvaging, recycling, and reusing waste materials. Deconstruction is the process of dismantling a building to salvage the materials for reuse and recycling, while demolition is the act of tearing down a building with heavy equipment, which generates large amounts of waste and destroys potentially reusable construction materials (Figure 4). In addition to promoting waste reduction through salvaging, recycling, and reuse, there are many different benefits of deconstruction as compared to demolition.

The City currently does not regulate the diversion of C&D waste away from landfills or the deconstruction of buildings to minimize landfilled C&D waste. Other county agencies both within the State of Hawai'i and elsewhere in the United States regulate or track the diversion of C&D waste and deconstruction of buildings. To emulate, the City could implement an ordinance that includes a combination of diversion regulation and deconstruction requirements or focus on one method over the other.



Figure 4. Deconstruction Benefits versus Demolition Benefits

5.2.1.1 Impacts and Benefits

Implementation of a diversion regulation and/or deconstruction policy for C&D waste on O'ahu would have a large impact on source reduction by increasing the amount of C&D waste diverted from landfills. With the PVT landfill (that is, commercial C&D waste handling) closing and ENV potentially set to assume responsibility for C&D waste island-wide, policy-driven requirements and regulations for C&D waste can reduce the amount of waste landfilled. Overall, this would benefit the environment and contribute towards a circular economy. Further research, stakeholder discussions, and financial studies are needed before implementation of any specific policy, but ordinance language and requirements should draw from existing ordinances and successful cases in other counties, states, and countries.

5.2.1.2 Examples

In the County of Hawai'i, a solid waste management plan is required for all developments seeking an environmental assessment, environmental impact statement, or Special Use Permit. The solid waste management plan must contain recommendations and mitigation measures for solid waste, and must be drafted and certified by a State of Hawai'i licensed engineer or architect (County of Hawai'i 2023). The Solid Waste Management Plan is used by the County of Hawai'i to "(1) promote and implement recycling and recycling programs; (2) predict the waste generated by the proposed development to anticipate the impacts on County Solid Waste Management Facilities; and (3) predict the additional vehicular traffic being generated because of waste and recycling transfer."

In California, Foster City is making strides towards the state-required diversion rate by adopting the California Green Building Code. Under this code, "applicable construction and demolition projects divert a minimum of 65% of the debris generated by the project." In addition, a waste management plan demonstrating how the project will maximize reuse and/or recycling must be submitted to receive a building permit (Foster City 2024).

The City of Austin, Texas, regulates C&D recycling for the following (City of Austin 2024):

- Construction projects with more than 5,000 square feet of new, added, or remodeled floor area
- Commercial and multifamily demolition projects of all sizes

The city requires those projects to do one of the following:

- Reuse or recycle at least 50 percent of C&D debris
- Landfill less than 2.5 pounds of debris per square foot of floor area

Contractors must provide a report to the city with the tons of C&D debris reused or recycled and the tons of C&D debris landfilled.

Orange County, North Carolina, has an ordinance that requires C&D projects to have a waste management plan and waste haulers to be licensed (Orange County 2002). The ordinance requires recycling of corrugated cardboard, clean wood, and scrap metal.

In Oregon, the City of Portland has an ordinance that requires projects seeking a demolition permit to fully deconstruct rather than mechanically demolish structures (City of Portland 2016); Portland was the first city in the country to adopt such an ordinance to salvage C&D materials for reuse. Deconstruction is required for the following structures (City of Portland 2023b):

- Single-dwelling structures built in 1940 or earlier
- Special historic structures designated as historic resources by the City of Portland

Deconstruction work must be performed by certified deconstruction contractors.

The establishment of this deconstruction ordinance launched the beginning of a new deconstruction industry in Portland and a workforce training program to train certified deconstruction contractors. Since 2018, the costs for deconstruction have gone down and the costs for mechanical demolition have gone up in Portland (City of Portland 2023a). Portland's deconstruction ordinance has been a success, contributing to the city's circular economy and diverting salvageable materials away from landfills for reuse instead.

The following are among the variety of guides and other resources that provide additional examples of how local governments are encouraging deconstruction and reduction of C&D waste:

- <https://www.epa.gov/smm/example-local-government-climate-action-plans-address-materials-management-and-waste>
- <https://labs.aap.cornell.edu/sites/aap-labs/files/2023-05/CROWD%20-%20Local%20Government%20Deconstruction%20and%20Reuse%20Guide%205.3.2023.pdf>
- https://www.acrplus.org/images/technical-reports/2019_ACR_Sustainable_construction_guidelines_for_public_authorities.pdf

5.2.1.3 Implementation

The SRWG recommends that the City works towards establishing an ordinance to require diversion of C&D waste and/or deconstruction of structures. The City is primed to follow the lead of the County of Hawai'i in requiring the preparation of a solid waste management plan. As a guideline, the County plan describes the following:

- The potential waste generated from the project
- Onsite source separation methods

- Identification of a proposed waste reduction, waste reuse, recycling facility, or disposal site to receive the waste
- Identification of impacts to County-operated waste management facilities and mitigation measures to minimize impacts

Requirement and identification of licensed waste haulers in the plan could also prevent potential misuse of transfer stations or recycling and reuse facilities. The City should explore requiring a set percentage of waste to be diverted from landfills and also identify the types of construction projects that would be affected by the ordinance. For example, larger projects could be targeted for bigger impact, or residential projects built before a certain year could be targeted because old, single-family homes are often demolished to rebuild new homes on O'ahu.

It is important to note that there have been previous attempts by the City to develop C&D-related ordinances and resolutions. Those have not been successful and have faced opposition in the past by industry groups; however, the current C&D management situation is much more dire and additional assessment and development of an ordinance for further consideration is recommended.

As the State considers its own focus areas that will be part of their integrated solid waste management planning efforts, a statewide C&D diversion and/or deconstruction directive may be another avenue to consider.

5.2.1.4 Member Support

Six SRWG members voted in support of adopting a diversion regulation and/or deconstruction ordinance for C&D waste initiatives. BIA Hawaii shared their concerns about mandates in the opinion letter submitted to the SRWG (**Appendix G**).

5.2.2 Work towards Streamlining the Permitting Process for C&D Material Management for Reuse

The permitting process for C&D material recycling and reuse currently poses a barrier for establishing new recycling and reuse facilities. As a potential solution, industry stakeholders and City agencies could work with the State to streamline and simplify the permitting process for C&D material management. Stakeholders could also work with the State to provide online educational materials on permitting processes and requirements for permittees.

5.2.2.1 Impact and Benefits

Streamlining the permitting process will support the establishment of new recycling and reuse facilities for C&D materials. Education would also greatly reduce barriers and challenges during the permitting process, as not all permittees are familiar with permitting requirements and contaminants of certain materials types.

5.2.2.2 Implementation

Efforts to streamline permitting processes should be focused on permitting for source reduction processes that produce no waste as a byproduct. For example, concrete waste can be completely recycled, with no waste as a byproduct.

The State is currently taking steps to streamline the DOH permitting process by converting all State DOH permitting to electronic forms rather than hard-copy forms. The SRWG recommends that the State continue efforts to streamline the permitting process and work with industry stakeholders and City agencies to produce educational materials on the permitting process.

5.2.2.3 Member Support

Six SRWG members voted yes to work towards streamlining the permitting process for C&D material management.

5.2.3 Work towards Establishing Staging and Storing Areas for C&D Waste Materials for Reuse

A large limiting factor for diverting C&D waste away from landfills is the lack of space for staging, sorting, and storing C&D waste materials. The supply and demand of reusable salvageable C&D waste materials do not always align, as construction projects have varying timelines and material demands; C&D waste materials are often transported offsite to a landfill rather than stored on the construction site to wait for potential future buyers or receivers. Construction sites typically have limited space, and the time and cost of waiting for a future receiver poses a barrier for diverting C&D waste materials for reuse. As a potential solution to this issue, industry stakeholders and government agencies should work together to establish staging and storing areas for C&D waste materials for reuse around the island of O‘ahu. These areas would serve as designated spaces to stage and store C&D waste materials for construction sites. From there, other construction projects could purchase or accept donated C&D materials from the supply as needed.

5.2.3.1 Impacts and Benefits

Staging and storing areas for C&D waste materials will allow more C&D debris to be reused rather than landfilled. Construction projects will also benefit from potential lower cost of reusing materials.

5.2.3.2 Examples

SRWG member Quinn Vittum shared that Re-use Hawai‘i has experienced their own challenges for storing materials due to lack of sufficient storage space and the high cost of renting warehouses on O‘ahu. For example, hotel renovations on O‘ahu produce massive amounts of reusable waste materials, but Re-use Hawai‘i does not have the storage space to accommodate the amount of material associated with these renovations. As a result, a majority of materials are landfilled.

The City of San Francisco, California, requires that C&D debris removed from a project in San Francisco must be recycled or reused (City of San Francisco 2021). C&D debris must be transported offsite by a transporter that has obtained a permit from the City Environment Department, and the waste must be transported to a registered facility that has been vetted and approved by the City Environment Department to receive mixed C&D loads.

In August 2023, the Honolulu City Council passed Resolution 23-168 to establish the Kapa‘a Quarry Transfer Station reusable material collection site pilot project. The City is working with Re-use Hawai‘i to collect and redistribute reusable construction materials and household items at the Kapa‘a Quarry Transfer Station. The transfer station typically functions to collect, sort, and store waste materials before transportation to a disposal or recycling facility. In comparison, this innovative pilot project is using the same designated City space to collect materials for reuse, thereby diverting reusable materials away from landfills. The pilot project serves as a collection site model for the SRWG’s recommendation to establish staging and storing areas for C&D waste materials.

5.2.3.3 Implementation

Industry and government stakeholders should build from lessons learned and successes of the Kapa‘a Quarry Transfer Station pilot project to implement a larger island-wide collection site network for C&D waste. Existing City transfer station sites and/or existing C&D reuse and processing facilities could be incorporated into this network, or new warehouse and storage spaces could be established. Network systems implemented in other counties and states should serve as examples for O‘ahu.

5.2.3.4 Member Support

Six members voted in support of moving forward with this recommended action.

5.2.4 Educate and Involve Stakeholders

The SRWG recognizes that there is a current gap in education and knowledge in the industry for reuse and recycling diversion methods. The SRWG recommends the establishment of educational programs to inform industry stakeholders, such as contractors, consultants, engineers, and project managers, of reuse and recycling options on O‘ahu for different C&D debris material types. The SRWG also recommends that the City adopts a core value system for source reduction and environmental stewardship, which is rooted in Native Hawaiian cultural values—for example, aloha ‘āina (love for the land), mālama (to care for), kūleana (responsibility), and laulima (working together). Education and outreach should also focus on educating stakeholders on this core value system as a means to unite people for a common cause and larger purpose.

5.2.4.1 Impacts and Benefits

Education and outreach is vitally important to encourage and enable behavior changes in the industry. Education on reuse and recycling options will help others understand where and how C&D materials can be diverted to other pathways instead of the landfill. In addition, education on a Native Hawaiian core value system has great potential to encourage behavior changes through cultivating a deeper respect for the land and a sense of shared responsibility.

5.2.4.2 Example

When Kamehameha Schools demolished the Keauhou Beach Hotel on Hawai‘i Island, they diverted over 90 percent of the C&D waste (approximately 21,000 tons of waste) away from landfills to instead be recycled, salvaged, or reused. The project managers were deeply committed to waste diversion to minimize the negative environmental impacts of the project on the island and work towards Kamehameha Schools’ commitment of zero waste by 2045. The project was revolutionary in the industry, especially for its size and close proximity to the ocean, winning several design and engineering awards for the project’s waste diversion achievements. Laura Takahashi from Kamehameha Schools and Eric Tamashiro from Bowers + Kubota spoke with the SRWG’s C&D PIG and shared several lessons learned from the project. One of their biggest challenges was not knowing what to do with the waste because of the current lack of guidance and knowledge in the industry for reuse and recycling options. They particularly struggled with concrete waste and identifying a receiver to take the concrete for reuse. They also found that the adoption of a Hawaiian core value system and education on the Hawaiian culture notably impacted the mindset of the construction staff and served as the key motivator for care and respect for the land throughout the project.

5.2.4.3 Implementation

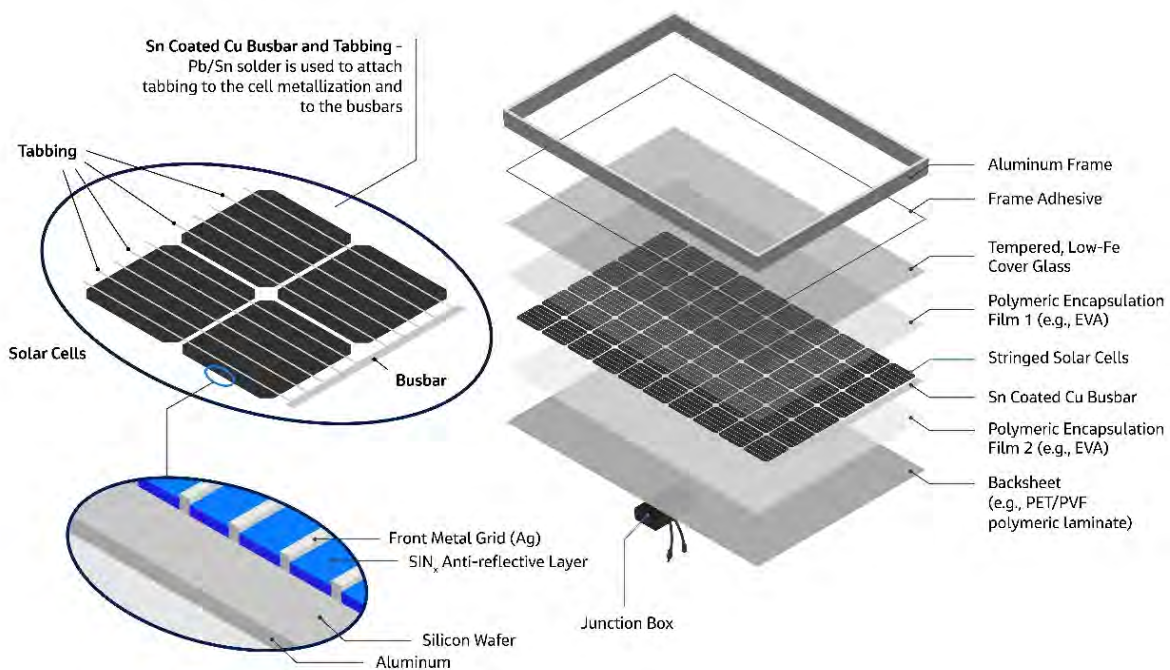
The City should build off other successful public education campaigns and develop new materials (in coordination with stakeholder representatives) to inform industry stakeholders, such as contractors, consultants, engineers, and project managers, of reuse and recycling options on O’ahu for different C&D debris material types. The City should also consider the benefits of adopting a core value system for source reduction and environmental stewardship, which is rooted in Native Hawaiian cultural values.

5.2.4.4 Member Support

Six SRWG members voted yes in support of education and outreach for stakeholders on C&D reuse and recycling methods.

5.3 Photovoltaic Panel Waste Recommended Actions

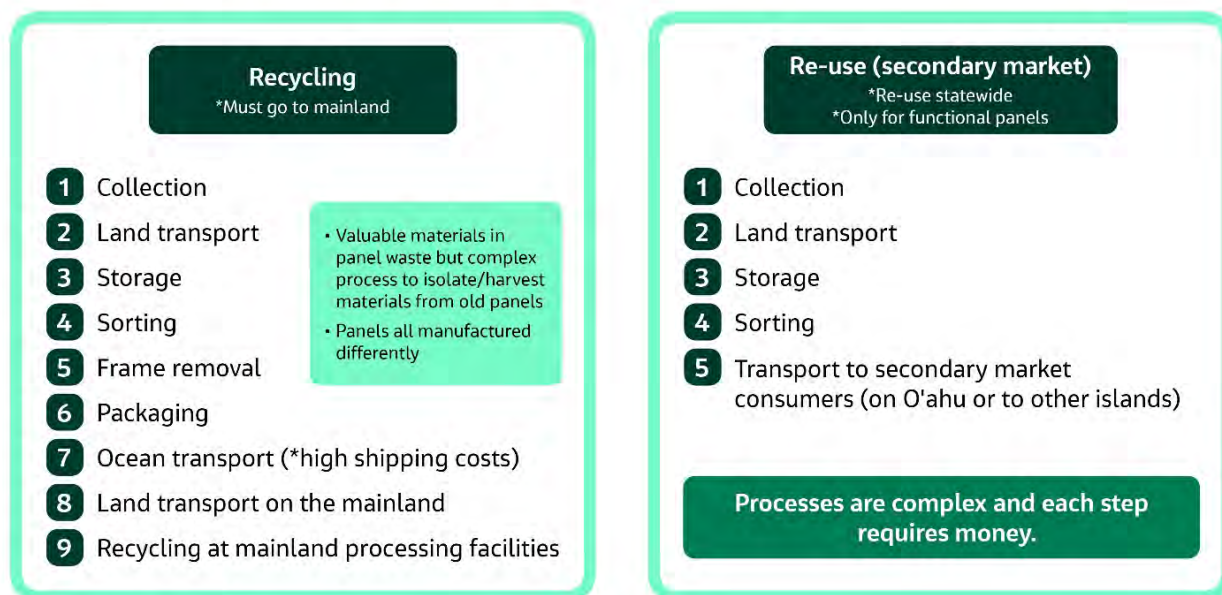
PV panels are made of many different components and contain harmful toxic metals like lead and cadmium, which are hazardous to human health and the environment when illegally dumped (Figure 5). For PV panels to be recycled, these components have to be disassembled. PV panels can be recycled or reused if the proper steps are taken (Figure 6). The following sections describe recommended actions for PV panel waste.



Adapted from United States Environmental Protection Agency, Last Updated June 2023

Figure 5. Example of PV Panel Components and Materials

How can O'ahu handle PV panel waste?



Adapted from Dr. Michael Cooney, University of Hawai'i at Mānoa

Figure 6. Recycling and Reuse of PV Panel Waste on O'ahu

5.3.1 Educate Owners about PV Panel Maintenance

Although PV panels have an average lifespan of about 25 years, industry leaders on O'ahu are finding that PV panels are being removed by owners sooner than they need to be. Panel installers are encouraging owners to replace their panels before the panel lifespan is over to install newer high-performance panel technologies. Industry leaders have also found that owners are often unaware of the proper maintenance required for upkeep of panels, resulting in lack of maintenance and panels dying out sooner than expected. Proper installation, regular maintenance, and cleaning can increase the lifespan of panels and ultimately save owners money by maintaining their current panel system rather than purchasing a new system.

5.3.1.1 Impacts and Benefits

Widespread education on PV panel maintenance could increase the lifespan of panels, thereby lowering the amount of panels needing to be replaced and lowering the amount of panel waste. Education on the long-term cost savings of regular maintenance and the environmental toxicity of panel waste could incentivize owners to invest in their current systems rather than pay for newer technologies. Education on end-of-life panel options, such as reuse for working panels and recycling for nonworking panels, could inform owners of the proper ways to dispose of their old panels and minimize incidents of illegal dumping.

5.3.1.2 Example

The City and County of Honolulu Department of Facility Maintenance Storm Water Quality Division runs a successful Public Education and Outreach (PEO) Program that educates the general public and various targeted groups (such as the construction industry, engineers, teachers, and residents) on storm water pollution prevention measures (CCH 2024). The PEO program uses community-based social marketing to promote behavior shifts towards behaviors that minimize negative impacts and improve storm water quality. The PEO program has launched several educational initiatives over the years, such as hosting public clean-up events, mailing materials to residents, tabling at events, organizing workshops and trainings, and creating educational brochures, guides, videos, and ads. Altogether, these efforts educate O'ahu's community on storm water pollution and prevention to protect the island's streams and oceans.

5.3.1.3 Implementation

An education program is needed to disseminate information on PV panel maintenance and best practices. Education should cover, but is not limited to, the following topics:

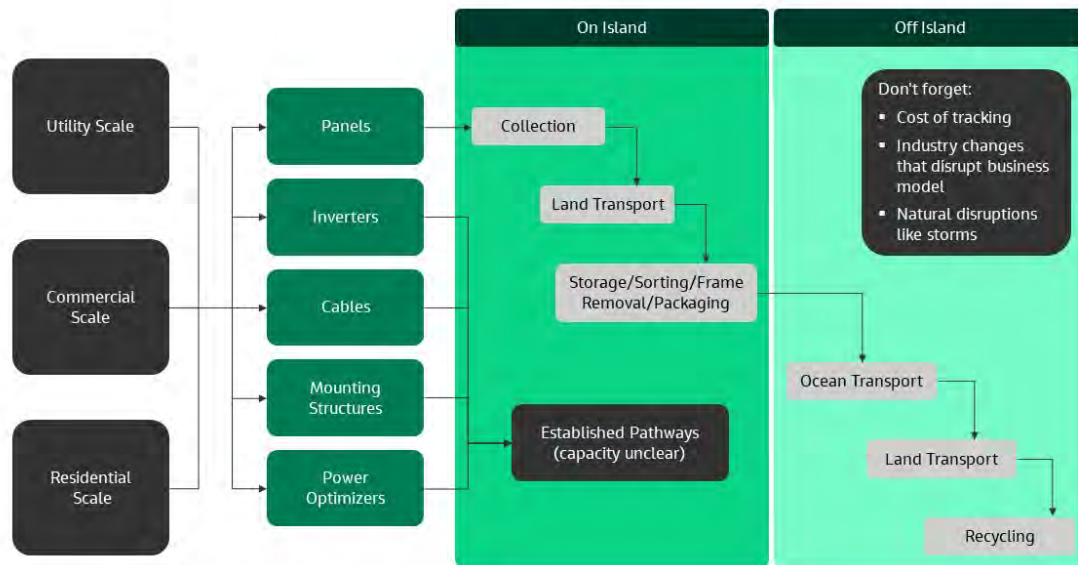
- Environmental toxicity of PV panel waste and illegal dumping
- PV panel reuse options on O'ahu for working panels
- Benefits of reuse options
- PV panel recycling options for nonworking panels
- Challenges with shipping panels to the mainland for recycling
- Best practices for proper installation, maintenance, and cleaning practices
- Benefits of regular maintenance and cleaning

5.3.1.4 Member Support

Six members voted in support of this recommended action to educate owners about PV panel maintenance.

5.3.2 Consider Establishing a Statewide Stewardship Program

Dr. Michael Cooney from the University of Hawai'i at Mānoa Hawai'i Natural Energy Institute presented his PV panel waste research for the PV panel waste PIG and recommended the establishment of a Statewide Stewardship Program to handle PV panel waste in the coming years. Disposal and handling of PV panel waste is an incredibly complex issue, as the panels contain hazardous materials that may pollute the environment if improperly handled or landfilled. With no way to recycle PV panel waste in Hawai'i, the waste must be shipped to the mainland for recycling (**Figure 6**). The DOH anticipates a large upcoming onset of PV panel waste (predicted in thousands of pounds) as the first wave of installed panels from the early 2000s expires. Dr. Cooney suggests a Statewide Stewardship Program to organize and centralize efforts and hold all groups accountable from an industry to consumer level (for example, manufacturers, retailers, operators, government agencies, refuse operators, installers, and waste generators/consumers) in a comprehensive programming and funding system (**Figure 7**). Dr. Cooney is currently working on a report (as part of a separate effort) to summarize planning and implementation for the Statewide Stewardship Program.

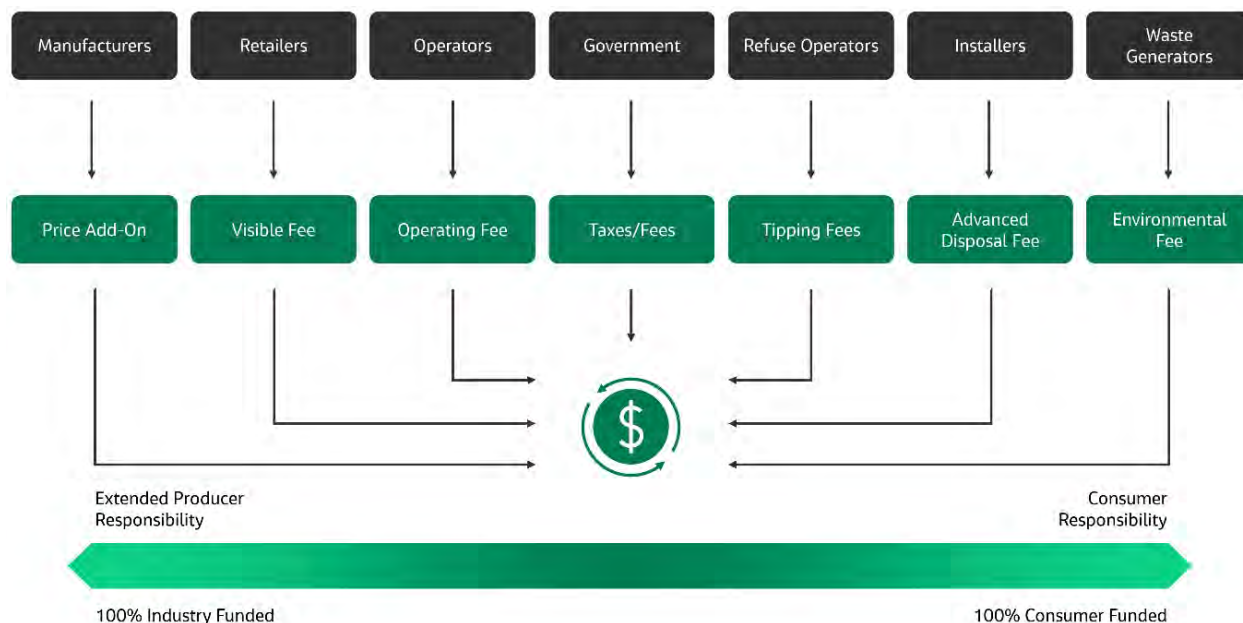


Adapted from Dr. Michael Cooney, University of Hawai'i at Mānoa

Figure 7. Statewide Stewardship Program Proposed Structure for PV Panel Waste Management

5.3.2.1 Implementation

The Statewide Stewardship Program could be implemented by a new 501c3 non-profit organization established for the purpose of carrying out the program. The program should have oversight from manufacturers and government agencies such as the DOH. The identification and maintenance of partnerships should be continued throughout the planning and implementation stages of the program. Funding for the program could come from the industry to the consumer level. For example, manufacturers, retailers, operators, government agencies, refuse operators, installers, and waste generators (consumers) could each pay into the program through a fee (Figure 8). The amount that a group pays into the program could vary, with the program entirely industry-funded on one end (resembling EPR) or entirely consumer-funded on the other end (that is, with the responsibility placed on the consumer). Further research and discussions are needed to plan out the details of potentially establishing a Statewide Stewardship Program for PV panel waste. Dr. Cooney's research should be referenced and considered once it is completed, and other options for handling PV panel waste should also be explored.



Adapted from Dr. Michael Cooney, University of Hawai'i at Mānoa

Figure 8. Statewide Stewardship Program Proposed Funding Structure from Industry to Consumer Level Contribution

5.3.2.2 Impacts and Benefits

The large upcoming wave of PV panel waste will pose an unprecedented statewide waste issue and environmental concern. The PV panel waste stream is expected to increase significantly in the future, especially as the installation of PV panels increases to meet the statewide goal of 100 percent renewable energy by 2045. The Statewide Stewardship Program has the potential to manage this large waste stream of hazardous toxic materials through a centralized structure and a sustainable funding system. Managing the PV panel waste stream protects the environment, minimizes illegal dumping, and supports Hawai'i's renewable energy goals. Through the various steps required to prepare the panels for shipment to the mainland—such as collection, land transport, storage, sorting, frame removal, and packaging into shipping containers—there is potential to stimulate the economy through new industry roles and niches in the process.

5.3.2.3 Example

In his presentation at PV panel waste PIG Meeting 3, speaker Brian Gold discussed the in-house recycling program currently run by Inter-Island Solar Supply, Hawai'i's largest wholesale panel distributor. The program works to collect PV panel waste from owners, sort and process the panels, and pack and ship the panels to a mainland recycling facility. Inter-Island Solar Supply's recycling program is currently the only end-of-life option for nonworking panels (Inter-Island Solar Supply 2023). Consumers pay a fee to give their panels to Inter-Island Solar Supply, who currently do not make a profit with the program. So far, the company has shipped a few containers to the mainland, but the program needs to be expanded and made more attractive to the market. The Statewide Stewardship Program would function like Inter-Island Solar Supply's recycling program at a larger scale.

5.3.2.4 Member Support

Six members voted in support of this recommended action to consider establishing a Statewide Stewardship Program.

5.3.3 Consider Subsidizing Shipping Costs to Ship PV Panel Waste to the Mainland for Recycling

Brian Gold shared during a PV panel waste PIG meeting that they currently do not make a profit with their in-house recycling program, but they continue to carry out the program to minimize the waste stream on O'ahu. The largest limiting factor for their program is the high cost of shipping the panels to the mainland, as the panels are heavy and shipping is expensive. City or State agencies could consider subsidizing the cost of shipping panels to the mainland to support the ongoing implementation and expansion of Inter-Island Solar Supply's recycling program and also encourage the potential establishment of other recycling programs on the other islands. Alternatively, shipping costs could be entirely consumer-funded by having panel owners pay a fee when disposing of their PV panels. Inter-Island Solar Supply currently charges consumers a per-module fee to receive panels; however, high shipping costs to the mainland still pose a limiting factor for expanding their operations. Solutions such as government subsidies or requiring higher consumer fees should be explored. Solutions for other islands should also be considered because PV panel waste is a statewide problem and is not specific to O'ahu.

5.3.3.1 Impacts and Benefits

Subsidizing or funding the shipping costs to ship PV panel waste to the mainland for recycling will increase the capacity for local companies and programs to handle the waste stream. Inter-Island Solar Supply's recycling program is the first and only program in Hawai'i to receive, sort, and ship aging and decommissioned panels. However, the large influx of PV panel waste in the future will require more handling capacity, whether through the potential expansion of Inter-Island Solar Supply's current program, the establishment of other similar local programs on the other islands, and/or the establishment of a Statewide Stewardship Program. Inter-Island Solar Supply's current limiting factor of high shipping costs will likely become a larger problem in the future if funding strategies and solutions are not identified. Subsidizing or funding panel shipping costs should be considered in ongoing planning efforts and discussions, especially as the waste stream increases and the tonnage of PV panels that need to be shipped to the mainland increases.

5.3.3.2 Implementation

Further planning, research, and discussion is needed to identify solutions to subsidizing and/or funding the shipping costs to ship PV panel waste to the mainland for recycling. Partnerships between industry leaders, government agencies, researchers, and shipping companies should be explored.

5.3.3.3 Member Support

Five members voted yes for including some version of this consideration in the SRWG Report.

5.3.4 Explore Extended Producer Responsibility

EPR is a policy approach that places more responsibility for end-of-life waste management on the producers and manufacturers that create the products and can apply to many different waste material types (NCSL 2023). For PV panels specifically, EPR would place responsibility on panel manufacturers to ensure that they do not pollute the environment and that new panels are made from as much recycled content as possible (PSI 2024). The United States has minimal regulation or responsibility placed on PV panel manufacturers for handling PV panel waste. The DOH is currently exploring EPR options for PV panels, as EPR may be a viable solution to the growing problem. However, there are still several nuances and details that need to be considered before definitively deciding for or against implementation of EPR policy. For instance, most manufacturers that provide Hawai'i's panel supply are international; implementation of EPR policy may cause these manufacturers to withdraw from the market, notably reducing supply while demand for clean energy remains high. On the other end, EPR policy could alleviate several of our PV panel waste management challenges by placing more responsibility on manufacturers. At the moment, EPR seems to be potentially part of a solution, but more research is needed in conjunction with consideration of other solutions. The SRWG recommends that further research and planning is needed to explore the feasibility and implementation of EPR for PV panels in Hawai'i.

5.3.4.1 Impacts and Benefits

By placing responsibility on manufacturers of the product, EPR policy can alleviate some of the burden on consumers, distributors, and installers of PV panels. EPR programs can incentivize the design of more sustainable products that have end-of-life solutions in mind. More sustainably designed panels can lead to new PV panel supply chains, as panels are made from more recyclable materials and researchers develop better standardized recycling methods (PSI 2024). While PV panels contain valuable materials like silicon and silver, the current recycling process is incredibly complex and expensive (Crownhart 2021). Panels are currently made differently by various manufacturers, and recycling facilities and researchers have found it very challenging to isolate and recover the valuable materials from the panel structure. EPR policy could lead to panels designed with more recyclable materials allowing the industry to adapt accordingly and recycle panels with more ease. Establishment of an EPR policy for Hawai'i could also support the setup of a Statewide Stewardship Program, which would organize efforts across the supply chain, from manufacturers to consumers.

5.3.4.2 Example

In 2017, Washington state became the first to pass a PV panel EPR law requiring recycling requirements for manufacturers (PSI 2024). In 2022, Niagara County, New York, became the first local government county to pass a PV panel EPR law requiring producers to finance solar panel recycling (Niagara County 2021). Dr. Cooney shared during his PIG meeting presentation that manufacturers have withdrawn from the markets in Washington and Niagara County due to the new EPR regulations. However, other states and counties in the United States may still soon establish their own EPR policies to manage the challenging issue of PV panel waste. Dr. Cooney shared in follow-up conversations with the consultant group (not during a PIG meeting) that California is looking into establishing a PV panel EPR program through the proposed Assembly Bill 2, "Recycling: solar photovoltaic modules." The California Product Stewardship Council (2023) states, "This bill would expand the definition of 'covered electronic devices' to include a 'customer-owned solar PV module.'" The California Product Stewardship Council further explains, "The bill would require, on or before October 1, 2026, and on or before October 1 each year thereafter, CalRecycle to establish a covered solar PV recycling fee based on the reasonable regulatory costs to administer covered electronic waste recycling." Internationally, in the European Union (EU), responsibility is placed on the manufacturers to collect and recycle used PV panels and fund research for end-of-life solutions (Crownhart 2021). EU member states have to recycle 85 percent of the material in PV panels (IEEFA 2023).

5.3.4.3 Implementation

EPR could be difficult to implement in Hawai'i because the majority of manufacturers in Hawai'i's market are international. Nonetheless, EPR could also be the start of more sustainably designed PV panels with greater recyclability. The DOH should put time and effort into considering EPR options, in collaboration with important stakeholders including other government agencies, PV panel industry leaders, distributors, installers, researchers, and consumers. The DOH and stakeholders should observe how California implements their upcoming EPR program and reach out to government leaders from California, Washington state, and Niagara County for their guidance and help.

5.3.4.4 Member Support

Six members voted in support of exploring EPR further.

5.3.5 Consider Supporting or Incentivizing Secondary Market Programs for Reuse of Functional PV Panels

Older PV panel systems are sometimes decommissioned when they are still functional. In these cases, functional PV panels can be reused rather than shipped to the mainland for recycling. KumuKit, a local solar panel installation company, and Re-use Hawai'i have partnered to implement a secondary market program to re-sell used functional PV panels at a low cost on the islands of O'ahu and Hawai'i. SRWG member Quinn Vittum (Re-use Hawai'i) has expressed concerns that saturation could be reached in the secondary market for demand. The supply of used panels remains steady, and supply is expected to increase in the future. However, the increased supply may soon become greater than demand (especially for panels with older technology from the early 2000s) because used panels with newer technology are preferred by consumers. If functional panels are not able to be sold for reuse, then they would end up in the same waste stream as nonfunctional panels, needing to go to a mainland recycling facility for disposal. To maximize source reduction, the SRWG recommends further consideration into supporting and incentivizing secondary market programs for reuse of functional PV panels.

5.3.5.1 Impacts and Benefits

From a source reduction perspective, reuse of panels with remaining life is preferred to shipping them to a mainland recycling facility. Supporting and incentivizing secondary market programs for PV panel ensures that reuse remains a viable and popular option for consumers. This recommendation also supports renewable clean energy options for those who otherwise would not be able to afford a brand new system.

5.3.5.2 Example

KumuKit and Re-use Hawai'i's secondary market program has proven to be successful on O'ahu and Hawai'i Island, with several local consumers purchasing used panels. Demand is particularly high on Hawai'i Island among rural farming communities.

5.3.5.3 Implementation

Industry stakeholders and government agencies should maintain relationships with KumuKit and Re-use Hawai'i to learn more about their successes and challenges and to identify opportunities to support and incentivize market demand. Quinn Vittum mentioned the idea of offering tax incentives for people purchasing and using resold used panels. Incentives could also emerge in the form of education regarding the environmental hazards and recycling challenges for PV panel waste. Moreover, partnerships with other private and public organizations could be established to further disseminate information about the PV panel secondary market and donation of panels to disadvantaged communities or community organizations.

5.3.5.4 Member Support

Five members voted in support of this recommended action.

5.4 Product Packaging and Food Waste/Organics Recommended Actions

The following sections describe recommended actions for product packaging and food waste and organics.

5.4.1 Initiate Reusable Container and Mobile Washing Program

The County's Disposable Food Ware Ordinance 19-30 (that is, DFWO) was signed into law in December 2019 and took effect in January 2021 (CCH 2019b). The DFWO restricts the use and sale of certain types of foodware (such as takeout containers) and serviceware (such as takeout utensils) provided by all food vendors and businesses operating within the City and County of Honolulu. Unfortunately, there are still a lot of disposable takeout containers being used and disposed of as part of large public events. Finding reusable alternatives that could be used to support large public events would make a substantial impact in source reduction.

SRWG member Nicole Chatterson (Zero Waste O'ahu) shared information about a reusable container pilot project that was conducted by Zero Waste O'ahu for about a year and a half (Zero Waste O'ahu 2023). The pilot was able to divert 20,000 disposable plastic containers from H-POWER and the landfill by using reusable containers. During the pilot, the reusable containers were collected then washed and sanitized at a brick-and-mortar-commercial kitchen to meet DOH rules for food safety. Washing the containers proved to be a limiting factor for this pilot project because of both the limited access to dishwashing facilities and the high cost of transportation to transport the containers to washing facilities. One potential solution to this barrier would be to set up and launch mobile washing trucks to wash containers more easily onsite. However, under DOH food safety regulations, a mobile washing truck would be considered a "Mobile Food Establishment"—like a typical food truck—and would need to be connected to a brick-and-mortar commercial support kitchen (DOH 2013). These regulations have posed a challenge for establishing mobile washing trucks in the past. As a solution, the SRWG recommend that policy language be modified to create an exemption for mobile dishwashing services, removing the requirement of a brick-and-mortar support kitchen for mobile dishwashing services.

5.4.1.1 Impacts and Benefits

Large events and restaurant takeout services generate sizeable amounts of waste as a result of food containers and packaging used to serve food. Switching to reusable food containers instead of single-use options can significantly reduce the amount of waste generated and also reduce the raw materials expended and carbon emissions released to manufacture the single-use containers. According to the EPA, containers and packaging contribute about 28 percent of the material in landfills in the United States (EPA 2015). For the island of O‘ahu, the *2017 Oahu Waste Composition Study* found that plastic waste contributed to 9.8 percent of the overall waste stream (CCH 2018). While data on specifically food-related containers and packaging are not known, it can be deduced that a portion of the plastic waste stream originates from food-related packaging. It is also important to remember that a large amount of food-related packaging litters our beaches and oceans, escaping detection and quantification in waste composition studies.

Overall, targeting disposable food-related containers in source reduction efforts has great potential for reducing the waste generation. The establishment of mobile washing trucks will allow for reusable container programs to expand, reaching more events and thereby increasing source reduction impacts.

5.4.1.2 Example

The Zero Waste O‘ahu pilot project is a recent and local example of how a reusable food ware program could be implemented within the City. Zero Waste O‘ahu has already purchased the containers, which could potentially be used at large public events as long as a more accessible washing alternative could be established. One example of a mobile dishwashing truck has been used to promote Zero Waste events in New Zealand (Envirohub 2024).

5.4.1.3 Implementation

This recommendation would be focused on using reusable food ware for large (100 people or more) public events. Public events like the Korea Fest hosted at the City’s Fasi Municipal Building grounds or events at the Waikiki Shell would be good candidates for this recommendation. In examining the lessons and successes of the Zero Waste O‘ahu pilot project, the PIG associated with this topic felt that the first step to successfully implementing this recommendation would be to modify existing policy to remove the requirement for mobile dishwashing services to be connected to a commercial kitchen. However, through conversations with the larger SRWG, Lene Ichinotsubo of the DOH Solid and Hazardous Waste Branch expressed her opinion that policy changes can be rather difficult but may have more success if another specific pilot project showed success. These details, along with the supporting funding and public education will need to be further refined for this recommendation. However, either route could be successful, and the chosen path will depend on support and the champions that push this recommendation forward.

5.4.1.4 Member Support

Six members voted in support of this recommended action.

5.4.2 Continue Evaluating Product Packaging Source Reductions Needs and Options

In addition to the packaging associated with the sale of food at restaurants and events, there are other types of food-related packaging that are currently generated and often disposed of. According to the EPA, in 2018, containers and packaging made up 28.1 percent of the total MSW generated in the United States that year (EPA 2023b). This includes a wide variety of materials, including glass, steel, aluminum, paper, plastics, wood, and other miscellaneous materials. As manufacturer and consumer needs and practices change, the waste generation trends also change. This requires continued re-evaluation and assessment to determine current opportunities for source reduction. The SRWG recommends creating a task force or extending some branch of the SRWG to monitor these trends and needs and to continue determining the best source reduction methods at that time. One potential example of this is to consider packaging-related EPR. As of 2023, there were several states (Washington, Oregon, California, Colorado, New Jersey, and Maine) in the process of either implementing or setting up EPR programs focused on packaging. As states learn more about these programs, the task force should consider if adding a packaging EPR for Hawai'i is beneficial.

5.4.2.1 Impacts and Benefits

Based on the large quantity of food-related packaging generated, the SRWG acknowledges that additional material-specific research could result in additional source reduction gains. The specific impact and benefits will depend on the material generation trends and the materials targeted.

From the *2017 Oahu Waste Composition Study*, out of the top ten most prevalent categories in the overall waste disposal stream, at least five of those materials are associated with packaging (CCH 2018). These packaging materials, which include uncoated corrugated cardboard (6.5 percent), pallets (5.9 percent), compostable paper (5.7 percent), mixed recyclable paper (5.5 percent), and other plastic film wrap (4.4 percent), account for a large amount of the material that is currently being disposed of. If a targeted EPR or other program was implemented, this could have significant impacts on source reduction of those materials.

Table 2. Most Prevalent Material Categories in Overall Waste

Ten Most Prevalent Material Categories in Overall Waste in 2017

Material	Estimated Percent	Cumulative Percent	Estimated Tons
Food Waste-Non-Vegetative	11.8%	11.8%	93,853
Food Waste-Vegetative	8.3%	20.1%	65,980
Uncoated Corrugated Cardboard	6.5%	26.7%	51,967
Green Waste	6.0%	32.7%	47,880
Pallets	5.9%	38.6%	46,722
Other Organics	5.8%	44.3%	45,875
Compostable Paper	5.7%	50.1%	45,660
Mixed Recyclable Paper	5.5%	55.5%	43,298
Other Plastic Film/Wrap	4.4%	60.0%	35,339
Treated Wood	3.4%	63.4%	27,042
Subtotal	63.4%		503,616
All other materials	36.6%		290,753
Total	100.0%		794,368

Adapted from City and County of Honolulu 2017 Waste Composition Study by Cascadia Consulting Group, June 2018

5.4.2.2 Example

The following states have packaging-related EPR programs as of 2023 (Source Intelligence 2023):

- Washington: Post Consumer Recycled Content Law (70A.245), which requires a minimum recycled content for different products starting in 2023
- Oregon: Plastic Pollution and Recycling Modernization Act (Senate Bill [SB] 582)
- California: Plastic Pollution Prevention and Packaging Producer Responsibility Act (SB 54)
- Colorado: Producer Responsibility Program for Statewide Recycling Action (House Bill [HB] 22-1355)
- New Jersey: Recycled Content Law (Public Law [P.L.] 2021, c. 391)
- Maine: An Act to Support and Improve Municipal Recycling Programs to Save Taxpayer Money (Legislative Document [LD] 1541)

5.4.2.3 Implementation

A new task force or some branch of the SRWG should monitor packaging material generation trends and needs then continue determining the best source reduction methods for those materials as time progresses.

As part of this, the SRWG recommends that the task force continues monitoring the effectiveness of other states' packaging-related EPR programs and whether similar programs could be beneficial in Hawai'i.

5.4.2.4 Member Support

Five members voted in support of this recommended action.

5.4.3 Incentivize Food Donations

The *2017 Oahu Waste Composition Study* shows that organics account for 35.5 percent of the waste stream (Table 3), and food waste specifically makes up a large portion (20.1 percent) of the material currently being disposed in Hawai'i (CCH 2018). As discussed in the 2019 ISWMP, "the total food waste in Hawai'i is estimated to be valued at over \$1 billion per year, which, in 2010, was equivalent to 1.52 times the total production of agriculture in Hawai'i. As stated in HB No. 314 (State of Hawai'i 2023), "One in six Hawai'i residents faces food insecurity, including one in four children."

Table 3. Organics Found in Waste Stream

Waste Composition Results in 2017: Organics

Material	Estimated Percent*	+/-	Estimated Tons
Organics	35.5%		282,334
Food Waste-Vegetative	8.3%	1.3%	65,980
Food Waste-Non-Vegetative	11.8%		93,853
Green Waste	6.0%	1.1%	47,880
Stumps	0.2%	0.1%	1,402
Textiles	2.9%	0.5%	23,238
Carpet	0.5%	0.4%	4,107
Other Organics	5.8%		45,875

Adapted from City and County of Honolulu 2017 Waste Composition Study by Cascadia Consulting Group, June 2018
 *Estimated Percent is given as the estimated percent of the overall waste stream

The Hawai'i Foodbank and Aloha Harvest are two programs that currently accept donated food. Food donation is protected under the Good Samaritan Law. Unfortunately, even with these protections, some businesses are not donating food.

The Good Samaritan Law (State of Hawai'i 2018) protects good-faith donors from civil and criminal liability and encourages food donation. However, the Good Samaritan Law currently requires that donors must have a commercial kitchen with specified requirements and excludes individuals from donating food. In addition, some businesses are not aware of the donor liability protections that are currently in place.

This recommendation encourages increased donation through the following means:

- Incentivizing businesses to donate more through the issuance of awards
- Public education
- Updating the Good Samaritan Law language to expand protections to individuals

5.4.3.1 Impacts and Benefits

From the *2017 Oahu Waste Composition Study* (CCH 2018), organics account for 35.5 percent, the largest portion of Honolulu's overall waste stream. Out of the top 10 most prevalent materials in the overall waste stream, food waste-non-vegetative and food waste-vegetative were the top two and together make up 20.1 percent of the overall waste stream.

As shown in the EPA (2023c) Wasted Food Scale (**Figure 9**), donating food is amongst the most preferred option for preventing and diverting wasted food.



Figure 9. EPA Wasted Food Scale

5.4.3.2 Example

The Hawai'i Green Business Program (State of Hawai'i 2024) is an example of a program that provides annual awards to businesses, venues, and events for their sustainable achievements. Topics considered under this program include energy conservation, waste reduction, pollution prevention, water conservation, natural resource preservation, community involvement, and cultural preservation. This may be a potential program that could be partnered with to elevate food donation. It could also be an example of how to set up a new successful program.

There are a number of successful public education campaigns that encourage donation. One recent example aimed at encouraging business to donate food was prepared by Oregon Metro (Metro 2021); this two-page guide, seen online at <https://www.oregonmetro.gov/sites/default/files/2023/05/30/guide-for-businesses-to-donate-food-20230530.pdf>, provides information on the importance of donating, information on liability and tax incentives, and helpful tips.

5.4.3.3 Implementation

Food donations from businesses should be incentivized by establishing a program that presents high-achievers with awards/certificates. The SRWG also recommends pairing this with a public education program and an update to the Good Samaritan Law. The public education campaign should provide information about the benefits of food donation, the protections provided by the Good Samaritan Law, and how to donate food. The Good Samaritan Law should be updated to extend to individuals.

5.4.3.4 Member Support

Six members voted in support of this recommended action.

5.4.4 Increase Food Reuse and Organics Recycling

As seen in the City's food waste recycling tip sheet (CCH 2023), City and County of Honolulu Ordinance Chapter 42 Section 42-3.5 requires businesses of a certain size to recycle or donate food waste. Food establishments currently mandated by the ordinance to recycle food waste include the following:

- Restaurants that occupy 5,000 square feet or more of floor area and serve 400 or more prepared meals per day²

² "Meals per day" as presented here are based on an annualized average.

- Food courts in a building or shopping center where five or more food establishments are situated and serviced by a common dining area
- Hotels with one or more kitchens and function rooms
- Grocery stores that occupy 18,000 square feet or more of floor area
- Food manufacturers or processors that occupy 5,000 square feet or more of floor area
- Catering establishments that serve or sell 400 or more prepared meals per day
- Hospitals that serve 400 or more prepared patient meals per day

Depending on the food type and quality, businesses can send food to food pantries, soup kitchens, produce and food scrap collectors/pig farmers, Aloha Harvest, the Hawai'i Foodbank, meat/seafood/cooking oil recycling facilities, and others. To increase the amount of food donated and sent to recycling facilities, the SRWG recommends that the ordinance language should be updated to require businesses of smaller sizes to donate and recycle food waste. While the ordinance title has the word "recycling" in the title, businesses can choose to donate edible food to organizations like Aloha Harvest and the Hawai'i Foodbank; non-edible food and scraps can be recycled by other organizations. The SRWG would like to place an emphasis on mandating food donations to prioritize source reduction. The policy language should be updated to emphasize donation of edible food waste as the preferred option over recycling, when a business has edible food.

The SRWG also concluded that further research is needed to look into organics and composting, as the SRWG was not able to fully discuss organics and composting solutions due to the SRWG's short appointed term of one year. The SRWG recommends that a separate task force should be created to discuss organics and composting source reduction strategies in depth. The task force should comprise stakeholders from representative organizations and agencies. Beyond the mandatory food waste recycling ordinance, the task force should look into implementation of new, more expansive, policy regulations for food donations and organics recycling.

5.4.4.1 Impacts and Benefits

Currently, the mandatory food waste recycling ordinance requires only large businesses to donate and recycle food waste. However, more food waste could be diverted away from disposal if the requirements are extended to businesses of smaller sizes. Donating edible foods contributes directly to source reduction by rescuing and redistributing food to feed others. Similarly, donating food scraps to pig farmers redistributes food scraps for animal feed. While recycling is less preferred than source reduction methods, the SRWG recognizes that not all food waste is edible for human or animal consumption. The group acknowledges that organics recycling is also a core solution for decreasing waste in landfills and thus combatting climate change through decreased methane production in landfills. Policy language can target food donations and organics recycling, while also encouraging and prioritizing donations.

Increased regulations mandating food donations also have a greater impact in addressing food insecurity and public health issues throughout the state (Hudak et al. 2022).

5.4.4.2 Example

Other states combine food donation and recycling requirements through more expansive policy regulations (Goerger 2022). For example, in 2022, Washington passed a major food waste bill ([HB 1799](#)) that expands organics recycling requirements in the state. The bill requires businesses producing at least 8 cubic yards of organic waste per week to arrange for onsite composting or organics collection.

The requirement will expand in 2025 to include businesses that produce over 4 cubic yards of organic waste per week. The bill encourages businesses to donate edible food, with a goal that 20 percent of edible food is donated by 2025. In addition, the bill requires municipalities with more than 25,000 residents to adopt an ordinance requiring local jurisdiction to purchase compost products and provide biweekly curbside composting. The law also increases liability protection for food donors and includes provisions to facilitate the siting of composting and anaerobic digestion facilities.

In 2022, California also passed a state law ([SB 1383](#)) to mandate food donations to meet the following goals:

- Reduced statewide disposal of organic waste 50 percent by 2020 and 75 percent by 2025
- Recovery of at least 20 percent of disposed edible food by 2025

California’s law phased food donations into two tiers, with the first tier of larger food generators required to start donating in 2022 and the second tier of smaller food generators required to start donating in 2024. Businesses are required to establish written agreements with receiving food programs and track the amount, frequency, and types of food donated monthly.

5.4.4.3 Implementation

The City should encourage food donations over organics recycling in any policy language changes. Moreover, the City should produce and distribute educational materials to disseminate news of policy changes and also encourage donations of edible foods. The organics and composting task force should discuss more source reduction solutions for organic waste and look into recent policy regulations implemented in other states and counties.

5.4.4.4 Member Support

Six members voted in support of this recommended action.

5.5 Implementation Summary

Table 4 summarizes the recommended actions discussed in Sections 5.1 through 5.4 and details their associated owners/partners and potential milestone dates.

Table 4. Implementation Summary

Action	Potential Owner/Partners	Estimate Milestone Date(s)
Overall		
Evaluate funding strategies	All parties driving recommendations Suggest that the City (Resilience Office) and State (DOH) collaborate on early assessment	<ul style="list-style-type: none"> ▪ Both immediate and ongoing as recommendations are advanced

Action	Potential Owner/Partners	Estimate Milestone Date(s)
Construction and Demolition (C&D) Waste Recommended Actions		
Adopt a diversion regulation and/or deconstruction ordinance	Owners: DOH and ENV Partners: Re-use Hawai'i, Island Demo, BIA Hawaii	<ul style="list-style-type: none"> Develop task force to continue evaluation of different types of ordinances and potential economic impact – 2024 Draft language and initiate administrative process – early 2025 Begin implementation – 2025
Work towards streamlining the permitting process for C&D material management for reuse	Owners: DOH Partners: ENV and industry stakeholders	<ul style="list-style-type: none"> Continue streamline permitting process (ongoing) Prepare educational materials – 2024 and ongoing
Work towards establishing staging and storing areas for C&D waste materials for reuse	Partners: Re-use Hawai'i, Island Demo, ENV	<ul style="list-style-type: none"> Following completion of Kapa'a Quarry Transfer Station pilot project, evaluate potential for full project design and implementation
Educate and involve stakeholders	Owners: ENV Partners: DOH, Re-use Hawai'i, Island Demo, BIA Hawaii, Kamehameha Schools	<ul style="list-style-type: none"> Prepare educational materials – 2024 and ongoing
Photovoltaic (PV) Panel Waste Recommended Actions		
Educate owners about PV panel maintenance	Owners: DOH and ENV Partners: Industry Partners to be determined (TBD)	<ul style="list-style-type: none"> Prepare educational materials – 2024 and ongoing
Consider establishing a Statewide Stewardship Program	Owners: DOH Partners: TBD	<ul style="list-style-type: none"> Develop working group or task force – 2024 Continue evaluation of stewardship program design and potential impact – 2024-2025 If deemed beneficial, begin working with potential 501c3 owner – 2026 and beyond
Consider subsidizing shipping costs to ship PV panel waste to the mainland for recycling	Owners: DOH Partners: Industry, researchers, shipping representatives TBD	<ul style="list-style-type: none"> Develop working group or task force to continue exploration of recommendation – 2025 Complete evaluation – 2026 Begin implementation – 2027

Action	Potential Owner/Partners	Estimate Milestone Date(s)
Explore Extended Producer Responsibility (EPR)	Owners: DOH Partners: Other government agencies, PV panel industry leaders, distributors, researchers, and consumers	<ul style="list-style-type: none"> Develop working group or task force to continue exploration of recommendation – 2025 Complete evaluation – 2026 Begin working with potential implementation owner – 2027 and beyond
Consider supporting or incentivizing secondary market programs for reuse of functional PV panels	Owners: KumuKit and Re-use Hawai'i Partners: DOH, ENV, other industry	<ul style="list-style-type: none"> Continue learning lessons from KumuKit and Re-use Hawai'i (ongoing) Develop public education materials, immediate and ongoing Assess new opportunities to support and incentivize market demand (ongoing)
Product Packaging and Food Waste/Organics Recommended Actions		
Initiate reusable container and mobile washing program	Owners: Zero Waste O'ahu Partners: ENV, DOH	<ul style="list-style-type: none"> Continue refining program funding and implementation details – 2024 Apply for funding and finalize policy change – 2024-2025 Begin implementation – 2025
Continue evaluating product packaging source reduction needs and options	Owners: ENV Partners: DOH, Zero Waste O'ahu, Hawaii Food Industry Association and Retail Merchants of Hawaii	<ul style="list-style-type: none"> Develop task force – 2026 Monitor material generation trends and potential needs – ongoing Annual review of potential needs – 2026 and beyond
Incentivize food donations	Owners: Resilience Office Partners: ENV, Zero Waste O'ahu, Hawaii Food Industry Association and Retail Merchants of Hawaii	<ul style="list-style-type: none"> Create task force or working group to identify resources and infrastructure needed – 2024 Secure funding and begin public education – 2025 Begin implementing – 2026 Public education – 2025 and beyond Adjust Good Samaritan language – 2027
Increase food reuse and organics recycling	Owners: ENV Partners: TBD	<ul style="list-style-type: none"> Create task force to continue evaluating organics management needs and options – 2024 and ongoing Modify language in ordinance to promote source reduction and donation and expand recycling – 2025

6. Next Steps

Beyond the close of the SRWG term in 2024, the City hopes that the foundations and recommendations of the working group are carried forward by a long-term self-sustaining group of stakeholders. The potential owners and partners can move forward with the recommended actions and/or coordinate with other agencies and stakeholders for next steps in achieving the stated milestones. Fundamentally, the work of the SRWG and the efforts that follow will help to shape future City initiatives and priority actions to meet the City's source reduction goal of reduction of per-capita waste generation by 25 percent by 2030.

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Appendix A

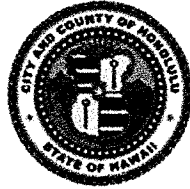
Example Member Letter from Mayor



DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: <http://envhonolulu.org>

RICK BLANGIARDI
MAYOR



May 31, 2023

ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR

MICHAEL O'KEEFE
DEPUTY DIRECTOR

IN REPLY REFER TO:
RE 23-028

Ms. Hayley Cook
Policy and Research Manager
Office of Climate Change,
Sustainability and Resiliency
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Ms. Cook:

The City and County of Honolulu's Department of Environmental Services has established the Source Reduction Working Group (SRWG), which has been tasked with determining the best ways to achieve solid waste source reduction on the island. As its adopted vision, the SRWG aims to improve Oahu's solid waste management system through development and promotion of source reduction initiatives and efforts.

The SRWG is comprised of industry leaders with different backgrounds whose experience and knowledge adds significant value to the SRWG. As such an individual, you have been appointed to the SRWG by Mayor Rick Blangiardi. Thank you for your willingness to participate.

The SRWG is planned to have five (5) meetings throughout the 2023 calendar year with meetings lasting approximately two (2) hours depending on the public comment period duration. As discussed in recent correspondences, Meeting #2 will be held on **June 28, 2023 at 1:00 p.m. - 3:00 p.m.** and will be located at **Kapolei Hale, 1000 Uluohia Street, Kapolei, Hawaii 96707 in Conference Room A.** Should your in-person availability change, we are also offering a secondary option to join Meeting #2 remotely. Remote meeting information will be provided prior to the meeting.

Future SRWG meetings will generally be set bimonthly with location to be determined. All meetings will be open to the public in accordance with the Sunshine Law. To view previous Meeting #1 documents (Charter Document, Source Reduction Working Group Rules, etc.) and audio recording, please refer to the SRWG webpage at: <https://www.honolulu.gov/opala/source-reduction-working-group.html>.

Ms. Hayley Cook
May 31, 2023
Page 2

We look forward to your participation in progressing source reduction on Oahu. If you have any questions, please contact Julie Ann Leano, Planner, at jleano@honolulu.gov or at (808) 768-3424.

Sincerely,



Roger Babcock, Jr., Ph.D., P.E.
Director

Refuse – Planning & Engineering

Appendix B

Member Information



SRWG Member Organization Websites

The following is a list of websites associated with the SRWG members. Following this are additional supplementary materials provided by some members (in alphabetical order).

<https://www.ksbe.edu/>

<https://www.zerowasteoahu.org/>

<https://islanddemo.com/>

<https://www.resilientoahu.org/>

<https://health.hawaii.gov/shwb/shwb-mission-statement/>

<https://www.biahawaii.org/>

<https://www.honolulu.gov/env>

<https://www.reusehawaii.org/>

<https://www.rmhawaii.org/>

<https://hawaiiifood.com/>



BIA Hawaii is a proud supporter and advocate of housing at all price points, and our members work to build the living spaces that kama'aina call home. Together, we educate, advocate, and grow.

Mission Statement

The Building Industry Association of Hawaii (BIA Hawaii) is THE VOICE of the Construction Industry. The BIA promotes our members through advocacy and education, and provides community outreach programs to enhance the quality of life for the people of Hawaii.

Corporate Values

BIA Hawaii operates with the highest standards of integrity, stewardship, accountability, and innovation in all relationships with members, industry and community. BIA fosters a climate which encourages empowerment and diligence amongst members and staff.

Membership, Programs & Recognition

BIA Hawaii was established in 1955. Our membership is compiled of over 320 developers, general contractors, specialty contractors, suppliers, REALTORS®, architects, designers, financial institutions and a host of other professionals who service the residential and commercial building industries across the State of Hawaii. The association is known for its strong advocacy efforts by our industry experts both locally and among home building associations across the nation, and we encourage a collaborative working relationship with elected officials, agencies and affiliates, and other associations in the industry. Together with our members, this unique mix of experts enables networking across industry sectors and provides the bridging of diverse interests into common goals, allowing the BIA to address challenges facing the industry from a holistic perspective.

BIA Hawaii is recognized statewide through our signature annual events, the BIG Home Building & Remodeling Show and the Summer Home Building & Remodeling Show, our Building Industry Design & Construction Awards competition. BIA Hawaii is awarded federal grants on an annual basis to support our Construction Training Center of the Pacific complete with a hands-on training workshop, and is recognized nationally for our education offerings that upskill, grow and sustain the workforce of the home building and construction industries in Hawaii.

Visit Facebook, Twitter and Instagram to stay informed of government relations activities, industry news, awards, and more:

<https://www.facebook.com/BIAHawaii/>

<https://twitter.com/biahawaii>

https://www.instagram.com/bia_hawaii/

Visit www.biahawaii.org for a membership directory, a calendar of events, and our class schedule.

CITY AND COUNTY OF HONOLULU

Solid Waste Management

By the Numbers

CURRENT METRICS ON O'AHU

Population 1,017,000



Municipal Solid Waste

1,215,000 tons/year



Construction and Demolition Debris

477,000 tons/year

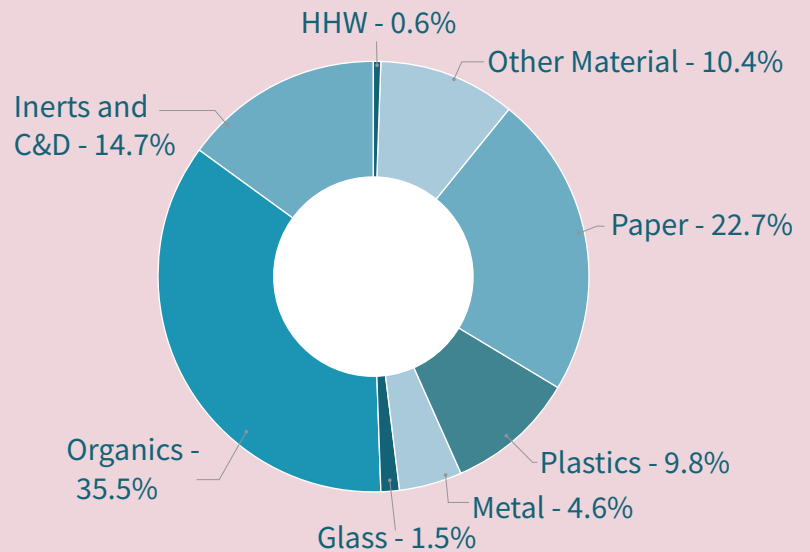


Recycling

438,000 tons/year



MUNICIPAL SOLID WASTE COMPOSITION (2017)



ENV COLLECTED SOLID WASTE

392,000 tons/year



Refuse to H-POWER

Green waste diverted for composting

Recyclables to materials recovery facility

H-POWER WASTE-TO-ENERGY FACILITY



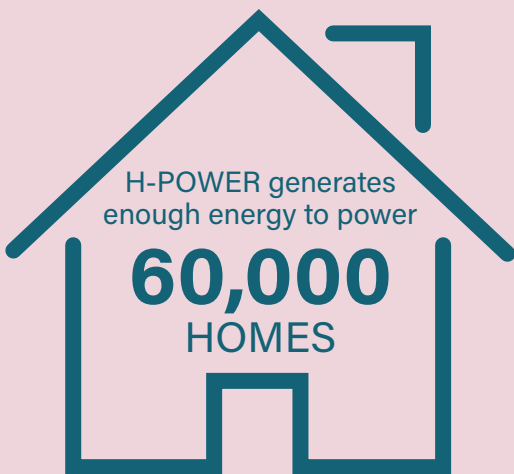
Converts
700,000 tons/year
of waste into
renewable energy



Reduces waste by
90% volume
into ash and residue



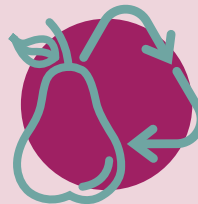
Waimānalo Gulch Sanitary
Landfill receives ash and
residue from H-POWER, inert
materials, and special wastes.
The landfill is the required backup
for H-POWER.



THE CITY'S SOURCE REDUCTION AND REUSE PROGRAMS



Mandatory Glass Recycling



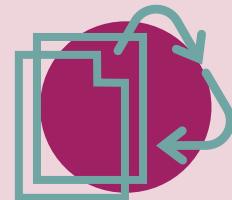
Mandatory Food
Waste Recycling



Plastic Bag Ban



Disposable Food
Ware Ordinance



Mandatory Office
Paper Recycling

SOLID WASTE IS MANAGED BY ENV AT

7

Convenience Centers

1

Waste-to-Energy Facility

3

Transfer Stations

1

Landfill

GREEN WASTE COMPOSTING



City-Diverted
75,000 tons/year
producing
50%
of O'ahu's commercial
compost feedstock



HNL.ENV1



HNL.ENV



HNL_ENV





ABOUT THE OFFICE

In 2016, O'ahu voters overwhelmingly supported amending the City Charter to create the Office of Climate Change, Sustainability and Resiliency ("Resilience Office"), ensuring that our local government tackles the serious issues of climate disruption, increasing the sustainability of City operations, and working with communities to create a more resilient island home.

As mandated by City Charter and Ordinance 20-47, the Resilience Office's responsibilities include: tracking climate change science and impacts; coordinating actions and policies to increase community preparedness; developing resilient infrastructure in response to the impacts from climate change; integrating sustainability and environmental values into City plans, programs, and policies; and promoting resilience of communities and coastal areas.

The Resilience Office also administratively supports the City's Climate Change Commission, and produces the City's Annual Sustainability Report that tracks City-wide progress on key sustainability, climate change, and resilience objectives.

KEY PROGRAM AREAS

By collaborating with community and City agencies, the Resilience Office works to coordinate actions and policies in relation to the following areas:



Energy



Policy
& Research



Hazard
Mitigation



Food Security
& Sustainability



Climate
Equity



Coastal
& Water

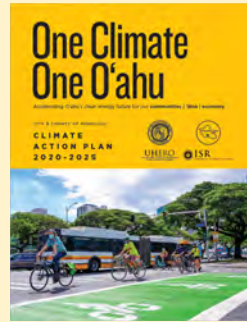
KEY CITY CLIMATE GOALS

- 1 100% renewable energy & net-negative carbon emissions no later than 2045
- 2 Increase on-site & City-owned renewable energy 200% by 2025
- 3 100% renewable City fleet by 2035
- 4 35% urban tree canopy by 2035 & 100,000 trees planted by 2025
- 5 2x the amount of wastewater reused by 2030
- 6 25% per capita waste reduction & 95% landfill diversion by 2030

GUIDING DOCUMENTS AND STRATEGIC PLANS



Adopted by Council Resolution 19-233, the community-driven **O'ahu Resilience Strategy** serves as a guiding policy pathway to implement community priorities related to affordability and climate change.



Adopted by Council Resolution 21-105, the 2020-2025 **Climate Action Plan** is a science-based, community-driven strategy for O'ahu to combat climate change and eliminate fossil fuel emissions.



The City's climate adaptation strategy, **Climate Ready O'ahu**, is anticipated to be released summer 2023 and will include specific climate change adaptation measures for equitably meeting the needs of our communities to adapt to a changing climate.



The **Long-Term Disaster Recovery Plan** is anticipated to be completed in late 2023, and will address opportunities to increase the City's resilience to the impacts of hazards in the immediate-, mid-, and long-term.

COMMUNITY RESOURCES FOR AFFORDABILITY, CLIMATE ACTION & PREPAREDNESS

- Federal Inflation Reduction Act clean energy and cost saving opportunities (like tax credits, rebate programs and grants) for residents, farmers, businesses, building owners and community organizations: resilientoahu.org/ira.
- Tips, incentives, and rebates to help community members Conserve808 by saving energy, water, and money: resilientoahu.org/consERVE808.
- Information on flooding risks and ways to protect your property to be more resilient when the rains come: resilientoahu.org/getfloodready.

STAY CONNECTED

Stay informed, learn more about the City's climate programs, and find out what you can do to build a more resilient O'ahu by following @ResilientOahu on social media, subscribing to email updates at resilientoahu.org/subscribe, and visiting resilientoahu.org.





The Retail Merchants of Hawaii

For nearly 120 years, Retail Merchants of Hawaii has served as the voice of Hawaii's retail industry. We are a vibrant and creative collective of the best in retail that advocates, educates and celebrates our statewide retail industry.

OUR MISSION is to promote the welfare; provide resources; advance the interest;, and serve as an advocate for the retail industry in business, government, and the community.

OUR STORY begins on April 23, 1901 when the Treasurer of the Territory of Hawaii granted a charter to the Merchants Association of Honolulu. It was the first organized group to represent the retail trade. Back then there were only a handful of merchants, and the common issues were creating a stable monetary system, improving shipping facilities and sanitation and laying of telegraphic cable for a faster communication system.

In 1914, it was apparent that a united business front could achieve greater success. As a result, the Merchants Association of Hawaii merged with another association to form a Retail Board. This board operated independently with its own elected officers, structure, and By-Laws.

In 1994 the Retail Merchants of Hawaii became an independent 501(c)(6) Non-Profit Trade organization whose focus continues to be on addressing the concerns, welfare and needs of the retail industry in government, business and the community.

TODAY, 27% of jobs in Hawaii are supported by the retail industry. We continue to be a statewide organization whose membership includes small mom & pop stores, large box stores, resellers, luxury retail, department stores, shopping malls, local, national, and international retailers, chains, online sellers, and everyone in between. Our goals are to (1) Advocate for the retail industry in government and the community; (2) Provide educational opportunities, resources, and timely information; (3) Promote the welfare of the retail industry and our communities and (4) Foster networking and partnership opportunities.



Re-use Hawai'i



Visit Us

200 Keawe St, Honolulu



Contact Us

reusehawaii.org
info@reusehawaii.org
(808)539-8910

We're an environmental nonprofit on a mission to (re)cultivate the circular economy & mālama 'āina.

Our programs are sustainable alternatives to wasteful practices where we convert tons of 'ōpala into valuable community resources.





Deconstruction

A sustainable alternative to demolition where we hand-disassemble buildings to recover materials for reuse.



Redistribution

Our Redistribution Centers offer reclaimed building materials, furniture, surplus paint, and more!



Local Tree Reclamation

We turn locally-felled trees into milled slabs for purchase. We currently have Monkeypod.



Workforce Development

We offer sustainable job training & mentorship. Participants learn customer service, woodworking, deconstruction, nonprofit management & more.

Join Us



Appendix C

Charter Document



Charter Document

Source Reduction Working Group

City and County of Honolulu
Department of Environmental Services

This document describes the purpose and procedures of the City and County of Honolulu (City) Department of Environmental Services (ENV) Source Reduction Working Group (SRWG), as recommended by the 2019 Integrated Solid Waste Management Plan Update, to improve O'ahu's solid waste management system through source reduction initiatives and efforts. The Charter will help us meet the goals of the SRWG and engage in productive discussions.

I. Vision

The SRWG aims to improve O'ahu's solid waste management system through the development and promotion of source reduction initiatives and efforts.

II. Mission

A successful source reduction program requires ongoing research (to stay aware of the latest, best topics and approaches and the changing materials and markets) and collaboration with stakeholders throughout O'ahu, including state and federal governments, industry, education institutions, non-government organizations, and communities. Many source reduction initiatives require support from stakeholders outside of the City to achieve implementation. As follows, the SRWG brings together a dedicated group of key stakeholders to ramp up efforts and continue discussions to identify, promote, and develop source reduction initiatives for O'ahu.

III. Goals

The SRWG brings together ten members of O'ahu's representative stakeholder groups with expertise in government, environment, sustainability, education, cultural, and industry fields to:

1. Identify potential best approaches to source reduction initiatives;
2. Provide recommendations for programs and policies to reduce waste generation;
3. Develop quantifiable targets for source reduction and identify metrics and milestones to track progress;
4. Facilitate coalitions between ENV, industry, educational institutions, non-governmental organizations, and communities to discuss and achieve source reduction; and
5. By the close of the SRWG, lay the foundations for the potential formation of a new, self-sustaining, long-term stakeholder coalition that discusses source reduction needs over time. A successful source reduction program for O'ahu will require ongoing discussions

and coordination that extends beyond the one-year appointed term for the SRWG. As such, at the close of the SRWG, members are encouraged to strive towards this goal by maintain contact and forming their own permanent, self-sustaining, stakeholder-led group.

IV. Meeting Information and Expectations

Four two-hour meetings are planned for the SRWG and will be held bi-monthly during the 2023 calendar year. All meetings shall be conducted pursuant to Chapter 92, Part I, Hawaii Revised Statutes, also known as the “Sunshine Law.”

See the Source Reduction Working Group Rules document for official rules.

- **Knowledge.** Members bring forth their diverse expertise, knowledge, and experience in their respective areas.
- **Preparedness.** Members arrive prepared for meetings, willing to share their knowledge and engage in open discussion.
- **Collaboration.** Members work collaboratively with others, respect ideas, stay on topic, and exercise patience. Members will not monopolize discussions.
- **Curiosity.** Members listen actively to others and strive to understand new and different perspectives, even when in disagreement. Members regularly examine their own ideas and positions.
- **Consideration.** Members must consider the limitations of the City and the other members/entities and will strive to identify solutions that are fair, feasible, realistic, and constructive.
- **Inclusivity.** Members remain mindful that the SRWG is comprised of individuals from multiple different backgrounds and areas of expertise. Members respect different perspectives and recognize the advantages of collaborating with stakeholders from multiple areas.
- **Responsibility.** Members are willing to assume responsibilities, including but not limited to, researching source reduction issues and approaches, presenting materials during meetings, and contributing resources and capabilities of their represented group(s) to promote source reduction on O’ahu.
- **Attendance.** Every effort will be made by the City to schedule meetings in advance, at times available for all SRWG members, it is also expected that SRWG members prioritize SRWG meeting times and attend as many meetings as possible.
- **Permitted Interaction Groups (PIGs).** Members of the SRWG may form Permitted Interaction Groups, in accordance with Chapter 92, Part I, Section 2.5 b , Hawaii Revised Statutes.

V. Inquiries

Inquiries about the project and the process may be directed to: Julie Leano at jleano@honolulu.gov by email and (808) 768-3424 by phone. For email inquiries, please include Josh Nagashima by Cc at josh.nagashima@honolulu.gov.

Appendix D

Rules



Source Reduction Working Group Rules

Source Reduction Working Group
City and County of Honolulu
Department of Environmental Services

April 5, 2023

- 1. Authority and Membership.** The Source Reduction Working Group (“SRWG”) was established in accordance with Section 4-103 of the Revised Charter of the City and County of Honolulu 1973 (2017 Edition). The SRWG consists of ten members appointed by Mayor Rick Blangiardi. If a member’s service concludes before the Committee’s work is complete, the Committee’s membership shall be reduced accordingly, unless and until the Mayor appoints a replacement.
- 2. Purpose and Objectives.** As an advisory committee of the City and County of Honolulu, Department of Environmental Services (“Department”), the function of the SRWG shall be limited to counsel and advice. The primary purpose of the SRWG meetings will be for the SRWG members to collaborate, engage in discussions, and recommend programs and policies to reduce waste generation in O’ahu. See SRWG’s Charter Document for additional information regarding SRWG’s Vision, Mission, and Goals.
- 3. Quorum and Voting.** Except as otherwise provided by law or these rules, a majority of the entire membership shall constitute a quorum of the SRWG, and an affirmative vote of a majority of the entire membership shall be necessary to take any action.
- 4. Meetings.** All meetings shall be conducted pursuant to Chapter 92, Part I, Hawaii Revised Statutes (also known as the “Sunshine Law”). Meetings shall be led by an independent, neutral, third-party facilitator provided by the Department, who shall facilitate meetings in a manner that provides all SRWG members an opportunity to engage in all discussions, deliberations, decisions and actions of the SRWG, and provides public participants with the opportunity to provide comments in accordance with the Sunshine Law and Rules. A final report summarizing the four meeting discussions and recommendations will be produced. The facilitator will not advocate for any issues, any interest groups, or any members of the SRWG.

The presence of a quorum of the SRWG is required for a meeting. For calendar year 2023, the Department plans a total of four two-hour meetings.
- 5. Agenda.** The agenda for each of the planned SRWG meetings shall be set by the Director or Deputy Director. Additional items may be added at the discretion of the Director or Deputy Director of the Department of Environmental Services until the time the agenda is posted. After the agenda is posted, additional items may only be added in accordance with the Sunshine Law.
- 6. Public Testimony.** Pursuant to Sunshine Law, any interested person shall be afforded the opportunity to submit data, views, or arguments, in writing on any agenda item. Interested

persons may also present oral testimony on any agenda item Oral testimony shall be limited to two minutes. No person may read another person's testimony or statement.

7. Correspondence. All correspondence addressed to the SRWG shall be sent by mail or email to:

Mailing address: Source Reduction Working Group
 c/o Department of Environmental Services
 1000 Uluohia Street, Suite 201
 Kapolei, Hawaii 96707

Email address: jleano@honolulu.gov and josh.nagashima@honolulu.gov

The Department shall promptly distribute correspondence to the SRWG members. Any correspondence received by a SRWG member pertaining to the business of the SRWG shall be provided to the Department by emailing the correspondence to jleano@honolulu.gov and josh.nagashima@honolulu.gov for distribution to all SRWG members or by calling the Department at (808) 768-3424 to make alternative arrangements for delivery.

8. Action by SRWG. Except as otherwise provided in these rules, the SRWG shall act by motion. Any member may make a motion. No motion may be received and considered by the SRWG until the same has been seconded.

9. Minutes. The minutes of all meetings of the SRWG shall be in summary form setting forth the major decisions and actions. Drafts of minutes shall be distributed upon completion by Department staff.

10. Conflicts of Interest. Members of the SRWG who have interest in matters before the SRWG shall disclose the nature of the interest, which disclosure shall be part of the SRWG's records. Members of the SRWG making such disclosures may, at their discretion, choose either to vote or abstain from voting on the matters in which they have declared an interest. In this and similar matters, the SRWG shall follow criteria for conflicts of interest established by the Ethics Commission pursuant to Article XI of the Charter and Chapter 3, Article 8 of the Revised Ordinances of Honolulu.

11. Amendment of Rules. These rules may be amended by a majority vote of the SRWG.

12. Effective Date. These rules shall be effective upon the date of adoption by the SRWG.

Date of Adoption: _____

Appendix E

Meeting Materials

Meeting 1

- Agenda
- Presentation Slides
- Final Notes

Meeting 2

- Agenda
- Survey
- Survey Results
- Presentation Slides
- Final Notes

Meeting 3

- Agenda
- Presentation Slides
- Final Notes

Meeting 4

- Agenda
- Presentation Slides
- Draft Notes

Meeting 5

To be added with final



Meeting 1



DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: <http://envhonolulu.org>

RICK BLANGIARDI
MAYOR



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR

MICHAEL O'KEEFE
DEPUTY DIRECTOR

IN REPLY REFER TO:
RE 23-024

April 12, 2023

NOTICE

**CITY AND COUNTY OF HONOLULU
SOURCE REDUCTION WORKING GROUP**

MEETING NO. 1

**WEDNESDAY, APRIL 19, 2023
KAPOLEI HALE – CONFERENCE ROOM “A” (Ground Floor)
1000 Ulu‘ōhi‘a Street, Kapolei, Hawai‘i 96707
1:00 PM – 3:00 PM**

PUBLIC PARTICIPATION AND COMMENTS

Persons wishing to testify are requested to register as follows:

- a. By sending an email to jleano@honolulu.gov with your name and the agenda item(s) on which you wish to testify by 8:00 AM on the day of the meeting; or
- b. By filling out the registration form in person at the meeting.

Persons who have not registered to testify will be given an opportunity to speak on an item following oral testimonies of the registered speakers. Oral testimony will be taken when each agenda item is taken up.

Each speaker is limited to a two-minute presentation and may not have anyone else read their statement.

WRITTEN COMMENTS

Written comments may be submitted by fax to (808) 768-3434, emailed to jleano@honolulu.gov, or mailed to Refuse Division, Attention: Planning & Engineering Branch, 1000 Uluohia Street, Suite 201, Kapolei, HI 96707. To ensure distribution at the meeting, written comments must be received by 8:00 AM on the day of the meeting. If submitted, written comments, including the commenter's address, email address, and phone number, may be posted on the Project's webpage at <https://www.honolulu.gov/opala/source-reduction-working-group.html>.

Should you have any questions, please call (808) 768-3424 or send an email to jleano@honolulu.gov.

MATERIALS AVAILABLE FOR INSPECTION

Meeting materials (“board packet” under HRS Section 92-7.5), when made available to the Source Reduction Working Group members, are accessible at <https://www.honolulu.gov/opala/source-reduction-working-group.html>.

If you need an auxiliary aid/service or other accommodation due to a disability, contact Julie Ann Leano at (808) 768-3424 or jleano@honolulu.gov as soon as possible, preferably by April 13, 2023. Requests made as early as possible have a greater likelihood of being fulfilled.

Upon request, this notice is available in alternate/accessible formats.

AGENDA

I. CALL TO ORDER

II. INTRODUCTION AND WELCOME

Introduction of Source Reduction Working Group members

III. SUNSHINE LAW PRESENTATION – Information

Department of the Corporation Counsel – Chapter 92, Hawaii Revised Statutes (HRS), Public Agency Meetings and Records (Sunshine Law)

IV. CHARTER DOCUMENT AND RULES – Information/Action

1. Adoption of Source Reduction Working Group Charter Document
2. Adoption of Source Reduction Working Group Rules

V. WORKING GROUP DISCUSSION TOPIC NO. 1: CONSTRUCTION AND DEMOLITION WASTE – Information

City and County of Honolulu's consultant Jacobs Engineering Group Inc. will provide information about construction and demolition waste, including applicable laws and legislation, and facilitate discussion about reducing construction and demolition waste.

VI. FUTURE WORKING GROUP DISCUSSION TOPICS – Information/Action

Discussion and identification of source reduction discussion topics for future meetings.

VII. PERMITTED INTERACTION GROUPS – Information/Action

Formation of Permitted Interaction Group (PIG) under HRS § 92-2.5(b) to investigate best practices that reduce waste generation of various materials

VIII. SCHEDULING/ANNOUNCEMENTS FOR NEXT MEETING – Information

1. Future meeting preferences
2. Next steps
3. Next meeting date

IX. ADJOURNMENT

City and County of Honolulu
Source Reduction Working Group
Meeting #1

April 19, 2023



Welcome!

Source Reduction Working Group Purpose

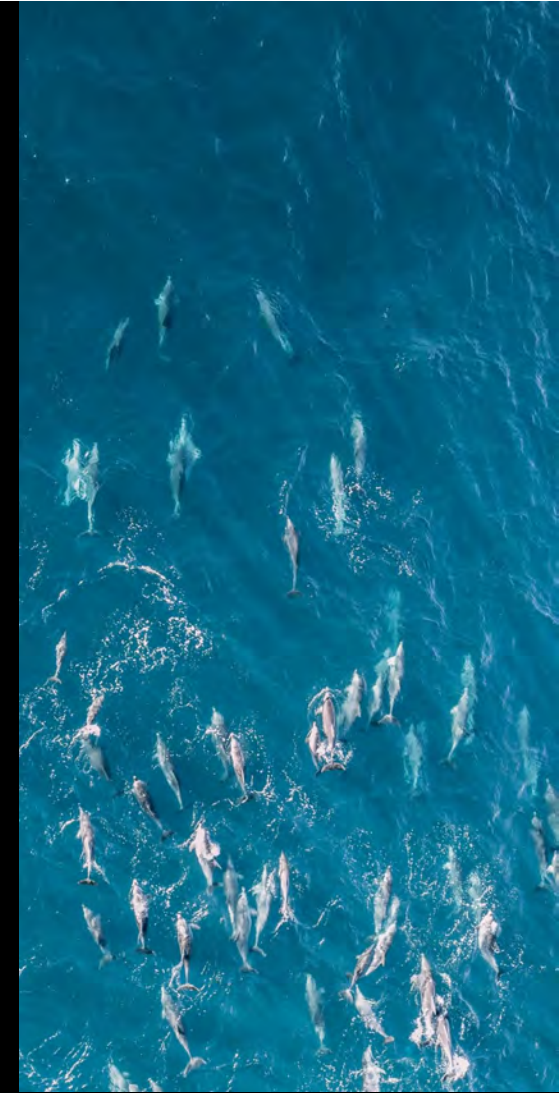
Collaborate, engage in discussions, and recommend programs and policies to reduce waste generation in O'ahu



Agenda

SRWG Meeting #1

- I. CALL TO ORDER
- II. INTRODUCTION AND WELCOME
- III. SUNSHINE LAW PRESENTATION
- IV. CHARTER DOCUMENT AND RULES
- V. WORKING GROUP DISCUSSION TOPIC NO. 1:
CONSTRUCTION AND DEMOLITION WASTE
- VI. FUTURE WORKING GROUP DISCUSSION TOPICS
- VII. PERMITTED INTERACTION GROUPS
- VIII. SCHEDULING/ANNOUNCEMENTS FOR NEXT MEETING
- IX. ADJOURNMENT



Introductions

Government – City and County of Honolulu

- Mike O’Keefe, Department of Environmental Services
- Nicola Hedge Office of Climate Change, Sustainability and Resiliency

Government – State of Hawaii

- Lene Ichinotsubo, Department of Health, Solid and Hazardous Waste Branch

Environmental and Sustainability Representative

- Nicole Chatterson, Zero Waste Oahu
- Quinn Vittum, Reuse Hawaii

Educational/Cultural Representative

- Amy Brinker, Kamehameha Schools, Sustainability

Industry Representatives

- Jessica Leorna, Building Industry Association (BIA) of Hawaii
- Allen Evans, Island Demo/Refrigerant Recycling
- Lauren Zirbel, Hawaii Food Industry Association
- Tina Yamaki, Retail Merchants of Hawaii



Source Reduction Working Group Web Page

- The web page for this working group is at: <https://www.honolulu.gov/opala/source-reduction-working-group.html>

The screenshot shows the SRWG Meetings page on the City and County of Honolulu website. At the top, there is a navigation bar with a search box, a language selector, and a menu with links for HOME, EDUCATION, RESOURCES (highlighted), and CONTACT US. The main content area is titled "SRWG Meetings" and includes the following text:

The SRWG is planned to have four in-person meetings throughout the 2023 calendar year. Details and documents associated with the meetings are published below.

SRWG Meeting 1 - April 19, 2023

The first SRWG meeting will occur on April 19, 2023 from 1:00 P.M. to 3:00 P.M. This meeting will be held at Kapolei Hale, Conference Room "A".

Meeting Documents

- [SRWG Meeting 1 Agenda](#)
- [Charter Document Source Reduction Working Group](#)
- [Source Reduction Working Group Rules](#)
- [Integrated Solid Waste Management Plan for the City and County of Honolulu](#)

Organization Summaries and Websites

- Summary - [Department of Environmental Services](#)
- Summary - [Office of Climate Change, Sustainability and Resiliency](#)
- Website - Office of Climate Change, Sustainability and Resiliency - [Resilientoahu.org](https://resilientoahu.org)
- Summary - [BIA Hawaii](#)
- Summary - [Re-use Hawai'i](#)
- Summary - [Retail Merchants of Hawaii](#)
- Website - [Department of Health Solid and Hazardous Waste Branch](#)

Last Updated: 12 April 2023

The footer contains three icons and their corresponding text: a smartphone icon for "LIST OF DEPARTMENT CONTACTS Directory of Services", a speech bubble icon for "CITY JOBS, STATE ID, DRIVER LICENSE... Frequently Asked Questions", and a social media icon for "SOCIAL MEDIA ACCOUNTS Follow Us".

Sunshine Law Presentation - Information

- See Presentation

Charter Document and Rules – Information/Action

Public Testimony – Charter Document and Rules

- If you have registered to testify (an email was sent to jleano@honolulu.gov with your name and the agenda items(s) on which you wish to speak by 8:00 AM on the day of the meeting on this agenda item or if you filled out the registration form in person at the meeting, your name will be called in the order that it was received.
- If you have not registered, you will be given an opportunity to speak on an item following oral testimonies of the registered speakers.
- Each speaker is limited to a two-minute presentation and may not have anyone else read their statement.



Charter Documents and Rules

■ Review documents

Charter Document
Source Reduction Working Group
City and County of Honolulu
Department of Environmental Services

This document describes the purpose and procedures of the City and County of Honolulu (City) Department of Environmental Services (ENV) Source Reduction Working Group (SRWG), as recommended by the 2019 Integrated Solid Waste Management Plan Update, to improve O'ahu's solid waste management system through source reduction initiatives and efforts. The Charter will help us meet the goals of the SRWG and engage in productive discussions.

I. Vision

The SRWG aims to improve O'ahu's solid waste management system through the development and promotion of source reduction initiatives and efforts.

II. Mission

A successful source reduction program requires ongoing research (to stay aware of the latest, best topics and approaches and the changing materials and markets) and collaboration with stakeholders throughout O'ahu, including state and federal governments, industry, education institutions, non-government organizations, and communities. Many source reduction initiatives require support from stakeholders outside of the City to achieve implementation. As follows, the SRWG brings together a dedicated group of key stakeholders to ramp up efforts and continue discussions to identify, promote, and develop source reduction initiatives for O'ahu.

III. Goals

The SRWG brings together ten members of O'ahu's representative stakeholder groups with expertise in government, environment, sustainability, education, cultural, and industry fields to:

1. Identify potential best approaches to source reduction initiatives;
2. Provide recommendations for programs and policies to reduce waste generation;
3. Develop quantifiable targets for source reduction and identify metrics and milestones to track progress;
4. Facilitate coalitions between ENV, industry, educational institutions, non-governmental organizations, and communities to discuss and achieve source reduction; and
5. By the close of the SRWG, lay the foundations for the potential formation of a new, self-sustaining, long-term stakeholder coalition that discusses source reduction needs over time. A successful source reduction program for O'ahu will require ongoing discussions

Source Reduction Working Group Rules
Source Reduction Working Group
City and County of Honolulu
Department of Environmental Services
April 5, 2023

1. **Authority and Membership.** The Source Reduction Working Group ("SRWG") was established in accordance with Section 4-103 of the Revised Charter of the City and County of Honolulu 1973 (2017 Edition). The SRWG consists of ten members appointed by Mayor Rick Blangiardi. If a member's service concludes before the Committee's work is complete, the Committee's membership shall be reduced accordingly, unless and until the Mayor appoints a replacement.
2. **Purpose and Objectives.** As an advisory committee of the City and County of Honolulu, Department of Environmental Services ("Department"), the function of the SRWG shall be limited to counsel and advice. The primary purpose of the SRWG meetings will be for the SRWG members to collaborate, engage in discussions, and recommend programs and policies to reduce waste generation in O'ahu. See SRWG's Charter Document for additional information regarding SRWG's Vision, Mission, and Goals.
3. **Quorum and Voting.** Except as otherwise provided by law or these rules, a majority of the entire membership shall constitute a quorum of the SRWG, and an affirmative vote of a majority of the entire membership shall be necessary to take any action.
4. **Meetings.** All meetings shall be conducted pursuant to Chapter 92, Part I, Hawaii Revised Statutes (also known as the "Sunshine Law"). Meetings shall be led by an independent, neutral, third-party facilitator provided by the Department, who shall facilitate meetings in a manner that provides all SRWG members an opportunity to engage in all discussions, deliberations, decisions and actions of the SRWG, and provides public participants with the opportunity to provide comments in accordance with the Sunshine Law and Rules. A final report summarizing the four meeting discussions and recommendations will be produced. The facilitator will not advocate for any issues, any interest groups, or any members of the SRWG.

The presence of a quorum of the SRWG is required for a meeting. For calendar year 2023, the Department plans a total of four two-hour meetings.
5. **Agenda.** The agenda for each of the planned SRWG meetings shall be set by the Director or Deputy Director. Additional items may be added at the discretion of the Director or Deputy Director of the Department of Environmental Services until the time the agenda is posted. After the agenda is posted, additional items may only be added in accordance with the Sunshine Law.
6. **Public Testimony.** Pursuant to Sunshine Law, any interested person shall be afforded the opportunity to submit data, views, or arguments, in writing on any agenda item. Interested

Charter Documents and Rules

1. Adoption of Source Reduction Working Group Charter Document
2. Adoption of Source Reduction Working Group

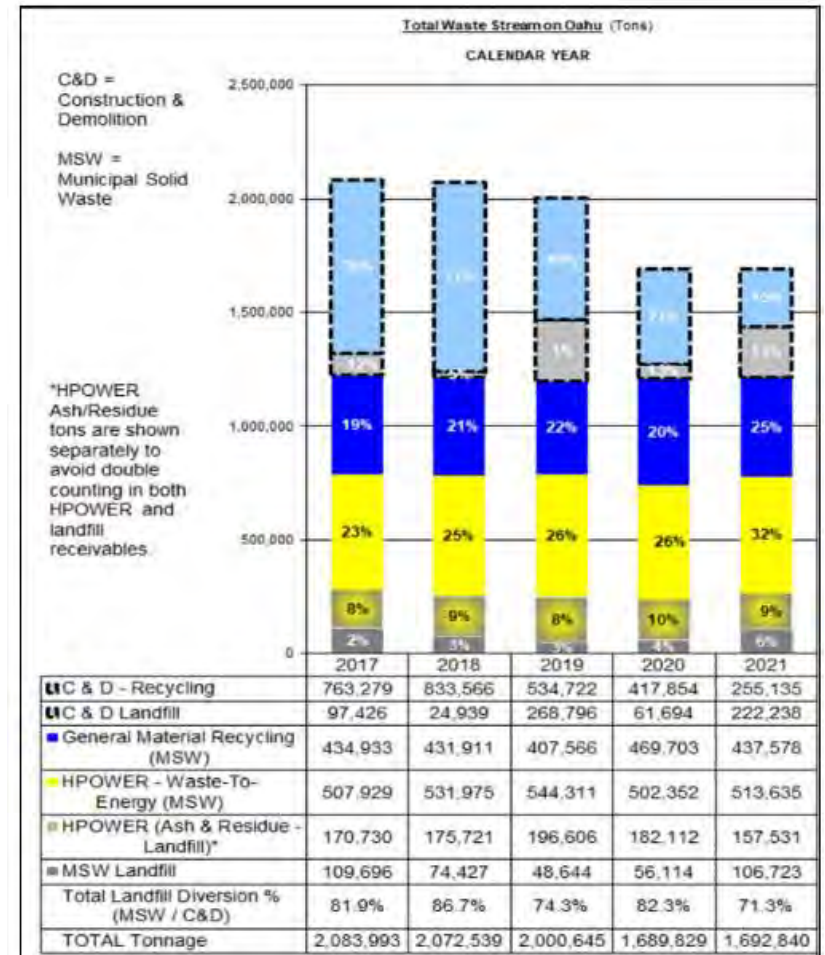
Working Group Discussion Topic No. 1: Construction and Demolition Waste - Information

Jacobs

Challenging today.
Reinventing tomorrow.

Construction & Demolition (C&D) Debris - Background

- In 2021 Construction and Demolition Debris Recycling: 255,135 tons representing 15% of the total waste.
- Construction and Demolition Debris to Landfill: 222,238 tons representing 13% of the total waste.



Construction & Demolition (C&D) Debris

- Background

- C&D debris: concrete, asphalt, wood, roofing, insulation material, tile, drywall, metal, plastic, glass and other materials associated with C&D
- The City has banned commercial haulers from taking C&D debris to the WGS� or H-Power
- Residential C&D debris (inert materials) can be taken to WGS� or Kapa‘a Transfer Station; Select residential C&D items can be picked up through the Bulky Item Appointment system
- C&D materials can be taken to PVT landfill or to one of the following reuse organizations: Island Demo, Schnitzer, West Oahu Aggregate Co., Inc. Grace Pacific, Re-Use Hawaii, Nanakuli Housing Corporation
- The West Oahu Aggregate and Island Demo facilities accept C&D debris from commercial contractors and the company’s own trucks, sort materials for recycling, and transfer the nonrecyclable portion to disposal facilities

C&D Material Reuse

Material	End Use/Reuse Markets*	
Concrete/ asphalt/rock/brick (CARB)	Rock & concrete	Aggregate
	Red brick	Landscaping
	White brick, tile & porcelain	Aggregate
Wood	Clean dimension lumber (CDL)	Mulch, landscaping
	CDL + glued wood wood	Biomass/alternative fuel
	Non-leaded painted wood	Refuse derived fuel (RDF)
Metal	Ferrous	Re-used as scrap metal
	Non-Ferrous	Re-used as scrap metal
Soil/gravel		On-site fill
Roofing (asphalt shingles)		Parking lot/pavement projects Recycled asphalt shingles can be used in the production of hot-mix asphalt, cold-patch asphalt, or new shingles, as well as for dust control on rural roads or as a road base component.
Drywall		Gypsum from wallboard has the following potential uses: <ul style="list-style-type: none"> • as a replacement for a portion of virgin gypsum in making new wallboard, • as a soil nutrient additive, • as a replacement for virgin gypsum for cement manufacturing, and • as a bulking/drying agent for sludge.



Sources: UN Sustainable Development Goals – Goal 12: Responsible Consumption and Production and <https://alohachallenge.hawaii.gov/>



Policy Considered for Encouraging Recycling & Source Reduction

- In 2017, the Honolulu City Council began developing an ordinance requiring construction companies to estimate the amount of C&D materials that may be generated by their project and to identify the specific disposal site to be used or amount reused to get a building permit.
- Evaluation of this potential program is ongoing, but the proposed bill was deferred in a May 2017 hearing with the City Council's Committee on Public Works, Infrastructure and Sustainability.
- On January 3, 2018, Resolution 18-3 was introduced, advocating that City contracts for C&D projects require that no less than 30 percent of C&D debris generated will be recycled or reused.
- This resolution was deferred in a January 2018 hearing with the City Council's Committee on Public Works, Infrastructure and Sustainability.

Overview of the C&D Debris Related Recommendations from 2019 ISWMP

Table 4-2. Recycling and Bioconversion Action Item Summary

Material Type	Action Item	Initiative Status	Implementation Dates
Bulky Items and White Goods	Continue to educate and promote existing program	Ongoing	FY19-FY28
	Solicit proposals for recycling of white goods at the planned refuse facility site adjacent to H-POWER property	Planned	FY19
	Continue pilot online appointment scheduling system for bulky item collection and consider implementation island-wide	Ongoing	FY19-FY28
	Optimize residential curbside collection program	Planned	FY19-FY20
C&D Debris	Continue to enforce the ban of commercial and business C&D debris from WGSL	Ongoing	FY19-FY28
	Continue to enforce the ban of burnable resident-generated C&D debris from WGSL (See Section 5 for more information.)	Ongoing	FY19-FY28
	Continue to evaluate a potential policy to require builders to submit a C&D debris recovery plan with building permit applications (See Section 5 for more information.)	Ongoing	FY19-FY28
	Enhance education of recycling programs island-wide	Planned	FY19-FY21



Table 9-11. Untreated Wood Market Programs and Outlook

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets
City and County	Regulations on the disposal of C&D debris and green waste	None	Mulch and soil amendment products Reuse in local building projects Gasifier feedstock
State	None	None	
Commercial	Disposal/recycling of C&D debris at the PVT Landfill Processing of green waste into mulch and soil amendment products for sale throughout Hawaii Reuse for local building projects	None	

Table 9-12. Concrete Market Programs and Outlook

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets
City and County	Regulations on the disposal of C&D debris	None	Reuse as aggregate or recycled concrete
State	Regulations on C&D debris facilities	None	
Commercial	Disposal and recycling of C&D debris at the PVT Landfill Processing of concrete for sale as aggregate or recycled concrete throughout Hawaii	None	

PVT Landfill			
Landfill End-of-life Monitoring	Keep apprised of the PVT Landfill's disposal and recycling initiatives to understand developments in C&D debris management	Ongoing	FY19-FY28

Source Reduction Initiative from 2019 ISWMP

Table A-1. Potential Source Reduction Initiatives

Source Reduction Topics	Potential Initiatives
Solid Waste Disposal	<ul style="list-style-type: none"> User fee or Pay-As-You-Throw solid waste rate structure* Source separation incentives (such as discounted rates for separating recyclables and compostables from municipal solid waste)* Every-other-week trash collection
Organics	<ul style="list-style-type: none"> Backyard or neighborhood composting and grasscycling* Food collection and distribution (collecting excess food from producers and provide to local food banks or meal programs; apps and websites) Restaurant Sustainability Certification Program (helping restaurants reduce food waste) Food recovery competitions among dining and food establishments Food Waste Outreach and Prevention (program to inform vendors how to reduce food waste, packaging, and disposables)* Food Waste Minimization Toolkit for schools
Policies and Programs	<ul style="list-style-type: none"> Universal Recycling and Composting Ordinance (requires recycling services to be provided to all residents and businesses) Construction and Demolition Recycling/Deconstruction Ordinance Food Service and Packaging Waste Reduction Ordinance (prohibiting non-recyclable and non-compostable food service ware) Commercial Organic Waste Disposal Ban* Single-use material bans (such as a plastic bag ban)* Green government procurement policies*/ Environmentally Preferable Purchasing Program Extended producer responsibility (such as material take-back programs and other product stewardship strategies)* Source reduction credit systems Zero Waste recognition programs to encourage diversion Competitive grant programs to support innovation Use of waste audits and waste tracking software to help document a baseline, waste reduction opportunities, and documenting success Policies to encourage use of durable goods rather than disposable ones* Tourist Tax to support reduction and management of waste generated by visitors to the island
Behavioral Change	<ul style="list-style-type: none"> Public education* Reduce consumer use of common single-use items (such as plastic straws) Provision of technical assistance to facilitate source reduction activities (such as proper deconstruction, building reuse, and building material reuse techniques)

2019 ISWMP Recommendation: The SRWG can also explore the effectiveness of deconstruction strategies and deconstruction versus demolition permit classifications. This may result in more effective reuse of C&D debris.



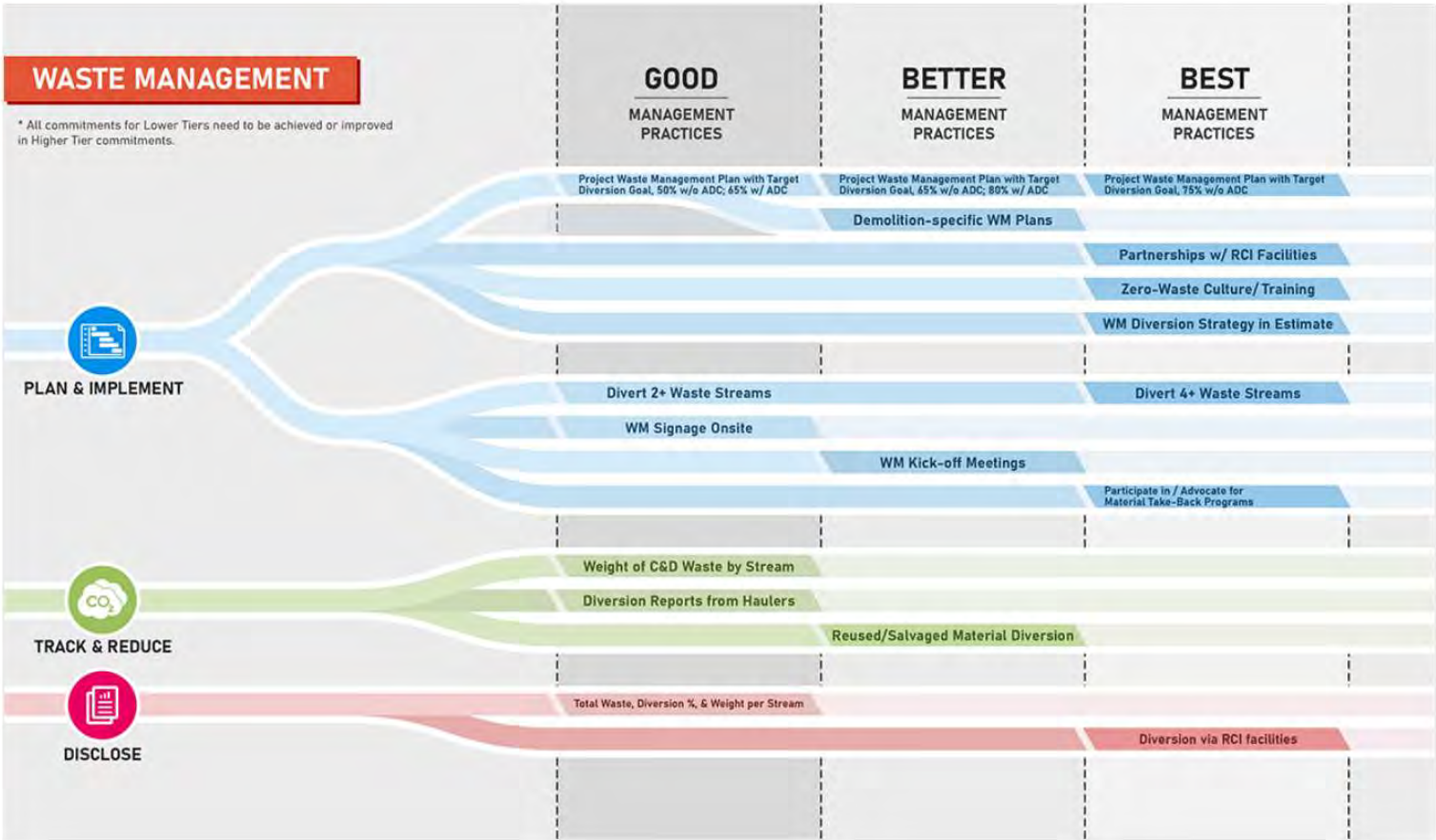
Ways to reduce the amount of C&D materials used and disposed

- Utilize reused or recycled products in building and infrastructure construction
- Utilize strategies that promote designing for adaptability, disassembly, and reuse
- Preserve existing structures instead of building new ones
- Utilize deconstruction or partial deconstruction opposed to demolition
- Get buy-in and participation from architects, designers, builders, contractors
- Salvage and reuse of materials

Promote Design Adaptability, Disassembly, and Reuse

- Incorporate source reduction, circular construction, and waste minimization goals and expectations in procurement and bid documents
- Use design and construction methods that allow and promote disassembly/deconstruction and material salvage and reuse
- Develop plans that include key information and drawings that make adaptation or disassembly feasible
- Use structures that create less waste (open-span systems, standard sizes, modular components, alternative framing, limiting interior finishes)
- Use materials that can be recovered, reused, and recycled (e.g. wood-framed building with heavy timber)

Ways to reduce the amount of C&D materials used and disposed



<https://www.buildinggreen.com/contractors-commitment>

Examples of C&D Waste Minimization Best Practices

City	C&D Program Elements	Highlights of Environmental and Social Benefits	Implementation Features
Auckland, NZ	Increase of landfill fees is driving the deconstruction market. C&D landfill fees increased from \$0 to \$20 per ton in 2021 and will increase to \$30 per ton by July 2024.	Deconstruction for government projects met Council's waste minimization objectives and building materials were reused by community-based organizations including those in the island of Tonga after a recent cyclone.	Education: Development of Building Out Waste: A guide for developers and building contractors
Palo Alto, CA	Demolition is no longer allowed. Deconstruction is required for residential and commercial projects.	Currently achieving 85% diversion rate for C&D debris The Reuse People conducts city-mandated salvage surveys and has trained hundreds of unemployed and underemployed individuals in deconstruction skills for various cities	Technology: Use of web-based platform, Green Halo, for tracking diversion rates from contractors and property owners
Vancouver, Canada	Requirement for deconstruction for homes built before 1910. Minimum reuse and recycling requirements for homes built before 1950 (75 – 90% diversion rate).	Partnership with The Rebuild Hub as resource for deconstruction and salvaging of materials . The Rebuild Hub is a deconstruction and salvage network in the Greater Vancouver area with all proceeds going towards Habitat for Humanity's affordable housing projects.	Funding: \$250,000 in funding from the City's 2018 Innovation Fund to support establishment of a Deconstruction Hub.
New York, NY	Zero Waste Design Guidelines – was developed a resource for designers, building operators, and planners, to reduce waste during construction thru the end of life.	Innovative strategies identified include: <ul style="list-style-type: none"> designing for deconstruction at the end of their useful life, designing for disassembly working with suppliers to take back materials at end of life 	Collaboration: The Zero Waste Design Guidelines was made possible with support from The Rockefeller Foundation and were developed in collaboration with more than 100 collaborators (architects, waste haulers, etc.)

Promoting Circular Constructions

Wood Reuse and Recycling in King County

- This project was established as a partnership between Seattle Public Utilities and King County Solid Waste in order to develop the circular clean wood supply chain.
- Processing salvaged lumber in order to increase its value and marketability is a viable strategy that holds merit. The results from this project would seem to indicate that the purchase of a planer to enable the processing to be done inhouse would be beneficial but the cost effectiveness is still being weighed.
- This partnership between a wood recycling company (primarily focused on producing a fuel product) and a processor of new wood salvaged from jobsites has proven to be fruitful for both entities and they are developing plans for moving forward together.



Some Additional Resources for C&D Source Reduction

Zero Waste Design & C&D Source Reduction

- <https://www.zerowastedesign.org/>
- <https://www.zerowastedesign.org/02-building-design/fa-construction-demolition-waste-best-practice-strategies/>
- https://www.zerowastescotland.org.uk/sites/default/files/Designing%20Out%20Construction%20Waste%20Guide_0.pdf
- <https://wrap.org.uk/wraps-built-environment-programme>
- https://www.epa.gov/sites/default/files/2017-06/documents/design_for_disassembly_in_the_built_environment.pdf
- <https://www.epa.gov/smm/best-practices-reducing-reusing-and-recycling-construction-and-demolition-materials#design>

Case Studies

- <https://www.makethemostofwaste.co.nz/media/1534/building-out-waste.pdf>
- <https://www.cityofpaloalto.org/files/assets/public/zero-waste/deconstruction-construction-materials-management/deconstruction-commerical-case-study-final.pdf>
- https://www.c40knowledgehub.org/s/article/How-to-start-deconstructing-and-stop-demolishing-your-citys-buildings?language=en_US
- <https://www.arup.com/services/climate-and-sustainability-services/circular-economy-services/circular-buildings-toolkit>
- <https://www.portlandoregon.gov/bps/70643?emulatemode=1>

Some Additional Resources for C&D Source Reduction

Waste Impact Calculators/Models

- This Waste Impact Calculator was built for Oregon and was based on actual waste characterization data for Oregon. <https://rstudioconnect.deq.state.or.us/content/706a4deb-f353-4d08-826d-85bf7856c154/>
- EPA's WARM model. <https://www.epa.gov/warm>
- EPA's Deconstruction Assessment Tool <https://www.epa.gov/large-scale-residential-demolition/deconstruction-rapid-assessment-tool>
- Zero Waste Design Waste Calculator <https://www.zerowastedesign.org/waste-calculator/>

Green Procurement

- <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>

Reviewing C&D Debris Source Reduction Options

- Challenges and Opportunities
 - What are challenges in addressing C&D waste?
 - What are the opportunities to address C&D waste?
- Implementers
 - Who will drive change?
 - Who will execute policy?
 - Who will physically participate in reducing C&D waste?
 - Key responsibilities and tasks?
- Target Materials
 - What are the targeted materials to reduce?
- Target Audience
 - Who is the targeted audience to reduce C&D waste?

Reviewing C&D Debris Source Reduction Options

- Benefits
 - What are the benefits to reducing C&D waste?
- Impacts
 - What are the impacts of reducing C&D waste?
- Potential sources of funding
 - What are some potential sources of funding?
 - How have other cities, states, and countries funded source reduction initiatives?
- Recommendations (and estimated costs)
 - What are some recommendations to reduce C&D waste?
 - What are the associated estimated costs of these recommendations, if applicable?
- Conceptual action plan
 - What is the goal?
 - What are the actionable steps that need to be taken to reach this goal?

Future Working Group Discussion Topics – Information/Action

Public Testimony – Future Working Group Discussion Topics

- If you have registered to testify (an email was sent to jleano@honolulu.gov with your name and the agenda items(s) on which you wish to speak by 8:00 AM on the day of the meeting on this agenda item or if you filled out the registration form in person at the meeting, your name will be called in the order that it was received.
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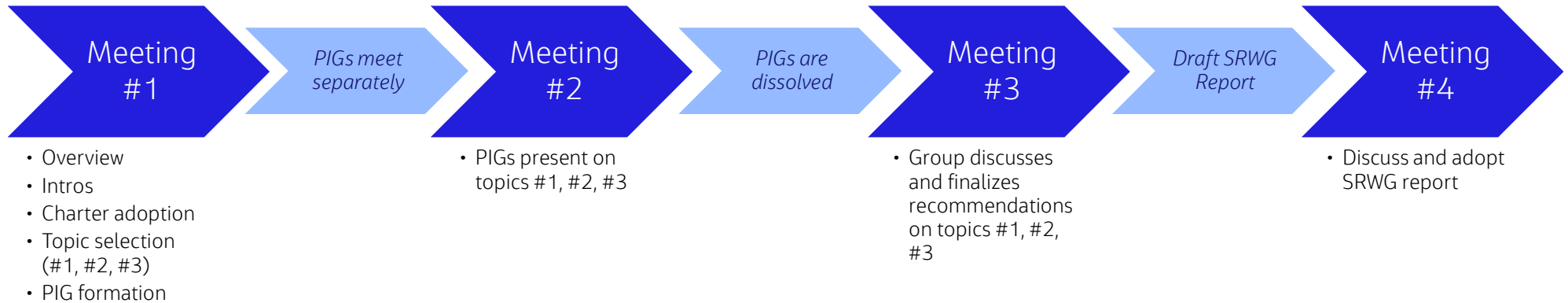


Future Working Group Discussion Topics – Information/Action

- Discussion and identification of source reduction discussion topics for future meetings.
- Goal: select 2 additional research & discussion topics



Potential Meeting Flow (TBD by Working Group Members)



Permitted Interaction Group (PIG) – Information/Action

Public Testimony – Future Working Group Discussion Topics

- If you have registered to testify (an email was sent to jleano@honolulu.gov with your name and the agenda items(s) on which you wish to speak by 8:00 AM on the day of the meeting on this agenda item or if you filled out the registration form in person at the meeting, your name will be called in the order that it was received.
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- Each speaker is limited to a two-minute presentation and may not have anyone else read their statement.



Permitted Interaction Group (PIG) –Information/Action

Formation of Permitted Interaction Group (PIG) under HRS 92-2.5(b) to investigate best practices that reduce waste generation of various materials

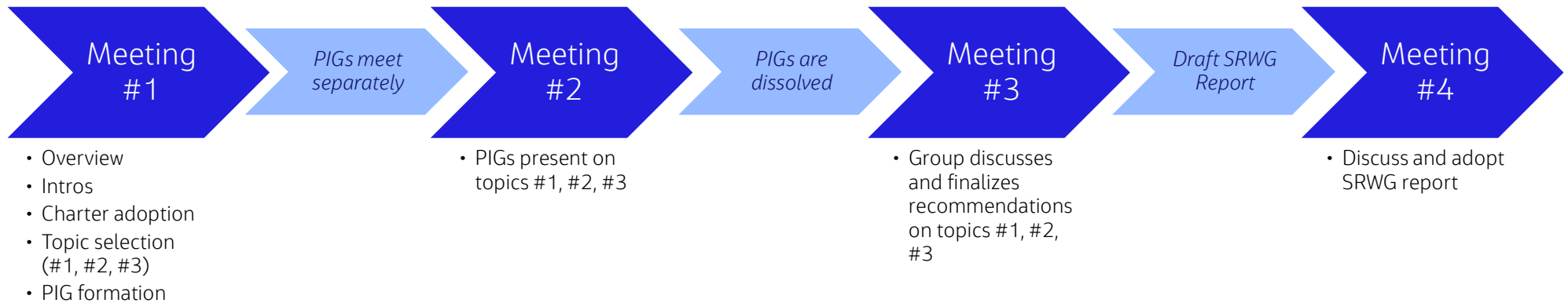
- Topic #1 – Construction and Demolition
- Topic #2 – ??
- Topic #3 - ??

Scheduling/Announcements for Next Meeting - Information

Scheduling/Announcements for Next Meeting - Information

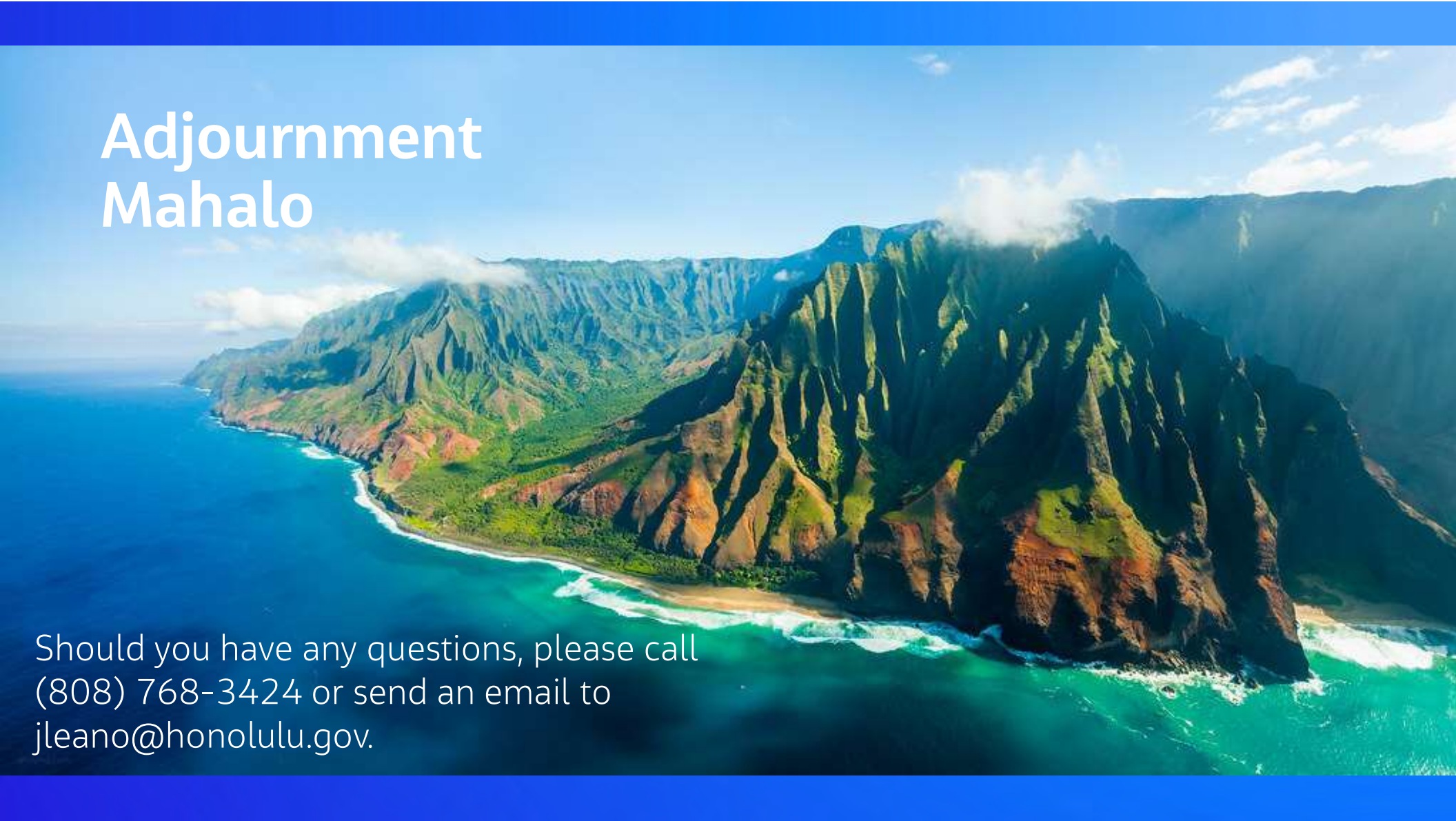
- Future meeting preferences
- Next steps
- Next meeting date

Potential Meeting Flow (TBD by Working Group Members)



Adjournment Mahalo

Should you have any questions, please call
(808) 768-3424 or send an email to
jleano@honolulu.gov.



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1132 Bishop Street
 Suite 1100
 Honolulu, Hawaii 96813
 O +1 808 943 1133
 F +1 808 954 4400
 www.jacobs.com

Subject City and County of Honolulu Source Reduction Working Group Meeting No. 1

Project Name Consultant Services for Source Reduction Working Group, City and County of Honolulu (Hawaii)

Project Number CCHSRWG1

Prepared by Jacobs

Location Kapolei Hale – Conference Room “A” (Ground Floor)

Date/Time Wednesday, April 19, 2023, 1:00pm – 3:00pm

Participants
SRWG Members:
 Mike O’Keefe – Deputy Director, Department of Environmental Services (ENV)
 Nicole Chatterson – Executive Director and Co-Founder, Zero Waste Oahu
 Quinn Vittum – Executive Director, ReUse Hawaii
 Amy Brinker – Sustainability Manager, Kamehameha Schools
 Jessica Leorna – CEO, BIA Hawaii
 Allen Evans – President, Refrigerant Recycling and Island Demolition
 Tina Yamaki – President, Merchants of Hawaii
 Lene Ichinotsubo – Solid Waste Section Supervisor, Department of Health, Solid and Hazardous Waste Branch
Jacobs (City’s Consultant and Meeting Facilitator):
 Lyndsey Lopez – Waste Planning and Strategy Lead

Notes

The meeting was recorded and is documented in one audio file. The time stamp for each agenda item is shown below. Key items and identified action items are summarized.

Agenda Item	Time Stamp	Key Items/Actions
1 Call to Order	00:00 to 04:37	Roll call of members. Nicola Hedge (Deputy Director, Office of Climate Change, Sustainability, and Resiliency) and Lauren Zirbel (Executive Director, Hawaii Food Industry Association) were not in attendance.
2 Introduction and Welcome	04:37 to 12:10	Introduced Source Reduction Working Group Members. Members stated names and what they’re excited about. Lyndsey Lopez introduced the working group web page.
3 Sunshine Law Presentation - Information	12:10 to 29:36	Kammy Chan from the Department of the Corporation Counsel provided a presentation overview on Chapter 92 Hawaii Revised Statutes Public Agency Meetings and Records (Sunshine Law). Jessica Leorna asked if the testimony will be included in the meeting minutes. Kammy answered

Agenda Item	Time Stamp	Key Items/Actions
4 Charter Document and Rules – Information/Action	29:36 to 53:39	<p>that written testimony will be provided in the board packet and oral testimony will be summarized in the minutes.</p> <p>No public testimony. Lyndsey Lopez presented the Charter Document verbatim. Josh Nagashima clarified that as a group appointed by the Mayor, the Sunshine Law applies, and members must agree on the Charter Document and Rules to guide their focus. Edits can be made by members. Nicole Chatterson asked if the group should make recommendations designed to fit within the current ISWMP10-year time frame. Josh answered that it would be ideal to report on the progress of the ISWMP, but it is not necessary to limit recommendations to set time frames.. Mike O’Keefe adds that when the 5-year mark is reached, an update on ISWMP is required. Reporting on the source reduction progress is a priority for next year.</p> <p>Lyndsey presented the SRWG Rules verbatim and asked is there are questions. Jessica Leorna felt there are additional people that might be valuable to include and asked if there’s an opportunity to petition the mayor to add a seat if majority votes to do so.</p> <p>Josh replied that would have to be researched, but he believes the group can motion to do anything, as long as it is voted on. Jessica asked if there should be testimony given prior to taking action and what the process is for a community member to provide dissent. Josh added that after the anticipated 4 meetings, a report, including written dissenting opinions, will be drafted. Lyndsey called for the group to make a motion for adoption.</p> <p>Action: Quinn Vittum moved to adopt the Source Reduction Working Group Rules. Tina Yamaki seconded the motion. All members in favor of the motion. Tina moved to adopt the Source Reduction Working Group Charter. Jessica seconded. All members in favor of the motion.</p>
5 Working Group Discussion Topic No. 1: Construction and Demolition Waste - Information	53:39 to 01:22:11	<p>Lyndsey gave presentation on C&D waste. Nicole asked where C&D waste goes. Lyndsey answered that waste goes to PVT Landfill as waste or goes to reuse facilities. Mike added that residential small-scale C&D waste goes to H-POWER. Quinn Vittum added that all wood waste is separated and goes to the landfill and that PVT Landfill is closing in 2028. Wood waste will likely not be recycled.</p> <p>A public guest Alexis Chapman from Hawaii Food Industry Association (HFIA) raised her hand. She was listening in because Lauren Zirbel from HFIA could not join. The group was in agreement to allow Alexis to be addressed. Alexis asked about the group’s operational definition of source and source reduction. Mike made the point that source reduction is further upstream than recycling.</p> <p>Allen Evans clarified what happens to C&D waste. The builder calls the demolition contractor who will reuse some materials, bury non-recyclable items, and recycle items like metal, cardboard, and plastic. Aggregate is crushed and turned into backfill. Contractors can go to the transfer station at Mapunapuna where waste loads are sorted. Lyndsey asked Allen if the industry has changed over time. Allen stated that it has become harder and that the closing of PVT Landfill is a major concern for the industry.</p> <p>Lyndsey asked Lene Ichinotsubo what other areas are doing with C&D waste, from a State perspective. Lene Ichinotsubo explained that PVT is closing due to a new law prohibiting the landfill from expanding. Quinn gave an overview about what Re-use Hawai’i does including providing deconstruction services as an alternative to conventional demolition. Jessica urged caution on recommendations that increase the cost of housing.</p>
6 Future Working Group Discussion Topics – Information/Action	01:22:11 to 02:00:16	<p>No public testimony.</p> <p>A list of potential source reduction topics was presented on easel pads in front of the group by Lyndsey. Potential topic ideas were gathered from members ahead of the meeting by the Jacobs team. Topics included the following: solar panels, product packaging, construction and demolition waste, food waste, reusable programs to decrease food waste, furniture and HomeGoods, products with PFAS, lithium batteries, household hazardous waste, mattress recycling, grant programs to support innovation, tax incentives for repair, tax incentives for source reduction, State/City funded sanitization station (refillable products),</p>

Agenda Item	Time Stamp	Key Items/Actions
		<p>State/City funded wash station for reusable restaurant to go containers, unregulated junk haulers abuse of city convenience centers and transfer stations, and expanding ordinance 19-30. The following topics were added to the list by Lyndsey during the discussion: AI tools, residential asbestos, and consumer goods.</p> <p>Members were asked how many topics they wanted to do and what topics were most interesting to them.</p> <p>Amy Brinker hesitated to choose a number due to it being arbitrary. Amy thinks C&D is an important topic to cover. Amy suggested a decision-making matrix that can be scored, with topics including urgency; public, industry, and regulators readiness; as well as total potential reduction for landfill and recycling.</p> <p>Allen suggested up to 5 topics including C&D debris, tax incentives for source reduction, and solar panels.</p> <p>Lene did not decide on a number of topics, but expressed that more time might needed to be spent on certain topics. Lene wanted to emphasize C&D debris since there was an imminent need and other larger anticipated waste streams like PV panels, lithium batteries, and household hazardous waste.</p> <p>Tina wanted to focus on C&D debris as it has a deadline and affects everyone. Tina mentioned the national trend in product packaging and PFAS. Also, Tine suggested focusing on education like recycling on e-waste.</p> <p>Nicole agreed with Amy's decision-making matrix suggestion. Nicole suggested making more general topics, like organics, C&D, and plastic, metal, and glass, and to focus PIGs on specific topics. The closure of PVT Landfill and the Waimānalo Gulch Landfill timeline was brought up as a concern. In addition, Nicole expressed to focus on source reduction as opposed to conflating recycling.</p> <p>Jessica agreed with everyone so far. Tax incentives could be made into creative financing strategies. 116 million in grants are available until 2026. Jessica suggested use of AI, technology, and other tools to help obtain data. Going back to Council to revisit the PVT Landfill situation and Waimānalo Gulch Landfill was also brought up.</p> <p>Quinn emphasized C&D, specifically through the policy level. Also, Quinn suggested to focus on toxic material, residential asbestos, and composting. Lene shared concern on the difficulties of screening PFAS in food containers.</p> <p>Mike agreed with everything said so far, and preferred to focus on C&D because it has the highest impact, which will be exacerbated by PVT Landfill closure. Mike brought up the City's new landfill siting efforts, which may have to assume the role of accepting C&D material unless there are changes. Also, Mike suggested to focus on commercial and consumer generated waste and discuss more effective ways to work on challenges and projects. Moreover, Mike brought up potentially adding more meetings and leveraging the PIGs for next meeting. Lyndsey suggested longer or virtual meetings. PIGs would need to be decided today (based on current 4 meeting approach).</p> <p>Alexis (public guest), who participated in the plastic SWRG, suggested one topic and to focus on source reduction incentives. Alexis suggested industry expert PIGs.</p> <p>Lyndsey asked if anyone is opposed to going a few minutes longer and if there's a consensus to decide topics or make a matrix. Josh suggested another meeting as opposed to forming the PIGs today. PIGs need to be specific for the group to discuss. Amy expressed the matrix style as a preference, but shared potential to start PIGS related to C&D, organics, and hazardous waste. Allen agreed with forming a C&D PIG. Lene expressed that topics need to be identified then PIGs can be formed. Tina expressed that the group may be able to agree on one PIG, and the matrix may help, but suggested C&D debris. Josh proposed selecting the first topic like C&D and formulating what the PIG will do, then selecting the second topic at the second meeting without a PIG, unless a fifth meeting is agreed upon.</p>

Agenda Item	Time Stamp	Key Items/Actions
7 Permitted Interaction Groups – Information/Action	02:00:16 to 02:06:39	<p>Nicole suggested a fifth meeting and would like to incorporate consumer goods and food waste.</p> <p>Jessica skipped.</p> <p>Quinn agreed with forming a PIG and having a fifth meeting with C&D being the focus.</p> <p>Mike agreed with adding a fifth meeting and to introduce the matrix for residential consumer goods. Mike proposed not to form a PIG today and suggested it for the next meeting.</p> <p>Amy stated that a fifth meeting was fine.</p> <p>Jessica suggested top three best practices, with the PIGs being goal oriented.</p> <p>Josh offered the suggestion that PIGs can be formed in the next meeting, discussion can be in the fourth meeting to include alterations to the drafted report.</p> <p>Lyndsey summarized that a matrix is needed prior to the next meeting and called for the group to make a motion.</p> <p>Tina motioned to have five meetings, to include or not include PIGs in the following meeting, and for using a matrix. Nicole seconded. All agreed.</p> <p>Action: Jacobs, ENV, and SRWG will create a matrix to decide what to focus on and decide topics and PIGs at next meeting.</p> <p>Action: Jacobs and ENV will plan for an additional meeting.</p>
8 Scheduling/Announcements for Next Meeting - Information	02:06:39 to 02:12:32	<p>Future meeting preferences were discussed. SRWG members expressed that Doodle Poll survey is preferred. Nicole asked if there are issues if people join via video call (e.g., Zoom) from out of state.</p> <p>Lyndsey stated that connecting via Zoom from out of state can be looked into.</p>
9 Adjournment	02:12:32 to 02:13:40	<p>Lyndsey thanked everyone for coming. Julie Leano from ENV is the main point of contact.</p>

Meeting 2



DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: <http://envhonolulu.org>

RICK BLANGIARDI
MAYOR



June 22, 2023

ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR

MICHAEL O'KEEFE
DEPUTY DIRECTOR

IN REPLY REFER TO:
RE 23-032

NOTICE

**CITY AND COUNTY OF HONOLULU
SOURCE REDUCTION WORKING GROUP**

MEETING NO. 2

**WEDNESDAY, June 28, 2023
KAPOLEI HALE – CONFERENCE ROOM “A” (Ground Floor)
1000 Ulu‘ōhi‘a Street, Kapolei, Hawai‘i 96707
1:00 PM – 3:00 PM**

PUBLIC PARTICIPATION

Members of the public may participate in-person at the above address or remotely by video conference link.

1. To join the meeting by video conference, visit: (Please mute your devices except to testify)
https://teams.microsoft.com/join/19%3ameeting_NDIzZmE2ZmYtNGIzNS00YjdkLWJIYTIItNDQ4ODkyZWMOmMUY%40thread.v2/0?context=%7b%22id%22%3a%2237247798-f42c-42fd-8a37-d49c7128d36b%22%2c%22oid%22%3a%22da63cc2a-64f9-4fbd-a010-7f686b07a181%22%7d

ORAL COMMENTS

Persons wishing to testify in-person are requested to register as follows:

1. Send an email to jleano@honolulu.gov with your name and the agenda item(s) on which you wish to testify by 8:00 AM on the day of the meeting; or
2. Fill out the registration form in person at the meeting.

Persons wishing to testify remotely are requested to register as follows:

1. Video Conference: Send an email to jleano@honolulu.gov with your name and the agenda item(s) on which you wish to testify no later than 8:00 AM on the day of the meeting.

Oral testimony will be taken in the following order:

1. In-person comments will be taken first then closed
2. Video conference comments will be taken second then closed

Oral testimony will be taken at the beginning of each agenda item. Each speaker is limited to a two-minute testimony and may not have anyone else read their statement.

Once the oral testimonies of registered speakers have been taken, persons who have not registered will be given an opportunity to speak.

WRITTEN COMMENTS

Written comments may be submitted by fax to (808) 768-3434, emailed to jleano@honolulu.gov, or mailed to Refuse Division, Attention: Planning & Engineering Branch, 1000 Uluohia Street, Suite 201, Kapolei, HI 96707. To ensure distribution at the meeting, written comments must be received by 8:00 AM on the day of the meeting. If submitted, written comments, including the commenter's address, email address, and phone number, may be posted on the Project's webpage at <https://www.honolulu.gov/opala/source-reduction-working-group.html>.

Should you have any questions, please call (808) 768-3424 or send an email to jleano@honolulu.gov.

MATERIALS AVAILABLE FOR INSPECTION

Meeting materials ("board packet" under HRS Section 92-7.5), when made available to the Source Reduction Working Group members, are accessible at <https://www.honolulu.gov/opala/source-reduction-working-group.html>.

If you need an auxiliary aid/service or other accommodation due to a disability, contact Julie Ann Leano at (808) 768-3424 or jleano@honolulu.gov as soon as possible. Requests made as early as possible have a greater likelihood of being fulfilled.

Upon request, this notice is available in alternate/accessible formats.

AGENDA

I. CALL TO ORDER

II. INTRODUCTION AND WELCOME

Roll call of Source Reduction Working Group members. Brief introduction of members for those who could not join Meeting No. 1.

III. APPROVAL OF MINUTES FROM SRWG MEETING NO. 1 – Information/Action

Members will approve the minutes and meetings summary notes from SRWG Meeting No. 1.

IV. FUTURE WORKING GROUP DISCUSSION TOPICS – Information/Action

Discussion and identification of source reduction discussion topics for future meetings.

V. PERMITTED INTERACTION GROUPS – Information/Action

Formation of Permitted Interaction Group (PIG) under HRS § 92-2.5(b) to investigate best practices that reduce waste generation of various materials. Definition of the membership and specific scope of each PIG formed.

VI. SCHEDULING/ANNOUNCEMENTS FOR NEXT MEETING – Information

1. Future meeting preferences
2. Next steps
3. Next meeting date

VII. ADJOURNMENT



Source Reduction Working Group - Topic and Permitted Action Group Selection

In Meeting #1 of the Source Reduction Working Group, no consensus was reached with regards to the agenda items associated with "Future Working Group Discussion Topics" and "Permitted Interaction Groups." Each working group member must complete this survey so that we can discuss the results and finalize these items in Meeting #2. The results of this exercise will inform what topics this working group will discuss in future meetings and what recommendations will be made as a result.

As a reminder, the focus of this working group is on advancing source reduction. The Source Reduction definition and a few examples of source reduction are shown below. These are also on the working group website: <https://www.honolulu.gov/opala/source-reduction-working-group.html>

What Is Source Reduction?

Source reduction can be defined as actions that reduce the generation of waste, waste disposal, and waste toxicity. These actions can be done at various levels spanning from the manufacturer, legislative, industrial or business, and consumer level (see below for a few examples).

Source Reduction Examples

- **Manufacturer Level:** Manufacturers can redesign product packaging to use less material.
- **Legislative Level:** Honolulu City Council passed Bill 40 for the Disposable Food Waste Ordinance (DFWO), which promotes source reduction by replacing single-use, polystyrene foam food ware with reusable products as an option. In addition, under the DFWO, food vendors may only provide or distribute disposable service ware for prepared food or beverage upon request or affirmative response of a customer or person being provided prepared food or beverage. This could result in the reduction of distribution and use of disposable service ware.
- **Industrial or Business Level:** Some local businesses have been established with sustainability and zero waste as their objective. These stores sell environmental-friendly

products and feature refill stations for common toiletries.

- **Consumer Level:** At the consumer level, reduced purchasing, reuse, and repair are common source reduction actions. Because O'ahu's Plastic Bag Ban requires a minimum of 15 cents charge per allowable bag, customers often opt to bring their own reusable bag avoiding the additional fee.

During Meeting #1, working group members discussed using a few factors to help identify the general topics and the Permitted Interaction Groups (PIGs*) that should be selected for this working group.

For this exercise, the following factors should be considered:

- Urgency to address hazard or major concern
- Potential for landfill diversion
- Feasibility (technical complexity AND support from public, industry, elected officials, and regulators)

*PIGs: Two or more members of a board but less than the number of members which would constitute a quorum may be assigned to investigate a matter relating to the official business of their board.

Example Topics for PIGs include: Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30. Note: we are looking for your specific ideas on PIGs.

Please keep the definition, examples, and factors in mind as you answer the questions in this survey.

Thank you for your assistance in picking the topics and specific permitted interaction groups for this working group.

1

Please list any upcoming PTO/vacation dates for the 2023 calendar year. We would like to look ahead for scheduling.

Topic: Construction and Demolition Waste



2

Should the SRWG discuss this topic during future meetings?

Yes

No

3

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

7

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Product Packaging



8

Should the SRWG discuss this topic during future meetings?

Yes

No

9

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

13

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Food Waste / Organics



14

Should the SRWG discuss this topic during future meetings?

- Yes
- No

15

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

19

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Solar Panels



20

Should the SRWG discuss this topic during future meetings?

Yes

No

21

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

25

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Household Hazardous Waste



(e.g., residential insecticides, wood preservatives, solvents)

26

Should the SRWG discuss this topic during future meetings?

Yes

No

27

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

29

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

30

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

31

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Residential Asbestos



32

Should the SRWG discuss this topic during future meetings?

Yes

No

33

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

34

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

36

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

37

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Products with PFAS



38

Should the SRWG discuss this topic during future meetings?

Yes

No

39

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

40

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

42

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

43

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Lithium-ion Batteries



44

Should the SRWG discuss this topic during future meetings?

- Yes
- No

45

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

46

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

47

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

48

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

49

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Plastic, Metal, Glass



50

Should the SRWG discuss this topic during future meetings?

Yes

No

51

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

52

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

53

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

54

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

55

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Furniture / Bulky Waste



56

Should the SRWG discuss this topic during future meetings?

Yes

No

57

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

58

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

59

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

60

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

61

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Topic: Mattresses



62

Should the SRWG discuss this topic during future meetings?

Yes

No

63

On a scale from 1 to 5, rank the urgency to address this topic.

1 = not urgent, 5 = very urgent

	1	2	3	4	5
Urgency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

64

On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 = low potential, 5 = high potential

	1	2	3	4	5
Potential reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

65

On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 = not feasible, 5 = highly feasible

Things to consider: technical complexity AND support from public, industry, elected officials, and regulators.

	1	2	3	4	5
Feasibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

66

Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

Yes

No

67

Would you like to be a part of the PIG for this topic?

Keep in mind that you can technically be a part of multiple PIGs; though, it may be difficult to attend multiple PIG meetings.

Yes

No

Maybe

Additional Information

68

If you would like to be a part of PIG, please enter your name here. If you have specific ideas for a PIG, please also provide your ideas below; separated by a comma. Answers will only be visible to the facilitator for planning purposes.

69

Add any other questions or comments here

Mahalo for completing the survey!

We will compile the results and discuss them at SRWG Meeting #2

This content is neither created nor endorsed by Microsoft. The data you submit will be sent to the form owner.



Source Reduction Working Group - Topic and Permitted Action Group Selection

8 Responses

14:40 Average time to complete

Active Status

1. Please list any upcoming PTO/vacation dates for the 2023 calendar year. We would like to look ahead for scheduling.

8 Responses

Latest Responses

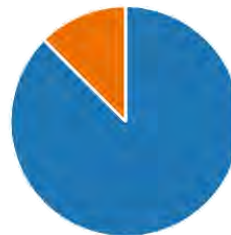
"August 16-21; September 28-October 3; October 16-20"

"None right now."

"July 000, August 7-14 "

2. Should the SRWG discuss this topic during future meetings?

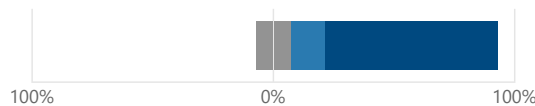
● Yes	7
● No	1



3. On a scale from 1 to 5, rank the urgency to address this topic.

■ 1
 ■ 2
 ■ 3
 ■ 4
 ■ 5

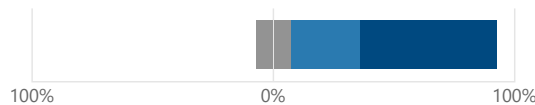
Urgency



4. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

■ 1
 ■ 2
 ■ 3
 ■ 4
 ■ 5

Potential reduction



5. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

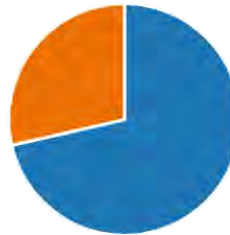
1 2 3 4 5



6. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

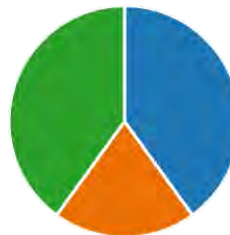
Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

● Yes 5
● No 2



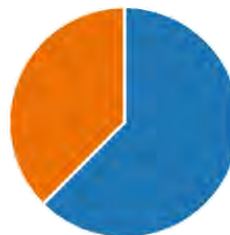
7. Would you like to be a part of the PIG for this topic?

● Yes 2
● No 1
● Maybe 2



8. Should the SRWG discuss this topic during future meetings?

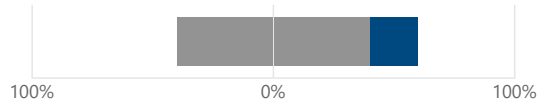
● Yes 5
● No 3



9. On a scale from 1 to 5, rank the urgency to address this topic.

1 2 3 4 5

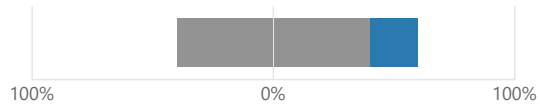
Urgency



10. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 2 3 4 5

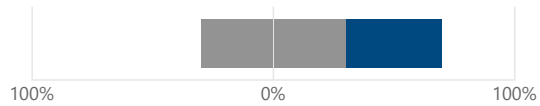
Potential reduction



11. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 2 3 4 5

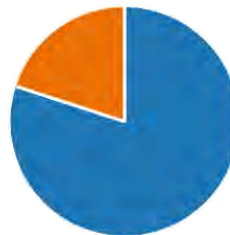
Feasibility



12. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

● Yes	4
● No	1



13. Would you like to be a part of the PIG for this topic?

- Yes 1
- No 1
- Maybe 2



14. Should the SRWG discuss this topic during future meetings?

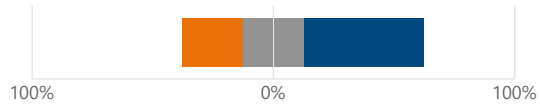
- Yes 4
- No 4



15. On a scale from 1 to 5, rank the urgency to address this topic.

- 1
- 2
- 3
- 4
- 5

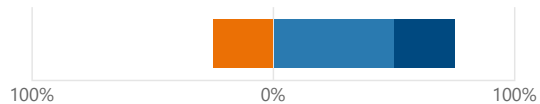
Urgency



16. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

- 1
- 2
- 3
- 4
- 5

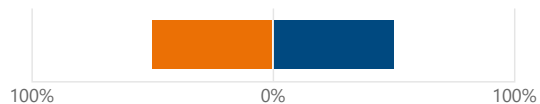
Potential reduction



17. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

- 1
- 2
- 3
- 4
- 5

Feasibility



18. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

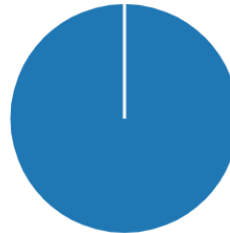
Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

- Yes 3
- No 1



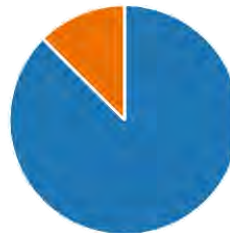
19. Would you like to be a part of the PIG for this topic?

- Yes 3
- No 0
- Maybe 0



20. Should the SRWG discuss this topic during future meetings?

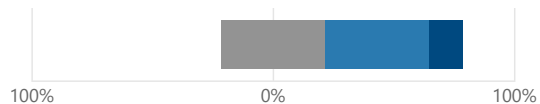
- Yes 7
- No 1



21. On a scale from 1 to 5, rank the urgency to address this topic.

- 1
- 2
- 3
- 4
- 5

Urgency



22. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 2 3 4 5



23. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

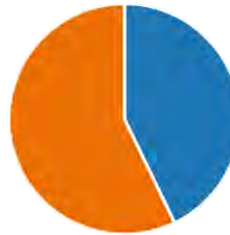
1 2 3 4 5



24. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

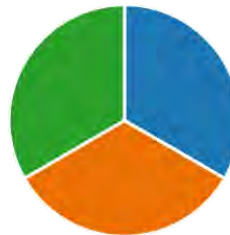
Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

● Yes 3
● No 4



25. Would you like to be a part of the PIG for this topic?

● Yes 1
● No 1
● Maybe 1



26. Should the SRWG discuss this topic during future meetings?

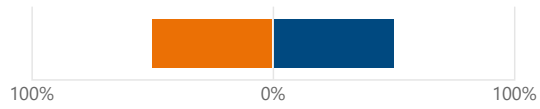
● Yes 2
● No 6



27. On a scale from 1 to 5, rank the urgency to address this topic.

■ 1 ■ 2 ■ 3 ■ 4 ■ 5

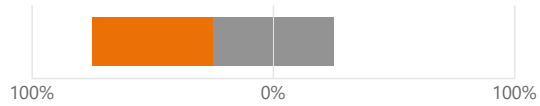
Urgency



28. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

■ 1 ■ 2 ■ 3 ■ 4 ■ 5

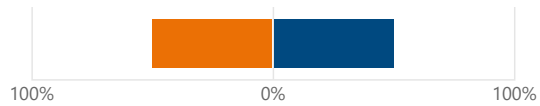
Potential reduction



29. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

■ 1 ■ 2 ■ 3 ■ 4 ■ 5

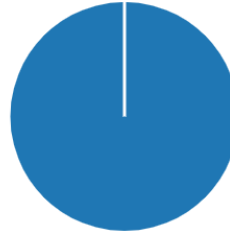
Feasibility



30. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

- Yes 2
- No 0



31. Would you like to be a part of the PIG for this topic?

- Yes 0
- No 1
- Maybe 1



32. Should the SRWG discuss this topic during future meetings?

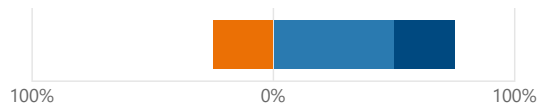
- Yes 4
- No 4



33. On a scale from 1 to 5, rank the urgency to address this topic.

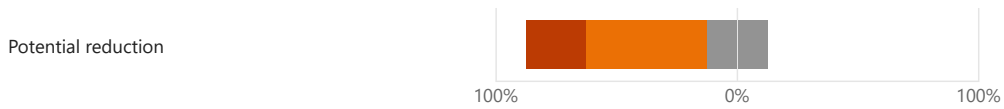
- 1
- 2
- 3
- 4
- 5

Urgency



34. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 2 3 4 5



35. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 2 3 4 5



36. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

● Yes 2
● No 2



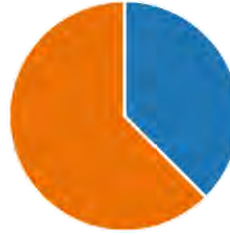
37. Would you like to be a part of the PIG for this topic?

● Yes 0
● No 2
● Maybe 0



38. Should the SRWG discuss this topic during future meetings?

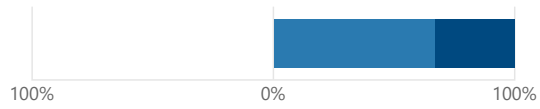
- Yes 3
- No 5



39. On a scale from 1 to 5, rank the urgency to address this topic.

- 1 ■ 2 ■ 3 ■ 4 ■ 5

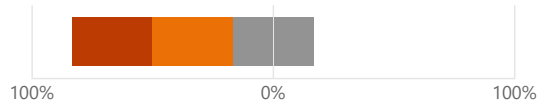
Urgency



40. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

- 1 ■ 2 ■ 3 ■ 4 ■ 5

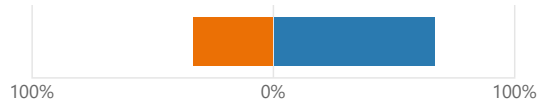
Potential reduction



41. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

- 1 ■ 2 ■ 3 ■ 4 ■ 5

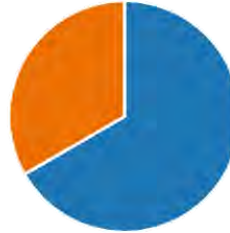
Feasibility



42. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

- Yes 2
- No 1



43. Would you like to be a part of the PIG for this topic?

- Yes 0
- No 0
- Maybe 2



44. Should the SRWG discuss this topic during future meetings?

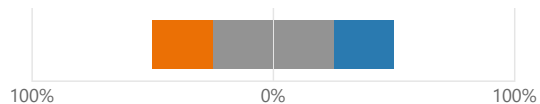
- Yes 4
- No 4



45. On a scale from 1 to 5, rank the urgency to address this topic.

- 1
- 2
- 3
- 4
- 5

Urgency



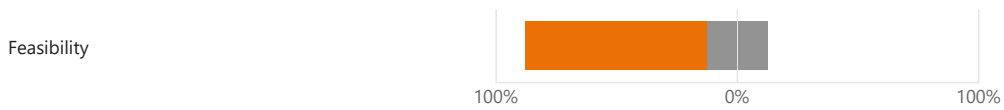
46. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 2 3 4 5



47. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 2 3 4 5



48. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

● Yes 2
● No 2



49. Would you like to be a part of the PIG for this topic?

● Yes 0
● No 1
● Maybe 1



50. Should the SRWG discuss this topic during future meetings?

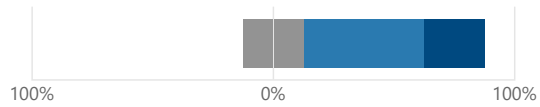
- Yes 4
- No 4



51. On a scale from 1 to 5, rank the urgency to address this topic.

- 1
- 2
- 3
- 4
- 5

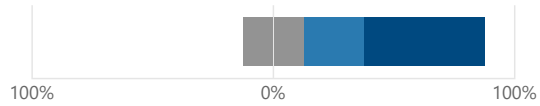
Urgency



52. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

- 1
- 2
- 3
- 4
- 5

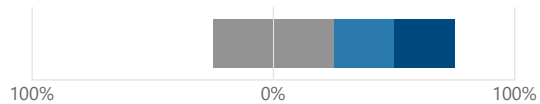
Potential reduction



53. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

- 1
- 2
- 3
- 4
- 5

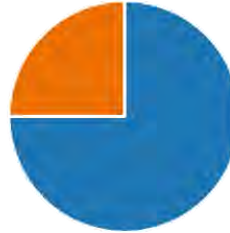
Feasibility



54. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

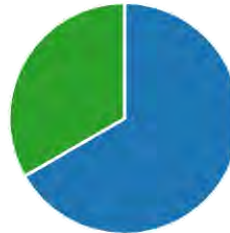
Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

- Yes 3
- No 1



55. Would you like to be a part of the PIG for this topic?

- Yes 2
- No 0
- Maybe 1



56. Should the SRWG discuss this topic during future meetings?

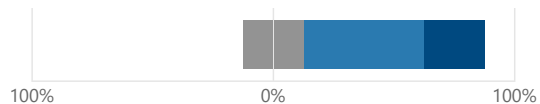
- Yes 4
- No 4



57. On a scale from 1 to 5, rank the urgency to address this topic.

- 1
- 2
- 3
- 4
- 5

Urgency



58. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

1 2 3 4 5



59. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

1 2 3 4 5



60. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

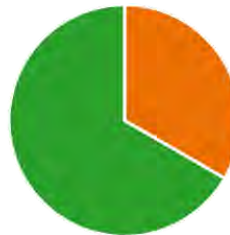
Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

● Yes 3
● No 1



61. Would you like to be a part of the PIG for this topic?

● Yes 0
● No 1
● Maybe 2



62. Should the SRWG discuss this topic during future meetings?

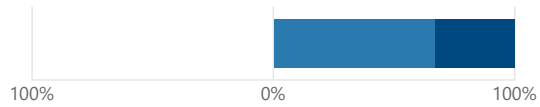
- Yes 4
- No 4



63. On a scale from 1 to 5, rank the urgency to address this topic.

- 1
- 2
- 3
- 4
- 5

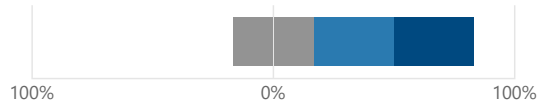
Urgency



64. On a scale from 1 to 5, rank the potential reduction for landfill and recycling streams by discussing this topic.

- 1
- 2
- 3
- 4
- 5

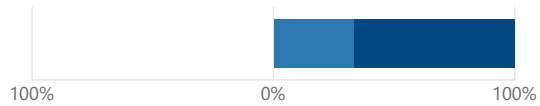
Potential reduction



65. On a scale from 1 to 5, rank the feasibility of implementing this source reduction strategy

- 1
- 2
- 3
- 4
- 5

Feasibility



66. Should we form a Permitted Interaction Group (PIG) for this topic to discuss the topic outside of scheduled SRWG meetings?

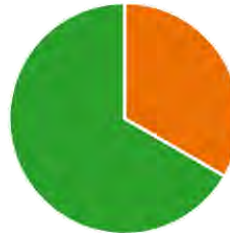
Generic Example Discussion Items for PIGs (based on a few ideas mentioned in Meeting 1 but not topic-specific): Tax Incentives, AI Tools, Public Education, Grants, State/City Funded Sanitation or Wash Stations, Unregulated Use of City convenience centers and transfer stations, Expanding Ordinance 19-30

- Yes 3
- No 1



67. Would you like to be a part of the PIG for this topic?

- Yes 0
- No 1
- Maybe 2



68. If you would like to be a part of PIG, please enter your name here. If you have specific ideas for a PIG, please also provide your ideas below; separated by a comma. Answers will only be visible to the facilitator for planning purposes.

4
Responses

Latest Responses
"Mike O'Keefe, C&D Waste"

"Suggest one topic be chosen by the SRWG as a focus, given the limited timef..."

69. Add any other questions or comments here

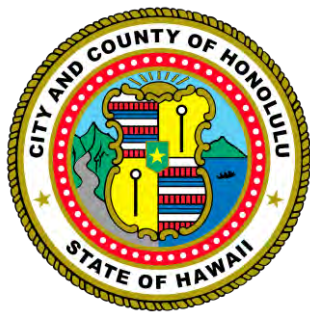
1
Responses

Latest Responses

"Suggest choosing ONE topic that is most realistic to address with the biggest..."



WELCOME TO THE CITY AND COUNTY OF HONOLULU SOURCE REDUCTION WORKING GROUP (SRWG) MEETING # 2 JUNE 28, 2023



Thank you for joining us. We will be beginning shortly.

Online Participants

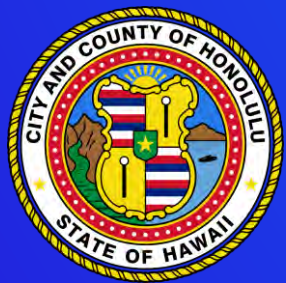
- We encourage [SRWG members](#) to turn on their video. [SRWG Members](#) are welcome and encouraged to speak up throughout the call. Though, please keep your [microphone on mute](#) unless you are speaking.



- The [Public](#) will have microphones and cameras disabled.
- For [virtual Public attendees that signed up to provide testimony](#), the moderator will enable your microphone and camera during the Public Comment period at the start of each actionable agenda item. Unmute to speak. Turning on your camera is optional.
- For [virtual Public attendees that did not previously sign up for testimony](#), please use the [chat feature](#) or [raise hand feature](#) to indicate your interest in speaking when the moderator asks for additional public comments.

City and County of Honolulu
Source Reduction Working Group
Meeting #2

June 28, 2023



Welcome!

Source Reduction Working Group Purpose

Collaborate, engage in discussions, and recommend programs and policies to reduce waste generation in O'ahu



In-Room Facilitator
Lyndsey Lopez



Virtual Facilitator
Eunice Chan



In-Room Coordinator
Emily Stone

Call to Order/Roll Call

Government – City and County of Honolulu

- Mike O’Keefe, Department of Environmental Services
- Hayley Cook, Office of Climate Change, Sustainability and Resiliency

Government – State of Hawaii

- Lene Ichinotsubo, Department of Health, Solid and Hazardous Waste Branch

Environmental and Sustainability Representative

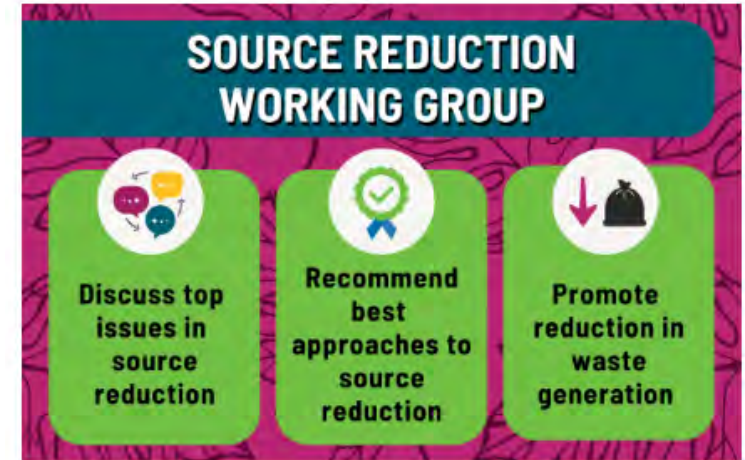
- Nicole Chatterson, Zero Waste Oahu
- Quinn Vittum, Reuse Hawaii

Educational/Cultural Representative

- Amy Brinker, Kamehameha Schools, Sustainability

Industry Representatives

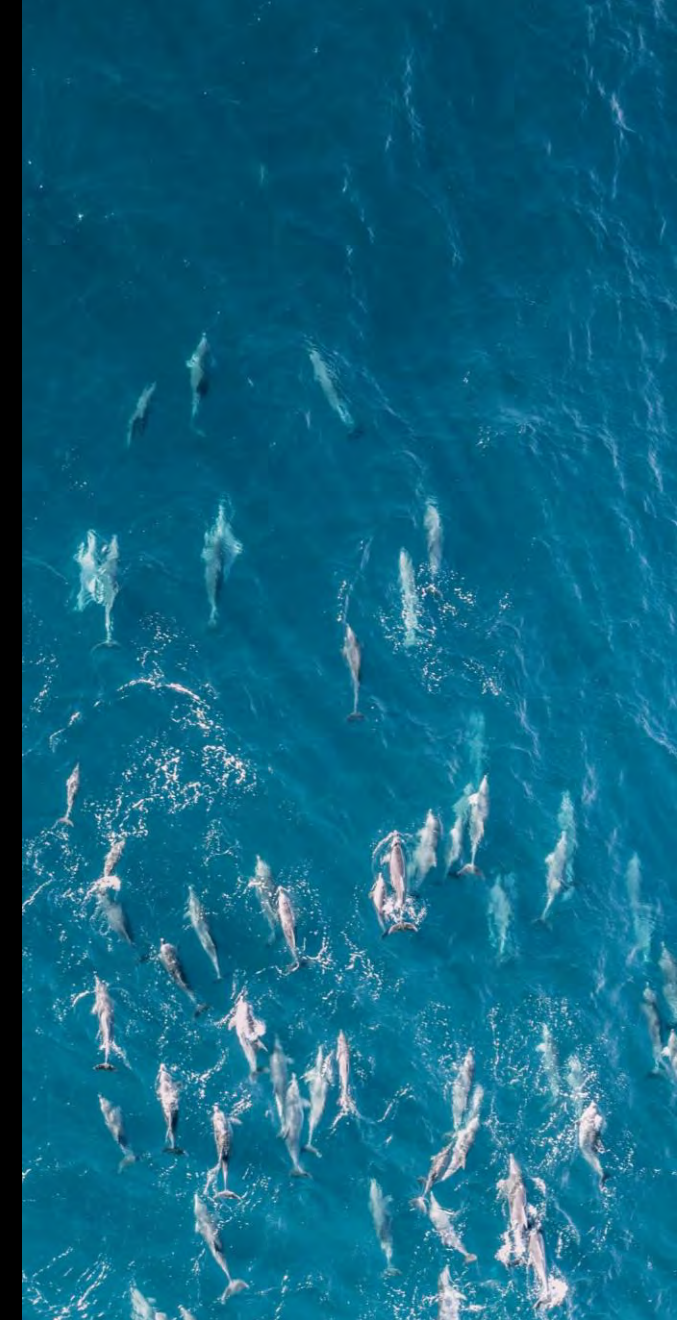
- Jessica Leorna, Building Industry Association (BIA) of Hawaii
- Allen Evans, Island Demo/Refrigerant Recycling
- Lauren Zirbel, Hawaii Food Industry Association
- Tina Yamaki, Retail Merchants of Hawaii



Agenda

SRWG Meeting #2

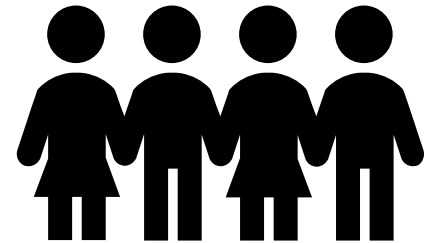
- I. CALL TO ORDER
- II. INTRODUCTION AND WELCOME
- III. APPROVAL OF MINUTES FROM SRWG MEETING NO. 1
- IV. FUTURE WORKING GROUP DISCUSSION TOPICS
- V. PERMITTED INTERACTION GROUPS
- VI. SCHEDULING/ANNOUNCEMENTS FOR NEXT MEETING
- VII. ADJOURNMENT



Approval of Minutes from SRWG Meeting No. 1– Information/Action

Public Testimony – Approval of Minutes from SRWG Meeting No. 1

- Oral testimony will be taken in the following order:
 - In-person comments (registered first, then not registered)
 - Video conference comments (registered first, then not registered)
- If you registered to testify by 8:00 AM today, an email was sent to jleano@honolulu.gov with your name and the agenda items(s) you would like to address. If you filled out the registration form in person at the meeting, your name will be called in the order that it was received (as described in bullet 1 above).
- If you have not registered, you will be given an opportunity to speak to an item following oral testimonies of the registered speakers in each group (in-person, video).
- Each speaker is **limited to a two-minute** presentation and may not have anyone else read their statement.



Providing Public Comment over Video Conference

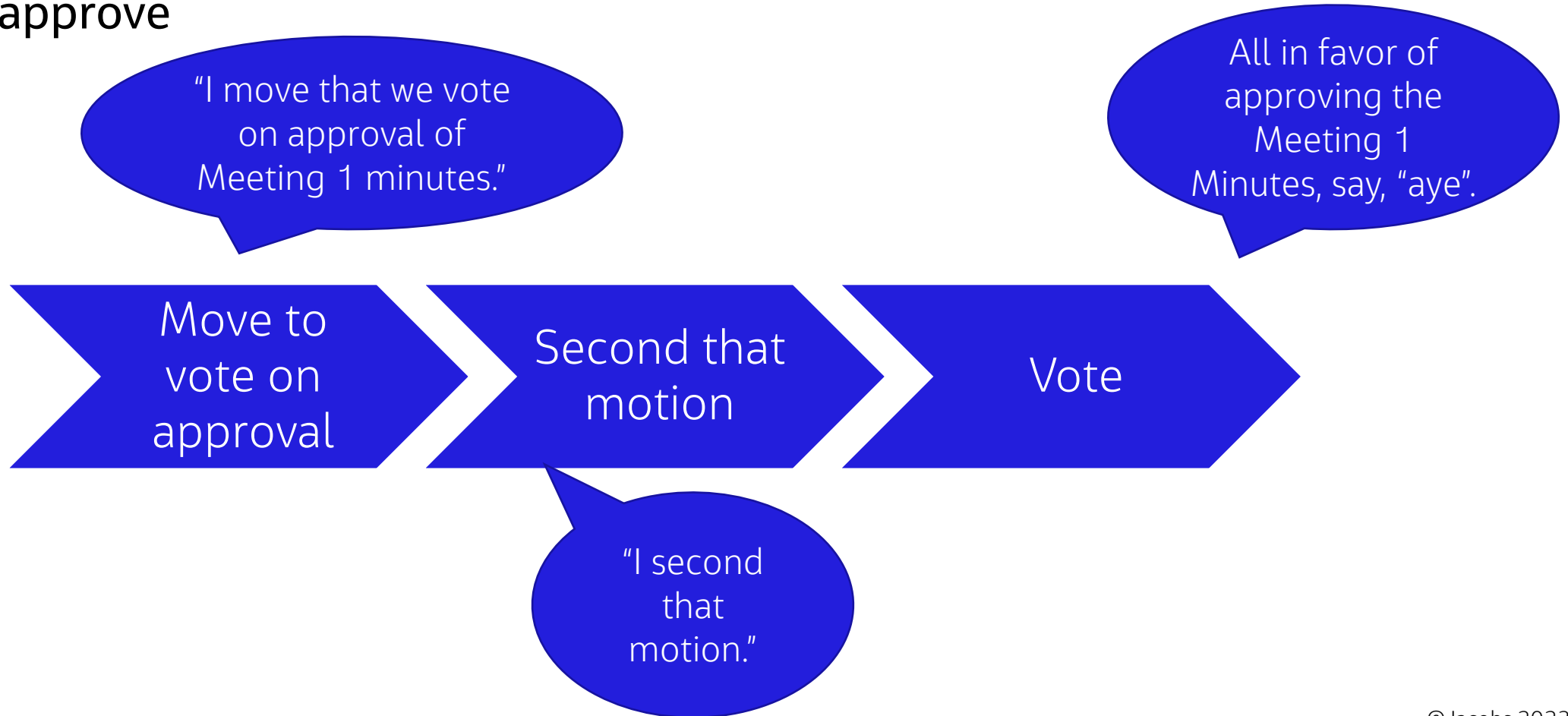
- Registered speakers:
 - Eunice will call on you when it is your turn to speak and grant you mic and video access.
- Not-registered speakers:
 - Following the registered speakers, Eunice will ask for additional testimonies from those online. Please raise your hand if you would like to testify.



- Eunice will call on you when it is your turn to speak and grant you mic and video access.

Minutes from SRWG Meeting No. 1

- Members reviewed minutes in their own time after receiving the meeting packet
- Any revisions?
- Motion to approve



Future Working Group Discussion Topics – Information/Action

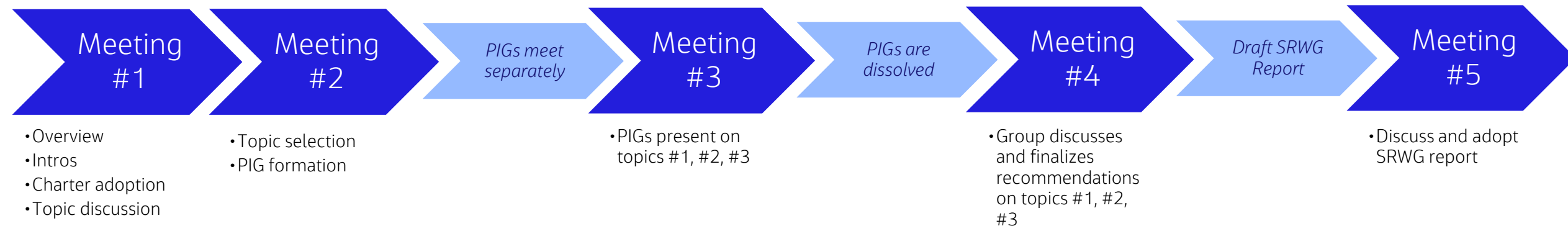
Future Working Group Discussion Topics – Information/Action

- Discussion and identification of source reduction discussion topics for future meetings
- Goal: select 1 or 2 additional research & discussion topics
 - Topic #1: C&D
 - Topic #2:
 - Topic #3:



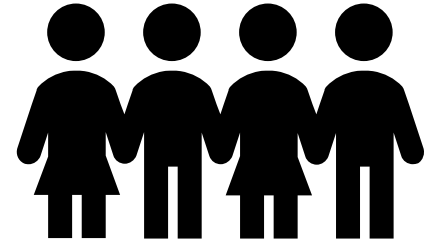
Source: EPA

Potential Meeting Flow (TBD by Working Group Members)



Public Testimony – Future Working Group Discussion Topics – Information/Action

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Topic Interest Survey Results

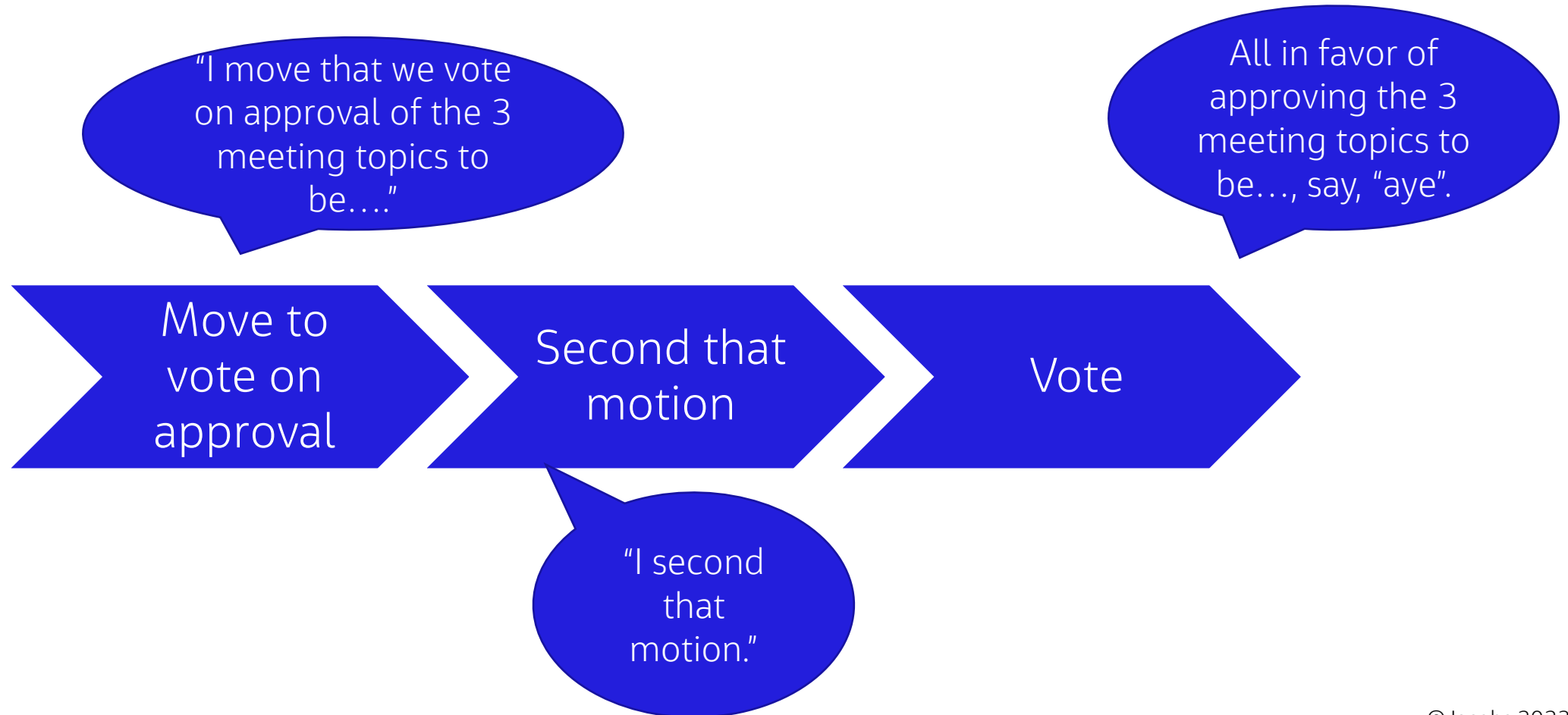
WORKING DRAFT – DATA COLLECTION IN PROCESS

Topic	Count of Yes Votes
Construction and Demolition Waste	5
Product Packaging	2
Food Waste/Organics	3
Solar Panels	4
Household Hazardous Waste	1
Residential Asbestos	3
Products with PFAS	0

Topic	Potential			Score
	Urgency	Reduction	Feasibility	
Construction and Demolition Waste	23	23	21	67
Product Packaging	8	6	8	22
Food Waste/Organics	12	11	12	35
Solar Panels	16	14	16	46
Household Hazardous Waste	2	2	2	6
Residential Asbestos	11	5	10	26
Products with PFAS	0	0	0	0

Future Working Group Discussion Topics

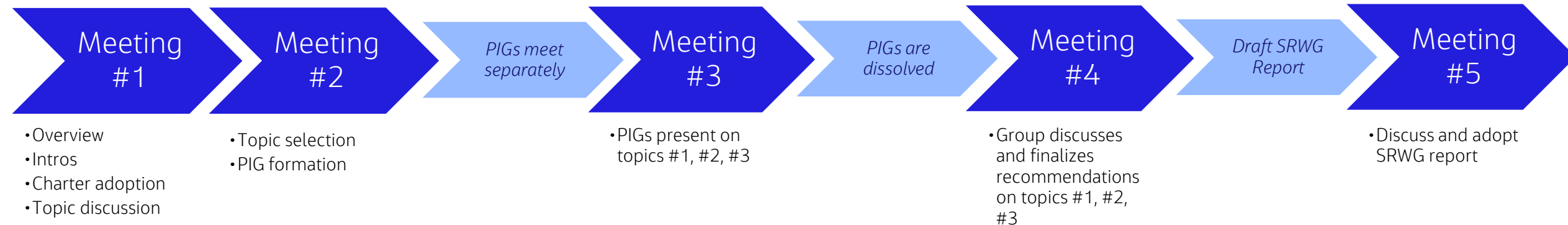
- Motion to approve



Permitted Interaction Group (PIG) – Information/Action

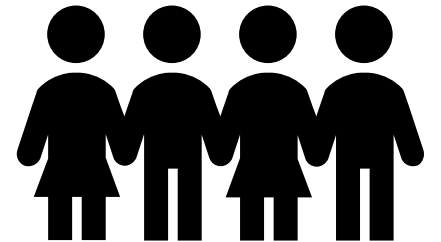
Permitted Interaction Group (PIG) –Information/Action

Formation of Permitted Interaction Group (PIG) under HRS 92-2.5(b) to investigate best practices that reduce waste generation of various materials



Public Testimony – Permitted Interaction Group

- Oral testimony will be taken in the following order:
 - In-person comments (registered first, then not registered)
 - Video conference comments (registered first, then not registered)
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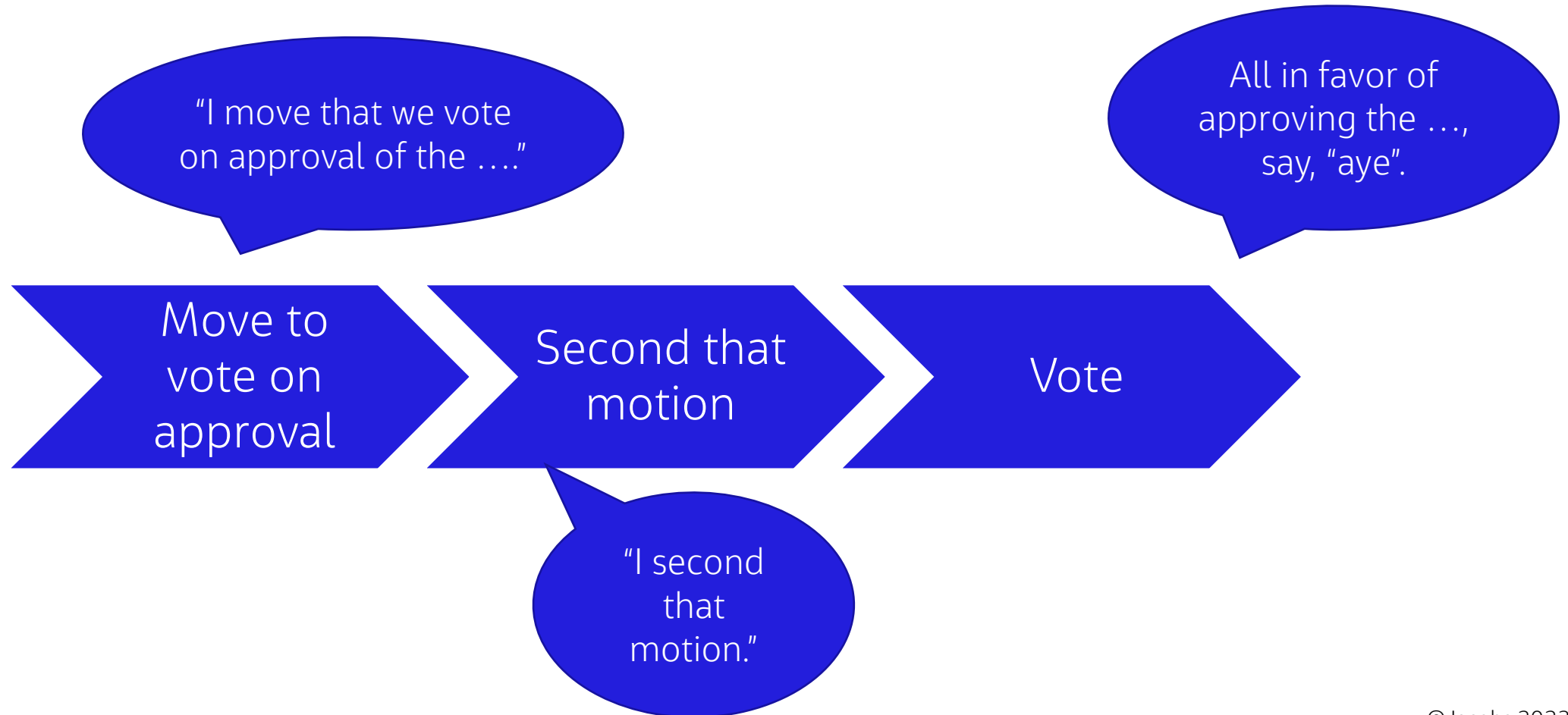
- Eunice will call on you when it is your turn to speak and grant you mic and video access.

Permitted Interaction Group (PIG) –Information/Action

- Topic #1 – Construction and Demolition
 - Membership:
 - Scope:
- Topic #2 – ??
 - Membership:
 - Scope:
- Topic #3 – ??
 - Membership:
 - Scope:

Permitted Interaction Group(s)

- Motion to approve members and scope

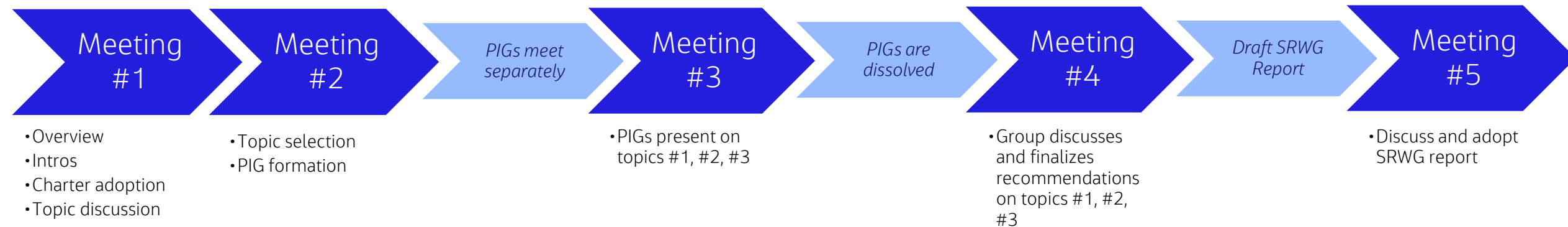


Scheduling/ Announcements for Next Meeting - Information

Scheduling/Announcements for Next Meeting - Information

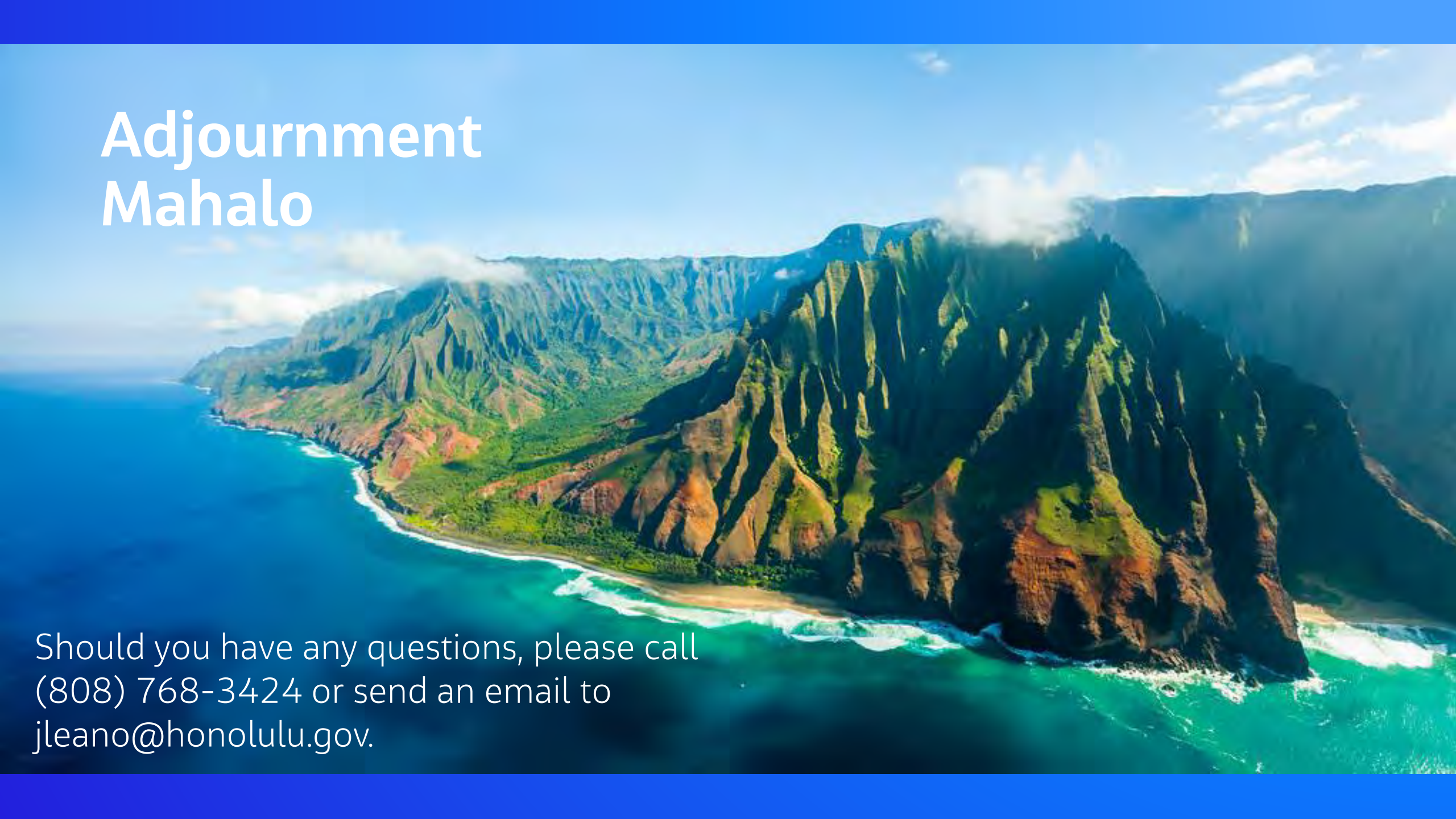
- Future meeting preferences
- Next steps
- Next meeting date will be sent out to SRWG members following this meeting

Potential Meeting Flow (TBD by Working Group Members)



Adjournment Mahalo

Should you have any questions, please call
(808) 768-3424 or send an email to
jleano@honolulu.gov.



1132 Bishop Street
Suite 1100
Honolulu, Hawaii 96813
O +1 808 943 1133
F +1 808 954 4400
www.jacobs.com

Subject	City and County of Honolulu Source Reduction Working Group Meeting No. 2
Project Name	Consultant Services for Source Reduction Working Group, City and County of Honolulu (Hawaii)
Project Number	CCHSRWG1
Prepared by	Jacobs
Location	Kapolei Hale – Conference Room “A” (Ground Floor)
Date/Time	Wednesday, June 28, 2023, 1:00pm – 3:00pm
Participants	SRWG Members: Hayley Cook (in-person) – Policy and Research Manager, Office of Climate Change, Sustainability and Resiliency Quinn Vittum (in-person) – Executive Director, ReUse Hawaii Allen Evans (in-person) – President, Refrigerant Recycling and Island Demolition Tina Yamaki (in-person) – President, Merchants of Hawaii Lauren Zirbel (in-person) – Executive Director, Hawaii Food Industry Association Amy Brinker (virtual) – Sustainability Manager, Kamehameha Schools Nicole Chatterson (virtual) – Executive Director and Co-Founder, Zero Waste Oahu Lene Ichinotsubo (virtual) – Acting Chief, Department of Health, Solid and Hazardous Waste Branch Jessica Leorna (virtual) – CEO, BIA Hawaii Jacobs (City’s Consultant and Meeting Facilitator): Lyndsey Lopez (in-person) – Waste Planning and Strategy Lead

SRWG Member(s) Not in Attendance Mike O’Keefe – Deputy Director, Department of Environmental Services (ENV)

Notes

The meeting was recorded and documented in one audio file and one MS Teams Meeting recording. For each agenda item, the time stamp is given based on the audio file. Key items and identified action items are summarized.

Agenda Item	Time Stamp	Key Items/Actions
1 Call to Order	00:00 to 1:26	Lyndsey welcomed the members in-person and online.
2 Introduction and Welcome	1:26 to 3:49	Emily conducted a roll call of members. Mike, Amy, and Jessica were not in attendance at the time of the roll call.

Agenda Item	Time Stamp	Key Items/Actions
<p>3 Approval of Minutes from SRWG Meeting No. 1 – Information/Action</p>	<p>3:49 to 8:20</p>	<p>Jessica joined virtually at this time.</p> <p>No one testified in-person or virtually for this agenda item.</p> <p>Lyndsey notified members that Lene submitted comments prior to the meeting. Lyndsey showed members the comments made by Lene. No other members had comments on the minutes.</p> <p>Action: Quinn motioned to approve meeting minutes. Tina seconded the motion. Hayley abstained from voting because she was not in attendance at the first meeting.</p> <p>Lauren, Tina, Quinn, Allen, Lene, Jess, and Nicole voted to approve the minutes. The meeting minutes from Meeting No. 1 were approved.</p>
<p>4 Future Working Group Discussion Topics – Information/Action</p>	<p>8:20 to 38:14</p>	<p>Lyndsey explained the background behind choosing topics, forming PIGs, and scheduling for upcoming meetings.</p> <p>No one provided public testimony in-person or online for this agenda item.</p> <p>Lyndsey went over the survey results for source reduction topics.</p> <ul style="list-style-type: none"> • Eight members answered the survey. • Top three votes: construction and demolition waste, product packaging, and solar panels. <p>Lyndsey asked if members are comfortable moving ahead with these three topics.</p> <p>Tina said that Hawai’i is a small consumer group and doesn’t have a say in product packaging; it would be more of a push in the mainland. Lyndsey said that the group can decide which direction that topic goes in. Lyndsey explained that the Permitted Interaction Group (PIG) could further refine product packaging strategies. Lauren agreed with Tina—there is regulation by the City and County, and it is illegal to interfere with interstate commerce. Lauren warned against putting separate regulations on locally made products that put local businesses at a disadvantage. Lauren said that the SRWG would benefit by focusing on other topics, such as food waste. Lyndsey mentioned the refillable packaging idea as something that was brought up at Meeting No. 1. Lauren expressed that she couldn’t see what could be done from a regulatory standpoint for product packaging. Lyndsey reminded that solutions can also focus on public education or incentives and doesn’t necessarily have to be only regulatory. Tina brought up the need to be careful with product packaging because Hawai’i is isolated, and restrictions could limit products sent here in which local businesses could suffer. Nicole said she understands where Tina and Lauren are coming from but disagrees that Hawai’i is too small to make decisions on packaging waste and noted that plastic film is the 10th most prevalent item in the waste stream per the 2017 audit. Nicole brought up EPR as a policy mechanism.</p> <p>Jessica expressed that the scoring matrix results reflect some level of misunderstanding or oversight of results drawn from the 2019 Integrated Solid Waste Management Plan (ISWMP). Jessica shared information on stats from the ISWMP: organics and paper are larger parts of the waste stream than C&D waste. Jessica asked the group to consider the ISWMP report when thinking about topics and wanted to make sure that the group is not heading towards a direction for something that hasn’t already been measured.</p> <p>Lyndsey mentioned that the closure of PVT landfill was not happening when the ISWMP was written, so now there is new urgency to figure out how to reduce the amount of C&D waste that is generated and where it can go. Lyndsey reminded the group that source reduction is the reduction of the quantity of materials and also the reduction of the toxicity of certain materials. Lyndsey shared that C&D takes up a lot of space and is continuously generated, and there are a variety of ways that C&D waste is managed elsewhere. Lyndsey reminded the group that solar panels are toxic, and solar panel popularity is increasing. Lyndsey shared that it is ultimately up to the group to decide which topic to focus on. Lyndsey reiterated that the PIGs are formed for the purpose of doing additional research.</p>

Agenda Item	Time Stamp	Key Items/Actions
		<p>Lyndsey asked to hear the group's thoughts on moving forward with the three highlighted topics, or what three topics should be selected instead.</p> <p>Allen – Allen was on-board with Tina about product packaging. Allen said that C&D is an important topic. He voted for C&D, food waste/organics, and solar panels.</p> <p>Hayley – Hayley expressed that she is comfortable with the top 3 topics from the survey: C&D, product packaging, solar panels. Though food waste/organics is one of the largest components in our waste stream and seems more approachable, the City is working on measures for it. Product packaging is complex and needs discussion.</p> <p>Quinn – Quinn expressed that he is comfortable with the top 3 topics.</p> <p>Tina – Tina expressed her concern about being able to discuss 3 topics in the short amount of time. Tina agreed with Allen and said C&D, food waste/organics, and solar panels should be the topics. She said product packaging has been discussed a lot previously.</p> <p>Lauren – Lauren agreed with Allen and Tina and voted for C&D, food waste/organics, and solar panels.</p> <p>Nicole – Nicole wanted to honor the survey process and voted for the top 3 topics from the survey. Nicole agreed with Hayley that there are at least two strong City policies related to food waste/organics in the residential and commercial sector and feels comfortable that it can be addressed elsewhere.</p> <p>Lene – Lene voted for the top 3 topics from the survey but voiced concern about the quantity of topics being covered.</p> <p>Jessica – Jessica said she prefers to choose 1 or 2 issues with a focus on organics, packaging, and solar. Jessica said C&D should be deferred; it is a vast issue with very little feasibility without having some solution relating to the PVT and Waimānalo locations.</p> <p>Quinn urged people to think about being here for the collective good and for a sustainable Hawai'i.</p> <p>Lyndsey acknowledged some members' comments about focusing on 1 or 2 topics and explained that there is opportunity to refocus efforts in the PIGs.</p> <p>Amy Brinker joined the meeting virtually and introduced herself. Lyndsey gave a summary of the voting process for topics currently in progress. Lyndsey explained that a group in the room would like to go forward with the survey results and another group wants to swap food waste and product packaging as a topic. Amy wondered about the percentage reduction of C&D, product packaging, food waste, and solar panels from the waste stream.</p> <p>Nicole explained that food waste is about 20% of the waste stream by weight, and product packaging (plastic film) is in the top 10 items of Honolulu's waste stream by weight.</p> <p>Amy said she wants to switch food waste with solar panels. Lyndsey explained that the group wants to switch food waste with product packaging. Amy said food waste should be chosen over product packaging. Lyndsey suggested doing all four topics: C&D, solar panels, food waste, and product packaging.</p> <p>Lauren suggested combining food waste and product packaging into the same PIG, since it will likely have the same members.</p> <p>Action: Nicole motioned to have the topics C&D waste, product packing/organics, and solar panels.</p> <p>Lauren seconded the motion.</p> <p>Quinn, Lauren, Allen, Tina, Hayley, Amy, Lene, and Nicole voted yes in favor of the motion. Jessica voted nay, and would like to see the focus be on organics and packaging. It was determined by majority vote that the SRWG will move ahead with PIGs formed around the topics C&D waste, food waste/organics, solar panels, and product packaging.</p>
5 Permitted Interaction Groups – Information/Action	38:14 to 1:09:28	No one testified in-person or virtually on the agenda item.

Agenda Item	Time Stamp	Key Items/Actions
		<p>Lyndsey reminded the group why a PIG is formed: the PIG formation allows more time for research and getting information for the next meeting. Lyndsey explained that today the group is identifying the PIGs wanted, who wants to be on them, and the scope of what the PIGs will be talking about. Lyndsey explained that PIGs would meet at least once to discuss research and what they're going to share. Lyndsey encouraged everyone to be a part of at least one PIG, and she asked if they would like the Jacobs team to be a part of the groups, so Jacobs can help set the meetings and PowerPoint presentations. Lyndsey asked the group to brainstorm about the PIG topic and scope, and suggested they focus on 3 things: (1) ways to incentivize, (2) policy or regulation, and (3) public education that would be recommended. Lyndsey gave everyone 1 minute to think about the PIG topic and scope on their own.</p> <p>Allen asked if there is conflict if he is in C&D business. Lyndsey said no, as long as he doesn't talk to the other people about what the group discusses. Lyndsey said that the group should also think about a guest speaker they want to invite.</p> <p>Nicole – Nicole said she likes the idea of 3 PIGs organized by topic. Nicole wanted to be a part of C&D and food waste/packaging group. Nicole wanted public education to also include industry education, education of political leadership, and public service officials. Nicole shared that the City of Austin and City of Portland both have great programs around deconstruction and that it could be beneficial to have a speaker from those municipalities. Nicole said she would like to hear from a state that has implemented EPR (4 states currently) and noted that the interstate commerce clause makes packaging legislation a challenge.</p> <p>Amy – Amy said she likes all the topics of incentives, policy, and education within the context of the waste stream identified and wants to be a part of PIGs C&D and food waste packaging. She said she needs to think more on speakers.</p> <p>Lene – Lene said PIGs should have direction on what to consider and thought that we should focus PIGs around the topics. Lene said there should be some context and expectations for the PIGs research. For C&D speakers, Lene said the team already has knowledge within the industry from within the State. For being a part of PIGs, Lene said she is interested in C&D first, solar panels second, and then food waste/packaging.</p> <p>Jessica – Jessica said they should make PIGs focused on the topics. Jessica said the group should spend time on research on policy, incentives, and public education. Jessica agreed with Nicole and Amy, that education should be industry-wide as well. Jessica mentioned the potential for using new technology for source reduction and that kind of research can fall within the PIG topic. Jessica said she wants to support the C&D and solar panels PIGs. For guest speakers, Jessica said industry stakeholders would be valuable because we have professionals locally who can speak to the issues they see in the field as well as people in other regions who have been involved with technology and economic research to bring companies that can support gaps locally to help the industry implement changes.</p> <p>Lauren – Lauren said she is interested in the food waste/packaging PIGs. For speakers, she suggested a true zero waste certification specialist or someone from Hyatt Regency Maui, which just recertified as lead gold and true zero waste certification through USGBC. She said that is an interesting program to look into—perhaps incentivizing or creating programs for businesses to get the certification.</p> <p>Tina – Tina said she is interested in the food waste/packaging PIG. If there's room, she said she wants to be a part of C&D. Tina agreed with Amy in wanting City and State speakers and understanding the capabilities and limitations of the City and State for reducing these types of waste.</p> <p>Quinn – Quinn said he wants to be a part of C&D and solar panels PIGs. For speakers, Quinn suggested Shaun Wood from EPA, from Portland. Quinn expressed wanting more government (City and State)</p>

Agenda Item	Time Stamp	Key Items/Actions
		<p>involvement and support for policy and systems to divert waste. Quinn also mentioned education for contractors and consumers on their responsibilities within their trade.</p> <p>Hayley – Hayley said she wants to be a part of the food waste/packaging and solar panels PIGs. For the packaging topic, Hayley said she is interested in EPR conversation and said it would be nice to talk with States that have adopted legislation for EPR. Hayley mentioned that Nicole Lowen has been championing the effort with the State legislature locally for EPR and suggested she could be a speaker. For the food topic, Hayley mentioned council members are interested in general island-wide collection of compost, and on a smaller scale, Hayley mentioned the Oahu Compost Project. For the solar panels topic, she said she needs to think about speakers. Hayley said she would appreciate having the Jacobs team as part of the groups.</p> <p>Allen – Allen said he would like to be a part of the C&D and solar panels PIGs. Allen agreed with Lene that we don't need guest speakers for C&D. Allen mentioned that they are now working with people to collect and move solar panels, and maybe someone could be brought in from the processing side on the mainland.</p> <p>Lyndsey and Emily looked at the survey results and explained that Mike O'Keefe is interested in being a part of the C&D PIG. Lyndsey reminded the group that the PIG membership cannot reach quorum and explained that C&D interest is currently more than quorum. Tina volunteered to remove herself from C&D PIG. Amy volunteered to not sit on C&D PIG. Lene volunteered to remove herself from C&D.</p> <p>Amy – Amy offered a guest speaker from Kamehameha Schools with experience in a deconstruction project.</p> <p>Lyndsey explained that PIGs will meet and then present during meeting 3 and then the group will talk about the presentations during meeting 4. Lyndsey mentioned that members can discuss more during meeting 4.</p> <p>Lyndsey reiterated the potential SRWG members of PIGs.</p> <ul style="list-style-type: none"> • C&D PIG: Nicole, Jess, Quinn, Allen, Mike • Packaging and Food Waste PIG: Nicole, Amy, Lauren, Tina, Hayley • Solar Panels PIG: Lene, Jess, Quinn, Hayley, Allen <p>Lyndsey also reiterated that everyone seems open to Jacobs being a part of the PIGs for facilitation and open to the idea of guest speakers.</p> <p>Lauren – Lauren mentioned a company called Chop Value which recycles chopsticks into tables; she said the company is opening a business in Hawai'i, and she said she is interested in them as a guest speaker.</p> <p>Lyndsey asked if someone wants to make a motion to form the PIGs for the three topics with a focus on researching ways to incentivize source reduction for those materials, policy or regulation needed, and public education from the stance of general education including industry, contractors, regulatory, etc.</p> <p>Action:</p> <p>Tina motioned to form the PIGs with the membership of Nicole, Jess, Quinn, Allen, and Mike as part of the C&D PIG; Nicole, Amy Lauren, Tina, and Hayley as part of the packaging/food waste PIG; Lene, Jess, Quinn, Hayley, and Allen as part of the solar panels PIG; and with Jacobs team members serving in facilitator roles as members of each PIG. Lauren seconded the motion.</p> <p>Nicole, Lene, Amy, Jessica, Lauren, Tina, Quinn, Hayley, and Allen voted yes in favor of the motion. Majority vote was achieved to form the PIGs with the proposed membership.</p>
<p>6 Scheduling/Announcements for Next Meeting - Information</p>	<p>1:09:28 to 1:11:27</p>	<p>Lyndsey explained that Jacobs will start organizing meetings for the PIGs. Lyndsey explained that Jacobs and ENV were hoping to get the working group done in the calendar year but Jacobs and ENV think that it may go into the next calendar year. Lyndsey explained that we might need longer than 2 hours at the next meeting to go over the PIG presentations and guest speakers—potentially 3 hours.</p>

Agenda Item	Time Stamp	Key Items/Actions
7 Adjournment	1:11:27 to 1:11:51	Lyndsey thanked everyone. The meeting was brought to a close.

Meeting 3



**DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU**

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAI'I 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEJA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

MICHAEL O'KEEFE
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
RE 23-047

November 21, 2023

NOTICE

**CITY AND COUNTY OF HONOLULU
SOURCE REDUCTION WORKING GROUP**

MEETING NO. 3

**TUESDAY, NOVEMBER 28, 2023
KAPOLEI HALE – CONFERENCE ROOM "A" (Ground Floor)
1000 Ulu'ōhi'a Street, Kapolei, Hawai'i 96707
9:00 AM – 11:00 AM**

PUBLIC PARTICIPATION

Members of the public may participate in-person at the above address or remotely by video conference link.

1. To join the meeting by video conference, visit: (Please mute your devices except to testify).

https://teams.microsoft.com/l/meetup-join/19%3ameeting_MTc3MDIiY2EtODE4Yy00YzZmLTg3ZjMtYmZmOTIzMDk4NGlw%40thread.v2/0?context=%7b%22Tid%22%3a%2237247798-f42c-42fd-8a37-d49c7128d36b%22%2c%22Oid%22%3a%22170409f7-7650-4062-b2c2-6365c10a1759%22%7d

ORAL COMMENTS

Persons wishing to testify in-person are requested to register as follows:

1. Send an email to jleano@honolulu.gov with your name and the agenda item(s) on which you wish to testify by 8:00 AM on the day of the meeting; or
2. Fill out the registration form in person at the meeting.

Persons wishing to testify remotely are requested to register as follows:

1. Video Conference: Send an email to jleano@honolulu.gov with your name and the agenda item(s) on which you wish to testify no later than 8:00 AM on the day of the meeting.

Oral testimony will be taken in the following order:

1. In-person comments will be taken first then closed.
2. Video conference comments will be taken second then closed.

Oral testimony will be taken at the beginning of each agenda item. Each speaker is limited to a two-minute testimony and may not have anyone else read their statement.

Once the oral testimonies of registered speakers have been taken, persons who have not registered will be given an opportunity to speak.

WRITTEN COMMENTS

Written comments may be submitted by fax to 808-768-3434, emailed to jleano@honolulu.gov, or mailed to Refuse Division, Attention: Planning & Engineering Branch, 1000 Ulu'ōhi'a Street, Suite 201, Kapolei, Hawai'i 96707. To ensure distribution at the meeting, written comments must be received by 8:00 AM on the day of the meeting. If submitted, written comments, including the commenter's address, email address, and phone number, may be posted on the Project's webpage at <https://www.honolulu.gov/opala/source-reduction-working-group.html>.

Should you have any questions, please call 808-768-3424 or send an email to jleano@honolulu.gov.

MATERIALS AVAILABLE FOR INSPECTION

Meeting materials ("board packet" under HRS Section 92-7.5), when made available to the Source Reduction Working Group members, are accessible at <https://www.honolulu.gov/opala/source-reduction-working-group.html>.

If you need an auxiliary aid/service or other accommodation due to a disability, contact Julie Ann Leano at 808-768-3424 or jleano@honolulu.gov as soon as possible. Requests made as early as possible have a greater likelihood of being fulfilled.

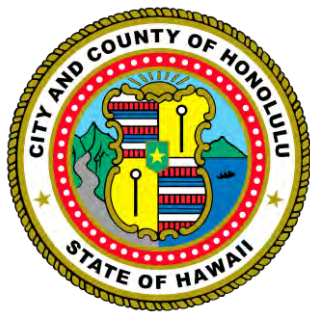
Upon request, this notice is available in alternate/accessible formats.

AGENDA

- I. **CALL TO ORDER**
- II. **INTRODUCTION AND WELCOME – 10 minutes**
Roll call of Source Reduction Working Group (SRWG) Members.
- III. **APPROVAL OF MINUTES FROM SRWG MEETING NO. 2 – Information/Action – 10 minutes**
Members will approve the minutes and meetings summary notes from SRWG Meeting No. 2.
- IV. **PERMITTED INTERACTION GROUP (PIG) PRESENTATION: CONSTRUCTION AND DEMOLITION WASTE – Information – 30 minutes**
Presentation from the PIG on the topic of Construction and Demolition Waste.
- V. **PIG PRESENTATION: PHOTOVOLTAIC (PV) PANEL WASTE – Information – 30 minutes**
Presentation from the PIG on the topic of PV Panel Waste.
- VI. **PIG PRESENTATION: PRODUCT PACKAGING AND FOOD WASTE/ORGANICS – Information – 30 minutes**
Presentation from the PIG on the topic of Product Packaging and Food Waste/Organics
- VII. **SCHEDULING/ANNOUNCEMENTS FOR NEXT MEETING – Information – 10 minutes**
 1. Next steps
 2. Next meeting date
- VIII. **ADJOURNMENT**



WELCOME TO THE CITY AND COUNTY OF HONOLULU SOURCE REDUCTION WORKING GROUP (SRWG) MEETING # 3 NOVEMBER 28, 2023



Thank you for joining us. We will be beginning shortly.

Online Participants

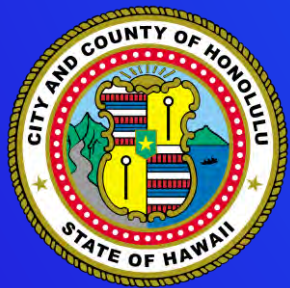
- We encourage [SRWG members](#) to turn on their video. [SRWG Members](#) are welcome and encouraged to speak up throughout the call. Though, please keep your [microphone on mute](#) unless you are speaking.



- The [Public](#) will have microphones and cameras disabled.
- For [virtual Public attendees that signed up to provide testimony](#), the moderator will enable your microphone and camera during the Public Comment period at the start of each actionable agenda item. Unmute to speak. Turning on your camera is optional.
- For [virtual Public attendees that did not previously sign up for testimony](#), please use the [chat feature](#) or [raise hand feature](#) to indicate your interest in speaking when the moderator asks for additional public comments.

City and County of Honolulu
Source Reduction Working Group
Meeting #3

November 28, 2023



Welcome!

Source Reduction Working Group Purpose

Collaborate, engage in discussions, and recommend programs and policies to reduce waste generation in O'ahu



Primary Facilitator
Lyndsey Lopez



In-Room Coordinator
Emily Stone

Call to Order/Roll Call

Government – City and County of Honolulu

- Mike O’Keefe, Department of Environmental Services
- Hayley Cook, Office of Climate Change, Sustainability and Resiliency

Government – State of Hawaii

- Lene Ichinotsubo, Department of Health, Solid and Hazardous Waste Branch

Environmental and Sustainability Representative

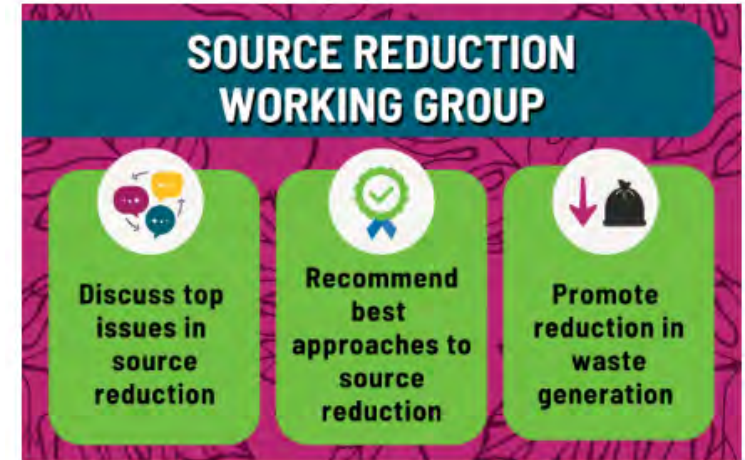
- Nicole Chatterson, Zero Waste Oahu
- Quinn Vittum, Reuse Hawaii

Educational/Cultural Representative

- Amy Brinker, Kamehameha Schools, Sustainability

Industry Representatives

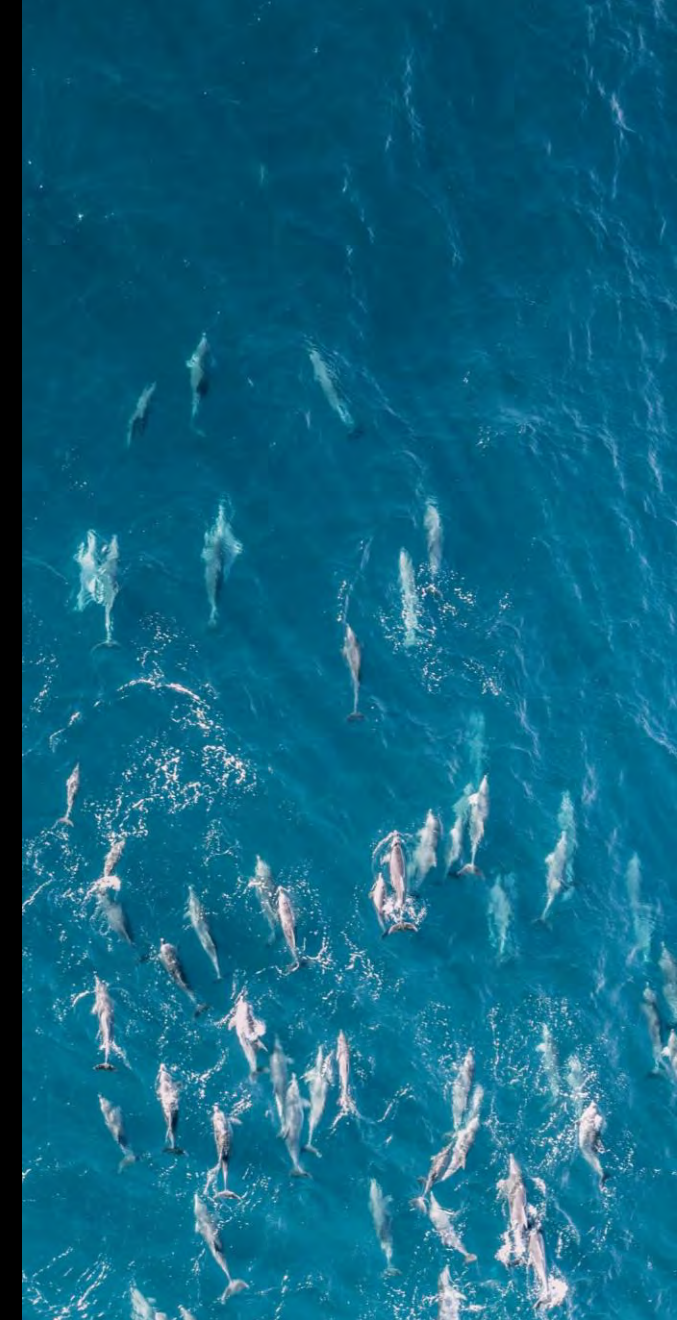
- Jessica Leorna, Building Industry Association (BIA) of Hawaii
- Allen Evans, Island Demo/Refrigerant Recycling
- Lauren Zirbel, Hawaii Food Industry Association
- Tina Yamaki, Retail Merchants of Hawaii



Agenda

SRWG Meeting #3

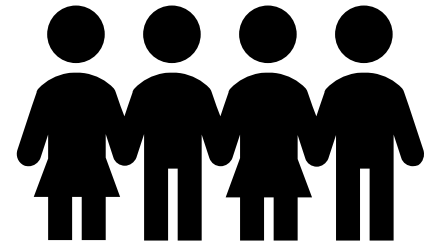
- I. CALL TO ORDER
- II. INTRODUCTION AND WELCOME
- III. APPROVAL OF MINUTES FROM SRWG MEETING NO. 2
- IV. PERMITTED INTERACTION GROUP (PIG)
PRESENTATION: CONSTRUCTION AND DEMOLITION
- V. PIG PRESENTATION: PHOTOVOLTAIC (PV) PANELS
- VI. PIG PRESENTATION: PRODUCT PACKAGING & FOOD WASTE/ORGANICS
- VII. SCHEDULING/ANNOUNCEMENTS FOR NEXT MEETING
- VIII. ADJOURNMENT



Approval of Minutes from SRWG Meeting No. 2 – Information/Action

Public Testimony – Approval of Minutes from SRWG Meeting No. 2

- Oral testimony will be taken in the following order:
 - In-person comments (registered first, then not registered)
 - Video conference comments (registered first, then not registered)
- If you registered to testify by 8:00 AM today, an email was sent to jleano@honolulu.gov with your name and the agenda items(s) you would like to address. If you filled out the registration form in person at the meeting, your name will be called in the order that it was received (as described in bullet 1 above).
- If you have not registered, you will be given an opportunity to speak to an item following oral testimonies of the registered speakers in each group (in-person, video).
- Each speaker is **limited to a two-minute** presentation and may not have anyone else read their statement.



Providing Public Comment over Video Conference

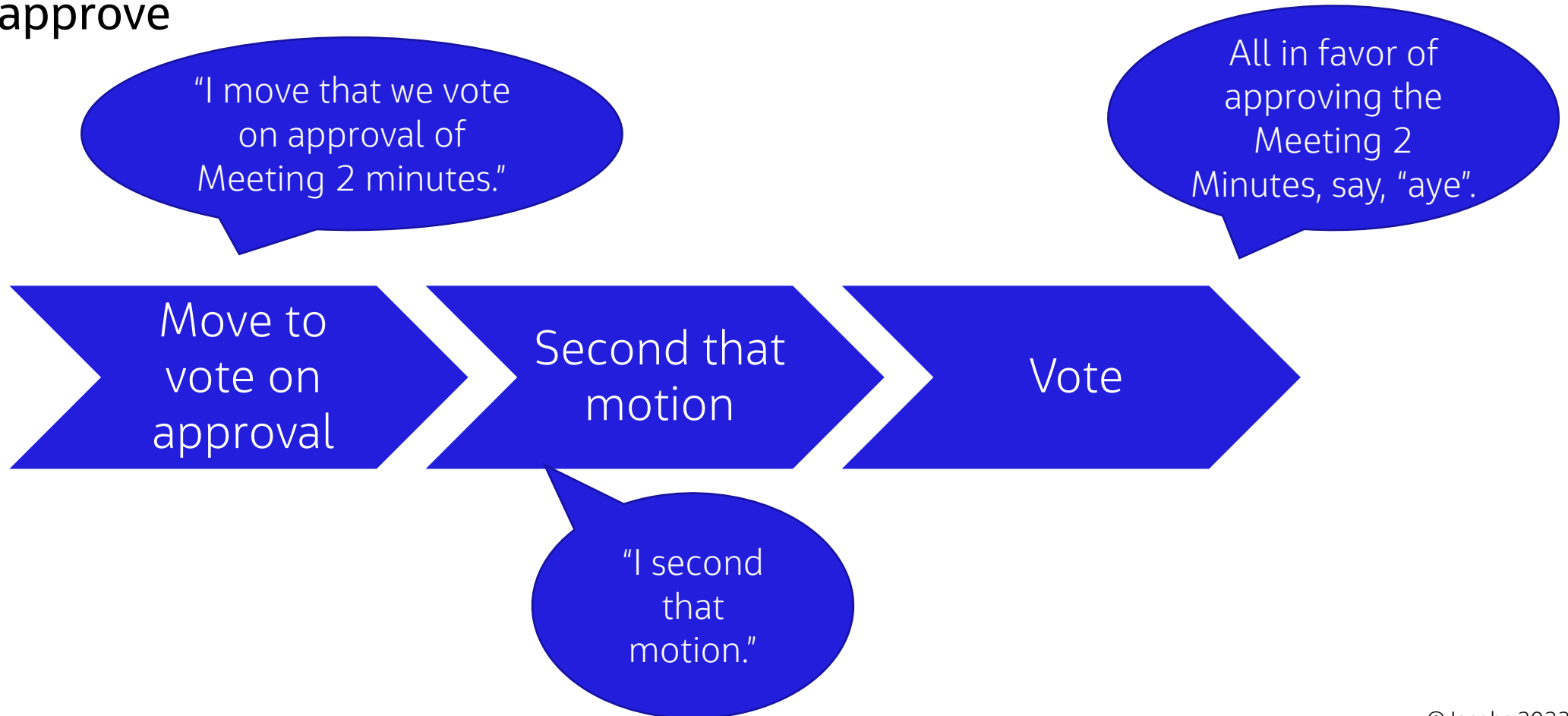
- Registered speakers:
 - Lyndsey will call on you when it is your turn to speak and grant you mic and video access.
- Not-registered speakers:
 - Following the registered speakers, Lyndsey will ask for additional testimonies from those online. Please raise your hand if you would like to testify.



- Lyndsey will call on you when it is your turn to speak and grant you mic and video access.

Minutes from SRWG Meeting No. 2

- Members reviewed minutes in their own time after receiving the meeting packet
- Any revisions?
- Motion to approve



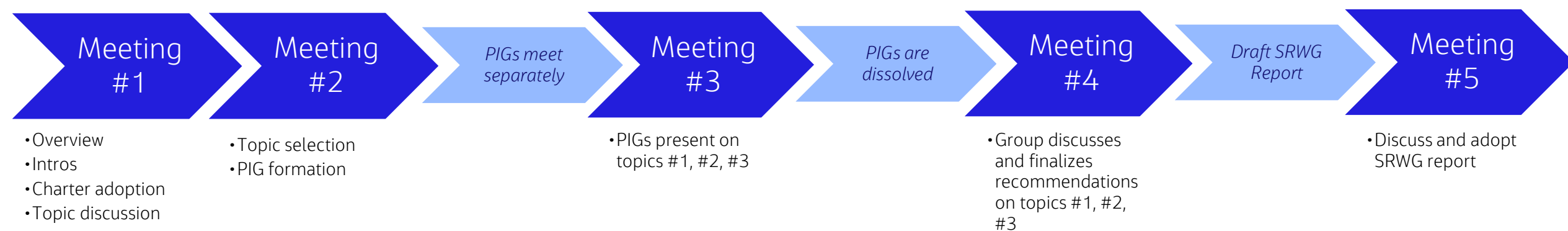
Permitted Interaction Group Presentations

Jacobs

Challenging today.
Reinventing tomorrow.

PIG Presentations

- In SRWG Meeting No. 2, the SRWG decided to have the 3 following PIGs:
 - Construction and Demolition Waste
 - Photovoltaic Panel Waste
 - Product Packaging & Food Waste/Organics –Information
- After SRWG Meeting No. 2, the PIGs met individually during several sessions.
- SRWG Meeting No. 3 will be utilized to share a summary of information and considerations from these PIG meetings. **Per Sunshine Law PIG requirements, SRWG Meeting No. 3 will NOT include discussion or decision making about these findings.**
- Following this meeting, the PIGs will be dissolved and then a discussion of this information will be conducted at the SRWG Meeting No. 4, next week.



PIG Presentation: Construction And Demolition Waste – Information

Roadmap

- Topic: Construction & Demolition Waste
- What is the current state of C&D waste on O‘ahu?
- Challenges and opportunities
- C&D Waste Considerations
 1. Seek out funding strategies
 2. Adopt a diversion regulation ordinance
 3. Adopt a deconstruction ordinance
 4. Streamline permitting process for C&D and concrete waste recyclers
 5. Establish transfer stations/stockpiling areas for C&D waste
 6. Educate and involve stakeholders

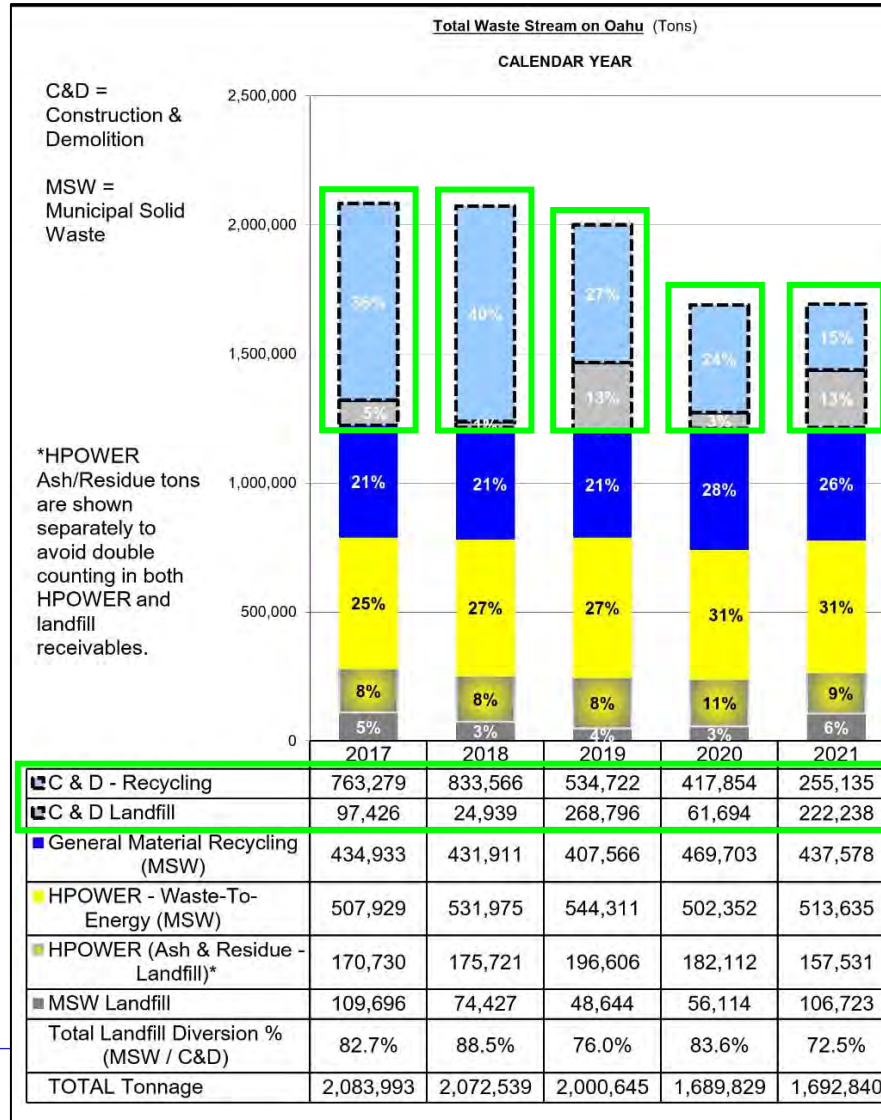
What is the current state of C&D waste on O‘ahu?

- **Upcoming problem:** PVT landfill is currently the primary disposal location for C&D waste. PVT is closing in the next 3-5 years.
- **City (ENV) to plan for C&D waste management**
 - City wants to reduce the amount of this C&D waste through source reduction
 - Also looking to divert some of this waste to H-POWER
 - City currently in process to identify a site for a new landfill that may accommodate C&D waste
 - A consultant is currently writing a C&D management plan for the City
 - City seeking policy that goes upstream and contributes to a reduction in waste generated rather than focusing on policy that impacts the transporter of waste via a disposal ban

Goal: Minimize C&D waste going to the landfill

Waste Composition

In 2021, C&D landfill was 13% of the waste stream (222,238 tons); C&D recycling was 15% of the waste stream (255,135 tons)



In 2017, 6% of landfill material was pallets
Overall Waste Stream, 2017 Waste Composition Results

Material	Estimated Percent	+ / -	Estimated Tons
Glass	1.5%		12,147
HI-5 Glass Containers	0.5%	0.1%	3,756
Non-HI-5 Glass Containers	0.6%	0.2%	4,814
Other Glass	0.5%	0.2%	3,578
Inerts and C&D Materials	14.7%		116,691
Untreated Wood	1.6%	1.3%	12,634
Treated Wood	3.4%	1.1%	27,042
Pallets	5.9%	3.1%	46,722
Gypsum Wallboard	0.7%	0.8%	5,325
Asphalt Roofing	0.0%	0.0%	117
Asphalt Paving	0.0%	0.0%	0
Concrete	0.1%	0.0%	749
Ceramics	0.4%	0.4%	3,483
Sand/Soil/Rock/Dirt	0.1%	0.1%	887
Other C&D Material	2.5%	1.2%	19,731

*C&D recycling data comes from a voluntary survey for businesses done annually

Data Source: City and County of Honolulu Department of Environmental Services Refuse Division

Data Source: Cascadia. 2018. 2017 Waste Composition Study. June. Final

Current C&D Strategies on O‘ahu

■ Senate Bill 431

- Requires State and County to have priority offeror selections for competitive procurements of C&D services, based on offeror’s recycling of C&D materials and use of recycled materials
- Requires State Building Codes to incorporate the International Green Construction Code and set specified targets for recycling, reuse, donation, and resale of non-hazardous construction waste

■ Collection Site at Kapa‘a Quarry Pilot Project

- City will collect and redistribute recovered materials and household items, in collaboration with Re-Use Hawaii

■ C&D Management Plan being Developed by City/County



I want to... [FY24 Budget](#) [Our Council](#) [Calendar](#) [News & Media](#)



Aug 9

Honolulu City Council Passes Resolution Urging The Administration To Establish A Kapa‘a Quarry Transfer Station Reusable Material Collection Site Pilot Project

**Updated: August 10, 2023*

HONOLULU, HAWAII - The Honolulu City Council passed [Resolution 23-168](#) on Wednesday, August 9, 2023, urging the establishment of a Kapa‘a Quarry Transfer Station reusable material collection site pilot project. This initiative aligns with the Council’s dedication to sustainable waste management and the well-being of our island community.

O‘ahu generates approximately 1.7 million tons of solid waste annually. Recognizing this, the proposed pilot project aims to alleviate some of O‘ahu’s pressing solid waste problems by collecting and redistributing recovered materials and household items.

The benefits of the project include:

Challenges and Opportunities in Addressing C&D Waste

■ Challenges?

- Challenging “norms”, behavior change, process change [Industry]
- Barrier to entry (difficulty permitting collection/processing site) [Regulatory]
- Limited space for sorting, recovering, and stockpiling/storing materials and need to be in places that reduce transportation costs [Industry]
- Re-educating architects, designers, builders/contractors, demolition crews, others [Industry]
- Some resistance in building industry around increased regulation [Regulatory]
- Concern for increasing cost of construction [Regulatory]

■ Opportunities?

- Large volumes of this material produced and will need a new destination with the closing of PVT landfill → potential for large impact [Regulatory]
- Increased volume will allow for investment in better processing equipment [Industry]
- Many opportunities for material re-use [Industry]
- Good case studies in other counties and states to learn from [All]
- Seeking policy that goes upstream and contributes to a reduction in waste generated rather than focusing on policy that impacts waste haulers via a disposal ban [Regulatory]
- Great local partners [Industry]

C&D Waste Considerations

1. Seek out funding strategies
2. Adopt a diversion regulation ordinance
3. Adopt a deconstruction ordinance
4. Streamline permitting process for C&D and concrete waste recyclers
5. Establish transfer stations/stockpiling areas for C&D waste
6. Educate and involve stakeholders

1. Seek out funding strategies

- **Current challenge:** Establishing new deconstruction, diversion, recycling programs or infrastructure requires money
- **Opportunity:** [Millions in EPA federal funding](#) for environmental waste reduction solutions
 - Fund expansion of Kapa'a transfer station pilot project → program
 - Incentivize contractors to divert waste (e.g., discount recycling tipping fees)
 - Fund education and outreach (EPA REO grant)
- **Solution:** City can apply for grants or build partnerships that support and seek grant funding

The screenshot shows the EPA website's page for the Bipartisan Infrastructure Law. The header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, Report a Violation, and About EPA. The main heading is "The Bipartisan Infrastructure Law: Transforming U.S. Recycling and Waste Management". A sidebar on the left lists various topics under the law, including Cleanup, Electric and Low-emission School Buses, Investments in Tribal Communities, Pollution Prevention, and Water Infrastructure. The main content area features an "Overview" section with a paragraph explaining the law's impact on recycling programs. To the right, there is a "Highlights" box with a yellow background, listing key announcements such as "\$100 Million for Solid Waste Infrastructure for Recycling Grants Nationwide" and "EPA Celebrates Year One". Below the overview, there is a link to a "United Nations International Resource Panel" report and a photograph of children holding a recycling bin. At the bottom, there are links to three grant programs: Solid Waste Infrastructure for Recycling, Recycling Education and Outreach, and Battery Collection Best Practices.

2. Adopt a diversion ordinance

- **Current challenge:** Lack of regulation for diversion
- **Examples:**
 - County of Hawai'i requires a Solid Waste Management Plan for developments
 - Plan identifies waste types, proposed waste reduction/recycling disposal methods, impacts to County waste-management facilities, mitigation measures to minimize impacts
 - State of Hawai'i licensed engineer or architect must write the Plan
 - City of Austin requires reuse/recycle of ≥50% C&D debris
 - For building permits ≥5,000 sq. ft.
 - For commercial and multifamily demolitions

Mitchell D. Roth
Mayor

Lee Lord
Managing Director



Ramzi I. Mansour
Director

Brenda Iokepa-Moses
Deputy Director

County of Hawai'i
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
345 Kekūānāo'a Street, Suite 41 · Hilo, Hawai'i 96720 · cohdem@hawaiicounty.gov
Ph: (808) 961-8083 · Fax: (808) 961-8086

May 5, 2023

SOLID WASTE MANAGEMENT PLAN Guidelines

INTENT AND PURPOSE

This is to establish guidelines for reviewing Solid Waste Management Plans, for which special conditions are placed on developments. The Solid Waste Management Plan will be used to (1) promote and implement recycling and recycling programs; (2) predict the waste generated by the proposed development to anticipate the impacts on County Solid Waste Management Facilities; and (3) predict the additional vehicular traffic being generated because of waste and recycling transfers. A State of Hawai'i licensed engineer or architect shall prepare a suitable Solid Waste Management Plan for review by the Department of Environmental Management.

REPORT

The Solid Waste Management Plan will contain the following:

1. Description of the project and the potential waste that may be generated: e.g., analysis of anticipated waste volume and composition. This includes waste generated during the construction and operation or maintenance phases. Waste types shall include (but not be limited to):
 - A. Organics (including food waste and green wastes);
 - B. Construction and Demolition materials;
 - C. Paper (including cardboard);
 - D. Metal (including ferrous and non-ferrous metals);
 - E. Plastic;
 - F. Special (including ash, sludge, treated medical waste, bulky items, tires);
 - G. Hazardous (including paint, vehicle fluids, oil, batteries); and
 - H. Glass.
2. Indicate onsite source separation by waste type, e.g., source separation bins for glass, metal, plastic, cardboard, aluminum, et cetera. Provide ample space for rubbish and recycling.
3. Identification and location of the proposed waste reduction, waste re-use, recycling facility or disposal site and associated transportation methods for the various components of the development's waste management system, including the number of vehicle

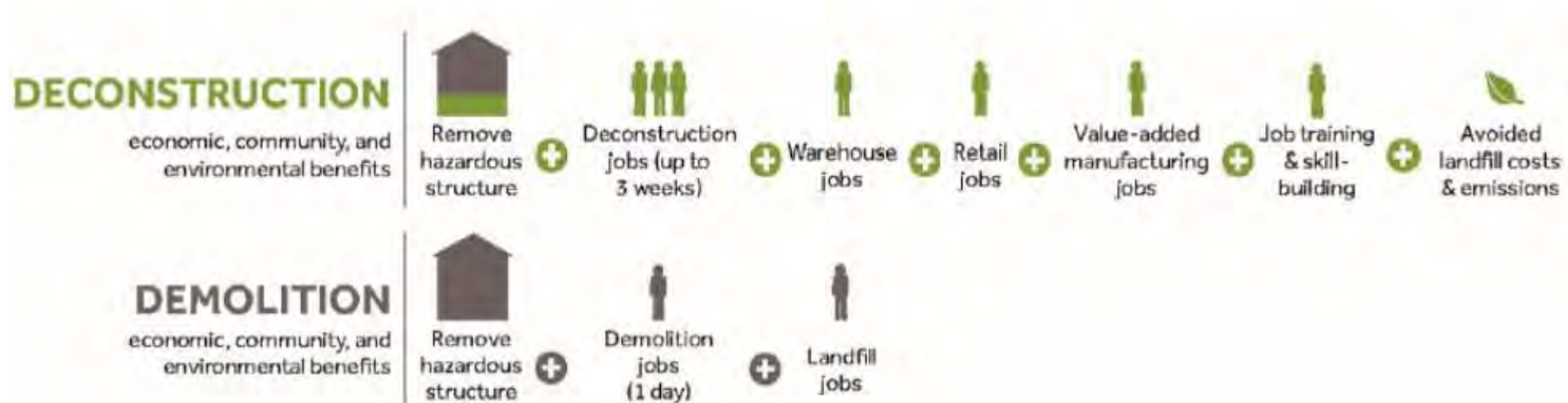
Hawai'i County is an Equal Opportunity Provider and Employer

2. Adopt a diversion ordinance CONTINUED

- **Solution:** City and County of Honolulu ordinance could require diversion, segregation, recycling, and/or reuse of C&D waste through:
 - Preparation of a **Solid Waste Management Plan**
 - Identification of **licensed waste haulers** (similar to [Orange County, North Carolina](#))
 - **Requiring a set percentage** of waste to be diverted from landfills (e.g. 50% of C&D waste from the project)
 - **Off-set cost of recycling/reuse** (e.g., potentially discounted tipping fees or hauling refunds)

Demolition vs. Deconstruction

Demolition	Deconstruction
Demolishing a building/structure to take it down (“wrecking”)	Deconstructing a building/structure intentionally to salvage materials for re-use and recycling



Source: [Cook County Illinois](#)

3. Adopt a deconstruction ordinance

- **Current challenge:** Lack of regulation for deconstruction
- **Example:** [City of Portland requires projects seeking a demolition permit to fully deconstruct](#)
 - For single-dwelling structures built **1940 or earlier**
 - A certified deconstruction contractor required → **workforce training program**
- **Solution:** City and County of Honolulu could require deconstruction (large buildings should be targeted for bigger impact; residential projects could also be regulated since many old single-family homes on O‘ahu are demolished to reconstruct new homes)



4. Streamline permitting process for C&D and concrete waste recyclers

- **Current challenge:** Permitting process for C&D and concrete waste recyclers is a barrier to setting up new recycling facilities
- **Solution:** Industry stakeholders could work with State to:
 - Streamline/simplify the [permitting process](#)
 - Provide online educational materials for interested permittees



Organizations

Select the organization from which you would like to submit a form.

Select Organization ▾

Forms

To locate a specific form please use our form finder.

Form Finder

Frequently Asked Questions

Are additional resources available to assist me with the application submission process?

How do I fill out the application if my proposed activity consists of multiple solid waste activities for

Solid Waste Section

A major responsibility of the Solid & Hazardous Waste Branch is the regulation of solid waste management facilities. The Solid Waste Section regulates solid waste management facilities that store, process, treat, transfer, or dispose of solid waste, including but not limited to landfill, waste-to-energy, composting, recycling, salvaging, and transfer facilities. Regulatory oversight is conducted under HRS 342H, HAR 11-58.1 and through a permitting system.

Permit applications and forms pertaining to facility solid waste management can be found below or by using the Application Finder (on the left). Please contact the Solid & Hazardous Waste Branch should you have any questions (808) 586-4226.

Contact Information

Contacts:
Phone:: 808-586-4226
Fax:: 808-586-5907

Additional Links

Solid Waste Section website

5. Establish transfer stations/stockpiling areas for C&D waste

■ **Current challenges:**

- Large limiting factor for diverting C&D waste is lack of space for stockpiling, sorting, and storing materials
 - Construction projects currently need to stockpile C&D materials on-site until a 'receiver' is identified
- The timeline for demand does not always align with supply of C&D waste

■ **Solutions:** Stakeholders could...

- Establish on-site stockpiling/sorting area(s) at potential, future C&D process facilities or landfill
- Establish a network of C&D transfer stations around the island to store materials
 - Minimize hauling fees by locating stations strategically around the island

*City's consultant working on C&D management plan may determine recommendations for new/current facilities, processes, operations, etc. for stockpiling and sorting C&D waste

6. Educate and involve stakeholders

- **Current challenge:** Lack of education and knowledge in the industry for reuse/recycling/diversion methods
- **Solutions:**
 - Education program for reuse/recycling/diversion methods
 - Education program before/during/after establishing new policies, ordinances, transfer system networks, etc.
 - Adoption and education of a core value system for the City
 - Ex. Hawaiian cultural value system was essential for success in [Kamehameha Schools demolition-rebuild project that diverted over 90% of C&D waste](#)
 - Aloha ‘āina = love for the land
 - Mālama = to care for
 - Kūleana = responsibility
 - Laulima = work together

Lesson Learned from Kamehameha Demolition of Keauhou Beach Hotel:

- Information on how to handle concrete and what it could be reused for was not readily available
- KS had to use their resources, money, and connections to make this project successful; additional education could help others

*EPA grant funding (consideration #1) can be put towards education programs

PIG Presentation: Photovoltaic (PV) Panels Waste – Information

Roadmap

- Topic: PV Panel Waste
- How much?
- What is the current state of PV panel waste on O‘ahu?
- How can O‘ahu handle PV panel waste?
- Challenges and opportunities
- Current strategies
- PV Panel Waste Program Considerations
 1. Seek out funding strategies
 2. Establish sites for collection, staging, and processing
 3. Establish a Statewide Stewardship Program
 4. Incentivization and education for Operation and Management of PV panels
 5. Subsidize shipping costs to ship PV panel waste to the mainland
 6. Explore Extended Producer Responsibility
 7. Support/incentivize secondary market program for re-use



How much?

- More than 1/3 of O‘ahu’s homes are powered by solar/PV panels
- As of 2021, 3.86 million modules have been installed on O‘ahu (residential and commercial)
- In 2021, 225,000 tons of PV materials installed throughout State of Hawai‘i
 - Which is 8.8% of all municipal solid waste and C&D waste in the state



Data Sources: [KumuKit](#) and [Hawaii Natural Energy Institute](#)

What is the current state of PV panel waste on O‘ahu?

- PV panels contain hazardous materials which may pollute the environment, if improperly handled
- PV panel lifespan is ~25 years
 - Proper installation and maintenance can increase lifespan
- Installers encourage owners to replace panels before their lifespan is overdue to new technologies
 - ~10-15 yrs. left on some panels
- Currently, no way to recycle PV panel waste in Hawai‘i
 - Waste must be shipped to the mainland for recycling
 - Functional panels can be re-sold to secondary market in Hawai‘i
- **Upcoming large wave of PV panel waste**, with greater growth in the future
 - Hawai‘i state goal of 100% renewable energy by 2045

How can O'ahu handle PV panel waste?

Recycling

*Must go to mainland

1. Collection
2. Land transport
3. Storage
4. Sorting
5. Frame removal
6. Packaging
7. Ocean transport (*high shipping costs)
8. Land transport on the mainland
9. Recycling at mainland processing facilities

- Valuable materials in panel waste but complex process to isolate/harvest materials from old panels
- Panels all manufactured differently

Re-use (secondary market)

*Re-use statewide

*Only for functional panels

1. Collection
2. Land transport
3. Storage
4. Sorting
5. Transport to secondary market consumers (on O'ahu or to other islands)

Processes are complex and each step requires money.

Challenges and Opportunities in Addressing PV Panel Waste

■ Challenges?

- Currently, no option to recycle on island [All]
- High shipping cost to the mainland [Industry]
- Lack of funding, or increases cost to consumers [Industry]
- Lack of centralized program/leadership [All]
- Lack of physical space for sorting, processing, staging [Industry]
- Owners are replacing panels earlier than needed [Industry]
- Installers/demolition contractors not currently being held accountable to managing materials [Regulatory]
- Difficulties with implementing EPR (Niagara County too extensive, no one willing to sell panels to their jurisdiction. Watching to see what CA does and how goes). [Regulatory]

■ Opportunities?

- Subsidizing shipping cost to the mainland [Regulatory]
- EPA grant funding opportunities [All]
- City could partner with agencies for centralized program/leadership [Regulatory]
- City could establish a physical space for sorting, processing, staging [Regulatory]
- Education for owners could promote longer usage of panels [All]
- Education for O&M could increase lifespan [All]

Current PV Panel Waste Strategies on O‘ahu

- Hawaii Natural Energy Institute (HNEI) **research** (led by Dr. Michael Cooney)
 - [Report: Considerations on Waste Management of Clean Energy Products in Hawaii](#)
 - Dr. Cooney currently working on a **report** for planning and implementation of a **Statewide Stewardship Program**
- [Inter-Island Solar Supply Recycling Program](#) (led by Brian Gold)
 - Hawaii’s largest wholesale panel distributor
 - Running **in-house recycling program** through partnership with a mainland recycler
 - Receives panels at end-of-life, sorts, packs, and ships containers of panels to the mainland
 - A few containers so far—program needs to be expanded and more attractive to the market
- [KumuKit](#) and [Re-Use Hawaii](#)
 - **Program for secondary market:** redistributing used panels to those who can’t afford new ones

PV Panel Waste Program Considerations

1. Evaluate funding strategies
2. Consider establishing sites for collection, staging, and processing
3. Consider the potential for a recycling program (Statewide Stewardship Program)
4. Incentivize and educate for O&M of PV panels
5. Subsidize shipping costs to ship PV panel waste to the mainland
6. Explore Extended Producer Responsibility
7. Support/incentivize secondary market program for re-use

1. Evaluate funding strategies

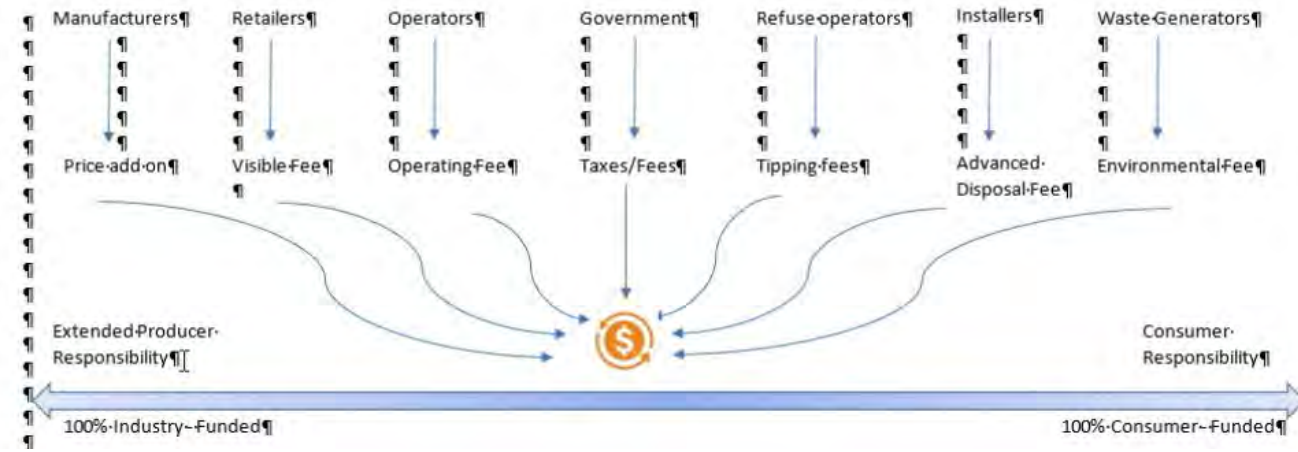
- **Current challenge:** Establishing new recycling and reuse programs requires money

- **Opportunity:**

- Industry- and consumer-level can be held accountable for disposal/recycling funding
- [EPA grants](#) - *For one-time capital improvements

- **Possible Solutions:**

- Sustainable on-going program funding from industry- to consumer-level
 - Manufacturers, retailers, operators, government, refuse operators, installers, and waste generators
- Expand tax credit for replacing PV panel systems, with a caveat requiring a fee for disposal/recycling of old system
- City/State can apply for grant funding



Source: Dr. Cooney

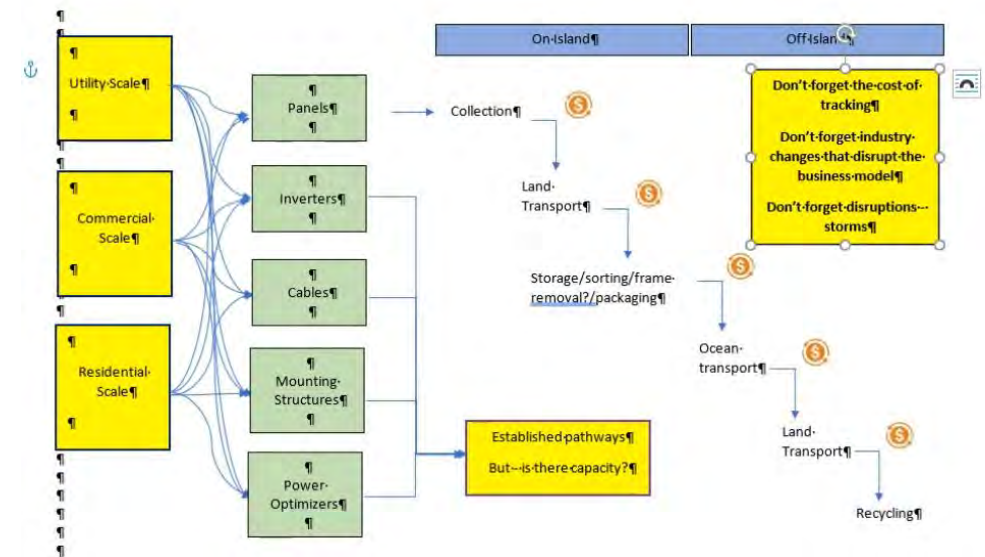
2. Consider establishing sites for collection, sorting, processing, and staging

- **Challenge:** Lack of physical space for sorting, processing, staging to prepare for shipping to the mainland. Also, must have appropriate permits (which can be challenging).
- **Example:** Inter-Island Solar Supply collects, sorts, processes, and stages panels on a small scale
- **Possible Solutions:**
 - City/Stakeholders can secure physical spaces for collection, etc.
 - City/State can off-set costs for commercial to incentivize dropping off panels
 - [Kapa‘a Station Pilot Project](#) with City and Re-Use Hawaii to collect and redistribute household and construction waste
 - Opportunity to pilot collecting, sorting, and staging PV panel waste



3. Consider establishing a Statewide Stewardship Program

- **Challenge:** Extremely complex process for PV panel recycling
- **Example:** [Inter-Island Solar Supply in-house recycling program](#) is a small-scale version of what needs to be scaled up to statewide level



- **Possible Solution:** Dr. Cooney recommends establishment of a Statewide Stewardship Program to support PV Panel recycling
 - Program could be led by a 403B non-profit organization, with oversight from manufacturers and government agencies.
 - Continued identification and maintenance of partnerships
 - Funding could come from several levels: industry to consumer
 - Manufacturers, retailers, operators, government, refuse operators, installers, and waste generators
 - Industry should watch how California's program roles out

4. Incentivize and educate owners about PV panel maintenance

■ Challenge:

- Panels are taken down and replaced sooner than they need to be
- Installers encourage replacement of panels due to new technologies
- Owners unaware of proper panel maintenance

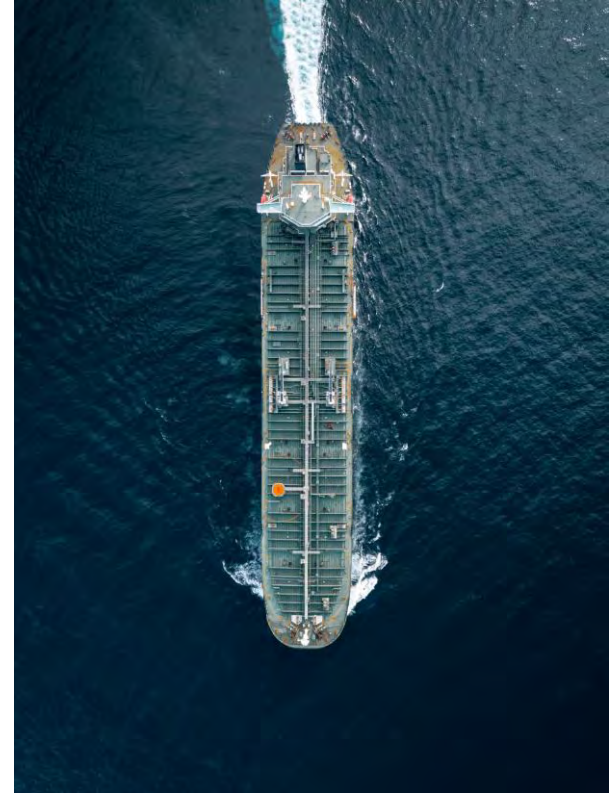
■ Example: [CCH Department of Facility Maintenance Storm Water Quality Division public education and outreach program](#) successful for storm water management

■ Possible Solutions:

- Establish an incentivization and education program
- Educate homeowners, commercial businesses, and installers on proper maintenance and reuse options to incentivize leaving panels on until they “die”
 - Proper installation, regular maintenance, and cleaning can increase lifespan

5. Subsidize shipping costs to ship PV panel waste to the mainland

- **Challenge:** Shipping costs to send panels to mainland very expensive (panels are heavy)
- **Example:** Inter-Island Solar Supply doesn't make a profit with recycling program—does it to minimize waste stream
- **Possible Solutions:**
 - If there is an industry- to consumer-level funding program, funds could go towards subsidizing or covering shipping costs for recyclers
 - City or State could consider subsidizing shipping costs
 - Individual consumer pays for shipping costs (e.g., someone replacing their system could pay a fee)



6. Explore Extended Producer Responsibility (EPR)

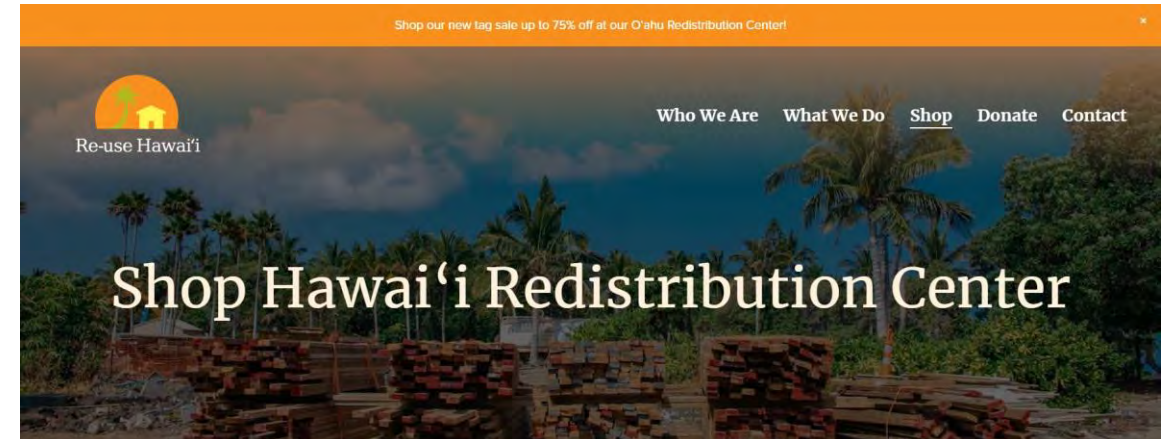
- **Challenge:** Lack of regulation and responsibility placed on producers. EPR for panels will likely be difficult to implement
 - Likely push-back from the industry
 - Manufacturers (majority international) may pull out from Hawai'i market
 - Demand will remain high to meet 2045 renewable energy goal
- **Examples:**
 - Washington only state with PV panel EPR law
 - Niagara County, NY only local government county with PV panel EPR law
 - Some manufacturers have pulled out from those areas
- **Next steps:** State DOH still interested in exploring EPR options—time and effort should be put into running-to-ground options and watching how California program is implemented.



State and Local Solar EPR Laws
1 State Law 1 Local Law

7. Support/incentivize secondary market program for re-use

- **Challenge:** Many used panels with life still in them, but not enough demand
 - Especially low demand for older panels with older technology
- **Example:** KumuKit + Re-Use Hawaii secondary market program successful in rural areas in Big Island
- **Possible Solution:** Tax incentives for used panel receivers to increase market demand



Preview of our Hawaii'i Island Redistribution Center



PV ICE: Photovoltaics in the Circular Economy Tool

- [Online software tool](#) that models the flow of mass and energy in the PV industry
- Aids with evaluation of potential circular economy pathways for PV materials

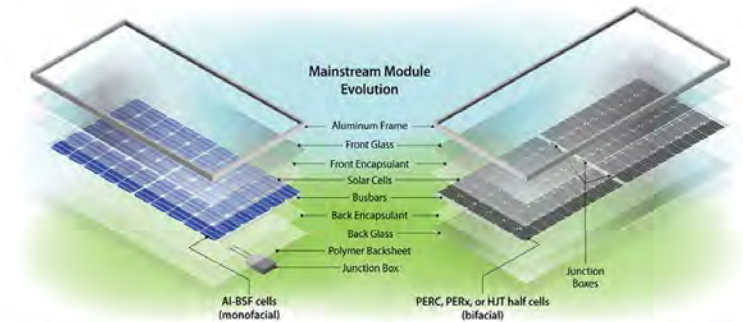
PV ICE: Photovoltaics in the Circular Economy Tool

The Photovoltaic in the Circular Economy (PV ICE) tool models the flow of mass and energy in the PV industry, helping to plan a more circular economy for solar energy.

PV ICE is an open-source tool designed to provide stakeholders and decision makers with a data-backed, mass-flow-based evaluation of potential circular economy pathways for PV materials.

[Download PV ICE Tool >](#)

The software can be accessed from a GitHub repo that includes tutorials and full documentation.



PV ICE captures historic and projected technology changes in PV, such as the evolution of module designs shown here. The tool models the changes in module composition over time to evaluate how this could impact virgin material needs, end of life waste, and installed capacity.

PV ICE Tool Capabilities

Using historic and projected average bills of materials for PV modules, PV ICE can estimate material demands—including accounting for changes in future PV designs, performance, and market shares. It can also estimate end-of-life material volumes, track effective installed capacity, and estimate the impact of a variety of circular pathways for PV materials.

Key features of PV ICE include:

- A transparent, reproducible, and research-backed tool as an open-source package in Python
- Dynamic baseline inputs that capture the evolution of PV technology
- Variable schedules for future deployments of PV that consider different paths to decarbonization
- Mass-flow tracking of circular loops, with planned expansions to include energy, impacts, and economics dimensions, including pathways for reuse, repair, remanufacturing, and recycling
- Application of NREL's experience in PV reliability to evaluate the impact of PV system quality on PV retirements
- Incorporation of common industry practices and behaviors (e.g., economic project lifetime, merchant tails, and repowering)
- A flexible framework that can evaluate spatial resolution, scenario comparisons, and even other renewable energy sources.

PIG Presentation: Product Packaging & Food Waste/Organics – Information

Goals from ISWMP

- Reduce per-capita waste generation **25 percent by 2030**, from **6.5 pounds per day to 4.9 pounds per day**.
- Reduce carbon emissions from the waste stream by reducing or eliminating carbon-based single-use plastics and polystyrene from the waste stream. Specifically, the City has established a goal of **reducing plastic waste going to H-POWER and landfill by 1 percentage point** (from 10 percent to 9 percent) by 2030.

Key Points To Consider

- Topic: Product Packaging (focused on food service-related packaging) & Food Waste/Organics
- What is the current state on O‘ahu?
- Challenges and Opportunities
- Current strategies/policies on O‘ahu
- Considerations
 - Seek EPA funding
 - Food Ware – Re-useable Container and Mobile Washing Program
 - Food Waste – Increase Food Donations
 - Food Waste – Increase Food Recycling (Organics and Composting)

What is the current state of food waste/organics on O‘ahu?

- 2017 Waste Composition Study results – Percentage in Disposed Waste Stream (by weight)
 - **Overall:** Organics are **35.5%**, largest portion of Honolulu’s overall waste stream
 - 2 most prevalent materials are food waste-non-vegetative and food waste-vegetative, together 20.1% of overall waste stream
 - **Overall Residential:** Organics are **42.3%**, largest portion of this waste stream
 - **Overall Commercial:** Organics are **31.1%**, largest portion of this waste stream

Table 4: Ten Most Prevalent Material Categories in Overall Waste

Material	Estimated Percent	Cumulative Percent	Estimated Tons
Food Waste-Non-Vegetative	11.8%	11.8%	93,853
Food Waste-Vegetative	8.3%	20.1%	65,980
Uncoated Corrugated Cardboard	6.5%	26.7%	51,967
Green Waste	6.0%	32.7%	47,880
Pallets	5.9%	38.6%	46,722
Other Organics	5.8%	44.3%	45,875
Compostable Paper	5.7%	50.1%	45,660
Mixed Recyclable Paper	5.5%	55.5%	43,298
Other Plastic Film/Wrap	4.4%	60.0%	35,339
Treated Wood	3.4%	63.4%	27,042
Subtotal	63.4%		503,616
All other materials	36.6%		290,753
Total	100.0%		794,368

[Source: Cascadia. 2018. 2017 Waste Composition Study. June. Final](#)

What is the current state of product packaging on O‘ahu?

- This PIG focused on food ware related product packaging
- The 2017 Waste Composition did not have a category that was specific to this material

Current food waste strategies/policies on O‘ahu

■ Residential food waste

- City is implementing Bill 62 (implementation deadline, Jan 1, 2024) to handle residential food waste (so will now cover food waste and green waste), RFP for residential food/green waste collection & processing recently went out

■ Commercial food waste

- City Wastewater Engineering is looking into treating commercial food waste at wastewater treatment plants – in the early planning phase
- City is looking to expand a law for commercial food waste generators required to divert food waste

■ O‘ahu Compost Project – Chinatown pilot project

- Food diversion from Chinatown restaurants to compost facility

Current product packaging strategies/policies on O'ahu

■ Disposable Food Ware Ordinance (DFWO)

- Affects all food vendors and businesses operating with City and County of Honolulu
- Amends O'ahu Plastic Bag Ban
- Restricts use and sale of polystyrene foam food ware, disposable plastic food ware, and disposable plastic service ware.

13. When can disposable service ware be provided to customers?

Food vendors may only provide disposable service ware that is non-plastic; this non-plastic service ware may only be provided:

- upon the request or affirmative response of a customer or person being provided prepared food or beverage, or
- in a self-service area or dispenser.

If the food vendor has disposable service ware in a self-service area or dispenser, the customer can take it without any verbal exchange.

DISPOSABLE FOOD WARE ORDINANCE

The Disposable Food Ware Ordinance (DFWO) began as Bill 40, which passed in City Council with a vote of 7-2. It was signed into law on December 15, 2019 as Ordinance 19-30, and it has since been termed the Disposable Food Ware Ordinance. The intent of this ordinance is to protect human safety and welfare and to improve environmental quality on the island, in the neighboring marine environment, and globally. The DFWO affects all businesses operating within the City of Honolulu (City).

The DFWO amends the O'ahu Plastic Bag Ban (PBB) and restricts the use of polystyrene foam food ware, disposable plastic food ware and disposable plastic service ware. It also dictates when disposable service ware can be provided.

Visit the DFWO webpage at www.opala.org/solid_waste/cw/dfwo_ordinance.html for more information on the DFWO, PBB, Frequently Asked Questions (FAQ), ENV Administrative Rules, and more. Last updated December 2020.

Effective January 1, 2021:

■ The DFWO amends the PBB definitions for "plastic checkout bag" and "plastic film bag," both of which contain revisions to six exemptions, including exemptions regarding food products (ROH Section 9-9.1).

■ No food vendor shall sell, serve, or provide disposable plastic service ware to customers (ROH Section 41-27.2).

■ A food vendor may only provide or distribute disposable service ware for prepared food or beverage:

- upon request or affirmative response of a

■ Any food vendor may provide disposable plastic straws, upon request, to customers for whom non-plastic straws are unsuitable due to medical or physical conditions. The following entities are exempt from all disposable plastic straw restrictions (as defined in the DFWO): hospitals, nursing facilities, assisted living facilities, adult residential care homes, hospice service agencies, hospice homes, home health agencies, and home care agencies.

■ To apply for an exemption for *situations with no reasonable alternatives available*, an exemption due to *significant hardship*, or an *Industry Exemption*, visit opala.org in December 2020 to download the form.

Disposable Food Ware Ordinance
Service Ware vs. Food Ware

Service Ware
Illustration of wooden chopsticks, a metal spoon, a metal fork, a metal knife, a metal straw, and a metal straw with a green and yellow striped pattern.

Disposable Plastic Service Ware
Illustration of a plastic fork, a plastic spoon, a plastic fork, a plastic knife, a pink plastic straw, and a yellow plastic straw with a green and yellow striped pattern.

Disposable Plastic Food Ware
Illustration of a plastic cup, a plastic plate, a plastic bowl, and a plastic container.

Polystyrene Foam Food Ware
Illustration of a white foam cup, a white foam plate, a white foam bowl, and a white foam container.

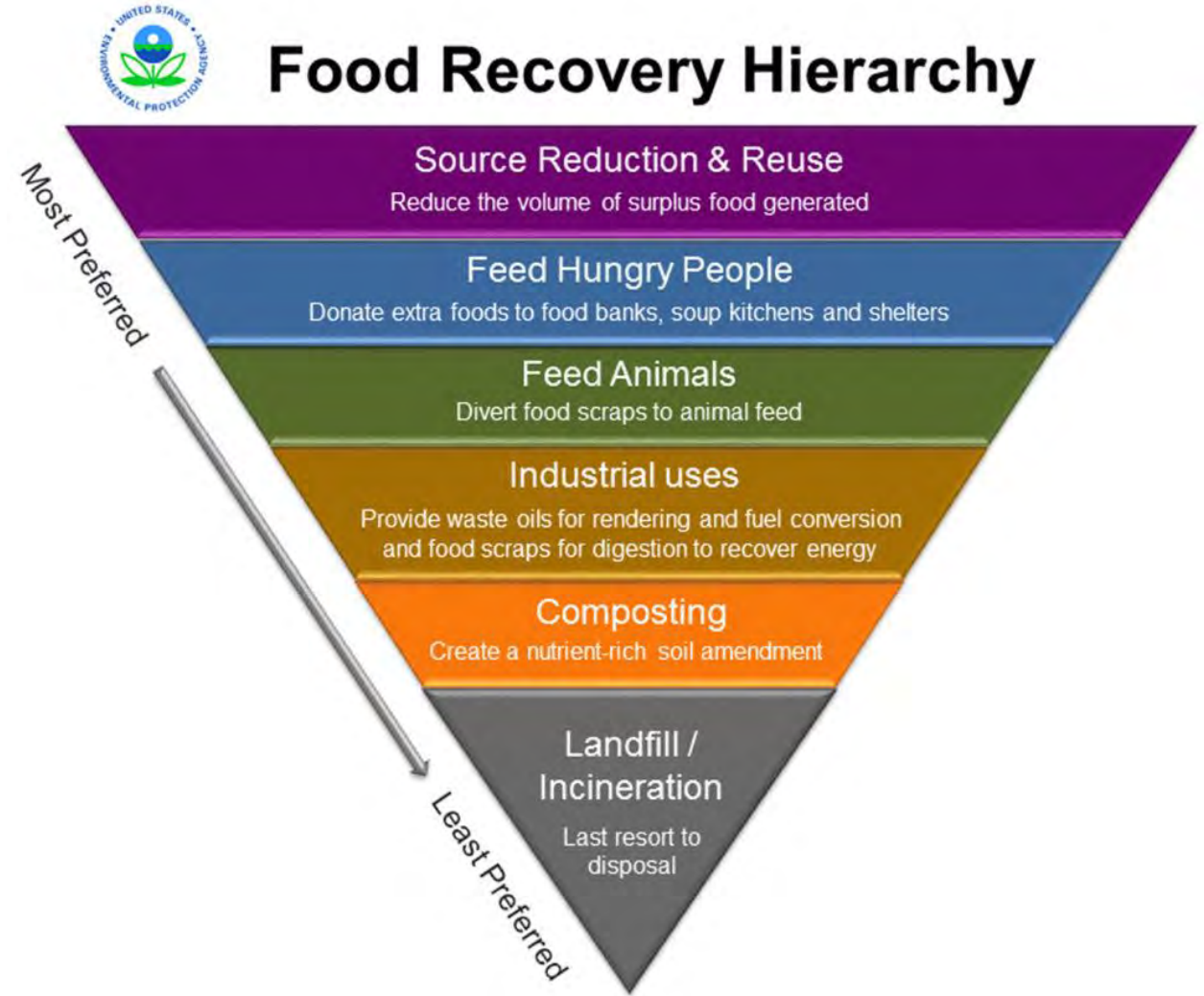
For details, exemptions, and frequently asked questions, visit opala.org

City and County of Honolulu | Department of Environmental Services | Refuse Division
businessrecycle@honolulu.gov | 768-3200 ext. 6



Current Needs

- For Food Waste: Need more focus on the higher portions of the [food recovery hierarchy](#)
- For Food-Related Packaging: Some existing ordinances, but there are challenges with implementation
 - The type of plastic food ware provided to customers is not regulated under the DFWO. The polypropylene containers do not fit the definition of “disposable plastic” in ordinance.
 - Need better infrastructure to support reusable container use



Considerations

- **Seek EPA funding**
- **Food Ware – Re-useable Container and Mobile Washing Program**
 1. Establish policy exemption for mobile dishwashing service to not require commercial kitchen connection
 2. Education
 3. Launch pilot project
 4. Launch program
- **Food Waste – Increase Food Donations**
 1. Incentivize food donations with an award/certificate
 2. Launch education program
 3. Update [Good Samaritan Law](#) language
- **Food Waste – Increase Food Recycling (Organics and Composting)**
 1. Expand [Ordinance Chapter 42, Section 42-3.5, Mandatory Food Waste Recycling](#)
 2. Establish an Organics & Composting Task Force

Seek EPA Funding

- **Challenge:** Lack of funding for programming
- **Example:** [EPA awarded \\$1.5 mil for County of Hawai'i](#) city-scale reusable food ware and refillable bottle system in Hilo
 - City and County of Honolulu well-positioned to apply next year
- **Solution:** Apply for [EPA funding](#)—City and/or Stakeholder partnerships
 - Funding could support:
 - Reusable food ware program
 - Education program
 - Incentivization program for food donations and food recycling
 - Establishment of an organics/composting task force



Funding supports all other strategies



Food Service Ware – Re-useable Container and Mobile Washing Program

- **Opportunity:** Zero Waste O‘ahu (Nicole) has re-usable containers from a prior pilot project
- **Challenges:**
 - Barrier in previous project: lack of access to washing facilities
 - Policy language states that food trucks and mobile dishwashing service need to be connected to a brick-and-mortar commercial kitchen
- **Examples:**
 - [New Zealand mobile wash truck program](#)
 - [Oregon Convention Center](#) reusable food container program
- **Solutions:**
 1. Establish policy language exemption for mobile dishwashing service to not require a commercial kitchen connection
 2. Education
 3. Launch pilot project—focused on large events
 4. Launch program

3-Year Plan for Packaging Priority: Mobile Dishwashing Exemption

Mobile Dishwashing & Food Service Ware

POLICY: exemption for mobile dishwashing services (remove requirement for commercial kitchen)

2023

Draft language for regulation or policy change

Identify coalition for policy

Identify resources and infrastructure needed

Coalition education (tours etc.)

2024

Start regulation or policy change process

Policy change finalized

Apply for funding for pilot

Public education

2025

Implement pilot project/s

Future Recommendations: Packaging



Food Waste – Increase Food Donations

- **Current policy:**

- [Good Samaritan Law](#) protects good-faith food donors from civil and criminal liability and encourages food donations

- **Challenges:**

- More businesses could donate food, but don't
- Some businesses are not aware of the donor liability protections in place
- Good Samaritan Law language currently excludes individuals from donating food
 - Currently, donors must have a commercial kitchen with specified requirements

- **Solutions:**

1. Incentivize food donations with an award/certificate
2. Launch education program
3. Update Good Samaritan Law language

3-Year Plan for Food Waste Priority: Food Donation Incentive Program

Food Donations

Incentives: Awards for business owners

2023

Identify resources and infrastructure needed

2024

Identify what agency might give award (aka "gold star")

Write for grants

Identify what is needed for "gold star"

Public education about new "gold star"

2025

Issue "gold star"

Food Waste – Increase Food Recycling (Organics and Composting)

- **Current policy:**

- [Ordinance Chapter 42, Section 42-3.5, Mandatory Food Waste Recycling](#) requires businesses of a certain size to send food waste to recycling facilities

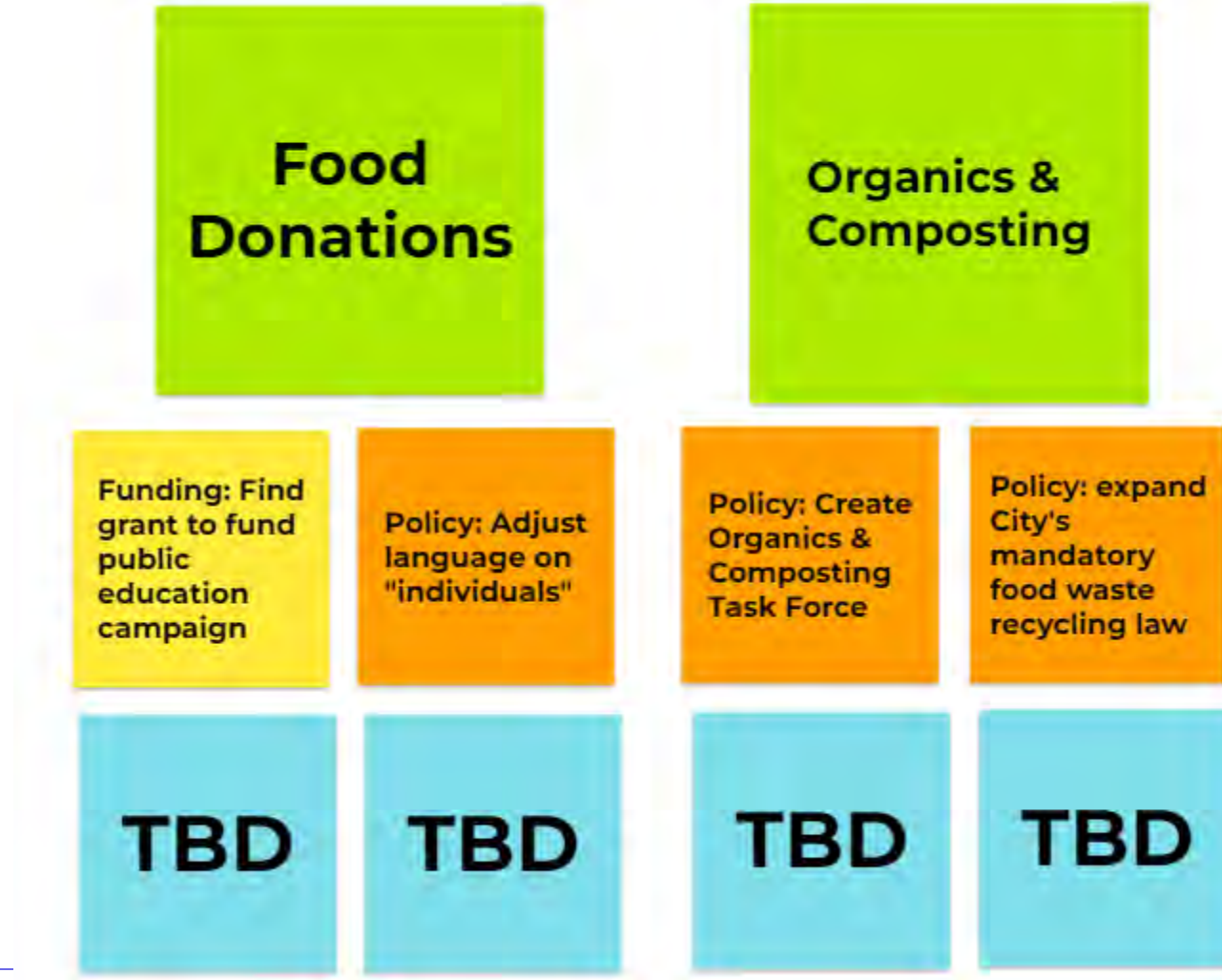
- **Opportunity:**

- Policy language change could increase food recycling by requiring additional sizes of businesses to separate food waste and send it to recycling facilities

- **Solutions:**

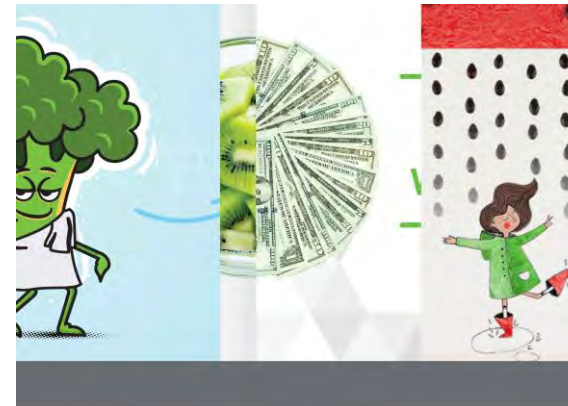
1. Expand Ordinance Chapter 42, Section 42-3.5 to require more businesses to send food waste to recycling facilities
2. Establish an Organics & Composting Task Force
 - To focus efforts/discussion on topic

Future Recommendations: Food Waste



EPA Tools for Preventing and Diverting Wasted Food

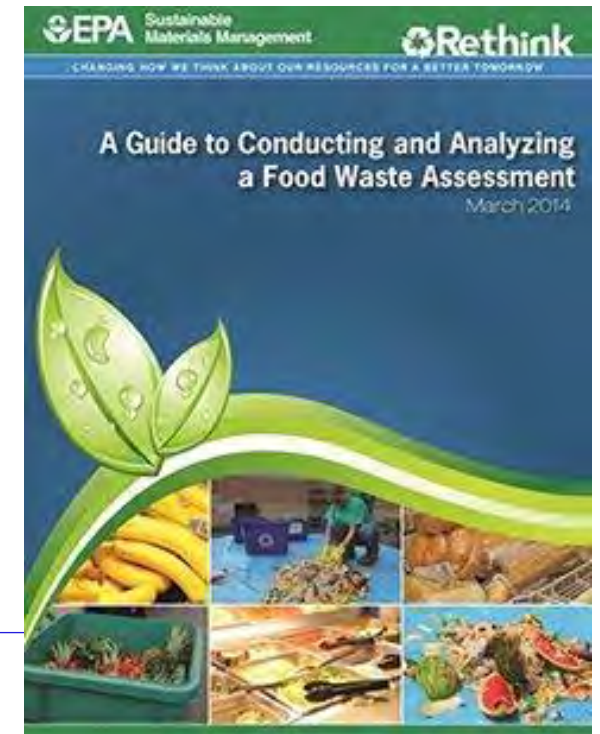
- [Social Marketing Campaign Toolkits](#) to prevent wasted food and compost food scraps → toolkits can be used to design behavior change campaigns for Oahu
- [Food Waste Assessment Guidebook](#)
- [Food and Packaging Waste Prevention Tool](#) – spreadsheet for food service establishments to track food waste and generate graphs & data summaries
- [Paper Tracking Waste Logs](#)
- [Waste Reduction Model \(WARM\) Tool](#)



Preventing Wasted Food
in Your Community:
A Social Marketing Toolkit

April 2023

EPA 530-R-23-008

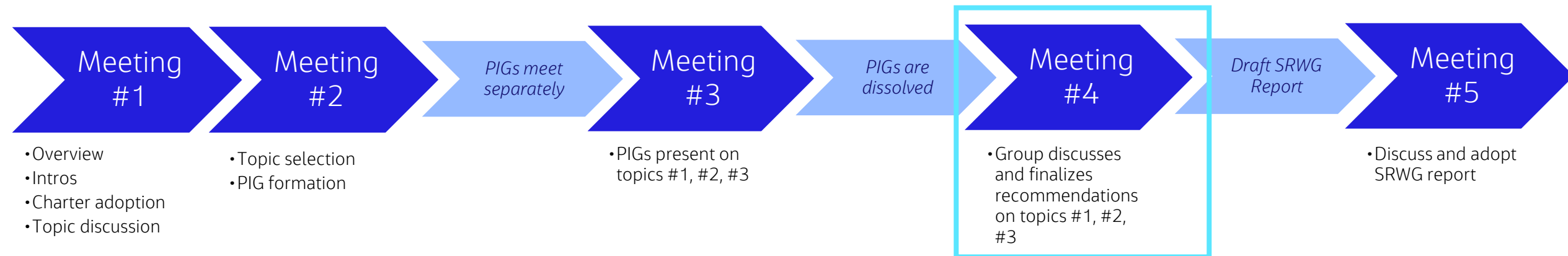


Scheduling/ Announcements for Next Meeting - Information

Scheduling/Announcements for Next Meeting - Information

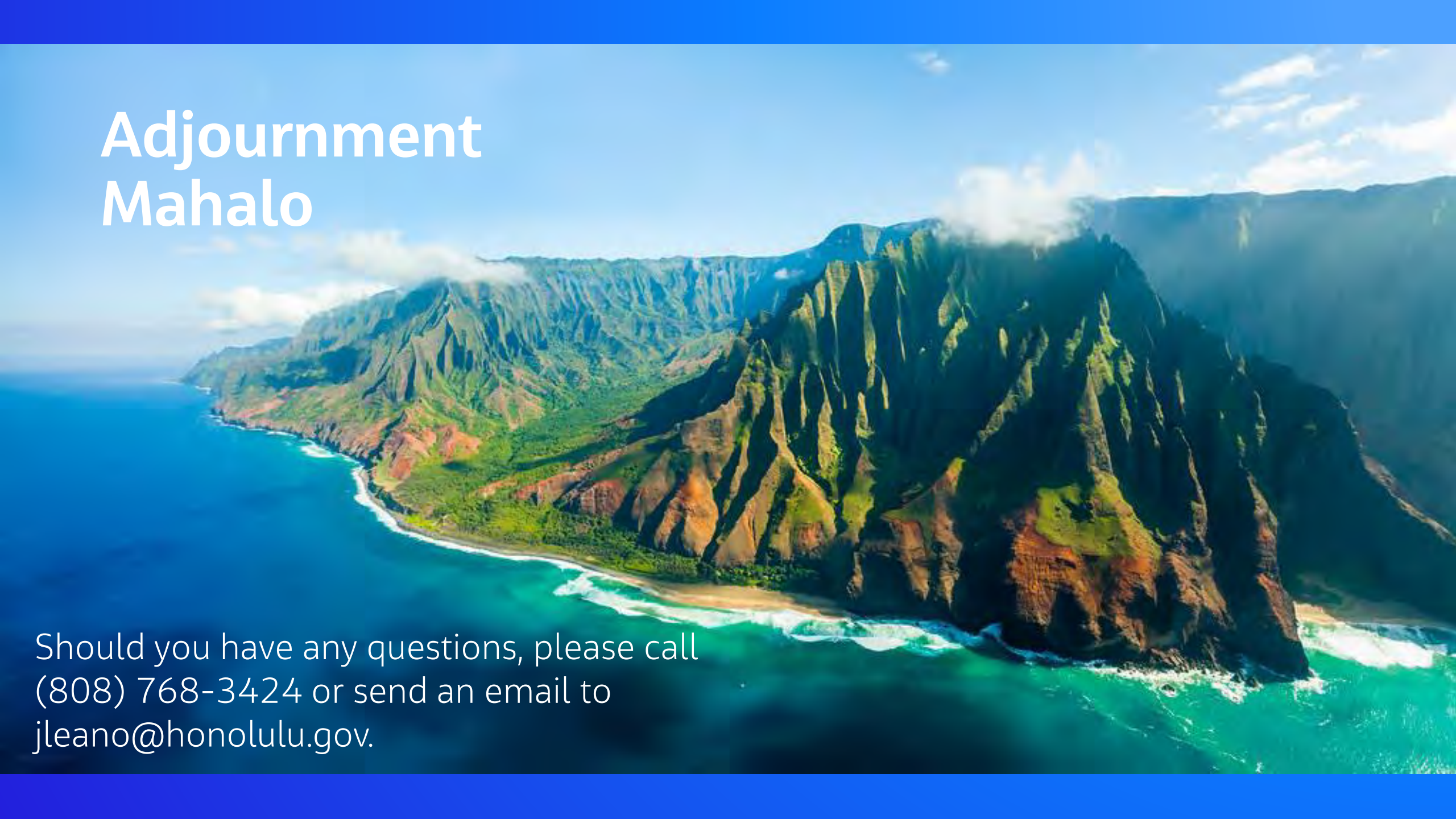
- Next steps
- Next meeting date – SRWG Meeting #4, Monday 12/4 from 1pm-4pm HST
 - In-person Option: Kapolei Hale Conference Room A
 - Virtual Option: MS Teams

Potential Meeting Flow



Adjournment Mahalo

Should you have any questions, please call
(808) 768-3424 or send an email to
jleano@honolulu.gov.



1132 Bishop Street
 Suite 1100
 Honolulu, Hawaii 96813
 O +1 808 943 1133
 F +1 808 954 4400
 www.jacobs.com

Subject City and County of Honolulu Source Reduction Working Group Meeting No. 3

Project Name Consultant Services for Source Reduction Working Group, City and County of Honolulu (Hawai'i)

Project Number CCHSRWG1

Prepared by Jacobs

Location Kapolei Hale – Conference Room “A” (Ground Floor)

Date/Time Wednesday, November 28, 2023, 9:00am – 11:00am

Participants **SRWG Members:**
 Hayley Cook (in-person) – Policy and Research Manager, Office of Climate Change, Sustainability and Resiliency
 Quinn Vittum (virtual) – Executive Director, ReUse Hawai'i
 Allen Evans (virtual) – President, Refrigerant Recycling and Island Demolition
 Tina Yamaki (virtual) – President, Merchants of Hawai'i
 Lauren Zirbel (virtual) – Executive Director, Hawai'i Food Industry Association
 Amy Brinker (virtual) – Sustainability Manager, Kamehameha Schools
 Lene Ichinotsubo (virtual) – Acting Chief, Department of Health, Solid and Hazardous Waste Branch
 Mike O'Keefe (virtual) – Deputy Director, Department of Environmental Services (ENV)

Jacobs (City's Consultant and Meeting Facilitator):
 Lyndsey Lopez (virtual) – Waste Planning and Strategy Lead

SRWG Member(s) Nicole Chatterson – Executive Director and Co-Founder, Zero Waste O'ahu
Not in Attendance Jessica Leorna – CEO, BIA Hawai'i

Notes

The meeting was recorded and documented in one audio file and one MS Teams Meeting recording. For each agenda item, the time stamp is given based on the audio file. Key items and identified action items are summarized.

Agenda Item	Time Stamp	Key Items/Actions
1 Call to Order	00:00 to 1:50	Lyndsey welcomes the members in-person and online. Lyndsey calls the meeting to order.
2 Introduction and Welcome	1:51 to 4:01	Emily conducts a roll call of members. Hayley Cook, Quinn Vittum, Allen Evans, Lene Ichinotsubo, Amy Brinker, Lauren Zirbel are in attendance

Agenda Item	Time Stamp	Key Items/Actions
<p>3 Approval of Minutes from SRWG Meeting No. 2 – Information/Action</p>	<p>4:02 to 7:33</p>	<p>at the time of the roll call. Tina Yamaki, Jessica Leorna, Mike O’Keefe, and Nicole Chatterson are not in attendance at the time of the roll call.</p> <p>Lyndsey goes over the agenda for the meeting.</p> <p>No one provides public testimony in-person or online for this agenda item.</p> <p>Lauren’s wifi went out, so she drops and rejoins during this agenda item. When she rejoins, Lyndsey provides a brief summary of what she missed.</p> <p>Action: Lauren motions to approve meeting minutes from SRWG Meeting No. 2. Lene seconds the motion.</p> <p>Quinn, Hayley, Allen, Amy, Lene, and Lauren vote to approve the minutes. The meeting minutes from Meeting No. 2 are approved.</p>
<p>4 Permitted Interaction Group (PIG) Presentation: Construction and Demolition Waste – Information</p>	<p>7:34 to 30:50</p>	<p>Lyndsey provides a summary of the PIG process and Sunshine Law PIG requirements. Lyndsey tells the group that, per Sunshine Law, the group cannot discuss and make decisions on the PIG topics, until after the PIGs are dissolved at the end of Meeting No. 3.</p> <p>Lyndsey presents information from the PIG on the topic of Construction and Demolition Waste.</p> <p>Lyndsey explains the current state of C&D waste on O’ahu:</p> <ul style="list-style-type: none"> • PVT landfill is currently the primary disposal location for C&D waste. PVT is closing in the next 3-5 years. The City wants to reduce the amount of C&D waste through source reduction. In 2021, C&D landfill was 13% of the waste stream, and C&D recycling was 15% waste stream. Large contributor to C&D waste stream was wooden pallets. <p>Lyndsey explains challenges and opportunities in addressing C&D waste:</p> <ul style="list-style-type: none"> • Challenges – challenging norms; barrier to entry with difficulties with permitting; limited space for sorting, recovering, stockpiling, sorting; re-educating architects, designers, contractors, demolition crews; resistance from industry around increased regulation; concerns for increasing cost of construction • Opportunities – large volume of material so potential for large impact; investment in better processing equipment; opportunities for reuse; case studies in other counties and states; policies that target upstream waste; local partnerships <p>Lyndsey explains current C&D strategies on O’ahu:</p> <ul style="list-style-type: none"> • Senate Bill 431 – requires state and county to have priority offeror selections for procurements of C&D services; requires State Building Codes to incorporate International Green Construction Code • Collection Site at Kapa’a Quarry Pilot Project collaboration between the City and Re-Use Hawai’i • Current C&D Management Plan being developed by City <p>Mike O’Keefe joins the meeting virtually at this time.</p> <p>Lyndsey presents on the 6 considerations:</p> <ol style="list-style-type: none"> 1. Seek out funding strategies – millions in EPA federal funding. As a solution, the City can apply for grants or build partnerships that support and seek grant funding. 2. Adopt a diversion ordinance – currently lack of regulation for diversion. As an example, County of Hawai’i requires a Solid Waste Management Plan. City of Austin requires reuse/recycle of more than 50% C&D debris for building permits for more than 5000 sq. ft. and for commercial and multifamily demolitions. As a solution, City and County of

Agenda Item	Time Stamp	Key Items/Actions
		<p>Honolulu could require diversion segregation, recycling, and/or reuse of C&D waste.</p> <p>Lyndsey explains the difference between demolition and deconstruction; studies show that deconstruction can lead to more jobs than demolition.</p> <ol style="list-style-type: none"> 3. Adopt a deconstruction ordinance – currently lack of regulation for deconstruction. As an example, the City of Portland requires projects seeking a demolition to fully deconstruct for single-dwelling structures built before 1940 and a certified deconstruction contractor is required. As a potential solution, the City and County of Honolulu could require deconstruction, targeting larger buildings or small old single-family homes. 4. Streamline permitting process for C&D and concrete waste recyclers – currently permitting process poses a barrier. As a potential solution, industry stakeholders could work with the State to streamline/simplify the permitting process and provide educational materials for interested parties. 5. Establish transfer stations/stockpiling areas for C&D waste – currently large limiting factor for diverting C&D waste is the lack of space for stockpiling, sorting, and storing materials. As a potential solution, stakeholders could establish on-site stockpiling/sorting areas at potential, future C&D process facilities or landfill and establish a network of C&D transfer stations around the island to store materials. 6. Educate and involve stakeholders – currently lack of education and knowledge in industry for reuse/recycling diversion methods. As potential solutions, establish education programs and adopt a core value system for the City. In a Kamehameha Demolition of Keauhou Beach Hotel project, they diverted over 90% C&D waste and Hawaiian core value system really impacted the project. Kamehameha project also lacked knowledge on how to handle concrete, so they additional education on diversion methods would be helpful for others.
<p>5 Permitted Interaction Group (PIG) Presentation: Photovoltaic (PV) Panel Waste – Information</p>	<p>30:51 to 55:25</p>	<p>Lyndsey presents information from the PIG on the topic of Photovoltaic (PV) Panel Waste.</p> <p>Lyndsey explains data on the amount of PV waste:</p> <ul style="list-style-type: none"> • More than 1/3 of O’ahu’s homes are powered by solar/PV panels • As of 2021, 3.86 million modules have been installed on O’ahu • In 2021, 225,000 tons of PV materials installed throughout State of Hawai’i, which is 8.8% of the municipal solid waste <p>Lyndsey explains the current state of PV panel waste on O’ahu:</p> <ul style="list-style-type: none"> • Panels contain hazardous materials • Panel lifespan is ~25 years • Installers have been encouraging owners to replace panels before their lifespan is over due to new technologies • Currently no way to recycle PV panel waste in Hawai’i. Waste must be shipped to the mainland for recycling. Functional panels can be re-sold, so there are re-use opportunities locally, but not recycling opportunities locally. <p>Lyndsey explains how O’ahu can handle PV panel waste now—through either recycling by shipping to the mainland or re-using functional panels.</p> <p>Lyndsey explains challenges and opportunities for addressing PV Panel waste:</p> <ul style="list-style-type: none"> • Challenges – no option to recycle on island; high shipping cost to mainland; lack of funding; lack of centralized

Agenda Item	Time Stamp	Key Items/Actions
<p>6 Permitted Interaction Group (PIG) Presentation: Product Packaging and Food</p>	<p>55:26 to 1:20:01</p>	<p>program/leadership; lack of physical space for sorting, processing, staging; owners replace panels earlier than needed; installers/demolition contractors not being held accountable for managing materials; difficulties with implementing EPR</p> <ul style="list-style-type: none"> • Opportunities – subsidizing shipping costs to the mainland; EPA grant funding opportunities; City could partner with agencies for a centralized program/leadership; potential physical space for panels; education <p>Lyndsey presents on the 7 considerations:</p> <ol style="list-style-type: none"> 1. Evaluate funding strategies. Possible solutions include sustainable on-going program funding from industry to consumer level, expand tax credit for replacing PV panel systems with a caveat requiring a fee for disposal/recycling of old system, and City/State can apply for grant funding. <p>Lyndsey goes over current PV panel waste strategies on O’ahu:</p> <ul style="list-style-type: none"> • Dr. Cooney’s research with Hawai’i Natural Energy Institute • Inter-Island Supply Recycling Program (led by Brian Gold) • KumuKit and ReUse Hawai’i have a program for redistributing used panels <p>Tina Yamaki joins virtually at this time.</p> <p>Lyndsey continues presenting on the 7 considerations:</p> <ol style="list-style-type: none"> 2. Consider establishing sites for collection, sorting, processing, and staging. Currently Inter-Island Solar Supply does this on a small scale. As potential solutions, City/stakeholders could secure a physical space for collection; off-set costs for commercial to incentivize dropping off panels; and explore opportunities to pilot collecting, sorting, and staging PV panel waste. 3. Consider establishing a Statewide Stewardship Program. Dr. Cooney recommended establishment of program. He suggests that the program could be led by a 403B non-profit organization with oversight from manufacturers and government agencies. Funding could come from several levels from the industry to consumer level. 4. Incentivize and educate owners about PV panel maintenance. Panels are taken down sooner than they need to be. Education on maintenance and installation could increase panel lifespan. 5. Subsidize shipping costs to mainland. Currently Inter Island Solar Supply doesn’t make a profit with the recycling program; they do it to minimize the waste stream. 6. Explore Extended Producer Responsibility – currently lack of regulation and responsibilities placed on producers. EPR will likely be difficult. Majority of manufacturers are international and they could pull out from Hawai’i market. Washington only state with PV panel EPR law. Niagara County only local government with PV panel EPR law. State DOH still interested in exploring EPR options—time and effort should be put into running-to-ground options and watching how California program is implemented. 7. Support and incentivize secondary market program from reuse – currently there are many used panels but not enough demand to match. A possible solution includes tax incentives for receivers of panels to increase market demand. <p>Lyndsey shared a slide that includes resources and tools that discuss the circular economy of PV panels.</p> <p>Lyndsey presents information from the PIG on the topic of Product Packaging and Food Waste/Organics.</p>

Agenda Item	Time Stamp	Key Items/Actions
<p>Waste/Organics – Information</p>		<p>Lyndsey goes over goals from the ISWMP:</p> <ul style="list-style-type: none"> • Reduce per-capita waste generation 25 percent by 2030, from 6.5 pounds per day to 4.9 pounds per day • City established goal of reducing plastic waste going to H-POWER by 1 percent <p>Lyndsey goes over the current state of food waste/organics on O’ahu:</p> <ul style="list-style-type: none"> • 2017 waste composition study found that organics were 35.5%, largest portion of O’ahu’s overall waste stream • For residential, organics were 42.3% of waste stream • For commercial, organics were 31.1% <p>Lyndsey goes over the current state of product packaging on O’ahu, but the 2017 waste composition study did not have a category specific to this material.</p> <p>Lyndsey explains current food waste strategies/policies on O’ahu:</p> <ul style="list-style-type: none"> • Residential food waste: City is implementing Bill 62 • Commercial food waste: City Wastewater Engineering is looking into treating commercial food waste at wastewater treatment plants; City looking to expand a law for commercial food waste generators required to divert waste • O’ahu Compost Project Chinatown pilot project is focused on diverting food waste from Chinatown restaurants to compost facilities <p>Lyndsey explains current product packaging strategies/policies on O’ahu:</p> <ul style="list-style-type: none"> • Disposable Food Ware Ordinance (DFWO) <p>Lyndsey explains current needs for source reduction:</p> <ul style="list-style-type: none"> • Food waste: Need more focus on higher portions of the food recovery hierarchy • Food-Related Packaging: There are some existing ordinances but challenges with implementation <p>Lyndsey explains the group’s considerations:</p> <ol style="list-style-type: none"> 1. Seek EPA funding. EPA awarded \$1.5 million to County of Hawai’i for a city-scale reusable food ware and refillable bottle system in Hilo. Solutions include applying for EPA funding – City and/or stakeholder partnerships 2. Food ware – Re-usable container and mobile washing program. Zero Waste O’ahu (Nicole) has re-useable containers from a prior pilot project. Previous barrier was lack of access to washing facilities. Policy language states that food trucks and mobile dishwashing service need to be connect to a brick-and-mortar commercial kitchen. Solutions include establishing policy language exemption for mobile dishwashing service to not require a commercial kitchen connection; education; and launch of pilot project and programs. Lyndsey goes over 3-Year Plan for Packaging Priority: Mobile Dishwashing Exemption and Future Recommendations. 3. Food waste – increase food donations. Current policy Good Samaritan Law protects good-faith food donors from civil and criminal liability and encourages food donation. Potential solutions are to incentivize food donations from businesses with an award, launch education program, and update Good Samaritan Law language. Lyndsey goes over 3-Year Plan for Food Waste Priority: Food Donation Incentive Program. 4. Food waste – increase food recycling. Current policy Ordinance Chapter 42 Section 42-3.5 requires businesses of

Agenda Item	Time Stamp	Key Items/Actions
7 Scheduling/Announcements for Next Meeting - Information	1:20:02 to 1:24:15	<p>a certain size to send food waste to recycling facilities. Policy language change could increase food recycling by requiring additional sizes of business to send food to recycling facilities. Also, an Organics & Composting Task Force could be established.</p> <p>Lyndsey goes over Future Recommendations: Packaging and EPA Tools for Preventing and Diverting Wasted Food.</p> <p>Lyndsey announces the next meeting date and time on Monday December 4, 2023 from 1pm-4pm HST.</p> <p>Lyndsey asks the SRWG members if they have any clarifying questions. SRWG members did not ask clarifying questions.</p> <p>Dean Uchida (public attendee) asks in the Microsoft Teams chat if the slides would be made available. Lyndsey informs Dean that the slides will be available on the SRWG website online.</p>
8 Adjournment	1:24:16 to 1:25:23	<p>Lyndsey thanks everyone. The meeting is brought to a close.</p>

Meeting 4



**DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU**

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

MICHAEL O'KEEFE
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
RE 23-048

November 28, 2023

NOTICE

**CITY AND COUNTY OF HONOLULU
SOURCE REDUCTION WORKING GROUP**

MEETING NO. 4

**MONDAY, DECEMBER 4, 2023
KAPOLEI HALE – CONFERENCE ROOM “A” (Ground Floor)
1000 Ulu'ōhi'a Street, Kapolei, Hawaii 96707
1:00 PM – 4:00 PM**

PUBLIC PARTICIPATION

Members of the public may participate in-person at the above address or remotely by video conference link.

1. To join the meeting by video conference, visit: (Please mute your devices except to testify).

https://teams.microsoft.com/join/19%3ameeting_ZGJjZmEzZTAtdGE3Zi00MDA1LWI3OWQtNGFjYzIzNGMzMTNm%40thread.v2/0?context=%7b%22Tid%22%3a%2237247798-f42c-42fd-8a37-d49c7128d36b%22%2c%22Oid%22%3a%22170409f7-7650-4062-b2c2-6365c10a1759%22%7d

ORAL COMMENTS

Persons wishing to testify in-person are requested to register as follows:

1. Send an email to jleano@honolulu.gov with your name and the agenda item(s) on which you wish to testify by 8:00 AM on the day of the meeting; or

2. Fill out the registration form in person at the meeting.

Persons wishing to testify remotely are requested to register as follows:

1. Video Conference: Send an email to jleano@honolulu.gov with your name and the agenda item(s) on which you wish to testify no later than 8:00 AM on the day of the meeting.

Oral testimony will be taken in the following order:

1. In-person comments will be taken first then closed.
2. Video conference comments will be taken second then closed.

Oral testimony will be taken at the beginning of each agenda item. Each speaker is limited to a two-minute testimony and may not have anyone else read their statement.

Once the oral testimonies of registered speakers have been taken, persons who have not registered will be given an opportunity to speak.

WRITTEN COMMENTS

Written comments may be submitted by fax to 808-768-3434, emailed to jleano@honolulu.gov, or mailed to Refuse Division, Attention: Planning and Engineering Branch, 1000 Ulu'ōhi'a Street, Suite 201, Kapolei, Hawai'i 96707. To ensure distribution at the meeting, written comments must be received by 8:00 AM on the day of the meeting. If submitted, written comments, including the commenter's address, email address and phone number, may be posted on the Project's webpage at <https://www.honolulu.gov/opala/source-reduction-working-group.html>.

Should you have any questions, please call 808-768-3424 or send an email to jleano@honolulu.gov.

MATERIALS AVAILABLE FOR INSPECTION

Meeting materials ("board packet" under HRS Section 92-7.5), when made available to the Source Reduction Working Group members, are accessible at <https://www.honolulu.gov/opala/source-reduction-working-group.html>.

If you need an auxiliary aid/service or other accommodation due to a disability, contact Julie Ann Leano at 808-768-3424 or jleano@honolulu.gov as soon as possible, preferably by November 30, 2023. Requests made as early as possible have a greater likelihood of being fulfilled.

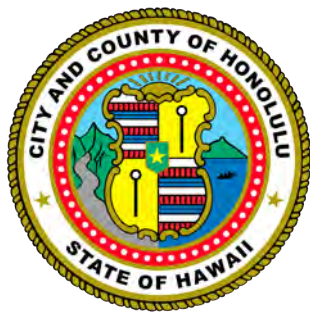
Upon request, this notice is available in alternate/accessible formats.

AGENDA

- I. CALL TO ORDER**
- II. INTRODUCTION AND WELCOME**
Roll call of Source Reduction Working Group (SRWG) members.
- III. APPROVAL OF MINUTES FROM SRWG MEETING NO. 3 – Information/Action**
Members will approve the minutes and meetings summary notes from SRWG Meeting No. 3.
- IV. DISCUSSION OF INFORMATION PRESENTED AT MEETING NO. 3 – Information**
Discussion of the information presented by the three Permitted Interaction Groups (PIG) on the topics of (1) Construction and Demolition Waste, (2) Photovoltaic Panels Waste, and (3) Product Packaging and Food Waste/Organics.
- V. FINALIZE RECOMMENDATIONS – Information/Action**
Finalize recommendations to be put forth by the SRWG in the upcoming Report.
- VI. SCHEDULING/ANNOUNCEMENTS FOR NEXT MEETING – Information**
 1. Next steps – Preparation of Report
 2. Next meeting date
- VII. ADJOURNMENT**



WELCOME TO THE CITY AND COUNTY OF HONOLULU SOURCE REDUCTION WORKING GROUP (SRWG) MEETING # 4 DECEMBER 4, 2023



Thank you for joining us. We will be beginning shortly.

Online Participants

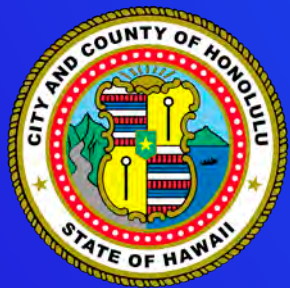
- We encourage [SRWG members](#) to turn on their video. [SRWG Members](#) are welcome and encouraged to speak up throughout the call. Though, please keep your [microphone on mute](#) unless you are speaking.



- The [Public](#) will have microphones and cameras disabled.
- For [virtual Public attendees that signed up to provide testimony](#), the moderator will enable your microphone and camera during the Public Comment period at the start of each actionable agenda item. Unmute to speak. Turning on your camera is optional.
- For [virtual Public attendees that did not previously sign up for testimony](#), please use the [chat feature](#) or [raise hand feature](#) to indicate your interest in speaking when the moderator asks for additional public comments.

City and County of Honolulu
Source Reduction Working Group
Meeting #4

December 4, 2023



Welcome!

Source Reduction Working Group Purpose

Collaborate, engage in discussions, and recommend programs and policies to reduce waste generation in O'ahu



Primary Facilitator
Lyndsey Lopez



In-Room Coordinator
Emily Stone

Call to Order/Roll Call

Government – City and County of Honolulu

- Mike O’Keefe, Department of Environmental Services
- Hayley Cook, Office of Climate Change, Sustainability and Resiliency

Government – State of Hawaii

- Lene Ichinotsubo, Department of Health, Solid and Hazardous Waste Branch

Environmental and Sustainability Representative

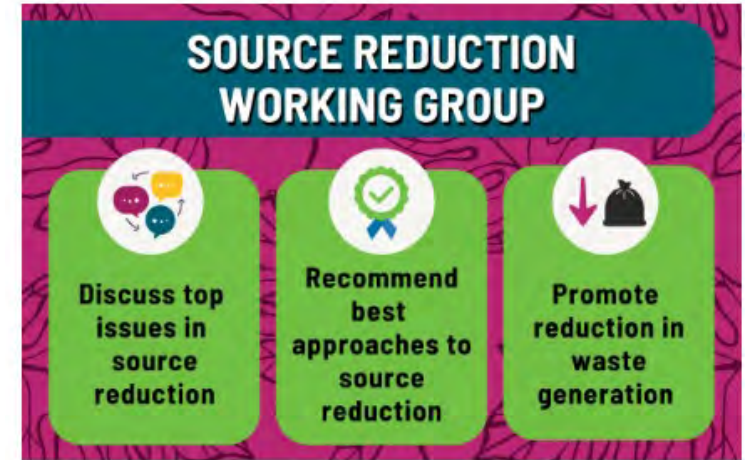
- Nicole Chatterson, Zero Waste Oahu
- Quinn Vittum, Reuse Hawaii

Educational/Cultural Representative

- Amy Brinker, Kamehameha Schools, Sustainability

Industry Representatives

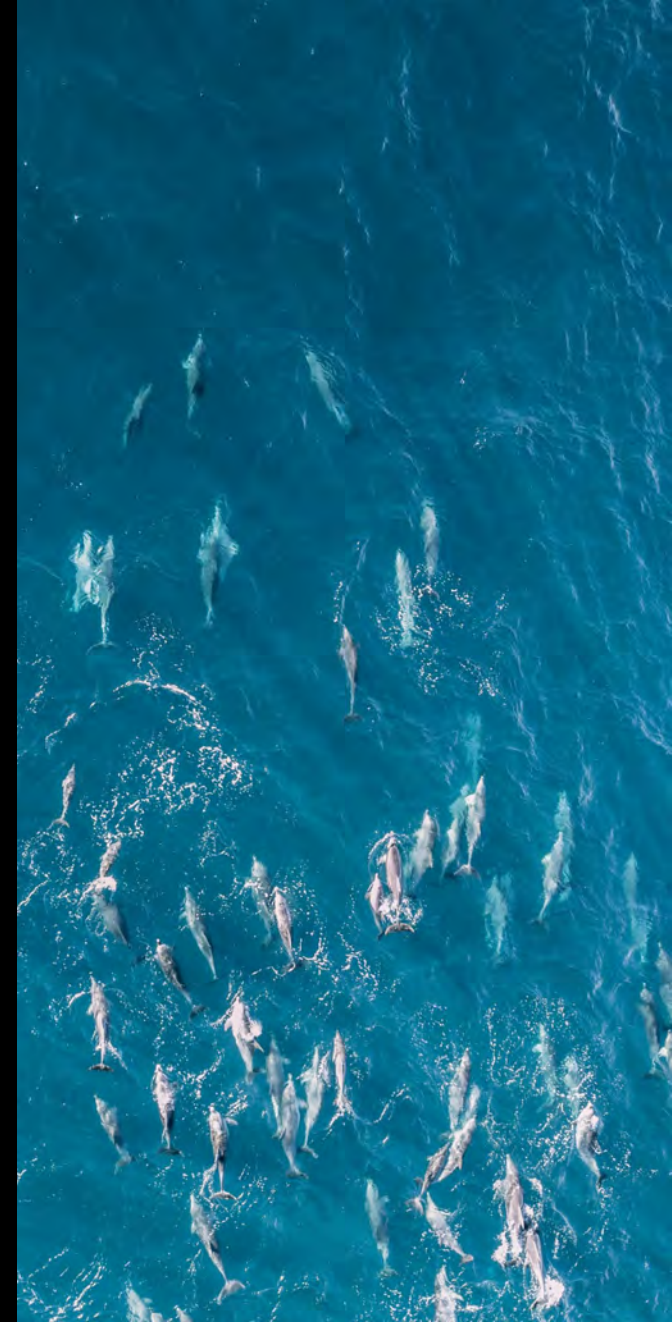
- Jessica Leorna, Building Industry Association (BIA) of Hawaii
- Allen Evans, Island Demo/Refrigerant Recycling
- Lauren Zirbel, Hawaii Food Industry Association
- Tina Yamaki, Retail Merchants of Hawaii



Agenda

SRWG Meeting #4

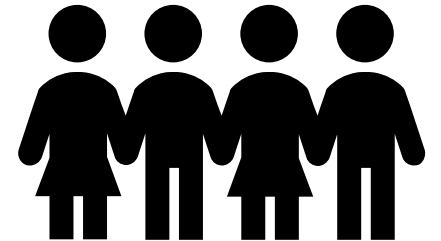
- I. CALL TO ORDER
- II. INTRODUCTION AND WELCOME
- III. APPROVAL OF MINUTES FROM SRWG MEETING NO. 3
- IV. DISCUSSION OF INFORMATION PRESENTED AT MEETING NO. 3
- V. FINALIZE RECOMMENDATIONS
- VI. SCHEDULING/ANNOUNCEMENTS FOR NEXT MEETING
- VII. ADJOURNMENT



Approval of Minutes from SRWG Meeting No. 3 – Information/Action

Public Testimony – Approval of Minutes from SRWG Meeting No. 3

- Oral testimony will be taken in the following order:
 - In-person comments (registered first, then not registered)
 - Video conference comments (registered first, then not registered)
- If you registered to testify by 8:00 AM today, an email was sent to jleano@honolulu.gov with your name and the agenda items(s) you would like to address. If you filled out the registration form in person at the meeting, your name will be called in the order that it was received (as described in bullet 1 above).
- If you have not registered, you will be given an opportunity to speak to an item following oral testimonies of the registered speakers in each group (in-person, video).
- Each speaker is **limited to a two-minute** presentation and may not have anyone else read their statement.



Providing Public Comment over Video Conference

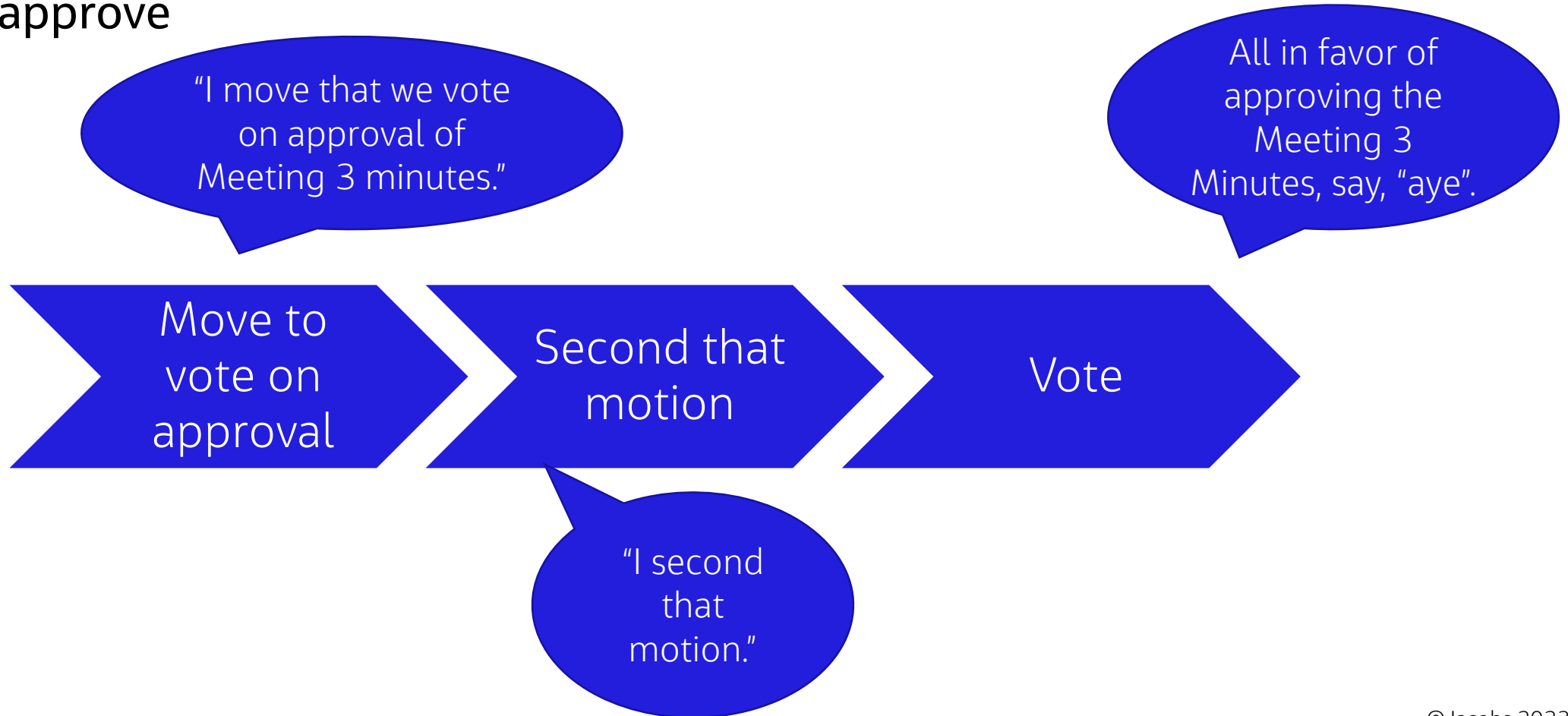
- Registered speakers:
 - Lyndsey will call on you when it is your turn to speak and grant you mic and video access.
- Not-registered speakers:
 - Following the registered speakers, Lyndsey will ask for additional testimonies from those online. Please raise your hand if you would like to testify.



- Lyndsey will call on you when it is your turn to speak and grant you mic and video access.

Minutes from SRWG Meeting No. 3

- Members reviewed minutes in their own time after receiving the meeting packet
- Any revisions?
- Motion to approve



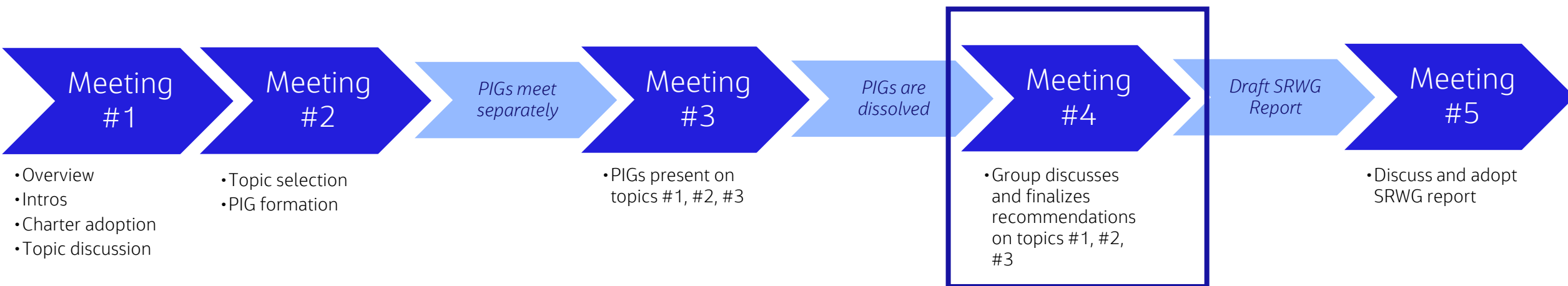
Discussion Of Information Presented at Meeting No. 3 - Information



Challenging today.
Reinventing tomorrow.

Overview of the Process

- In **SRWG Meeting No. 2**, the SRWG decided to have the 3 PIGs: Construction and Demolition Waste; Photovoltaic Panel Waste; and Product Packaging & Food Waste/Organics –Information
- The PIGs met individually during several sessions and a summary of information and considerations from these PIG meetings was shared at **SRWG Meeting No. 3**.
- **SRWG Meeting No. 4 (today)** is the opportunity to further discuss these ideas and finalize recommendations.
- **Goal of SRWG Meeting No. 4 (today)** is to determine what to include in the report
 - The report is not an ordinance. It's a collection of recommendations.
 - Some may recommendations may move fast, and some may require future steps/evaluation to proceed



Process for Today

Agenda Item IV

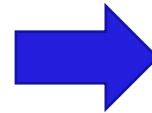
For each consideration:

Discuss as a group, answer questions, collect feedback

Perform a **quick vote**: "yes" or "no" in support of further considering the idea

*Repeat for each consideration

Public
Testimony



Agenda Item V

For each consideration with a majority vote:

Identify any **modifications** to the consideration

Motion to approve the recommendation for inclusion in the **SRWG Report**. Quorum must be achieved for motion to pass.

*Repeat for each consideration with a majority vote

Source Reduction Working Group

What Is Source Reduction?

- Source reduction can be defined as actions that **reduce the generation of waste, waste disposal, and waste toxicity**. These actions can be done at various levels spanning from the manufacturer, legislative, industrial or business, and consumer level.

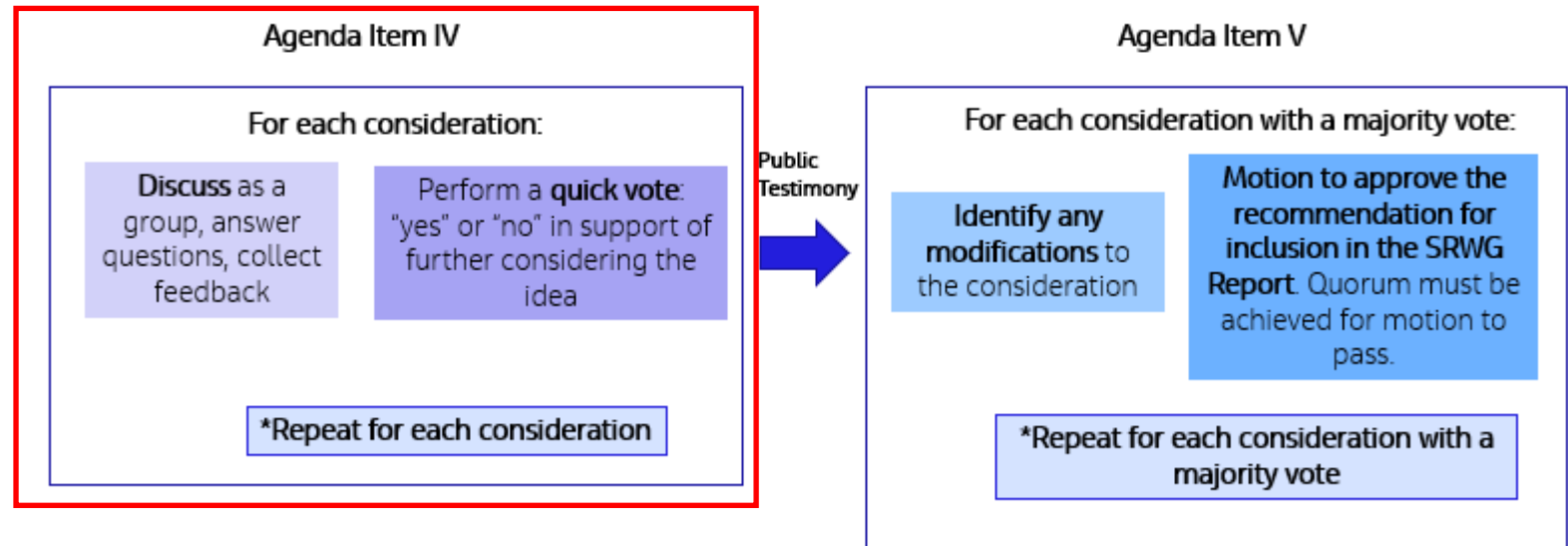
Source Reduction Working Group Goals (from SRWG Charter)

The SRWG brings together ten members of O‘ahu’s representative stakeholder groups with expertise in government, environment, sustainability, education, cultural, and industry fields to:

1. Identify potential best approaches to source reduction initiatives;
2. Provide recommendations for programs and policies to reduce waste generation;
3. Develop quantifiable targets for source reduction and identify metrics and milestones to track progress;
4. Facilitate coalitions between ENV, industry, educational institutions, non-governmental organizations, and communities to discuss and achieve source reduction; and
5. By the close of the SRWG, lay the foundations for the potential formation of a new, self-sustaining, long-term stakeholder coalition that discusses source reduction needs over time. A successful source reduction program for O‘ahu will require ongoing discussions and coordination that extends beyond the one-year appointed term for the SRWG. As such, at the close of the SRWG, members are encouraged to strive towards this goal by maintain contact and forming their own permanent, self-sustaining, stakeholder-led group.

C&D Waste Considerations

1. Seek out funding strategies
2. Adopt a diversion regulation ordinance
3. Adopt a deconstruction ordinance
4. Streamline permitting process for C&D and concrete waste recyclers
5. Establish transfer stations/stockpiling areas for C&D waste
6. Educate and involve stakeholders



1. Seek out funding strategies

- **Current challenge:** Establishing new deconstruction, diversion, recycling programs or infrastructure requires money
- **Opportunity:** [Millions in EPA federal funding](#) for environmental waste reduction solutions
 - Fund expansion of Kapa'a transfer station pilot project → program
 - Incentivize contractors to divert waste (e.g., discount recycling tipping fees)
 - Fund education and outreach (EPA REO grant)
- **Solution:** City can apply for grants or build partnerships that support and seek grant funding

The screenshot shows the EPA website's page for the Bipartisan Infrastructure Law. The header includes the EPA logo, navigation links for Environmental Topics, Laws & Regulations, Report a Violation, and About EPA, and a search bar. The main content area is titled "Bipartisan Infrastructure Law" and features a sidebar with links to various topics like Home, Review Funding Announcements, Cleanup, Revitalization and Recycling, Electric and Low-emission School Buses, Investments in Tribal Communities, Pollution Prevention, and Water Infrastructure. The main article is titled "The Bipartisan Infrastructure Law: Transforming U.S. Recycling and Waste Management". It includes an "Overview" section, a "Highlights" box with key announcements, and a list of "On this page" links. A photograph of children holding a recycling bin is also visible.

On this page:

- [Overview](#)
 - [2023 Grant Selectees and Recipients](#)
 - [Model Recycling Program Toolkit](#)
- [Related Information](#)

Overview

The Bipartisan Infrastructure Law is a historic investment in the health, equity, and resilience of American communities. With unprecedented funding to support state and local waste management infrastructure and recycling programs, EPA will improve health and safety and help establish and increase recycling programs nationwide.

[The United Nations International Resource Panel concluded](#) natural resource extraction and processing make up about half of all global greenhouse gas emissions. Increasing recycling reduces climate, environmental, and social impacts of materials extraction and keeps valuable resources in use, instead of in landfills.

Under the Bipartisan Infrastructure Law, EPA is developing three new waste prevention, reuse, and recycling programs:

- [Solid Waste Infrastructure for Recycling Grant Program.](#)
- [Recycling Education and Outreach Grant Program.](#)
- [Battery Collection Best Practices and Voluntary Battery Labeling Guidelines.](#)

Highlights

- [EPA Announces over \\$100 Million for Solid Waste Infrastructure for Recycling Grants Nationwide](#) **NEW**
- [EPA Celebrates Year One Accomplishments Under the Bipartisan Infrastructure Law.](#)



1. Seek out funding strategies (C&D)

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report



2. Adopt a diversion ordinance

- **Current challenge:** Lack of regulation for diversion
- **Examples:**
 - County of Hawai'i requires a Solid Waste Management Plan for developments
 - Plan identifies waste types, proposed waste reduction/recycling disposal methods, impacts to County waste-management facilities, mitigation measures to minimize impacts
 - State of Hawai'i licensed engineer or architect must write the Plan
 - City of Austin requires reuse/recycle of ≥50% C&D debris
 - For building permits ≥5,000 sq. ft.
 - For commercial and multifamily demolitions

Mitchell D. Roth
Mayor

Lee Lord
Managing Director



Ramzi I. Mansour
Director

Brenda Iokepa-Moses
Deputy Director

County of Hawai'i

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
345 Kekūānāo'a Street, Suite 41 · Hilo, Hawai'i 96720 · cohdem@hawaiicounty.gov
Ph: (808) 961-8083 · Fax: (808) 961-8086

May 5, 2023

SOLID WASTE MANAGEMENT PLAN Guidelines

INTENT AND PURPOSE

This is to establish guidelines for reviewing Solid Waste Management Plans, for which special conditions are placed on developments. The Solid Waste Management Plan will be used to (1) promote and implement recycling and recycling programs; (2) predict the waste generated by the proposed development to anticipate the impacts on County Solid Waste Management Facilities; and (3) predict the additional vehicular traffic being generated because of waste and recycling transfers. A State of Hawai'i licensed engineer or architect shall prepare a suitable Solid Waste Management Plan for review by the Department of Environmental Management.

REPORT

The Solid Waste Management Plan will contain the following:

1. Description of the project and the potential waste that may be generated: e.g., analysis of anticipated waste volume and composition. This includes waste generated during the construction and operation or maintenance phases. Waste types shall include (but not be limited to):
 - A. Organics (including food waste and green wastes);
 - B. Construction and Demolition materials;
 - C. Paper (including cardboard);
 - D. Metal (including ferrous and non-ferrous metals);
 - E. Plastic;
 - F. Special (including ash, sludge, treated medical waste, bulky items, tires);
 - G. Hazardous (including paint, vehicle fluids, oil, batteries); and
 - H. Glass.
2. Indicate onsite source separation by waste type, e.g., source separation bins for glass, metal, plastic, cardboard, aluminum, et cetera. Provide ample space for rubbish and recycling.
3. Identification and location of the proposed waste reduction, waste re-use, recycling facility or disposal site and associated transportation methods for the various components of the development's waste management system, including the number of vehicle

Hawai'i County is an Equal Opportunity Provider and Employer

2. Adopt a diversion ordinance CONTINUED

- **Solution:** City and County of Honolulu ordinance could require diversion, segregation, recycling, and/or reuse of C&D waste through:
 - Preparation of a **Solid Waste Management Plan**
 - Identification of **licensed waste haulers** (similar to [Orange County, North Carolina](#))
 - **Requiring a set percentage** of waste to be diverted from landfills (e.g. 50% of C&D waste from the project)
 - **Off-set cost of recycling/reuse** (e.g., potentially discounted tipping fees or hauling refunds)

2. Adopt a diversion ordinance (C&D)

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

C&D Waste Considerations

2. Adopt a diversion ordinance

City and County of Honolulu ordinance could require diversion, segregation, recycling, and/or reuse of C&D waste through:

- Preparation of a Solid Waste Management Plan
- Identification of licensed waste haulers (similar to Orange County, North Carolina)
- Requiring a set percentage of waste to be diverted from landfills (e.g. 50% of C&D waste from the project)
- Off-set cost of recycling/reuse (e.g., potentially discounted tipping fees or hauling refunds)

Feedback	Mike - Highest support for this idea. More source reduction than most. Gets to charter. Biggest capacity for impact. Groundwork established (Hawaii County)	Allen - better way of screening out haulers	Lene - If City decides to proceed. Need front-end education and outreach on what can be recycled and reused. Reuse of materials (safety, contamination causing problem).		
Feedback	Lene - potential to have more holistic ordinance (combine 2 and 3).	Quinn - would like to send the group the resource he sent. Update on procurement process leg. (coordination, on state-wide actions).			
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications	Potentially combine C&D consideration 2 and 3	

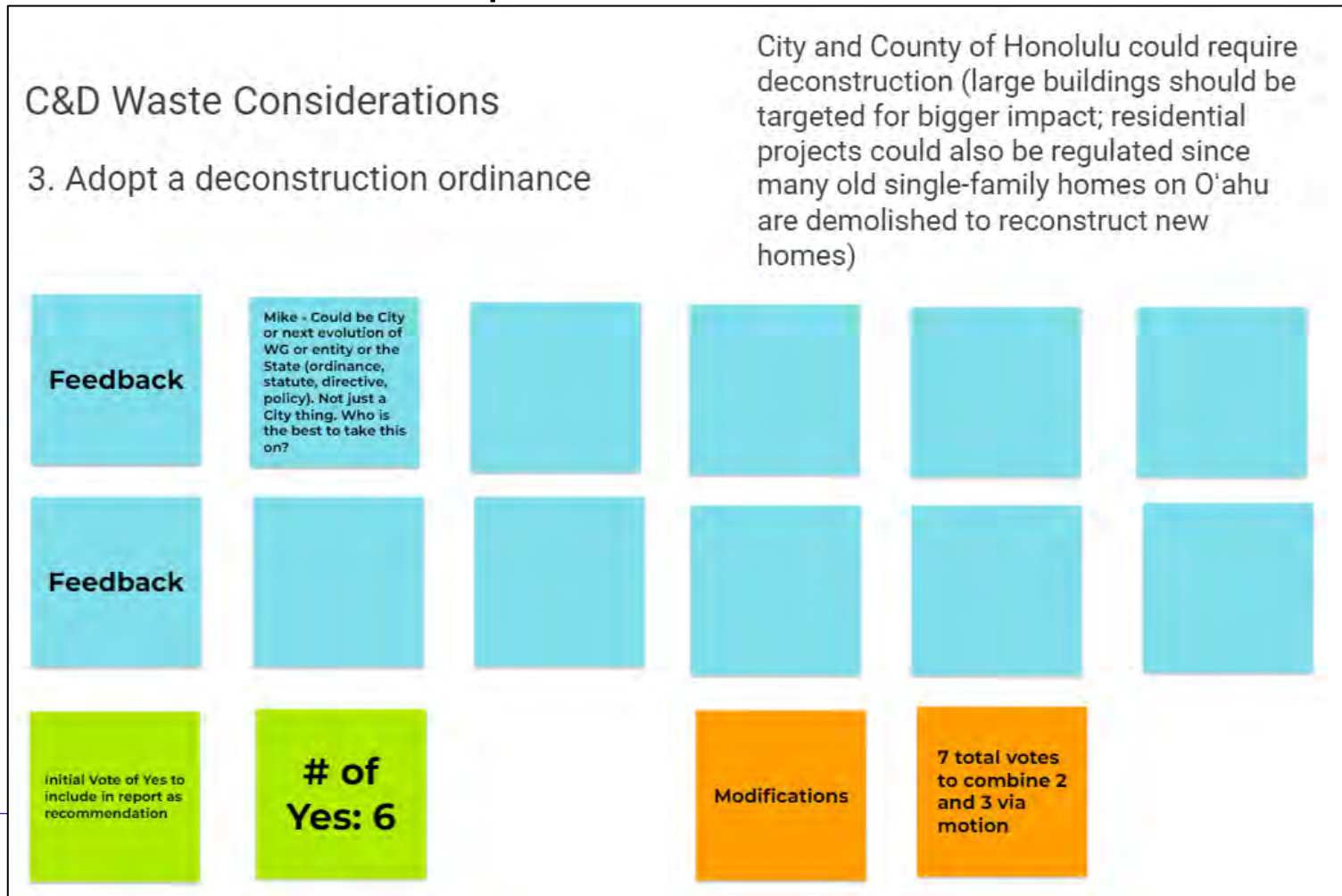
3. Adopt a deconstruction ordinance

- **Current challenge:** Lack of regulation for deconstruction
- **Example:** [City of Portland requires projects seeking a demolition permit to fully deconstruct](#)
 - For single-dwelling structures built **1940 or earlier**
 - A certified deconstruction contractor required → **workforce training program**
- **Solution:** City and County of Honolulu could require deconstruction (large buildings should be targeted for bigger impact; residential projects could also be regulated since many old single-family homes on O‘ahu are demolished to reconstruct new homes)



3. Adopt a deconstruction ordinance

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report



4. Streamline permitting process for C&D and concrete waste recyclers

- **Current challenge:** Permitting process for C&D and concrete waste recyclers is a barrier to setting up new recycling facilities
- **Solution:** Industry stakeholders could work with State to:
 - Streamline/simplify the [permitting process](#)
 - Provide online educational materials for interested permittees



Organizations

Select the organization from which you would like to submit a form.

Select Organization ▾

Forms

To locate a specific form please use our form finder.

Form Finder

Frequently Asked Questions

Are additional resources available to assist me with the application submission process?

How do I fill out the application if my proposed activity consists of multiple solid waste activities for

Solid Waste Section

A major responsibility of the Solid & Hazardous Waste Branch is the regulation of solid waste management facilities. The Solid Waste Section regulates solid waste management facilities that store, process, treat, transfer, or dispose of solid waste, including but not limited to landfill, waste-to-energy, composting, recycling, salvaging, and transfer facilities. Regulatory oversight is conducted under HRS 342H, HAR 11-58.1 and through a permitting system.

Permit applications and forms pertaining to facility solid waste management can be found below or by using the Application Finder (on the left). Please contact the Solid & Hazardous Waste Branch should you have any questions (808) 586-4226.

Contact Information

Contacts:
Phone:: 808-586-4226
Fax:: 808-586-5907

Additional Links

Solid Waste Section website

4. Streamline permitting process for C&D and concrete waste recyclers

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

C&D Waste Considerations

Industry stakeholders could work with State to:
-Streamline/simplify the permitting process
-Provide online educational materials for interested permittees

4. Streamline permitting process for C&D and concrete waste recyclers (consider change to C&D material management)

Feedback	Allen - all recyclers would benefit from streamlining the process. Need both City and State involvement to streamline/coordinate.	Lene If its a reuse issue, then a solid waste management permit, wouldn't apply. As an update, working on e-permitting, future submission could be cloned/reutilized. Edu	Mike - this is a good option, plan on supporting provided that efforts focused on source reduction, i.e. process that create not waste by-product.		
Feedback					
Initial Vote of Yes to include in report as recommendation	# of Yes: 6	Modifications	Make more general so could be a number of permits (not just solid waste permit)	Make specific for permitting streamlining only for non-disposal activities.	Streamline the permitting process for C&D materials management (non-disposal). 6 votes for inclusion.

5. Establish transfer stations/stockpiling areas for C&D waste

■ **Current challenges:**

- Large limiting factor for diverting C&D waste is lack of space for stockpiling, sorting, and storing materials
 - Construction projects currently need to stockpile C&D materials on-site until a 'receiver' is identified
- The timeline for demand does not always align with supply of C&D waste

■ **Solutions:** Stakeholders could...

- Establish on-site stockpiling/sorting area(s) at potential, future C&D process facilities or landfill
- Establish a network of C&D transfer stations around the island to store materials
 - Minimize hauling fees by locating stations strategically around the island

*City's consultant working on C&D management plan may determine recommendations for new/current facilities, processes, operations, etc. for stockpiling and sorting C&D waste

5. Establish transfer stations/stockpiling areas for C&D waste

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

C&D Waste Considerations

5. Establish transfer stations/stockpiling areas for C&D waste

Stakeholders could...

- Establish on-site stockpiling/sorting area(s) at potential, future C&D process facilities or landfill
- Establish a network of C&D transfer stations around the island to store materials
- Minimize hauling fees by locating stations strategically around the island

Feedback	Quinn - will see how pilot project, there a need for warehousing of materials (e.g. SFO), limits what can reuse.	Mike - could be a good thing. Some good opp for source reduction. Think need to understand stakeholder involvement more. Keep focused on SR core soln low priority	Allen - C&D different, many materials to divert.			
Feedback	Lene - concern if there is competing operations, could be failure all around. Discuss what stakeholders to include.	Quinn - pilot project about to roll out, at TS, tangible thing for donate/reuse. Rewrite to clarify this would be like that.				Establish areas where C&D materials can be stored or stockpiled before reuse. Note that biggest consideration is space for storing and staging reuse. 5 votes.
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications	Staging and storage.	Wording need to be adjusted. To reflect more like the pilot.	Establish areas where C&D materials can be stored or stockpiled before reuse.

6. Educate and involve stakeholders

- **Current challenge:** Lack of education and knowledge in the industry for reuse/recycling/diversion methods
- **Solutions:**
 - Education program for reuse/recycling/diversion methods
 - Education program before/during/after establishing new policies, ordinances, transfer system networks, etc.
 - Adoption and education of a core value system for the City
 - Ex. Hawaiian cultural value system was essential for success in [Kamehameha Schools demolition-rebuild project that diverted over 90% of C&D waste](#)
 - Aloha ‘āina = love for the land
 - Mālama = to care for
 - Kūleana = responsibility
 - Laulima = work together

Lesson Learned from Kamehameha Demolition of Keauhou Beach Hotel:

- Information on how to handle concrete and what it could be reused for was not readily available
- KS had to use their resources, money, and connections to make this project successful; additional education could help others

*EPA grant funding (consideration #1) can be put towards education programs

6. Educate and involve stakeholders (C&D)

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

C&D Waste Considerations

6. Educate and involve stakeholders

- Education program for reuse/recycling/diversion methods
- Education program before/during/after establishing new policies, ordinances, transfer system networks, etc.
- Adoption and education of a core value system for the City

Feedback	Mike - could this be a subset of almost any consideration. Not it's own.				
Feedback					
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications		

PV Panel Waste Program Considerations

1. Evaluate funding strategies
2. Consider establishing sites for collection, staging, and processing
3. Consider the potential for a recycling program (Statewide Stewardship Program)
4. Incentivize and educate for O&M of PV panels
5. Subsidize shipping costs to ship PV panel waste to the mainland
6. Explore Extended Producer Responsibility
7. Support/incentivize secondary market program for re-use



1. Evaluate funding strategies

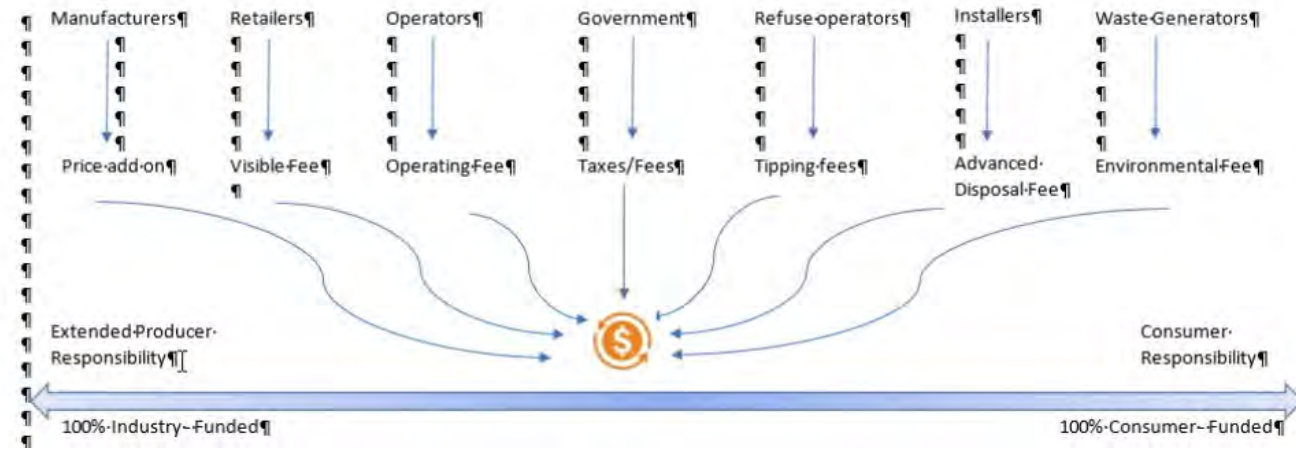
- **Current challenge:** Establishing new recycling and reuse programs requires money

- **Opportunity:**

- Industry- and consumer-level can be held accountable for disposal/recycling funding
- [EPA grants](#) - *For one-time capital improvements

- **Possible Solutions:**

- Sustainable on-going program funding from industry- to consumer-level
 - Manufacturers, retailers, operators, government, refuse operators, installers, and waste generators
- Expand tax credit for replacing PV panel systems, with a caveat requiring a fee for disposal/recycling of old system
- City/State can apply for grant funding



Source: Dr. Cooney

The screenshot shows the EPA website's page for the Bipartisan Infrastructure Law. The main heading is 'The Bipartisan Infrastructure Law: Transforming U.S. Recycling and Waste Management'. The page features a navigation menu with options like 'Environmental Topics', 'Laws & Regulations', 'Report a Violation', and 'About EPA'. A search bar is located in the top right corner. Below the navigation, there is a 'Highlights' section with two main bullet points: 'EPA Announces over \$100 Million for Solid Waste Infrastructure for Recycling Grants Nationwide' and 'EPA Celebrates Year One Accomplishments Under the Bipartisan Infrastructure Law'. An 'Overview' section follows, providing a brief summary of the law's impact. At the bottom right, there is a small image of children holding a recycling bin.

1. Evaluate funding strategies (PV Waste)

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

PV Panel Waste Considerations

1. Evaluate Funding Strategies

- Sustainable on-going program funding from industry- to consumer-level (Manufacturers, retailers, operators, government, refuse operators, installers, and waste generators)
- Expand tax credit for replacing PV panel systems, with a caveat requiring a fee for disposal/recycling of old system
- City/State can apply for grant funding

Feedback	Lene - clarifying question confirming that this is only evaluating funding strat.				
Feedback	Mike - this could be good, but needs more work. Maybe a subset. Not it's own or high priority.				
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications		

2. Consider establishing sites for collection, sorting, processing, and staging

- **Challenge:** Lack of physical space for sorting, processing, staging to prepare for shipping to the mainland. Also, must have appropriate permits (which can be challenging).
- **Example:** Inter-Island Solar Supply collects, sorts, processes, and stages panels on a small scale
- **Possible Solutions:**
 - City/Stakeholders can secure physical spaces for collection, etc.
 - City/State can off-set costs for commercial to incentivize dropping off panels
 - [Kapa‘a Station Pilot Project](#) with City and Re-Use Hawaii to collect and redistribute household and construction waste
 - Opportunity to pilot collecting, sorting, and staging PV panel waste



Kapa'a Transfer Station

4/16/2014 13:25

2. Consider establishing sites for collection, sorting, processing, and staging (PV Waste)

- Collect feedback
- Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

PV Panel Waste Considerations

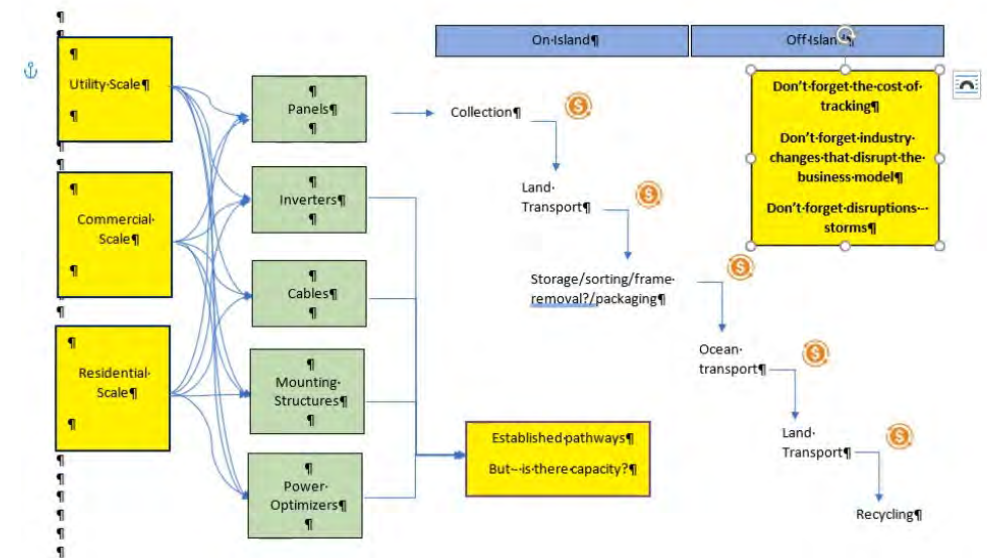
2. Consider establishing sites for collection, sorting, processing, and staging

- City/Stakeholders can secure physical spaces for collection, etc.
- City/State can off-set costs for commercial to incentivize dropping off panels
- Kapa'a Station Pilot Project with City and Re-Use Hawaii to collect and redistribute household and construction waste (Opportunity to pilot collecting, sorting, and staging PV panel waste)

Feedback	Lene - if we keep this language, should sep between SR and recycling. Didn't have opportunity to consider best collection pt. Could potentially utilize specialized contractor	Lene - by limiting amt of collection pts, better control of what get. Not sure if this is best path forward.	Quinn - jury still out on how much can recover and redistribute. Might be saturation in terms of demand.		
Feedback	Mike - not sure worth prioritizing, sounds good, but view as this is prime for EPR.				
Initial Vote of Yes to include in report as recommendation	# of Yes: 4		Modifications	Change: collection site.	

3. Consider establishing a Statewide Stewardship Program

- **Challenge:** Extremely complex process for PV panel recycling
- **Example:** [Inter-Island Solar Supply in-house recycling program](#) is a small-scale version of what needs to be scaled up to statewide level



- **Possible Solution:** Dr. Cooney recommends establishment of a Statewide Stewardship Program to support PV Panel recycling
 - Program could be led by a 403B non-profit organization, with oversight from manufacturers and government agencies.
 - Continued identification and maintenance of partnerships
 - Funding could come from several levels: industry to consumer
 - Manufacturers, retailers, operators, government, refuse operators, installers, and waste generators
 - Industry should watch how California's program roles out

3. Consider establishing a Statewide Stewardship Program (PV Waste)

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

PV Panel Waste Considerations

3. Consider establishing a Statewide Stewardship Program

Possible Solution: Dr. Cooney recommends establishment of a Statewide Stewardship Program to support PV Panel recycling

- Program could be led by a 403B non-profit organization, with oversight from manufacturers and government agencies.
- Continued identification and maintenance of partnerships
- Funding could come from several levels: industry to consumer (Manufacturers, retailers, operators, government, refuse operators, installers, and waste generators)
- Industry should watch how California's program roles out

Feedback	Lene - recognize that this is a consider, but not wanting to overshadow other solns. EPR could lead to state-wide stewardship program. not ready to commit to direction	Nicole - don't see harm including more than less. haven't had scope or time to determine best direction, just plants seed, not committal.		
Feedback	Quinn - error on the slide. 501C non-profit			
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications	

4. Incentivize and educate owners about PV panel maintenance

■ Challenge:

- Panels are taken down and replaced sooner than they need to be
- Installers encourage replacement of panels due to new technologies
- Owners unaware of proper panel maintenance

■ Example: [CCH Department of Facility Maintenance Storm Water Quality Division public education and outreach program](#) successful for storm water management

■ Possible Solutions:

- Establish an incentivization and education program
- Educate homeowners, commercial businesses, and installers on proper maintenance and reuse options to incentivize leaving panels on until they “die”
 - Proper installation, regular maintenance, and cleaning can increase lifespan

4. Incentivize and educate owners about PV panel maintenance

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

PV Panel Waste Considerations

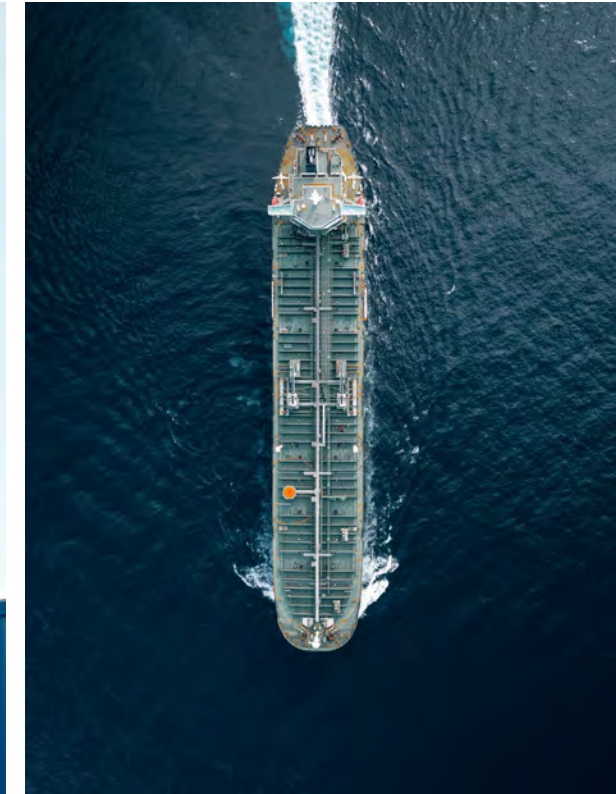
4. Incentivize and educate owners about PV panel maintenance

- Establish an incentivization and education program
- Educate homeowners, commercial businesses, and installers on proper maintenance and reuse options to incentivize leaving panels on until they "die"
- Proper installation, regular maintenance, and cleaning can increase lifespan

Feedback	Allen/Lene/Mike - don't think we need additional incentivization (already will have an incentive if prolong life), education is focus				
Feedback					
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications		

5. Subsidize shipping costs to ship PV panel waste to the mainland

- **Challenge:** Shipping costs to send panels to mainland very expensive (panels are heavy)
- **Example:** Inter-Island Solar Supply doesn't make a profit with recycling program—does it to minimize waste stream
- **Possible Solutions:**
 - If there is an industry- to consumer-level funding program, funds could go towards subsidizing or covering shipping costs for recyclers
 - City or State could consider subsidizing shipping costs
 - Individual consumer pays for shipping costs (e.g., someone replacing their system could pay a fee)



5. Subsidize shipping costs to ship PV panel waste to the mainland

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

PV Panel Waste Considerations

5. Subsidize shipping costs to ship PV panel waste to the mainland

-If there is an industry- to consumer-level funding program, funds could go towards subsidizing or covering shipping costs for recyclers
-City or State could consider subsidizing shipping costs
-Individual consumer pays for shipping costs (e.g., someone replacing their system could pay a fee)

Feedback	Lene - if consumer paying for this, cost of disposal, likely already paid for. COMbine with 1.				
Feedback	Mike - 2nd Lene's comment, perhaps could be part of an EPR initiative. Good program, but make sure what we endorse is actual source reduction, not recycling.				
Initial Vote of Yes to include in report as recommendation	# of Yes: 5		Modifications		

6. Explore Extended Producer Responsibility (EPR)

- **Challenge:** Lack of regulation and responsibility placed on producers. EPR for panels will likely be difficult to implement
 - Likely push-back from the industry
 - Manufacturers (majority international) may pull out from Hawai'i market
 - Demand will remain high to meet 2045 renewable energy goal
- **Examples:**
 - Washington only state with PV panel EPR law
 - Niagara County, NY only local government county with PV panel EPR law
 - Some manufacturers have pulled out from those areas
- **Next steps:** State DOH still interested in exploring EPR options—time and effort should be put into running-to-ground options and watching how California program is implemented.



State and Local Solar EPR Laws
1 State Law 1 Local Law

6. Explore Extended Producer Responsibility (EPR) – (PV Waste)

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

PV Panel Waste Considerations

6. Explore Extended Producer Responsibility (EPR)

State DOH still interested in exploring EPR options—time and effort should be put into running-to-ground options and watching how California program is implemented.

Feedback	See comments on previous considerations about EPR				
Feedback					
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications		

7. Support/incentivize secondary market program for re-use

- **Challenge:** Many used panels with life still in them, but not enough demand
 - Especially low demand for older panels with older technology
- **Example:** KumuKit + Re-Use Hawaii secondary market program successful in rural areas in Big Island
- **Possible Solution:** Tax incentives for used panel receivers to increase market demand



7. Support/incentivize secondary market program for re-use (PV Waste)

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report



Considerations

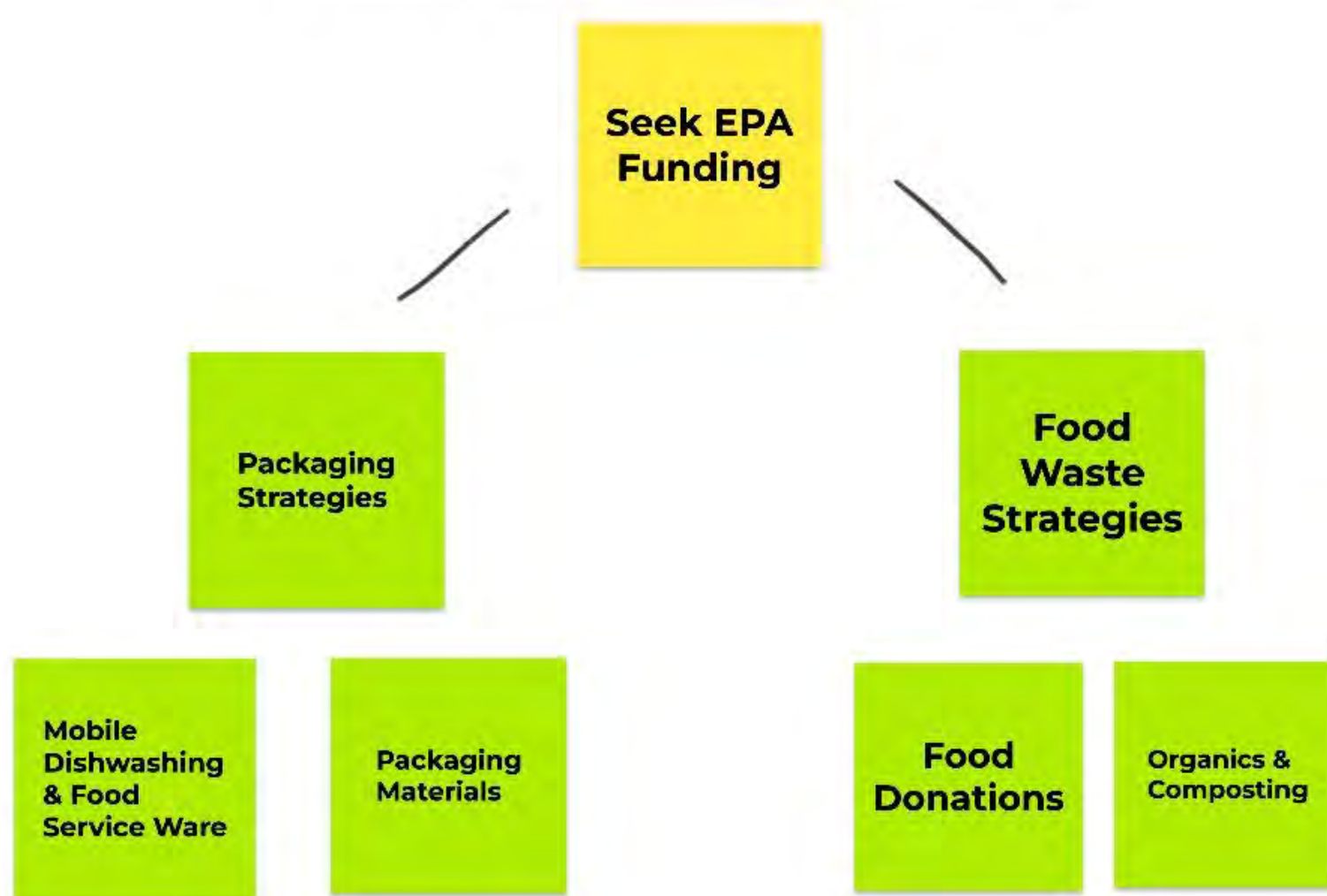
- **Seek EPA funding**
- **Food Ware – Re-useable Container and Mobile Washing Program**
 1. Establish policy exemption for mobile dishwashing service to not require commercial kitchen connection
 2. Education
 3. Launch pilot project
 4. Launch program
- **Food Waste – Increase Food Donations**
 1. Incentivize food donations with an award/certificate
 2. Launch education program
 3. Update [Good Samaritan Law](#) language
- **Food Waste – Increase Food Recycling (Organics and Composting)**
 1. Expand [Ordinance Chapter 42, Section 42-3.5, Mandatory Food Waste Recycling](#)
 2. Establish an Organics & Composting Task Force

Seek EPA Funding

- **Challenge:** Lack of funding for programming
- **Example:** [EPA awarded \\$1.5 mil for County of Hawai'i](#) city-scale reusable food ware and refillable bottle system in Hilo
 - City and County of Honolulu well-positioned to apply next year
- **Solution:** Apply for [EPA funding](#)—City and/or Stakeholder partnerships
 - Funding could support:
 - Reusable food ware program
 - Education program
 - Incentivization program for food donations and food recycling
 - Establishment of an organics/composting task force

The screenshot shows the EPA website's page for the Bipartisan Infrastructure Law. The header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, Report a Violation, and About EPA. The main content area features a sidebar with links to various program areas like Funding Announcements, Cleanup, and Tribal Communities. The main article title is 'The Bipartisan Infrastructure Law: Transforming U.S. Recycling and Waste Management'. Below the title, there is an 'On this page' section with links to Overview, 2023 Grant Selectees and Recipients, Model Recycling Program Toolkit, and Related Information. A 'Highlights' box on the right lists key announcements, including '\$100 Million for Solid Waste Infrastructure for Recycling Grants Nationwide' and 'EPA Celebrates Year One Accomplishments Under the Bipartisan Infrastructure Law'. The 'Overview' section describes the law's impact on recycling and waste management, mentioning that natural resource extraction and processing account for half of global greenhouse gas emissions. A photo of children holding a recycling sign is also visible.

Funding supports all other strategies



1. Seek out funding strategies (Food Ware & Food Waste)

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

Food Ware and Food Waste Considerations

1. Seek EPA Format

Apply for EPA funding—City and/or Stakeholder partnerships. Funding could support:
-Reusable food ware program
-Education program
-Incentivization program for food donations and food recycling
-Establishment of an organics/composting task force

Feedback					
Feedback					
Initial Vote of Yes to include in report as recommendation	# of Yes: 7		Modifications		

Food Service Ware – Re-useable Container and Mobile Washing Program

- **Opportunity:** Zero Waste O‘ahu (Nicole) has re-usable containers from a prior pilot project
- **Challenges:**
 - Barrier in previous project: lack of access to washing facilities
 - Policy language states that food trucks and mobile dishwashing service need to be connected to a brick-and-mortar commercial kitchen
- **Examples:**
 - [New Zealand mobile wash truck program](#)
 - [Oregon Convention Center](#) reusable food container program
- **Solutions:**
 1. Establish policy language exemption for mobile dishwashing service to not require a commercial kitchen connection
 2. Education
 3. Launch pilot project—focused on large events
 4. Launch program

3-Year Plan for Packaging Priority: Mobile Dishwashing Exemption

Mobile Dishwashing & Food Service Ware

POLICY: exemption for mobile dishwashing services (remove requirement for commercial kitchen)

2023

Draft language for regulation or policy change

Identify coalition for policy

Identify resources and infrastructure needed

Coalition education (tours etc.)

2024

Start regulation or policy change process

Policy change finalized

Apply for funding for pilot

Public education

2025

Implement pilot project/s

2. Food Service Ware – Re-useable Container and Mobile Washing Program

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

Food Ware and Food Waste Considerations

2. Food Service Ware – Re-useable Container and Mobile Washing Program

1. Establish policy language exemption for mobile dishwashing service to not require a commercial kitchen connection
2. Education
3. Launch pilot project—focused on large events
4. Launch program

Feedback	Lene - what if a pilot was done with a washing in brick and mortar to show success, which might make easier to change policy.	Nicole - already have data on successfully washing reusable containers (from previous pilot) at a brick and mortar.			
Feedback	Lene - clarifying question - is this just big events? Nicole - Yes, this is what the group was talking about. Publicly attended events primarily.	Lene - changing law might now be easy. Encourage finding a way to do at brick and mortar.	Lene - once show success, then might have better luck with changing law.		
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications		

Future Recommendations: Packaging



3. Future Recommendations: Mobile Dishwashing & Good Service Ware

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

Food Ware and Food Waste Considerations

3. Future Recommendations: Mobile Dishwashing & Food Service Ware

1. Launch program
2. Incentivize 100 ppl+ events to utilize reusable service ware
3. Seek grant funding for mobile dishwashing unit

Feedback					
Feedback					
Initial Vote of Yes to include in report as recommendation	# of Yes:		Modifications	this was part of 2	

4. Future Recommendations: Packaging Materials

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

Food Ware and Food Waste Considerations

4. Future Recommendations: Packaging Materials

Policy: create task force to extend SRWG to look at current state and recommendations for next steps (EPR, pallets, etc.)

Feedback					
Feedback					
Initial Vote of Yes to include in report as recommendation	# of Yes: 5		Modifications		

Food Waste – Increase Food Donations

- **Current policy:**

- [Good Samaritan Law](#) protects good-faith food donors from civil and criminal liability and encourages food donations

- **Challenges:**

- More businesses could donate food, but don't
- Some businesses are not aware of the donor liability protections in place
- Good Samaritan Law language currently excludes individuals from donating food
 - Currently, donors must have a commercial kitchen with specified requirements

- **Solutions:**

1. Incentivize food donations with an award/certificate
2. Launch education program
3. Update Good Samaritan Law language

3-Year Plan for Food Waste Priority: Food Donation Incentive Program

Food Donations

**Incentives:
Awards for
business
owners**

2023

**Identify
resources and
infrastructure
needed**

2024

**Identify what
agency might
give award
(aka "gold
star")**

**Write
for
grants**

**Identify what
is needed for
"gold star"**

**Public
education
about new
"gold star"**

2025

**Issue
"gold
star"**

5. Food Waste – Increase Food Donations

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

Food Ware and Food Waste Considerations

5. Food Waste - Increase Food Donations

- Incentivize food donations with an award/certificate
- Launch education program
- Update Good Samaritan Law language

Feedback					
Feedback					
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications		

Food Waste – Increase Food Recycling (Organics and Composting)

- **Current policy:**

- [Ordinance Chapter 42, Section 42-3.5, Mandatory Food Waste Recycling](#) requires businesses of a certain size to send food waste to recycling facilities

- **Opportunity:**

- Policy language change could increase food recycling by requiring additional sizes of businesses to separate food waste and send it to recycling facilities

- **Solutions:**

1. Expand Ordinance Chapter 42, Section 42-3.5 to require more businesses to send food waste to recycling facilities
2. Establish an Organics & Composting Task Force
 - To focus efforts/discussion on topic

6. Food Waste – Increase Food Recycling (Organics and Composting)

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

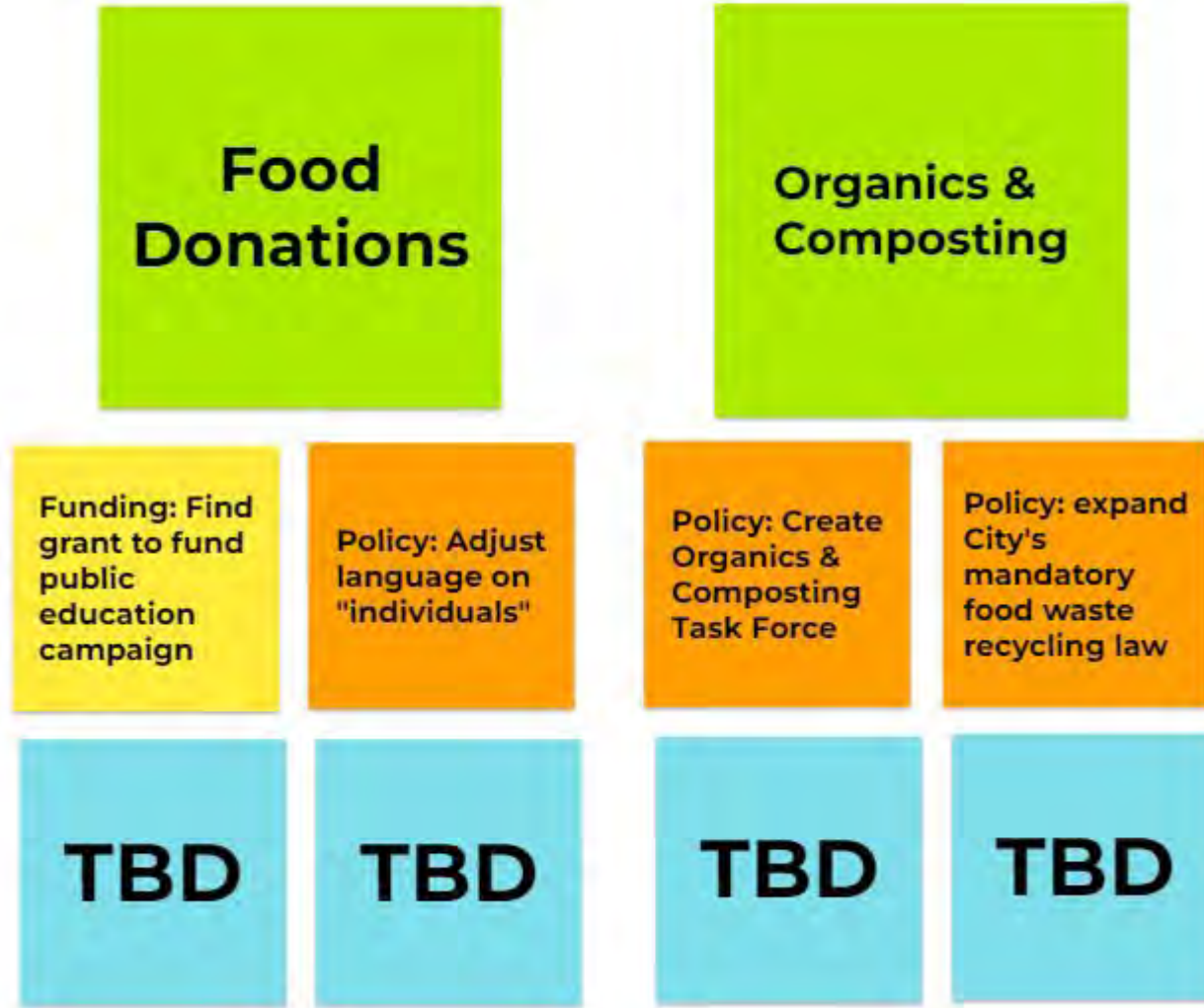
Food Ware and Food Waste Considerations

6. Food Waste – Increase Food Recycling (Organics and Composting)

- Expand Ordinance Chapter 42, Section 42-3.5 to require more businesses to send food waste to recycling facilities
- Establish an Organics & Composting Task Force (to focus efforts/discussion on topic)

Feedback	Lene - wouldn't we want to include reuse (does animal feed count as recycling or reuse)	Mike - this portion of ordinance requires City to include food waste in it's recycling program, going to implement in 2025 (Lyndsey clarified consideration and Mike struck comment)	Mike - better to reword this one (focus more on reuse).		
Feedback	Nicole - great point (Lene) also include addition of prioritizing use of edible food to people	Tina - larger restaurants and hotels (many sending to food bank and other donation), don't publicize, bigger doing. Smaller ones, hard to keep (storage limit)			
Initial Vote of Yes to include in report as recommendation	# of Yes: 6		Modifications		

Future Recommendations: Food Waste



7. Future Recommendations: Food Donations & Organics & Composting

- a. Collect feedback
- b. Perform a quick vote: vote yes to have a version of this consideration included as a recommendation in the SRWG report

Food Ware and Food Waste Considerations

7. Future Recommendations: Food Donations & Organics & Composting

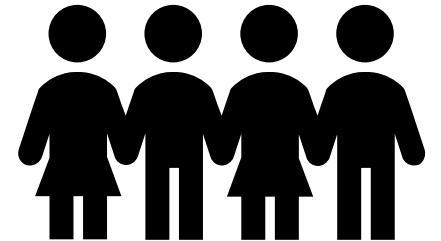
- Grant funding for public education campaign
- Policy: adjust language on "individuals" for food donation
- Policy: create organics & composting task force
- Policy: expand City's mandatory food waste recycling law

Feedback					
Feedback					
Initial Vote of Yes to include in report as recommendation	# of Yes:		Modifications		

Finalize Recommendations- Information/Action

Public Testimony – Finalize Recommendations

- Oral testimony will be taken in the following order:
 - In-person comments (registered first, then not registered)
 - Video conference comments (registered first, then not registered)
- If you registered to testify by 8:00 AM today, an email was sent to jleano@honolulu.gov with your name and the agenda items(s) you would like to address. If you filled out the registration form in person at the meeting, your name will be called in the order that it was received (as described in bullet 1 above).
- If you have not registered, you will be given an opportunity to speak to an item following oral testimonies of the registered speakers in each group (in-person, video).
- Each speaker is **limited to a two-minute** presentation and may not have anyone else read their statement.



Providing Public Comment over Video Conference

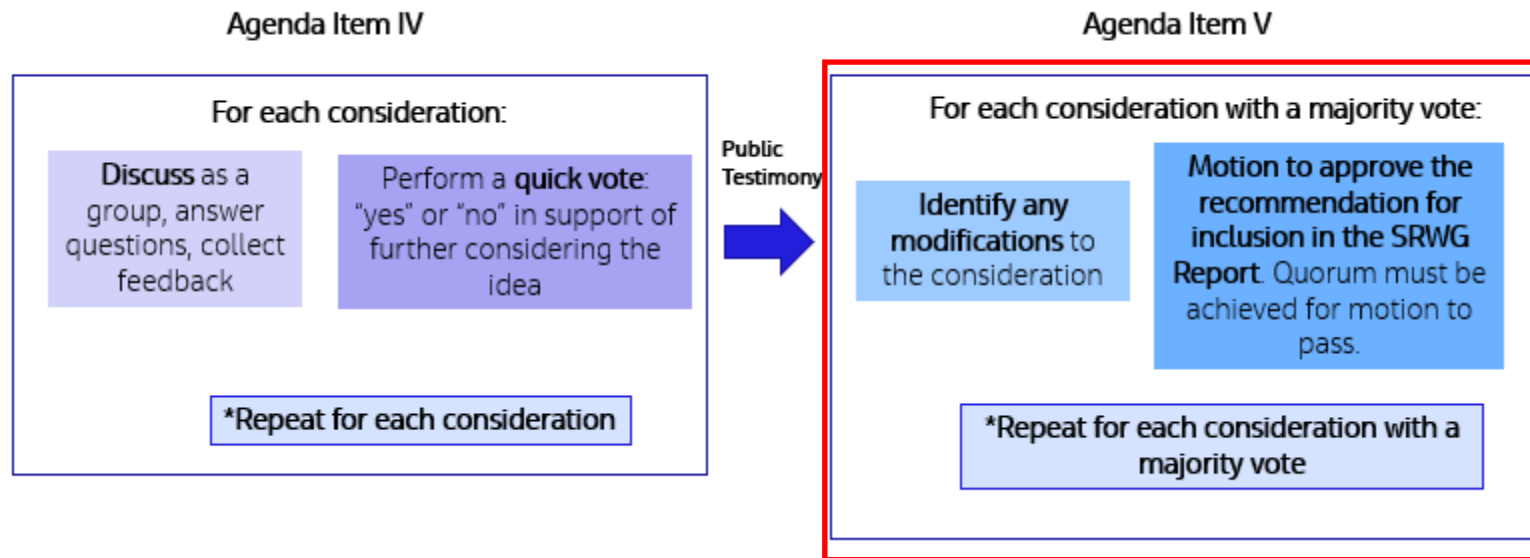
- Registered speakers:
 - Lyndsey will call on you when it is your turn to speak and grant you mic and video access.
- Not-registered speakers:
 - Following the registered speakers, Lyndsey will ask for additional testimonies from those online. Please raise your hand if you would like to testify.



- Lyndsey will call on you when it is your turn to speak and grant you mic and video access.

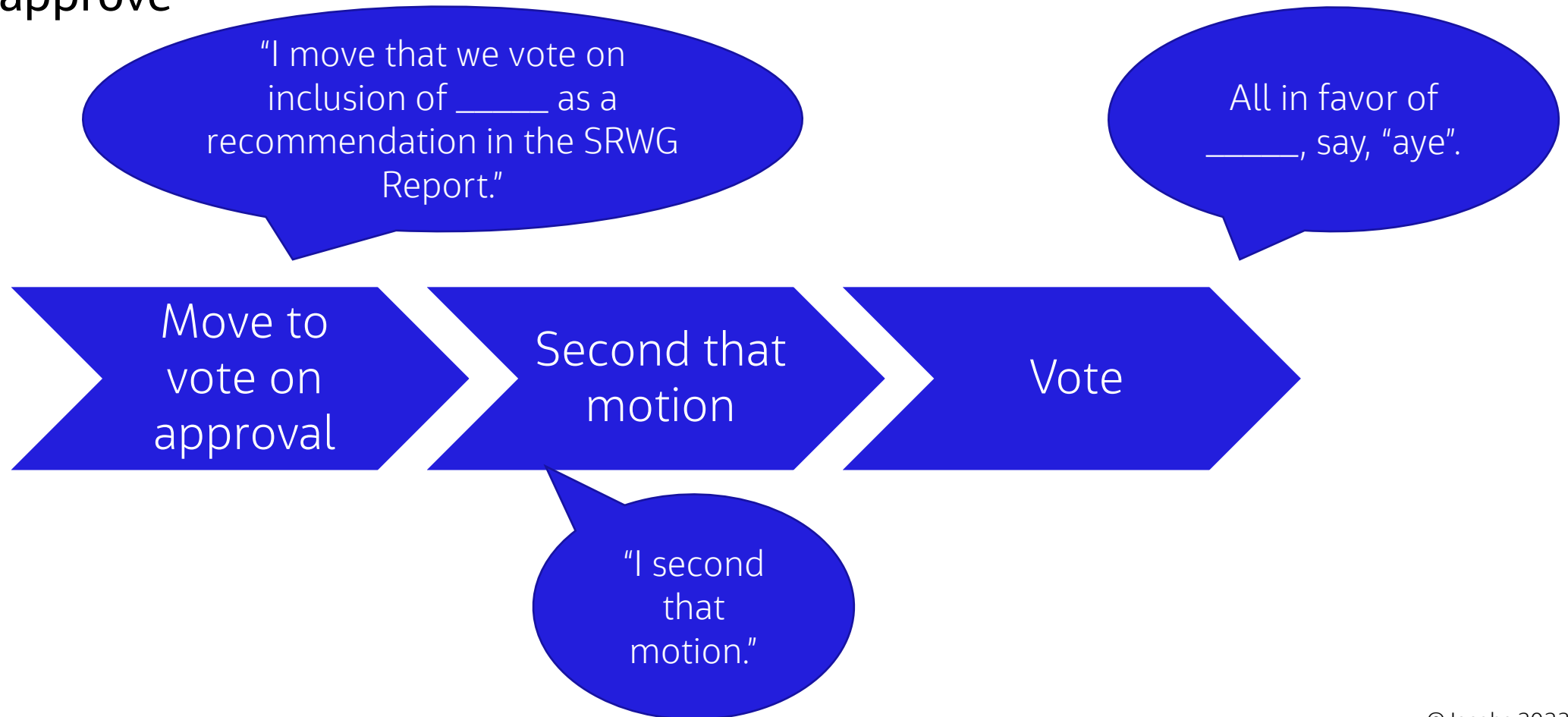
Finalize Recommendations

- SRWG Jamboard



Finalize Recommendations

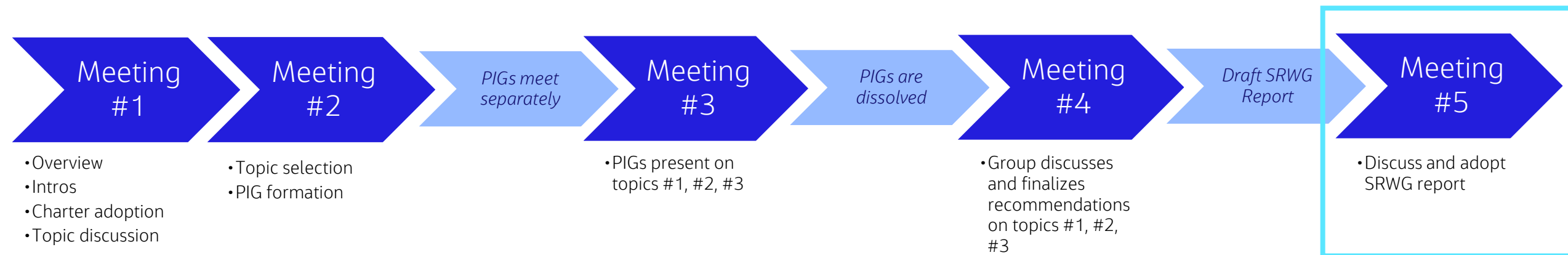
- For each of the considerations voted to move forward, the final recommendation needs to be formalized via a motion
- Motion to approve



Scheduling/ Announcements for Next Meeting - Information

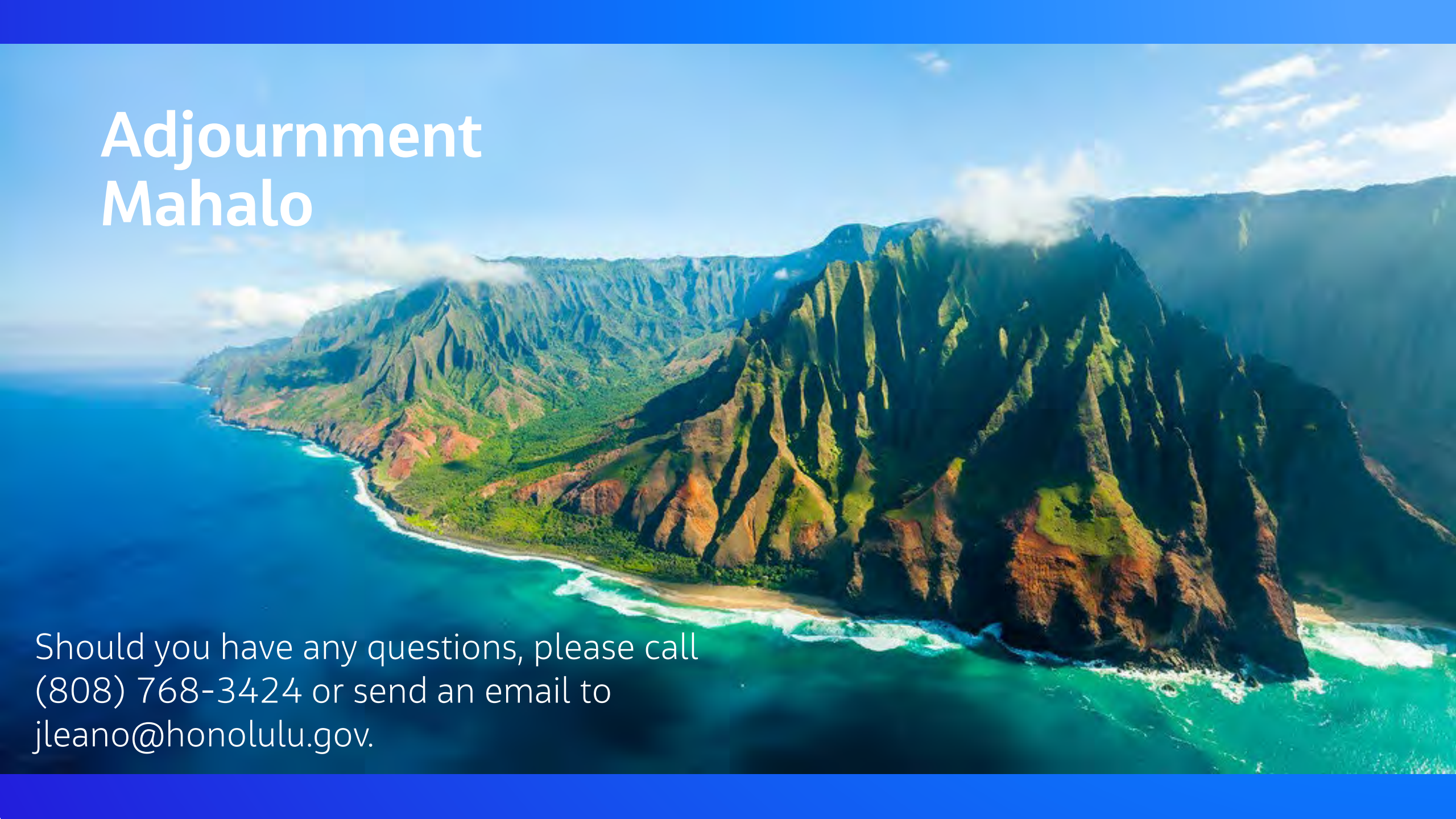
Scheduling/Announcements for Next Meeting - Information

- Next steps – Preparation of Report and Collection of Comments from SRWG
- Next meeting date – SRWG Meeting #5, TBD



Adjournment Mahalo

Should you have any questions, please call
(808) 768-3424 or send an email to
jleano@honolulu.gov.



1132 Bishop Street
 Suite 1100
 Honolulu, Hawaii 96813
 O +1 808 943 1133
 F +1 808 954 4400
 www.jacobs.com

Subject City and County of Honolulu Source Reduction Working Group Meeting No. 4

Project Name Consultant Services for Source Reduction Working Group, City and County of Honolulu (Hawai'i)

Project Number CCHSRWG1

Prepared by Jacobs

Location Kapolei Hale – Conference Room “A” (Ground Floor)

Date/Time Monday, December 4, 2023, 1:00pm – 4:00pm HST

Participants
SRWG Members:
 Hayley Cook (virtual) – Policy and Research Manager, Office of Climate Change, Sustainability and Resiliency
 Quinn Vittum (in-person) – Executive Director, ReUse Hawai'i
 Allen Evans (in-person) – President, Refrigerant Recycling and Island Demolition
 Tina Yamaki (virtual) – President, Merchants of Hawai'i
 Lauren Zirbel (virtual) – Executive Director, Hawai'i Food Industry Association
 Lene Ichinotsubo (virtual) – Acting Chief, Department of Health, Solid and Hazardous Waste Branch
 Mike O'Keefe (in-person) – Deputy Director, Department of Environmental Services (ENV)
 Nicole Chatterson (virtual) – Executive Director and Co-Founder, Zero Waste O'ahu
Jacobs (City's Consultant and Meeting Facilitator):
 Lyndsey Lopez (virtual) – Waste Planning and Strategy Lead

SRWG Member(s) Jessica Leorna – CEO, BIA Hawai'i

Not in Attendance Amy Brinker – Sustainability Manager, Kamehameha Schools

Notes

The meeting was recorded and documented in one MS Teams Meeting recording. For each agenda item, the time stamp is given based on the MS Teams Meeting recording. Key items and identified action items are summarized.

Agenda Item	Time Stamp	Key Items/Actions
1 Call to Order	00:00 to 1:01	Lyndsey welcomes the members in-person and online. Lyndsey calls the meeting to order.
2 Introduction and Welcome	1:02 to 4:31	Emily conducts a roll call of members. Mike O'Keefe, Hayley Cook, Lene Ichinotsubo, Nicole Chatterson, Quinn Vittum, Allen Evans, and Lauren Zirbel are in

Agenda Item	Time Stamp	Key Items/Actions
<p>3 Approval of Minutes from SRWG Meeting No. 3 – Information/Action</p>	<p>4:32 to 7:28</p>	<p>attendance at the time of the roll call. Tina Yamaki, Jessica Leorna, and Amy Brinker are not in attendance at the time of the roll call.</p> <p>Lyndsey announces that quorum is reached to hold the meeting. Lyndsey asks the group if any SRWG members need to leave the meeting early. Lene tells the group that she was able to resolve her last meeting conflict, so she will be able to attend the full meeting.</p> <p>Lyndsey lets the group know that Jess Leorna is no longer with BIA Hawai'i, so the consultants and ENV will be working with BIA Hawai'i to determine if someone else from BIA Hawai'i can join in her place for participation in Meeting #5 and review of the SRWG Report.</p> <p>Lyndsey goes over the agenda for the meeting.</p> <p>No one provides public testimony in-person or online for this agenda item.</p> <p>Action: Quinn motions to approve meeting minutes from SRWG Meeting No. 3. Allen seconds the motion.</p> <p>Quinn, Hayley, Allen, Mike, Lene, Hayley, and Nicole vote to approve the minutes. The meeting minutes from Meeting No. 3 are approved.</p>
<p>4 Discussion of Information Presented at Meeting No. 3 – Information</p>	<p>7:29 to 1:59:41</p>	<p>Lyndsey reviews the process from Meeting No. 2 through to Meeting No. 5 to remind the group of the overall flow of meetings and the purpose of each. Lyndsey explains that Meeting No. 4 is the opportunity to discuss the PIG ideas with the overall group and finalize the recommendations with the goal of determining what to include in the report.</p> <p>There were some technical difficulties in the in-person room, so Lyndsey paused to confirm that we could hear her.</p> <p>Lyndsey goes over the process for today for discussing the PIG considerations, answering questions, and then performing a quick vote for inclusion of the consideration in the report. Lyndsey explains that the group will then move on to finalizing the recommendations by identifying any modifications and then motioning to approve the recommendations for inclusion in the SRWG Report.</p> <p>Lyndsey goes over the definition of source reduction, which is to reduce the generation of waste, waste disposal, and waste toxicity.</p> <p>Lyndsey goes over the SRWG goals identified from the SRWG Charter:</p> <ol style="list-style-type: none"> 1. Identify potential best approaches to source reduction initiatives; 2. Provide recommendations for programs and policies to reduce waste generation; 3. Develop quantifiable targets for source reduction and identify metrics and milestones to track progress; 4. Facilitate coalitions between ENV, industry, education institutions, non-governmental organizations, and communities to discuss and achieve source reduction; and 5. By the close of the SRWG, lay the foundations for the potential formation of a new self-sustaining, long-term stakeholder coalition that discusses source reduction needs over time. A successful source reduction program for O'ahu will require ongoing discussions and coordination that extends beyond the one-year appointed term for the SRWG. As such, at the close of the SRWG, members are encouraged to strive towards this goal by maintaining contact and forming their own permanent, self-sustaining, stakeholder-led group. <p>Lyndsey starts the discussion on the six C&D waste considerations and asks for feedback from the group:</p> <ol style="list-style-type: none"> 1. Seek out funding strategies – millions in EPA federal funding. City can apply for grants or build partnerships that support and seek grant funding. <ul style="list-style-type: none"> • Quinn brings up the City capacity to write grants as a potential concern to consider. Quinn makes the point that people are busy and wonders who does that work. • Lene says that grants in general are not sustainable because they are a one-time effort or contribution. Lene mentions the consideration of recycling tipping fees and thinks that grants should go towards capital improvements or utilized for one-time expenditures, rather than long-term efforts like tipping fee incentives for recycling, which cannot be sustained long term by

Agenda Item	Time Stamp	Key Items/Actions
		<p>grant funding. Lene thinks there should be consistency in implementation.</p> <p>Tina Yamaki joins virtually at this time.</p> <ul style="list-style-type: none"> • Mike agrees with Lene’s comments. Mike thinks as a general idea that seeking out funding strategies is a good thing, but funding needs to be targeted for things like a plan for creating a long-term program or education and outreach because funding a program wouldn’t lead to discontinuing a service. Mike thinks that pursuing grant funding depends on what the money would be used for. • Six votes: Mike, Quinn, Allen, Hayley, Lene, Nicole vote yes for including some version of this consideration in the SRWG Report. <p>2. Adopt a diversion ordinance – currently lack of regulation for diversion. As an example, County of Hawai’i requires a Solid Waste Management Plan. City of Austin requires reuse/recycle of more than 50% C&D debris for building permits for more than 5000 sq ft and for commercial and multifamily demolitions. As a solution, City and County of Honolulu could require diversion segregation, recycling, and/or reuse of C&D waste.</p> <ul style="list-style-type: none"> • Quinn mentions that he emailed Lyndsey a document, which is a guide for local government deconstruction and material reuse. Quinn wants to make sure everyone has access to that. Lyndsey says that a link could be sent out to the group and/or a link could be included in the Report. • Lyndsey announces that Dean Uchida (public guest) that his hand is up, but in the next agenda item there will be a chance for him to speak during the public comment period. • Mike says that this consideration is the one that he supports the most out of the other considerations. Mike explains that this is more of a source reduction initiative than the other considerations discussed. Mike says that this consideration has the biggest capability to affect source reduction and groundwork has been made with Hawai’i County adopting something similar to this. Mike says this is the truest source reduction initiative brought up. • Lene mentions that consideration #3 about a deconstruction ordinance could be a potential subset of consideration #2 about a diversion regulation ordinance. Lene wonders if deconstruction could be part of the diversion regulation ordinance. Lene wonders if the ordinance could be approached from a more holistic standpoint rather than separating the two. • Mike agrees that deconstruction would be a means of diversion, so it could be a subset of the ordinance. • Allen makes the comment about identification of licensed waste haulers. Allen thinks that there could be more emphasis on all waste haulers. Allen thinks that screening haulers could be done. • Emily comments that the slides for consideration #2 and consideration #3 were organized separately because waste diversion and deconstruction are two separate things, so they’re easier to understand as separate concepts. Emily mentions that they are not necessarily two separate things. • Quinn updates the group that the State legislature will introduce two bills this session for waste diversion and for procurement process for anyone trying to divert waste for public. Quinn wonders if there could be coordination with the State, since the Statewide bills are being introduced. • Lene thinks if the City pursues this diversion regulation ordinance, then education and outreach needs to be shared about what can be recycled and considerations for safety reuse and recycle. Lene explains the example that soil is often reused between projects, and contaminated soil has been tracked to different project locations in the past, and additional clean-up for

Agenda Item	Time Stamp	Key Items/Actions
		<p>remediation has resulted in additional waste. Lene says the State helps on the back-end and thinks the City can help on the front-end with education on a potential Solid Waste Management Plan and permitting requirements.</p> <ul style="list-style-type: none"> • Six votes: Nicole, Hayley, Mike, Allen, Quinn, Lene vote yes for including some version of this consideration in the SRWG Report. <p>3. Adopt a deconstruction ordinance – currently lack of regulation for deconstruction. As an example, the City of Portland requires projects seeking a demolition to fully deconstruct for single-dwelling structures built before 1940 and a certified deconstruction contractor is required. As a potential solution, the City and County of Honolulu could require deconstruction, targeting larger buildings or small old single-family homes.</p> <ul style="list-style-type: none"> • Lyndsey explains that this could be implemented in some way with the diversion ordinance. • Mike makes a clarifying comment about what comes after the 5th SRWG meeting. Mike mentions that it has been noted that solutions have been something that the City will take on, but he doesn't want the group to limit their thinking to only things that the City could do. Mike suggests that the next evolution of the SRWG could continue these efforts, or something could move on to other entities or to the State as a State statute rather than an ordinance. Mike explains that, in some cases, the City wouldn't be the best group to carry forward certain considerations. • Lene has a question if the option to combine #2 and #3 is still on the table. Lyndsey explains that those specifics would be decided in the next agenda item. • Six votes: Mike, Quinn, Allen, Hayley, Nicole, and Lene vote yes for including some version of this consideration in the SRWG Report. <p>4. Streamline permitting process for C&D and concrete waste recyclers – currently permitting process poses a barrier. As a potential solution, industry stakeholders could work with the State to streamline/simplify the permitting process and provide online education materials for interested permittees.</p> <ul style="list-style-type: none"> • Allen thinks the permitting process for all recyclers could benefit, not just concrete waste recyclers. Allen thinks that other stakeholders could work together as well, not just the State. For example, City stakeholders like DPP could be involved in conversations. For example, a concrete waste recycler is currently trying to go through SMA permitting, and Allen thinks that City agencies could help with streamlining the process. • Mike thinks this is ultimately a good thing to do. Mike plans on supporting this consideration provided that efforts would be focused on source reduction through a process that would create no waste by-product. Mike mentions, for example, that he believes that you could completely recycle concrete waste. Mike wants to keep people focused on the purpose of the group, which is source reduction. Mike would support it to the extent that it is a source reduction initiative. • Lene says that a Solid Waste Management Permit would not apply for reuse of waste—for example, reuse of a door would not require a permit. In response to Mike's comments about source reduction, Lene explains that a Solid Waste Management Permit would not be required for reuse of waste. Lene explains that the State is working on e-permitting so everything would be done electronically rather than on paper. Lene explains that the State is already taking steps to streamline process, and the State recognizes that permitting education has a lot to do with it because generators are not all aware of contaminants of certain material types. Lene appreciates the comments from the group.

Agenda Item	Time Stamp	Key Items/Actions
		<ul style="list-style-type: none"> • Six votes: Allen, Quinn, Nicole, Hayley, Nicole, Mike, Lene vote yes for including some version of this consideration in the SRWG Report. <p>5. Establish transfer stations/stockpiling areas for C&D waste – currently large limiting factor for diverting C&D waste is the lack of space for stockpiling, sorting, and storing materials. As a potential solution, stakeholders could establish on-site stockpiling/sorting areas at potential, future C&D process facilities or landfill.</p> <ul style="list-style-type: none"> • Lyndsey mentions that a consultant is currently preparing a C&D management plan, so coordination would be required with them. • Quinn states that while he thinks the transfer station piece is important and he'll see what happens with the pilot project, he wonders if there is more of a need for storage of material like warehouses or yards. Quinn explains that the City of San Francisco does that for places that are diverting materials. Quinn states that if they had more space at ReUse Hawai'i then they could do more. Quinn states that with hotel renovations, there are massive amounts of materials, even though they have 40,000 sq ft facilities. Quinn cannot afford to lease warehouses, so City or State could help with that need. • Lene has a question about the word "stakeholder." Lene asks a clarifying question if this consideration is just limited to City and State or government agencies. Lene is concerned that if there are competing operations, there could be failure all around. • Lyndsey says that the SRWG can determine more specific wording on the "stakeholders" that could be involved. • Lene does not have a recommendation for which stakeholders. • Quinn doesn't think stockpiling is the right word. Rather, the words used should be is "staging" and "storage". • Nicole agrees with Quinn's comment via the chat. • Roger Babcock has his hand up virtually and asks if he can talk. Lyndsey tells Dr. Babcock that it is better for him to speak during the public testimony period during the next agenda item. • Initially five votes: Allen, Quinn, Lene, Nicole, and Hayley vote yes for including some version of this consideration in the SRWG Report. • Mike states that he did not raise his hand and asks a clarifying question. Mike states that the consideration is a good thing and thinks that some of this consideration could be considered source reduction, such as staging. Mike explains that he didn't raise his hand because only part of the consideration is source reduction. Mike thinks we need to clarify stakeholder involvement more. Mike thinks the goal of the source reduction working group should stay focused on core solutions which lie in diversion and deconstruction. Mike wonders about the next iteration of the group's capacity to take on, so it doesn't lose focus on higher value and higher impact strategies. • Lyndsey thinks it's good to capture that feedback. Lyndsey thinks in the report that some things could be prioritized. Lyndsey thinks documenting of the group's thoughts is important. • Mike now votes yes for inclusion of this recommendation in the Report with the hope that the Report will clarify and prioritize the strategies that are put forward. • Quinn asks Mike if this consideration sounds like the collection site model. Mike views this consideration as something separate from the collection site model. Quinn mentions the Kapa'a Transfer Station pilot project. Quinn thinks that this consideration could be rewritten to mention the Kapa'a Transfer Station, which is a collection site for storage. • Allen thinks C&D debris is different because C&D debris is everything: concrete, wood, scrap metals. Allen thinks C&D

Agenda Item	Time Stamp	Key Items/Actions
		<p>debris is a larger portion than other types of waste. Allen mentions that when talking about diversion and reuse, concrete for example can be infinitely reused. Allen mentions that cardboard is a huge percentage of the waste. Allen thinks that C&D waste diversion may require another program.</p> <ul style="list-style-type: none"> • Emily makes a comment that the wording came from multiple PIG meetings and the discussion with the Kamehameha Schools guest speakers. Emily tells the group to move forward okay with disagreeing with how it is written. • Lyndsey reiterates that now there is a total of six votes, since Mike changed his vote. <p>6. Educate and involve stakeholders – currently lack of education and knowledge in industry for reuse/recycling diversion methods. As potential solutions, establish education programs and adopt a core value system for the City. In a Kamehameha Demolition of Keauhou Beach Hotel project, they diverted over 90% C&D waste and Hawaiian core value system really impacted the project. Kamehameha project also lacked knowledge on how to handle concrete, so they additional education on diversion methods would be helpful for others.</p> <ul style="list-style-type: none"> • Mike thinks that this consideration could be a subset of any consideration, to streamline the considerations, rather than its own consideration. • Six votes: Quinn, Allen, Lene, Hayley, and Nicole vote yes for including some version of this consideration in the SRWG Report. <p>Lyndsey starts the discussion on the seven PV Panel Waste considerations and collects feedback from the group:</p> <ol style="list-style-type: none"> 1. Evaluate funding strategies <ul style="list-style-type: none"> • Lene has a clarifying question if the consideration is to evaluate these funding strategies further, and not identifying that these are the only solutions. Lyndsey confirms yes to Lene’s question. • Six votes: Allen, Quinn, Hayley, Nicole, Lene, Mike vote yes for including some version of this consideration in the SRWG Report. • Mike chimes in a bit late and states that he should have said yes. Mike thinks it’s a good thing but doesn’t quite know what it means. Mike thinks that seeking out funding strategies is still good and thinks it could be a sub-set of the other items. Mike confirms that a yes vote indicates further consideration and not top priority. 2. Consider establishing sites for collection, sorting, processing, and staging. Currently Inter-Island Solar Supply does this on a small scale. As potential solutions, City/stakeholders could secure a physical space for collection. <ul style="list-style-type: none"> • Lyndsey states that this consideration could be on its own or in combination with other C&D materials. • Lene has two comments: 1) If we keep the language, it should be similar to C&D to separate language between source reduction and recycling. 2) The group didn’t have time to consider the best collection point for this recycling and reuse option. Collection of PV panel waste is at the point of transport to a different location. Specialized contractors for this case could be utilized for this level of collection of waste. Hundred something level of contractors for PV panel waste, rather than thousands of homeowners generating waste as in the case of C&D. By limiting collection points, Lene thinks that there is better control over what they get. Lene thinks this needs to be looked at as a possibility. From source reduction standpoint, Lene thinks that contractors can easily identify which panels work and which don’t—which can be reused and which need to be recycled. This doesn’t necessarily have to go to a larger collection point for someone else to identify what works and what doesn’t. Lene thinks it’s a possible solution, but she’s not at the point where she knows if it’s the best path forward.

Agenda Item	Time Stamp	Key Items/Actions
		<ul style="list-style-type: none"> • Mike says that he is where Lene is at. Mike states that it is a good sounding thing, but views PV panel waste as an area that is prime for extended producer responsibility to put the burden on manufacturers and producers for management of this material. Mike is supportive of this, but wants the focus on PV panel waste to be more upstream or through a different strategy altogether. Mike isn't sure how he feels about this one. Mike says his comment is PV panel specific, not for other materials as well. • Quinn says the jury is still out on what can be recovered and reused for solar panels. Quinn says that there might be saturation down the line with demand for reuse of PV panels. • Four votes: Quinn, Allen, Nicole, Hayley vote yes for including some version of this consideration in the SRWG Report. <p>3. Consider establishing a Statewide Stewardship Program. Dr. Cooney recommended establishment of program. He suggests that the program could be led by a 403B non-profit organization with oversight from manufacturers and government agencies. Funding could come from several levels from the industry to consumer level.</p> <ul style="list-style-type: none"> • Lene recognizes that this is just a consideration, but she doesn't want this to overshadow other potential solutions. Lene thinks EPR could lead to a statewide stewardship program. Lene doesn't want this consideration to overshadow one potential solution over another. Lene is not ready to commit to a direction yet as far as best possible options for PV panels. • Nicole states that considering the plan doesn't have teeth and nothing is a committed direction she doesn't see the harm in including more than less because the group hasn't had the scope or time to determine the best and only direction. Nicole tells the group that since none of the Report is committal, the group is just planting seeds for future work. • Quinn agrees with Nicole. Quinn states that the slide should say 501c3 non-profit group instead of 403B. • Six votes: Quinn, Allen, Mike, Nicole, Hayley, Lene vote yes for including some version of this consideration in the SRWG Report. <p>4. Incentivize and educate owners about PV panel maintenance. Panels are taken down sooner than they need to be. Education on maintenance and installation could increase panel lifespan.</p> <ul style="list-style-type: none"> • Allen doesn't think this needs to be incentivized because the incentive is that they get better performing panels. Allen thinks that education is all that is needed. • Lene agrees. • Mike agrees and states that the incentive is the money they could save. • Six votes: Quinn, Allen, Mike, Lene, Hayley, and Nicole vote yes for including some version of this consideration in the SRWG Report. <p>5. Subsidize shipping costs to mainland. Currently Inter Island Solar Supply doesn't make a profit with the recycling program; they do it to minimize the waste stream.</p> <ul style="list-style-type: none"> • Lyndsey suggests this could be combined. • Lene says that this would be the funding source. If a consumer pays a disposal fee, then funding can come from that. Lene thinks that this could be combined with #1. Lene doesn't think it's subsidy—it's actually payment. • Mike seconds Lene's comment. Mike wonders if this could be a part of an EPR initiative. Mike wonders if we are talking about PV panels getting landfilled on the mainland. • Lyndsey explains that the Inter-Island Solar Supply program's limiting factor is shipping cost. Lyndsey explains that panels go to recycling facilities on the mainland. Recycling cannot happen

Agenda Item	Time Stamp	Key Items/Actions
		<p>on island and has to be shipped somewhere – currently to the mainland.</p> <ul style="list-style-type: none"> • Mike thinks it's a good program but wants to make sure that it is source reduction and not recycling. • Lyndsey mentions that the reduction of toxicity of illegally dumping PV panels is also source reduction. • Five votes: Mike, Quinn, Allen, Hayley, Nicole vote yes for including some version of this consideration in the SRWG Report. <p>6. Explore Extended Producer Responsibility – currently lack of regulation and responsibilities placed on producers. EPR will likely be difficult. Majority of manufacturers are international and they could pull out from Hawai'i market. Washington only state with PV panel EPR law. Niagara County only local government with PV panel EPR law. State DOH should put time and effort into considering options and watching how California implements EPR.</p> <ul style="list-style-type: none"> • Six votes: Mike, Quinn, Allen, Nicole, Hayley, and Lene vote yes for including some version of this consideration in the SRWG Report. <p>7. Support/incentivize secondary market program for re-use</p> <ul style="list-style-type: none"> • Lene asks Quinn if there is a possibility that saturation could be reached in the secondary market for demand. • Quinn says that they are concerned that supply of reused panels will be higher than demand, but they are still evaluating them. • Lene thinks we should add the word "consider" to it says "Consider supporting/incentivizing secondary market program for re-use." • Quinn thinks that people using the used panels could get a tax incentive. • Five votes: Mike, Quinn, Allen, Lene, Hayley vote yes for including some version of this consideration in the SRWG Report. <p>Lyndsey explains the product packaging & food waste/organics group's considerations:</p> <ol style="list-style-type: none"> 1. Seek EPA funding. EPA awarded \$1.5 million to County of Hawai'i for a city-scale reusable food ware and refillable bottle system in Hilo. <ul style="list-style-type: none"> • Lyndsey mentions that this consideration could be incorporated as a sub-set of the other considerations, so that funding could go towards each strategy. • Seven votes: Mike, Quinn, Allen, Lene, Hayley, Nicole, and Tina vote yes for including some version of this consideration in the SRWG Report. 2. Food ware – Re-usable container and mobile washing program. Zero Waste O'ahu (Nicole) has reuseable containers from a prior pilot project. Previous barrier was lack of access to washing facilities. Policy language states that food trucks and mobile dishwashing service need to be connect to a brick-and-mortar commercial kitchen. <ul style="list-style-type: none"> • Lene asks if there is difficulty with mobile washing. Lene wonders if a pilot could be done in a brick-and-mortar setting to show that success is possible. Lene thinks that success with a pilot project may make it easier to pass a policy change. • Nicole mentions that Zero Waste O'ahu ran a pilot program for a year and a half washing in a commercial kitchen. Nicole says that they do have data from the successful pilot project with reusable containers (diverted 20,000 containers by using reusable containers). • Lene asks if these are normal takeout containers rather than a restaurant setting.

Agenda Item	Time Stamp	Key Items/Actions
		<ul style="list-style-type: none"> • Nicole says yes. Nicole explains that the goal is to have a washing option available at event settings. • Lene asks if these are catered events or food truck scenarios. • Lyndsey explains yes that this would be for large events. Lyndsey then goes over the PIG's jamboard more in detail, and explains that the program would target events greater than 100 people. • Lene wonders if outdoor events like weddings are being targeted. • Lyndsey confirms and adds that it's big events, those with more than 100 people. • Nicole explains that the Korea Fest hosted at the Fasi Municipal grounds is a good example. Nicole says that public events would be targeted rather than private events like weddings. Nicole mentions public events at for example the Waikiki Shell. • Lene wonders if the food service ware could be easily transported to a brick-and-mortar facility. Lene wonders if there is a way to proceed if they can't change the policy language, by getting containers to a washing area connected to a brick and mortar kitchen. • Six votes: Mike, Quinn, Allen, Hayley, Lene, Nicole vote yes for including some version of this consideration in the SRWG Report. <p>3. Future recommendations for packaging – creating a task force or extending the SRWG to look at the current state and recommendations for next steps (EPR, pallets, etc.)</p> <ul style="list-style-type: none"> • Five votes: Mike, Allen, Quinn, Nicole, and Lene vote yes for including some version of this consideration in the SRWG Report. <p>4. Food waste – increase food donations. Current policy Good Samaritan Law protects good-faith food donors from civil and criminal liability and encourages food donation. Potential solutions are to incentivize food donations from businesses with an award.</p> <ul style="list-style-type: none"> • Lene asks a clarifying question about the order in which we are going because she thought that they were voting on this consideration in the last vote. Lene asks what the group is currently voting on. • Lyndsey explains that this current vote is about food donation incentives. Lyndsey goes back to the previous consideration to explain the group's 3-year plan for packaging materials and future recommendations for packaging materials. • Lene does not have a comment on the food donation consideration. • Six votes: Quinn, Mike, Allen, Nicole, Tina, and Lene vote yes for including some version of this consideration in the SRWG Report. <p>5. Food waste – increase food recycling. Current policy Ordinance Chapter 42 Section 42-3.5 requires businesses of a certain size to send food waste to recycling facilities. Policy language change could increase food recycling by requiring additional sizes of business to send food to recycling facilities.</p> <ul style="list-style-type: none"> • Lene wonders if the group should include reuse in this consideration or wonders if animal feed is considered recycling this purpose. Lene is not familiar with the language in the ordinance, so she doesn't know if animal feed is an option in the ordinance for recycling. • Nicole thinks Lene makes a good point, and the language could be included to prioritize diversion of edible food waste over recycling. • Mike wants to focus this consideration on reuse. Mike mentions that the City has one of the solutions covered by accepting food

Agenda Item	Time Stamp	Key Items/Actions
<p>5 Finalize Recommendations – Information/Action</p>	<p>2:10:30 to 2:49:28</p>	<p>waste curb-side for residential collection in 2025. Mike thinks that this could be reworded to focus on reuse. Mike thinks that the City has this solution covered, and Mike thinks that time is better spent on commercial reuse facilities.</p> <ul style="list-style-type: none"> • Lyndsey explains that the current issue is that not all businesses are currently required to divert their food waste, so this consideration would require more businesses to recycle their food waste. • Mike said that he is confusing this ordinance with the curb-side ordinance and said to disregard what he said. Mike thinks that the consideration wording can still be reworded to emphasize reuse over recycling. • Tina said that she has been talking to larger restaurants and hotels, and they have been donating to Aloha Harvest, food bank, and other food programs. Tina said that larger restaurants aren't publicizing their food donations. Tina said that some smaller businesses don't have the storage space for the food. Tina said that for smaller restaurants, leftovers go home with the employees. • Six votes: Mike, Quinn, Allen, Tina, Hayley, Nicole vote yes for including some version of this consideration in the SRWG Report. <p>The group goes on a short break (from 2:00:24 to 2:10:08 in the MS Teams recording). Lyndsey reminds the group that public testimony will be taken at the beginning of Agenda Item V. The group reconvenes at 3:15 HST.</p> <p>Lyndsey checks if the group has quorum to continue the meeting. Quorum is reached, so the meeting resumes.</p> <p>Lyndsey announces that public testimony will begin. No one in the room registered for public testimony. Lyndsey asks if anyone online would like to testify for the public.</p> <p>Lyndsey announces that a letter was provided from BIA Hawai'i.</p> <p>Dean Uchida provides public testimony. Dean represents Jess Leorna from BIA Hawai'i. Dean wants to make sure that the task force has a copy of the written testimony letter from BIA Hawai'i and hopes that the letter is provided in the Report.</p> <p>Lyndsey clarifies that the letter was distributed to the SRWG members today and clarifies that the letter can be provided in the Report. Lyndsey also explains that we will be in communication with BIA Hawai'i for providing a replacement for Jess.</p> <p>Lyndsey asks Dr. Roger Babcock if he has a comment. Dr. Roger Babcock does not comment at this time.</p> <p>Lyndsey explains that the group will now finalize the recommendations, and then begins to gather feedback from the group for each consideration one-by-one. Lyndsey explains that now is the time for group to provide additional steps and wording for the considerations. Lyndsey explains that the group will go through the considerations that received five or more votes.</p> <p>C&D Waste considerations:</p> <ol style="list-style-type: none"> 1. Seek out funding strategies <ul style="list-style-type: none"> • Mike thinks that this consideration could be combined with other considerations. • Mike moves that the group votes on inclusion of seeking funding opportunities as a subset of other recommendations in the SRWG Report as applicable. Allen seconds the motion. Quinn, Allen, Mike, Hayley, Nicole, Lene, Tina vote to approve the motion. 2. Adopt a diversion ordinance <ul style="list-style-type: none"> • Quinn asks that once the consideration is in the Report then the group can dig in further to the details. • Lyndsey explains that this one is a bit trickier to explain the details. Lyndsey explains that the goal is to define the consideration to the level that the group is comfortable. • Quinn thinks that the considerations are good as written but considerations #2 and #3 should be combined. Quinn moves to vote on

Agenda Item	Time Stamp	Key Items/Actions
		<p>inclusion of both consideration #2 (adopt a diversion regulation ordinance) and consideration #3 (adopt a deconstruction ordinance) combined in the SRWG. Mike seconds. Nicole, Hayley, Lene, Tina, Mike, Allen, and Quinn vote to approve the motion.</p> <p>4. Streamline permitting process for C&D and concrete waste recyclers</p> <ul style="list-style-type: none"> • Nicole wants more time to think about it. Nicole thinks that it is easier to edit the language in the written report. Nicole asks if they will have a chance to make changes later. • Lyndsey explains that there will be another opportunity for comment on the draft SRWG Report later. • Allen motions to keep the language as is and work on it in a future group. Allen thinks that there needs to be more discussion on this. Allen is saying that we are potentially removing the possibility for other types of waste in the future, by using the current wording. Allen thinks more work is needed to clarify the wording. Allen mentions removing the word C&D from the wording. • Lyndsey mentions that this consideration came out of the C&D PIG. • Emily asks Allen if he wants to remove the word “concrete” from the consideration. • Allen thinks there should be a more general term used instead of limiting the group to “C&D and concrete.” • Lene says that she is having a hard time hearing the room. Since concrete is a subset of C&D, Lene wonders if we can change wording to “C&D material management.” The wording change could also for reuse and could be applicable to more than just the State’s permits and could be applicable to other permits like those for land-use, zoning, and other permitting issues. • Lyndsey says that the wording could say, “Streamline permitting process for C&D material management.” • Quinn says that he wouldn’t want the process to be easier for landfills diverting waste. • Allen doesn’t think the idea would be to make the process easier for landfills, so he thinks the group should be sure to cover that. Allen says that concrete recycling is huge, and it is permittable and requires permits. Allen says that concrete looks like a small part of the waste stream in reports, but the industry does a really good job of recycling concrete. Allen says that permitting is a challenge for concrete recycling, and he thinks the consideration is worth considering. • Lene makes the clarification that requirements are different for landfills and recyclers are different based on statutory requirements. Lene says that permitting streamlining would change the process in which to do it, not changing statutory requirements or rules. • Quinn makes a motion to proceed with consideration #4 for streamlining the permitting process for C&D material management. Allen seconds the motion. Quinn, Allen, Mike, Lene, Hayley, Nicole vote to approve the motion. <p>5. Establish transfer stations/stockpiling areas for C&D waste</p> <ul style="list-style-type: none"> • Lyndsey asks the group if they have modifications on language because the group mentioned that earlier during the previous agenda item discussion. Lyndsey asks the group if they want, “Establish transfer stations/staging/storing areas for C&D materials. • Mikes asks the group if this item is referring to areas where waste from generator can be stored before it is reused or repurposed somewhere else. If that is the case, Mike thinks that the words “transfer stations” can be removed from the wording because the wording “transfer stations” implies a stop on the way to disposal or recycling, rather than reuse and source reduction. • Allen agrees and thinks the new terminology should be “C&D recycling” station. Allen explains that if consideration item #4 for streamlining permitting process for recyclers goes forward, then this consideration item #5 would benefit. Allen recalls the PIG conversations and explains that

Agenda Item	Time Stamp	Key Items/Actions
		<p>having multiple smaller satellite locations around the island will be better than only one location for gathering the C&D waste.</p> <ul style="list-style-type: none"> • Emily verifies if the online attendees can hear the group online. • Lyndsey says that it became harder to hear online. Lyndsey asks the group if they still want to move forward with the consideration in some fashion. • Allen says he's on the fence because he's on the fence about it. He wonders who would be able to establish this. • Lyndsey asks the group if the wording could be changed to "establish areas where C&D materials can be stored and stockpiled before reuse." Lyndsey asks the group if that's what the group is trying to do. • Allen thinks that instead of using the language "establishing," that maybe industry stakeholders might want to set up transfer stations and maybe it could be done in line with the other recommendations. Allen thinks that certified C&D recyclers should be used. • Lyndsey says that we are getting close to end of time and wants to do a process check since the group is getting stuck. • Quinn makes a motion to advance this item noting that the biggest consideration is space for storing and staging reusable or recyclable C&D debris. • Nicole seconds the motion. • Quinn, Mike, Hayley, Nicole, and Lene vote to approve the motion. • Allen asks what the motion was. • Emily puts the motion language in the chat and tells the group it's in the chat. • Quinn clarifies that the motion is to advance this item with the consideration that emphasis is on space to store and stage reusable C&D debris. • Allen thinks that's one-sided, and we need both because some things can't be reused. • Lyndsey asks if that was a yes vote or no. • Allen says no. • Allen says that he would move to remove the recommendation altogether. • Lyndsey says that this consideration could be one that the group provides comments on in the draft report, so the group can think about it more. Lyndsey asks if that was five votes—two in the room and three online. • Quinn says that he wasn't sure if there was a second though because he lost track. • Lyndsey says that there was a second. • Emily asks about who seconded the motion. • Nicole says that she seconded the motion. • Lyndsey says that there were three online votes—Hayley, Nicole, and Lene—which would be a total of five votes. (Mike and Quinn voted in-person to approve the motion.) • There are a total of five votes to approve the motion. <p>Lyndsey asks the group if they can stay past 4pm HST since the group is close to end of time. Nicole has a hard stop. Quinn can go until 4:15pm HST. Lene has a 4pm HST meeting.</p> <p>Lyndsey suggests that the group make a motion to include the items with 5 or more votes in the draft report. Then the group will have the opportunity to review and make comments on them. Then the group can discuss and vote on the finalized version of the report to be put forth.</p> <p>Quinn makes a motion to approve all the items that got 5 or more votes and give the members an opportunity to comment on them during the final draft period.</p> <p>Allen seconds the motion.</p> <p>Quinn, Mike, Allen, Lene, Hayley, Nicole, and Tina vote to approve the motion.</p>

Agenda Item	Time Stamp	Key Items/Actions
6 Scheduling/Announcements for Next Meeting - Information	2:49:29 to 2:50:00	Lyndsey announces the upcoming process for the SRWG: the consultants will take the feedback and draft the report; the SRWG members will have the opportunity to review and provide comments prior to Meeting #5; the members will finalize the report at Meeting #5. Lyndsey announces that Meeting #5 time and date is to be determined.
7 Adjournment	2:50:01 to 2:50:30	Lyndsey thanks everyone. Lyndsey tells the group that more information will come about the report and Meeting #5. The meeting is brought to a close at 3:56pm HST.

DRAFT

Meeting 5

To be added with final



Appendix F

Supplementary Background Materials



Supplementary Background Materials

City and County of Honolulu Source Reduction Working Group

<https://www.honolulu.gov/opala/source-reduction-working-group.html#:~:text=The%20City%20and%20County%20of,public%20health%20and%20the%20environment.>

2017 Waste Composition Study

https://www.honolulu.gov/rep/site/env/envref/envref_docs/2017_Waste_Composition_Studies.pdf

2019 Integrated Solid Waste Management Plan Update

https://www.honolulu.gov/rep/site/env/envref/envref_docs/ISWMP_2019_Final.pdf

December 2022 Hawai'i Natural Energy Institute Report to the Hawai'i State Legislature Recommendations on Waste Management of Clean Energy Products in Hawai'i

<https://www.hnei.hawaii.edu/wp-content/uploads/2023-HNEI-Act92-Final-Report-Clean-Energy-Products-Waste-Management.pdf>

Appendix G

Personal Statements/Testimony Letters





December 1, 2023

Ms. Lyndsey Lopez
Waste Planning and Strategy Lead
City and County of Honolulu
Source Reduction Working Group (SRWG)
C/O Jacobs
1132 Bishop Street, Suite 1100
Honolulu, Hawaii 96813

Subject: Focus of the Working Group/C&D Waste PIG Proposed Considerations

Dear Ms. Lopez,

This is a follow up to the group meeting of November 28, 2023 where the SRWG focused on the three PIG considerations for the areas of focus. The following are the considerations from each of the PIG's.

C&D Waste Considerations

1. Seek out funding strategies
2. Adopt a diversion regulation ordinance
3. Adopt a deconstruction ordinance
4. Streamline permitting process for C&D and concrete waste recyclers
5. Establish transfer stations/stockpiling areas for C&D waste
6. Educate and involve stakeholders

PV Panel Waste Program Considerations

1. Seek out funding strategies
2. Establish sites for collection, staging, and processing
3. Establish a Statewide Stewardship Program
4. Incentivization and education for Operation and Management of PV panels
5. Subsidize shipping costs to ship PV panel waste to the mainland
6. Explore Extended Producer Responsibility
7. Support/incentivize secondary market program for re-use

Product Packaging & Food Waste/Organics –Information▪ Considerations

1. Seek EPA funding
2. Food Ware – Re-useable Container and Mobile Washing Program
3. Food Waste – Increase Food Donations
4. Food Waste – Increase Food Recycling (Organics and Composting)

808.847.4666 | 94-487 AKOKI STREET SUITE 213 | WAIPAHU, HAWAII 96797

INFO@BIAHAWAII.ORG | BIAHAWAII.ORG | HOMESHOWHAWAII.ORG

Background:

At this point, we believe there needs to be a firm understanding of what is driving the need to divert waste from the landfills. The SRWG is a result of the “2019 Integrated Solid Waste Management Plan Update dealing with the Future of Solid Waste Management.” The plan states that the City recognizes that a successful source reduction program will require ongoing collaboration with stakeholders throughout Oahu, including the state and federal governments, business and industry, research and education, non-governmental organizations, policy makers, and residents. Many source reduction initiatives require further evaluation of economic, social, and environmental factors to determine feasibility, as well as support from stakeholders outside the City to achieve implementation. The City is committed to stepping up source reduction efforts and continuing the discussion begun with stakeholders through the development of this Plan by establishing a Source Reduction Working Group (SRWG), which will meet quarterly (or as often as determined by the SRWG itself) and focus on developing quantifiable targets for source reduction, identifying metrics and milestones to track progress, and evaluating the feasibility and practicality of potential source reduction initiatives. In this ISWMP, the City has established the following goals:

- Reduce per-capita waste generation 25 percent by 2030, from 6.5 pounds per day to 4.9 pounds per day.
- Reduce carbon emissions from the waste stream by substantially reducing or eliminating carbon based single-use plastics and polystyrene from the waste stream going to H-POWER and landfill by 2030.

Recycling and Bioconversion: The City is proposing a series of new recycling initiatives that include issuing RFPs for recycling or beneficial reuse of glass deposit beverage containers and non-deposit glass, recycling of white goods, and recycling or beneficial reuse of ash, as well as implementing residential user fees as a possible mechanism to encourage waste prevention. In this ISWMP, the City has established the following goal:

- Increase landfill diversion to a diversion rate of 95 percent by 2030 and eliminate the need for an everyday landfill.

The 2019 Integrated Solid Waste Management Plan has identified a goal or objective for reducing solid waste. The plan states that the goal is to reduce per-capita waste generation 25 percent by 2030, from 6.5 pounds per day to 4.9 pounds per day.

The following table identifies the total tonnage that needs to be reduced by 25%. It also included a breakdown of the type of material, amount being processed, and percentage of the total being processed at H-Power and Waimanalo Gulch Sanitary Landfill.

Total Waste Composition (Tons) (2017) Table 2-8								Reduce by 25% by 2030
Material	H-Power	% of Total to H-Power	WGSL	% of Total to WGSL	Recycled	% of Total Recycled	Total	
Reuse	-		-		32,816	8%	32,816	24,612
Paper	165,263	23.76%	17,934	16.35%	65,820	5.31%	249,017	186,763
Plastics	71,486	10.28%	7,758	7.07%	5,889		85,133	63,850
Metal	33,374	4.80%	3,803	3.47%	133,904	30.79%	171,081	128,311
Organics	257,653	37.05%	28,663	26.13%	151,815	34.91%	438,132	328,599
Glass	11,114	1.60%	1,206	1.10%	14,713	3.38%	27,033	20,275
Inerts and C&D Materials	106,754	15.35%	11,585	10.56%	1	0.00%	118,340	88,755
Household Hazardous Waste	4,004	0.0058	879	0.80%	-	-	4,883	3,662
Other Materials	45,767	3.69%	37,870	34.52%	29,977	6.89%	113,614	85,211
Subtotal	695,415	100.00%	109,698	100.00%	434,935	100.00%	1,240,051	930,038
Residue from H-Power			33,521				33,521	25,141
Ash from H-Power			136,403				136,403	102,302
Total	695,415	49%	279,622	20%	434,935	31%	1,409,973	1,057,480

It is interesting that C&D Materials represents only 15.35% of the materials going to H-Power and only 10.56% of the total materials going to Waimanalo Gulch Sanitary Landfill. It is unclear but it appears that much of the separation of C&D waste is being done by PVT Land Company (“PVT”) with combustible materials going to H-Power and non-combustible materials going to the landfill. We are not sure why the SRWG did not consult with PVT on how they currently operate and identify what waste products presently have to go to the landfill. This information would have been useful to determine if there are ways to divert this waste product through further processing.

In both situations, C&D Materials is not the largest generator of materials. It is third in the amount of tonnage behind Organics (37.05%) and Paper (23.76%) at H-Power. It is fourth in the amount of tonnage going to Waimanalo Gulch Sanitary Landfill behind Other Materials (34.52%), Organics (26.13%) and Paper (16.35%).

SRWG PIG Considerations:

In comparing the findings and considerations proposed by each of the PIGS, only the C&D PIG contained suggestions of immediately adopting Ordinances to:

1. Divert C&D Waste from landfills; and,
2. Require construction “Deconstruction” for demolition projects on Oahu.

All of the PIGS are looking for funding with the low hanging fruit being EPA Grants/Funding programs; however, there is no discussion on if these sources are sustainable over the long-term.

The PV industry seems to have made their point that if you put too many requirements/conditions on manufactures of PV panels to recycle and reuse their product at the end of its lifecycle (+/-25 years), the manufactures might bypass the Hawaii market.

Interesting that they only looked at U.S. Mainland firms for recycling the PV panels. There was no discussion of looking to Asia for a company that might want to set up a recycling plant in Hawaii to capture the large amount of PV panels that will need to be recycled as they reach their life expectancy. Mitsubishi (see attached article) has developed a process that reduces costs by 20% to 30% and results in 99% of the panel being reused. The major components of a PV panel are: glass, silver, copper and aluminum which are all being recycled on a large scale right now.

It's interesting that the immediately first step to "Mandate" actions or impose fees/taxes on the entities creating the waste seems to dramatically decline the closer you get to an individual citizen/tax-payer. The construction industry can pass the cost of requiring waste diversion and waste deconstruction to the next developer. The Solar PV industry is looking for ways to off-set or subsidize the cost of recycling PV panels. However, when it comes to how to reduce food and food packaging waste which deals more directly with individuals and families, the options seem to be more "voluntary."

BIA Hawaii believes in the economics approach to change behavior. The four (4) traditional ways to change behavior are:

1. Provide information,
2. Change the incentives,
3. Change the prices, or
4. Impose regulations.

We are a firm believer in using incentives to change behavior as opposed to regulations or mandates. As stated earlier, we believe the SRWG missed an opportunity to get a better understanding of PVT's operations and how it currently diverts C&D waste from the landfill. By focusing on what is going to the landfill now, SRWG would have been able to explore other ways (i.e. can these materials be converted/recycled, what would the subsidy be) to divert these materials from going to the landfill.

Based on the lack of information on how PVT is diverting C&D waste from the landfills now, and the lack of any "incentive based" consideration for diverting C&D waste from landfills, BIA Hawaii is not in a position to support the considerations of the PIG at this time.

We appreciate the opportunity to participate in the SRWG and look forward to working on other efforts to reduce the landfill waste on Oahu.

Should you have any questions, please feel free to contact us at 808-629-7509.

Sincerely,

BIA Hawaii