Status Report on Reducing and/or Continuing the Use of
Waimanalo Gulch Sanitary Landfill
April 12, 2022
10:00 a.m.
Kalanianaole Beach Park
89-269 Farrington Hwy, Waianae, HI 96792

Status Report

1. Introduction and Background

Notice of this public hearing was published in the Honolulu Star Advertiser on March 29, 2022 and posted on the City's Refuse Division website, www.honolulu.gov/opala.

The City and County of Honolulu, Department of Environmental Services ("ENV"), holds a public hearing once every three months in accordance with the terms of the FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER APPROVING WITH MODIFICATIONS THE CITY AND COUNTY OF HONOLULU PLANNING COMMISSION'S RECOMMENDATION TO APPROVE SPECIAL USE PERMIT certified on November 1, 2019, by the State of Hawaii Land Use Commission (LUC) in Docket No. SP09-403 (the LUC Order). This public hearing is held to comply with Conditions 15 and 16 of the LUC Order, which states:

"15. The Applicant shall report to the public every three months on the efforts of the City Council and the City Administration in regard to the continued use of the WGSL, including any funding arrangements that are being considered by the City Council and the City Administration."

"16. The Applicant shall have a public hearing every three months in either Wai`anae, Mā`ili, or Nānākuli to report on their efforts to either reduce or continue the use of the WGSL."

The complete LUC Order is available at the State LUC website: https://luc.hawaii.gov/

In accordance with the foregoing, the following report covers developments during the last calendar quarter regarding the matters set forth in Conditions 15 and 16 of the LUC Order.

EXHIBIT K464

2. Progress Toward Another Landfill Site

A. Condition 5 of the LUC Order states in relevant part:

"By no later than December 31, 2022, the Applicant shall identify an alternative landfill site that may be used upon closure of WGSL."

The City has been engaged in an ongoing effort to identify a landfill site. Condition 4 of the prior LUC Order in Docket No. SP09-403, which was certified on October 22, 2009 ("2009 LUC Order"), stated:

"On or before November 1, 2010, the Applicant shall begin to identify and develop one or more new landfill sites that shall either replace or supplement the WGSL."

In accordance with Condition 4 of the 2009 LUC Order, Mayor's Advisory Committee on Landfill Site Selection ("MACLSS") met in 2011 and 2012, and completed its final report on September 25, 2012. All committee meetings were open to the public and to public comment. In the final report, 11 potential sites were identified and ranked based on community criteria. Handouts provided to the MACLSS, the Group Memory of each meeting, and the final report are posted online at www.honolulu.gov/opala.

The City retained a consultant to further review and analyze the sites based on technical and engineering considerations. The report, "Assessment of Municipal Solid Waste Handling Requirements for the Island of Oahu", was completed in November 2017 and is available online at www.honolulu.gov/opala.

The passage of Act 73 (2020) prohibits the construction, modification, or expansion of waste disposal facilities without first establishing a buffer zone of no less than one-half mile around the waste or disposal facility. Although not required, the active area of WGSL is in compliance with this requirement.

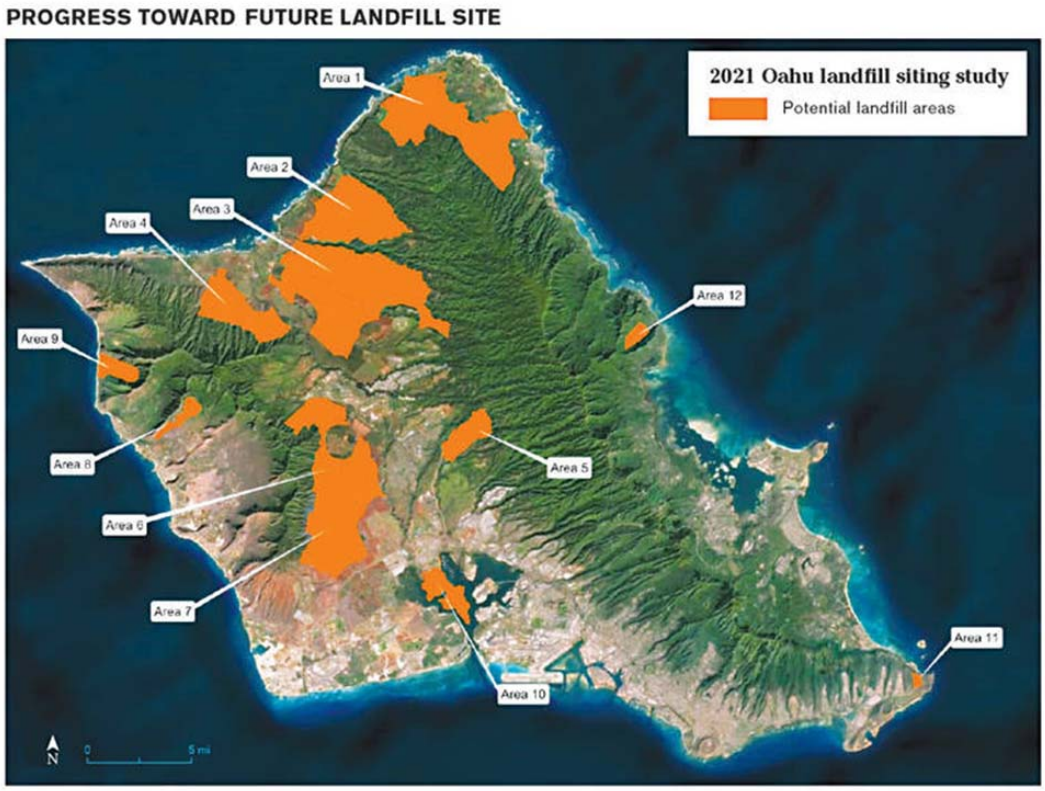
PVT Landfill informed haulers that due to the passage of Act 73, PVT would no longer be an option for disposal of asbestos containing material ("ACM") after January 1, 2021. To provide an on-island option for ACM, WGSL began accepting ACM as of January 6, 2021.

With PVT unable to proceed with their planned expansion, they are expecting to close within the next 5 to 9 years. The City is drafting C&D waste recycling legislation and permit modifications for H-POWER to be able to accept the wood or combustible fraction. In addition, Chapter 9 of the Revised Ordinances of Honolulu should be amended to include fees that reflect the actual cost of disposal and special handling required for asbestos and other special wastes.

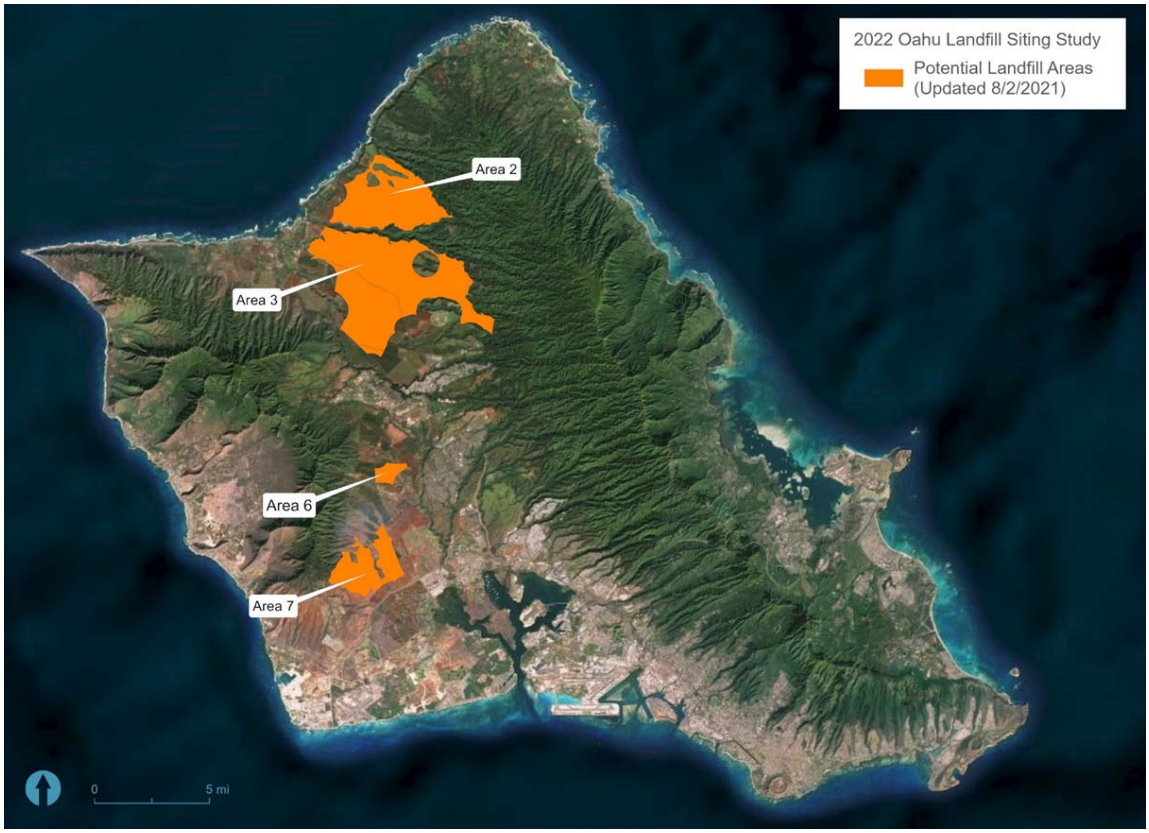
In 2020, ENV began preparing an application for a District Boundary Amendment (DBA) to change the zoning of the WGSL site from Agricultural to Urban. ENV also began the environmental review process for the DBA. The EIS and DBA application are not being pursued at this time pending further development of landfill siting activities.

An initial review of the available sites in Fall 2020 reduced the number of potential future landfill sites to four (Keaau, Upland Kahuku 1 and Upland Pupukea 1 and 2) based on sites short-listed in the 2017 landfill siting report. However, additional review in January 2021 determined that a more thorough review and evaluation of new locations island-wide with respect to Act 73 is warranted.

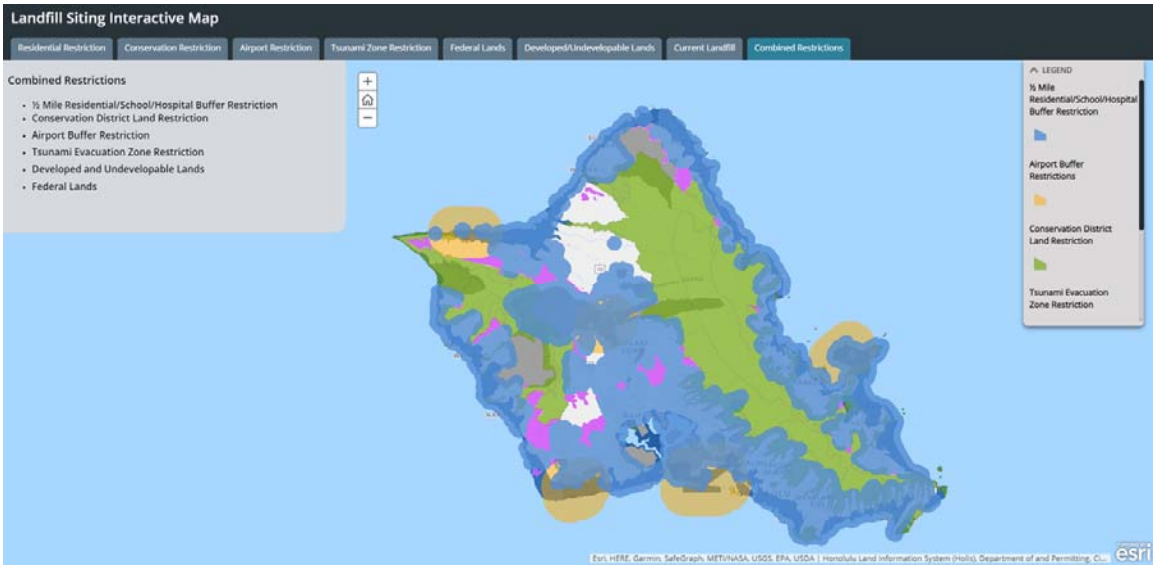
On April 27, 2021, ENV presented an update on integrated solid waste management and progress towards a future landfill site at a joint City Council meeting. ENV shared a preliminary map showing areas compliant with Act 73 where a landfill could potentially be located. The consultant further refined the areas with respect to Act 73 and other constraints.



On August 26, 2021, ENV presented a landfill siting update to joint Council. ENV shared a further refined map of areas where a landfill could potentially be located.



On August 27, 2021, ENV launched a new landfill siting website containing an interactive map tool, resident survey and questions and answers.



On September 24, 2021, Mayor Rick Blangiardi appointed nine members to the Landfill Advisory Committee ("LAC"), which was established in accordance with Section 4-103 of the Revised Charter of the City and County of Honolulu 1973 (2017 edition), as revised.

The LAC's inaugural meeting was held on October 4, 2021, with a total of seven meetings conducted thus far and the last meeting planned for June 2022. As of the seventh LAC meeting held on April 4, 2022, the LAC had evaluated and scored six potential landfill sites shown below, which was used to produce the site ranking that was presented at the meeting, but the committee discussed that none of the sites are suitable due to their proximity to the drinking water aquifer. The report is being prepared and will be finalized at the next LAC meeting. The final selection of the new landfill site will be made by the City.

To learn more about the LAC and how to participate in the next meeting, the public should visit www.honolulu.gov/opala/newlandfill. ENV is continuing to periodically update the City Council and Neighborhood Boards.

B. The following table summarizes the amount of Municipal Solid Waste (MSW), and H-POWER ash and residue delivered to WGSL during the last three months:

MONTH	MSW*	ASH	RESIDUE
January 2022	3,645.80	13,466.52	0
February 2022	6,392.32	11,018.34	0
March 2022	7,300.66	12,135.45	0

*Note: MSW includes the following waste streams: MSW, auto shredder waste, special waste, sludge and does not include homeowner loads.

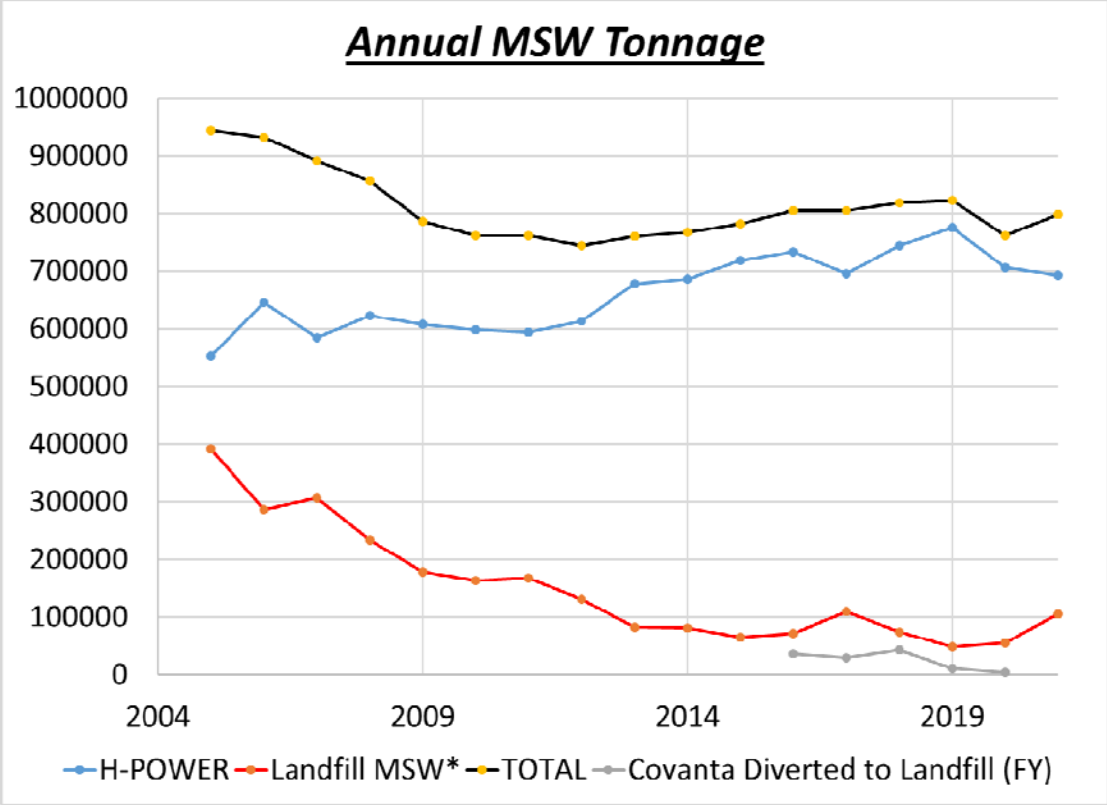
3. Progress Report on Landfill Diversion, Recycling and Planning

A. H-POWER

The H-POWER Waste-to-Energy facility is operating at full capacity, including processing of treated dewatered wastewater sludge, bulky waste, ENV-Refuse collected used auto tires and treated non-sharps medical waste. A project for the processing and beneficial reuse of ash was awarded to Covanta Projects LLC. The project was approved by EQT, the new owner of Covanta.

ENV and Covanta are planning in-feed waste processing improvements to the Refuse Derived Fuel (RDF) Waste Processing Facility that will include a mobile baling system. The project will allow processing of bulky waste into RDF. The mobile baler will provide flexibility to store waste during extended maintenance outages. The baled waste would be stored and processed later, further reducing diversion of waste to the landfill. The equipment was tested in March 2021 and DOH approval is pending for operation and storing of bales.

The following graph illustrates the reduction of MSW delivered to WGSL (red line) generally as a result of source reduction and diverting more waste from the landfill to H-POWER (blue line). Slightly higher landfill tonnages in 2017 and 2021 were due to facility refurbishment projects and major turbine-generator maintenance. For 2022, about 50,000 tons MSW to landfill is expected.



B. Materials Recycling

To present a complete waste flow picture for Oahu, the most current data available is for calendar year 2020. Although waste to WGSL and H-POWER is tracked monthly by ENV, recycling data is provided by commercial recycling companies that are surveyed annually. Recycling data for 2020 was gathered and compiled during the first half of 2021; updated charts and analysis are posted below. Recycling data for 2020 is posted on www.honolulu.gov/opala.

The island's waste data is presented in two charts:

1. TOTAL WASTE which includes Municipal Solid Waste ("MSW") and Construction and Demolition ("C&D") material, processed through recycling, waste-to-energy or landfilling; and
2. MSW only, processed through recycling, waste-to-energy or landfilling.

Both charts present data for the most recent five (5) calendar years (2016-2020). Moreover, this data shows how Oahu's waste was diverted from WGSL through recycling and waste-to-energy.

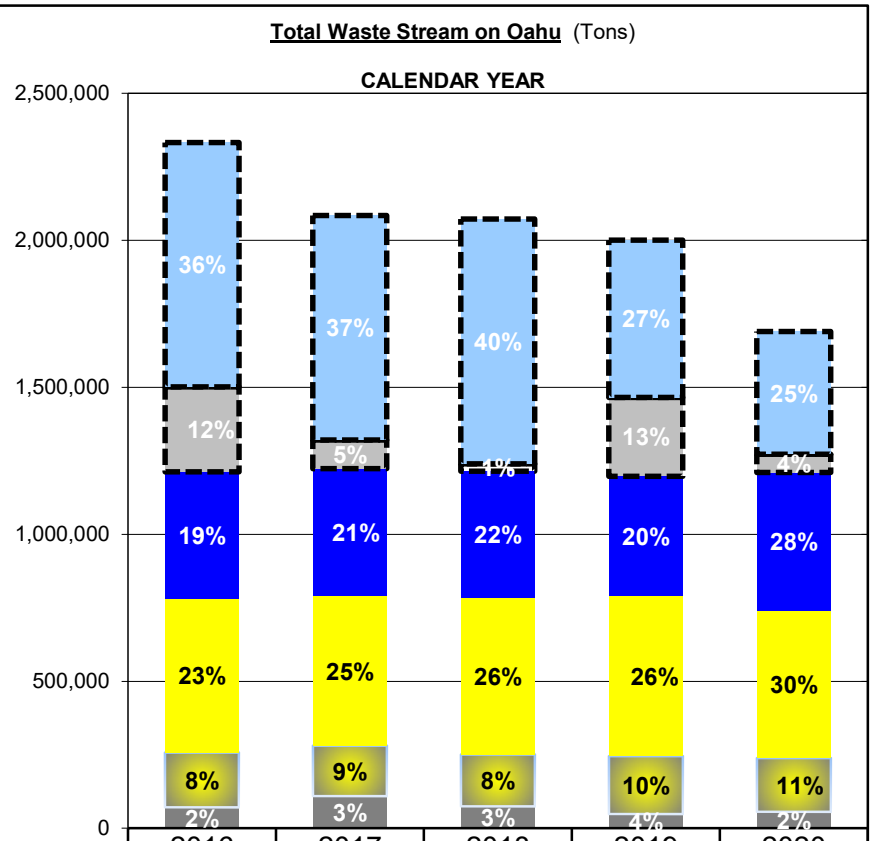
TOTAL WASTE data is presented in the chart below. For 2020, rates for C&D material recycling and disposal decreased overall from the 2019, while recycling

and waste-to-energy combined to divert nearly 76% of waste from landfills. There are two landfills on Oahu: the City's WGSL, which is designated for MSW, and the privately-owned PVT Landfill, which is permitted for C&D waste only.

C&D = Construction & Demolition

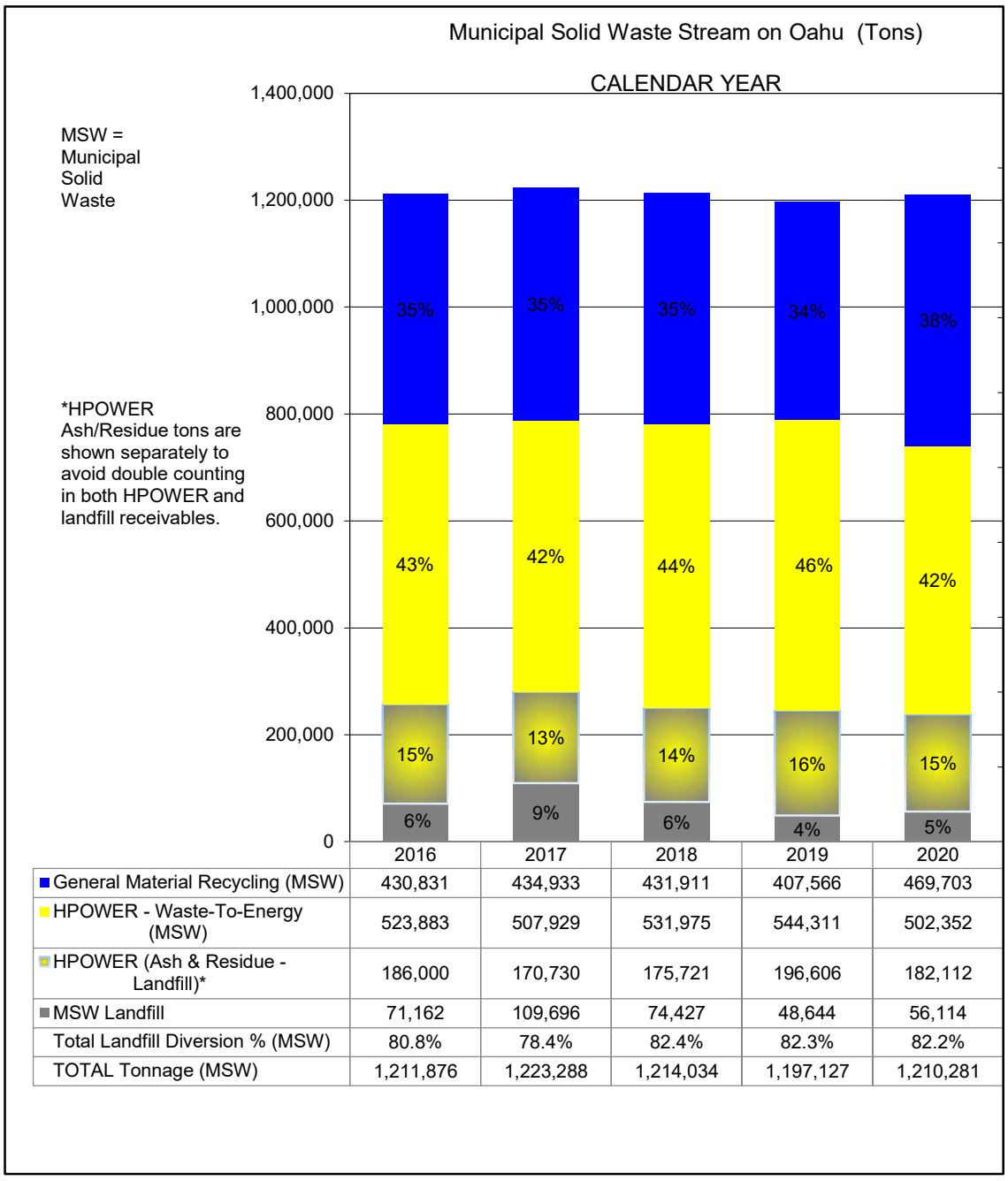
MSW = Municipal Solid Waste

*HPOWER Ash/Residue tons are shown separately to avoid double counting in both HPOWER and landfill receivables.



	2016	2017	2018	2019	2020
C & D - Recycling	830,414	763,279	833,566	534,722	417,854
C & D Landfill	289,924	97,426	24,939	268,796	61,694
General Material Recycling (MSW)	430,831	434,933	431,911	407,566	469,703
HPOWER - Waste-To-Energy (MSW)	523,883	507,929	531,975	544,311	502,352
HPOWER (Ash & Residue - Landfill)*	186,000	170,730	175,721	196,606	182,112
MSW Landfill	71,162	109,696	74,427	48,644	56,114
Total Landfill Diversion % (MSW / C&D)	77.6%	82.7%	88.5%	76.0%	83.6%
TOTAL Tonnage	2,332,214	2,083,993	2,072,539	2,000,645	1,689,829

MSW ONLY data is presented in the chart below. Robust recycling and waste-to-energy rates continue to contribute to the steady decline of MSW tonnage going to the WGSL. Considering MSW only and landfill diversion specific to the WGSL, the landfill diversion rate achieved through recycling and waste-to-energy is at 82.2%, and the general material recycling rate increased to 38%, an increase of 4% from 2019. Landfill diversion rates for the most recent five (5) years at WGSL are charted below, allowing for a better visual assessment of the data. Important to note that 5% of the approximate 20% of material landfilled at WGSL in 2020, was MSW, with the rest consisting of ash and noncombustible residue from H-POWER.



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HPOWER (Ash & Residue - Landfill)*	186,000	170,730	175,721	196,606	182,112
MSW Landfill	71,162	109,696	74,427	48,644	56,114
Total Landfill Diversion % (MSW)	80.8%	78.4%	82.4%	82.3%	82.2%
TOTAL Tonnage (MSW)	1,211,876	1,223,288	1,214,034	1,197,127	1,210,281

Recycling data: The tables below provide detail of tons recycled by material type. The City has gathered annual recycling data since 1988 (except for 1989 and 1990). Note the upward trend of general material recycling from approximately 75,000 tons in 1988 to nearly 470,000 tons in 2020. Recycling of C&D materials, such as concrete, rock and asphalt, contributed an additional 417,854 tons to the recycling rates, for a total of almost 900,000 tons recycled for 2020. C&D recycling rates tend to fluctuate based on the volume and type of construction projects undertaken from year to year but have risen significantly since 2015 due to ongoing major projects. In 2020, there was a significant drop in C&D Recycling due to a decrease in construction and the stored recyclable material at the private C&D landfill.

Yearly Recycling Rates (tons)

Year	General Material Recycling	C&D Recycling	Total Recycled
2020	469,703	417,854	887,557
2019	407,566	534,722	942,288
2018	431,911	868,617	1,300,528
2017	434,933	763,279	1,198,212
2016	430,831	830,414	1,261,245
2015	449,153	731,865	1,181,018
2014	475,953	401,335	877,286
2013	477,011	257,287	734,298
2012	487,159	179,906	667,065
2011	490,061	181,087	671,148
2010	448,639	101,556	550,195
2009	426,947	116,670	543,617
2008	456,876	216,745	673,621
2007	453,282	148,952	602,234
2006	421,072	121,675	542,747
2005	417,669	193,829	611,498
2004	386,338	173,916	560,254
2003	366,639	106,773	473,412
2002	352,699	139,055	491,754
2001	367,300	114,070	481,370
2000	327,710	165,000	492,710
1999	314,075	225,200	539,275
1998	318,690	148,800	467,490
1997	313,394	204,400	517,794
1996	299,574	95,300	394,874
1995	294,340	44,400	338,740
1994	290,412	35,700	326,112
1993	241,600	30,000	271,600
1991	167,152	0	167,152
1988	73,992	0	73,992

Oahu Recycling 2020	
Material Type	
Corrugated Cardboard	41,812
Newspaper	8,574
	5,213
Other Paper	1,060
METALS	
GLASS	10,947
PLASTIC	4,799
TIRES	7,783
AUTO BATTERIES	
ELECTRONIC SCRAP	1,000
WOOD WASTE/PALLETS	
FOOD WASTE	38,361
OTHER REUSE (Goodwill, Salvation Army)	11,821
TOTAL	

The City's efforts to increase residential recycling rates have continued with its ongoing efforts to educate residents about the value and benefits of its three-cart curbside program, and the continued promotion and rejuvenation of its condominium recycling assistance program. Additionally, the City requires commercial sector recycling through mandatory laws established by City ordinance and provides assistance to businesses to setup and expand their recycling programs.

1. Curbside Recycling – Curbside recycling participation remains strong and material recovery rates are increasing every year. ENV completed the final phase expansion of the fully automated 3-cart curbside recycling program May 2010. There are currently 170,000 homes participating in the program, capturing material at a rate of 23,000 tons of mixed recyclables and 75,000 tons of green waste per year. Increased public experience with identifying and sorting recyclables is producing higher results for the City's curbside recycling program. The program continues to be evaluated to identify strategies for improving participation, efficiencies and to decrease contamination.

2. Multi-Material Recycling Centers – Recycling is available to those without curbside collection service. There are two City recycling drop-off locations in Haleiwa, one fronting its Waialua Base Yard (Emerson Rd.) and the other at its Kawailoa Transfer Station. Both locations feature several 96-gallon blue carts, complete with instructional signage and stickers for the community to use. All blue cart recyclables are acceptable, including plastics (1 & 2), glass

bottles and jars, metal cans, newspaper, paper bags, corrugated cardboard and white and colored office paper.

3. Condominium Recycling – The City continues to promote condominium recycling through a program reimbursing condominium properties for costs associated with the start-up of a recycling program, and additionally provides technical assistance, educational materials, wheeled carts and guidance in establishing collection services.

4. Electronic Waste (e-waste) – A State law requiring manufacturers to provide take-back programs for electronic waste went into effect January 1, 2010, and is administered by DOH. In general, the covered electronics include computers and televisions. Collection and recycling of e-waste has increased, but the law is weak in its requirements for the manufacturers to achieve recovery goals or to provide consumer convenience in take back programs. In 2015, the law was amended to require electronic device manufacturers to establish drop-off locations for e-waste and prohibited mail-back only recycling options for some devices. ENV continues to work in collaboration with DOH and local e-waste recycling companies to support local programs and legislative proposals.

5. Business Recycling Programs – The City continues to provide assistance to commercial sector recycling efforts and to ensure compliance with mandatory recycling policy established in the mid 1990's, which requires office buildings to recycle office paper, bars/restaurants to recycle glass and a variety of food operations to recycle food waste. It is no longer mandatory for Advance Disposal Fee ("ADF") glass to be sorted by the liquor establishments, but the recyclers still receive ADF glass through their commercial accounts. The City suspended the ADF portion of the glass relating to the glass ordinance but the City still receives the State Subsidy for ADF glass the recyclers are collecting. State legislation is needed to increase the fee to lift the suspension on the ADF glass. Disposal site bans/restrictions divert materials from WGSL and H-POWER, including green waste, cardboard, metals, tires, auto batteries, and e-waste. The City is encouraging businesses to generate less food waste and to support food security programs. The City provides technical assistance to businesses for designing and implementing recycling programs through how-to guides, workshops and on-site support, and works collaboratively with the State's Green Business Program.

6. Plastic Bag Ordinances – As of July 1, 2015, businesses are prohibited from providing plastic checkout bags and non-recyclable paper bags to their customers at the point of sale. Per Ordinance 12-8, amended by Ordinance 14-29, ENV is responsible for implementing and enforcing the ban. All information pertaining to the ban is also posted online on www.honolulu.gov/opala. Businesses are required to submit annual compliance information to verify their compliance with the ban. The ban was

amended by Ordinance 17-37, in 2017 to require businesses to charge a minimum of 15 cents per bag for reusable, recyclable paper or compostable bags to customers at the point of sale, effective July 1, 2018. Beginning January 1, 2020, compostable bags were banned, and plastic film bags were no longer considered to be reusable bags. The ban was amended by Ordinance 19-30 changing the definition of "plastic" and amending the definitions for "plastic checkout bag" and "plastic film bag" as well as revising the exemptions list, effective April 1, 2020.

7. Disposable Food Ware Ordinance –The intent of Ordinance 19-30, commonly referred to as the Disposable Food Ware Ordinance ("DFWO"), 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 food vendors and businesses operating within the City by amending the Oahu Plastic Bag Ban and restricting the use and sale of polystyrene foam food ware, disposable plastic food ware and disposable plastic service ware. The DFWO also prescribes when disposable service ware may be provided. Inspections for compliance with Ordinance 19-30 began in June 2021. On June 25, 2021, the City suspended the restrictions on disposable plastic service ware and polystyrene foam food ware contained in Section 41-27.2(b) and (d), Revised Ordinances of Honolulu, in an effort to promote and protect the public health, safety, and welfare of the residents of the City, and to provide relief from the economic impact directly and indirectly caused by COVID-19. Subsequently on December 10, 2021, Sections 41-27.2(a) and (c) and Section 41-27.4 were suspended to alleviate the economic hardship and inequity caused by the COVID-19 emergency and emergency actions that were taken to implement public health best practices, and the supply chain challenges caused by global shipping delays. The suspension of Sections 41-27.2 and 41-27.4 continued through March 5, 2022. On March 3, 2022, ENV granted an exemption request by Chamber of Commerce, Hawaii Restaurant Association, Retail Merchants of Hawaii, and Hawaii Food Industry Association, for the use of disposable plastic food ware. The exemption will run through September 5, 2022.

8. Public education – Public education regarding recycling is ongoing and includes the distribution of brochures and print materials, dissemination of information via City's new refuse website, www.honolulu.gov/opala, WasteLine e-newsletter and virtual presentations. There has been an increase in social media participation to assist with the public education program. Source reduction will be another component to add to our public education program. Opala.org will have a redirect to the new website for the next two (2) years. The transition period to phase out the old website will be approximately 2 years.

   Composting workshops – Composting workshops presented by City staff were reinstated as part of the City's public education program. The workshop

teaches residents to manage green waste at home by utilizing the green cart for large items such as branches and to aerobically compost the grass trimmings, leaves and small diameter branches. The City is also gathering information to provide food waste composting through the use of worms called vermiculture and beneficial microbes with the Bokashi method. Due to the pandemic, composting workshops are through a virtual format.

Recycling education in the schools – Recycling education shows presented by the Honolulu Theatre for Youth ("HTY") combined with classroom activity books educate our youth to become expert recyclers and encourage them to support their family to properly sort their waste at home. Every year, the program reaches approximately 20,000 students and teachers. The 12th season will include a feature on HTY's HI-Way program aired through the television media with a focus on food waste reduction and the introduction of Fats, Oil and Grease. This program features environmental issues including solid waste management and concludes in late February 2022.

C. Integrated Solid Waste Management Plan

Hawaii Revised Statutes (HRS) Section 342G-24 requires each county to submit revised integrated solid waste management plans every 10 years with an interim status report submitted five years after every submission of a revised plan. The City has completed the most recent Integrated Solid Waste Management Plan, dated November 2019. The plan was completed after Solid Waste Advisory Committee meetings, DOH review, and a public comment period. Comments from each step were incorporated. The plan is posted online at www.honolulu.gov/opala.

5. Relevant City Council Resolutions and Bills

RESOLUTION NO.	DESCRIPTION	STATUS
15-167	To establish a city policy to expedite the closure of the WGSL and the implementation of sustainable waste management practices.	Resolution adopted 7/8/15.
16-147	Authorizes the City to enter into an agreement with the State for the allotment of funds for a glass recycling program.	Resolution adopted 7/6/16.
17-340	Urging the City to develop composting facilities.	Resolution adopted 2/28/18.
18-35	Requesting the Office of the City Auditor to evaluate the use and impacts of single-use food service containers and plastic bags.	Resolution adopted 2/14/18.

19-101	Requesting ENV to prepare a report evaluating operations of Leeward Coast refuse drop-off facilities and recommending improvements thereto.	Resolution adopted 8/7/19.
20-211	Encouraging the City to support a circular economy, etc.	Resolution adopted 9/9/20.
20-292	Efficiency improvements at the City's drop-off facilities.	Resolution adopted 12/9/20.
21-102	Urging the City to assess the City's capability to implement a C&D waste recycling program.	Resolution introduced 4/21/21.
21-103	Requesting the City to evaluate potential landfill sites for compliance with Act 73.	Resolution postponed 8/26/21.
21-105	Adopting the Climate Action Plan	Resolution adopted 6/2/21.

BILL NO.	DESCRIPTION	STATUS
40 (2019)	Addresses single-use plastic goods and plastic bags.	Bill enacted as Ordinance 19-30 on 12/15/19.
64 (2019)	Relating to illegal dumping.	Bill enacted as Ordinance 20-4 on 3/5/20 effective 7/1/20.
62 (2020)	Relating to food waste collection.	Bill passed second reading as amended and referred to committee on 12/1/21.
63 (2020)	Relating to composting.	Bill postponed in committee on 10/21/20.
98 (2020)	Relating to food waste recycling requirements for food establishments.	Bill passed first reading 1/27/21.
9 (2021)	Relating to expenditures from the solid waste special fund.	Bill introduced 3/2/21.
15 (2021)	Relating to the solid waste special fund.	Bill enacted as Ordinance 21-18 effective 7/1/21.

All resolutions and bills, and video of Council meetings, can be found at the City website, www.honolulu.gov

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City Attendees:

Department of Environmental Services (ENV)

Ahmad Sadri, Energy Recovery Administrator
Henry Gabriel, Recycling Coordinator
Joshua Nagashima, Acting Assistant Refuse Collections Administrator

Other: Tina Alder, District Manager, Waste Management of Hawaii Inc.

Public: Sharlette Poe, NB #24 Chair
Tiana Wilbur, NB #24

Questions and Answers:

Q: How much Asbestos Containing Material (ACM) has been coming into WGSL since PVT stopped taking it?
A: About 100 to 150 tons per month. ACM is accepted on Wednesdays.

Q: What is the reduction in tons of trash to tons of ash at H-POWER?
A: The H-POWER process reduces trash from about 10 to 15 tons of trash to 1 ton of ash. By the number of trucks: between 300 to 400 truck per day of trash comes into H-POWER and is reduced down to 20 to 25 trucks of ash leaving H-POWER for WGSL.

Q: How many householders use WGSL?
A: The average is 10 householders per day with 20 on a peak day like a weekend or holiday when the public demand is highest. Only householders with inert wastes like soil, rock and concrete are accepted at WGSL.

Q: What is the ash recycling project term and scope and how will it affect ash going to WGSL?
A: The term of the ash recycling contract is 10 years. The project is designed to clean, screen and treat the ash for ability to use in construction applications and sell to the aggregate market. The goal is to divert between 60-80% of the ash currently being landfilled. The remaining ash going to landfill is still useful for providing stability to the landfill cells and slopes. Three major permits are needed for this project: solid waste, recycling, and innovative recycling technologies. We expect permitting to take anywhere from 6 to 24 months. Covanta currently has one facility operating in Fairless Hills, Pennsylvania that accepts ash from various Covanta facilities and markets the resulting aggregate and metals. Beneficial reuse of ash is also being done on a demonstration scale in Florida.

Q: Can the City look into the differences between the amounts and types of packaging used in imported products compared to the amounts used in local products?
A: We are gathering more information about what type of packaging is being used or requested upon making an order for imported versus local products.

C: In accordance with the Integrated Solid Waste Management Plan, ENV will convene a Source Reduction Working Group (SRWG) to determine the topics of interest related to source reduction and the initiatives that can be pursued by the City and other groups to encourage source reduction. We are reaching out to nonprofit groups and other potentially interested parties and working with a consultant to determine the format and structure for the meetings. Extended producer responsibility (EPR) and packaging will be major focus points. We will provide updates on the SRWG in future public hearings and reports.

Q: Have you considered partnering with/providing funding for commercial/backyard composting technologies and kitchen counter appliances, such as Pelacase ($400-500/unit)?
A: We highly encourage source reducing food waste and feeding people and animals first. Pelacase, Vitamix and Lomi are all kitchen counter appliance products that are available. We have tested one but are not partnered with any of these manufactures at this time. The appliance we tested reduced the odors associated with food waste but there was still light pungent smell. These kitchen counter appliances are not composting *per se*, but they may make it easier to compost food waste by breaking it down and dehydrating and grinding waste. The next step after processing food waste in one of these appliances would be to put the prepared material in the soil for composting.

Q: Can we collaborate on disseminating public education info about recycling options out to the residents?
A: Yes, we'll provide info and we're actively posting on social media: see https://www.honolulu.gov/social-media-center. We recently partnered on restaurant expo.

Q: Do you do recycling of e-waste, tires and appliances?
A: Yes, appliances are sent to Island Recycling where the refrigerants and metals are recycled. Tires are sent to H-POWER and Retired Tires Hawaii. H-POWER processes tires, while Retired Tires Hawaii ships tires to the West Coast for recycling. For e-waste, recycling of commercial e-waste is required and residents are highly encouraged to take their e-waste to a drop-off event or location. For more information on recycling options visit www.honolulu.gov/opala.

Q: Do you have a renewable energy infrastructure waste plan for solar modules, batteries and wind turbine blades?
A: Recycling is expected or required for these materials but very difficult. We are promoting manufacturer responsibility. H-POWER and WGSL do not accept solar modules, batteries or wind turbine blades. States have been passing legislation banning the disposal of wind turbine blades in landfills. For residents who are self-hauling old solar modules, they can take them to the metals drop-off area at any transfer station or convenience center. These disposal sites also have battery drop-off bins but these are intended for used auto batteries, not specialty batteries. See https://www.honolulu.gov/opala/quick-links/hhw/batteries.html.