

## Status Report on Reducing and/or Continuing the Use of

### Waimanalo Gulch Sanitary Landfill

Public Hearing

January 21, 2020

10:00 a.m.

Kalanianaʻole Beach Park

89-269 Farrington Hwy, Waianae, Hawaii 96792

### Presentation

#### 1. Opening and Welcome

Notice of this public hearing was published in the Honolulu Star Advertiser January 7, 2020 and on the City's Refuse Division website, [www.opala.org](http://www.opala.org). A corrected notice of this public hearing was published on the City's Refuse Division website on January 15, 2020, to clarify that this public hearing shall be 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 being 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/>

The following report covers developments during the last calendar quarter regarding the matters set forth in Conditions 15 and 16 of the LUC Order.

In its decision, the LUC adopted with modifications the Planning Commission's recommendations to approve a special use permit for the WGSL, and approved

with modifications the City's applications, subject to 17 conditions, including a condition that requires the WGSL to close by no later than March 2, 2028.

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, the Landfill Advisory Committee (LAC) 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 LAC, the Group Memory of each meeting, and the final report are posted online at [www.opala.org](http://www.opala.org).

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.opala.org](http://www.opala.org).

Funding is being requested to begin planning for siting a new landfill based on the results of these reports.

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
October 2019	4,748.20	13,620.89	4,121.22
November 2019	2,410.66	11,216.89	2,820.44
December 2019	3,082.51	12,885.32	3,075.91

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

### 3. Progress Report on Landfill Diversion, Recycling and Planning

#### A. H-POWER

The H-POWER 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.

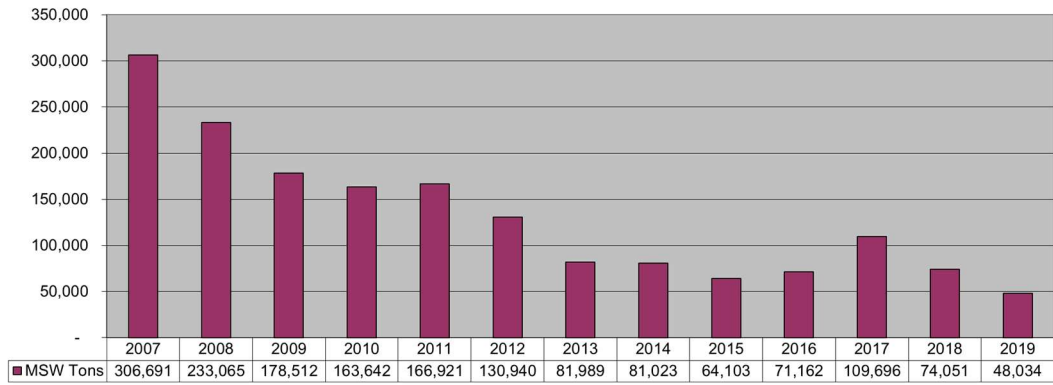
Emerging technologies are being explored for further reducing ash and process residue disposal at the landfill. An ash, residue and automobile shredder residue (ASR) recovery and recycling Request for Proposals (RFP) was re-issued in December 2019.

The City 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. This project is envisioned to be completed by mid-2021.

The City and Covanta and coordinating with Island Commodities Corporation (ICC) to devise various options for processing the material at H-POWER and to schedule test loads. ICC is installing new equipment at their facility to further reduce the need for landfill or H-POWER disposal.

The following graph illustrates the reduction of MSW delivered to the landfill generally as a result of diverting more waste to H-POWER. Note that the increase in MSW landfilled in 2017 was due to major refurbishment of the processing lines at H-POWER, a once in 30-year project.

**Tons Received at WGS�**  
**Calendar Year (Not Including H-Power Ash or Residue)**



## B. Materials Recycling

To present a complete waste flow picture for Oahu, the most current data available is for calendar year 2018. Although waste to the landfill and HPOWER is tracked every month by ENV, recycling data is provided by commercial recycling companies that are surveyed annually. Recycling data for 2018 was gathered and compiled during the first half of 2019; updated charts and analysis are posted below. Recycling data for 2019 will be compiled and will be posted on Opala.org by mid-year of 2020.

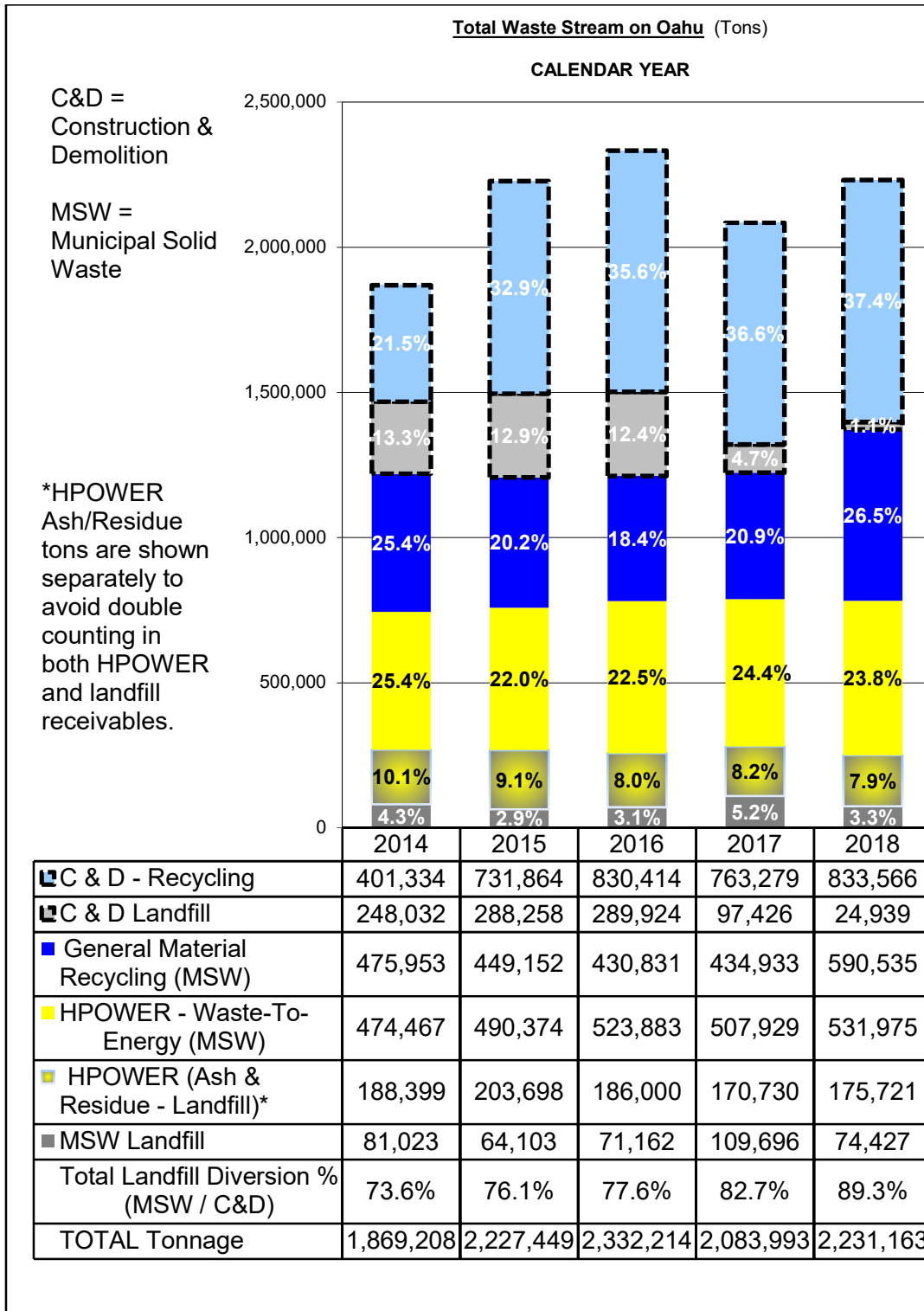
The island's waste data is presented in two charts:

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 (2014-2018). Moreover, this data shows how Oahu's waste has been diverted from the landfill through recycling and waste-to-energy.

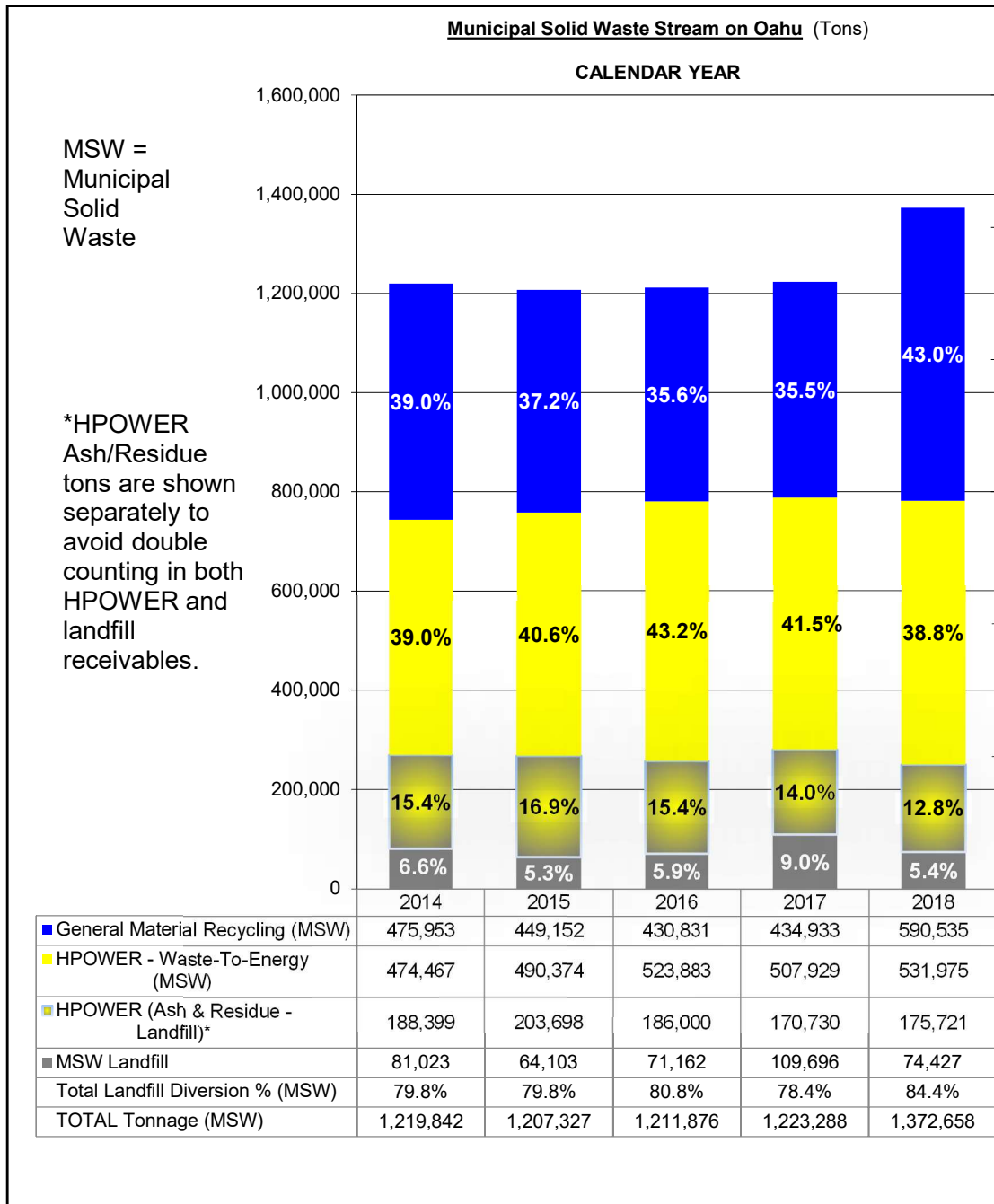
**TOTAL WASTE** data is presented in the chart below. For 2018, rates for C&D material recycling and disposal increased from the 2017, while recycling and waste-to-energy combined to divert nearly 89% of waste from the landfill.

There are two landfills on Oahu: the City's Waimanalo Gulch Sanitary Landfill (WGSL), which is designated for MSW, and the privately-owned PVT Landfill, which is permitted for Construction and Demolition (C&D) waste only.



**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 Waimanalo Gulch Sanitary Landfill. Considering MSW only and landfill

diversion specific to the WGSL, the landfill diversion rate achieved through recycling and waste-to-energy is nearing 89%, and the general material recycling rate is almost 43%. 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 of the 13% of material landfilled at WGSL in 2017, little over 5% was MSW, with the rest consisting of ash and noncombustible residue from HPOWER.



**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 430,000 tons today. Recycling of construction and demolition (C&D) materials, such as concrete, rock and asphalt, contributed an additional 870,000 tons to the recycling rates, for a total of almost 1.3M tons recycled for 2018. 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 ongoing major projects across the island.

### **Yearly Recycling Rates (tons)**

<b>Year</b>	<b>General Material Recycling</b>	<b>C&amp;D Recycling</b>	<b>Total Recycled</b>
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



<b>Oahu Recycling 2018</b>	
<b>Material Type</b>	<b>Amount in tons</b>
PAPER	
Corrugated Cardboard	43,562
Newspaper	12,758
Office Paper	7,581
Other Paper	849
METALS	
Ferrous (includes autos)	134,988
Non-Ferrous (includes aluminum)	16,196
GLASS	14,571
PLASTIC	5,127
TIRES	7,211
AUTO BATTERIES	6,605
ELECTRONIC SCRAP	1,170
GREEN WASTE (yard trimmings)	111,907
WOOD WASTE/PALLETS	13,942
CONSTRUCTION & DEMOLITION (rock, concrete, asphalt)	868,617
FOOD WASTE	38,667
OTHER REUSE (Goodwill, Salvation Army)	16,778
<b>TOTAL</b>	<b>1,300,528</b>

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 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.

**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 in May 2010. There are currently 160,000 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 and efficiencies.

**Multi-Material Recycling Centers** – Recycling through HI-5 redemption and other recycling drop-off is available to those without curbside collection service. HI-5 redemption centers now accept a wide array of recyclable materials, providing the community with a one-stop recycling center for all their materials. Currently, there are about 30 locations around Oahu that offer "HI-5 plus" recycling, accepting paper, plastic and glass containers, and metals, along

with providing HI-5 container redemption services. Among these sites are two City recycling drop-off locations in Haleiwa, one fronting its Waialua Base Yard (Emerson Rd) and the other at its Kawaihoa 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.

**Condominium Recycling** -- The City continues to promote condominium recycling through a program that reimburses 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.

**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. DOH is looking for ways to strengthen the collection programs, and has proposed bills in the most recent four State legislative sessions (2012, 2013, 2014, and 2015). 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 will continue to work in collaboration with DOH and local e-waste recycling companies to support local programs and legislative proposals.

**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. Disposal site bans/restrictions divert materials from landfill and H-POWER, including green waste, cardboard, metals, tires, auto batteries, and e-waste. 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.

**Plastic Bag Ban** – 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 ORD 12-8, amended by ORD 14-29, ENV is responsible for implementing and enforcing the ban. Prior to the ban's effective date, ENV mailed compliance surveys and tip sheets to approximately 10,000 potentially-affected businesses and asked them to return the compliance forms and indicate how they planned to comply with the ban. Public notices were

placed in the Star Advertiser and MidWeek in May. All information pertaining to the ban is also posted online on Opala.org. On July 1, 2015, City staff began enforcing the ban. The City mailed out a Plastic Bag Ban Compliance Form dated March 7, 2016 with a return date of April 29, 2016. Retail industry feedback based on the returned forms indicates that about 35% of businesses will not provide bags. 28% of businesses indicated they were exempt from the ban. Of the remaining 37% offering bags, 13% are offering paper bags, 7% are offering reusable bags, 3% are offering compostable bags, and 15% are offering some combination of the three types of allowable bags. Businesses are required to submit annual compliance information to verify their compliance with the ban. The ban was amended by ORD 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 will be banned and plastic film bags will no longer be considered to be reusable bags.

**Public education** – Public education regarding recycling is ongoing and includes the distribution of brochures and print materials, dissemination of information via the Opala.org website, WasteLine e-newsletter and annual events such as Tour de Trash. Source reduction will be another component to add to our Public education program.

Composting workshops – Composting workshops presented by City staff have been 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 type green waste such as large diameter branches and to compost, aerobically, 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.

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 home. Every year, the program reaches approximately 20,000 students and teachers. The eighth 2017-18 season included a Tenney Theatre presentation of "Extraordinary Stories from an Ordinary Ohana" that took place in November and December 2017. "Sort It Out", a recycling performance workshop type show at local schools concluded in late February. "SHOCKA", a musical on how Hawaii will reach 100% renewable energy by 2045 using such methods as Waste-to-Energy, H-POWER concluded in May 2018.

### 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 has been posted online at [www.opala.org](http://www.opala.org).

#### 4. Special Use Permit (SUP) Amendment

The proceedings at the Honolulu Planning Commission (Planning Commission) and State Land Use Commission (LUC) relating to File No. 2008/SUP-2 have concluded. On June 10, 2019, the Planning Commission filed its Findings of Fact, Conclusions of Law, and Decision and Order. The Planning Commission's records in the proceeding were transmitted to the LUC in September 2019, and the LUC met in October 2019 to consider the Planning Commission's decision. On November 1, 2019, the LUC filed its 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 in Docket No. SP09-403. A copy of the decision is available on the LUC's website at <https://luc.hawaii.gov/wp-content/uploads/2019/11/SP09-403-final-FOFCOLDO-2019.pdf>

#### 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.
19-124	Urging the City Administration to divert recyclables to H-POWER and reinvest the cost savings in developing on-island recycling facilities.	Resolution amended to CD1 and postponed in committee on 7/24/19.
19-176	Urging the City Administration to Establish a City program to recycle material from scrap tires.	Resolution introduced 7/31/19.
<b>BILL NO.</b>	<b>DESCRIPTION</b>	<b>STATUS</b>
5 (2018)	Relating to litter reduction, recycling, and composting incentives.	Bill passed first reading and referred to public works committee 1/31/18.
19 (2018)	Relating to collection and disposal of refuse.	Bill deferred in committee 4/12/18.
28 (2018)	Increases tipping fees for the transfer stations and landfill to \$120/ton.	Bill passed first reading and referred to budget committee 3/28/18.
29 (2018)	Requires green waste to be disposed at composting facilities.	Bill passed first reading and referred to public works committee 3/28/18.
59 (2018)	Businesses may provide reusable bags or compostable plastic bags, provided that they charge the customer a minimum of 15 cents per bag. Businesses may provide recyclable paper bags to customers without charge.	Bill passed first reading and referred to public works committee 8/15/18.
92 (2018)	Restricts the use of polystyrene foam food containers by food vendors and food packagers.	Bill passed first reading and referred to public works committee 12/5/18.
97 (2018)	Restricts the use of single-use plastic straws.	Bill passed first reading and referred to public works committee 1/30/19.
13 (2019)	Authorizes the City to charge for refuse collection and disposal services.	Bill postponed in committee 5/14/19.
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 passed first reading and referred to public works committee 12/4/19

All resolutions and bills, and video of Council meetings, can be found at the City website, [www.honolulu.gov](http://www.honolulu.gov)

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City Attendees:

Department of Environmental Services

Ahmad Sadri, Acting Energy Recovery Administrator

Joshua Nagashima, Planner

Other:

Tina Alder, District Manager, Waste Management

Dee Dee Letts, Resolutions Hawaii

Public:

None