

**REPORT TO THE TWENTY-EIGHTH  
LEGISLATURE STATE OF HAWAII  
2016**

PURSUANT TO SECTION 342G-15, HAWAII REVISED STATUTES,  
REQUIRING THE OFFICE OF SOLID WASTE MANAGEMENT TO GIVE AN  
ANNUAL REPORT ON SOLID WASTE MANAGEMENT

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## **I. INTRODUCTION**

The Office of Solid Waste Management (OSWM) is required to provide an annual report to the legislature to describe the State's progress toward achieving the waste reduction goal. This report also contains general information about OSWM programs, Solid Waste Section (SWS) activities, and county solid waste and recycling efforts.

The OSWM and SWS are contained within the Department of Health's Solid and Hazardous Waste Branch (SHWB). The SWS is responsible for permitting and monitoring solid waste facilities within the state, while planning functions are contained within the OSWM. The OSWM also administers the state Deposit Beverage Container (DBC) and Glass Advance Disposal Fee (ADF) Programs. The OSWM also provides technical and programmatic assistance to the counties in their development of solid waste management and recycling programs.

In 1991, the legislature established a waste stream reduction goal of 50% by the year 2000. The OSWM works to enhance the development of county and private recycling programs through a combination of statewide funding mechanisms and statewide guidance and mandates.

## **II. SOLID WASTE MANAGEMENT**

### **Solid Waste Priorities and Practices**

Section 342G-2, Hawaii Revised Statutes, requires the department and the counties to consider solid waste management practices and methods in the following order of priority:

- 1) Source Reduction
- 2) Recycling (to include composting)
- 3) Landfilling and incineration

The first two practices reduce the amount of waste to be either landfilled or incinerated.

Source reduction is also called "waste prevention" or "waste reduction" and means creating less waste. Although not included in the list of priorities, "Reuse", means using a product over without first having to reprocess it. The product may be used for its original or intended use, or may be used in a different capacity. "Recycling" is the process by which materials are collected and used as "raw" materials to create new products. All of these methods are sometimes referred to collectively as "waste diversion."

Because waste reduction avoids creation of waste it is inherently difficult to quantify. In some cases, comparisons can be made to waste levels before a waste reduction practice was employed to waste levels afterward. In most cases, an estimate of the amount of waste reduced is all that is possible.

Reuse of products or materials is marginally easier to measure than waste reduction because it involves actual material. It can be measured counting the units of a particular product being reused or measuring its tonnage. However, effectively measuring reuse is difficult because it takes place at so many levels and on a unregulated and widespread scale. Take for example the reuse of plastic and glass containers for food storage at home or in the workplace. While this particular activity contributes

to overall waste reduction it is impossible to accurately measure. Some reuse activity is accounted for in the diversion statistics presented in this report; as at least two counties gather data on the amounts of material that is donated to non-profit organizations such as the Salvation Army or Goodwill Industries.

Recycling is the most easily quantified activity of the waste diversion trio for at least two reasons. First, like reuse, it involves actual material that can be measured. Second, data from many recycling facilities are regularly collected by the state and counties.

Diversion refers to the combination of reuse and recycling activities. It does not include landfilling, incineration, or waste to energy processes. The diversion rates presented below are based on data collected by the counties. The current diversion rate is composed primarily of recycling activity and a small amount of reuse activity.

The United States Environmental Protection Agency's (EPA) most recent data indicate a national recycling rate of 34.3% for 2013. The State's goal of 50% waste diversion was set in 1991 and mirrored EPA's national recycling goal at the time of 50% by 2000. Since that time the EPA revised the goal down to 35% recycling by 2005; and, currently, discontinued the use of a stated national recycling goal.

Hawaii's commercial recyclers contend with long standing challenges which include high land values (which translate to high land lease or rental costs) and high shipping costs. Recycling markets for nearly all of the state's recyclable material are out of state. Most recyclables are shipped to either the mainland U.S. or Asia. Recyclers will ship their material to the market paying the best prices at the time. Volatility in recycled materials markets is an issue that all recyclers deal with regardless of location. Hawaii's recyclers are, however, especially affected by market fluctuations because of thinner profit margins resulting from high shipping costs.

### **Solid Waste Disposal and Diversion Rates (Difficulties with Data Collection)**

The OSWM calculates solid waste disposal and diversion rates by aggregating data collected by each county with data collected under authority of the SWS's permitting system.

Recently, the OSWM and counties have experienced difficulties in gathering data. Submittal of the report to the 2014 Legislature was initially delayed in the hope of completing data gathering, and was omitted entirely when data collection could not be completed.

While we anticipate some difficulty with data gathering the OSWM is evaluating data collection and reporting practices and will work towards increased consistency. Reports will no longer be delayed because of data gaps, but will be submitted with any gaps clearly noted while efforts to fill the gaps continue.

**Table 1B: Solid Waste Diversion for FY 2015 (tons)**

	Disposal	Diversion	Generation	Diversion Rate
Hawaii	179,033	65,300 <sup>#</sup>	244,333	26.7%
Maui	183,167	30,786 <sup>#</sup>	213,952	14.4%
Oahu*	933,911	877,288	1,810,811	48.4%
Kauai	81,500	66,665	148,165	45.0%
State	1,377,611	1,040,039	2,417,650	43.0%

Notes: \*2014 calendar year data, # incomplete data

**Table 2: Solid Waste Diversion Rates for FY 2011 through FY 2015**

FY	2011	2012	2013	2014	2015
Hawaii	28.9%	38.1%	34.1%	24.7%	26.7%
Maui	36.6%	#	32.9%	#	14.4% <sup>#</sup>
Oahu*	36.9%	38.6%	37.1%	40.3%	48.4%
Kauai	23.8%	32.5%	43.5%	42.4%	44.9%
State	35.1%	34.7%	38.1%	36.8%	43.0%

Notes: \*calendar year data, # incomplete data

### **III. OFFICE OF SOLID WASTE MANAGEMENT ACTIVITIES**

#### **Deposit Beverage Container Program**

The State of Hawaii Deposit Beverage Container Program (DBC Program) achieved an annual redemption rate of 68% for FY 2015, accounting for a total of over 647 million containers recycled during the current Fiscal Year.

#### **Program Redemption Rate**

The DBC Program's redemption rate is a measure of program's effectiveness to: (1) collect and redeem eligible deposit beverage containers; and (2) recycle deposit beverage container materials.

The redemption rate is calculated by dividing the number of DBC redeemed by the number of DBC sold.

$$\text{FY 2015 Redemption Rate: } \frac{652,243,406 \text{ (Redeemed)}}{958,569,528 \text{ (Sold)}} = 68.0\%$$

#### **Deposit Beverage Container Program Special Fund**

In FY 2015 the department collected approximately \$ 62.7 million in container fees and deposits and paid out \$53.7 million for redeemed deposits and eligible handling fees. The department paid \$1.5 million for program administration and contracted activities.

As of June 30, 2015, the DBC special fund contained approximately \$ 8.8 million after encumbrances. Based on monthly transactions of between \$3 million and \$4 million the program prefers to maintain a minimum fund balance of \$4 million to ensure sufficient funds are available for continuous operations. The fund balance fell below \$4 million in the past few years because of high redemption rates, fund transfers, the loss of interest income, and the loss of the program's exemption from the Department of Accounting and General Service's Central Services Fee.

Statute allows the department to increase the container fee when the redemption rate exceeds 70%. While the redemption rate surpassed that threshold in 2008, the department deferred on increasing the container fee until September 2012 due to a low fund balance.

In FY 2015, the redemption rate dropped below 70%, triggering a decrease of the container fee from 1.5¢ to 1¢ per container, as specified by law.

The legislature's restoration of the Central Services Fee exemption during the 2013 session, along with the 2015 restoration of interest income, are critical in helping the DBC program maintain adequate fund levels in the future.

**TABLE 3: DBC FY 2015 Revenues & Expenditures**

Revenue		
Distributor Payments		
Deposits (5¢/container)	\$ 48,225,056	
Container Fees (1.5¢/container)	\$ 14,467,562	
Interest (from Bank)	\$ 0	
Others - Dividend	\$ 0	
Others – Refund & Reimbursement	\$ 4,301	
	<b>Total Revenue</b>	<b>\$ 62,696,919</b>
Expenditures		
Payments to Redemption Centers		
Deposits (5¢/container)	\$ 35,693,917	
Handling Fees (2¢ to 4¢/ per container)*	\$ 18,025,012	
	<b>Subtotal</b>	<b>\$ 53,718,929</b>
County Support		
County of Hawaii	\$ 407,774	
County of Maui	\$ 0	
County of Kauai	\$ 231,274	
	<b>Subtotal</b>	<b>\$ 639,048</b>
Reimbursement for Lanai, Maui to operate a Certified Redemption Center	\$ 58,323	
Administrative Expenses		
DOH Payroll	\$ 694,133	
DOH supplies, phone, misc.	\$ 59,689	
Advertising/Outreach	\$ 0	
Payment to General Fund for Administrative Fees	\$653,450	
Audit Fee	\$ 55,000	
Others – Travel	\$ 12,414	
	<b>Subtotal</b>	<b>\$1,533,009</b>
	<b>Total Expenditures</b>	<b>\$ 55,890,987</b>

\* Handling fees for aluminum, bi-metal, and plastic are 2¢ for Oahu and 3¢ for neighbor islands. Fees for glass are 2¢ for agriculture/construction and 4¢ for remanufacturing uses for all islands.

### **Certified Redemption Centers**

Ninety three (93) certified redemption centers (CRCs) were open to the public as of June 30, 2015. The island breakdown is as follows: Hawaii – 18, Maui – 12, Molokai – 2, Lanai – 1, Oahu – 52, and Kauai – 8.

### **Segregated Rates**

Segregated rates are offered by CRCs to give consumers the quicker option of redeeming their containers by weighing instead of hand counting. The rates are set by the department and indicate the average number of deposit containers per pound when the containers are segregated by material type. Consumers have a choice to redeem their containers by either weight or hand count. CRCs must provide a hand count of loads of 200 or less containers if requested by the customer.

The department periodically evaluates deposit beverage container weights and updates the rates accordingly to reflect trends in container packaging. The segregated rates were last updated in December 2010. The current rates are shown in Table 4.

**TABLE 4: Segregated Rates**

Material Type	# Containers per lb.	Refund Amount per lb.
Aluminum	32	\$1.60
Bi-metal	5.9	\$0.295
Glass	2.4	\$0.12
Plastic (17 fl. oz. or less)	26.3	\$1.315
Plastic (mixed sizes)	18.8	\$0.94

## **Electronic Waste and Television Recycling and Recovery Program Program Background**

The Electronic Waste Recycling Act was adopted in 2008 and created a recycling program for waste computers, portable computers, computer monitors and computer printers. Products covered by this portion of statute are considered “Covered Electronic Devices” (CEDs). The Electronic Waste and Television Recycling and Recovery Act was adopted in 2009 and expanded the program to cover televisions. Products covered under the expanded portion of the law are termed “Covered Televisions” (CTVs). The dual program is administered by the Office of Solid Waste Management (OSWM).

The law requires manufacturers to register with the DOH and submit recycling plans to the department. The plans describe how each manufacturer intends to collect and recycle used CED and CTV products. Table 5 indicates the number of manufacturers registered with the department by calendar year.

**Table 5: Number of Registered Manufacturers**

Calendar Year	2011	2012	2013	2014	2015
CED	44	50	53	56	60
CTV	29	28	28	26	27

### **Manufacturer Ranking by Pounds Recycled for 2014**

By January 1, 2010, CED manufacturers were required to have their recycling programs established for Hawaii and by January 1, 2011, CTV manufacturers were required to have their recycling programs established.

By law, the department is required to rank CED manufacturers by the number of pounds they recycled. Tables 6 displays the ranking for the manufacturers who reported recycling CEDs in Hawaii. There were 40 CED manufacturers who reported recycling zero (0) pounds of CEDs in Hawaii in 2014, these manufacturers are listed alphabetically in Table 7.

**Table 6: Manufacturer Ranking by CED Pounds Recycled for 2014**

<b>Rank</b>	<b>Manufacturer</b>	<b>CED Pounds Recycled</b>
1	Apple Inc.	1,343,086
2	Hewlett-Packard (HP)	600,207
3	Samsung Electronics America, Inc.	131,318
4	Dell Marketing LP	86,305
5	LG Electronics USA, Inc.	40,008
6	Best Buy	37,186
7	Acer America Corporation	29,857
8	Brother International Corporation	6,320
9	Panasonic Corporation of North America	4,926
10	Microsoft Corporation	4,334
11	Lexmark International, Inc.	3,493
12	Oki Data Americas, Inc.	1,000
13	Cellco Partnership dba Verizon Wireless	939
14	Amazon Fulfillment Services, Inc.	585
15	Sony Electronics, Inc.	375
16	Mach Speed Technologies DBA Apollo Brands	136
17	Barnesandnoble.com llc	6
17	Lenovo (United States) Inc.	6
<b>Total Pounds Recycled in 2014</b>		<b>2,290,087</b>

**Table 7: CED Manufacturers Reporting Zero Pounds Recycled for 2014**

<b>Manufacturer</b>	<b>CED Pounds Recycled</b>
ASUS Computer International	0
BenQ America Corp.	0
Canon USA	0
Cyberpower Inc.	0
Double Power Technology, Inc.	0
Elo Touch Solutions, Inc.	0
Envision Peripherals, Inc.	0
Epson America, Inc.	0
Fuhu, Inc.	0
Fujitsu America Inc.	0
Google Inc.	0
Hannspree North America, Inc.	0
HKC Digital	0
HTC America	0
International Business Machines Corporation (IBM)	0
Konica Minolta Business Solutions U.S.A., Inc.	0
KYOCERA Document Solutions USA Inc.	0
LeapFrog Enterprises, Inc.	0
LF Products Pte Ltd.,	0
Motorola Mobility	0
Motorola Solutions	0
NCR Corporation	0
NEC Display Solutions of America, Inc.	0
NVIDIA Corporation	0
Planar Systems, Inc.	0
PLR IP Holdings, LLC (Polaroid)	0
Ricoh Americas Corporation	0
Russell Distribution Company	0
Sceptre	0
SMART Technologies	0
TMAX Digital Inc.	0
Toshiba America Information Systems, Inc.	0
Toshiba Global Commerce Solutions	0
ViewSonic Corporation	0
Visual Land, Inc.	0
VIZIO Inc.	0
Vox International Corporation (formerly Audiovox)	0
Wacom Technology Corporation	0
Wyse Technology Corporation	0
Xerox Corporation	0

In 2014, manufactures reported recycling 2,290,087 pounds of CEDs and 1,945,189 pounds of CTVs. In 2013, manufactures reported recycling 2,363,542 pounds of CEDs and 1,775,816 pounds of CTVs. For 2012, CED and CTV manufacturers reported recycling 2,449,920 pounds of CEDs and 1,429,984 pounds of CTVs. For 2011, CED and CTV manufacturers reported recycling 2,494,484 pounds of CEDs and 1,011,631 pounds of CTVs. For 2010, only CED manufacturers were required to have recycling programs and it was reported that 3,235,432 pounds of electronic waste was recycled. The 3,235,432 pounds recycled in 2010 also included other types of electronic waste (TVs, keyboards, mice, etc.) in addition to CEDs. Overall, there was an increase of 95,918 pounds (2.3%) of CEDs and CTVs recycled from 2013 to 2014 (Table 8).

**Table 8: E-waste Recycled for 2010-2014 (pounds)**

Calendar Year	2010	2011	2012	2013	2014
CED Manufacturers	3,235,432	2,494,484	2,449,920	2,363,542	2,290,087
CTV Manufacturers	N/A	1,011,631	1,429,984	1,775,816	1,945,189
Totals:	3,235,432	3,506,115	3,879,904	4,139,358	4,235,276

Registered CED manufacturers are required to pay an annual registration fee of \$5,000 while registered CTV manufacturers are required to pay an annual registration fee of \$2,500. Any manufacturer that sells both CEDs and CTVs are required to pay a combined \$7,500 in annual registration fees. Table 9 indicates program revenue from manufacturer registration fees.

**Table 9: Electronic Device Recycling Fund Revenue**

Calendar Year	2011	2012	2013	2014	2015
	\$292,500	\$320,000	\$335,000	\$345,000	\$367,500

## **Electronics Recycling Program Concerns and Challenges**

### Convenience and Effectiveness of Manufacturer Recycling Programs

In an attempt to strike a balance between rigid mandates and unlimited flexibility, the law gives manufacturers considerable leeway in the types of recycling programs they offer consumers. The law requires each manufacturer to submit a recycling plan that describes collection and recycling procedures to the department annually. While the law requires the department to review each plan it does not provide any criteria or performance standards by which to evaluate the plans. This allows some manufacturers to implement inconvenient programs that require consumers to do much of the work to recycle their used CEDs or CTVs. The department is concerned that inconvenient programs discourage consumers and limit recycling.

### Lessons Learned / Moving Forward

Counties have made diversion of electronic waste from landfilling (or incineration) a high priority and had developed programs prior to adoption of the state law. However, most of the collection programs have been drastically scaled back, or completely eliminated, because of budget constraints.

New electronics recycling services for the general public have become available in response to the law. The most comprehensive programs have been centered on Oahu with recyclers accepting all brands of

electronics free of charge and even accepting items not covered by the law. Comprehensive services are centered on Oahu because of its population concentration.

Since passage of the law it has become clear that statutory mandates for both minimum recycling goals and customer convenience are necessary to foster a more effective and convenient statewide electronics recycling system. Some manufacturers put no effort into establishing useful recycling programs, as evidenced by the reporting of zero pounds of recycled material. While other manufacturers, who choose to implement Oahu centric programs have demonstrated that they will not extend comprehensive services to the neighbor islands.

The department will continue to work with the Legislature to strengthen the program with respect to consistency of service provided across the state, convenience of the recycling programs, long term stability of the programs, and to setting recycling goals.

**Glass Advance Disposal Fee (ADF) Program**

The OSWM continues to administer a statewide glass recovery program that is funded by an advance disposal fee (ADF). The department collects the fee from importers of products contained in glass containers (that are not deposit beverage containers). The department then contracts with each county to operate local glass recovery programs to divert glass from the waste stream for recycling. As directed by statute (HRS §342G-84) the funds are distributed to the counties based on de facto population. Each county is allowed enough flexibility to structure its glass-recycling program to maximize recycling of the glass. Program revenue and expenditures are indicated in Tables 10 and 11 respectively.

The Glass ADF Program was significantly affected by implementation of the DBC Program. Beginning October 1, 2004, glass deposit beverage containers were transferred from the ADF Program to the DBC Program. This reduced the number of containers covered by the ADF Program by approximately 80%, and resulted in a corresponding decrease in revenue. For most of its existence, the ADF Program has focused on commercial glass recycling. A more recent development has seen some DBC redemption centers starting to collect, and pay for, ADF glass containers with ADF funds. This has increased the amount of glass being recycled and significantly increased the drawdown of ADF funds. Recycled glass tonnages are shown in Table 12.

The decrease of containers covered by the ADF Program is also reflected in the decreased amount of glass collected through each county operated buy-back program. The department has adjusted the amounts of each of the county contracts in accordance with the decrease in Program revenue.

**Table 10: Glass ADF Revenue\***

Calendar Year	14
	\$800,614

\*Revenue collection was switched to a calendar year basis beginning in 2014; see discussion below

**Table 11: Expenditures for County Collection Programs**

FY	2011	2012	2013	2014	2015
Hawaii	\$150,000	\$132,700	\$129,200	\$70,000	\$128,000
Maui	\$145,000	\$141,600	\$122,800	\$67,700	\$111,060
Oahu	\$745,000	\$0*	\$620,400	\$340,400	\$547,965
Kauai	\$40,176	\$43,796	\$68,404	\$48,824	\$53,200
Total	\$1,080,176	\$318,096	\$940,804	\$526,924	\$840,225

\*Funding was not provided to the counties in FY 2010 and to the City & County of Honolulu in FY 2012 because the Advance Disposal Fee special fund was identified as a potential source to cover general fund shortfalls.

**Table 12: County Recycled Glass (Tons)\***

FY	2011	2012	2013	2014	2015
Hawaii	1,145	829	785	548	878
Maui	2,115	1,809	1,843	971	1,080
Oahu	5,994	0**	3,100	1,649	4,824
Kauai	246	373	335	408	587
Total	9,500	3,011	6,063	3,576	7,370

*\*The Glass Advance Disposal Fee special fund was identified as a potential source to cover general fund shortfalls, so funding was not provided to the counties in FY 2010 and to the City & County of Honolulu for FY 2012. Therefore, tonnage reports were not required of the counties during FY 2010 or the City & County of Honolulu for FY 2012.*

Program Audit

Senate Concurrent Resolution 74, Senate Draft 1, House Draft 1, of the 2014 Legislature (Resolution) instructed the Legislative Auditor (Auditor) to conduct an audit of the ADF Program. The Auditor conducted the audit from July through October 2014 and issued its final report in December 2014.

The department has made several changes in its administration of the ADF program since the completion of the audit.

In changes initiated before the audit the department switched to an invoicing and reimbursement method of payments that dramatically increased the counties' accountability in expending program funds. The department further increased the stringency of this process by incorporating documentation and reporting requirements into its glass contracts as recommended by the auditor.

Collection of the ADF from glass container importers was changed from a fiscal year to a calendar year basis. The change allows the department to use actual collection data instead of estimates to set each counties' allotment for the next contract period. Partial year projections were used out of necessity when collections were based on the fiscal year. The increased accuracy of calendar year collections aids the counties in their budget planning.

The department met with the counties (as directed by the Resolution) to review administration of current county glass recycling programs. The meetings have led to a greater understanding of the unique challenges each county faces with recycling glass containers.

**IV. SOLID WASTE MANAGEMENT PROGRAM FUNDING SHORTAGE**

**Solid Waste Management Disposal Surcharge**

In FY 2014 the Solid Waste Management Disposal Surcharge (Surcharge) was the primary funding source for the Solid Waste Section (SWS) and a partial funding source for two planners in the OSWM.

The department collects the Surcharge from the owners/operators of disposal facilities within the state. This includes all municipal solid waste and construction and demolition landfills, as well as the H-POWER waste-to-energy incinerator on Oahu. Surcharge payments are deposited in the Environmental Management Special Fund. Originally proposed at 75¢ per ton in early discussions, the Surcharge was initially set, in statute (HRS §342G-62), at 25¢ per ton in 1993 and raised to 35¢ per ton in 1997. Unlike other regulatory programs within the department, the SWS receive no federal funding, which leaves it nearly entirely dependent on Surcharge collections.

The disposal surcharge is a common funding mechanism for solid waste management programs across the country. Past research has indicated that 17 states utilize disposal surcharges to fund solid waste management functions; with an average of \$1.43 per ton, and a high of \$3.00 per ton and a low of 35¢ per ton. Hawaii’s Surcharge is small when landfill tipping fees are taken into account. For example, Hawaii’s 35¢ per ton represents less than one percent of the approximately \$90 per ton tipping fee charged at the City and County of Honolulu’s Waimanalo Gulch Landfill. The following is a summary of each county’s landfill tipping fees and associated charges.

Hawaii County	\$85.00 per ton
Maui County	\$61.00 per ton + \$10.00 recycling surcharge = \$71.00 per ton total cost C&C of
Honolulu	\$81.00 per ton + 12% recycling surcharge = \$90.72 per ton total cost
Kauai County	\$56.00 per ton

**Table 13: Solid Waste Disposal Surcharge Collections**

FY	11	12	13	14	15
	\$305,759	\$448,482	\$425,950	\$323,894	\$465,865

**Table 14: Solid Waste Disposal Surcharge Expenditures**

FY	2011	2012	2013	2014	2015
	\$622,897	\$568,467	\$593,394	\$663,952	\$680,165

**Table 15: Solid Waste Disposal (Tons)**

FY	2011	2012	2013	2014	2015
	1,367,000	1,359,000	1,236,000	1,325,000	1,457,000

**Declining Collections and Unchanging Workload**

As indicated in Table 15, disposal tonnage has decreased by nearly 30% between FY 2008 and FY 2013. While the economic slowdown is believed to have contributed to the decrease in waste generation, the reduction can also be partially attributed to increased waste diversion. A related downward trend is not discernible in Surcharge collections because of lags in Surcharge payments.

The decline in collections is expected to continue as the counties continue to improve diversion activities.

Although the Surcharge revenue has declined and the amount of waste disposed in Hawaii has decreased; the workload carried by the SWS, to regulate solid waste facilities (including recycling and composting facilities) has remained relatively unchanged. The SWS staff of three FTE engineers and three environmental health specialists annually manage approximately 390 permitted facilities, an average of over 100 permit applications, an average of over 175 solid waste complaints, illegal dumping sites, and numerous miscellaneous inquiries annually. Regulating landfills is intensive work, and while it is common for regulatory programs in other states to assign one engineer to each permitted landfill, the three engineers of the SWS must oversee 11 active permitted landfills in addition to the nearly 300 other permitted facilities.

The understaffing has had real impacts on the regulated community and county governments as permit application review times have steadily increased. These delays directly increase costs for facility owners/operators. Additionally, numerous activities have been drastically scaled back or discontinued. These include state solid waste management planning activity, tracking of county solid waste management planning activity, construction and demolition waste minimization/diversion outreach, lead-acid battery and tire recycling outreach/compliance and enforcement, environmentally preferable purchasing tracking, and leaf blower noise enforcement. Further reductions in service will likely take place if no new revenues are realized while costs continue to rise and revenue continues to decrease.

### **Increasing Costs**

Program expenses currently exceed \$600,000 annually and costs will continue to rise due mostly to rising salary and benefit costs. The most recent contract approved for HGEA Units 3 and 13 members increased last year's personnel costs by 4%; along with increases through FY 2017. These costs will be paid by the decreasing Surcharge revenue stream, creating annual deficits of approximately \$200,000.

The program has been able to maintain positions and partial operations through cost savings incurred through position vacancies and reassigning personnel to other programs. Expenses, which are primarily salaries, are already unsustainable, and we expect to be insolvent within the next two years.

### **Legislative Activity**

The department has requested an increase of the disposal surcharge through bills included in the Governor's administrative package for the past four legislative sessions. During the 2011 legislative session the department participated in a series of meetings, organized by the Senate's Committee on Energy and Environment that included representatives of the state, City & County of Honolulu, PVT Landfill, and Honua Energy. The meetings resulted in a compromise proposal of a tiered surcharge that ultimately did not pass the Legislature.

Because of the critical funding situation, the department will continue to work with the legislature to find workable solutions. If funding is not increased; additional mandated services will be eliminated. It should be noted that the legislative bill to increase the Surcharge as presented to the 2014 Legislature

requested additional funding to continue existing funded activities. A separate budget request was made to update State Integrated Solid Waste Management (ISWM) Plan. Both requests were not granted. If all activities as mandated in HRS 342G are to be performed, additional funding is required.

## **V. Clean Energy and Solid Waste Management**

Increasing energy costs and Hawaii's dependence on fossil fuels has increased the focus on developing local renewable energy sources. The Hawaii Clean Energy Initiative seeks to have 70% of Hawaii's energy come from renewable sources by 2030, and landfill methane is a potential energy source to replace some fossil fuel use.

These efforts will likely affect the way we consider future waste management technologies. As an example, the City and County of Honolulu classifies the H-POWER waste to energy facility as a recycling activity. The City claims 74% of Oahu's waste is diverted from landfilling when including waste to energy use with traditional recycling and composting. The City's claimed diversion numbers may increase further with the completion of H-POWER's third boiler. Although we support the development of alternative energy sources, state solid waste laws (Chapter 342G, HRS) define incineration as waste disposal, not recycling, and therefore department cannot concur with the City's position that incineration is a form of recycling.

Additionally, in considering the hierarchy of solid waste management practices and the definition of recycling, there is an opposing view in that if incineration (or waste to energy) is considered recycling there will be less of an incentive to retrieve recyclable materials for the creation of new products and instead they will be utilized solely for their energy value. Because of our distance to markets and fuel sources, typical discussions heard on the national level may not be appropriate locally. Therefore, such evaluations should be conducted in the next state ISWM Plan, pending available funding.

These emerging issues are of serious importance to both the SWS and OSWM, as they may lead to a redefinition of traditional solid waste management approaches. The collective staff of both programs actively monitors these issues, tracking national and international discussions, and studying how new concepts may be incorporated into both planning and permitting processes.