

**REPORT TO THE TWENTY-SIXTH LEGISLATURE
STATE OF HAWAII
2011**

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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EXECUTIVE SUMMARY

In FY 2009-10 statewide generation of municipal solid waste (MSW) totaled 1,636,297 tons, a reduction of about 35% from FY 2008-09. Nearly 40% of waste was recycled, with the remaining amount being landfilled or incinerated. While the diversion rate increased, tonnages of disposed materials and diverted materials decreased over the past year.

The State's solid waste diversion rate for FY2009-10 is 39.6%. According to the EPA, the national recycling rate for the 2008 calendar year was 33.2%. The state's goal was 50% waste diversion by the January 1, 2000, based on Hawaii Revised Statutes (HRS) 342G-3(a)(2), which was adopted in 1991. The EPA's national recycling goal is 35%.

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. The report also contains general program information about OSWM programs and the counties' solid waste and recycling efforts.

This report covers activities of both the OSWM and the Solid Waste Section (SWS) conducted during FY 2009-10. Both programs are contained within the Department of Health's Solid and Hazardous Waste Branch (SHWB). The SWS is the program 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) Program. Additionally, the OSWM provides technical and programmatic assistance to the counties in their development of solid waste management and recycling programs. The activities of the DBC program are covered in a separate report.

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

HRS §342G-2 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.

As to practices, source reduction, also called "waste prevention" or "waste reduction", means creating less waste. "Reuse", although not included in the list of priorities, 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. Collectively, these methods are sometimes referred to 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 other 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. It is possible to quantify reuse because it involves actual material. Quantification can be made in numerous ways including counting number of individual product units or measuring its tonnage. However, effectively measuring reuse is still difficult because it takes place at so many levels and on a widespread scale. For example, many people regularly reuse plastic 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. However, some reuse activity is accounted for in the diversion statistics presented in this report. An example of a reuse activity that is quantified is the amount of material that is donated and sold 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, many recycling facilities regularly submit data to the counties for tracking. In addition, most recycling facilities are regulated by the Department of Health under solid waste management regulations. Part V, below, discusses a difference of opinion between the department and the City and County of Honolulu regarding waste to energy activity.

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 State's current diversion rate of 39.6% is nearly in line with the most recent national statistics. The EPA reported national recycling rate of 33.2% for 2008. The state's goal of 50% waste diversion was set in 1991 and mirrored EPA's recycling goal at the time. The EPA has since revised its recycling goal of 50% by the year 2000 to 35% with no target date specified. This change was made in recognition of the fact that states and municipalities need a broader time frame in which to reach higher waste reduction levels.

Hawaii's commercial recyclers continue to deal with long standing obstacles. Most notable is the high cost of shipping to the Far East or the mainland U.S. where most recycling markets are located. Volatility in recycled materials markets, combined with the relatively small amounts of materials generated in Hawaii also continues to challenge recyclers. The current global economic downturn has placed even greater obstacles to recycling primarily by reducing demand and increasing the costs to transport recyclable materials. Some mainland and overseas recycling markets have, hopefully temporarily, either eliminated or reduced significantly their demand for recyclable material.

Solid Waste Disposal and Diversion Rates

The OSWM reports solid waste disposal and diversion rates by aggregating county collected data with data collected under authority of the solid waste program's permitting system. The state's fiscal year begins July 1 and ends on June 30.

The economic slowdown of the past two years continues to show its effects on solid waste generation and recycling activity. Disposal tonnage has decreased 39% from 1,629,397 tons in FY 2008-09 to 988,444 tons for FY 2009-10. While the diversion rate has increased, the tonnage of diverted material has decreased from 902,973 tons to 647,854 tons.

Table 1: Waste Diversion Statistics for FY 2009-10

	Disposal (Tons)	Diversion (Tons)	Generation (Tons)	Diversion Rate
Hawaii	155,682	87,337	243,019	35.9%
Maui	158,986	109,350	268,335	40.8%
Oahu*	601,117	426,947	1,028,064	41.5%
Kauai	72,659	24,220	96,879	25.0%
State	988,444	647,854	1,636,297	39.6%

* Calendar Year 2009 data

Table 2: Diversion rates for fiscal years 2006 through 2010

FY	06	07	08	09	10
Hawaii	25.8%	23.8%	29.2%	30.9%	35.9%
Maui*	30.0%	44.1%	33.1%	34.2%	35.3%
Oahu#	41.0%	30.8%	33.4%	37.2%	41.5%
Kauai	11.6%	19.9%	29.6%	26.3%	25.0%
State	36.0%	31.4%	32.3%	35.7%	39.6%

Notes:

* The large increase in Maui County's diversion rate is due to a single large-scale hotel renovation project

Previous calendar year data

III. OFFICE OF SOLID WASTE MANAGEMENT ACTIVITIES

Hawaii Deposit Beverage Container (DBC) Program

The State of Hawaii Deposit Beverage Container Program (Program) achieved an annual redemption rate of 76% in FY 2009-10. Over 686 million deposit beverage containers (DBC) were recycled and public participation remained strong.

DBC Program Redemption Rate

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

The redemption rate for FY 2010 was 76%. The redemption rate is calculated by dividing the number of DBC redeemed by the number of DBC sold.

$$\text{Redemption Rate} = \frac{686,392,140 \text{ (redeemed)}}{901,861,628 \text{ (sold)}}$$

$$\text{Redemption Rate} = 76\%$$

Chart 1: Number of DBC Redeemed by Material Type

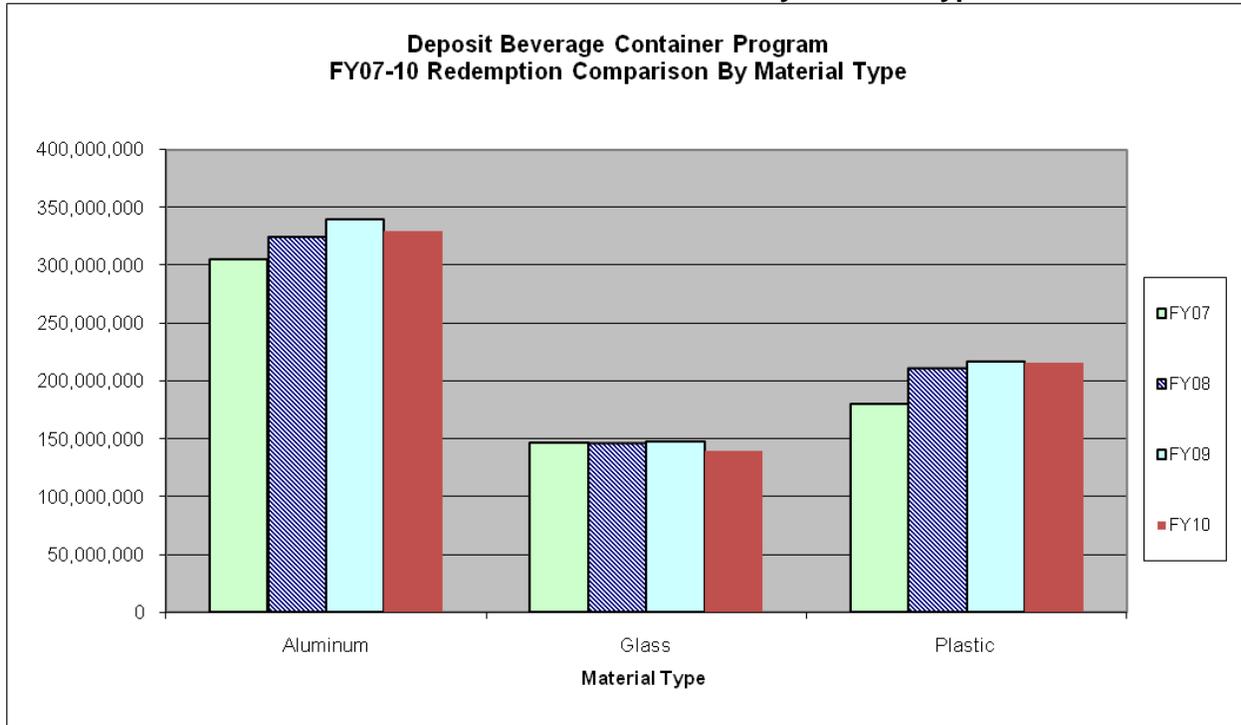


Chart 2: Comparison of Redeemed & Unredeemed

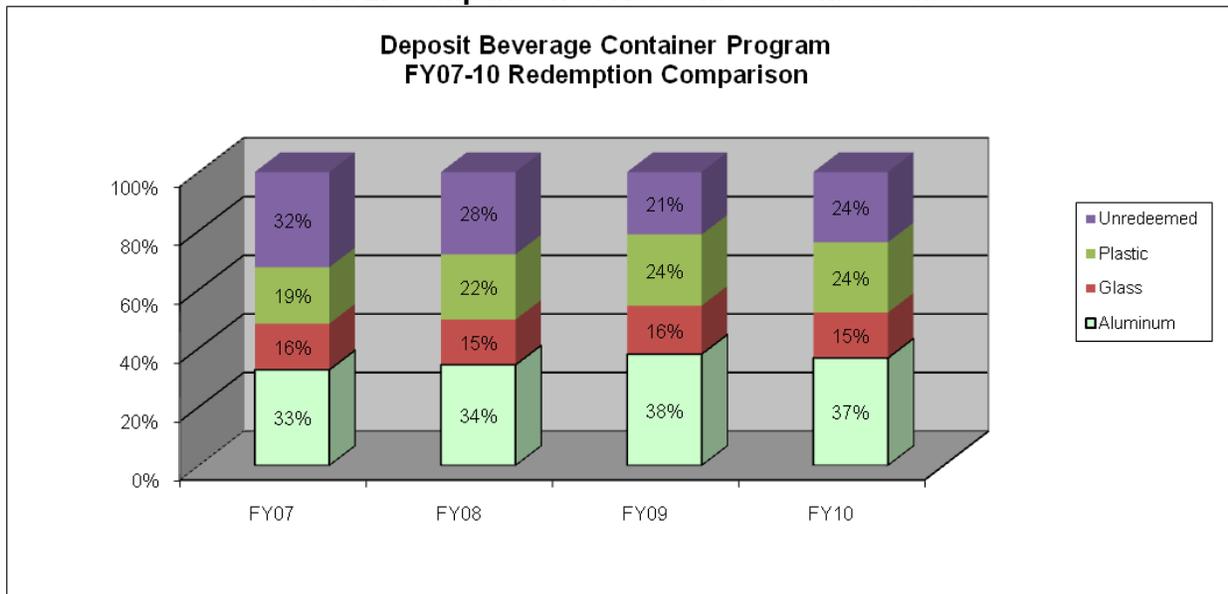
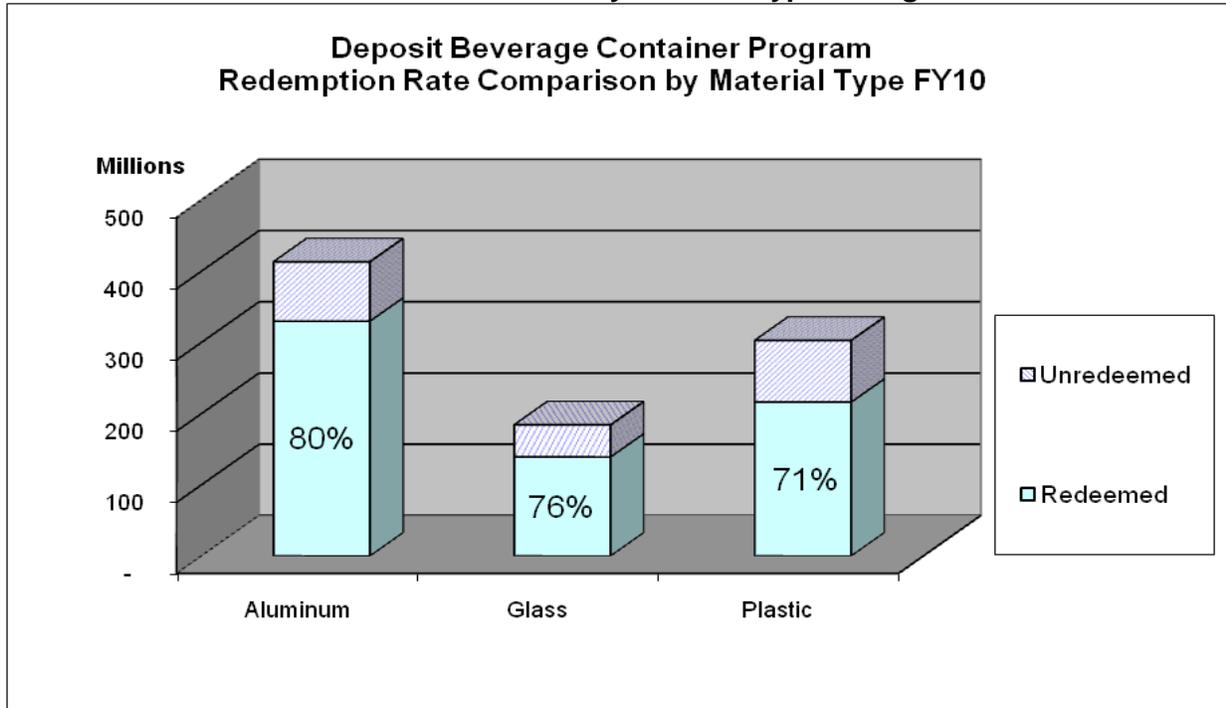


Chart 3: DBC Redeemed by Material Type during FY 10



Deposit Beverage Container Program Special Fund

During FY 2010, the department collected approximately \$54 million in container fees and deposits from distributors. It paid out nearly \$55 million to redemption center operators for redeemed deposits and eligible handling fees. The department also paid approximately \$2.6 million for Program administration and contracted DBC program activities. See Table 3 for a breakdown of revenue and expenditures.

As of June 30, 2010, the DBC special fund had about \$14 million remaining after encumbrances. The Program must rely on the fund's reserves to sustain itself to keep up with the high rates of deposit refunds. This is because the Program pays out more than it collects per container. While the Program collects 6 cents per container (deposit plus container fee), it pays 7 to 9 cents per container (5 redemption plus 2-4 cents handling fee). The Program relies on the percentage of unredeemed deposits to sustain itself. As the percentage of unredeemed deposits shrinks, due to high number of deposits being refunded, then the Program must utilize the fund's reserves or increase the container fee to sustain itself.

Certified Redemption Centers

Just over one hundred certified redemption centers were open to the public as of June 30, 2010. See Table 2 for a breakdown of number of CRCs by island.

Table 4: Numbers of Certified Redemption Centers by Island

Island	Jan 2005	Dec 2005	June 2006	June 2007	June 2008	June 2009	June 2010
Hawaii	5	11	12	15	16	19	19
Maui	9	9	12	14	15	14	13
Molokai	1	1	1	3	3	2	2
Lanai	1	1	1	1	1	1	1
Oahu	23	49	52	60*	63	68	59
Kauai	5	6	6	6	7	10	11
Total:	44	77	84	99	105	114	105

For Oahu, thirteen (13) new redemption centers were opened, but were offset by the decertification of 20 mobile redemption centers that were operating less than 30 hours per week and the closure to two regular redemption centers. A change in statute enacted into law in 2007 requires certified redemption centers on Oahu to operate at least 30 hours per week. The certifications for these mobile redemption centers were up for renewal at the end of calendar year 2009, and the Program took this opportunity to bring these redemption centers into compliance by not renewing their certifications.

DBC Inspections & Enforcement

Inspections

Program inspectors conducted 217 compliance evaluation inspections (CEIs) of regulated entities which included certified redemption centers, recycling facilities, and retailers. Some CEIs were initiated pursuant to facility complaints, which warranted extensive investigation. Businesses that were found to be in violation of the law were advised orally during the CEI out brief and, if applicable, issued warning letters to inform them of corrective actions required by the Program.

The Program investigated alleged incidents of non-compliance about certified redemption centers and beverage retailers that were received from the public via electronic mail, telephone and in-person. On-site inspections were conducted to determine if any certification requirements were violated and, if so, reinstated compliance with Program requirement. The department generally referred "customer service" complaints to the applicable company (e.g. redemption company or retailer) and requested that the company resolve, to the extent possible, the complaint(s). Both the redemption companies and retailers were generally proactive in addressing these types of complaints.

Compliance Investigations

For the purpose of identifying areas of potential and/or actual non-compliance, the Program issued requests for information (RFIs) to over 130 businesses under its authority to include recycling facilities, distributors and manufacturers, and airline companies and cruise ship lines. This widespread investigation enabled the Program to evaluate, and subsequently address, areas of non-compliance associated with the disposal of beverage containers that are exempt from the Program and as such, are difficult to track. Also, through this process of inquiry, the Program ensured that each airline and cruise ship develop and implement a recycling plan as required by the Program.

Enforcement

In FY 2010 the majority of warning letters, 41 out of 62 total, were issued to deposit beverage distributors for delinquent distributor reports and payments, 9 warning letters were issued to certified redemption centers for certification violations, and 12 warning letters were issued to distributors for failure to comply with the program's requirements.

The program issued a total of 5 formal enforcement notices and orders, in the form of official Notices of Findings and Orders (NFVOs). Four (4) NFVOs were issued to deposit beverage container distributors (Central Boeki Hawaii Ltd, H & K Inc. dba Palama Supermarket, Asian Food Trading Co Inc. and Tamura's Enterprise Inc.) for failing to report and submit payments to the Program. The department successfully resolved 3 of the aforementioned cases and is awaiting closure of the fourth. An NFVO was issued to a certified redemption center, Atlas Recycling Centers LLC., for various violations including failure to inspect containers presented for redemption and for providing inaccurate refunds to the public. Atlas Recycling has requested a hearing with the department.

DBC Educational Outreach

The program website, www.hi5deposit.com, is continually updated to reflect program changes and general information. Department contact information is also provided on the site.

The department sponsored a "HI-5 Recycling" category in the `Olelo Community Television's 2010 Youth Xchange video competition for students grades K-12. Students produced 30-second public service announcements to promote the HI-5 program and recycling in general. Forty-eight videos were submitted in this category and the department participated in judging the videos.

DBC Program Updates & Challenges

Segregated Rates

The segregated rates were updated in November 2009. The department adopted "segregated rates" (weight rates paid for deposit containers segregated by material type) to help process consumer container loads faster and to give the public options when they redeem containers for refund. The department periodically evaluates deposit beverage container weights and updates the rates accordingly to reflect recent trends in container packaging.

A statewide segregated rate study is conducted to determine the average number of beverage containers per pound. The segregated rate, or container weight conversion, is an average because beverage containers come in a wide variety of sizes and weights. The segregated rates are displayed in Table 3.

Table 5: DBC Segregated Rates

Material Type	# Containers per lb.	Refund Amount per lb.
Aluminum	31.4	\$1.57
Bi-metal	4.6	23¢
Glass	2.3	11.5¢
Plastic (small size: 17 fluid oz. or less)	24.4	\$1.22
Plastic (mixed sizes)	17.4	87¢

Consumers continue to have a choice to request redemption by weight or by count. Consumers who prefer a count may request a count, and certified redemption centers must provide a hand count of loads of 200 or less containers if requested. If people believe that the weight rate may result in an undercount, as may happen if many small plastic containers are involved, they can segregate the containers by size and seek a hand count. People who bring in large loads of deposit containers may choose to have their loads weighed to avoid waiting while each container is counted.

Redemption Center Company Audits

To improve accountability amongst regulated entities, i.e., certified redemption centers and registered DBC distributors and dealers, the Program has contracted for professional auditing and accounting services to conduct in-depth auditing of regulated companies. Although, the Program conducts regular and on-the-spot general audits and records review of regulated facilities, the Program expects that the in-depth audit and accounting investigations will provide more detailed insight into the regulated companies and recommend policy and procedural changes, which will significantly improve accountability of the companies audited and for the Program as a whole. Audits will begin September 2010 for recycling companies operating certified redemption centers.

Certified Redemption Center Reporting Procedure Changes

The program continues to plan a major change to its current redemption and recycling company claims procedures. The proposal is to pay the combined DBC refund value and handling fee claims only on the quantity of DBC material that is actually shipped to and received by the materials end use recycler/re-processor. At present, the Program pays deposit refunds upon receiving claims, half the handling fee when DBC are shipped, and the other half of the handling fee when the re-processor receives the DBC. DOH has in some cases found significant differences between the number of containers claimed for deposit refunds and the number of containers reportedly shipped later. The DBC quantity claimed by redemption centers is sometimes not a reliable indicator of the actual quantity of DBC material collected, which has been found to be affected/reduced by such factors as material shrinkage, theft, contamination, etc. The proposed change will base all payments on the number or quantity of containers shipped to and received by the materials end use recycler/re-processor.

The proposed procedure will also establish a single combined deposit and handling fee form. This form will be a combination of the program's currently used DR-1 and HR-1 forms. This modification will better ensure that refund payment requests made by redemption centers for

DBC material redeemed/collected cover the same quantity of DBC material shipped to an end-user recycler and provide a simple administrative process.

The Program is assessing the negative impacts from this planned change in cash flow, which could include closing of certified redemption facilities and possible reduction of deposit beverage container redemption. Based on an informal survey, initially certified redemption companies vehemently opposed this proposed change. During recent discussions, certain certified redemption companies were more willing to discuss the proposed claims procedure changes. At the start of the Program our primary concern was encouraging private entities to provide DBC recycling. The Program is maturing and weighing other values more highly now. The audits on redemption center companies (described in the section above titled *Redemption Center Company Audits*) will provide the Program with additional information that will help the Program in designing reporting procedure changes.

DBC Closing Remarks

The Program continued to experience high participation in FY 2010. The Program believes that the redemption rate reflects the public's satisfaction with the redemption process and the overall support of the DBC program. As such, the Program will continue to concentrate on improving customer convenience and service during the redemption process. The Program will also continue to improve by increasing internal efficiency and DBC redemption center and distributor accountability, including consistent and adequate verification of claims, and vigorous regulatory enforcement.

Electronic Waste and Television Recycling and Recovery Program

Electronics Recycling Program Background

The Electronic Waste Recycling Act (Act 13) was adopted during the legislature's First Special Session of 2008 and passed into law without the governor's signature. The act created a recycling program for computers, portable computers, computer monitors and computer printers, with all products falling under the term "Covered Electronic Device" (CED).

The Electronic Waste and Television Recycling and Recovery Act (Act 183) was adopted by the legislature during its 2009 session. In addition to renaming the program, Act 183 expanded the existing CED program to cover televisions. Televisions that fall under the purview of the program are termed "Covered Televisions" (CTV).

The dual program is managed by the Department of Health's (DOH) Office of Solid Waste Management (OSWM), which is a part of the Solid and Hazardous Waste Branch.

The law mandates that CED and CTV manufacturers provide Hawaii residents and businesses with the collection and recycling of their respective CEDs and CTVs. CED manufacturers were required to have their programs in place and operating by January 1, 2010. CTV manufacturers are required to have their programs operating by January 1, 2011.

Electronics Recycling Program Activity

Manufacturers selling CEDs in Hawaii were required to register with the DOH by January 1, 2009. In 2009, there were 44 manufacturers registered with the DOH. The number increased slightly in 2010 to 46. Registered CED manufacturers were further required to submit recycling plans to the department by June 1, 2009. The plans described how each manufacturer intended to manage the collection and recycling of their used products. The CED recycling programs detailed in those plans were operating by January 1, 2010.

Manufacturers selling CTVs in Hawaii were required to register with the DOH by January 1, 2010, with a total of 27 CTV manufacturers registering with the department in 2010. CTV manufacturers were required to submit their recycling plans by June 1, 2010 and have their recycling programs operating by January 1, 2011.

Electronic Device Recycling Fund

Both CED and CTV manufacturers are required to pay an annual registration fee to the department. The fee for CED manufacturers is \$5,000 per year and began in 2009. CTV manufacturers are required to pay \$2,500 per year and began in 2010. The fees are separate, meaning that manufacturers that produce both CEDs and TVs are required to pay a combined \$7,500 per year. All fees are deposited into the Electronic Device Recycling Fund which was created by Act 13.

The number of registered CED manufacturers fell dramatically from FY 09 to FY 10 from 75 to five. This may be due to a combination of factors including small volume manufacturers choosing to exit the Hawaii market; clarification by manufacturers that their products do not qualify as CEDs; and manufacturers neglecting to renew their annual registration. The department is investigating and will conduct the appropriate follow-up with individual manufacturers.

Table 6: Electronic Device Recycling Fund Revenue

FY	09	10
	\$377,500	\$87,500

Table 7: Number of Registered Manufacturers

FY	09	10
CED	75	5
CTV	1	25

The department is in the process of establishing the mechanisms to provide funding to interested counties for electronic waste recycling efforts that will supplement manufacturer programs.

Electronics Recycling Program Concerns and Challenges

Convenience and Effectiveness of Manufacturer Recycling Programs

In an attempt to strike a balance between oppressive mandates and flexibility, the law gives manufacturers considerable leeway in the types of recycling programs they offer consumers. The law requires each manufacturer to submit their recycling plans to the department. The plans need to describe collection and recycling procedures. While the law does require the department to review and approve acceptable plans, it does not provide the department any criteria or performance standards by which to evaluate the plans.

This has resulted in some manufacturers implementing programs that require consumers to do much of the work recycling their used electronic devices or televisions. The department is concerned that inconvenient plans will discourage consumers and limit recycling. Examples of what consumers may find inconvenient are described below:

- Mail-back programs that require customers to package CEDs for mailing. This could be problematic for consumers who have large-sized TVs, or are required to supply their own boxes/packaging for mailing.
- Drop-off programs with a limited number of collection sites that don't provide adequate coverage for the entire state. Neighbor island consumers may be required to mail their CEDs to collection sites located on Oahu.
- Drop-off programs with inconvenient hours of operation.

Anecdotal evidence suggests that mail-back programs will result in minimal amounts of material being recycled, while programs with generous take-back requirements and convenient hours being the most successful. The department will use 2010 collection data submitted by CED manufacturers to assess program effectiveness and make appropriate recommendations for improvement.

Orphans

An "Orphan" is an electronic device or television that is not covered by the recycling law. The most common type of orphans are most likely to be electronic devices and TVs made by companies that have either gone out of business or no longer sell their products in Hawaii. The law does not address orphan products, so manufacturers are not required to recycle them.

TV Manufacturer's Recycling Responsibility

The law requires the department to set minimum recycling amounts for each CTV manufacturer by using a modified market share formula. After the first year of CTV recycling (2011) the department will set minimum recycling goals for each CTV manufacturer for the following year, and will be repeated annually. The law requires CED manufacturers to recycle their own products but does not set a minimum amount of CED material to collect for recycling.

The minimum for CTV manufacturers will be set using a formula set in statute as follows: each manufacturer's market share (a percentage) is multiplied by the amount (weight) of material that manufacturer collected for recycling the previous year. Because each manufacturer's market share percentage is multiplied against its *previous year's* recycling collection it creates an incentive for manufacturers to collect as little material as possible in their first year of mandated collection (2011), their first year of collections. There is no minimum amount of collection set for 2011.

Impact on County Programs

The department has had contact with each of the counties during the process of implementing the first stages of the electronics recycling program.

All of the counties have made diversion of electronic waste from landfilling (or incineration) a high priority and had developed programs to do so. Hawaii County has contracted with private electronics recyclers to accept material from the public while Maui and Kauai counties have done this through periodic collection events. The City and County of Honolulu has conducted periodic collections in the past and handles much of the consumer electronic waste stream through its bulky items collection. However, over the past year, most of the collection programs have been drastically scaled back or completely eliminated because of budget constraints.

Whether or not programs created under the recycling law will fill the gap in services created by reductions in county programs remains to be seen. As mentioned above, the department will analyze data for the first year of CED collections to assess program effectiveness.

In the interim, the department is attempting to provide funding to the counties to bolster (or restart) existing electronics waste recycling collection programs. While there is some concern that the funds will be providing services that should be the responsibility of CED (and eventually CTV) manufacturers, the department has determined that the short term need to divert these materials from disposal outweighs this concern.

Glass Advance Disposal Fee (ADF) Program

The OSWM continues to administer a statewide glass recovery program that is funded through an advance disposal fee (ADF). The department collects the fee from distributors of products contained in glass containers that are not deposit beverage containers. The department then contracts with each county to establish glass buy back programs that divert glass from the waste stream towards 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.

The Glass ADF Program has been significantly affected by implementation of the DBC Program. Beginning October 1, 2004, glass deposit beverage containers were transferred from the ADF program to DBC Program. This reduced the number of containers covered by the ADF Program by approximately 80%, and resulted in a corresponding decrease in revenue.

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 reduced the amounts of each of the county contracts in accordance with the decrease in program revenue.

Table 8: Glass ADF Revenue

FY	06	07	08	09	10
	\$651,746	\$676,011	\$622,215	\$731,115	\$701,607

Table 9: Expenditures for County Collection Programs

FY	06	07	08	09	10
Hawaii	\$71,000	\$56,879	\$832,580	\$59,390	\$0*
Maui	\$225,000	\$57,261	\$150,640	\$57,205	
Oahu	\$215,000	\$314,363	\$67,740	\$295,205	
Kauai	\$10,000	\$25,577	\$151,650	\$24,890	
Total	\$521,000	\$454,080	\$1,202,610	\$436,690	

* Funding was not provided to the counties in FY 2010 because the Glass Advance Disposal Fee special fund was identified as a potential source to transfer money from the cover general fund shortfalls.

Table 10: County Recycled Glass Tonnages

FY	06	07	08	09	10
Hawaii	582	401	433	371	0*
Maui	2,040	620	1,000	1,564	
Oahu	1,456	1,171	2,154	2,139	
Kauai	0	221	0	259	
Total	4,078	2,413	3,587	4,333	

** The Glass Advance Disposal Fee special fund was identified as a potential source to transfer money from the cover general fund shortfalls so funding was not provided to the counties in FY 2010. Therefore, tonnage reports were not required by the counties during FY 2010*

Construction & Demolition Waste Minimization and Diversion Outreach

The OSWM continues to provide compliance assistance to Hawaii’s construction industry, which is comprised of general contractors, subcontractors, builders, developers and other interested parties. The purpose is to promote compliance with State illegal dumping laws established in Chapters 342G and 342H, HRS, and Chapter 11-58.1, HAR, “Solid Waste Control”. The OSWM participates in workshops convened by the department’s Compliance Assistance Office and also attends General Contractor’s Association of Hawaii meetings. OSWM also participates in special meetings coordinated by the Buildings Industry Association and other agencies of the State, such as DAGS and the Strategic Industries Division of DBEDT.

County Solid Waste Management Planning Activity

Statute requires that each county develop and maintain an integrated solid waste management (ISWM) plan. The counties of Kauai, Maui and the City and County of Honolulu each began the process of revising its existing ISWM plan during the FY 2006-07.

Per statutory requirements, each county assembled an advisory committee as part of its revision process. An OSWM staff member participated in the advisory committee phase of the process as either members of the committee or as resources that committee members could call on for information or guidance.

The County of Kauai concluded its advisory committee meetings in late 2006 and submitted a draft plan for the department’s review and comment in late 2007. The draft plan was subsequently revised and the county reconvened its advisory committee in May 2008 to review the revisions. The County of Kauai has completed plan revisions and the plan has been approved by the OSWM. The department representative participated in the advisory committee as a non-voting member.

The City and County of Honolulu submitted a draft plan for department review and comment in July 2008. After receiving comments from the department, the City and County’s Department of Environmental Services was planning on a holding public hearing to share the plans with the general public and garner comments. At the time of writing of this report, the public hearing was scheduled for December 2008. The department representative participated in the advisory committee as a non-voting member.

The County of Maui concluded meetings of its plan advisory committee in May 2008 and held a series of public meetings and hearings in July 2008 to garner input from the general public.

They submitted a draft plan for the department's review and comment in September 2008. The department provided comments on the draft plan in November 2008. An OSWM staff planner represented the department on the advisory committee as a non-voting member.

The County of Hawaii began the process of revising its ISWM plan during FY 2007-08 and convened its first advisory committee meeting in June 2008. Committee meetings are tentatively scheduled to conclude in April 2009 with submittal of a draft plan to the department to follow shortly thereafter. An OSWM staff planner represented the department on the advisory committee as a non-voting member.

All counties completed revision of their ISWM plans by the end of the FY 2009-10.

Revised Planning Requirements

Act 12 of the 2010 legislative session changed the time requirement for counties to revise their solid waste management plans from five to ten years. This change was made in recognition of the considerable time and cost involved in revising county solid waste management plans. The planning process for each of the county plan revisions took a minimum of two years to conduct. Additionally, each plan nearly always contains considerable capital improvement items that often require years of discussion and planning before implementation. Because of this it is very, if not impossible, to entirely implement a given plan in the former five year revision time frame. The revised law requires each county to submit an interim status reports to the OSWM five years after a plan revision is completed.

IV. SOLID WASTE MANAGEMENT PROGRAM FUNDING

Solid Waste Management Disposal Surcharge

The department collects the Solid Waste Management Disposal 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 revenue is deposited in the Environmental Management Special Fund.

The disposal surcharge is the primary funding source for the department's Solid Waste Section (SWS); and a portion of the OSWM, providing partial funding for the Solid Waste Coordinator and Recycling Coordinator. Originally proposed at 75¢ per ton, the surcharge was initially set by statute (HRS §342G-62) in 1993 at 25¢ per ton, and raised to 35¢ per ton in 1997. As indicated in the table below, surcharge revenue has decreased by about 15% over the last two years. While the economy is believed to have affected the reduction of waste generation rates, the reduction can also be attributed to the increase in waste diversion. Further reduction in revenue is expected in the following years with planned increase waste diversion in the form of recently permitted recycling and non-incineration waste to energy facilities.

The disposal surcharge is a common funding mechanism for solid waste management programs across the country. Past research has indicated that seventeen states utilize disposal surcharges to fund solid waste management functions; with an average of \$1.43 per ton, and a high of \$3.00 and a low of \$0.35 per ton. The current surcharge is small when landfill tipping fees are taken into account. For example, Hawaii's 35 cents 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 \$53.00 + \$10.00 recycling surcharge = \$63.00 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 11: Solid Waste Disposal Surcharge Revenue

FY	06	07	08	09	10
	\$535,391	\$565,122	\$564,934	\$537,862	\$476,990

Increasing Costs

Program expenses currently exceed \$600,000 annually, and projections are that costs will continue to increase due mostly to rising salary and benefit costs. Historically, both the SWS and OSWM have been able to maintain positions and operations by utilizing cost savings incurred through position vacancies. However, due to recent elimination of general-funded staff positions, including two within the SWS, vacancies in OSWM have been filled through the reduction-in-force process and personnel levels in both programs have reached maximum position counts.

The SWS staff of three FTE engineers and three environmental health specialists annually handle approximately 300 permitted facilities; 100 to 200 permit applications; 200 to 300 solid waste complaints; illegal dumping sites; and numerous miscellaneous inquiries annually. Additionally, the revenue situation keeps the OSWM from undertaking other activities stipulated in statute, which include waste reduction, recycling and market development.

Decreasing Revenue

In addition to rising costs, the program has faced elimination of two general-funded positions as well as decreasing tip fee surcharge revenue due to decreased disposal tonnages at landfills and the H-Power facility, and increased waste diversion. The decreased disposal tonnages are directly linked to economic slowdown. Tip fee surcharge revenue has decreased 16% since FY 2007-08. Additional decreases are anticipated based on the proposed operations of additional recycling and waste to energy facilities.

While the amount of waste disposed in Hawaii would decrease; the workload carried by the SWS and OSWM to regulate solid waste facilities remains at a high level as the number of regulated facilities has remained relatively unchanged.

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 estimates that 65% of Oahu's waste is recycled by including waste to energy use with traditional recycling. With the construction of H-Power's third boiler to be completed by the end of 2011, we expect the City's recycling numbers to increase. Although we support the development of alternative energy sources, the state solid waste laws (Hawaii

Revised Statutes, Ch. 342G) define incineration as waste disposal and not recycling and therefore DOH cannot concur with the City's position that incineration is a form of recycling.

In addition, 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 be utilized only for its 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 ISWMP, 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 its planning and permitting processes.

VI. Summary

The statewide diversion rate has increased despite decreased amounts of material being disposed and diverted.

Public participation of the DBC program remains high as indicated by the redemption rate. The program will continue efforts to improve the customer experience and improve internal program efficiency.

The first component of the electronics recycling program, covering used electronics devices, has gone into effect in 2010. The department will assess program effectiveness after receiving data in early 2011. The television recycling component of the program will go into effect in 2011.

Integrated solid waste management planning requirements have been modified to allow counties more time to develop and implement plans.

Funding remains a challenge for the OSWM as revenues levels do not meet program expenditures.

The SWS and OSWM actively track developing clean energy issues as they relate to solid waste management.