

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

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DEPUTY DIRECTOR

IN REPLY REFER TO:
RE 14-009

May 1, 2014

The Honorable Ernest Y. Martin
Chair and Presiding Officer
and Members
Honolulu City Council
530 South King Street, Room 202
Honolulu, Hawaii 96813

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Dear Chair Martin and Councilmembers:

The Department of Environmental Services submits, for your information and files, 15 copies of the 2010 Solid Waste User Fee Study. Our records indicate that this study may not have been formally transmitted to the City Council when the study was finalized. The report can also be viewed online at www.opala.org under Resource Library/Technical Studies.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori M.K. Kahikina".

Lori M.K. Kahikina, P.E.
Director

APPROVED:

A handwritten signature in black ink, appearing to read "Ember Lee Shinn".

Ember Lee Shinn
Managing Director

Final Report

Solid Waste User Fee Study

City and County of Honolulu
Refuse Division

February 2010



An SAIC Company

Final Report

Solid Waste User Fee Study

City and County of Honolulu
Refuse Division

February 2010



An SAIC Company

This report has been prepared for the use of the client for the specific purposes identified in the report. The conclusions, observations and recommendations contained herein attributed to R. W. Beck, Inc. (R. W. Beck) constitute the opinions of R. W. Beck. To the extent that statements, information and opinions provided by the client or others have been used in the preparation of this report, R. W. Beck has relied upon the same to be accurate, and for which no assurances are intended and no representations or warranties are made. R. W. Beck makes no certification and gives no assurances except as explicitly set forth in this report.

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February 16, 2010



An SAIC Company

Ms. Wilma Namumnart
Assistant Chief
Refuse Division
Department of Environmental Services
City and County of Honolulu
1000 Uluohia Street, Suite 212
Kapolei, Hawaii 96707

Subject: Solid Waste User Fee Study

Dear Wilma:

R. W. Beck, Inc. is pleased to submit this final report on the Solid Waste User Fee Study conducted for the City and County of Honolulu Department of Environmental Services Refuse Division. This report sets forth and summarizes the methodology, assumptions, analyses, and results of the study that occurred from May through January 2010.

This study was a collaborative effort among R. W. Beck staff and Division staff. I wish to express our appreciation for the friendly cooperation and assistance of all of those who provided the information and review necessary to successfully complete this study.

Once again, we appreciate the opportunity to be of service to the Refuse Division.

Sincerely,

R. W. BECK, INC.

A handwritten signature in cursive script, appearing to read 'Ann Hajnosz', written in black ink.

Ann Hajnosz
Utility Services Practice
Pacific Northwest Practice Lead

Enclosures

Solid Waste User Fee Study

City and County of Honolulu Refuse Division

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EXECUTIVE SUMMARY

Background

The Refuse Division (Division) of the Department of Environmental Services of the City and County of Honolulu (City) provides refuse collection and disposal services for all single family residences and a limited number of multi-family properties, non-residential customers, and City agencies on the island of Oahu. The Division contracts for the operation of a municipal solid waste/ash landfill (Waimanalo Gulch Landfill) and a waste-to-energy project called H-POWER, which stands for Honolulu Program of Waste Energy Recovery. Together the landfill and H-POWER provide solid waste disposal for the Division's collected waste stream, as well as for most private collection contractors and other City disposal needs.

In 2008, the Division began providing curbside mixed recyclables collection to portions of the island of Oahu. Full implementation of this program is planned for FY 2010.

The Division currently does not charge residential customers for solid waste collection services.

Purpose of the Study

The purpose of this Solid Waste User Fee Study (Study) was to update the Division's financial model and to design solid waste user fees that could be implemented in FY 2011. In addition to these two tasks, the Division requested assistance in compiling information related to solid waste user fees in comparable cities; implementing solid waste user fees and providing support for public education efforts in implementing the new solid waste user fee.

Results Summary

There are two sets of results from this study: (1) cost of service results for certain solid waste services and (2) the impact of residential user fees on the Division's financial projections.

The cost of service results are summarized in Table ES-1.

EXECUTIVE SUMMARY

**Table ES-1
Cost of Service Summary**

Service Category	Cost of Service	
Residential Refuse Collection (1) (2)	\$ 49.16	per household per month
Small Business - Manual (3)	\$ 74.70	per account per month
Chinatown Service (3)	\$ 6.08	per cubic foot
Front End loader (3 CY bin) (2)	\$ 313.85	per container per month
Island wide services - Multi Family (4)	\$ 108.21	per MF unit per year

- (1) Includes island wide services for bulky item collection, self-haul green waste and other recycling services provided to single-family Division customers.
- (2) The Division does not currently charge for this service.
- (3) The Division currently charges \$1 per cubic foot with a minimum charge of \$30 per account per month.
- (4) Includes island wide services for bulky item collection, self-haul green waste and other recycling services provided to multi-family units which are not Division customers.

Table ES-2 provides a summary of the impact of a residential monthly user fee on the Division's dependence on General Fund transfers. Three levels of user fees were considered including a \$20/household/month fee, a \$25/household/month fee and a \$30/household/month fee.

**Table ES-2
User Fee Scenarios
Fiscal Years 2010–2015**

	Budgeted		Projected			
	2010	2011	2012	2013	2014	2015
\$20/HH/Month User Fee						
Residential User Fees (1)	\$0	\$43,523,800	\$43,883,800	\$44,243,800	\$44,603,800	\$44,963,800
Transfer from General Fund	\$102,203,753	\$71,832,970	\$55,294,129	\$55,709,284	\$61,984,517	\$71,819,968
\$25/HH/Month User Fee						
Residential User Fees (1)	\$0	\$54,404,700	\$54,854,700	\$55,304,700	\$55,754,700	\$56,204,700
Transfer from General Fund	\$102,203,753	\$60,952,070	\$44,323,229	\$44,648,384	\$50,833,617	\$60,579,068
\$30/HH/Month User Fee						
Residential User Fees (1)	\$0	\$65,285,600	\$65,825,600	\$66,365,600	\$66,905,600	\$67,445,600
Transfer from General Fund	\$102,203,753	\$50,071,170	\$33,352,329	\$33,587,484	\$39,682,717	\$49,338,168

- (1) Assumes residential user fee starting in FY 2011. No increases to user fee are projected through FY 2015.

Section 1 INTRODUCTION

1.1 Background

The Refuse Division (Division) of the Department of Environmental Services of the City and County of Honolulu (City) provides refuse collection and disposal services for all single family residences and a limited number of multi-family properties, non-residential customers, and City agencies on the island of Oahu. The Division contracts for the operation of a municipal solid waste/ash landfill (Waimanalo Gulch Landfill) and a waste-to-energy project called H-POWER, which stands for Honolulu Program of Waste Energy Recovery. Together the landfill and H-POWER provide solid waste disposal for the Division's collected waste stream, as well as for most private collection contractors and other City disposal needs.

In 2008, the Division began providing curbside mixed recyclables collection to portions of the island of Oahu. Full implementation of this program is planned for FY 2010.

The Division currently does not charge residential customers for solid waste collection services.

1.2 Purpose of the Study

The purpose of this Solid Waste User Fee Study (Study) was to update the Division's financial model and to design solid waste user fees that could be implemented in FY 2011. In addition to these two tasks, the Division requested assistance in compiling information related to solid waste user fees in comparable cities; implementing a solid waste user fee; and providing support for public education efforts in implementing the new solid waste user fee.

1.3 Report Organization

This report is organized into five sections including this Introduction. Subsequent sections include:

- Section 2 – Cost of Service Analysis
- Section 3 – Rate Design Issues and Comparable Rates
- Section 4 – Financial Analysis
- Section 5 – User Fee Implementation Action Plan

Section 2

COST OF SERVICE ANALYSIS

This section describes the tasks involved in conducting the solid waste cost of service analysis. Before describing each of the tasks in detail, a brief overview of the overall rate analysis methodology is presented. This section of the report also describes the cost of service based rates.

2.1 Methodology Overview

This overview provides the background necessary to understand how data compiled in each task provides the information required to determine the cost of service and fees required to adequately recover the cost of service.

- **Development of the “Test Year”** – The first task in conducting the cost of service analysis is the development of an annual revenue requirement for a “Test Year”. The revenue requirement represents the total revenue that a solid waste utility will need to recover during a year in order to fund all expenses associated with providing solid waste services. R. W. Beck, Inc. worked with Division staff to select a historical period that reflected the typical operation of the solid waste system. R. W. Beck then reviewed the financial data from that period and worked with Division staff to make any adjustments to costs to make them representative of a typical year.
- **Allocation of Costs to Service Categories** – R. W. Beck worked with Division staff to assign and allocate costs to various service categories. The service categories represent the primary solid waste services provided by the Division. The service categories consisted of the 15 cost centers that comprise the Division budget.
- **Allocation to Customer Classes** – R. W. Beck grouped the service categories based on the customer classes that will recover each category’s costs. The customer classes included residential single-family collection, small business-manual, Chinatown, front end loader (3 CY bin), island-wide services for multi-family (MF) units that do not receive solid waste collection services from the Division and other disposal costs.
- **Determination of Billing Units** – R. W. Beck next identified the appropriate billing units for each customer class. For example, the basic residential user fee would be charged per customer, so the number of residential customers was utilized as the billing unit for this customer class.
- **Calculation of the Cost of Service** – Finally, the costs for each customer class were distributed across the appropriate billing units to determine the cost of service for each customer class.

2.2 Development of the “Test Year” Revenue Requirement

The revenue requirement is defined as the amount of revenue required to recover all costs associated with O&M, debt service and cash financed capital outlays. In developing the revenue requirement for solid waste services, R. W. Beck used the fiscal year (FY) 2010 operating budget as the basis for the “Test Year”. The FY 2010 budget was compared to actuals from FY 2006 through FY 2009. Through this comparison, and with input from Division staff, R. W. Beck made adjustments to ensure that the “Test Year” would reflect expenses that occur on a regular basis. These types of adjustments are customary when conducting a detailed cost of service and rate design study.

The Division revenue requirement is net of revenue offsets, such as disposal (tip fee) revenues, energy revenue, recycling income, interest income and miscellaneous fees, since these amounts reduce the revenue needed to be recovered in the calculated user fees. Total expenses for Division for the “Test Year” were \$189,415,828 and revenue offsets totaled \$30,368,144. The resulting “Test Year” revenue requirement totaled \$159,047,684 for the Division. A more detailed summary of these costs are provided in Table 2-3 shown later in this Section.

2.3 Allocation of Costs to Service Categories

The Division provides various services to the community. To determine the costs for each service, there is a need to allocate costs to service categories that represent the primary solid waste services provided. These categories were determined through a series of discussions with Division staff. For the purpose of the analysis, the services were functionalized into 15 service categories shown in Table 2-1.

**Table 2-1
Solid Waste Service Categories**

Administration	Transfer Station
Residential Collection – Grey Cart	H-POWER
Residential Collection – Green Cart	Landfill
Residential Collection – Blue Cart	Interim Disposal (Shipping waste)
Manual –Resident/Small Business	Convenience Centers
Manual - Chinatown	Other Recycling
Front End Loader (3-CY Bins)	Self Haul Green Waste
Bulky Item Collection	

Table 2-2 summarizes the allocation factors that were used to allocate the FY 2010 revenue requirement to the various service categories. The Basis of Allocation represents how the costs are incurred in the provision of service to each respective service category. For example, under the Personnel Basis of Allocation factors, labor costs are allocated to the service categories such as Automated Collection – Gray, Automated Collection – Green, etc. based on the percent of Division staff time spent providing automated collection to the various service categories. In this way, the corresponding costs of providing automated collection will be calculated based on these allocation factors.

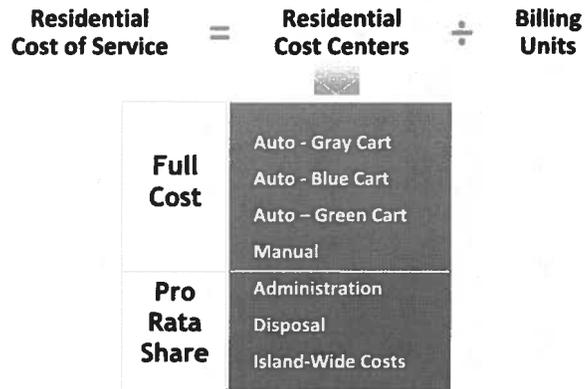
COST OF SERVICE ANALYSIS

Identification of the total costs associated with each service category was a critical step in determining rates that reflect the cost of providing service. These costs were isolated by service category in order to fully recover the total revenue requirement by matching those customers that utilize the service with the actual costs associated with that service. While most costs are directly related to the service provided, some costs such as "Costs from other Divisions", are allocated to the service categories based on estimated time and/or costs spent in the provision of services. These costs included costs from Budget and Fiscal, Facility Maintenance and other city agencies.

Table 2-3 identifies the cost of providing each service for FY 2010. In addition, non-rate related revenue offsets such as revenue from energy sales are also included in the analysis. The test year net revenue requirement is shown in the first column of Table 2-3.

2.4 Allocation to Customer Classes

After calculating the costs for each service category, the service categories costs were then allocated by customer class. This assists in identifying the appropriate customers to be charged for each service provided. Figure 2-1 graphically illustrates this methodology when used to calculate the residential cost of service. The same principles are applied when allocating costs to the remaining customer classes.



**Figure 2-1
Residential Cost Recovery Methodology**

Table 2-4 identifies how the service categories were grouped and the recovery basis for each service category.

**Table 2-4
Service Category and Recovery Basis**

Service Category	Proposed Recovery Basis
Administration	Redistributed to other service categories based on proportion of revenue requirement
Residential Collection	
Grey – Automated	Basic Residential User Fee, Small Business Rate – Automated
Green – Automated	Basic Residential User Fee
Blue – Automated	Basic Residential User Fee
Manual	Basic Residential User Fee
Front End Loader (3 CY bin)	Front End Loader (3 CY bin) Rate
Island-Wide Services – Residential ⁽¹⁾	Basic Residential User Fee
Commercial Collection	
Small Business – Manual	Small Business Rate – Manual
Chinatown	Chinatown Rate
Disposal	
Landfill	Allocated to Residential, Commercial, Front End Loader (3 CY bin), Island-Wide Services – MF and Other Disposal Customers Based on Estimated Tonnage
H-POWER	
Transfer Station	
Off-Island Shipping	
Island-Wide Services – MF ⁽²⁾	Island-Wide Services – MF Rate

(1) Includes island wide services for bulky item collection, self-haul green waste and other recycling services provided to single-family Division customers.

(2) Includes island wide services for bulky item collection, self-haul green waste and other recycling services provided to multi-family units which are not Division customers.

The administration service category was distributed across the remaining service categories based on salaries of the various work units. The disposal service categories were reallocated to residential, commercial, front end loader (3 CY bin), island-wide services – MF and other refuse disposal customers based on estimates of the tonnage to be collected for each customer class.

2.5 Determination of Billing Units

In order to calculate the appropriate user fees, it was necessary to determine the proper number of annual billing units for various customer classes. R. W. Beck received billing data for each customer class from Division staff and determined the cost of service by dividing the revenue requirement by the appropriate billing units.

2.5.1 Disposal

The cost of disposal is distributed to the various customer classes based on the estimated tonnage each customer class contributes to the total. Therefore, the billing unit for the disposal service categories is tons. Table 2-5 lists the estimated tonnage for FY 2010.

**Table 2-5
Estimated Disposal Tonnage**

Fiscal Year 2010

Disposal	Tons
Landfill	177,341
H-POWER	607,609
Transfer Station	235,158
Off-Island Shipping	100,000
Convenience Center	36,317

2.5.2 Residential Collection

The Division is transitioning its automated service to residential customers so that by the end of FY 2010 all of these residents will receive once per week refuse collection. Certain residents who receive manual service will continue to receive twice per week refuse collection.

The residential rate is proposed to be a flat monthly fee, which is a logical basis for charging these customers for similar services. Correspondingly, the appropriate billing unit for this customer class is the number of residential accounts served via the Division's residential operation. In addition to the number of residential refuse accounts, the number of commercial accounts receiving automated service via 90-gallon carts is also considered here. This is because these commercial customers are served in the same manner as the automated residential refuse customers, largely incurring the same costs. Manual residential customers are also included in this customer count since if a residential rate is implemented, these customers will likely be charged the same rate as residential customers receiving automated service even though manual service has a higher cost of service. Table 2-6 provides the billing unit forecast for the residential customer class as provided by the Division.

**Table 2-6
Residential Billing Units**

Fiscal Year 2010

Residential – Automated ⁽¹⁾	157,100
Residential – Manual	20,389
Specialty Routes ⁽²⁾	2,360
Total Billing Units	178,849

(1) Includes all Grey, Blue and Green Automated Cart Customers.

(2) Includes highway and stake routes.

2.5.3 Commercial Collection

Small Business - Manual

Manual small business customers are provided unlimited refuse collection twice per week. These customers are billed a flat monthly fee based upon the monthly average volume of waste (cubic feet) collected. The billing unit for this customer class is the number of accounts served via the Division’s operation. Table 2-7 provides the billing unit for this customer class as provided by the Division.

**Table 2-7
Small Business - Manual Collection Accounts**

Fiscal Year 2010

Small Business – Manual	624
-------------------------	-----

Chinatown

Chinatown customers are provided unlimited refuse collection manually six times per week. These customers are billed a flat monthly fee based upon the monthly average volume of waste (cubic feet) collected. Table 2-8 provides the billing unit for the Chinatown customer class as provided by the Division.

**Table 2-8
Chinatown Cubic Feet**

Fiscal Year 2010

Total CF collected	145,000
--------------------	---------

2.5.4 Front End Loader (3 CY bin) Collection

Front-load customers are provided refuse collection twice a week via three cubic yard (3-CY) containers. The billing unit for this customer class is the amount of containers

SECTION 2

collected via the Division's operation. Table 2-9 provides the amount of 3-CY front-load containers as provided by the Division.

Table 2-9
Front End Loader (3 CY bin) Containers

Fiscal Year 2010

Total Containers	1,276
------------------	-------

2.5.5 Island-Wide Services – Multi-Family

This customer class represents the multi-family units who are not customers of the Division, yet still receive Division services. These services include bulky collection, self-haul MSW and self-haul green waste. The billing unit for this customer class is the total amount of multi-family households within the City. Table 2-10 provides the amount of households as provided by the Division.

Table 2-10
Multi-Family Households

Fiscal Year 2010

Total MF Households	124,687
---------------------	---------

2.6 Calculation of the Cost of Service

Based on the data discussed in this section, R. W. Beck determined the cost of service for the various Division programs. The unit costs shown in this section are not the rates R. W. Beck recommends to be adopted by the Division. Rather, the unit costs show the total cost of providing service to a certain customer class. The proposed rates, listed in Section three, take into account other factors, such as policy decisions and external market forces.

2.6.1 Disposal

Table 2-11 lists the projected cost of service per ton disposed for FY 2010. The cost of disposal service includes a proportional share of the Administration expenses¹. It is important to note that the Transfer Station and Convenience Center service categories include the costs of operating these specific facilities, as well as the cost of disposal incurred at the ultimate disposal site.

¹ Off-island shipping does not include any allocated administrative costs.

**Table 2-11
Disposal Cost of Service (COS) per Ton⁽¹⁾**

Disposal COS (per ton)	Landfill	Off-Island	H-POWER	Transfer Station	Convenience Center	Total Disposal Cost	FY 2008 Tons	Cost per Ton
Landfill Rate	\$12,836,314	\$0	\$0	\$0	\$0	\$12,836,314	177,341	\$72.38
Off-Island	\$0	\$10,000,000	\$0	\$0	\$0	\$10,000,000	100,000	\$100.00
H-POWER	\$0	\$0	\$36,848,245	\$0	\$0	\$36,848,245	607,609	\$60.64
Transfer Station	\$1,680,474	\$1,309,156	\$12,059,163	\$15,296,872	\$0	\$30,345,665	235,158	\$129.04
Convenience Center	\$1,305,086	\$1,016,714	\$8,448	\$1,029,711	\$5,831,213	\$9,191,172	36,317	\$253.09

(1) It should be noted that the columns in this table are not meant to be summed since transfer station and convenience center costs and tonnage are reflected in the three disposal options, landfill, off-island shipping and H-POWER.

To provide some perspective on what these disposal costs results mean, currently the Division is charging \$81/ton for disposal at both the landfill and at H-POWER compared to the cost to provide these services of \$72.38 and \$60.64, respectively. As alluded to earlier in this section, there are other considerations that must be taken into account when setting rates, including the recovery of costs for services for which no rates or fees are charged, e.g. residential collection.

2.6.2 Residential Collection

Table 2-12 lists the cost of service for residential refuse collection. The revenue requirement includes a proportional share of the Island-Wide Services – Single-Family and Administration service categories.

**Table 2-12
Residential Refuse Cost of Service**

Basic Residential COS	Gray Cart	Manual	Green Cart	Blue Cart	Island-Wide Allocation	Total
Collection	\$15,777,502	\$12,183,700	\$7,412,519	\$7,664,961	\$11,173,073	\$54,211,755
Administration	\$1,664,078	\$2,079,077	\$871,585	\$884,513	\$921,530	\$6,420,784
Disposal/Processing	\$26,030,801	\$6,128,685	\$3,214,603	\$2,000,000	\$7,204,391	\$44,578,481
Total	\$43,472,382	\$20,391,463	\$11,498,708	\$10,549,474	\$19,298,994	\$105,211,020
Accounts	155,600	22,749	155,600	155,600	178,349	178,349
Cost/Acct/Yr	\$279.39	\$896.37	\$73.90	\$67.80	\$108.21	\$589.92
Cost/Acct/Mo	\$23.28	\$74.70	\$6.16	\$5.65	\$9.02	\$49.16

The results for residential collection indicate that if the Division were to charge the full cost of service for providing refuse, green waste and mixed recyclables collection, the monthly charge would be approximately \$49.16 per household per month. Currently, the Division does not charge any residential solid waste user fee.

2.6.3 Commercial Collection

Small Business – Manual

Table 2-13 lists the cost of service for manual small business collection. The revenue requirement includes a proportional share of the Administration service category.

Table 2-13
Small Business – Manual Cost of Service

Business Manual Service	
Collection	\$334,196
Admin	\$57,029
Disposal	<u>\$168,108</u>
Total	\$559,333
Accounts	624
Cost/Acct/Mo	<u>\$74.70</u>

The results for manual small business collection indicate that if the Division were to charge the full cost of service for providing refuse collection, the monthly charge would be approximately \$74.70 per account per month. Currently, the Division charges \$1 per cubic foot collected with a minimum charge of \$30 per month per account.

Chinatown

Table 2-14 lists the cost of service for Chinatown customers for the test year. The revenue requirement includes a proportional share of the Administration service category.

Table 2-14
Chinatown Cost of Service

Chinatown COS	
Collection	\$706,230
Admin	\$139,820
Disposal	<u>\$35,023</u>
Total	\$881,073
Cubic feet collected	145,000
Cost/CF	\$6.08

The results for Chinatown collection indicate that if the Division were to charge the full cost of service for providing refuse collection, the unit charge would be approximately \$6.08 per cubic foot collected. Currently, the Division charges \$1 per cubic foot collected with a minimum charge of \$30 per month per account.

2.6.4 Front End Loader (3 CY bin) Collection

Table 2-15 lists the cost of service for front load customers. The revenue requirement includes a proportional share of the Administration service category.

**Table 2-15
Front End Loader (3 CY bin) Cost of Service**

Front-Load COS	
Collection	\$2,381,066
Admin	\$314,001
Disposal	\$2,110,606
Total	\$4,805,673
Container yards collected	1,276
Cost/Container/Mo	\$313.85

The results for front end loader (3 CY bin) collection indicate that if the Division were to charge the full cost of service for providing refuse collection, the monthly charge would be approximately \$313.85 per container per month. Currently, the Division does not charge any front end loader (3 CY bin) user fee.

2.6.5 Island-Wide Services – MF

Table 2-16 shows the cost of service for multi-family island-wide services customers. The revenue requirement includes bulky, self-haul green waste and other recycling services, as well as a proportional share of the Administration service category.

**Table 2-16
Island-Wide Services – MF Cost of Service**

Allocation of Island-Wide Svcs for MF	
Collection	\$7,811,297
Admin	\$644,258
Disposal	\$5,036,719
Total	\$13,492,274
Accounts	124,687
Cost/Year	\$108.21

The results for multi-family island-wide services indicate that if the Division were to charge the full cost of service for providing bulky, self-haul green waste and other recycling services, the annual charge would be approximately \$108.21 per multi-family unit. Currently, the Division does not charge any multi-family island-wide user fee.

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2.6.6 Other Disposal Costs

Table 2-17 represents the disposal costs incurred from activities outside of the Division's operations. These operations include private hauler disposal costs, other city and eleemosynary disposal costs. Commercial disposal costs and a portion of Other City costs are recovered through tip fees at the landfill and H-POWER and other revenues. The balance of costs not recovered are funded from the General Fund.

Table 2-17
Other Disposal Costs

Other Disposal Costs	
Commercial	\$30,958,409
Other City	\$2,603,585
Eleemosynary	\$536,316
Total	\$34,098,311

2.7 Cost of Service Summary

The Division's cost of service relative to its estimated revenue recovery for the test year FY 2010 is shown in Table 2-18.

Table 2-18
Cost of Service Summary

Customer	FY 2010 Estimated		
	FY 2010 COS	Revenue	Surplus (Deficit)
Residential	\$105,211,020	\$0	(\$105,211,020)
Disposal			
Commercial	30,958,409	38,466,320	7,507,911
Eleemosynary	536,316	-	(536,316)
Other City	2,603,585	643,793	(1,959,792)
Small Business (1)	1,440,406	500,000	(940,406)
MF (Island-Wide)	13,492,274	-	(13,492,274)
Front-Loader	4,805,673	-	(4,805,673)
Total Surplus/(Deficit)	\$159,047,684	\$39,610,113	(\$119,437,571)

(1) Small business manual and Chinatown.

The \$119 million figure corresponds to the approximate amount of General Fund assistance provided to the Division to cover the balance of costs not recovered from current revenue sources which include fees charged to commercial haulers for disposal at the landfill and H-POWER. Approximately 88 percent of the deficit corresponds to the cost of providing residential solid waste service.

Section 3

RATE DESIGN ISSUES AND COMPARABLE RATES

3.1 Introduction

A key attribute of solid waste user fee is that it provides a stable and reliable funding source for the delivery of those services. Solid waste user fees may vary based on customer type as well as type of service received. For example, single-family units may be charged a different rate than multi-family units. Customers may be charged different rates based on the specific services they receive. For example, customers who have more carts or set-out greater bulky quantities may be charged higher fees.

Some local governments assess a fixed dollar amount on different customer classes as defined by the property appraiser's office. Others label the assessment a "waste generation fee" and charge an amount based on estimates of waste generated by different categories of customers (e.g. single-family, multi-family, commercial, etc.).

The Division is considering implementing a solid waste user fee for residential customers that would be billed to the existing property tax bill. Through this billing mechanism, the cost of solid waste services would be billed directly to the property owner.

Based on prior research, R. W. Beck has generally found that implementing solid waste user fees via property assessments work best when the following conditions are present:

- Solid waste collection is provided by the local jurisdiction, e.g. a city or county, or under a managed contract.
- An addition to or itemization of the tax bill is likely to be accepted by the public.
- The local government providing solid waste services already sends a tax bill to the same residents that would be charged the solid waste fee or can work with the local government that sends out the tax bill.
- There is an enterprise fund for solid waste management that includes refuse and recycling collection as well as disposal and processing.

This section of the report provides the Division with a planning level understanding of the following key issues associated with the potential implementation of a solid waste user fee:

- Steps to implement a solid waste user fee.
- Advantages and disadvantages of charging a solid waste user fee on a property tax bill.

SECTION 3

- Potential challenges and solutions to placing a solid waste user fee on a property tax bill.
- Rate design and policy issues.
- Summary case study from the City of Tucson, which implemented a residential solid waste user fee in 2004.

3.2 Steps to Implement a Solid Waste User Fee

Over the past ten years, the Division has taken a number of steps to facilitate the implementation of a solid waste user fee. In July 1999, the Division created the Solid Waste Special Fund. Since then, the Division has prepared a number of financial analyses estimating the costs of potential solid waste user fees. In the last year, the Division's efforts toward implementation of a solid waste user fee gained the support of the current City administration however as of the date of this Report a solid waste user fee ordinance is not under consideration by the administration.

Should the City administration decide to move forward, the following key steps are recommended to implement a solid waste user fee:

- Ensure political support for this funding approach.
- Determine the type and amount of solid waste costs that will be recovered through the fee.
- Determine who should pay fees (businesses, residents, etc.) and whether the fee is based on services received or some other measure.
- Determine the basis for the fee.
- Calculate fee for each customer.
- Explain reason and determination of fee to affected stakeholders.
- Clearly communicate what services are funded through the fee, as well as the cost for individual services (e.g. refuse collection, recycling, disposal, etc.).
- Utilize stakeholder feedback to fine tune fee structure, as appropriate.
- Obtain elected official approval of final fee structure.
- Monitor costs and fee revenues, and adjust fees periodically, as needed.

Most communities have an enterprise fund in place prior to implementing a user fee. As mentioned above, the Division already has a solid waste enterprise fund in place. Using its enterprise fund, the Division can differentiate the costs and revenues associated with solid waste activities and prevent items from those operations from being commingled with other city expenditures. Implementing a user fee will provide the opportunity for the Division to ensure sufficient revenue is generated to cover the costs of all solid waste services.

3.3 Advantages and Disadvantages

As part of the Division’s efforts towards implementation of a solid waste user fee, the pros and cons of this initiative must be weighed. Table 3-1 provides an overview of the advantages and disadvantages of charging a solid waste user fee on a property tax bill.

**Table 3-1
Advantages and Disadvantages of Charging a Solid Waste User Fee
on Property Tax Bill (Twice a Year)**

Advantages	<ul style="list-style-type: none"> ▪ Can generate sufficient revenue to cover the cost of solid waste services. ▪ Provides predictable amount of revenue, thereby minimizing financial risk. ▪ Reduces financial demands on the general fund. ▪ Allows fees to be set and varied by customer type, and linked to waste generation. ▪ Low non-payment rate. ▪ Relatively low burden to administer vs. utility fee (issued once or twice per year, vs. monthly). ▪ Increases financial accountability and operational efficiency as rate increases should be justifiable.
Disadvantages	<ul style="list-style-type: none"> ▪ May be perceived as a tax. ▪ Fee not directly tied to use of service. ▪ Fees may not be tax deductible for residents although business can regard them as a business expense. ▪ Renters may not pay directly. ▪ May be cumbersome to manage unoccupied properties and changes in service levels, if applicable. ▪ Requires coordination with taxing entity or entities.

3.4 Potential Challenges and Solutions to Charging a Solid Waste User Fee on a Property Tax Bill

As Table 3-1 above demonstrates, there is the potential for significant challenges to the implementation of a solid waste user fee on a property tax bill Table 3-2 describes some of these potential challenges and some suggested solutions to those challenges.

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Table 3-2
Potential Challenges and Suggested Solutions to Charging a Solid Waste User Fee on a Property Tax Bill

Potential Challenges	Suggested Solutions
Payees will perceive this as "just another tax."	<ul style="list-style-type: none">▪ Before implementing such a fee, analyze the cost of service relative to other communities, implement cost-saving measures, and inform stakeholders of the results.▪ Involve all stakeholders, including residents, elected officials, and decision makers, in the process early on to alleviate any potential concerns. If the general public has been or will be involved in the process, they will be much more supportive. Communicate all of the services being provided through the user fee.
"I don't know if the funds would really end up supporting solid waste programs."	<ul style="list-style-type: none">▪ Consider implementing an enterprise fund for solid waste management services to ensure that funds are used exclusively for their intended purpose.
Politics will interfere with necessary future rate adjustments	<ul style="list-style-type: none">▪ Consider the establishment of a semi-autonomous agency, which would require the approval from the Board that would oversee the solid waste agency.▪ A semi-autonomous agency would reduce the potential for politics to impact Board decisions. This approach has been used for other solid waste and water agencies in the United States.▪ Another benefit of a semi-autonomous agency is that it provides direct encouragement for operations to be more efficient, since the cost savings can be directly recognized by the user department.

3.5 Rate Design and Policy Issues

The Division is considering implementing a solid waste user fee based on a monthly flat rate for basic service which is defined as one gray (trash) cart, one blue (mixed recyclables) cart and one green (green waste) cart. At a minimum, R. W. Beck would expect that the rate the Division would charge each residential household would be for a minimum level of service. This section provides a brief overview of other rate design issues that the Division may need to consider.

Variable Rates

Under a variable rate structure, also referred to as pay-as-you-throw (PAYT), residential garbage collection fees are based on the amount of garbage that is set out by the customer. A variable rate structure is intended to create a financial incentive for households to produce less waste and lower their residential garbage bill.

Under PAYT, households are given the option of various sized carts (30-, 60- or 90-gallons are typical) or multiple rolling carts for refuse collection. Since the City has the same sized containers for refuse, mixed recyclables and green waste, R. W. Beck recommends that a variable rate be based on the number of containers provided to each customer. As mentioned earlier all customers would receive the base level of service (e.g. one refuse, one recycling and one green waste container). The monthly solid waste user fee would increase if the number of containers requested by the customer exceeded the initial three carts mentioned above.

RATE DESIGN ISSUES AND COMPARABLE RATES

In many communities, waste placed outside the cart is not collected. This reinforces the importance of recycling and helps increase collection efficiency by allowing drivers to remain in their vehicles. In other communities, overflow waste is collected if it is in specially marked bags or tagged with city-provided tags. The City may want to examine its current policies relative to these issues to ensure that the policies are consistent with the goals of the new program, i.e. once a week trash pick-up and alternating weeks green waste and mixed recyclables pick-up, that is currently being rolled out to all of its customers.

At a minimum, the amount charged for the extra container should be based on the cost of service which would include the cost of the cart, collection costs and disposal fees. Some communities, in an effort to encourage waste minimization, have established rates for extra containers that are greater than the cost of service. The pricing of additional containers is often a policy issue.

Potential challenges associated with a variable rate could include the following:

- **Higher Administrative Costs.** Variable rate fee structures typically require greater administrative management. Costs associated with these increases are not reflected in the rate structures discussed in this study.
- **Increased Illegal Dumping.** The implementation of a flat (not variable rate based) solid waste user fee should not have a direct impact on illegal dumping. Since all residents will be charged the same fee for the service, there is not an incentive for illegal dumping. However, to the extent that the Division places limits on set-out quantities or implements a variable rate structure for additional containers, there could be an increase in illegal dumping. To minimize the potential for illegal dumping, the Division should include a reasonable level of service, e.g. large enough containers and adequate collection frequency that is included in the base fee. The Division may need to examine its current policy of providing additional green waste containers to customers at no charge.
- **More Traffic at the Convenience Centers, Transfer Stations and Landfill.** To avoid paying additional user fees for extra containers, some residents may opt to take material directly to the Division's disposal facilities where they are not charged. While this may be a viable option for residents, this would increase the number of vehicles using the facilities on a daily basis. If the Division currently does not monitor this type of activity, it may want to consider doing so to gauge the impact of the solid waste user fee on these services.
- **Higher Public Education Costs.** If the Division converts to a variable rate fee structure in the future, it would require the Division to develop and implement a public education campaign to inform residents about the changes. The Division should develop an on-going public education program as the Division will need to continually educate residents about this fee structure. Additional information on this subject can be found in Section 5.3.1 of this report.

SECTION 3

Discounts for Part-time Residents

Some part-time residents may contend that they should be partially or completely exempt from having to pay a solid waste user fee. Their basis for this contention would be that they are only receiving a portion of the service, and should not be required to pay for the full service. This is a policy issue that frequently arises when conducting solid waste and water/wastewater rate studies.

R. W. Beck does not recommend discounts for part-time residents. If the Division allows discounts, it would have a substantial negative financial impact. A key reason to not have any discounts involves the nature of the solid waste collection business. Costs for the Division to provide this service continue regardless of whether the Division services an individual customer since the Division must still purchase vehicles and retain staff. From an administrative perspective, it is also extremely difficult and expensive to track the status of part-time residents.²

Discounts for Low-Income Customers

Some cities will offer discounts for low-income customers. While R. W. Beck recognizes financial challenges faced by low-income customers, providing a discount on the solid waste user fee is not consistent with the concept of charging user fees based on the level of service provided. Therefore, R. W. Beck would not recommend providing discounts for low-income customers.

From an administrative perspective, it is also extremely difficult and expensive to track the status low-income customers. There would also be a need to define the basis for a low-income customer. It is important to realize that any discount provided to low-income customers would need to be off-set by a corresponding increase to the non- low-income customers in order to recover the cost of service. Another option is for the General Fund to subsidize low-income customers.

Residential versus Multi-Family Rates

As a part of this study, R. W. Beck has calculated the specific costs of service for single-family and multi-family residential solid waste customers. User fees should be implemented based on these specific costs of service. Rates for multi-family customers are typically lower than for single-family residential customers based on lower disposal quantities for refuse and bulky items.

Bulky Item Rates

As a part of this study, R. W. Beck has calculated the specific costs of service for bulky item collection. Many cities across the United States have recognized the need to set limits on the quantity of bulky materials that can be set-out for collection. R. W. Beck would recommend that the Division also establish a minimum level of service for bulky items that will be included in the base user fee. This would infer that

² The same logic that is used by water/wastewater utilities in denying exemptions for part-time residents could be used for solid waste services. The logic is that there is a fixed cost incurred by a water/wastewater or solid waste utility, regardless of whether the service is used part-time or year round. Therefore, the customer must pay for the right of having that service available at any time.

the Division would either charge for the collection of additional material or not collect the items. Another option would be to have customers take the material to one of the Division's disposal locations (e.g. convenience center, transfer station or landfill). If the Division elects to charge customers for additional bulky items, there will be a need to determine how to bill for these services. Adding these costs to the property tax bill could be a challenge. An alternative would be to direct bill or require customers to purchase tags from the Division that would allow for this type of extra service.

3.6 Case Study: Tucson, Arizona

In 2000, the City of Tucson, Arizona recognized the need to evaluate options to fund its residential solid waste system. At the time, Tucson funded residential solid waste services through the general fund, while commercial collection, including dumpsters and roll-offs, was funded via user fees. To address this issue, the City of Tucson retained R. W. Beck to conduct a cost of service (COS) and rate design study.³ Through its initial study, R. W. Beck recommended that the City establish an enterprise fund and begin charging a residential solid waste user fee. Key reasons for this recommendation included:

- Relieve the general fund from having to pay for residential solid waste services.
- Provide greater incentives for the Solid Waste Department to operate in as an efficient and effective manner as possible.

While there was some support for the user fee, the City Council initially did not implement a user fee when it considered the issue in 2001. Initial reasons for not implementing the user fee included:

- The current property tax funding method was satisfactory.
- A new solid waste user fee was seen as "just another tax".
- The City might not realize a decrease in property tax bills.
- The user fee would not be tax deductible.

At this point, there was an understanding that further consideration would be required prior to the implementation of a user fee, although the conversion to an enterprise fund was deemed acceptable.

The City decided to revisit the user fee issue in 2003. Through an update of the initial cost of service study, the City realized that a monthly residential fee of \$14.09 would have to be implemented to meet the cost of service. At this time, the City also recognized that implementing a user fee would allow the citizens to gain an increased awareness of the cost of providing solid waste services. When citizens pay a monthly user fee (versus the cost of the service being buried in the general fund), there is an increased awareness that it is not a "free service." As a result, the citizens are more inclined to better utilize all of the solid waste services (household hazardous waste program, recycling program, brush/bulky program, etc.) offered by the City.

³ The City retained Reed, Stowe and Yanke, LLC, which was later acquired by R. W. Beck.

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In 2003, the City needed to replace a significant number of its solid waste vehicles. Because of the large investment necessary to pay for the replacement vehicles, the City Council approved a small user fee to offset these expenses. Thus, the City implemented a \$2 monthly fee, which was specifically intended to pay for bulky/brush collection services.

In 2004, the City Council recognized the need to fund critical roadway improvements. Some council members mentioned that implementation of the previously proposed \$14 per month residential solid waste fee would help to minimize the anticipated increase in property taxes associated with these roadway improvements. In considering a solid waste user fee, the City Council identified several advantages and disadvantages.

**Table 3-3
Summary of Advantages and Disadvantages for Implementation of a User Fee
in Tucson, Arizona**

Advantages	Disadvantages
<ul style="list-style-type: none">• A user fee allows for the Department to operate more like a business, increasing operational efficiency.• The associated monthly cost directly correlates with the level of service provided for waste collection.• The implementation of a fee automatically “frees” millions of dollars otherwise allocated to solid waste collection. This money can be diverted to address a number of critical needs such as enhancing public safety, staffing firefighters, and resurfacing roadways and sidewalks.• The necessary increase in property taxes due to improvements to the roadways and sidewalks could be minimized.	<ul style="list-style-type: none">• An additional fee is incurred on the side of the user, a practice that had not historically been favored.

Based on these advantages, the City Council decided to implement a cost of service based user fee, which meant an increase from \$2 to \$14 per month for each single-family household. With such a sizable increase, the City recognized the need to conduct public outreach to City residents. The City developed and implemented a public education plan. The plan consisted of a wide variety of methods including grassroots efforts, consistent messages throughout various publications and coordination with public relations and media correspondents.

3.7 Comparable Rates

As part of our scope, we worked with the Division to identify comparable cities to compare solid waste services and user fees. Table 3-4 is a summary of survey information compiled from comparable solid waste agencies. Information relative to the percent of cost recovery through user fees was requested but difficult to obtain as shown by the responses on the table.

RATE DESIGN ISSUES AND COMPARABLE RATES

**Table 3-4
Solid Waste User Fee Survey of Comparable Agencies**

City	Number of Households	Service Type (Refuse/ Recycling) ¹	Services Provided				Annual Cost per Household ²	Percentage of COS Recovered through User Fees
			Refuse	Recycling	Brush/ Bulk	Green Waste/ Composting		
Phoenix, AZ	390,000	Fully Automated	Once a week with 90 gal. carts	Once a week with 90 gal. carts (single-stream)	Quarterly collection; up to 20 CY	No separate collection; bagged or boxed green waste collected with brush/bulky or refuse	\$321.60	No Response
		Fully Automated	Once a week with 90 gal. carts	Once a week with 90 gal. cart (single-stream)	Twice a year collection; up to 10 CY	No separate collection; green waste collected with brush/bulky or refuse	\$168.00	No Response
El Paso, TX	161,500	Fully Automated	Once a week with 96 gal. carts	Once a week with 96 gal. carts (single-stream)	Pick-up upon customer request ³	No separate collection; green waste collected with brush/bulky or refuse	\$198.00 ⁴	100%
		Fully Automated; Manual	Twice a week with 90 gal. carts (automated areas) or bags (manual areas)	Once a week with 96 gal. carts (automated areas) and bags (manual areas) (single stream)	Monthly collection; no item or bundle over 50 lbs	No separate collection; green waste collected with brush/bulky or refuse ⁵	\$251.76	No Response
Dallas, TX	240,000	Fully Automated; Manual	Twice a week with 90 gal. carts (automated areas) or bags (manual areas)	Once a week with 96 gal. carts (automated areas) and bags (manual areas) (single stream)	Monthly collection; no item or bundle over 50 lbs	No separate collection; green waste collected with brush/bulky or refuse ⁵	\$251.76	No Response

RATE DESIGN ISSUES AND COMPARABLE RATES

**Table 3-4
Solid Waste User Fee Survey of Comparable Agencies**

City	Number of Households	Service Type (Refuse/ Recycling) ¹	Services Provided				Annual Cost per Household ²	Percentage of COS Recovered through User Fees
			Refuse	Recycling	Brush/ Bulk	Green Waste/ Composting		
San Antonio, TX	308,000	Fully Automated;	Once a week with 96 gal. carts (automated areas);	Once a week with 96 gal. carts (automated areas)	Twice a year collection ⁶ ; reasonable limits for residential property	No separate collection; green waste collected with brush/bulky or refuse	\$224.88 ⁷	No Response
		Manual	Twice a week with bags (manual areas) (single stream)	and 18 gal. bins (manual areas)	residential property (manual areas)			
Austin, TX	166,000	Fully Automated	Once a week with variable sized carts (30, 60 or 90 gal.)	Every other week with 90 gal. carts (single stream)	Twice a year collection; reasonable limits for residential property	Every other week collection with customer provided carts or kraft paper bags (green waste)	\$363.00 ⁸	No Response
Seattle, WA	144,918 ¹⁴	Fully Automated;	Once a week with variable sized carts (12, 20, 32, 64 and 96 gal.)	Once a week with 90 gal. carts (single stream)	Pick-up upon customer request ¹⁰ ; no item over 300 lbs	Once a week with variable sized carts (13, 32 and 96 gal.) (green waste and compostables)	\$885.60 ¹¹	100%
		Semi-automated						
Portland, OR	158,191 ¹⁴	Fully Automated;	Once a week with variable sized carts (20, 32, 60 and 90 gal.)	Once a week with 60 gal. carts and 13.5 gal. bins for glass (dual stream)	Pick-up upon customer request ¹²	Every other week collection with variable sized carts (32 and 60 gal.) (green waste)	\$438.00 ¹³	No Response
		Semi-automated						
Sacramento, CA	122,776 ¹⁴	Fully Automated;	Once a week with variable sized carts (32, 64, and 96 gal.)	Once a week with 32, 64, or 90 gal. carts (single stream)	Once per year collection of bulky waste. Eight collections per year of un-bundled brush	Once a week with a 96 gal. cart	\$238.80 ¹⁵	100%
		Semi-automated						

RATE DESIGN ISSUES AND COMPARABLE RATES

**Table 3-4
Solid Waste User Fee Survey of Comparable Agencies**

City	Number of Households	Service Type (Refuse/ Recycling) ¹	Services Provided			Annual Cost per Household ²	Percentage of COS Recovered through User Fees	
			Refuse	Recycling	Brush/ Bulk			
Los Angeles, CA	626,091 ¹⁴	Fully Automated; Manual	Once a week with a 90 gal. cart	Once a week with a 90 gal. cart (single stream)	Pick-up upon customer request	Once a week with a 90 gal. cart	\$435,84 ¹⁶	No Response

- (1) Service type also includes green waste/compostable carts for the cities of San Francisco, Seattle and Portland in addition to recycling and refuse carts.
- (2) Cost is based on annual collection (monthly cost multiplied by 12) of 90 or 96 gal refuse cart, excluding San Francisco where the largest refuse cart size is 32 gal. In order to be comparable to the City of Honolulu, the annual cost for San Francisco is based on the monthly cost of three, 32-gal. containers for a total container space of 96-gal.
- (3) \$25.00 for first 5 CY; \$5.00 for each additional CY.
- (4) Fee is based on the following monthly household costs: refuse/recycling/brush/bulk = \$15.00 plus \$1.50 for environmental fee.
- (5) Grass clippings are to be bagged and set-out with refuse carts.; \$1.50 for each bag.
- (6) Burded brush no more than 40 lbs and no longer than 4 ft collected with refuse.
- (7) Fee is based on the following monthly household cost: refuse/recycling = \$13.41; brush/bulky = \$2.53; conversion fee = \$1.50; environmental fee = \$1.30.
- (8) Fee is based on the following monthly household cost for a 90 gal. cart: base rate = \$8.75; variable rate for 90 gal. = \$16.50; anti-litter fee = \$5.00; (variable rates for 30 gal. = \$4.75; 60 gal = \$10.00).
- (9) Fee is based on the following monthly household costs: three, 32 gal. containers at a rate of \$24.76 each; (20 gal. rate = \$19.07).
- (10) \$30.00 per item; \$38.00 for any item containing CFCs.
- (11) Fee is based on the following monthly household costs for a 96 gal. refuse cart and 96 gal. compostable cart: 96 gal. rate = \$66.90; 96 gal. rate = \$6.90; (variable rates for refuse carts: 12 gal. = \$14.05; 20 gal. = \$17.15; 32 gal. = \$22.30; 64 gal. = \$44.60); (variable rates for compostable carts: 13 gal. = \$3.60; 32 gal. = \$5.40).
- (12) Volume limits depend on franchised hauler requirements; \$4.50 per bag, bundle or 32 gal. cart.
- (13) Fee is based on the following monthly household costs for a 90 gal. refuse cart: 90 gal. rate = \$36.50; (variable rates for refuse carts: 20 gal. = \$21.70; 32 gal. = \$26.50; 60 gal. = \$31.25).
- (14) SOURCE: U. S. Census for 1 unit Households attached and unattached.
- (15) Fee is based on the monthly household costs for a 96 gal. refuse cart: \$19.90; (variable rates for refuse carts: 32 gal. = \$12.42; 64 gal. = \$ 16.35).
- (16) Fee is based on the monthly household cost of \$36.32 per month for a 90 gal. refuse cart, a 90 gallon tree trimmings cart and a 90 gallon recyclable cart.

Section 4

FINANCIAL ANALYSIS

4.1 Purpose

The purpose of this section is to present the key assumptions, methodology and results of the financial analysis. The Division's current financial model was updated to reflect the financial impact of a proposed solid waste user fee through FY 2015.

4.2 Introduction

An update to the Division's Integrated Solid Waste Management Plan (ISWMP) was completed by R. W. Beck in 2008. Based on financial analyses conducted for that effort using FY 2006 data, it was determined that, approximately 34 percent of the Division's operating and capital expenses are paid for through assistance from the General Fund which derives its revenues from property taxes. Solid waste tip fees and other revenues pay for the remaining approximately 66 percent of operating and capital expenses. Therefore, while the Division is an established Enterprise Fund of the City, it is not totally self-sufficient because it derives a portion of its revenues from the General Fund. As mentioned earlier, the Division does not currently charge a solid waste user fee for its residential customers.

As a result of the analyses and information described in Sections 2 and 3 of this report, a proposed solid waste user fee of \$25 per household per month starting in FY 2011 was assumed in the completion of the financial model update. Using this key assumption, the level of General Fund assistance through FY 2015 was estimated.

4.3 Other Key Assumptions

- The study period for the financial analysis is defined as FY 2010-FY 2015.
- General inflation is assumed to be three percent per year over the entire time period.
- The projected customer growth rate of 0.75 percent per year and the projected tonnage growth rate of -0.34 percent per year are based on the projected growth in the de facto population (residents plus an adjustment for temporary residents and visitors) and estimated projected growth in per capita generation rate.
- Shipping 100,000 tons of waste off-island is assumed to start in FY 2010 and continue for three years at a cost of \$10,000,000 per year.
- Projected capital costs are assumed to be paid for by general obligation bond funds.

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- H-POWER expansion capital costs were estimated per consultation with Division staff.
- Basic residential solid waste user fee of \$25 per month assumed to be implemented in FY 2011.

4.4 Methodology

The methodology used to update the financial model consisted of the following steps:

- Historical operating data, revenues and cost data for FY 2006 through FY 2008 were collected and analyzed to understand historical Division operations. R. W. Beck worked with Division staff to understand historical changes in the various accounts in order to more accurately project account levels in the future.
- Estimated actual for FY 2009 and budget data for FY 2010 were similarly analyzed to understand the reasons for significant fluctuations in costs and revenues, if any.
- Working with Division staff, R. W. Beck determined future impacts to cost accounts based on expectations for future system performance under the new solid waste user fees.
- Projections for future revenues for the period FY 2011-FY 2015 were developed based on the implementation of solid waste user fees in FY 2011.
- A financial operating statement was developed depicting historical and projected revenues, operating expenses; debt service and General Fund assistance levels.

4.5 Projections of Accounts, Waste and Operating Revenue

4.5.1 Solid Waste Collection Accounts

Residential and commercial solid waste collection accounts were projected based on historical patterns and expected future changes as discussed with Division staff. The projections assume that growth in customer accounts will be approximately 0.75 percent per year through the FY 2015. This assumption is slightly lower than the 0.97 percent assumption used in the ISWMP and reflects the results of the current economic downturn. Table 4-1 provides actual and estimated accounts for FY 2006-FY 2009.

**Table 4-1
Actual and Estimated Division Accounts
Fiscal Years 2006–2009**

Customer Accounts	Actual			Estimated	'06 - '09 Average Annual Growth
	2006	2007	2008	2009	
Single-Family Households					
Manual	20,389	20,389	20,389	20,389	0.00%
Automated	154,580	156,590	158,620	155,600	0.22%
Subtotal Single-Family Households	174,969	176,979	179,009	175,989	0.19%
Apartment Units/Other Small Schools and Churches	18,348	18,348	18,348	18,348	0.00%
Total 96 Gallon Cart Accounts	193,317	195,327	197,357	194,337	0.18%
3 Cubic Yard Bin Service - Residential					
Multi-Family Households	2,682	2,682	2,682	2,682	0.00%
Total 3 CY Bin - Residential	2,682	2,682	2,682	2,682	0.00%
3 Cubic Yard Bin Service - Other					
Church/School	139	139	139	139	0.00%
Other City/Government	56	56	56	56	0.00%
Parks	84	84	84	84	0.00%
Total 3 CY Bin - Other	279	279	279	279	0.00%
Specialty Routes					
Highway	1,956	1,956	1,956	1,956	0.00%
Stake	404	404	404	404	0.00%
Total - Specialty Routes	2,360	2,360	2,360	2,360	0.00%
Small Business Manual	624	624	624	624	0.00%
Total Accounts	199,262	201,272	203,302	200,282	0.17%
De Facto Population	960,940	969,530	978,720	988,010	0.93%

3 Cubic Yard Bin Service is the same as Front End Loader service.

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Table 4-2 provides budgeted and projected accounts from FY 2010 -FY 2015.

**Table 4-2
Budgeted and Projected Division Accounts
Fiscal Years 2010–2015**

Customer Accounts	Budgeted		Projected				'10 - '15 Average Annual Growth
	2010	2011	2012	2013	2014	2015	
Single-Family Households							
Manual	20,389	20,389	20,389	20,389	20,389	20,389	0.00%
Automated	157,100	158,600	160,100	161,600	163,100	164,600	0.94%
Subtotal Single-Family Households	177,489	178,989	180,489	181,989	183,489	184,989	0.83%
Apartment Units/Other Small Schools and Churches	18,350	18,350	18,350	18,350	18,350	18,350	0.00%
Total 96 Gallon Cart Accounts	195,839	197,339	198,839	200,339	201,839	203,339	0.75%
3 Cubic Yard Bin Service - Residential							
Multi-Family Households	2,710	2,740	2,770	2,800	2,830	2,860	1.08%
Total 3 CY Bin - Residential	2,710	2,740	2,770	2,800	2,830	2,860	1.08%
3 Cubic Yard Bin Service - Other							
Church/School	139	139	139	139	139	139	0.00%
Other City/Government	56	56	56	56	56	56	0.00%
Parks	84	84	84	84	84	84	0.00%
Total 3 CY Bin - Other	279	279	279	279	279	279	0.00%
Specialty Routes							
Highway	1,960	1,960	1,960	1,960	1,960	1,960	0.00%
Stake	400	400	400	400	400	400	0.00%
Total - Specialty Routes	2,360	2,360	2,360	2,360	2,360	2,360	0.00%
Small Business Manual	624	624	624	624	624	624	0.00%
Total Accounts	201,812	203,342	204,872	206,402	207,932	209,462	0.75%
De Facto Population	997,380	1,006,850	1,016,550	1,026,500	1,036,550	1,046,700	0.97%

3 Cubic Yard Bin Service is the same as Front End Loader service

4.5.2 Waste Quantities

Waste quantities were projected to remain flat for Oahu during the projection period. Historical quantities of solid waste disposed and transferred, and recyclable materials collected, along with historical per capita rates, were used to develop projections for total waste generated and disposed.

Table 4-3 and Table 4-4 provide historical and projected waste quantities from FY 2006-FY 2015.

**Table 4-3
Actual and Estimated Waste Quantities
Fiscal Years 2006–2009**

	Actual		Estimated		'06 - '09 Average Annual Growth
	2006	2007	2008	2009	
Solid Waste Disposal Options (Tons)					
Recycling	235,550	221,126	219,582	227,800	-1.11%
Refuse Division - Landfill	337,208	289,957	277,071	260,900	-8.20%
Refuse Division - H-POWER	602,509	619,700	607,609	610,000	0.41%
Total Waste Managed by Refuse Division (1)	1,175,267	1,130,783	1,104,262	1,098,700	-2.22%

(1) Total Waste Managed by Division equals total waste generated less private hauler recycling quantities which average approximately 226,000 tons per year in the FY 2006-FY 2009 time period.

Waste quantity projections through FY 2105 reflect the following assumptions:

- Landfill disposal – quantities decrease by approximately 100,000 tons between FY 2010 and FY 2012 due to 100,000 tons being transshipped while the H-POWER expansion is being constructed. Landfill quantities remain at approximately 50,000 tons through FY 2015.
- H-POWER disposal – quantities remain at current levels (approximately 610,000 tons) through FY 2011 and expand to approximately 710,000 in FY 2012 and to 800,000 tons thereafter with the completion of the H-POWER capacity expansion in mid-FY 2012 (total expanded capacity will be 900,000 tons per year). Projected quantities remain at 800,000 tons through FY 2015.
- Interim Disposal Option – approximately 100,000 tons of waste is expected to be shipped to the mainland annually starting in FY 2010 for a period of 3 years.

**Table 4-4
Budgeted and Projected Waste Quantities
Fiscal Years 2010–2015**

	Budgeted		Projected			'10 - '15 Average Annual Growth	
	2010	2011	2012	2013	2014		2015
Solid Waste Disposal Options (Tons)							
Recycling	230,550	233,460	236,540	239,800	239,800	239,800	0.79%
Refuse Division - Landfill	169,600	178,400	140,000	50,500	51,000	51,500	-21.21%
Refuse Division - H-POWER	610,000	610,000	710,000	800,000	800,000	800,000	5.57%
Interim Disposal Option	100,000	100,000	100,000	0	0	0	n/a
Total Waste Managed by	1,110,150	1,121,860	1,186,540	1,090,300	1,090,800	1,091,300	-0.34%
Refuse Division (1)							

(1) Total Waste Managed by Division equals total waste generation less private hauler recycling quantities which are projected to average approximately 237,000 tons per year in the FY 2010-FY 2015 time period.

4.5.3 Solid Waste Revenues

Current annual revenues of the Division are primarily comprised of disposal fees assessed at transfer stations, the Landfill and at the H-POWER facility; revenues from the sale of electric energy generated at H-POWER; and revenues from a recycling surcharge that is collected on all billed tonnage that is delivered to the transfer stations, H-POWER and the Landfill. In addition, the Division collects revenues from small number of commercial collection customers. As mentioned earlier in this section, the Division does not collect solid waste user fees from its residential customers. However for purposes of this analysis, a user fee in the amount of \$25 per household per month was assumed to be implemented in FY 2011 in order to determine the impact on the level of assistance from the General Fund.

Refuse General Operating Account

Revenues from most accounts are projected to be constant or slightly slower due to decreases in tonnage projections. Commercial collection customers are projected to remain constant throughout the planning period. Revenues from disposal at transfer stations are projected to decrease at the rate of waste quantity growth or approximately -0.34 percent per year; no increases to transfer station tip fees are projected.

Landfill revenues will decrease from a current level of approximately \$10.1 million per year to an average of \$4.1 million per year over the planning period through FY 2015, reflecting the assumption that all waste generated and not either recycled or used as fuel at H-POWER will be disposed of at the Landfill through FY 2015. In addition, it is assumed that 100,000 tons of waste will be transshipped beginning in FY 2010 and continuing through FY 2012, further reducing tonnage to the Landfill.

H-POWER – Solid Waste Disposal Facility Account

H-POWER revenues are generally based on an estimated 610,000 tons of waste disposed of annually at the facility through FY 2011. Waste quantities will increase to 710,000 tons when the H-POWER capacity expansion comes on-line in mid-FY 2012

and to 800,000 tons thereafter through FY 2015. No increases to commercial tip fees at H-POWER are projected and tip fees to other City agencies will rise to the same level as commercial customers in FY 2012. H-POWER energy revenues are based on the FY 2010 estimates and escalated at three percent in later years.

Revenues from the sale of electricity are projected to increase significantly when additional H-POWER capacity comes on-line in mid-FY 2012.

Glass Account

Glass appropriation revenues are assumed at approximately \$450,000 per year which is the average annual revenue over the last four years, reflecting the impacts of the HI-5 program, which will reduce the amount of glass containers available to produce this revenue source.

Recycling Account

Recycling surcharge revenues, which are based on 12 percent of the H-POWER, Landfill, and transfer station tip fees, will remain constant due to little to no growth in the quantity of waste disposed. In addition, as more disposal options become available, tonnage to the landfill may decrease and recycling surcharge revenues will be reduced.

Tables 4-5 and 4-6 provide historical and projected operating revenues from FY 2006-FY 2015.

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**Table 4-5
Actual and Estimated Division Operating Revenues
Fiscal Years 2006–2009**

					'06 - '09 Average Annual Growth
	Actual		Estimated		
	2006	2007	2008	2009	
REFUSE GENERAL OPERATING ACCOUNT - 250					
6128 - Collector Decals	\$800	\$800	\$916	\$925	4.96%
7261 - Collection-Small Business	564,000	540,000	498,165	522,500	-2.52%
7262 - Residential Second Day Collection	0	0	46,110	0	n/a
Miscellaneous	0	0	193	0	n/a
8011 - Vacation Accum Deposits	0	0	28,141	0	n/a
7875 - Recovery-Damaged Refuse Carts	0	0	1,275	0	n/a
7899 - Recoveries-Other	0	0	38,499	0	n/a
7256 - Pre-Paid Collection/Disposal Charges	0	0	8,623	0	n/a
7291 - Disposal	0	0	11,332,649	12,422,000	n/a
Transfer Station	1,288,180	1,297,500	0	0	-100.00%
Landfill	10,113,506	10,389,200	0	0	-100.00%
Recycling (20% of tip fee)	555,514	559,700	0	0	-100.00%
REFUSE GENERAL OPERATING ACCOUNT - 250	\$12,522,000	\$12,787,200	\$11,954,572	\$12,945,425	1.11%
RESIDENTIAL SOLID WASTE USER FEE REVENUES	n/a	n/a	n/a	n/a	n/a
H-POWER - SOLID WASTE DISP. FAC. ACCOUNT - 885					
8011 - Vacation Accumulated Deposits	\$0	\$0	\$3,788	\$0	
8232 - Commercial Tip Fees (1)	24,393,097	24,393,200	18,767,713	23,100,000	-1.80%
8233 - Electrical Energy	34,754,477	35,787,790	46,627,308	30,000,000	-4.79%
Metal Sales	1,509,190	1,500,000	0	0	-100.00%
8236 - City Agency Tip Fees	13,667,084	13,667,100	14,622,474	13,888,000	0.54%
8329 - S/H Disposal Charge H-Power	0	0	10,721	0	n/a
8330 - AES Easement	25,923	25,900	31,651	30,000	4.99%
H-POWER - SOLID WASTE DISP. FAC. ACCOUNT - 885	\$74,349,771	\$75,373,990	\$80,063,655	\$67,018,000	-3.40%
H-POWER Mortgage	24,294,334	21,881,500	0	0	-100.00%
GLASS RECYCLING - 206					
6745 - Glass Payments from DOH	\$500,000	\$300,000	\$605,527	\$178,000	-29.13%
6746 - Admin of Glass Program	0	0	0	0	n/a
GLASS RECYCLING - 206	500,000	300,000	605,527	178,000	-29.13%
RECYCLING SURCHARGES - RECYCLING ACCOUNT - 209	5,863,155	5,896,800	6,028,338	5,833,000	-0.17%
TOTAL REVENUES	\$117,529,260	\$116,239,500	\$98,652,100	\$85,974,400	-9.90%

(1) Source: 2006 and 2007 from revenue estimating spreadsheets; 2008 from Accounting Statement of Revenue by Revenue Source.

Table 4-6
Budgeted and Projected Division Operating Revenues
Fiscal Years 2010–2015

	Budgeted		Projected			10 - '15 Average Annual Growth	
	2010	2011	2012	2013	2014		2015
REFUSE GENERAL OPERATING ACCOUNT - 250							
6128 - Collector Decals	\$916	\$820	\$820	\$830	\$830	\$830	-1.95%
7261 - Collection-Small Business	500,000	500,000	500,000	500,000	500,000	500,000	0.00%
7262 - Residential Second Day Collection	0	0	0	0	0	0	n/a
Miscellaneous	0	0	0	0	0	0	n/a
8011 - Vacation Accum Deposits	0	0	0	0	0	0	n/a
7875 - Recovery-Damaged Refuse Carts	0	0	0	0	0	0	n/a
7899 - Recoveries-Other	0	0	0	0	0	0	n/a
7256 - Pre-Paid Collection/Disposal Charges	0	0	0	0	0	0	n/a
7291 - Disposal	0	0	0	0	0	0	n/a
Transfer Station	1,256,000	1,188,900	1,183,900	1,180,100	1,176,300	1,172,500	-1.37%
Landfill	10,104,000	7,034,000	5,520,200	1,991,000	2,011,200	2,030,700	-27.45%
Recycling (20% of tip fee)	486,000	486,000	486,000	486,000	486,000	486,000	0.00%
REFUSE GENERAL OPERATING ACCOUNT - 250	\$12,346,916	\$9,209,720	\$7,680,920	\$4,157,930	\$4,174,330	\$4,190,030	-19.44%
RESIDENTIAL SOLID WASTE USER FEE REVENUES (1)	\$0	\$54,404,700	\$54,854,700	\$55,304,700	\$55,754,700	\$56,204,700	n/a
H-POWER - SOLID WASTE DISP. FAC. ACCOUNT - 885							
8232 - Commercial Tip Fees	\$23,085,000	\$23,942,000	\$27,867,200	\$31,389,700	\$31,389,700	\$31,389,700	6.35%
8233 - Electrical Energy	29,541,305	30,427,500	36,478,100	42,335,200	43,605,200	44,913,400	8.74%
Metal Sales	0	0	0	0	0	0	n/a
8236 - City Agency Tip Fees (2)	14,598,165	14,258,500	29,643,800	33,400,400	33,400,400	33,400,400	18.00%
8329 - S/H Disposal Charge H-Power	0	0	0	0	0	0	n/a
8330 - AES Easement	25,923	25,900	25,900	25,900	25,900	25,900	-0.02%
H-POWER - SOLID WASTE DISP. FAC. ACCOUNT - 885	\$67,250,393	\$68,653,900	\$94,014,800	\$107,161,200	\$108,431,200	\$109,739,400	10.29%
H-POWER Mortgage	0	0	0	0	0	0	n/a
GLASS RECYCLING - 206	800,000	450,000	450,000	450,000	450,000	450,000	-10.87%
RECYCLING SURCHARGES - RECYCLING ACCOUNT - 209	5,814,766	5,602,200	7,730,900	8,165,600	8,167,600	8,174,700	7.05%
TOTAL REVENUES	\$86,212,100	\$138,320,500	\$164,741,300	\$175,239,400	\$176,977,800	\$178,758,800	15.70%

- (1) Assumes \$25/household per month solid waste user fee.
- (2) Tip fee for the City increases from \$45 to \$81 in FY 2012.

4.6 Operating Expenses

Annual operating expense projections include direct salary costs, fringe benefits, equipment and current expenses for all Division operations including collection, transfer station, Landfill, H-POWER, recycling and green waste. In addition, the Division incurs costs for services performed for the Division by other City departments such as Budget and Fiscal, Information Technology and Facilities Maintenance. The following paragraphs provide additional detail on specific operating expense accounts.

Table 4-7 summarizes the Division's historical operating expenses.

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**Table 4-7
Actual and Estimated Division Operating Expenses
Fiscal Years 2006–2009**

	Actual		Estimated		'06 - '09 Average Annual Growth
	2006	2007	2008	2009	
Division Expenses					
Administration	\$1,103,926	\$1,457,470	\$1,665,380	\$1,849,325	18.77%
Inspection and Investigation	270,885	329,589	293,521	474,480	20.54%
Recycling	3,340,414	7,712,707	12,764,293	18,289,303	76.25%
Glass Recycling	455,628	469,236	645,702	1,115,515	34.78%
Collection - Honolulu	10,051,089	10,228,778	11,123,552	15,298,124	15.03%
Collection - Rural	8,538,580	8,811,434	10,481,982	13,037,953	15.15%
Maintenance and Waste	1,417,234	1,552,570	1,614,890	2,318,932	17.84%
Landfill	7,515,388	6,026,386	13,514,417	16,087,082	28.88%
Transfer Station	8,182,440	8,719,312	8,164,173	8,308,762	0.51%
H-POWER	80,628,099	82,392,568	84,237,723	58,399,943	-10.19%
Subtotal - Cost of Operation	\$121,503,682	\$127,700,050	\$144,505,633	\$135,179,419	3.62%
Costs from Other Divisions	\$55,983,139	\$62,483,152	\$69,535,514	\$69,109,415	7.27%
Total Operating Expenses	\$177,486,821	\$190,183,202	\$214,041,147	\$204,288,834	4.80%

Projections of future operating expenses reflect changes in system operations developed in consultation with Division staff.

The key assumptions used in the operating expense are as follows:

- General inflation – assumed to be 3 percent under all scenarios.
- Residential automated MSW collection – collected once per week with full implementation island-wide by FY 2010.
- Residential automated green waste collection – collected twice per month and fully implemented on an island-wide basis in FY 2010.
- Residential automated mixed recyclables collection – collected twice per month and fully implemented on an island-wide basis in FY 2010.
- H-POWER expansion – adding an additional 300,000 tons of processing capacity completed in mid-FY 2012.
- Transshipping – 100,000 tons at a cost of approximately \$100/ton result in additional costs of approximately \$10 million per year for FYs 2010-2012.

4.6.1 Administration

Administration expenses are primarily for the salaries and benefits of the administrative staff, including the Refuse Division Chief and Assistant Refuse Division Chief, as well as the planning, disposal and collection engineers. Main responsibilities include strategic and long range planning, operations management, major contract negotiations, conducting studies to increase operating efficiencies and preparing annual budgets.

4.6.2 Inspection & Investigation

The main component of the Inspection & Investigation expenses is the salary and benefits of five staff positions that support the collection and disposal related functions of the Division. Their primary tasks involve promoting and monitoring staff and worker safety, managing and servicing businesses and government refuse collection and disposal accounts and coordinating performance data for the Division.

4.6.3 Recycling

The Division provides comprehensive recycling program support to the City. Services range from public education and outreach programs, commercial recycling program assistance, partnering with local recycling contractors, supporting media requests and managing community recycling bins. In addition, the recycling staff compiles data on recycling statistics and program performance and evaluates their performance against benchmarks. Over the past few years the recycling staff has been involved in the planning and public education efforts for the curbside mixed recycling program. In addition, staff has conducted limited inspections for curbside mixed recycling collection.

4.6.4 Glass Recycling

Glass recycling expenses are associated with the container redemption program; a major portion of the expenses are for payments to glass recyclers for non-deposit glass.

4.6.5 Collection

The Division's collection operations consist of automated and manual service for most of the residential waste on the island of Oahu. Automated service, using single-person crews, collects MSW one a week in some areas of Oahu and twice a week in other areas. As mentioned earlier, the Division is planning on moving to once a week residential automated MSW collection island-wide by the end of FY 2010. Curbside green waste and mixed recyclables collection service alternates on a weekly basis. These services are expected to be fully implemented island-wide by the end of FY 2010. Residents who receive manual MSW collection will continue to be serviced twice per week. Single-family residents are provided 90-gallon carts for MSW collection from the Division. Mixed recyclables carts are 64-gallons; green waste carts are 90-gallons. Manual service is currently used in a few areas on Oahu where access is limited.

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The Division also provides automated collection to multi-family, government, small commercial and non-profit customers. Collection services for these customers are generally the same as residential customers. Other collection services include bulky item pick-up, green waste collection, mixed recyclable collection, front end loader (3 CY bin) collection and white goods collection.

4.6.6 Maintenance & Waste Diversion

Maintenance & Waste Diversion expenses consist mainly of salaries and benefits of the 32 staff members that support the various Division functions including operating and maintaining the convenience centers, maintaining compactors and hauling refuse and mixed recyclables from the convenience centers to final disposal sites. Other tasks include installation, inspection and maintenance of disposal equipment and enforcement of policies and operating procedures for public users of disposal facilities.

4.6.7 Landfill (Contractor Operated and Closed)

Landfill expenses consist mainly of labor and payments to a private contractor for operation of the Landfill. Primary responsibilities of Division staff include operating the weighing system and collecting information on tonnage and billing data. Division and contractor staff share responsibilities for monitoring loads for compliance with City ordinances.

Landfill expenses also include maintenance costs for previously closed City landfills.

4.6.8 H-POWER

H-POWER costs consist of labor costs, Division costs to use H-POWER, including payment of the recycling surcharge and certain contractual payments made to the operator of H-POWER. The contracted Rental of Buildings expense ended in FY 2008 when the City purchased the facility. The primary duties of the staff in this branch include overseeing the engineering design and construction of upgrades and maintenance and operation of the H-POWER plant. In addition H-POWER staff are providing construction inspection of the H-POWER expansion project.

4.6.9 Transfer Station and Convenience Centers

MSW collected from the route collection trucks is consolidated at the transfer stations and transported to either recycling or disposal sites. Convenience centers and transfer stations allow residents to drop off their MSW and recyclables for free. The Division operates three transfer stations and six convenience centers located throughout Oahu. Transfer station expenses consist mainly of the labor costs and current expenses associated with operating and maintaining the transfer stations and convenience centers.

4.6.10 Other City Services

In addition to the operating expenses discussed above, the Division is expected to make payments to the City for the use of other City services that are provided to the Division in support of its operations. These services include such items as automotive services, billing and collection, Central Administration Services Expense (CASE), legal counsel, GIS support and solid waste debt service.

The Division’s expenses also include contributions for retirement, social security, health fund, unemployment and workers compensation for Division staff.

Table 4-8 summarizes the Division’s projected operating expenses.

**Table 4-8
Budgeted and Projected Division Operating Expenses
Fiscal Years 2010–2015**

	Budgeted		Projected			'10 - '15 Average Annual Growth	
	2010	2011	2012	2013	2014		2015
Division Expenses							
Administration	\$1,935,722	\$1,935,722	\$1,994,000	\$2,054,000	\$2,115,700	\$2,179,300	2.40%
Inspection and Investigation	497,852	497,852	528,400	544,300	560,500	577,400	3.01%
Recycling	15,932,725	15,932,725	16,312,953	16,704,553	17,107,653	17,522,853	1.92%
Glass Recycling	1,413,912	1,413,912	1,456,400	1,500,200	1,545,200	1,591,500	2.39%
Collection - Honolulu	11,632,544	11,632,544	11,950,900	12,309,500	12,678,800	13,059,200	2.34%
Collection - Rural	12,289,235	12,289,235	12,658,300	13,038,200	13,429,500	13,832,300	2.39%
Maintenance and Waste	2,277,652	2,277,652	2,345,900	2,416,400	2,488,800	2,563,400	2.39%
Landfill	20,305,654	20,305,654	21,013,200	10,923,800	11,356,100	11,579,700	-10.62%
Transfer Station	8,003,852	8,003,852	8,233,500	8,480,400	8,734,700	8,996,600	2.37%
H-POWER	46,516,362	46,516,362	43,308,400	58,014,300	59,574,800	61,182,000	5.63%
Subtotal - Cost of Operation	\$120,805,510	\$120,805,510	\$119,801,953	\$125,985,653	\$129,591,753	\$133,084,253	1.95%
Costs from Other Divisions	\$68,610,318	\$79,467,080	\$90,262,596	\$94,902,160	\$99,219,693	\$107,253,645	9.35%
Total Operating Expenses	\$189,415,828	\$200,272,590	\$210,064,549	\$220,887,814	\$228,811,447	\$240,337,898	4.88%

(1) Projections based on general inflation escalator of 3 percent.

4.7 Capital Expenditures

Capital expenditures are based on a combination of the Division’s project-specific capital expenditure budget for the time period FY 2009 to FY 2015, which are based on existing operating conditions, and additional capital expenditures identified by the Division at the beginning of FY 2010.

4.7.1 Key Assumptions

The key assumptions used in the projections of capital expenditures and funding sources are as follows:

- Capital expenditures over the planning period will be funded through long-term debt.

SECTION 4

- Approximately \$93 million in bonds will be sold over the FY 2010 - FY 2015 time period to fund capital projects.
- Approximately \$286 million in H-POWER bond proceeds will be expended for capacity expansion in FY 2010 - FY 2011.
- Transfer station capital improvements of approximately \$1.9 million over the FY 2010 - FY 2011.
- Equipment and vehicle replacements are estimated at \$12.4 million in FY 2010 and \$9 million per year thereafter per discussions with Division staff.

Table 4-9 summarizes the projected capital expenditures and sources of funds for the period FY 2009 - FY 2015.

**Table 4-9
Projected Capital Expenditures and Sources of Funding
(\$000s)
Fiscal Years 2009–2015**

	Estimated	Budgeted	Projected				
	2009	2010	2011	2012	2013	2014	2015
Renewals, Replacements & Additions - Facilities	\$0	\$12,433	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
Disposal Projects							
Kapaa/Kalaheo LF Gas Flare System		700	325				
ISWMP Update			500				
H-POWER Capacity Expansion	40,000	142,853	142,853				
H-POWER Purchase	44,000						
H-POWER APC	10,000						
Closure Projects							
Waipahu Incinerator Site Closure	500	650	650				
General Facilities							
Solid Waste Weighing Facility	501						
Refuse Convenience Center Improvements	751						
O'ahu Secondary Landfill Site Selection		500					
Refuse Facility Improvements at Various Locations		1,150	1,150	1,150	1,150	1,150	1,150
Waianae Yard - Vehicle Wash Facility		125	1,076				
Wahiawa Yard - Vehicle Wash Facility			1,100				
Transfer Stations							
Kapaa	701						
Kawaihoa		300	1,575				
Keehi	951						
Total Capital Expenditures	\$97,404	\$158,711	\$158,229	\$10,150	\$10,150	\$10,150	\$10,150
Sources of Funds for Capital Expenditures							
Solid Waste Improvement Bond Fund (WB)	\$97,404	\$158,711	\$158,229	\$10,150	\$10,150	\$10,150	\$10,150
General Improvement Bond Fund (GI)	0	0	0	0	0	0	0
Less Capital Expenditure Paid by H-POWER Bonds	(94,000)	(142,853)	(142,853)	0	0	0	0
Total GO Bonds Issued	\$3,404	\$15,858	\$15,376	\$10,150	\$10,150	\$10,150	\$10,150
Cumulative GO Bonds Issued	\$21,476	\$37,334	\$52,710	\$62,860	\$73,010	\$83,160	\$93,310

4.7.2 Capital Projects

Detailed descriptions for the projected capital expenditures for FY 2010 - FY 2015 are taken from the six-year CIP found in the “City and County of Honolulu, The Executive Program and Budget, FY 2010, Volume 2 – Capital Program and Budget”, the 2010 CIP Budget and discussions with Division staff at the beginning of FY 2010.

Kapaa/Kalaheo LF Gas Flare System

This project will determine the best method of addressing gas related issues at the landfills and provide for the construction of additional gas flares as required by the Department of Health. Estimated costs are \$700,000 in FY 2010 and \$325,000 in FY 2011.

Integrated Solid Waste Management Plan (ISWMP) Update

The Division is planning to update its ISWMP in FY 2011 per Department of Health requirement to update the plan every five years. Estimated cost is \$500,000 in FY 2011.

SECTION 4

H-POWER Capacity Expansion

The City estimates that an additional 300,000 tons of annual H-POWER capacity will be available by mid-FY 2012 bringing the total capacity of H-POWER to 900,000 tons. Approximately \$286,000,000 will be spent on the expansion over the FY 2010-FY 2012 time period.

Waipahu Incinerator Site Closure

The former incinerator building will be cleaned and all unnecessary equipment and appurtenances will be removed and salvaged or disposed. The interior of the building will also be tested and monitored. Any hazardous materials found will be properly mitigated. Estimated costs are \$650,000 in FY 2010 and a similar amount in FY 2011.

Oahu Secondary Landfill Site Selection

This project will study the potential locations for an additional landfill on Oahu. This study will also provide the required facilitation, technical assistance and guidance needed to implement and manage a landfill site selection advisory committee. Estimated costs are \$500,000 in FY 2010.

Refuse Facility Improvements at Various Locations

These projects include various repairs, improvements or modifications to Division facilities. Estimated costs are \$1,150,000 per year through FY 2015.

Waianae and Wahiawa Yards Vehicle Wash Facilities

Includes planning, design and construction of a vehicle wash facility for both yards. Estimated costs are \$1,100,000 for the Wahiawa Yard in FY 2011 and \$1,076,000 for the Waianae Yard in FY 2011.

Kawailoa TS Green Waste Recycling Improvements

This project will construct a new operations building and create a green waste load-out area for the public to unload their green waste directly into the transfer trailer. Estimated costs are \$300,000 in FY 2010 and \$1,575,000 in FY 2011.

4.8 Financial Analysis Results

The previous sections summarized the individual components of the financial analysis including:

- Customer and quantity projections.
- Revenue projections.
- Operating expense projections.
- Capital expenditure and financing projections.

Table 4-10 summarizes the Division's projected operating statement for the planning period. Included in these results are estimates for the level of revenues provided by a

\$25 per month user fee for residential collection starting in FY 2011 and transfers from the General Fund.

**Table 4-10
Budgeted and Projected Operating Statement
Fiscal Years 2010–2015**

	Budgeted		Projected			
	2010	2011	2012	2013	2014	2015
REVENUES						
Residential User Fees (1)	\$0	\$54,404,700	\$54,854,700	\$55,304,700	\$55,754,700	\$56,204,700
Other Revenues	87,212,075	84,915,820	110,886,620	120,934,730	122,223,130	123,554,130
Subtotal Revenues (2)	87,212,075	139,320,520	165,741,320	176,239,430	177,977,830	179,758,830
Transfer from General Fund	102,203,753	60,952,070	44,323,229	44,648,384	50,833,617	60,579,068
TOTAL REVENUES	\$189,415,828	\$200,272,590	\$210,064,549	\$220,887,814	\$228,811,447	\$240,337,898
EXPENDITURES						
Division Operating Expenses	\$120,805,510	\$120,805,510	\$119,801,953	\$125,985,653	\$129,591,753	\$133,084,253
Other City Agencies Expenses	68,610,318	79,467,080	90,262,596	94,902,160	99,219,693	107,253,645
TOTAL EXPENDITURES	\$189,415,828	\$200,272,590	\$210,064,549	\$220,887,814	\$228,811,447	\$240,337,898
NET OPERATING REVENUES	\$0	\$0	\$0	\$0	\$0	\$0

(1) Assumes \$25/HH/month starting in FY 2011. No increases to user fee are projected through FY 2015.

(2) See Table 4-6 for details. Includes \$1 million in interest income.

Table 4-11 summarizes the level of revenues and General Fund transfers under a \$20/HH/month and \$30/HH/month residential user fee starting in FY 2011.

**Table 4-11
User Fee Scenarios
Fiscal Years 2010–2015**

	Budgeted		Projected			
	2010	2011	2012	2013	2014	2015
\$20/HH/Month User Fee						
Residential User Fees (1)	\$0	\$43,523,800	\$43,883,800	\$44,243,800	\$44,603,800	\$44,963,800
Transfer from General Fund	\$102,203,753	\$71,832,970	\$55,294,129	\$55,709,284	\$61,984,517	\$71,819,968
\$25/HH/Month User Fee						
Residential User Fees (1)	\$0	\$54,404,700	\$54,854,700	\$55,304,700	\$55,754,700	\$56,204,700
Transfer from General Fund	\$102,203,753	\$60,952,070	\$44,323,229	\$44,648,384	\$50,833,617	\$60,579,068
\$30/HH/Month User Fee						
Residential User Fees (1)	\$0	\$65,285,600	\$65,825,600	\$66,365,600	\$66,905,600	\$67,445,600
Transfer from General Fund	\$102,203,753	\$50,071,170	\$33,352,329	\$33,587,484	\$39,682,717	\$49,338,168

(2) Assumes residential user fee starting in FY 2011. No increases to user fee are projected through FY 2015.

Section 5

USER FEE IMPLEMENTATION ACTION PLAN

5.1 Introduction

The implementation of a new solid waste user fee for residents of the City represents a significant departure from the current model where residents assume garbage pick-up is “free”. It is likely that there will be significant stakeholder feedback, especially given the current economic situation. R. W. Beck has worked with communities in the development of a comprehensive action plans to address stakeholder issues and to ensure that the implementation of a solid waste user fee is successful. This section summarizes the key elements of a successful User Fee Implementation Action Plan (Action Plan).

Specific actions for the Division still need to be worked out depending on guidance from the Administration and City Council.

5.2 Development of the Action Plan

The key elements of any Action Plan include the following:

1. Public education.
2. Billing.
3. Customer service.
4. Container purchase and ownership.
5. Ordinance development.
6. Procurement.

The Division has already largely addressed items 2, 4, 5, and 6 or Billing, Container purchase and ownership, Ordinance development and Procurement. This section will therefore concentrate on items 1 and 3, Public Education and Customer Service.

5.3 Recommended Action Plan

The following paragraphs outline the specific action items associated with Public Education and Customer Service. A discussion of each action item is included, along with a description of the particular roles, responsibilities, timelines and potential costs, if any. As mentioned earlier, the Division has addressed most of these elements and so at this time it appears feasible that the Division would be able to address the final two elements of Public Education and Customer Service prior to new use fee implementation date.

5.3.1 Public Education

Public education will be a critical issue in navigating a successful transition from the current model of “free” garbage pick up to charging a solid waste user fee. There will be a need to develop a systematic approach to notifying individual residents, businesses, non-profits (eleemosynaries) and property owners of the Division’s plans to charge a new fee. The following paragraphs present specific public education action items that will need to be addressed as a part of the implementation process.

Public Education/Outreach to All Individual Households

There will be a need to effectively communicate to all residents the reasons for the new solid waste user fee, the benefits of this change, how it will affect each resident and the specific timeline over which implementation of this new fee through the property tax process will occur. It will be critically important to begin actively educating customers on the specifics of how the solid waste user fee will be collected through the property tax process. Questions to be considered include:

- Why is a solid waste user fee being implemented now?
- What is meant by “basic service”?
- What if I need more carts? How much will it cost?
- What are the benefits that I will receive from this new fee?
- How will I be charged for this fee?
- What happens if I don’t pay this fee?
- I am a renter, who is responsible for paying this fee?

There are a wide variety of ways to communicate important information to residents including but not limited to:

- News releases and articles.
- Direct mailing of informational packets.
- Bill inserts.
- Public meetings.
- Radio public service announcement (PSA).
- Signs.
- Cable television PSA.

In all public education efforts undertaken in preparation for implementation of the new solid waste user fee, it will be important to distinguish between those customer receiving service from the Division and those who receive service from private haulers (most multi-family residences and businesses).

Roles/Responsibilities: Development of the public education program and specific communication methods to be used in this effort will be accomplished through a joint effort of the City’s Department of Budget and Fiscal Services (Fiscal) as the property tax collecting agency and the Division. These groups will need to work together to coordinate specific roles, responsibilities and timelines for development and implementation of public education related items.

Timeline: Outreach to all residents regarding the new solid waste user fee should begin once the City Council starts its deliberation on the fee. Depending on the level of stakeholder feedback desired or required, public meetings could be held to answer questions and assess the level of potential acceptance. It would be best to schedule these meetings six months prior to implementation of the new user fee.

Costs: Depending on the strategies decided upon by the Division there will be some initial public education costs associated with this effort for items ranging from rental of facilities to hold public meetings and associated organizational costs (presentation materials, water, etc.) to printing of fliers and postage for direct mailings.

Plan for Ongoing Public Education Efforts

Once the initial public education effort is complete and the solid waste user fee is implemented, there may still be a need to develop an ongoing public education campaign regarding the specifics of how the solid waste user fee is collected and paid. Ongoing public education is important in order to educate new residents and keep existing residents up to date on potential future changes in the fee.

Roles/Responsibilities: Development of the ongoing public education program should be accomplished through a joint effort of the Division and Fiscal. These agencies will need to work together to coordinate specific roles, responsibilities and timelines for development and implementation of public education related items.

Timeline: Outreach to residents regarding solid waste services provided by the Division should be an ongoing process and the Division currently has in place a well developed website, www.opala.org, to provide customers with information related to service. This will be an important tool to communicate the details of the new solid waste user fee.

Costs: Costs for effective ongoing public education efforts should typically be in the range of \$2-\$3 per household per year. No additional costs have been included in the financial analysis since the Division already has many elements of on-going public outreach in place. It is not anticipated that the new fee will increase these costs materially on a long term basis past the initial public education campaign.

5.3.2 Customer Service

Customer service activities represents another critical function that must be addressed by the Division in the implementation of a solid waste user fee. These activities should be coordinated between the Division and Fiscal. Typical activities are expected to include answering resident questions regarding their solid waste bill, and collection and researching customer billing questions. The following paragraphs present specific customer service action items that will need to be addressed as a part of the fee implementation process.

SECTION 5

Train Division and Fiscal staff to Address Solid Waste User Fee Questions

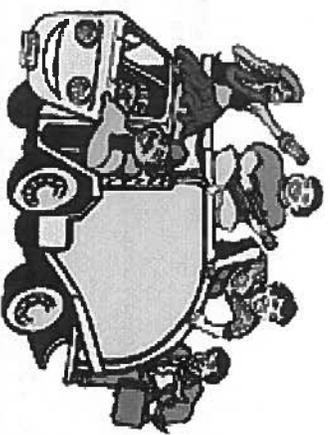
It will be important to train certain Division and Fiscal staff to field and answer customer questions regarding the new fee. Doing so will allow for efficient processing of all user fee questions and requests. There will be a need to coordinate existing property tax billing systems to allow staff the ability to access, review and modify data as needed to address user fee issues. A plan will need to be put in place to determine which staff (Division and/or Fiscal) will handle customer calls depending on type of customer. For example would Division staff continue to handle commercial customer calls while residential customer calls are handled by Fiscal? If so, how can consistency be ensured in the handling of customer billing invoices?

Roles/Responsibilities: Primary responsibility for customer service training is shared between Division and Fiscal staff.

Timeline: Customer service training should be completed within two months of planned user fee implementation.

Costs: There are no additional costs associated with this action item assuming it is completed by current City staff.

Appendix A FINANCIAL ANALYSIS TABLES



Solid Waste Program Financial Model
Financial Planning Model
Fiscal Years
2006-2015



Model prepared by R. W. Beck, Inc.
for internal use by Refuse Division Staff
R. W. Beck run date: February 17, 2010

Table 1
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division
 Assumptions and General Parameters

	Average Annual Growth Rate Assumptions (6)		
	2010-2015	2010-2014	2015
	Population	Per Capita Generation	Per Capita Generation
1 Operating Expenses/Income			
2 General Expense Escalator (1)			
3 Fringe Benefit Rate (2)			
4 Basic Service Residential User Fee/MO			
5 Front Loader Residential User Fee/MO			
6			
7 Capital Expenditure Funding			
8 Long-Term Debt (Facilities)			
9 Interest Rate (3)	5.00%		
10 Repayment Period (Years)	25		
11 Bond Financing Expense (3)	2.00%		
12			
13			
14 Financial Assurance Targets			
15 Planned Debt Service Coverage (4)	1.00		
16			
17			
18 Equivalent Single Family Units (# of SFH/ unit) (5)			
19 Apartment Units 96 gallon cart	0.67		
20 Multi-Family 3-yr	12.00		
21 Non-Profit/Parks 3-yr	12.00		
22			
23 Adjustments			
24 Adjustment for Uncollectibles-Basic Service			
25 Adjustment for Uncollectibles-FL			
26			
27 Customer Population and Growth			
28 Growth for Basic Services-Automatic Carts	1,500		
29 Leeward Customers	15,000		
30			

Average Annual Growth (AAG) is defined as the average growth rate for each year over a specified time period. For example, to calculate the AAG in SF households between 2006-2009, shown in Table 2, the calculation is $(180,760/175,593)^{(1/3)} - 1 * 100 = .97\%$, where 3 is the number of years between 2006-2009.

- Notes:
- (1) Based on CPI for Hawaii being higher than the national average.
 - (2) Based on Employee Fringe Benefit Rate of 21.88% per the City. Includes Vacation (8.08%) Sick Leave (5.02%) Holiday (5.00%) and Other (3.78%).
 - (3) Per Honolulu Budget and Fiscal Services.
 - (4) For planning purposes the Debt Service Coverage has set at 1.0.
 - (5) Per the Division. Apartment units assumption reflects reduced yard waste.
 - (6) Based on discussions with Division staff.

Base Case Definition:

Landfill: Extend operating permit until November 2009. Expand landfill with additional 15 years of capacity.
H-POWER: Buyback took place in FY 2008. Included APC retrofit. Expansion to be completed in FY 2013.
Collection, Transfer Station and Recycling: Expansion of mixed curbside and green waste collection to the whole island. Completed in FY 2010.

TABLE 2
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Actual and Projected Number of Accounts

	'06 - '09			Estimated (2)	Average Annual Growth (3)	'10 - '15						
	Actual (1) 2006	2007	2008			Budgeted (4) 2010	2011	2012	2013	2014	2015	Average Annual Growth (3)
1 96 Gallon Cart Service - Residential												
2 Single-Family Households	20,389	20,389	20,389	20,389	0.00%	20,389	20,389	20,389	20,389	20,389	20,389	0.00%
3 Manual	154,580	156,590	158,620	155,600	0.22%	157,100	158,600	160,100	161,600	163,100	164,600	0.94%
4 Automated	174,989	176,979	179,009	175,989	0.19%	177,489	178,989	180,489	181,989	183,489	184,989	0.83%
5 Subtotal Single-Family Households												
6 Apartment Units/Other Small Schools and Churches	18,348	18,348	18,348	18,348	0.00%	18,350	18,350	18,350	18,350	18,350	18,350	0.00%
7 Total 96 Gallon Cart Accounts	193,317	195,327	197,357	194,337	0.18%	195,839	197,339	198,839	200,339	201,839	203,339	0.75%
8												
9 3 Cubic Yard Bin Service - Residential												
10 Multi-Family Households (5)	2,682	2,682	2,682	2,682	0.00%	2,710	2,740	2,770	2,800	2,830	2,860	1.08%
11 Total 3 CY Bin - Residential	2,682	2,682	2,682	2,682	0.00%	2,710	2,740	2,770	2,800	2,830	2,860	1.08%
12												
13 3 Cubic Yard Bin Service - Other												
14 Church/School	139	139	139	139	0.00%	139	139	139	139	139	139	0.00%
15 Other City/Government	56	56	56	56	0.00%	56	56	56	56	56	56	0.00%
16 Parks	84	84	84	84	0.00%	84	84	84	84	84	84	0.00%
17 Total 3 CY Bin - Other	279	279	279	279	0.00%	279	279	279	279	279	279	0.00%
18												
19 Specialty Routes												
20 Highway	1,956	1,956	1,956	1,956	0.00%	1,960	1,960	1,960	1,960	1,960	1,960	0.00%
21 Stake	404	404	404	404	0.00%	400	400	400	400	400	400	0.00%
22 Total - Specialty Routes	2,360	2,360	2,360	2,360	0.00%	2,360	2,360	2,360	2,360	2,360	2,360	0.00%
23												
24 Small Business Manual	624	624	624	624	0.00%	624	624	624	624	624	624	0.00%
25												
26 Total Accounts	199,262	201,272	203,302	200,282	0.17%	201,812	203,342	204,872	206,402	207,932	209,462	0.75%
27												
28												
29 De Facto Population (6)	960,940	969,530	978,720	988,010	0.93%	997,380	1,006,850	1,016,550	1,026,500	1,036,550	1,046,700	0.97%

Notes

- (1) Source: HOUSECNT.xls
- (2) Source: Estimated per Division
- (3) Average Annual Growth per Division as the average growth rate for each year over a specified time period.
- (4) Projections per discussions with Refuse Division staff. Growth in SF automated assumes 1,500 new accounts per year.
- (5) Actual average growth is equal to .97%, however with rounding the average annual growth is calculated at 1.08%
- (6) Per Section 2 of the ISWMP (Table 2-1, "Population Used for FY Waste Projections"), based on the population projections from the Hawaii Data Book 2005.

TABLE 3
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Summary of Projected Waste Quantities (Tons)

	Actual			Estimated	Average Annual Growth (1)	Budgeted					Average Annual Growth (1)
	2006	2007	2008			2010	2011	2012	2013	2014	
1 Total Organic Generation (2)	1,793,560	1,793,560	1,793,560	1,793,560	0.00%	1,793,560	1,793,560	1,793,560	1,793,560	1,793,560	0.00%
2 Less Private and Unpermitted Disposal (3)	225,000	227,010	229,160	231,340	0.93%	233,530	235,750	238,020	240,350	242,700	0.97%
3 Total Waste to be Managed (4)	1,568,560	1,566,550	1,564,400	1,562,220	-0.13%	1,560,030	1,557,810	1,555,540	1,553,210	1,550,860	-0.15%
4 Less Private Haulers Recycling (5)	393,293	435,767	460,138	463,520	5.63%	449,880	435,950	389,000	462,910	460,060	0.32%
5 Total Waste Managed by Refuse Division	1,175,267	1,130,783	1,104,262	1,098,700	-2.22%	1,110,150	1,121,860	1,166,540	1,090,300	1,090,800	-0.34%
6 Total Waste Managed by Refuse Division - Disposal Options											
7 Recycling (6)	235,550	221,126	219,562	227,800	-1.11%	230,550	233,460	236,540	239,800	238,800	0.79%
8 Landfill (7)	337,206	289,957	277,071	260,900	-8.20%	169,600	178,400	140,000	50,500	51,500	-21.21%
9 H-POWER (8)	602,509	619,700	607,609	610,000	0.41%	610,000	610,000	710,000	555,800	564,400	-1.24%
10 H-POWER Capacity Expansion (9)	0	0	0	0	n/a	0	0	0	244,200	235,600	n/a
11 Shipping Waste Off Island (10)	0	0	0	0	n/a	100,000	100,000	100,000	0	0	n/a
12 Total Waste Managed by Refuse Division	1,175,267	1,130,783	1,104,262	1,098,700	-2.22%	1,110,150	1,121,860	1,166,540	1,090,300	1,090,800	-0.34%
13											
14											
15 Solid Waste Transferred - Transfer Stations (11)											
16 Trans. Stations - Refuse Div.	207,255	197,528	193,318	188,490	-2.94%	188,880	188,230	187,580	186,920	186,270	-0.35%
17 Trans. Stations - Other City	2,980	3,104	4,244	3,270	3.15%	3,260	3,250	3,240	3,230	3,220	-0.31%
18 Trans. Stations - Non-Profit	972	1,213	1,489	1,160	6.08%	1,160	1,160	1,150	1,150	1,140	-0.35%
19 Transfer Stations - Comm.	9,109	10,442	9,927	9,340	0.84%	9,310	9,280	9,240	9,210	9,180	-0.35%
20 Transfer Stations - Other (12)	47,400	20,227	24,168	28,080	-15.03%	28,980	28,890	28,790	28,690	28,590	-0.35%
21 Total Solid Waste Transferred	267,715	232,515	233,144	232,350	-4.61%	231,500	230,800	230,000	229,200	228,400	-0.35%
22											
23 Solid Waste Transferred - Convenience Centers (13)											
24 Convenience Centers	8,308	8,891	7,980	7,950	-5.12%	7,900	7,900	7,900	7,900	7,900	0.00%
25 Total Solid Waste Transferred - Convenience Centers	8,308	8,891	7,980	7,950	-5.12%	7,900	7,900	7,900	7,900	7,900	0.00%
26											

TABLE 3
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Summary of Projected Waste Quantities (Tons)

	Actual			Estimated		Average Annual Growth (%)	Budgeted					Average Annual Growth (%)	
	2006	2007	2008	2009	2010		2011	2012	2013	2014	2015		
27 DETAIL FOR SOLID WASTE MANAGED BY REFUSE DIVISION													
28 Refuse Division Recycled Waste (9)													
29 Paper	80,575	79,475	62,554	62,600	62,600	-8.07%	62,600	62,600	62,600	62,600	62,600	62,600	0.00%
30 Plastic	4,070	4,151	4,704	4,700	4,700	4.91%	4,700	4,700	4,700	4,700	4,700	4,700	0.00%
31 Metal	5,345	5,000	5,000	5,300	5,300	-0.28%	5,300	5,300	5,300	5,300	5,300	5,300	0.00%
32 Glass	23,545	20,745	25,050	25,000	25,000	1.87%	25,000	25,000	25,000	25,000	25,000	25,000	0.00%
33 Other Inorganic	16,047	16,270	16,714	16,700	16,700	1.34%	16,700	16,700	16,700	16,700	16,700	16,700	0.00%
34 Other Wastes	29,487	23,812	22,004	22,000	22,000	-9.30%	22,000	22,000	22,000	22,000	22,000	22,000	0.00%
35 Green Waste	31,000	34,000	40,000	48,000	50,750	15.69%	50,750	53,660	60,000	60,000	60,000	60,000	3.41%
36 Wood	8,734	9,566	13,526	13,500	13,500	15.62%	13,500	13,500	13,500	13,500	13,500	13,500	0.00%
37 Other Organics	36,547	28,087	29,933	30,000	30,000	-6.45%	30,000	30,000	30,000	30,000	30,000	30,000	0.00%
38 Total Refuse Division Recycled Waste	235,550	221,126	219,582	227,800	230,550	-1.11%	230,550	233,480	239,800	239,800	239,800	239,800	0.79%
39													
40 Landfill (7)													
41 Landfill - Residential	3,799	4,487	4,639	3,730	2,420	-0.61%	2,420	2,550	2,000	720	730	740	-21.10%
42 Landfill - Refuse Division	145,955	116,411	95,266	103,190	67,080	-10.91%	67,080	70,560	55,370	19,970	20,170	20,370	-21.21%
43 Landfill - Non-Profit	3,052	2,981	2,916	2,580	1,680	-5.45%	1,680	1,770	1,380	500	500	510	-21.21%
44 Landfill - Commercial	152,808	137,219	150,037	127,000	82,560	-6.00%	82,560	86,840	68,150	24,580	24,830	25,070	-21.21%
45 Landfill - Other City	31,494	28,859	24,213	24,400	15,660	-8.16%	15,660	16,680	13,090	4,720	4,770	4,820	-21.20%
46 Landfill - Recycler	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a
47 Subtotal Landfill	337,208	289,957	277,071	260,900	169,600	-8.20%	169,600	178,400	140,000	50,500	51,000	51,500	-21.21%
48													
49 H-POWER (8)													
50 H-POWER - Commercial	301,138	300,156	285,362	295,580	295,580	-0.62%	295,580	295,580	344,040	269,320	273,490	277,650	-1.24%
51 H-POWER - Refuse Division	298,588	317,551	319,692	312,300	312,300	1.40%	312,300	312,300	363,500	284,550	288,960	293,360	-1.24%
52 H-POWER - Other City Agencies	768	768	887	810	810	0.90%	810	810	950	740	750	770	-1.01%
53 H-POWER - Non-Profit	1,014	1,226	1,668	1,300	1,300	8.63%	1,300	1,300	1,520	1,190	1,210	1,220	-1.26%
54 Subtotal H-POWER	602,509	619,700	607,609	610,000	610,000	0.41%	610,000	610,000	710,000	555,800	564,400	573,000	-1.24%
55													
56 H-POWER Capacity Expansion (9)													
57 H-POWER - Commercial	0	0	0	0	0	n/a	0	0	0	118,330	114,160	110,000	n/a
58 H-POWER - Refuse Division	0	0	0	0	0	n/a	0	0	0	125,020	120,620	116,220	n/a
59 H-POWER - Other City Agencies	0	0	0	0	0	n/a	0	0	0	330	310	300	n/a
60 H-POWER - Non-Profit	0	0	0	0	0	n/a	0	0	0	520	500	490	n/a
61 Subtotal H-POWER Capacity Expansion	0	0	0	0	0	n/a	0	0	0	244,200	235,600	227,000	n/a
62													
63 Total H-POWER Capacity (9)	602,509	619,700	607,609	610,000	610,000		610,000	610,000	710,000	800,000	800,000	800,000	5.57%
64													
65 Total Waste Managed by Refuse Division	1,176,267	1,130,783	1,104,262	1,098,700	1,110,150	-2.22%	1,110,150	1,121,860	1,186,540	1,090,300	1,090,800	1,091,300	-0.34%

**TABLE 3
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Summary of Projected Waste Quantities (Tons)**

	Average Annual Growth			Average Annual Growth (1)				
	2006	2007	2008	2010	2011	2012	2013	2014
	106 - '09			110 - '15				
	Actual			Projected				
	Annual			Annual				
	Growth (1)			Growth (1)				

- Notes
- (1) Average Annual Growth is defined as the average growth rate for each year over a specified time period.
 - (2) Equals Waste Managed by Refuse Division, Private Landfill, Private Recyclers, and Unpermitted Disposal. Held constant at 2006 levels to reflect decrease in waste generated over 2006-2009 time period and expected flat or decreased generation.
 - (3) Assumed to be 225,000 tons in FY 2006 per Section 2 of ISWMP. Projections based on FY 2006 per capita generation rate for Private and Unpermitted Disposal, the De Facto population per Section 2 of the ISWMP, and the increase in the per capita generation rate per Section 2 of the ISWMP.
 - (4) Waste to be managed is equal to Total Oahu Generation less Private and Unpermitted Disposal.
 - (5) Equals Total Waste to be Managed less Waste to be Managed by Refuse Division. Estimated for all years 2006-2015.
 - (6) 2006-2008 data per opaha.org. 2009 estimated by RMB. Recycling tonnages do not include Chemical/Oils per Division email dated 1/29/2007. Quantities also exclude green waste tonnage the Division is not responsible for. Projections except for Green Waste assume flat growth through 2015. Green Waste assumes 60,000 tons collected after program matures and stays constant through 2015.
 - (7) FY 2006-2008 tonnage taken from "FY05-07_WG.xls", "FY 08 Incoming at LF, HP, TS.xls" and "Tonnage Data H-power and WGS.xls" for Landfill-Residential. Projections based on "Tonnage Data Table Revised CY 090421.xls". Landfill expansion planned to take place in FYs 2010-2011 and additional 511,000 tons of capacity will be added to Waimanalo Gulch.
 - (8) Includes Refuse, Convenience Center and Transfer categories from FY05-07_HPR.xls" and FY 08 Incoming at LF, HP, TS.xls. Projections based on "Tonnage Data Table Revised CY 090421.xls".
 - (9) H-POWER capacity expansion planned to be operational by 2012. Total waste processed at H-POWER starting in 2012 through 2015 is 800,000 tons per Refuse Division.
 - (10) Assumes shipping 100,000 tons of waste per year to the mainland through 2012.
 - (11) FY 2006 - 2008 from FY 05-07_KapaetS.xls, FY05-07_KeahiTS.xls, FY 05-07_KapaetS.xls, FY05-07_KeahiTS.xls, FY 05-07_KoaTS.xls and FY 08 Incoming at LF, HP, TS.xls.
 - (12) Includes Outbound, Transfer, Glass-Weight Only, Residential Weight and Residential Count categories from FY 05-07_KapaetS.xls, FY 05-07_KeahiTS.xls, FY 05-07_KoaTS.xls and FY 08 Incoming at LF, HP, TS.xls.
 - (13) Includes Kapaee only; no data reported for Keahi and Kawaiake. Projections for FY 2009-2015 based on change in waste quantities managed by Refuse Division.

**Table 4
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
P a s s i v e S e r v i c e s**

	Actual (1)			Estimated		Budgeted		Projected		
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Billable Waste Percentages										
1 Convenience Centers	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2 Transfer Station - Other City	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
3 Transfer Stations - Commercial	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
4 Landfill - Residential (2)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
5 Landfill - Commercial	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
6 Landfill - Other City	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
7 Landfill - Recyclers	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
8 H-POWER - Commercial	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
9 H-POWER - All City	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
10 H-POWER Capacity Expansion - Commercial	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
11 H-POWER Capacity Expansion - All City	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
12										
Billable Waste (Tons) (3)										
13 Convenience Centers	-	-	-	-	-	-	-	-	-	-
14 Transfer Station - Other City	2,980	3,100	4,240	3,270	3,260	3,250	3,240	3,230	3,220	3,210
15 Transfer Stations - Commercial	9,110	10,440	9,930	9,340	9,310	9,280	9,240	9,210	9,180	9,150
17 Landfill - Residential	-	-	-	-	-	-	-	-	-	-
18 Landfill - Commercial	152,910	137,220	150,040	127,000	82,560	86,840	68,150	24,580	24,830	25,070
19 Landfill - Other City	31,490	28,860	24,210	24,400	15,860	16,680	13,090	4,720	4,770	4,820
20 Landfill - Recyclers	-	-	-	-	-	-	-	-	-	-
21 H-POWER - Commercial	301,140	300,160	285,360	295,580	295,580	295,580	344,040	387,650	387,650	387,650
22 H-POWER - All City	301,370	319,540	322,250	314,410	314,410	314,410	365,970	412,350	412,350	412,350
23 H-POWER Capacity Expansion - Commercial	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
24 H-POWER Capacity Expansion - All City	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
25										
Billing Rates (\$/Ton)										
26 Convenience Centers	-	-	-	-	-	-	-	-	-	-
27 Transfer Station - Other City (4)	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
28 Transfer Stations - Commercial (4)	110.60	110.60	110.60	110.60	110.60	110.60	110.60	110.60	110.60	110.60
30 Landfill - Residential (2)	-	-	-	-	-	-	-	-	-	-
31 Landfill - Commercial (4)	81.00	81.00	81.00	81.00	81.00	81.00	81.00	81.00	81.00	81.00
32 Landfill - Other City	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
33 Landfill - Recyclers (5)	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20
34 H-POWER - Commercial (6)	81.00	81.00	81.00	81.00	81.00	81.00	81.00	81.00	81.00	81.00
35 H-POWER - All City (6)	45.35	45.35	45.35	45.35	45.35	45.35	45.35	45.35	45.35	45.35
36 H-POWER Capacity Expansion - Commercial	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
37 H-POWER Capacity Expansion - All City	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 4
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Public Division

	Actual (1)			Estimated		Budgeted			Projected		
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
38 RECYCLING SURCHARGE (7)											
39 Transfer Station - Other City	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	
40 Transfer Station - Commercial	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	13.27	
41 Landfill - Commercial	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	
42 Landfill - Other City	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	
43 Landfill - Recyclers	-	-	-	-	-	-	-	-	-	-	
44 H-POWER - Commercial	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	
45 H-POWER - All City	5.44	5.44	5.44	5.44	5.44	5.44	5.44	5.44	5.44	5.44	
46 H-POWER Capacity Expansion Capacity - Commer	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
47 H-POWER Capacity Expansion Capacity - All City	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	

Notes

- (1) Per www.opala.org.
- (2) The Division does not charge Residential customers for disposal at the Landfill.
- (3) Based on Billable Waste Percentages times Quantities on Table 3.
- (4) FY 2007 and FY 2008 based on existing rate. FY 2009 - FY 2015 assumed constant per the Division.
- (5) Rate based on 20% of Landfill commercial rate paid for recyclers to dump residual materials.
- (6) FY 2007 and FY 2008 based on existing rate. FY 2009 - 2015 per Division recommendation.
- (7) Per Division rate schedule a 12% recycling surcharge is imposed on all tonnage paying for disposal.

TABLE 5
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Historical and Projected Revenues

	Actual (1,2)			Estimated (2)		Average Annual Growth (3)	Budgeted (4)					Projected (5)			Average Annual Growth (3)
	2006	2007	2008	2009	2010		2011	2012	2013	2014	2015				
1 REFUSE GENERAL OPERATING ACCOUNT - 250															
2 6128 - Collector Details (8)	\$800	\$900	\$916	\$925	\$916	4.96%	\$916	\$820	\$820	\$830	\$830	\$830	\$830	-1.95%	
3 7261 - Collector-Small Business (7)	564,000	540,000	496,165	522,500	500,000	-2.52%	500,000	500,000	500,000	500,000	500,000	500,000	500,000	0.00%	
4 7262 - Residential Second Day Collection	0	0	46,110	0	0	n/a	0	0	0	0	0	0	0	n/a	
5 Miscellaneous (8)	0	0	193	0	0	n/a	0	0	0	0	0	0	0	n/a	
6 8011 - Vacation Accum Deposits (9)	0	0	28,141	0	0	n/a	0	0	0	0	0	0	0	n/a	
7 7875 - Recovery-Damaged Refuse Carts	0	0	1,275	0	0	n/a	0	0	0	0	0	0	0	n/a	
8 7899 - Recoveries-Other	0	0	38,499	0	0	n/a	0	0	0	0	0	0	0	n/a	
9 7266 - Pre-Paid Collection/Disposal Charges	0	0	8,623	0	0	n/a	0	0	0	0	0	0	0	n/a	
10 7291 - Disposal	1,288,180	1,297,500	1,332,649	12,422,000	1,256,000	-100.00%	1,256,000	1,198,900	1,183,900	1,180,100	1,176,300	1,172,500	1,172,500	-1.37%	
11 Transfer Station (10)	10,113,506	10,389,200	0	0	10,104,000	-100.00%	10,104,000	7,034,000	5,520,200	1,991,000	2,011,200	2,030,700	2,030,700	-27.45%	
12 Landfill (10)	555,514	559,700	0	0	486,000	-100.00%	486,000	486,000	486,000	486,000	486,000	486,000	486,000	0.00%	
13 Recycling (11)	0	0	0	0	0	n/a	0	54,404,700	54,854,700	55,304,700	55,754,700	56,204,700	56,204,700	n/a	
14 Basic Service Residential User Fee	0	0	0	0	0	n/a	0	0	0	0	0	0	0	n/a	
15 Front End Loader User Fee (19)	0	0	0	0	0	n/a	0	0	0	0	0	0	0	n/a	
16 Subtotal 250	\$12,522,000	\$12,787,200	\$11,954,572	\$12,945,425	\$12,346,916	1.11%	\$12,346,916	\$63,614,420	\$62,545,620	\$59,462,630	\$59,929,030	\$60,394,730	\$60,394,730	37.37%	
17															
18 H-POWER - SOLID WASTE DISP. FAC. ACCOUNT - 885															
19 8011 - Vacation Accum Deposits	\$0	\$0	\$3,788	\$0	\$0	-1.80%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	6.35%	
20 8232 - Commercial Tip Fees (10)	24,393,097	24,393,200	18,767,713	23,100,000	23,085,000	-4.79%	23,085,000	23,942,000	27,867,200	31,399,700	31,399,700	31,399,700	31,399,700	8.74%	
21 8233 - Electrical Energy (12)	34,754,477	35,787,790	46,627,308	30,000,000	29,541,305	-100.00%	29,541,305	30,427,500	36,478,100	42,335,200	43,605,200	44,913,400	44,913,400	n/a	
22 Meal Sales (13)	1,509,190	1,500,000	0	0	0	0.54%	0	0	0	0	0	0	0	18.00%	
23 8236 - City Agency/Tip Fees (10, 14)	13,987,084	13,987,100	14,622,474	13,888,000	14,599,165	n/a	14,599,165	14,258,500	29,643,600	33,400,400	33,400,400	33,400,400	33,400,400	-0.02%	
24 8329 - SH/Disposal Charge H-Power	0	0	10,721	0	0	4.99%	0	0	0	0	0	0	0	10.29%	
25 8330 - AES Easement	25,923	25,900	31,651	30,000	25,923	-3.40%	25,923	25,900	25,900	25,900	25,900	25,900	25,900	n/a	
26 Subtotal 885	\$74,349,771	\$75,373,990	\$80,063,655	\$67,018,000	\$67,250,383		\$67,250,383	\$68,653,900	\$84,014,800	\$107,167,200	\$108,431,200	\$108,739,400	\$108,739,400		
27															
28 H-POWER Other Revenue	\$24,294,334	\$21,881,500	\$0	\$0	\$0	-100.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	n/a	
29 H-POWER Mortgage (15)	\$24,294,334	\$21,881,500	\$0	\$0	\$0	-100.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	n/a	
30 Subtotal H-POWER Other Revenue	\$24,294,334	\$21,881,500	\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0		
31															
32 GLASS RECYCLING - 206	\$500,000	\$300,000	\$605,527	\$178,000	\$800,000	-29.13%	\$800,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	-10.87%	
33 6745 - Glass Payments from DOH (16)	0	0	0	0	0	n/a	0	0	0	0	0	0	0	n/a	
34 6746 - Admin of Glass Program	\$500,000	\$300,000	\$605,527	\$178,000	\$800,000	-29.13%	\$800,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	-10.87%	
35 Subtotal 206	\$500,000	\$300,000	\$605,527	\$178,000	\$800,000		\$800,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000		
36															
37 RECYCLING SURCHARGES - RECYCLING ACCOUNT - 209	\$4,217,074	\$4,250,700	\$4,251,182	\$4,108,000	\$4,089,320	-0.87%	\$4,089,320	\$3,840,300	\$4,129,100	\$4,129,100	\$4,131,100	\$4,133,100	\$4,133,100	0.31%	
38 7293 - Commercial Recycling Surcharge (10)	1,646,081	1,646,100	1,596,485	1,513,000	1,745,446	-2.77%	1,745,446	1,761,900	3,801,800	4,036,500	4,036,500	4,036,500	4,036,500	16.26%	
39 7294 - Division, Other City Recycling Surcharge (10)	0	0	148,144	212,000	0	n/a	0	0	0	0	0	0	0	n/a	
40 8047 - Sale-Other Misc & Supplies	0	0	32,528	0	0	n/a	0	0	0	0	0	0	0	n/a	
41 8063 - Sale of Scrap Materials	0	0	0	0	0	n/a	0	0	0	0	0	0	0	n/a	
42 Additional WTE Recycling Surcharge	0	0	0	0	0	n/a	0	0	0	0	0	0	0	n/a	
43 Community Bins - HI-5 program	0	0	0	0	0	n/a	0	0	0	0	0	0	0	n/a	
44 Subtotal 209	\$5,863,155	\$5,896,800	\$6,028,338	\$5,833,000	\$5,814,766	-0.17%	\$5,814,766	\$5,602,200	\$7,730,900	\$8,165,600	\$8,167,600	\$8,174,700	\$8,174,700	7.05%	
45															
46 TOTAL REVENUES	\$117,529,260	\$116,239,490	\$98,652,092	\$85,974,425	\$86,212,075	-9.90%	\$86,212,075	\$139,320,520	\$164,741,320	\$175,239,430	\$176,977,830	\$178,758,830	\$178,758,830	15.70%	

TABLE 5
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division
 Historical and Projected Revenues

	'06 - '09			'10 - '15		
	Average Annual Growth (3)			Average Annual Growth (3)		
	2006	2007	2008	2010	2011	2012
Actual (1,2)				Budgeted (4)		
Estimated (2)				2013	2014	2015
Projected (5)						

- Notes
- (1) FY 2006 from "y06 actual rev based on tons.xls."
 - (2) FY 2008 and FY 2009 from "CG-FIN-GL-0005_Accounting_Statement_of_Revenue_by_Revenue_Source[1].pdf"
 - (3) Average Annual Growth is defined as the average growth rate for each year over a specified time period.
 - (4) FY 2010 from "FY20estrevenue.xls"
 - (5) Projections based on Billable Waste Quantities and Billing Rates. See Table 3 for details.
 - (6) FY 2011-2013 projections based on "FY 07 Revenue Revised Estimate.xls" provided by Staff. FY 2014 -FY 2015 assumed no increase.
 - (7) Projections based on growth in De Facto population. See Table 2 for details.
 - (8) Includes revenue items 7006, 7061, 7009 and 8232.
 - (9) Combined totals for units 2396 and 2046.
 - (10) Projections based on Billable Waste Quantities and Billing Rates. See Table 3 for details.
 - (11) Projections assumed to reflect no growth in this revenue source.
 - (12) FY 2011 and beyond based on FY 2010 revaluation increasing with inflation.
 - (13) FY 2006 revenues per Division. FY 2007 through FY 2009 based on actuals. No revenues expected in the future per Division.
 - (14) Change in magnitude of projected revenues due to changes in projected H-POWER tipping fee in FY 2012. See Table 4 for details.
 - (15) Source: "moneyforpurchass.xls" provided by Division. Assumes reduction in revenues occurring in FY 2009 as H-POWER is purchased by the City in Oct. 2008.
 - (16) FY 2009 - 2015 per Division recommendation.

TABLE 6
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Actual and Projected Operating Expenses
Fiscal Years Ending June 30

	'06 - '09										Average Annual Growth (%)				
	Actual (1)		Estimated (1)		Budgeted (1)		Adjustments		Year						
	2006	2007	2008	2009	2010	2010	2010	2011	2012	2013		2014	2015		
56 Labor Fringe Costs - Salaries and Wages (5)	67,000	71,700	81,800	81,100	0	114,800	0	114,800	114,800	114,800	114,800	114,800	114,800	114,800	2.39%
57 Current Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
58 Pats and Handmen - Green Carts (42)	0	3,286,308	5,683,730	6,030,000	0	3,400,000	0	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	2.39%
59 Pats and Handmen - Blue Carts (43)	0	0	0	0	0	2,800,000	0	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000	2.40%
60 Supplies (11)	944,978	30,983	237,981	0	0	157,500	0	157,500	157,500	157,500	157,500	157,500	157,500	157,500	2.40%
61 Services (12)	338,829	174,042	139,370	0	0	465,500	0	465,500	465,500	465,500	465,500	465,500	465,500	465,500	2.40%
62 Other Contractual Services (8)	0	3,765,817	5,273,000	11,342,500	0	0	0	0	0	0	0	0	0	0	2.40%
63 Community Recycling Bins Hauling & Maintenance	740,052	0	0	0	0	3,500,000	0	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	2.39%
64 Recycling Education Events	24,993	0	0	0	0	100,000	0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	2.40%
65 Public Outreach	64,394	0	0	0	0	25,000	0	25,000	25,000	25,000	25,000	25,000	25,000	25,000	2.44%
66 Website server, updates	0	0	0	0	0	180,000	0	180,000	180,000	180,000	180,000	180,000	180,000	180,000	2.39%
67 Tire Recycling Fee	119,842	0	0	0	0	2,000,000	0	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2.39%	
68 Propane Tank Recycling Fee	234,358	0	0	0	0	70,000	0	70,000	70,000	70,000	70,000	70,000	70,000	70,000	2.40%
69 Illegal Dumping Projects	234,358	0	0	0	0	110,000	0	110,000	110,000	110,000	110,000	110,000	110,000	110,000	2.39%
70 Condo/Apartment Recycling	0	0	0	0	0	37,500	0	37,500	37,500	37,500	37,500	37,500	37,500	37,500	2.39%
71 Green Waste Tip Fee	234,358	0	0	0	0	4,528,804	0	4,528,804	4,528,804	4,528,804	4,528,804	4,528,804	4,528,804	4,528,804	2.39%
72 Match Delivery Fee	1,101	0	0	0	0	100,000	0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	2.40%
73 Operating Expense Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.40%
74 Office Paper Recycling Program	0	0	0	0	0	35,000	0	35,000	35,000	35,000	35,000	35,000	35,000	35,000	2.40%
75 White Goods From Recycling	0	0	0	0	0	525,000	0	525,000	525,000	525,000	525,000	525,000	525,000	525,000	2.39%
76 Mixed Recyclable Processing	0	0	0	0	0	2,000,000	0	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2.39%
77 Used Battery Processing	0	0	0	0	0	70,000	0	70,000	70,000	70,000	70,000	70,000	70,000	70,000	2.40%
78 Other Professional Services	0	31,356	528	0	0	100,000	0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	2.40%
79 Rentals (13)	9,048	5,615	24,724	0	0	28,500	0	28,500	28,500	28,500	28,500	28,500	28,500	28,500	2.42%
80 Other (14)	21,722	28,704	17,695	0	0	28,500	0	28,500	28,500	28,500	28,500	28,500	28,500	28,500	2.41%
81 Refuse Disposal Services	0	0	730,761	0	0	0	0	0	0	0	0	0	0	0	0.00%
82 Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
83 Subtotal - Current Expenses	\$2,987,020	\$7,313,505	\$12,307,988	\$17,637,890	0	\$18,828,104	0	\$18,828,104	\$18,283,157	\$18,654,155	\$18,026,053	\$18,408,733	\$18,803,053	\$18,803,053	1.92%
84 Subtotal - RECYCLING	\$3,340,414	\$7,712,707	\$12,764,283	\$18,288,303	0	\$18,550,872	0	\$18,550,872	\$15,992,725	\$16,312,853	\$16,704,653	\$17,107,653	\$17,522,853	\$17,522,853	1.92%
85 GLASS RECYCLING															
86 Salaries and Wages (4)	\$40,639	\$44,780	\$44,424	\$52,515	\$0	\$52,412	\$0	\$52,412	\$52,412	\$54,000	\$55,600	\$57,300	\$59,000	\$59,000	2.40%
87 Labor Fringe Costs - Salaries and Wages (5)	8,800	9,800	8,700	11,500	11,500	11,500	11,500	11,500	11,500	11,800	12,200	12,500	12,800	12,800	2.32%
88 Current Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
89 Other Contractual Services (8)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
90 Market Development	0	0	0	0	0	100,000	0	100,000	100,000	103,000	106,100	109,300	112,800	112,800	2.40%
91 Public Education	0	0	0	0	0	100,000	0	100,000	100,000	103,000	106,100	109,300	112,800	112,800	2.40%
92 Audit Glass Recycling Companies	0	0	0	0	0	25,000	0	25,000	25,000	25,800	26,600	27,400	28,200	28,200	2.44%
93 Demonstration Projects	0	0	0	0	0	300,000	0	300,000	300,000	309,000	318,300	327,800	337,600	337,600	2.39%
94 Other Frigid Charges	405,208	413,555	589,745	500,000	0	800,000	0	800,000	800,000	824,000	848,700	874,200	900,400	900,400	2.39%
95 Other (15)	881	1,101	1,633	28,500	0	25,000	0	25,000	25,000	25,800	26,600	27,400	28,200	28,200	2.44%
96 Subtotal - Current Expenses	\$406,089	\$414,656	\$591,578	\$609,515	\$0	\$1,350,000	\$0	\$1,350,000	\$1,350,000	\$1,398,600	\$1,432,200	\$1,475,400	\$1,518,800	\$1,518,800	2.39%
97 Subtotal - GLASS RECYCLING	\$406,089	\$414,656	\$591,578	\$609,515	\$0	\$1,350,000	\$0	\$1,350,000	\$1,350,000	\$1,398,600	\$1,432,200	\$1,475,400	\$1,518,800	\$1,518,800	2.39%
98 COLLECTION - HONOLULU															
99 Salaries and Wages (4)	\$7,483,890	\$7,742,081	\$8,311,987	\$10,725,135	\$0	\$8,490,544	\$0	\$8,490,544	\$8,490,544	\$8,745,300	\$9,007,700	\$9,277,900	\$9,558,200	\$9,558,200	2.39%
100 Labor Fringe Costs - Salaries and Wages (5)	1,637,800	1,694,400	1,818,700	2,353,200	1,637,700	1,637,700	1,637,700	1,637,700	1,637,700	1,693,500	1,970,900	2,050,000	2,090,000	2,090,000	2.39%
101 Current Expenses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
102 Supplies (16)	28,672	29,128	42,895	38,700	0	45,750	0	45,750	45,750	47,100	48,500	50,000	51,500	51,500	2.40%
103 Pats - Grey Carts	0	548,879	276,833	1,325,084	0	885,000	0	885,000	885,000	705,600	728,800	748,600	771,100	771,100	2.40%
104 Other Contractual Services (8)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
105 Disposal of Frigid Appliances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
106 Janitorial Yard Services	3,852	0	0	0	0	20,000	0	20,000	20,000	20,600	21,200	21,800	22,500	22,500	2.39%
107 Guard Services	120,088	0	0	0	0	175,000	0	175,000	175,000	180,300	185,700	191,300	197,000	197,000	2.40%
108 Bulky Item Hauling	274,387	0	0	0	0	100,000	0	100,000	100,000	100,000	106,100	108,300	113,600	113,600	2.40%
109 White Goods Disposal	341,115	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
110 Radioactive Calibration	0	0	0	0	0	15,000	0	15,000	15,000	15,500	16,000	16,500	17,000	17,000	2.53%

TABLE 6
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division
Actual and Projected Operating Expenses
 Fiscal Years Ending June 30

	Actual (1)			Estimated (1)		Annual Growth (2)	Average Annual Growth (2)												
	2006	2007	2008	2008	2009		Budgeted (1)	Adjustments	Past Year					Projected (3)					
							2010	2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
166	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
167	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
169	42,917	35,324	35,847	43,480	49,480	4.88%	53,200	0	53,200	53,200	54,800	56,400	58,100	59,800	61,500	63,200	64,900	66,600	68,300
170	965	1,915	3,391	2,500	2,500	40.31%	2,700	0	2,700	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500	3,600
171	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
173	\$1,417,234	\$1,592,570	\$1,614,890	\$2,318,932	\$2,318,932	17.84%	\$1,910,952	\$366,700	\$2,277,652	\$2,277,652	\$2,345,800	\$2,416,400	\$2,488,800	\$2,567,100	\$2,654,400	\$2,745,700	\$2,841,000	\$2,940,300	\$3,042,600
174																			
175	\$78,528	\$91,178	\$81,094	\$93,612	\$93,612	2.11%	\$89,404	\$0	\$89,404	\$89,404	\$92,100	\$94,800	\$97,700	\$100,600	\$103,600	\$106,600	\$109,600	\$112,600	\$115,600
176	17,200	19,800	17,700	18,300	18,300	2.09%	0	19,800	19,800	20,200	20,600	21,000	21,400	21,800	22,200	22,600	23,000	23,400	23,800
177	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
178	6,104	477	708	100,800	100,800	154.65%	75,750	0	75,750	75,750	76,800	78,000	80,300	82,700	85,200	87,700	90,200	92,700	95,200
179	6,813,828	5,785,155	13,310,747	15,617,000	15,617,000	31.83%	5,136,000	0	5,136,000	5,280,100	5,448,800	5,612,300	5,780,700	5,954,100	6,128,500	6,302,900	6,477,300	6,651,700	6,826,100
180	0	0	0	0	0	-	4,513,000	(2,256,500)	2,256,500	2,256,500	2,383,800	2,539,700	2,708,200	2,888,300	3,078,400	3,279,500	3,491,600	3,714,700	3,948,800
181	0	0	0	0	0	-	2,149,000	(1,074,500)	1,074,500	1,074,500	1,139,800	1,210,100	1,286,400	1,368,700	1,457,000	1,551,300	1,651,600	1,757,900	1,870,200
182	0	0	0	0	0	-	132,000	0	132,000	132,000	136,000	140,100	144,300	148,600	153,000	157,500	162,100	166,800	171,500
183	0	0	0	0	0	-	200,000	0	200,000	200,000	206,000	212,200	218,600	225,200	232,000	238,900	246,000	253,200	260,600
184	0	0	0	0	0	-	200,000	0	200,000	200,000	206,000	212,200	218,600	225,200	232,000	238,900	246,000	253,200	260,600
185	0	0	0	0	0	-	20,000	0	20,000	20,000	20,600	21,200	21,800	22,500	23,200	23,900	24,600	25,300	26,000
186	0	0	0	0	0	-	150,000	0	150,000	150,000	154,500	159,100	163,800	168,600	173,500	178,500	183,600	188,800	194,100
187	0	0	0	0	0	-	250,000	0	250,000	250,000	257,900	265,200	273,200	281,400	289,800	298,500	307,500	316,800	326,400
188	0	0	0	0	0	-	185,000	0	185,000	185,000	190,000	196,300	202,200	208,300	214,700	221,500	228,600	236,000	243,700
189	0	0	0	0	0	-	36,000	0	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000
190	0	0	0	0	0	-	15,000	0	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
191	0	0	0	0	0	-	10,000	0	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
192	0	0	0	0	0	-	120,000	0	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000
193	0	0	0	0	0	-	10,000,000	0	10,000,000	10,000,000	10,300,000	10,600,000	11,000,000	11,400,000	11,800,000	12,200,000	12,600,000	13,000,000	13,400,000
194	25,000	149,074	101,385	191,570	191,570	87.15%	292,700	0	292,700	292,700	301,500	310,500	319,800	329,400	339,400	349,700	360,300	371,100	382,200
195	117,553	0	75,000	75,000	75,000	-13.81%	82,500	0	82,500	82,500	84,100	85,700	87,400	89,100	90,900	92,700	94,600	96,500	98,500
196	218	604	2,773	800	800	54.33%	700	0	700	700	700	700	700	700	700	700	700	700	700
197	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
198	\$6,964,201	\$5,815,310	\$13,415,523	\$15,586,170	\$15,586,170	-	\$23,527,652	0	\$23,527,652	\$23,527,652	\$24,000,000	\$24,480,000	\$24,960,000	\$25,440,000	\$25,920,000	\$26,400,000	\$26,880,000	\$27,360,000	\$27,840,000
199	\$7,080,229	\$6,026,368	\$13,514,417	\$16,087,082	\$16,087,082	31.59%	\$23,617,054	(\$3,311,400)	\$20,305,654	\$20,305,654	\$20,800,000	\$21,300,000	\$21,800,000	\$22,300,000	\$22,800,000	\$23,300,000	\$23,800,000	\$24,300,000	\$24,800,000
200							\$35	(\$3,311,400)	\$35	\$35	\$45	\$46	\$48	\$49	\$50	\$51	\$52	\$53	\$54
201																			
202	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
203	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
204	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
205	34,913	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
206	96,536	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
207	63,710	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
208	280,000	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
209	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
210	\$465,159	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
211																			
212	\$3,281,265	\$3,433,168	\$3,774,415	\$4,267,402	\$4,267,402	9.04%	\$4,091,252	\$0	\$4,091,252	\$4,091,252	\$4,214,000	\$4,340,400	\$4,470,600	\$4,604,700	\$4,742,700	\$4,884,600	\$5,030,400	\$5,180,100	\$5,333,700
213	720,100	751,200	825,800	933,700	933,700	9.04%	895,200	895,200	895,200	922,000	949,700	978,200	1,007,500	1,037,600	1,068,400	1,099,900	1,132,100	1,165,000	1,198,600
214	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
215	62,716	66,460	110,131	115,248	115,248	18.81%	114,400	0	114,400	114,400	117,800	121,300	124,800	128,400	132,000	135,700	139,400	143,100	146,900
216	5,309	6,966	10,214	14,072	14,072	38.39%	13,500	0	13,500	13,500	13,900	14,300	14,700	15,100	15,500	15,900	16,300	16,700	17,100
217	21,759	5,467	1,585,678	1,337,500	1,337,500	294.65%	1,314,000	0	1,314,000	1,314,000	1,353,400	1,394,000	1,435,800	1,478,900	1,522,400	1,566,300	1,610,600	1,655,300	1,700,400
218	3,647,681	4,235,447	914,075	1,395,000	1,395,000	-28.89%	30,000	0	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
219	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 6
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Department of Environmental Services
Refuse Division
Actual and Projected Operating Expenses
Fiscal Years Ending June 30

	Actual (1)		Estimated (1)		Average Annual Growth (2)	Budgeted (1)		Adjustments		Test Year		Projected (3)					Average Annual Growth (2)
	2006	2007	2008	2008		2010	2010	2010	2011	2012	2013	2014	2015				
220 Bud Out-Crocker to PTV Exp	0	0	0	0	-	(20,000)	0	0	0	(20,000)	0	0	0	0	0	0	
221 Truck Scale Maintenance	0	0	0	0	-	120,000	0	0	0	120,000	0	0	123,600	127,200	131,100	135,000	
222 Radiation Detection	0	0	0	0	-	40,000	0	0	0	40,000	0	0	41,200	42,400	43,700	45,000	
223 Emergency Radiol Handling (45)	0	0	0	0	-	300,000	0	0	0	300,000	0	0	309,000	318,000	327,000	337,000	
224 Radiol Truck Lease	0	0	0	0	-	800,000	0	0	0	800,000	0	0	824,000	848,700	874,200	900,400	
225 Pest control, Water Disposal	0	0	0	0	-	30,000	0	0	0	30,000	0	0	30,800	31,600	32,400	33,800	
226 Janitorial	0	0	0	0	-	20,000	0	0	0	20,000	0	0	20,600	21,200	21,800	22,900	
227 Refuse Disposal Services	0	0	0	0	-	0	0	0	0	0	0	0	216,300	222,800	229,500	236,400	
228 Utilities (32)	171,500	153,953	198,914	186,240	4.98%	210,000	0	0	0	210,000	0	0	17,500	17,500	18,000	18,100	
229 Repairs and Maintenance	0	9,331	184,689	18,000	-	17,000	0	0	0	17,000	0	0	28,800	28,800	29,700	30,800	
230 Other (33)	55,488	32,742	23,408	22,600	-25.87%	28,000	0	0	0	28,000	0	0	500	500	500	500	
231 Rentals	0	2,519	494,947	9,000	-	500	0	0	0	500	0	0	0	0	0	0	
232 Equipment	562	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	
233 Subtotal - Current Expenses	\$4,171,075	\$4,534,944	\$3,583,958	\$3,107,680	-	\$3,017,400	\$0	\$0	\$0	\$3,017,400	\$0	\$0	\$3,097,500	\$3,190,300	\$3,285,900	\$3,384,400	
234 Subtotal - TRANSFER STATION	\$8,182,440	\$8,719,912	\$4,164,173	\$8,308,782	0.51%	\$7,108,652	\$885,200	\$8,003,852	\$8,003,852	\$8,003,852	\$8,235,500	\$8,469,400	\$8,724,700	\$8,986,600	\$9,248,500	\$9,510,400	
235 H-POWER																	
236 Salaries and Wages (4)	\$202,388	\$94,664	\$153,543	\$238,980	6.84%	\$235,132	\$0	\$235,132	\$235,132	\$242,200	\$249,500	\$257,000	\$264,700	\$272,400	\$280,700	\$289,700	
237 Labor Fringe Costs - Salaries and Wages (5)	44,300	20,800	33,800	52,500	5.82%	0	51,400	51,400	51,400	53,000	54,600	56,200	57,900	59,600	61,300	63,000	
238 Current Expenses	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	
239 Other Contractual Services (6, 34)	0	35,161,657	37,117,546	40,300,000	-	0	0	0	0	0	0	0	0	0	0	0	
240 Consultants	0	0	0	0	-	600,000	0	600,000	600,000	618,000	636,500	655,000	673,300	691,500	709,700	727,900	
241 Attorney Fees	0	0	0	0	-	250,000	0	250,000	250,000	257,500	265,000	272,500	280,000	287,500	295,000	302,500	
242 UAW to LF	0	0	0	0	-	90,500	0	90,500	90,500	93,200	95,900	98,600	101,300	104,000	106,700	109,400	
243 Ash, Residue, Unacceptable Waste, Ferrrous Length, Fees (46)	1,579,370	0	0	0	-	3,060,000	0	3,060,000	3,060,000	3,151,800	3,242,600	3,333,400	3,424,200	3,515,000	3,605,800	3,696,600	
244 H-POWER Service Fee (35)	26,843,402	0	0	0	-	36,000,000	0	36,000,000	36,000,000	37,476,400	38,952,800	40,429,200	41,905,600	43,382,000	44,858,400	46,334,800	
245 H-POWER Capacity Expansion Service Fee (36,46)	5,435,181	0	0	0	-	0	0	0	0	0	0	0	13,853,500	14,209,100	14,564,700	14,920,300	
246 Adjustment	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	
247 Insurance on Building Pass Through	0	0	0	0	-	2,050,000	0	2,050,000	2,050,000	2,111,500	2,174,000	2,236,500	2,300,000	2,362,500	2,425,000	2,487,500	
248 Environmental Testing	0	0	0	0	-	2,200,000	0	2,200,000	2,200,000	2,268,000	2,334,000	2,400,000	2,471,000	2,537,000	2,603,000	2,669,000	
249 Rentals	30,812,828	30,812,828	30,814,298	1,287,000	-65.41%	0	0	0	0	0	0	0	0	0	0	0	
250 Refuse Disposal Charge	14,312,833	14,783,334	10,255	1,287,000	-	0	0	0	0	0	0	0	0	0	0	0	
251 State Disposal Surcharge	100,539	109,720	119,322	113,780	4.20%	113,750	0	113,750	113,750	117,200	120,700	124,300	128,000	131,700	135,400	139,100	
252 Recycling Surcharge (City)	1,471,986	1,287,352	1,589,410	1,663,552	4.17%	1,775,000	0	1,775,000	1,775,000	1,829,300	1,883,700	1,938,100	1,992,500	2,046,900	2,101,300	2,155,700	
253 Other Fixed Charges	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	
254 Other Current Expenses	25,373	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	
255 Supplies (37)	0	521	10,208	7,800	-	9,880	0	9,880	9,880	10,300	10,720	11,140	11,560	11,980	12,400	12,820	
256 Services (38)	0	788	6,377	13,300	-	51,800	0	51,800	51,800	53,400	55,000	56,700	58,400	60,100	61,800	63,500	
257 Other (39)	0	322,206	4,193	7,000	-	24,800	0	24,800	24,800	25,500	26,300	27,100	27,900	28,700	29,500	30,300	
258 Parts	0	0	2,130	7,000	-	4,000	0	4,000	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700	
259 Solid Waste Disposal	0	0	14,574,840	14,732,251	-	14,738,750	0	14,738,750	14,738,750	15,156,500	15,574,250	15,992,000	16,409,750	16,827,500	17,245,250	17,663,000	
260 Equipment	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	
261 Subtotal - Current Expenses	\$80,381,411	\$82,277,804	\$84,050,580	\$58,107,453	-	\$60,808,980	\$0	\$60,808,980	\$60,808,980	\$62,228,830	\$63,648,680	\$65,068,530	\$66,488,380	\$67,908,230	\$69,328,080	\$70,747,930	
262 Subtotal - H-POWER	\$80,620,059	\$82,392,958	\$84,237,723	\$58,359,543	-10.19%	\$81,203,712	\$14,738,750	\$81,203,712	\$81,203,712	\$82,228,830	\$83,248,680	\$84,268,530	\$85,288,380	\$86,308,230	\$87,328,080	\$88,347,930	
263 COSTS OF OPERATION																	
264 Salaries	\$20,224,489	\$1,048,873	\$22,843,422	\$28,257,716	11.70%	\$25,619,223	\$0	\$25,619,223	\$25,619,223	\$26,387,800	\$27,179,500	\$27,994,800	\$28,834,500	\$29,698,000	\$30,585,500	\$31,496,500	
265 Labor Fringe Costs - Salaries and Wages (5)	4,425,100	4,985,500	4,986,100	6,172,400	11.73%	5,582,900	0	5,582,900	5,582,900	5,750,500	5,923,200	6,101,600	6,285,800	6,476,000	6,672,000	6,873,500	
266 Current Expenses	96,843,796	102,045,677	116,684,111	100,749,303	1.33%	110,406,084	(20,802,897)	89,603,187	89,603,187	92,882,653	96,268,353	99,664,553	103,070,753	106,486,953	109,903,153	113,329,353	
267 Equipment	10,297	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	
268 SUBTOTAL - COST OF OPERATION (49)	\$121,900,682	\$127,700,060	\$144,506,633	\$135,178,419	3.82%	\$138,025,307	(\$15,219,737)	\$120,805,570	\$120,805,570	\$123,865,653	\$126,935,733	\$130,015,813	\$133,106,293	\$136,207,273	\$139,318,253	\$142,439,233	
269 COSTS FROM OTHER DIVISIONS																	
270 BUDGET AND FISCAL SERVICES																	
271 Accounting & Fiscal Services (41)	\$45,028	\$87,646	\$83,749	\$87,880	23.54%	\$100,200	\$0	\$100,200	\$100,200	\$103,200	\$106,300	\$109,500	\$112,800	\$116,200	\$119,700	\$123,200	
272 Treasury (41)	4,800	4,800	2,532	4,800	0.00%	4,800	0	4,800	4,800	4,900	5,000	5,200	5,400	5,600	5,800	6,000	

TABLE 6
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Actual and Projected Operating Expenses
Fiscal Years Ending June 30

	Actual (1)			Estimated (1)		Average Annual Growth (2)	Budgeted (1)		Adjustments		Test Year		Projected (3)					Average Annual Growth (2)
	2006	2007	2008	2009	2010		2010	2010	2010	2011	2012	2013	2014	2015				
273 Subtotal - BFS	\$49,828	\$102,448	\$96,281	\$102,690	\$105,000	27.26%	\$105,000	\$0	\$105,000	\$105,000	\$108,100	\$111,300	\$114,700	\$118,200				
274 DEPARTMENT OF INFORMATION TECHNOLOGY																		
275 Applications (41)	\$39,336	\$47,390	\$49,892	\$52,537	\$53,712	10.13%	\$53,712	\$0	\$53,712	\$53,712	\$55,300	\$57,000	\$59,700	\$60,500				
276 DEPARTMENT OF FACILITY MAINTENANCE																		
277 Automotive Equipment Services (41)	\$5,863,436	\$8,304,910	\$8,435,203	\$8,828,014	\$8,894,482	14.61%	\$8,894,482	\$0	\$8,894,482	\$8,894,482	\$9,161,300	\$9,436,100	\$9,718,200	\$10,010,800				
278 Administration (41)	78,352	86,510	61,785	67,503	63,480	7.56%	63,480	0	63,480	66,300	69,200	102,200	103,300					
279 Roads Maintenance (41)	0	0	0	0	0	-	0	0	0	0	0	0	0					
280 Subtotal - DFM	\$5,941,788	\$8,391,320	\$8,496,988	\$8,895,514	\$8,957,962	14.53%	\$8,957,962	\$0	\$8,957,962	\$8,957,962	\$9,257,600	\$9,535,300	\$9,821,400	\$10,116,100				
281 DEPARTMENT OF PARKS AND RECREATION																		
282 Urban Forestry	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0	\$0	\$0	\$0					
283 DEPARTMENT OF ENVIRONMENTAL SERVICES																		
284 Administration (41)	\$395,366	\$359,580	\$326,594	\$311,128	\$319,623	16.87%	\$319,623	\$0	\$319,623	\$319,623	\$338,200	\$357,300	\$377,000	\$397,300				
285 MISCELLANEOUS																		
286 Refinement System Contributions (47)	\$3,052,307	\$3,045,220	\$3,316,000	\$3,415,500	\$3,444,000	3.82%	\$3,444,000	\$0	\$3,444,000	\$3,444,000	\$3,607,300	\$3,775,500	\$3,946,800	\$4,127,300				
287 FICA Tax (47)	1,563,347	1,700,290	1,892,000	1,863,600	2,086,000	5.74%	2,086,000	0	2,086,000	2,086,000	2,148,600	2,213,100	2,279,500	2,347,600				
288 Hawaii Public Employees Health Fund (47)	4,131,723	5,691,090	5,519,000	5,694,600	6,212,000	11.22%	6,212,000	0	6,212,000	6,458,400	6,712,000	6,973,600	7,242,800					
289 Workers Compensation (47)	800,000	900,000	1,000,000	1,030,000	1,100,000	8.79%	1,100,000	0	1,100,000	1,133,000	1,167,000	1,202,000	1,238,100					
290 Unemployment Compensation (47)	0	4,370	8,000	8,200	5,000	-	5,000	0	5,000	5,200	5,400	5,600	5,800					
291 Provision for Salary Adjustment/Accounted Vacation Pay (47)	1,193,032	185,500	1,368,000	1,396,700	168,900	5.22%	168,900	0	168,900	182,900	198,300	204,200	210,300					
292 Provision for Electricity (47)	0	37,620	0	0	50,000	-	50,000	0	50,000	50,000	51,500	53,000	54,600					
293 Provision for Other Energy Costs	0	7,266	0	0	0	-	0	0	0	0	0	0	0					
294 Transfer to General Fund for Debt Service	0	0	0	0	0	-	0	0	0	0	0	0	0					
295 Solid Waste - Existing (48)	6,162,108	7,361,810	7,266,188	8,005,476	10,828,835	9.12%	10,828,835	0	10,828,835	14,023,002	16,786,591	20,280,481	22,754,275	26,297,270				
296 Solid Waste - New (48)	0	0	0	0	4,391,968	-	4,391,968	0	4,391,968	3,953,979	3,583,979	3,163,979	3,853,979					
297 H-P-POWER - Existing (50)	25,039,204	25,018,520	24,979,830	24,928,470	16,576,918	-0.17%	16,576,918	0	16,576,918	24,777,590	31,025,000	31,879,339	34,951,195					
298 H-P-POWER - New (50)	0	0	0	0	263,500	-	263,500	0	263,500	271,400	279,500	287,600	296,500					
299 Transfer to General Fund for Rent (55)	0	0	0	0	0	-	0	0	0	0	0	0	0					
300 Transfer to General Fund for CASE (35)	0	0	0	0	0	-	0	0	0	0	0	0	0					
301 Refuse	3,278,800	3,983,900	4,971,500	5,120,600	5,377,400	16.01%	5,377,400	0	5,377,400	6,377,400	6,598,700	6,794,600	6,952,300					
302 H-P-POWER (51)	3,247,300	4,574,900	5,212,850	5,369,000	3,064,100	16.25%	3,064,100	0	3,064,100	3,694,125	3,945,000	4,063,400	4,183,300					
303 Gases	83,400	83,800	95,480	98,380	70,100	5.63%	70,100	0	70,100	72,200	74,400	76,600	78,900					
304 Recycling	685,000	745,900	849,800	875,400	1,087,300	8.52%	1,087,300	0	1,087,300	1,119,900	1,153,500	1,188,100	1,223,700					
305 Transfer to Other Post Employment Benefits Fund	0	0	0	0	0	-	0	0	0	0	0	0	0					
306 Subtotal - MISC	\$49,558,821	\$53,563,716	\$60,586,048	\$59,397,546	\$58,844,021	6.22%	\$58,844,021	\$0	\$58,844,021	\$69,700,783	\$80,203,396	\$94,541,260	\$98,547,893	\$96,281,545				
307 SUBTOTAL - COSTS FROM OTHER DIVISIONS	\$55,983,139	\$62,483,152	\$68,535,514	\$69,109,415	\$68,600,318	7.27%	\$68,600,318	\$0	\$68,600,318	\$79,467,080	\$90,262,596	\$94,802,160	\$98,219,893	\$107,263,645				
308 TOTAL COST	\$177,488,821	\$190,163,292	\$214,041,147	\$204,288,834	\$204,695,625	4.80%	\$204,695,625	(\$15,219,797)	\$189,475,828	\$200,572,590	\$210,064,549	\$220,887,814	\$228,611,447	\$230,337,898				

Notes
 (1) Source: FY04,05,06 Current Exp Del.PDF, 2006 SAS reports provided by Division, FY 07-FY 10 from "ProposedFY10ICE.pdf"
 (2) Average Annual Growth is defined as the average growth rate for each year over a specified time period.
 (3) 2011-2015 projections based on general inflation estimator of 3%, unless otherwise noted.
 (4) Salary Information from "FY 04, 05, 06 Salary Detail.PDF" provided by Division and "FY 07 to FY10 from "ProposedFY10Del.pdf"
 (5) Based on Employee Fringe Benefit Rate of 21.88% per the City, includes Vacation (6.08%), Sick Leave (6.92%), Holiday (5.00%) and Other (3.78%).
 (6) Includes Office supplies, Cleaning and Toilet supplies, Computer supplies, Meals, Educational, Recreational and Scientific Supplies, Gas, Maps and Signs, Photography supplies, Safety Supplies, Supplies not Classified, Supplies on Inventory Individually, Hardware, Parts, Tools, Uniforms and Light Bulbs.
 (7) Includes Pest Control, Grounds Maintenance, Other Commercial Services, Transportation of Things, Repairs and Maintenance - Motor Vehicle/Office Furniture/Other equipment/Computer Equipment.
 (8) Other Contracted Services breakout data source: "2009 breakout.pdf" provided by Division. Breakout does not exactly match Other Contractual Services expense from SAS reports. Combined with 04 3039 Recycling Services and 04 3049 Other Services/Not Classified where applicable.

Table 8
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Estimated, Budgeted and Projected Debt Service
Fiscal Years Ending June 30
(\$mm)

NOTE: This table was not used in the 2010 analysis.

	Estimated		Budgeted			Projected		
	2009	2010	2011	2012	2013	2014	2015	
26 Total Debt Service								
27								
28 Total Existing Annual Debt Service	\$32,934	\$27,506	\$14,023	\$16,796	\$20,280	\$22,754	\$26,287	
29 Total Proposed Annual Debt Service	1,310	7,640	19,130	30,580	31,310	32,040	26,760	
30 Total Annual Debt Service	\$34,244	\$35,146	\$33,153	\$47,376	\$51,590	\$54,794	\$53,047	

Notes

- (1) H-POWER General Obligation Bonds issued in 1990 and 1999, Operating Fund General Obligation Bonds issued in 1992, 1993, 1997, 1999 and 2001.
- (2) See Table 7 CIP for uses of bond funds. Bond issuance expense of 2% included in annual payment.

Table 9
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Actual, Estimated, Budgeted and Projected Operating Statement
Fiscal Years Ending June 30

	Actual			Estimated		Budgeted		Projected				
	2006	2007	2008	2008	2010	2011	2012	2013	2014	2015		
1 OPERATING REVENUES (1)												
2 Basic Residential User Fee (2)	\$0	\$0	\$0	\$0	\$0	\$54,004,700	\$54,054,700	\$55,304,700	\$55,754,700	\$56,204,700		
3 Front End Loader User Fee	0	0	0	0	0	0	0	0	0	0		
4 Release General Operating Account - 250	12,522,000	12,787,200	11,954,572	12,945,425	12,346,316	9,208,720	7,690,920	4,157,930	4,174,330	4,190,930		
5 H-POWER - Solid Waste Disp. Fac. Account - 885	74,348,771	75,373,990	80,063,855	67,018,000	67,250,393	68,653,900	94,074,800	107,161,200	108,431,200	109,739,400		
6 H-POWER Other Revenue	24,294,334	21,881,500	21,881,500	0	0	0	0	0	0	0		
7 Glass Recycling - 206	500,000	300,000	605,527	178,000	800,000	450,000	450,000	450,000	450,000	450,000		
8 Recycling Surcharges - Recycling Account - 209	5,883,155	5,886,800	6,028,338	5,833,000	5,814,765	5,602,200	7,730,900	8,165,600	8,167,800	8,174,700		
9 Subtotal Operating Revenues	\$117,529,280	\$116,239,490	\$98,852,092	\$85,974,425	\$86,212,075	\$138,320,520	\$164,741,320	\$175,238,430	\$176,977,830	\$178,758,530		
10 OTHER REVENUES												
11 Interest Income (3)	\$0	\$0	\$0	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000		
12 Subtotal Other Revenues	\$0	\$0	\$0	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000		
13 TOTAL REVENUES	\$117,529,280	\$116,239,490	\$98,852,092	\$86,974,425	\$87,212,075	\$139,320,520	\$165,741,320	\$176,238,430	\$177,977,830	\$179,758,530		
14 TRANSFERS												
15 Transfer from General Fund (4)	\$56,957,318	\$73,943,712	\$115,389,055	\$117,314,409	\$102,203,753	\$80,852,070	\$44,323,229	\$44,648,384	\$50,833,617	\$60,579,088		
16 Subtotal Transfers	\$56,957,318	\$73,943,712	\$115,389,055	\$117,314,409	\$102,203,753	\$80,852,070	\$44,323,229	\$44,648,384	\$50,833,617	\$60,579,088		
17 TOTAL REVENUES	\$174,486,598	\$190,183,202	\$214,241,147	\$204,288,834	\$189,415,828	\$220,172,590	\$210,064,549	\$220,887,814	\$228,811,447	\$240,337,618		
18												
19 TOTAL REVENUES	\$174,486,598	\$190,183,202	\$214,241,147	\$204,288,834	\$189,415,828	\$220,172,590	\$210,064,549	\$220,887,814	\$228,811,447	\$240,337,618		
20												
21 REFUSE DIVISION OPERATING EXPENSES (5)												
22 Administration	\$1,103,926	\$1,457,470	\$1,665,380	\$1,849,325	\$1,935,722	\$1,935,722	\$1,994,000	\$2,054,000	\$2,115,700	\$2,179,300		
23 Inspection and Investigation	270,865	329,589	293,521	474,480	497,852	497,852	528,400	544,300	560,500	577,400		
24 Recycling	3,340,414	7,712,707	12,764,293	18,289,303	15,932,752	15,832,725	16,312,953	16,704,553	17,107,653	17,622,653		
25 Glass Recycling	455,628	489,236	645,702	1,115,515	1,413,912	1,413,912	1,456,400	1,500,200	1,545,200	1,591,500		
26 Collection - Honolulu	10,051,089	10,228,778	11,123,552	15,298,124	11,632,544	11,832,544	12,306,900	12,678,800	13,059,200	13,439,500		
27 Collection - Rural	8,538,580	8,811,434	10,481,982	13,037,953	12,289,235	12,289,235	12,658,300	13,038,200	13,429,500	13,820,200		
28 Maintenance and Waste Diversion	1,417,234	1,552,570	1,614,890	2,318,932	2,277,652	2,277,652	2,345,900	2,416,400	2,488,800	2,563,400		
29 Landfill - Contractor Operated	7,056,228	6,026,386	13,514,417	16,087,082	20,305,854	20,305,654	21,013,200	10,823,800	11,356,100	11,579,700		
30 Landfill - Closed	455,159	0	0	0	0	0	0	0	0	0		
31 Transfer Station	8,182,440	8,719,312	8,164,173	8,308,782	8,003,652	8,003,652	8,233,500	8,480,400	8,734,700	8,996,600		
32 H-POWER	80,828,099	82,392,568	84,237,723	58,399,943	46,516,382	46,516,382	43,308,400	58,014,300	58,574,800	61,182,000		
33 TOTAL OPERATING EXPENSES	\$121,509,682	\$127,700,050	\$144,505,633	\$135,179,419	\$120,805,510	\$120,805,510	\$119,801,953	\$125,985,653	\$129,591,753	\$133,084,253		
34												
35 OTHER CITY AGENCIES EXPENSES (5)												
36 Budget and Fiscal Services	\$48,828	\$102,446	\$96,281	\$102,680	\$105,000	\$105,000	\$108,100	\$111,300	\$114,700	\$118,200		
37 Department of Information Technology	39,336	47,390	49,692	52,537	53,712	53,712	55,300	57,000	58,700	60,500		
38 Department of Facility Maintenance	5,841,788	8,381,320	8,486,988	8,925,514	8,987,982	8,987,982	9,257,600	9,535,300	9,821,400	10,116,100		
39 Department of Parks and Recreation	0	0	0	0	0	0	0	0	0	0		
40 Department of Environmental Services	395,366	358,280	326,504	631,128	619,623	619,623	638,200	657,300	677,000	697,300		
41 Miscellaneous	49,585,821	53,593,716	60,566,049	50,397,546	56,844,021	69,700,783	80,203,396	84,541,260	88,547,893	96,261,545		
42 TOTAL OTHER CITY AGENCIES EXPENSES	\$55,983,139	\$62,463,152	\$69,535,514	\$69,109,415	\$68,610,318	\$79,467,080	\$90,262,596	\$94,902,150	\$98,219,693	\$107,253,645		
43												
44 TOTAL EXPENDITURES	\$177,486,821	\$190,183,202	\$214,041,147	\$204,288,834	\$189,415,828	\$200,272,590	\$210,064,549	\$220,887,814	\$228,811,447	\$240,337,698		
45												
46 NET REVENUES (Operating Reserves)	(\$3,000,243)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		

Table 9
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division
Actual, Estimated, Budgeted and Projected Operating Statement
 Fiscal Years Ending June 30

	Actual			Estimated		Budgeted		Projected				
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
47												
48	NUMBER OF EQUIVALENT											
49	SINGLE-FAMILY HOUSEHOLDS											
50	Single-Family Households	174,989	176,979	179,039	175,989	177,489	178,989	180,489	181,989	183,489		
51	Apartments (SFH Equivalent)	12,232	12,232	12,232	12,232	12,233	12,233	12,233	12,233	12,233		
52	Multi-Family (SFH Equivalent)	32,184	32,184	32,184	32,184	32,520	32,880	33,240	33,600	34,320		
53	Non-Profit/Parke (SFH Equivalent)	3,348	3,348	3,348	3,348	3,348	3,348	3,348	3,348	3,348		
54	Highway	1,956	1,956	1,956	1,956	1,960	1,960	1,960	1,960	1,960		
55	Stake	404	404	404	404	400	400	400	400	400		
56	Total Equivalent Single Family Households (6)	225,093	227,103	229,133	226,113	227,950	229,810	231,670	233,530	235,390		
57	NET COST / HH / MONTH (7)	\$21.09	\$27.13	\$41.97	\$43.24	\$37.36	\$22.10	\$15.94	\$15.93	\$18.00		
58	Percent Change from Prior Year		28.7%	54.7%	3.0%	-13.6%	-40.8%	-27.9%	-0.1%	13.0%		
59												
60												
61												
62												
63	Notes											
64	(1) See Table 5: Summary of Projected Revenues for more detail.											
65	(2) Assume \$29/month user fee starting in FY 2011.											
66	(3) R. W. Beck assumption.											
67	(4) FY 2006 is the actual transfer amount. FY 2007 and beyond equals the amount of additional revenues from the General Fund needed to support Division operations.											
68	(5) See Table 6: Actual and Projected Operating Expenses for more detail.											
69	(6) Based on Customer Accounts on Table 2 and customer equivalent assumptions from Table 1.											
70	(7) Equals Transfers from General Fund divided by Total Equivalent Single Family Households and 12 months. Starting in FY 2011, equals the amount not being recovered by user fee of \$25 per HH per month.											
71	The figure shown represents the shortfall on an equivalent SFH per HH/month basis after taking into account the \$25/HH/month user fee.											

TABLE 6
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Actual and Projected Operating Expenses
 Fiscal Years Ending June 30

	Actual (1)		Estimated (1)		Annual Growth (2)	Budgeted (1)		Adjustments		Test Year	Projected (3)		
	2006	2007	2008	2009		2010	2010	2010	2011		2012	2013	2014
	Average												
	06 - 09												
	Average												
	10 - 15												
	Annual Growth (2)												
(9) Includes Motor Poles, Endbarns and Taps, Service and Meat Awards, Postage, Travel Expenses, General Construction, Membership and Registration, Subscriptions, Auto Allowances, Parking Fees, Bus Fare and Other Fixed Charges.													
(10) Includes MV-Plate Emblem, Telephone, Auto Allowances, and Parking Fees.													
(11) Includes Office Supplies, Other Food, Education Supplies, Maps and Signs, Photography Supplies, Supplies not Classified, Parts, Linens, and Postage. \$1M assumed in 2009 for replacement cars.													
(12) Includes Other Communal Services, Transportation of Things, Advertising and Publication of Notices, Printing and Binding, Hardware and Photography Services.													
(13) Includes Rentals of Motor Vehicles, and Other Rentals.													
(14) Includes Travel Out of State, Bus Fare, Membership and Registration, Subscriptions, Auto Allowances, and Parking Fees.													
(15) Includes Advertising and Publication of Notices, Meals and Auto Allowances.													
(16) Includes Office supplies, Cleaning and Toilet Supplies, Meals, Maps and Signs, Photography supplies, Safety supplies, Supplies not classified, Supplies on inventory individually, Engines, Transmission, Other motor vehicle parts, Tools, Hardware, Computer Equipment and Light bulbs.													
(17) Includes Telephone, Transportation, Printing and Binding, Electricity, Water, Sewer, Service a Meat Awards, MV-Plate Emblem, Fuel Control Repair and Maintenance/Other Equipment, Plumbing, Grounds and Maintenance, Medical Services, Other Prof. Services & Ref. Disposal Services													
(18) Includes Membership and Registration Fees, Other Contractual Services, Lab Analysis, Inmate/Vendor Claims, Other Fixed Charges, Traffic Safety Program, Auto Allowances, Other Services not Classified and Temp Total Disability.													
(19) Includes Office Supplies, Cleaning & Toilet Supplies, Meals, Diesel, Photo & Computer Supplies, Horticulture & Safety Supplies, Bus Soap, Supplies not Classified, Supplies on Inventory, Aggregate, Bitumid, Concrete, Building & Construction Materials, Light Bulbs, Postage, Computer Equipment & The Impmat/In													
(20) Includes Air Conditioning, Engineering and Architectural Services, Pest Control, Other Services not Classified, Printing and Binding, Telephone, Other Communal Services, Electricity, Repair and Maintenance, Electrical, General Construction and Other Repair to Building													
(21) Includes Office Supplies, Cleaning and Toilet Supplies, Medical Dental Supplies, Maps and Signs, Safety Supplies, Welding Supplies, Gak and Aluminum Sheet, Cap screws, Supplies not Classified, Supplies on Inventory Individually, Horticulture Supplies, Lumber, Parts-Vehicles/Furniture/Other, Bus Degreaser and Cleaning Chemicals Other Electric Supplies, Light Bulbs, Hydraulic Oil, Fringe, Couplings, Gauges, Paint Supplies, Hardware, Masonry and Other Building Materials and The Impmat.													
(22) Includes Other Professional Services and Repairs, Alarm Services, Grounds Maintenance, Pest Control, Other Services Not Classified, Painting and Maintenance.													
(23) Includes Plumbing, Telephone, Electricity, Water, and Sewer.													
(24) Includes Membership and Registration Fees, Auto Allowances, Parking Fees, and Temp Total Disability.													
(25) Includes AV-A/DJ, CPE, Seal, Meals, and Safety Supplies.													
(26) Includes Advertising and Publication of Notices, Other Services not Classified, telephone, Electricity, Water, Sewer and Attorney Fees and Printing and Binding.													
(27) Includes Other Rentals Fees for Memberships and Registration, Parking Fees, Other Fixed Charges and Auto Allowances.													
(28) Lumber/ \$10n Total Operating Costs includes salaries and wages, labor fringe costs, and current expenses.													
(29) Includes Telephone, Electricity, Water, and Sewer.													
(30) Includes Office Supplies, Other Nurs Bldg Supplies, Cleaning and Toilet Supplies, Hydraulic Oil, Other Fuel, Medical Dental, Meals, Unleaded Gas, Chemical Supplies, Maps and Signs, Safety Supplies, Welding Supplies, TIG and CR-G, Galvanized and Aluminum sheets, Cap screws, Park, Supplies not Classified, Fireworks, Lumber, Other Building Materials, Bitumid, Tiles, Batteries, Transmission, Light bulbs, Other Electrical Supply, The Impmat.													
(31) Includes Other Professional Services, Other Contractual Services, Grounds Maintenance, Pest Control, Recycling Services, Tree Trimming, Other Services Not Classified, Advertising and Public Notice													
(32) Includes Telephone, Electricity, Water, and Sewer.													
(33) Includes Temp Total Disability, Rentals, Membership and Registration Fees, General Construction, Painting, Other Repairs to Building, Interest Vendor Claims, Auto Allowances, Parking Fees, Oil Waste Removal, and Other Fixed Charges.													
(34) Includes HRSV Service Fee, estimated at \$38,524,000 for FY 2007. FY 2007 also includes \$2,065,700 for Environmental Training.													
(35) Source: FY 2010 TDoc.pdf.													
(36) Based on average \$10n in FY 2009 of \$48.73 times the H-POWER Capacity Expansion (tem) and general inflation of 3 percent per year.													
(37) Includes Office Supplies, Cleaning and Toilet Supplies, Maps, Educational Supplies, Safety Supplies, Supplies not Classified, Individual Supplies on Inventory.													
(38) Includes Other Contractual Services, Other Services not Classified, Postage, Telephone, Other Communication Services, Travel, Printing and Binding, Janitorial Services and Pest Control.													
(39) Includes Repair and Maintenance, Rentals, Auto Allowances, Other Fixed Charges, Membership Fees and Registration and Fraud Charges.													
(40) 2006 Total does not match SAS reports total due to addition of fringe and the variance between the SAS Other Contractual Services expense and the Other Contractual Services breakout provided by the Division. Variance not including fringe is roughly .5%.													
(41) Source: FY 2010 Volcano opening program budget FY 2010.pdf													
(42) Based on 164,220 cars with an interest rate of 5% over a period of 10 years.													
(43) Based on 158,400 cars with an interest rate of 5% over a period of 10 years.													
(44) Based on a biannual expense for LF expansion and escalated at the assumed annual growth rate of 3 percent. Data from Contract No. C-44889, amendment, 6 PDF.													
(45) Not included in FY 2007 or FY 2008 budgets, but per Division, should be at projected at \$390,000.													
(46) Source: FY 2010 H-POWER Checkada *													
(47) Source: FY 2010 TDoc(5).pdf													
(48) SOURCE: Data information for Fiscal Years 05 - 08 from redacted.pdf, FY 08 through 13 from DEBT 04 28 09 Revised 042309.xls and WHPPOWER.xls (July 2009).													
(49) New sold waste debt service is for all other projects in CIP not related to H-POWER and H-POWER Capacity Expansion, WHPPOWER.xls (July 2009).													
(50) H-POWER debt service is for APC and buy back. Debt service ends in FY 2010. WHPPOWER.xls (July 2009).													
(51) CASE contribution in FY 2012 increased by 25% to coincide with estimated 25% increase in tabular waste savings from H-POWER capacity expansion.													

Table 7
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Projected CIP and Sources of Funds
Fiscal Years Ending June 30
(\$'000)

	Estimated (1)		Projected (2)				
	2009	Budgeted (1) 2010	2011	2012	2013	2014	2015
1 Projected Capital Expenditures (\$'000)							
2 Renewals, Replacements & Additions - Equipment (3)	\$0	\$12,433	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
3 Subtotal - Equipment	\$0	\$12,433	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
4							
5 Renewals, Replacements & Additions - Facilities							
6 Dispose/ Projects							
7 ISWMP Update	\$0	\$0	\$500	\$0	\$0	\$0	\$0
8 Kapaekalaeo Landfill Gas Flare System	0	700	325	0	0	0	0
9 H-POWER Purchase (4)	44,000	0	0	0	0	0	0
10 H-POWER APC (5)	10,000	0	0	0	0	0	0
11 H-POWER Capacity Expansion	40,000	142,853	142,853	0	0	0	0
12 Closure Projects							
13 Waipahu Ash Landfill Closure	0	0	0	0	0	0	0
14 Waipahu Incinerator Site Closure	500	650	650	0	0	0	0
15 General Facilities							
16 Refuse Facilities: Emergency Back-Up Power Improvements	0	0	0	0	0	0	0
17 Wahiawa Yard - Vehicle Wash Facility	0	0	1,100	0	0	0	0
18 Wahiawa Yard - Vehicle Wash Facility	0	125	1,076	0	0	0	0
19 Solid Waste Weighing Facility	501	0	0	0	0	0	0
20 Refuse Convenience Center Improvements	751	0	0	0	0	0	0
21 Oahu Secondary Landfill Site Selection	0	500	0	0	0	0	0
22 Refuse Facility Improvements at Various Locations	0	1,150	1,150	1,150	1,150	1,150	1,150
23 Transfer Stations (TS)							
24 Kawaiika TS Recycling Improvements	0	300	1,575	0	0	0	0
25 Kapaia TS Road Reconstruction	701	0	0	0	0	0	0
28 Keolu Transfer Station Fuel Station Renovation	951	0	0	0	0	0	0
26 Subtotal - Facilities	\$97,404	\$146,278	\$149,229	\$1,150	\$1,150	\$1,150	\$1,150
27 Projected Capital Funding (\$'000)							
28 H-POWER Expenditures (6)							
29 Bond Financed	\$84,000	\$142,853	\$142,853	\$0	\$0	\$0	\$0
30 Fund Balance Financed	10,000	0	0	0	0	0	0
31 Total H-POWER Expenditures	\$94,000	\$142,853	\$142,853	\$0	\$0	\$0	\$0
33 Total Operating Fund (Solid Waste) Expenditures	3,404	15,959	15,376	10,150	10,150	10,150	10,150
34 Total Capital Expenditures	\$97,404	\$158,711	\$158,229	\$10,150	\$10,150	\$10,150	\$10,150
36 Sources of Funds for Capital Expenditures							
37 Solid Waste Improvement Bond Fund (WB)	\$97,404	\$158,711	\$158,229	\$10,150	\$10,150	\$10,150	\$10,150
38 General Improvement Bond Fund (GI)	0	0	0	0	0	0	0
39 Less Capital Expenditure Paid by separate H-POWER Debt Sch.	(94,000)	(142,853)	(142,853)	0	0	0	0
40 Total Bonds Issued	\$3,404	\$15,858	\$15,376	\$10,150	\$10,150	\$10,150	\$10,150
42 Cumulative Bonds Issued	\$21,476	\$37,334	\$52,710	\$62,860	\$73,010	\$83,160	\$93,310

Table 7
CITY AND COUNTY OF HONOLULU
Department of Environmental Services
Refuse Division
Projected CIP and Sources of Funds
Fiscal Years Ending June 30
(\$'000)

Estimated (1)		Budgeted (1)		Projected (2)		
2009	2010	2011	2012	2013	2014	2015

- Notes
- (1) SOURCE: Refuse Division CIP.xls
 - (2) FY 2011 - FY 2015 per Refuse Division 8-year CIP Budget.
 - (3) FY 2009 based on approved Equipment CIP per Division. FY 2010-2015 per Division estimate.
 - (4) H-POWER purchased in FY 2009 for \$44 M; financed using \$10 million in cash and \$34 million in bonds.
 - (5) APC retrofit financed by bonds per the Division.
 - (6) Includes H-POWER purchase and APC retrofit in 2009 and expansion in 2010-2011.

Table 8
CITY AND COUNTY OF HONOLULU
 Department of Environmental Services
 Refuse Division
 Estimated, Budgeted and Projected Debt Service
 Fiscal Years Ending June 30
 (\$,000)

NOTE: This table was not used in the 2010 analysis.

	Estimated		Projected				
	2009	2010	2011	2012	2013	2014	2015
1 Existing Debt Service (1)							
2 H-POWER Fund	\$24,928	\$16,577	\$0	\$0	\$0	\$0	\$0
3 Operating Fund	8,005	10,929	14,023	16,796	20,280	22,754	26,287
4 Total Current Annual Debt Service	\$32,934	\$27,506	\$14,023	\$16,796	\$20,280	\$22,754	\$26,287
5							
6 New Long Term Bond Debt Service (2)							
7 H-POWER Fund							
8 2008 Series A Issue	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9 2009 Series A Issue		6,080	6,080	6,080	6,080	6,080	6,080
10 2010 Series A Issue			10,340	10,340	10,340	10,340	10,340
11 2011 Series A Issue				10,340	10,340	10,340	10,340
12 2012 Series A Issue					0	0	0
13 2013 Series A Issue						0	0
14 2014 Series A Issue							0
15 Subtotal - New H-POWER Long Term Debt Service	\$0	\$6,080	\$16,420	\$26,760	\$26,760	\$26,760	\$26,760
16							
17 Operating Fund (Solid Waste)							
18 2008 Series A Issue	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310	\$1,310
19 2009 Series A Issue		250	250	250	250	250	250
20 2010 Series A Issue			1,150	1,150	1,150	1,150	1,150
21 2011 Series A Issue				1,110	1,110	1,110	1,110
22 2012 Series A Issue					730	730	730
23 2013 Series A Issue						730	730
24 2014 Series A Issue							730
25 Subtotal - New Solid Waste Long Term Debt Service	\$1,310	\$1,560	\$2,710	\$3,820	\$4,550	\$5,280	\$6,010
26							
27 Additional WTE Capacity Debt Service							
28 2008 Series A Issue							
29 2009 Series A Issue							
30 2010 Series A Issue							
31 2011 Series A Issue							
32 2012 Series A Issue							
33 2013 Series A Issue							
34 Subtotal - New Solid Waste Long Term Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0