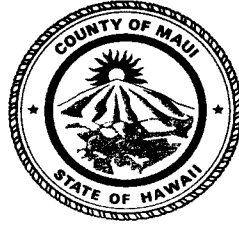


ALAN M. ARAKAWA  
Mayor

KYLE K. GINOZA, P.E.  
Director

MICHAEL M. MIYAMOTO  
Deputy Director



MICHAEL RATTE  
Solid Waste Division

ERIC NAKAGAWA, P.E.  
Wastewater Reclamation  
Division

**COUNTY OF MAUI  
DEPARTMENT OF  
ENVIRONMENTAL MANAGEMENT**  
2200 MAIN STREET, SUITE 100  
WAILUKU, MAUI, HAWAII 96793

April 20, 2015

Mr. Sananda K. Baz *SKB*  
Budget Director, County of Maui  
200 South High Street  
Wailuku, Hawaii 96793

Honorable Alan M. Arakawa  
Mayor, County of Maui  
200 South High Street  
Wailuku, Hawaii 96793

For Transmittal to:

Honorable G. Riki Hokama  
Chair, Budget and Finance Committee  
Maui County Council  
200 South High Street  
Wailuku, Hawaii 96793

Dear Chair Hokama:

**SUBJECT: REQUESTS/QUESTIONS FROM THE APRIL 8, 2015 MEETING (EM-2) (BF-1)**

Please find the requested response to the questions from the April 8, 2015 Budget and Finance Meeting with regards to the Department of Environmental Management.

1. *Explain why the reclaimed water connection fee is greater for South Maui than West Maui (account 3490, Fees – Reclaimed Water Connection, page 30 of Ramseyer version of Appendix B, Revenues – Fees, Rates, Assessments and Taxes, Fiscal Year July 1, 2015 to June 30, 2016). (EC)*

The rates are based on the infrastructure costs to establish the distribution system. The costs in South Maui were higher than West Maui hence the higher connection fees for the South Maui area. The connection fees are intended to recover the infrastructure costs. As the West Maui distribution system grows, so will the connection fees.

2. *Provide a comparison of sewer collection fees for each of Hawaii's four counties. (MW)*

Attached is a spreadsheet summarizing the Sewer User Fees for the other counties.

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COUNTY COUNCIL

APPROVED FOR TRANSMITTAL

*Alan M. Arakawa* 4/20/15  
Mayor Date

3. *Provide the approximate annual tonnage of construction material waste received at the Maui Demolition & Construction Landfill in Maalaea and the anticipated increase in the annual tonnage at the Central Maui Landfill should Maui Demolition & Construction Landfill cease its operations. Further, provide a status of the permit for the Maui Demolition & Construction Landfill. (MW)*

SWD accessed the private C&D landfill's Annual Report data filed with the State of Hawaii- DOH. The average tonnage for years 2011 to 2015 was 42,199 tons of C&D. Concerning the SUP condition clarification provided by the Maui Planning Commission, as well as discussions with DOH, it is estimated the private C&D landfill may shutdown in early 2016. The anticipated increase in the annual tonnage is in the attachment for Questions 4 & 10. The SWD estimates we will need four (4) months of funding and will receive 4 months of revenue. The Budget Director will adjust the proposed FY16 budget to reflect these estimates. If any additional information is needed regarding the status of the C&D SUP permit, please request that from the Planning Department.

4. *Explain how your Department calculated the \$2.73 million in additional estimated revenues for the disposal of construction and demolition waste at the Central Maui Landfill. Provide a breakdown of the estimated expenditures related to this disposal. (MW)*

SWD accessed the private C&D landfill's Annual Report data filed with the State of Hawaii- DOH. We averaged years 2011 to 2015 and applied appropriate rates (not including \$10 /Ton Recycling Fee- that has its own line item for FY16 overall rates). Expenses were estimated to increase by 28% (42,199 C&D tons/150,000 normal MSW tons) that was based on the additional tonnage over our projected tonnage without C&D. Please see response for Question 3 and the attachment for Questions 4 & 10 for details.

5. *Provide a breakdown of landfill cover material purchased in FY2014 and FY 2015, to date. Include the cost per ton and annual tonnage for each type of material purchased. (MW)*

Please see attachment for Question 5.

6. *In recent community meetings, your Department stated that continuing the three-can plan would cost an additional \$70 per account per year. Explain how your Department calculated this cost. (DC)*

The \$70 per account per year cost estimate was a preliminary estimate that was provided by the Landfill Diversion Section of the Solid Waste Division for island-wide implementation. Attached are details of that preliminary estimate. Please note that there are economies of scale for implementing an island-wide system and the residents would bear a higher cost for a partial implementation, such as what is being contemplated in Maui Meadows. The Solid Waste Division has since developed a more thorough analysis based on the data collected, which shows greater resource allocation to equipment and public education and outreach.

7. *Your Department has proposed establishing a new fee of \$22 per account per month to support the continuation of the three-can plan. Explain how your Department calculated this fee. (DC)*

Please see attachment for Questions 7 & 8.

8. *Provide a breakdown of the operational costs for the three-can plan. Include the amount budgeted for the plan, the amount expended for FY 2015 to date, and the amount encumbered. Further, provide the savings realized by discontinuing the plan on February 1, 2015. (DC)*

The County budgeted \$67,500 for the pilot 3-Can Plan for FY15. A total of \$24,284 was expended to process recyclables and ship to a recycler. In FY2015, initially a total of \$44,000 was encumbered to process recyclables. The remainder of the budget will be used to remove the Blue and Green cans from the curb, clean, and repurpose. Please see attachment for Questions 7 & 8 for details.

9. *Provide a breakdown of the tonnage of waste, recyclables, and green waste collected through the three-can plan. (DC)*

Please see attachment for Question 9.

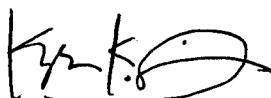
10. *Provide a breakdown of additional revenues anticipated from the proposed changes to Solid Waste Management Fund fees and explain how the additional revenues will be expended by the Solid Waste Division. (MW)*

The combined additional revenue of \$2,729,270 reduces the amount of subsidy necessary from the General Fund to SW Fund following certification of the CAFR for FY16. Please see attachment for Questions 4 & 10 for details.

Account Type	Rate Increase Over Current Rate	Estimated Annual Tons	Estimated Additional Revenue
Refuse Disposal Fee	\$14.40	102,866	\$1,481,270
Refuse Collection Fee	\$4.00	26,000	\$1,248,000
		Total:	\$2,729,270

Should you have any questions, please contact me at ext. 8230.

Sincerely,



KYLE K. GINOZA, P.E.  
Director of Environmental Management

Enclosures: Sewer User Fees Fiscal Year 2016  
Solid Waste Division's FY2016 Proposed Rates & Fees and Revenue Calculation  
Question 5 Cover Material Purchased in FY2014 and FY 2015  
SWD Curbside Pilot Project Cost Evaluation  
Question 7 & 8: FY15 Cost Estimate to Add on 3 Can Plan  
Question 9: Tonnages Collected Through 3-Can Plan

cc: Michael Ratte, Solid Waste Division Chief  
Michael Kehano, Solid Waste Division Assistant Chief

**SEWER USER FEES  
Fiscal Year 2016**

	-----MAUI-----		OAHU	KAUAI	HAWAII
	Current	Proposed			
	Eff 7/1/10	7/1/15	7/1/15	7/1/14	7/1/02
<b>RESIDENTIAL</b>					
<i>Monthly charge per dwelling unit</i>					
Single Family					
Base Charge	\$ 26.50	\$ 27.90	\$ 77.55	\$ 60.09	\$ 27.00
Water Usage Charge per 1,000 gallons					
<i>Applies to first 9,000 gallons of water consumed</i>	\$ 3.55	\$ 3.75		--	--
Maximum charge	\$ 58.45	\$ 61.65	no maximum	\$ 60.09	\$ 27.00
Total water consumption less 20% irrigation factor			\$ 4.63		
Multi-Family					
Base Charge	\$ 26.50	\$ 27.90	\$ 53.32	\$ 50.03	\$ 27.00
Water Usage Charge					
<i>Applies to first 6,000 gallons of water consumed</i>	\$ 3.55	\$ 3.75		--	--
Maximum charge	\$ 47.80	\$ 50.40	no maximum	\$ 50.03	\$ 27.00
Total water consumption less 20% irrigation factor			\$ 4.63		
Flat rate per dwelling unit:					
Haliimaile	\$ 12.55	\$ 13.25			
Res'l Carehomes	\$ 86.63	\$ 90.50			
Single Family (Private water system)	\$ 51.70	\$ 54.15	\$ 110.89		
Multi-Family (Private water system)	\$ 42.10	\$ 44.20	\$ 86.65		
<b>NON RESIDENTIAL</b>					
Monthly Base Charge Per Water Meter	\$ 15.30	\$ 16.10	\$ 77.55	\$ 10.70	\$ 22.00
Volume charge per 1,000 gallons:					
Single Meter: Commercial, Government, Religious	\$ 5.40	\$ 5.60		\$ .71-\$17.04	\$ 4.05
Hotel	\$ 7.47	\$ 7.70	extra strength surcharge applies	\$ 11.13	\$ 4.05
Industrial/Food Service	\$ 9.20	\$ 9.55	extra strength surcharge applies	\$ 17.00	\$ 4.05
Total consumption less 20% irrigation factor			\$ 4.63		
Dual Meter: Commercial, Government, Religious	\$ 6.77	\$ 7.20	\$ 4.63	\$7.10-\$22.83	\$ 4.05
Hotel	\$ 9.90	\$ 10.40	extra strength surcharge applies	\$ 17.20	\$ 4.05
Industrial/Food Service	\$ 11.80	\$ 12.60	extra strength surcharge applies	\$ 22.77	\$ 4.05

## SOLID WASTE DIVISION'S FY2016 PROPOSED RATES & FEES AND REVENUE CALCULATION

FOR QUESTIONS 4 & 10 EM-2 BF-1 4/10/2015

Increase landfill tipping fees by \$14.40/ton, refuse collection fees by \$4/month,

### COSTS BY PROGRAM PROPOSED FY16

	LANDFILL	COLLECTION	DIVERSION	MAV (3)	TOTAL
salaries and wages	2,179,418	2,435,152	233,222	0	4,847,792
operations	5,222,052	1,487,193	4,102,601	407,711	11,219,557
equipment	1,985,500	1,260,000	0	0	3,245,500
interfund	120,000	220,000	0	0	340,000
administrative costs (1)	7,979,687	5,065,432	438,744	209,500	13,693,363
<b>TOTAL</b>	<b>17,486,657</b>	<b>10,467,777</b>	<b>4,774,567</b>	<b>617,211</b>	<b>33,346,212</b>

### REVENUES FY16 (Proposed Rates)

	rate/mo	rate	units	quantity	LANDFILL	COLLECTION	DIVERSION	MAV	TOTAL	FY16 ESTIMATED REV
misc trash		80	tons	102,866	8,229,288				8,229,288	
fog		50	tons	5,626			281,293		281,293	
biosolids		83	tons	633			52,576		52,576	
Construction & Demolition		80	tons	22,199	1,775,920				1,775,920	
Clean Earthen Material/Concrete Rubble (no protruding re-bar)		65	tons	6,185	402,025				402,025	
Clean Earthen Material/Concrete Rubble (no re-bar)		40	tons	13,815	552,600				552,600	2,730,545 C&D
Crushed Glass +/- 2"		0	tons		0				0	
recycling surcharge (2)		10	tons	148,394			1,483,945		1,483,945	
greenwaste		20	tons	10,885			217,701		217,701	
residential tipping fee			vehicle	84,962	0				0	
associated costs (4)			lot	(180,154)	0				0	12,995,348 LF REV
residential collection	22	264	accts	26,000		6,864,000			6,864,000	
appliance pick up fee			each	2,000		0			0	
associated costs (4)			lot	(2,500)		0			0	6,864,000 Ref REV
transfer from WWRD		83	allow	23,831			1,977,982		1,977,982	1,977,982 TRANS IN
<b>TOTAL</b>					<b>10,959,833</b>	<b>6,864,000</b>	<b>4,013,497</b>	<b>0</b>	<b>21,837,330</b>	<b>21,837,330</b>
<b>SURPLUS(DEFICIT)</b>					<b>(6,526,824)</b>	<b>(3,603,777)</b>	<b>(761,071)</b>	<b>(617,211)</b>	<b>(11,508,882)</b>	<b>34.51% Subsidy</b>

(1) Administrative Costs includes DEM contribution, division admin, debt service, overhead, ers, eutf (health), opeb (obligation to post employment benefits)

(2) Recycling Surcharge assessed on tipping fees, fog, biosolids & greenwaste

(3) MAV Payroll is housed in Highway Beautification Fund 101160

(4) Associated Costs for new programs is shown here for profitability instead of buried in operating costs

Landfill revenue = (tipping fee x # of units) + (greenwaste fee x # of units)

Refuse revenue = refuse fee x 12 months x # of units

Diversion revenue = (fog rate x # of units) + (biosolid rate x # of units) + (rec. surcharge x # of units) + WWRD interfund transfer

Surplus(Deficit) = proposed budget - estimated revenue

Quantities are projections based on data from previous completed fiscal year

**QUESTION 5: COVER MATERIAL PURCHASED IN FY2014 AND FY2015**

	Fiscal Year 2014		Fiscal Year 2015	
	Price per Ton	Annual Tonnage	Price per Ton	Annual Tonnage
Central Maui Landfill	\$9.00	148,559	\$7.95	97,240
Molokai Landfill	\$12.50	14,878	\$12.50	8,354
Hana Landfill	\$34.89	6,400	\$35.92	7,128
Lanai Landfill	\$20.82	6,266	\$21.61	4,176

## SWD CURBSIDE PILOT PROJECT COST EVALUATION

<b>PROJECT PARAMETERS:</b>			ONE YEAR	July 1, 2013 - June 30, 2014			
			TOTAL TONS COLLECTED	3003	ACCOUNTS:	1750	
			AVG. TONS/ACCOUNT	0.605	TONS DIVERTED:	997	
<b>LANDFILL MARGINAL COSTS</b>			<b>CURBSIDE MARGINAL COSTS</b>				
TONS	COST PER TON	TOTAL COST		TONS	COST PER TON	COMMENTS /NOTES	TOTAL COST
1059.0	\$26	\$27,322	Recyclables	344	\$130	Processing cost is \$130/ton (MD)	\$44,720
			Greenwaste	715	\$0	No cost from EKO currently *1	\$0
			Refuse *2	62	\$26	Contamination	\$1,610
			Equipment cost	1750 acct.	\$20.14/acct *3	Cost carts (2), delivery, training, PR, etc.	\$35,245
			"A" Expense & SWD Admin OH				\$28,781
			<b>TOTAL COST</b>				<b>\$110,356</b>

	LANDFILL	CURBSIDE COST	CURBSIDE \$ IF WE ADD \$30/TON GW PROCESSING *1	
PROJECT \$	\$27,322	\$110,356	\$131,806	TOTAL TONS LF/YR
<b>COST PER TON</b>	<b>\$26</b>	<b>\$104</b>	<b>\$124</b>	<b>375,240</b>
COST DIFF./ACCT/YR		\$47.45	\$59.70	TOTAL AUTOMATED COM ACCOUNTS
COST DIFF./ACCT/MO		\$3.95	\$4.98	
COST DIFF./COM WIDE *4		\$1,020,129	\$1,283,657	21,500
	Likely 3 add. staff needed	\$1,257,729	\$1,521,257	
PILOT DIVERSION %		33%		
TOTAL TONS DIVERTED COM WIDE		12,250		
			\$70.76	
<b>DIVERSION % INCREASE IF CURBSIDE GOES COM WIDE</b>		3.3%		

**NOTES:**

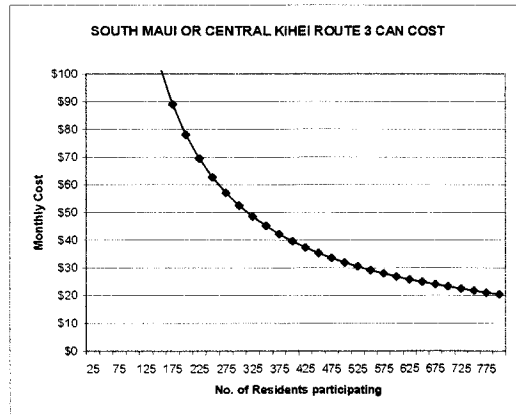
- \*1 Compost may cost in future contracts est.\$20/ton + \$10 recy fee. So, \$30 X 715 = \$21,450
- \*2 Assumes 20% contamination with refuse of curbside bins.
- \*3 Costs amortized over 10 years using 3% rate of return.
- \*4 Assumes no staffing increase, each staff increase equals \$79,200.

**QUESTION 7 & 8: FY15 COST ESTIMATE TO ADD ON 3 CAN PLAN (IF ADDED TO CURRENT REFUSE COST) ALL KIHAI PILOT ROUTES**

Number of Refuse Accounts On A Route (max. 1,000)	750
Number of Tons of Mixed Recyclables Annually	193
Number of Tons of Green Waste Annually	383
Number of Tons of Contamination	35
Cost per Ton of Processing Mixed Recyclables	\$130.00
Cost per Ton of Processing Green Waste	\$20.00
Estimated Depreciated Cost of the Dedicated Refuse Truck	\$70,000.00
Estimated Maintenance cost for Refuse Truck	\$21,701.10
Annual Cost of Carts/Delivery/Mailers	\$20.14
Cart maintenance and repair / storage	\$10,000.00
Cost per Ton of Landfilling Contamination	\$70.00
Annual Cost of County Staff to Maintain Program	\$46,678.85
Annual Cost of County Staff to Manage Program	\$12,298.15
Annual Total Cost to Process Mixed Recyclables	\$25,120.57
Annual Total Cost to Process Green Waste	\$7,667.97
Annual Total Cost to Process Contamination	\$2,418.22
Annual Total Cost for Carts/Delivery/Mailers	\$15,105.00
Annual Cost of the Dedicated Refuse Truck	\$70,000.00
Annual Cost of maintenance/repair/storage	\$10,000.00
Estimated Annual Maintenance Costs	\$21,701.10
Annual County Staff Cost	\$58,977.00
Annual Savings for Landfilling	-\$40,364.37
Total Annual Program Costs	\$170,625.50
Inflationary cost increase over 10 year period (3% increase/yr)	\$195,603.02

Annual Program Costs per Account	\$260.80
<b>MONTHLY ADDED COSTS PER ACCOUNT *</b>	<b>\$21.73</b>

\* This cost is in addition to their existing monthly refuse costs.



Input the total estimated accounts on route  
 771.91 tons - Jan. 2013 to Dec. 2014 for M. M. and Central Kihei(2 yrs) 0.2576  
 1,531.55 tons - Jan. 2013 to Dec. 2014 for M. M. and Central Kihei(2 yrs) 0.5112  
 Approx. 69 tons of contamination per yr for 1,498 accounts 0.0461

Current cost/ton to process recyclables  
 No cost based upon current agreement with EKO for the 3-Can Plan Pilot. A permanent 3-Can Plan may have increased cost for compost, assume \$20/ton  
 Based on \$420,000 Cost and replacement after 6 years for additional truck  
 Maintenance, parts, and tires (See costs below)  
 per refuse account

Cost of landfilling per CML Cost of Landfilling SWD Report  
 Refuse Driver costs \$53k/yr + OH & Fringe of 87.39%; County subsidizes refuse hauling costs by 47% in FY 16. Hence, unsubsidized cost is added as it is not mandatory for the County to provide curbside recycling.  
 Approx. \$60k/yr; + OH&F (77.64%) 20 hours per month, recycling staff

**REFUSE DATA TABLE**

Estimated O&M  
 \$190,000 Gasoline  
 \$150,000 R&M parts  
 \$120,000 Tires  
 \$460,000 per year for 23 vehicles in Wailuku Refuse, includes refuse collection vehicles, pickups and flat beds.

\$81,653 \$220k per year maintenance (Flat rate for all Refuse vehicles in Wai, Mak, Lah. Also includes Hana & Molokai Refuse truck and service)  
 Molokai Refuse p/u \$1,745.30/wk; Hana Refuse p/u \$915.22/wk

**GRADUATED COST DATA TABLE FOR GRAPH**

Residents Participating:	25	50	75	100	125	150	175	200	225	250	275
Monthly cost/resident:	\$615.27	\$308.27	\$205.93	\$154.77	\$124.07	\$103.60	\$88.98	\$78.02	\$69.49	\$62.67	\$57.09
Residents Participating:	300	325	350	375	400	425	450	475	500	525	550
Monthly cost/resident:	\$52.43	\$48.50	\$45.12	\$42.20	\$39.64	\$37.38	\$35.38	\$33.58	\$31.97	\$30.51	\$29.18
Residents Participating:	575	600	625	650	675	700	725	750	775	800	
Monthly cost/resident:	\$27.96	\$26.85	\$25.83	\$24.88	\$24.01	\$23.20	\$22.44	\$21.73	\$21.07	\$20.45	

**LEGEND / INFO:**

Above numbers are based upon current participation rates, tonnages, contamination rates, etc.

South Maui # of accounts: 750. # of Central Kihei route: 748

COM would require all accounts or none on a route to be on the 3 can.

Participation by choice requires one additional pick up/week per route, is not operationally feasible and would require computerizing our trucks.



**QUESTION 9: TONNAGES COLLECTED THROUGH 3-CAN PLAN**

**AUGUST 2012 - JANUARY 2015**

	Central Kihei			Maui Meadows		
	Trash	Greenwaste	Single Stream Recyclables	Trash	Greenwaste	Single Stream Recyclables
August-12	33.21	25.98	7.54	44.19	25.06	8.99
September-12	59.32	21.79	12.20	51.58	26.06	11.14
October-12	73.19	27.47	11.36	59.69	29.01	11.40
November-12	72.83	25.42	18.13	66.65	25.71	18.91
December-12	89.58	22.12	6.36	59.32	26.04	13.91
January-13	79.91	36.41	13.46	86.42	20.81	14.00
February-13	75.41	23.37	11.90	64.19	25.97	13.12
March-13	69.43	30.38	12.44	65.28	30.92	12.77
April-13	96.99	27.09	11.87	84.38	25.87	12.59
May-13	70.09	26.54	17.88	75.58	31.40	19.75
June-13	76.81	28.85	11.88	78.66	30.08	12.12
July-13	101.38	28.30	11.83	90.61	27.31	12.07
August-13	61.46	46.06	21.33	54.26	47.26	21.31
September-13	76.70	23.89	12.46	64.80	23.34	12.17
October-13	73.01	26.04	17.62	69.20	27.25	12.59
November-13	77.65	23.19	12.71	76.49	32.33	18.11
December-13	98.59	26.52	13.95	86.84	27.60	15.22
January-14	88.41	41.57	15.32	80.26	44.26	14.58
February-14	87.11	30.96	14.11	77.00	31.94	14.68
March-14	87.98	30.91	14.05	77.38	27.73	14.63
April-14	83.80	33.21	13.21	90.57	30.12	13.39
May-14	84.66	31.29	19.98	75.32	30.54	20.18
June-14	106.98	33.11	13.02	76.11	29.92	13.20
July-14	87.51	41.02	13.10	87.93	28.22	12.14
August-14	87.06	15.89	12.61	77.38	15.30	9.73
September-14	93.11	23.21	12.42	93.69	31.98	12.19
October-14	71.82	26.81	18.50	60.30	25.93	18.32
November-14	75.24	25.52	12.43	70.69	25.94	12.17
December-14	108.72	20.51	13.13	89.82	11.33	13.84
January-15	77.98	33.65	16.03	70.05	32.01	14.57

<b>TOTALS:</b>	<b>2,426</b>	<b>857</b>	<b>413</b>	<b>2,205</b>	<b>847</b>	<b>424</b>
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Note: Program started last 1/2 of Aug 2012