

201 N. Civic Drive, Suite 230  
 Walnut Creek, California 94596  
 Telephone: 925/977-6950  
 www.hfh-consultants.com

Robert D. Hilton, Emeritus  
 John W. Farnkopf, PE  
 Laith B. Ezzet, CMC  
 Richard J. Simonson, CMC  
 Marva M. Sheehan, CPA  
 Robert C. Hilton, CMC

October 1, 2020

Mr. Sergio Ramirez  
 District Manager  
 West Bay Sanitary District  
 500 Laurel Street  
 Menlo Park, CA 94025

*Sent via e-mail*

**Subject: Update the District's Solid Waste/Recycling Rate Model**

Dear Mr. Ramirez:

HF&H Consultants, LLC (HF&H), at your request, has reviewed the West Bay Sanitary District's (District) projected calendar year 2021 residential and commercial costs and revenues as presented in the draft report submitted by the South Bayside Waste Management Authority (SBWMA) to determine the estimated surplus/shortfall for each customer class (residential and commercial). Additionally, we have updated the District's solid waste/recycling "cost of service" rate model to reflect 2021 projected results.

Based upon the findings described in this report and presented to the District's Board at its September 09, 2020 meeting, the District's Board proposed the following rate adjustments for 2021.

Container Size Serviced 1X/Week	Residential	Commercial	Proposed \$ Increase	Proposed 2021 Rate
20 Gallon	6.98% Increase	N/A	\$3.00	\$46.00
32 Gallon	4.90% Increase	4.90% Increase	\$2.50	\$53.50
64 Gallon	0.0% Increase	0.0% Increase	\$0.00	\$72.00
96 Gallon	0.0% Increase	0.0% Increase	\$0.00	\$105.00
All Bins	N/A	5% Decrease	Varies	Varies

The adjustments for both residential and commercial rates will better reflect the cost of service, while generating sufficient revenue to cover the projected collection and processing costs for 2021. As part of a multi-year plan, similar adjustments were implemented in previous years. Increases projected for 2022 are anticipated to be slightly higher than basic cost of living increases for the smaller gallon containers and flat for larger gallon containers and bins.

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## BACKGROUND

As a member of the SBWMA, the District transitioned collection services and operation of the Shoreway Recycling and Disposal Center in San Carlos from Allied Waste/Republic to Recology San Mateo County (RSMC) and South Bay Recycling (SBR). RSMC and SBR took over collection services and operation of the Shoreway Environmental Center (Shoreway), respectively, beginning January 1, 2011. The District entered into a new 15-year agreement with RSMC with operations to start January 1, 2021.

Annually, the SBWMA provides the District with its allocation of the projected costs to provide collection service and operation of Shoreway. This information is utilized in the rate-setting process. A rate model was developed by HF&H and adopted by the District's Board of Directors (Board) on December 14, 2011.

Based on results provided by the SBWMA for setting rates in 2017, there was no rate adjustment increase required, as combined revenue in general was sufficient to cover total costs. However, the District requested HF&H to prepare an analysis of the then-current solid waste rates and propose a revised rate structure for residential and overall adjustment to commercial carts, commercial bins, and commercial compactor rates. The purpose of the analysis was to better reflect the cost of service, while generating sufficient revenue to cover the projected collection and processing costs for 2017 through 2025.

## SCOPE OF WORK

Based on the results, provided by the SBWMA for the 2021 rate-setting process, HF&H updated the "cost of service" model previously developed and enhanced the cost allocation methodology between residential container sizes. The cost projections reflect the first year under the new agreement with RSMC.

We performed the following procedures as part of our review:

- Obtained cost, rate and current customer account data from the District and the final September 17 2020 SBWMA report;
- Prepared a summary schedule projecting the District's revenues for 2021 and revenue for the next five years (through 2026). We assumed an annual 3.5% inflation to costs over the 5-year period;
- Prepared a schedule projecting residential and commercial revenue requirement through 2026 with the objective of the residential revenue to equal the costs to provide the service; and,
- Prepared a schedule proposing adjustments to the rates for the various residential carts with the objective of specific cart size revenue to equal its respective cost to provide the service.

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## LIMITATIONS

Our conclusions are based, in part, on Recology's projections of its financial results of operations included in the September 24<sup>th</sup> "SBWMA Final Report Reviewing the 2021 Recology Compensation Application". Actual results of operations will usually differ from projections because events and circumstances frequently do not occur as expected and the difference may be significant.

## FINDINGS

### General

HF&H has updated the prior year's rate structure analysis following its two-step process. The first step divides the solid waste collection system into two customer classes: residential and commercial. For purposes of this study, we are including multi-family customers with the commercial customer class and we have not factored any surplus or deficit from the prior year revenue reconciliations. We then reviewed the revenues and the revenue requirements for each customer class independently. During this initial step it was noted that the year over year increases in revenue requirement was less than the previously assumed 6% disposal costs but similar to the assumed 7.7% increase in collection costs as shown below:

Revenue Requirement (RSMC & SBR)	2020	2021	Variance Year over Year \$	Variance Year over Year %
Collection Cost	\$1,028,165	\$1,106,508	\$78,343	7.6%
Disposal/Processing	542,709	545,437	2,728	0.5%
Agency Fees (on net revenue)	94,252	101,430	7,178	7.6%
<b>Total Costs</b>	<b>\$1,665,126</b>	<b>\$1,753,375</b>	<b>\$88,249</b>	<b>5.3%</b>

The second step is to further review the residential customer class by examining the rate and cost to provide service for each size of container (20 gallon, 32 gallon, 64 gallon and 96 gallon).

### Step 1 – Residential and Commercial Customer Classes

The following table shows the Rate Year 2021 revenue requirement by customer class. At current rates (2020 rates), the solid waste collection system as a whole is projected to generate slightly more than the requirement, \$18,058 excess of revenue compared to costs. However, as shown below, the residential customer class' revenue is approximately 0.36% below its costs.

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**Table 1:  
 2021 Projected Revenue and Costs by Customer Class**

<b>Analysis of Residential and Commercial Revenues and Costs</b>			
	<b>Residential</b>	<b>Commercial</b>	<b>Total</b>
<b>Projected Revenue at <u>Current Rates</u><sup>1</sup></b>	<b>\$1,490,960</b>	<b>\$280,473</b>	<b>\$1,771,433 <b>A</b></b>
<b>Projected 2021 Costs</b>			
Collection	\$924,701	\$181,807	\$1,106,508
Disposal/Processing	\$486,870	\$58,567	545,437
Agency Fees	\$84,694	\$16,736	101,430
<b>Total Costs</b>	<b>\$1,496,265</b>	<b>\$257,110</b>	<b>\$1,753,375 <b>B</b></b>
<b>Excess (Deficiency) of Revenues vs Costs</b>	<b>(\$5,305)</b>	<b>\$23,363</b>	<b>\$18,058 <b>A-B=C</b></b>
<b>Projected Rate Adjustment</b>	<b>0.36%</b>	<b>-8.33%</b>	<b>-1.02%</b>

NOTE: The amounts shown above are for 2021 activity only. Prior year surplus/shortfalls are NOT included.

<sup>1</sup> Projected Revenue is based upon the first 5 months of 2020 actual revenue annualized.

If the District elects to have the residential customer class rates generate sufficient revenue to cover its costs, rates could be adjusted all at once or over a period of time. The table below shows possible rate adjustments to both customer classes over a four-year period, assuming costs will usually increase annually by 3.5%.

**Table 2:  
 Proposed Average Rate Adjustments**

		<b>Residential</b>	<b>Commercial</b>
<b>1</b>	2021	1.80%	-4.34%
<b>2</b>	2022	2.67%	0.20%
<b>3</b>	2023	3.51%	3.34%
<b>4</b>	2024	3.39%	3.34%

The following table shows the projected revenues after the above rate adjustments. By 2022, the revenues are just slightly above the cost for residential and slightly above the cost for commercial.

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**Table 3:  
 4-year Projected Revenue and Costs**

Projections - Balance Revenue & Costs over 4 Years												
	1			2			3			4		
	2021			2022			2023			2024		
	Residential	Commercial	Total	Residential	Commercial	Total	Residential	Commercial	Total	Residential	Commercial	Total
Proposed Average Rate Adjustment	1.80%	-4.34%		2.67%	0.20%		3.51%	3.34%		3.39%	3.34%	
Total Revenue	\$1,517,797	\$268,291	\$1,786,088	\$1,558,341	\$268,836	\$1,827,177	\$1,612,976	\$277,821	\$1,890,797	\$1,667,701	\$287,102	\$1,954,803
<b>Assumptions:</b>												
1) Cost Increase	"Projected"	"Projected"		3.50%	3.50%		3.50%	3.50%		3.50%	3.50%	
2) Disposal/Processing Increase	"Projected"	"Projected"		3.50%	3.50%		3.50%	3.50%		3.50%	3.50%	
Collection	\$924,701	\$181,807	\$1,106,508	\$957,065	\$188,170	\$1,145,236	\$990,563	\$194,756	\$1,185,319	\$1,025,232	\$201,573	\$1,226,805
Disposal/Processing	486,870	58,567	545,437	503,910	60,617	564,527	521,547	62,738	584,286	539,801	64,934	604,736
Agency Fees	84,694	14,422	99,117	87,659	14,927	102,586	90,727	15,450	106,176	93,902	15,990	109,892
Total Costs	1,496,265	254,797	1,751,062	1,548,634	263,714	1,812,349	1,602,837	272,944	1,875,781	1,658,936	282,498	1,941,433
Excess (Deficiency) Amount	\$21,532	\$13,495	\$35,026	\$9,706	\$5,122	\$14,828	\$10,140	\$4,876	\$15,016	\$8,765	\$4,605	\$13,370
Excess (Deficiency) Percentage	1.42%	5.03%	1.96%	0.62%	1.91%	0.81%	0.63%	1.76%	0.79%	0.53%	1.60%	0.68%

## Step 2 – Residential Container Rates

We reviewed the residential rates by container size and compared the rates to the cost of service by container size projected by the SBWMA, which assumed the variable cost between container sizes is primarily the disposal cost. Additionally HF&H updated the cost of service by container size using the same approach used in the rate model from the previous year. Since this is the first year of the new Agreement with RSMC there are some significant variances due to the negotiation process and the reclassification of costs from RSMC's 2011 proposal. We have assumed the following:

- **Organics collection costs** are fixed per household as every customer receives the same size container and is serviced at the same frequency (64 gallon cart, serviced 1 time per week). For 2021, the fixed cost is \$24.56 per home per month (a 2.33% increase from 2020's cost of \$24.00);
- **Recycling collection costs** are also fixed per household for the same reason as above, (64 gallon cart - serviced 1 time per week). For 2021, the fixed cost is \$12.39 per home per month (a 4.73% increase from 2020's cost of \$11.83);
- **Disposal cost** is variable based upon the capacity/gallon size of the solid waste cart serviced. For 2021 the projected variable cost is \$0.155 per gallon (a 6.16% increase from 2020's cost of \$0.146);
- **Fixed solid waste (SW) route/collection costs** are costs that do not vary based on the level of service received (e.g., customer service costs, IT costs, etc.). For 2021, the fixed cost is \$3.20 per home per month (a 23.07% increase from 2020's cost of \$2.60); and,
- **All other SW route/collection costs** are attributed to each cart size using equivalent cart units (ECU) calculated by applying routing metrics. (The ECU basic principle establishes the numeric

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relationship between cart size and route capacities.) For 2021, the projected monthly cost per ECU is \$5.218 multiplied by a factor of:

- 1.000 for a 20 gallon cart;
- 1.600 for a 32 gallon cart;
- 3.627 for a 64 gallon cart; and,
- 6.080 for a 96 gallon cart.

The following tables shows the current rates (2020), the SBWMA and the HF&H projected 2021 costs by cart size.

**Table 4a:**  
**HF&H Projected 2021 Costs by Residential Container Size**

<b><i>Analysis of Costs by Size of Container</i></b>				
	<b>20</b>	<b>32</b>	<b>64</b>	<b>96</b>
<b>Organics Collection Cost</b>	\$24.56	\$24.56	\$24.56	\$24.56
<b>Recycling Collection Cost</b>	12.39	12.39	12.39	12.39
<b>Disposal Cost (\$0.15 per gallon)</b>	3.10	4.95	9.90	14.86
<b>Fixed Solid Waste Cost</b>	3.20	3.20	3.20	3.20
<b>All Other Solid Waste Cost</b>				
	<i>\$5.2180 X a factor of</i>	<i>1.000</i>	<i>1.600</i>	<i>3.627</i>
	<u>\$5.22</u>	<u>\$8.35</u>	<u>\$18.92</u>	<u>\$31.73</u>
<b>* Monthly Cost per Cart per HF&amp;H</b>	<b>\$48.45</b>	<b>\$53.44</b>	<b>\$68.97</b>	<b>\$86.72</b>

\* Rounded to the nearest cent

**Table 4b:**  
**Comparison of 2020 Residential Rates and Projected 2021 Costs by Container Size**

<b><i>Analysis of Costs by Size of Container</i></b>							
		<u>Current Mo.</u>		<u>* 2021</u>	<u>Excess</u>	<u>Projected Rate</u>	<u>Prior Years</u>
<u>Subscription</u>	<u>Container Size</u>	<u>Rate</u>	<u>Mo Cost</u>	<u>of Revenues</u>	<u>vs Costs</u>	<u>Adjustment</u>	<u>Variance</u>
			<u>per Cart</u>				<u>before</u>
							<u>Adjustment</u>
19%	427	20	\$43.00	\$48.45	<b>(\$5.45)</b>	12.7%	19.6%
57%	1262	32	\$51.00	\$53.44	<b>(\$2.44)</b>	4.8%	5.3%
19%	428	64	\$72.00	\$68.97	\$3.03	-4.2%	-6.9%
4%	81	96	\$105.00	\$86.72	\$18.28	-17.4%	-19.3%
100%	2198						

\* Rounded to the nearest cent

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The following table shows possible adjustments to achieve the desired residential customer class results from Step 1 and align the rates to the cost of service at each residential container size from Step 2. These are projections based upon annual assumed increases in costs and would need to be revised as the actual costs are known and projections revised.

**Table 5:  
 Possible Residential Rate Adjustments to Achieve Cost of Service by Cart Size**

	<i>Container Size</i>							
	20 gallon		32 gallon		64 gallon		96 gallon	
<b>Current Rate</b> →		<b>\$43.00</b>		<b>\$51.00</b>		<b>\$72.00</b>		<b>\$105.00</b>
<b>Proposed 2021</b>	<b>6.98%</b>	<b>\$46.00</b>	<b>4.90%</b>	<b>\$53.50</b>	<b>0.00%</b>	<b>\$72.00</b>	<b>0.00%</b>	<b>\$105.00</b>
<b>Projected 2022</b>	5.98%	\$48.75	3.27%	\$55.25	0.00%	\$72.00	0.00%	\$105.00
<b>2023</b>	4.61%	\$51.00	3.62%	\$57.25	3.47%	\$74.50	0.00%	\$105.00
<b>2024</b>	4.41%	\$53.25	3.50%	\$59.25	3.36%	\$77.00	0.00%	\$105.00
<b>2025</b>	4.23%	\$55.50	3.80%	\$61.50	3.25%	\$79.50	0.00%	\$105.00
<b>2026</b>	4.06%	\$57.75	3.24%	\$63.50	3.14%	\$82.00	0.00%	\$105.00
<b>2026 Projected Cost of Service</b>		<b>\$57.54</b>		<b>\$63.47</b>		<b>\$81.91</b>		<b>\$103.00</b>

## Rate Structure Summary

### Current Rate Structure

Under the current rate structure, rate revenue (assuming current rates and no use of prior year surplus or shortfall) is projected to produce an excess of approximately \$18,058 in revenue for the forthcoming year (see Table 1).

### Rate Adjustments

#### Residential and Commercial Customer Class

In the first step described above, HF&H divided the solid waste collection system into two customer classes: residential and commercial and modeled a rate structure which achieved a cost of service balance between the customer classes in four to five years. Overall revenue from residential rates are increased by 1.80% and revenue from commercial rates are decreased by 4.34% in 2021 (see Table 2 and Table 3).

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### **Residential Cost of Service by Container Size**

The District continues to elect to address the commercial customers as a class, but revise and align individual residential rates to “cost-of-service” rates, where the residential rates would have a fixed component regardless of solid waste container size (organics, recycling and some solid waste collection costs are fixed), plus variable costs and a per-gallon disposal rate. This type of rate structure may be more equitable, but may not be reasonable to implement all at once; resulting in rate increases being phased in following a multi-year plan. After the first phase of larger increases to the residential 20 and 32 gallon in prior years, our updated scenario, as modeled above, results in an 6.98% increase to 20-gallon rates and a 4.9% increase to 32-gallon rates in 2021 and subsequent 5.98% to 3.24% increases over the next 5 years. The 64-gallon rates would remain flat in 2021 and 2022 with a 3.47% increase in 2023 and 3.36% to 3.14% increases thereafter. The 96-gallon rates would remain flat in 2021 and over the next 5 years. (See Table 5).

### **Recommendation**

As we have seen in other jurisdictions over the past few years, the District’s rate structure encourages customers to “downsize” their solid waste container by placing more materials in their recyclable material and organics carts, rather than in their solid waste containers, which ultimately reduces the amount of trash sent to the landfill. However, as customers reduce their container size, less revenue is generated but there is not an equal reduction of the cost to drive by, collect, and process the materials. Only 23% of residents (those customers receiving 64- or 96-gallon service) cover the fixed costs to provide such service (see Table 4b). The District has been able to keep the residential rates lower than necessary because, as was the industry practice, commercial revenues have contributed more than the cost of their services. In the future, the District should continue increasing the 20-gallon and 32-gallon rates a greater percentage than the 64-, and 96-gallon rates to have them pay a larger percentage of their fixed costs but still be lower than the 64-gallon rate to incentivize customers to reduce the amount of materials disposed of in the landfill. The aligning of residential rates to the cost of service at each container size and the overall reduction of the commercial customer class bin rates by a flat percentage over time, achieves the District’s objective of a cost-of-service rate structure (see Table 6).

At its September 09, 2020 meeting, the District’s Board proposed to implement, as part of its multi-year plan established five years ago, the following rate adjustments for residential and commercial rates that will close the gap between the rates and the cost for the 20-gallon and 32-gallon services, while generating sufficient revenue to cover the projected collection and processing costs for 2021.



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**Table 6:  
 District's Board Proposed Rate Adjustments**

<b>Rates by Size of Container</b>						
	<b>Residential</b>				<b>Commercial</b>	
	20 Gallon	32 Gallon	64 Gallon	96 Gallon	1YD Bin 1x/week	3YD Bin 1x/week
<b>Current Rates</b>	<b>\$43.00</b>	<b>\$51.00</b>	<b>\$72.00</b>	<b>\$105.00</b>	<b>\$185.55</b>	<b>\$392.14</b>
<b>Proposed Rate Adjustment</b>	6.98%	4.90%	0.00%	0.00%	-5.00%	-5.00%
<b>2021 Proposed Rate / Mo.</b>	<b>\$46.00</b>	<b>\$53.50</b>	<b>\$72.00</b>	<b>\$105.00</b>	<b>\$176.27</b>	<b>\$372.53</b>
<b>Increase (Decrease) / Mo.</b>	\$3.00	\$2.50	\$0.00	\$0.00	(\$9.28)	(\$19.61)
<b>2021 Projected Revenue at Proposed Rates</b>						
	<b>Residential</b>	<b>Commercial</b>	<b>Total</b>			
Projected Revenue at <u>Current Rates</u> <sup>1</sup>	\$1,490,960	\$280,473	\$1,771,433			
2021 <u>Proposed Rate</u> Revenue	\$1,517,797	\$268,291	\$1,786,088 <b>A</b>			
2021 Proposed Costs	<u>1,496,265</u>	<u>254,797</u>	<u>1,751,062</u> <b>B</b>			
Excess Amount	\$21,532	\$13,495	\$35,026 <b>A - B = C</b>			
Excess Percentage	1.4%	5.0%	2.0%			

<sup>1</sup> Projected revenue at current rates is based upon the actual revenue for the first 5 months of 2020, annualized.

\* \* \* \*

We appreciate the opportunity to be of continued service to the District. We value our relationship with you and the District and are committed to providing you the highest level of service in the performance of this matter for you. Should you have any questions, please feel free to call me at (925) 977-6961.

Sincerely,

HF&H CONSULTANTS, LLC



Marva M. Sheehan, CPA  
 Vice President