



ADMINISTRATION AND FINANCE



A Public Agency

STAFF REPORT

To: SBWMA Board Members
From: Kevin McCarthy, Executive Director
Marshall Moran, Finance Manager
Date: April 23, 2015 Board Meeting
Subject: Discussion on FY1516 Preliminary Operating Budget

Recommendation

This staff report is for discussion purposes only and no formal action is requested of the Board of Directors. Based on Board feedback, staff will bring back a revised budget document to the May 28, 2015 Board meeting. Also, given that this preliminary budget was prepared a month earlier than usual, revenue and Shoreway operating expenses were based on year to date information through February 2015. The final budget documents to be prepared in June will be updated with actuals through April 2015.

Analysis

Overview

In **Attachment A** you will find the preliminary FY1516 detailed operating budget (including cash reserve balances, revenues, expenses and capital budget) with forecasted revenues of \$41,937,600 and expenses of \$40,458,307. The expense detail in **Attachment A** is organized by the five main areas of our budget (i.e., Administration, Contract Compliance and Support, Recycling - AB 939 and AB 341 Compliance, Collection Operations, and Shoreway Operations). These first four areas of the budget are referred to as the SBWMA program budget, exclusive of Shoreway Operations, and make up 7.7% of the total expense. The program budget totals \$3,800,707 inclusive of \$662,800 of pass through costs associated with the Door-to-Door HHW collection program. The budget document also includes a variance column (FY1516 budget vs. adopted FY1415) by line item and includes notes where applicable to explain a line item. Further program expense line item detail can be found in **Attachment B** and detail for Shoreway revenue and operations can be found in **Attachment F**.

Shoreway Operations includes all South Bay Recycling (SBR) compensation, disposal and processing expenses and all other direct expenses related to the SBWMA's responsibilities and obligations as the owner of the facility. The Shoreway operating expenses are largely non-discretionary expenses (e.g., SBR operator compensation, disposal and processing expense and franchise fee payments to the City of San Carlos) and are variable to tonnage delivered to the Shoreway facility and to annual calendar year contractual CPI-based compensation adjustments. These expenses total 90.6% of the total expense.

The current organization chart and details on personnel related budget assumptions can be found in **Attachments C and D**, respectively. No changes are proposed in staffing levels or in employee benefits. However, the budget reflects the overlap of the current retiring Finance Manager with a new Finance Manager to ensure a successful transition given the critical nature of this position.

Proposed New Projects and Activities in FY1516

The upcoming fiscal year is a critical transition year as the JPA begins to implement a new long range plan and prepares its Member Agencies for critical decisions related to their Franchise Agreements with Recology. The preliminary FY1516

budget includes all the recommended long range plan projects assumed for FY1516 totaling \$430,000 in spending pending Board direction including:

- Implement an every other week residential garbage collection pilot (**\$120,000**).
- Develop and implement public education and notification to residents participating in the Recology residential split-body collection vehicle pilot project (**\$17,000**).
- Develop and implement enhanced commercial recycling outreach targeting businesses and multi-family (**\$60,000**).
- Implement a stakeholder engagement process for the environmental education center and tour Program (**\$25,000**).
- Completion of conceptual designs for a Shoreway Transfer Station mixed waste processing system to recover organics materials and other recyclables from residential and commercial solid waste (**\$183,000**).
- Complete Recology administration building remodel design assessment to accommodate SBWMA offices (**\$25,000**).
- Continuation of the public spaces recycling project with assumed budget of **\$11,000**.

\$45,000 is budgeted to complete the financial analysis of both Recology's and SBR's actual cost of operations to prepare to forecast future collection costs (see agenda item 6A staff report for more details). Consultant(s) will assist staff with analyzing the contractor's actual costs vs. compensation. Budgeted figures are relatively modest based on the assumption that both contractors are expected to share information on their actual operational costs.

Staff will continue to analyze the JPAs cost of operations and to that end work activities are assumed as follows:

- If applicable, manage the transition of a new vendor for the Annual Financial and Accounting Services contract. The timing of such a potential change is critical given the planned retirement of the current Finance Manager.
- Evaluate the current model used for outsourced HR and payroll administration by a third party and make recommendations for changes if appropriate.

Finally, staff is budgeting for some new community events at Shoreway including:

- Host three seasonal (summer, fall, spring) compost and mulch giveaway events at Shoreway. With the JPA having free compost availability it make sense for the JPA to help do its part to support water conservation efforts given our continued drought. \$3,000 is included in the budget for outreach to support the events.
- "America Recycles Day" event at Shoreway in November. The event will be modeled after our annual Earth Day event which typically draws 300-400 visitors. Funds for the event are included in the Shoreway education center budget which remains unchanged at \$60,000 from FY1415.

Ongoing Core Staff Responsibilities

- Continued oversight and contract administration support for the 12 collection services Franchise Agreements with Recology San Mateo County (RSMC). This work is accomplished with approximately two full-time employees, one fewer than when the 12 new Franchise Agreements went into effect on January 1, 2011.
- Manage all public education activities to support the residential collection services and manage the development of the outreach materials for the commercial collection programs. \$240,000 is budgeted for residential outreach and \$185,000 for commercial outreach. Another \$80,000 is earmarked for outreach for the HHW door-to-door collection program. In addition to the SBWMA's \$185,000 for commercial outreach, Recology has a budget of over \$900,000 per year to cover management of the Commercial Recycling Outreach program with a staff of nine; this expense is included in Recology's compensation and not in the SBWMA budget.
- Continued oversight of the SBR Shoreway operations and management of all disposal and processing contracts with one full-time employee.
- Management of the annual contractor compensation adjustment process, including review of the 2016 RSMC and SBR compensation applications, and completion of final reports (Recology and SBR) for 2016.
- Support of existing recycling programs, notably ongoing residential public outreach; AB 341 commercial recycling outreach; expanded outreach to support multi-family recycling; and oversight and expanded outreach for the HHW Door-to-Door collection services for 12 Member Agencies.

- Management of the Shoreway Education Center tour program, including the school tours and public tours. This program is educating 5,000 tour visitors per year with two full-time employees.
- Management of all ongoing capital repairs and maintenance at the 16-acre Shoreway facility, including nearly 200,000 square feet of building space and \$20 million in equipment owned by the SBWMA. This work is managed by the same employee that manages the SBR contract and all disposal and processing contracts. Please see **Attachment E** for a brief description on each capital project.

Financial Summary

Overall, the preliminary FY1516 budget reflects solid financial results with fully funded cash reserves, an undesignated cash reserve balance of \$3.2 million, and modest overall increase in the operating budget of 2.2%. Franchise solid waste and organics tipping fees are assumed to increase by 3.8% effective January 1, 2016 which effects half the fiscal year. Prudent management of controllable expenditures and Shoreway operating and disposal and processing contracts tied to CPI continues to constrain costs.

As shown in **Table 1** below, FY1516 contribution to cash reserves is projected at \$1,479,293 which is \$860,532 less than our FY1415 adopted budgeted (2.1% of revenue) largely due to lower commodity revenue of \$651,900 on lower commodity prices and higher operating expense of \$922,732 slightly offset by lower interest expense of \$52,400. After capital expenditures and bond principal payments, the net contribution to cash reserves is projected to be negative \$1,072,708. Capital spending for FY1516 is forecasted to be \$324,000 higher than the adopted FY1415 budget largely due to the delay in the MRF canopy project.

Contributing factors to higher operating expenses include higher SBWMA program expense of \$233,032 with a notable line item increase of \$197,500 for long range plan projects and higher Shoreway operating expense of \$535,000. Shoreway operating expenses for SBR are assumed to increase \$394,700 or 2.3%. This is largely driven by more MRF volume which has no visible revenue impact due to lower commodity prices. Disposal and processing costs increase by \$131,900 or 0.9%.

Table 1

FY1516 SUMMARY					
CATEGORIES	FY1415 Adopted Budget	FY1415 Mid-Year Budget¹	FY1516 Preliminary Budget²	Variance	%
Total Revenue	\$41,927,800	\$41,263,900	\$41,937,600	\$9,800	0%
Total Operating Expense	\$36,702,475	\$36,219,636	\$37,625,207	(\$922,732)	-3%
Earnings Before Interest:	\$5,225,325	\$5,044,264	\$4,312,393	(\$912,932)	-17%
Interest Expense	\$2,885,500	\$2,885,500	\$2,833,100	\$52,400	2%
Contributions to Cash Reserves:	\$2,339,825	\$2,158,764	\$1,479,293	(\$860,532)	-37%
Capital Expenditures, adjusted	(\$925,000)	(\$265,000)	(\$1,249,000)	(\$324,000)	35%
Bond Principal Payment	(\$1,205,000)	(\$1,205,000)	(\$1,303,000)	(\$98,000)	8%
Net Contribution to Cash Reserves:	\$209,825	\$688,764	(\$1,072,708)	(\$1,282,533)	-611%

¹ Mid-year projection for capital spending has been reduced from \$910,000 to \$265,000 given certain projects not occurring in FY1415.

² FY1516 capital net of equipment replacement reserve funding of \$113,750.

Note: At the request of a Board Member, interest is shown separately in this table only. All other schedules have interest combined with operating expense.

Revenues

Table 2 below provides a summary of revenue by line item with total operating revenues for FY1516 budgeted to be \$9,800 (0.02%) higher than our FY1415 adopted budget. Higher franchise tipping fee (rates charged at Shoreway for franchise tons delivered by Recology) is largely offset by lower non-franchise (public) revenues and lower commodity revenue. MRF host fee revenues received for handling 3rd party recyclables (from Recology) are increasing as volumes are increasing over FY1415. The HHW revenue shown includes \$662,800 which fully offsets the HHW collection costs of \$662,800 included in the SBWMA program budget. HHW revenue increase is largely due to two agencies joining the program in March 2015 (Town of Atherton and City of Redwood City).

As noted at the bottom of **Table 2**, the commodity revenues shown are net of the 28% revenue share (\$1,142,500) we pay SBR and Shoreway buyback payments to customers (\$911,300).

Table 2

FY1516 REVENUES					
<u>Revenues</u>	<u>FY1415 Adopted Budget</u>	<u>FY1415 Mid-Year Projections</u>	<u>FY1516 Preliminary Budget</u>	<u>Variance</u>	<u>Variance %</u>
Tip Fee Revenues	\$32,221,900	\$31,773,100	\$32,690,700	\$468,800	1.5%
Non Franchised	\$6,229,700	\$5,952,900	\$5,948,700	(\$281,000)	-4.5%
Franchised	\$25,992,200	\$25,820,200	\$26,742,000	\$749,800	2.9%
Net Commodity Sales Revenues*	\$8,674,800	\$8,272,300	\$8,022,900	(\$651,900)	-7.5%
MRF - Host Fees	\$361,800	\$390,400	\$416,500	\$54,700	15.1%
Interest Income	\$56,500	\$67,400	\$48,200	(\$8,300)	-14.7%
HHW and Other Revenue	\$612,800	\$760,700	\$759,300	\$146,500	23.9%
Total Revenues:	\$41,927,800	\$41,263,900	\$41,937,600	\$9,800	0.0%
*Gross commodity sales – 28% revenue share with SBR and buyback payments.					

As shown in **Table 3** below, franchise tonnage is projected to be 2,821 tons higher (1.0%) than the FY1415 budget with a weighted average tip fee increase of \$1.72/ton or 1.9% (solid waste and organics rates increase 3.8% effective January 1, 2016). Public volumes are forecast to drop 7.1% with tipping fees up 2.7% (2.9% increase for solid waste and 4.2% for green waste effective January 1, 2016). The weighted average tipping fee increase figures below account for the proposed price changes and forecasted volumes (tons and yards) and the January 1, 2016 price increase impacting half of FY1516.

Table 3

TIP FEE REVENUE	FY1415 Adopted Budget	FY1415 Mid-Year Projections	FY1516 Proposed Budget	2016 vs 2015 Budget Variance	%
Franchise					
Tons	280,747	278,776	283,568	2,821	1.0%
Wtd Avg. Tip Fee	\$ 92.58	\$ 92.62	\$ 94.31	\$ 1.72	1.9%
Franchise Revenue	\$ 25,992,156	\$ 25,820,153	\$ 26,741,950	\$ 749,794	2.9%
Public					
Yards	182,976	170,994	170,058	-12,918	-7.1%
Wtd Avg. Tip Fee	\$ 34.05	\$ 34.81	\$ 34.98	\$ 0.93	2.7%
Public Revenue	\$ 6,229,698	\$ 5,952,860	\$ 5,948,662	\$ (281,036)	-4.5%
Total Tip Fee Revenue	\$ 32,221,854	\$ 31,773,013	\$ 32,690,612	\$ 468,758	1.5%

Table 4 below provides the detail on the franchise tonnage and public yards forecast for FY1516. Franchise solid waste tons are expected to increase 1.7% while organics decline slightly due to continued drought conditions.

Public solid waste yards are expected to drop significantly compared to FY1415 though declining at a lessor rate compared to our FY1415 mid-year projections provided in January 2015; these drops are not explainable at this point given that public solid waste rates have only increased 3% total in the past two years and no other facility option has come available. Public green waste volumes are expected to continue to decline given dry conditions. The lone bright spot is C&D business which continues to grow likely due to heightened construction activity locally.

Table 4

		FY1415 Adopted Budget	FY1415 Mid-Year Projections	FY1516 Proposed Budget	2016 vs 2015 Budget Variance	%
Total TS Tonnage and Yardage						
Franchise						
SBWMA Solid Waste	tons	176,143	177,835	179,200	3,057	1.7%
SBWMA Organics	tons	100,815	97,043	100,439	-375	-0.4%
SBWMA Dirt, Inert, Other	tons	3,790	3,898	3,929	139	3.7%
sub-total Franchise		280,747	278,776	283,568	2,821	1.0%
Non-SBWMA Weighed Dirt	tons	5,099	6,122	6,215	1,116	21.9%
Total Tons		285,846	284,898	289,783	3,937	1.4%
Public						
Public Solid Waste Yards	yards	67,277	55,672	53,942	-13,335	-19.8%
Public Green Waste Yards	yards	48,209	43,562	43,836	-4,373	-9.1%
Public C&D	yards	67,490	71,761	72,280	4,790	7.1%
Total Yards		182,976	170,994	170,058	-12,918	-7.1%

Table 5 summarizes commodity revenue detail included in the FY1516 budget. Commodity revenues are budgeted at \$10,076,664 which is \$735,526 or 6.8% lower than FY1415 budget. MRF commodity tonnage sold is higher than FY1415 budget by 3,744 tons, but is more than offset by lower budgeted commodity prices of \$20.58. Commodity prices have continued to slide since our mid-year budget projections in January 2015, but are forecasted to increase slightly over the next year. The weighted average commodity revenue per ton figure of \$150.67 is somewhat below historical averages which have been around \$165-170 per ton but is well above the effective floor price (i.e., Shoreway Operations Agreement minimum revenue guarantee per year of \$5,598,060) we receive from SBR of \$85.69/ton. The JPA's rate stabilization fund effectively buffers against needing large tip fee increases to mitigate any significant temporary drops in commodity revenue as experienced in the fall of 2008 as far as meeting bond covenants.

Table 5

		FY1415 Adopted Budget	FY1415 Mid-Year Projections	FY1516 Proposed Budget	2016 vs 2015 Budget Variance	%
COMMODITY REVENUE						
Tons Sold		63,134	64,935	66,878	3,744	5.9%
Wtd Avg. Price		\$ 171.26	\$ 162.75	\$ 150.67	\$ (20.58)	-12.0%
Gross Revenue		\$ 10,812,190	\$ 10,568,093	\$ 10,076,664	\$ (735,526)	-6.8%
Revenue Share w/ SBR		\$ (1,521,368)	\$ (1,407,569)	\$ (1,142,458)	378,910	-24.9%
Buyback Payments		\$ (615,972)	\$ (888,242)	\$ (911,340)	-295,368	48.0%
Net Commodity Revenue		\$ 8,674,850	\$ 8,272,282	\$ 8,022,865	\$ (651,985)	-7.5%
Price / Volume Impact			Price	Volume	Total	
Tonnage Change			\$ 150.67	\$ 3,744	\$ 564,046	
Price Change			\$ (20.58)	\$ 63,134	\$ (1,299,572)	
Total Change (Gross)					\$ (735,526)	

See **Attachment F** (Tables 2 and 3) for more detail on commodity price trends and commodity shipments.

Expenses

Table 6 summarizes all budgeted expenses for FY1516 which overall are 2.2% above FY1415 adopted budget levels.

Table 6

FY1516 EXPENSE SUMMARY						
EXPENSE CATEGORIES	FY1415 Adopted Budget	FY1415 Mid-Year Budget	FY1516 Preliminary Budget	FY1516 Preliminary Budget % of Total	Variance	%
SBWMA Program	\$2,901,375	\$2,893,175	\$3,134,407	7.7%	\$233,032	8.0%
HHW Collection	\$521,500	\$645,261	\$666,300	1.6%	\$144,800	27.8%
Shoreway Operations	\$31,732,800	\$31,168,200	\$32,267,800	79.8%	\$535,000	1.7%
Interest Expense	\$2,885,500	\$2,885,500	\$2,833,100	7.0%	(\$52,400)	-1.8%
Franchise Fees to San Carlos	\$1,546,800	\$1,513,000	\$1,556,700	3.8%	\$9,900	0.6%
Total Expense	\$39,587,975	\$39,105,136	\$40,458,307	100.0%	\$870,332	2.2%

Table 7 breaks out the Program expense categories.

Table 7

FY1516 PROGRAM EXPENSES					
Expenditures	FY1415 Adopted Budget	FY1415 Mid-Year Projections	FY1516 Preliminary Budget	Variance	Variance %
Administrative Expenses	\$1,762,475	\$1,754,275	\$1,786,407	\$23,932	1.4%
Contract Compliance & Support	\$257,400	\$257,400	\$296,000	\$38,600	15.0%
Recycling & AB 939 Compliance	\$881,500	\$881,500	\$1,052,000	\$170,500	19.3%
Subtotal SBWMA Program Expenses w/o HHW Pass Through Costs:	\$2,901,375	\$2,893,175	\$3,134,407	\$233,032	8%

Program Budget

The SBWMA proposed FY1516 program expense budget, exclusive of Shoreway operations and (HHW collection services), is \$3,134,407 or 8% higher than the FY1415 adopted budget. Notable variances within the program (category) areas of the budget include:

- **Administrative expenses** – 1.4% or \$23,932 higher than FY1415 adopted budget.
 - \$46,282 higher expenses for administrative staff of which \$40,370 is associated with a 2.5 month overlap of the new Finance Manager with the current Finance Manager. Assumed wage and benefit annual cost increases effective January 1, 2016 total \$42,000 (half in fiscal year). These higher expenses are offset partially by lower employee recruitment costs, Board counsel costs, and website costs.
- **Contract Compliance and Support expenses** – 15% or \$38,600 higher than FY1415 adopted budget.
 - \$20,000 for a financial analysis of SBR's actual operational costs vs. compensation.
 - \$25,000 for a financial analysis of Recology's actual operational costs vs. compensation.
 - \$35,000 for on-call consultant support for the new Finance Manager.
 - The above costs are partially offset by lower costs for annual financial and systems audit of contractors, and reduced consultant support for rate work.

- **AB 939 and AB 341 Compliance** – 19.3% or \$170,500 higher than FY1415 adopted budget.
 - \$197,500 higher expenses for long range plan projects offset partially by cuts in other line items including \$24,000 in diversion program support, \$10,000 in commercial recycling technical assistance, \$15,000 in residential outreach, and \$5,000 in newsletter printing/mailing costs.
- **Collection Operations** – 27.8% or \$144,800 higher than FY1415 adopted budget.
 - \$141,300 higher expense for the Door-to-Door HHW collection program largely due to a full-year effect of the recent rollout of new services in Atherton and Redwood City. HHW expense is fully offset by HHW revenue.

Further expense line item detail can be found in **Attachment B**. A fuller discussion on staff wage and benefit costs can be found under “Personnel” on the next page.

Shoreway Operations

Table 8 summarizes budgeted Shoreway operations expenses for FY1516 which are 1.4% above FY1415 adopted budget levels.

Table 8

FY1516 EXPENDITURE DETAIL FOR SHOREWAY OPERATIONS					
Expenditures	FY1415 Adopted Budget	FY1415 Mid-Year Projections	FY1516 Preliminary Budget	Variance	Variance %
SBR Compensation*	\$17,061,200	\$17,015,900	\$17,455,900	\$394,700	2.3%
Disposal and Processing*	\$14,121,800	\$13,628,500	\$14,253,700	\$131,900	0.9%
Insurance Shoreway	\$213,400	\$213,000	\$221,400	\$8,000	3.7%
Education Center	\$75,000	\$60,000	\$60,000	(\$15,000)	-20.0%
Debt Service Bond Interest	\$2,885,500	\$2,885,500	\$2,833,100	(\$52,400)	-1.8%
Other Operating Expenses	\$226,000	\$216,000	\$241,000	\$15,000	6.6%
Taxes (Sewer)	\$35,400	\$34,800	\$35,800	\$400	1.1%
Franchise Fee (San Carlos)**	\$1,546,800	\$1,513,000	\$1,556,700	\$9,900	0.6%
Total Shoreway Operations:	\$36,165,100	\$35,566,700	\$36,657,600	\$492,500	1.4%
* Expense projection based on estimated facility tonnage					
** Expense projection based on estimated gate revenue (tipping fees x estimated tons)					

Notable variances from the FY1415 adopted budget include:

- Higher Shoreway operator expenses of \$394,700 in payments to SBR; \$420,700 from assumed January 1, 2016 compensation rate increases, mix of materials (more MRF tons but less transfer station tons), and changes to mix to organics processor destinations. These expenses are slightly reduced from lower transportation costs and SBR interest expense. SBR’s 2016 compensation rates are estimated to increase approximately 1.8% which effects half of the fiscal year. (See **Attachment F**, Table 4 for detail).
- Disposal and processing expenses are higher than the FY1415 adopted budget by \$131,900 primarily from higher assumed disposal and processing rates effective January 1, 2016 partially offset by lower organics processing costs due to lower tonnage. (See **Attachment F**, Table 5 for detail).
- The Education Center budget is \$15,000 lower due largely to lower than expected school busing costs which are assumed to be \$19,000 for the upcoming fiscal year.
- Interest on our bonds to build the 2009 Master Plan improvements will decline by \$52,400 in FY1516.

Personnel

As detailed in **Attachment D**, the Administrative staff and AB 939 program staff budget line items reflect an assumed merit increase pool of 3% of total wages and no changes in salary ranges; such merit increases in total \$26,000 – half in fiscal year. Per Board discussion and direction at the May 22, 2014 Board meeting, the Board will separately review and consider approval of the final merit increase pool.

The SBWMA continues to have a very sustainable and cost effective business model for how the Agency manages its employee costs with key points as follows:

- The SBWMA is a non-PERs agency. Our seven current employees are offered a self-directed 401(a) and 457(b) plans, very similar to private sector 401(k) plans. We have no employee pensions and thus no long-term pension obligations. We do not participate in the Social Security system. There are no post-retirement benefits.
- All employees are non-represented; there are no collective bargaining agreements with our employees.
- There are no automatic salary adjustments for employees such as a COLA adjustment or step increases. Employee performance is evaluated each year and merit increases are granted on a calendar year basis using the Board approved merit increase pool and if salary ranges allow for an adjustment.
- There are no proposed changes to the benefit package as identified in the Board approved updated Employee Handbook on February 26, 2015.
- The above factors result in a low benefit to wage ratio of 32.7%.

The SBWMA also has one contract position, Recycling Programs Manager, through Local Government Services (LGS) which provides PERs benefits. This position's profile is similar to municipal agencies and thus the position recruitment focused on municipal employees who normally have PERs benefits.

Per Board direction, **Appendix D** also includes details on the SBWMA's benefit plans.

Capital Spending

Proposed FY1415 capital spending of \$1,362,750 is \$437,750 higher than the adopted FY1415 budget amount of \$925,000 largely due to the \$510,000 project for expansion of the MRF tipping area with a canopy extension to the existing building. \$450,000 was budgeted in FY1415 but recent bid results came in approximately \$61,000 over the original budget amount; this was even after a negotiated revised price with the sole bidder. Staff is in the process of rebidding the project. The actual spending for FY1415 will be lower by \$450,000 due to the delay in the canopy project into FY1516.

Additional detail on capital projects can be found on the capital projects worksheet included in **Attachment A** and **Attachment E**. Per Board feedback, staff has added a forecast for capital spending for the four fiscal years after FY1516; this provides a five-year snapshot of estimated capital spending. The forecast includes recommended capital projects in the draft 2015 Long Range Plan and for the first-time includes expected MRF equipment replacement costs.

Reserve Balances

Table 9 on the next page captures the reserve balance projections for FY1516 compared to the FY1415 adopted budget. The undesignated reserve balance is projected to be \$3.2 million which is \$0.7 million higher than the FY1415 adopted budget but \$1.3 million lower than the FY1415 mid-year budget. This is primarily due to \$0.7 million higher FY1314 actual balance than was used in the adopted budget but was used in the mid-year budget – it was not finalized by the auditor until November 2014. The preliminary FY1516 budget is lower than the FY1415 mid-year budget due to lower Contribution to Cash Reserves and higher capital expenditures.

Table 9

	ACTUAL FY1314	ADOPTED BUDGET FY1415	MID-YEAR BUDGET FY1415	PROPOSED BUDGET FY1516
UNRESTRICTED:				
RATE STABILIZATON (10% of expense)	\$ 3,021,726	\$ 3,906,648	\$ 3,845,988	\$ 3,979,201
EMERGENCY RESERVE (10% of total expense)	\$ 3,021,726	\$ 3,906,648	\$ 3,845,988	\$ 3,979,201
EQUIPMENT REPLACEMENT (ANNUAL)	\$ 1,130,726	\$ 1,542,328	\$ 1,542,328	\$ 1,499,514
UNDESIGNATED	\$ 5,952,546	\$ 2,530,236	\$ 4,527,022	\$ 3,197,366
TOTAL UNRESTRICTED GENERAL RESERVES	\$ 13,126,724	\$ 11,885,859	\$ 13,761,325	\$ 12,655,281
COMMITTED:				
BOND PRINCIPAL PAYMENT FUND	\$ 1,004,167	\$ 1,058,330	\$ 1,058,330	\$ 1,091,667
TOTAL GENERAL RESERVES	\$ 14,130,891	\$ 12,944,189	\$ 14,819,655	\$ 13,746,947
<i>proof</i>	\$ 14,130,891	\$ 12,944,189	\$ 14,819,655	\$ 13,746,947
Other LT Projects (Fully Funded)				
SHOREWAY REMEDIATION PROJECT	\$ 1,289,283	\$ 1,209,283	\$ 1,209,283	\$ 1,239,800

Despite the high undesignated cash reserve balance, staff is assuming tipping fee increases at Shoreway effective January 1, 2016 so as to meet bond covenant requirements (which are on a calendar year basis; see agenda item 4B for the 2014 calendar year financial statements). The preliminary FY1516 budget figures when used in conjunction with figures from the last half of FY1415 produce estimated bond covenant requirements results of 1.01 for the break-even test (minimum of 1.0 required) and 1.45 for the debt coverage test (minimum of 1.4 is required). While a revenue transfer from cash reserves can be made to comply with the bond covenant requirements, staff believes it's important to maintain our undesignated cash reserve balances to help meet future capital requirements at Shoreway. Also, the full year impact of the tip fee increase will improve these bond covenant test results.

Background

On June 26, 2014 the SBWMA Board of Directors adopted the FY141514 Operating Budget, inclusive of the SBWMA program budget and Shoreway Operations.

On January 22, 2015 the Board conducted a mid-year review of the FY1415 budget and adopted a revised budget to reflect \$175,000 in additional one-time expense for SBR operations associated with impacts from the slow-down at the Port of Oakland. Final costs due to the port labor slow down impact are still pending.

Fiscal Impact

For FY1415 staff is projecting contribution to cash reserves of \$1,479,293 which is \$860,532 below our FY1415 adopted budget contribution of \$2,339,825 (see Table 1 on page 3 of the staff report). This lower contribution is 2.1% of total revenue due primarily to the following factors:

- Higher tip fee revenue of \$749,800
- Lower commodity revenue from lower prices of \$651,985
- Higher Shoreway operating expense of \$492,500 (mainly due to higher MRF tons and MRF payment to SBR)
- Higher SBWMA program expense of \$233,032 primarily due to additional Long range Plan projects
- lower interest expense of \$52,400

Non-operating obligations (i.e., bond principal payment and capital expenditures) are not included in the contribution to cash reserves but are paid out of contributions to arrive at Net Contribution to Cash Reserves (i.e. Cash Flow). These obligations include: bond principal payment (\$1,303,000) and capital expenditures (\$1,249,000). Net Cash Flow after deducting these

items for FY1516 is negative \$1,072,708. All cash flow items are included in the reserve calculation. (See **Table 1** on page 3 of the staff report.)

The assumed increases in franchise tipping fees effective January 1, 2016 will have an estimated collection rate impact for 2016 of 0.97%.

Attachments:

- A – FY1516 Preliminary Budget
- B – Programmatic Detail (Staff Resources and Description of Key Projects and Work Activities)
- C – Organization Chart
- D – Personnel Summary
- E – Capital Project Description
- F – Back-Up Financial and Operational Data

	ACTUAL FY1314	ADOPTED BUDGET FY1415	MID-YEAR BUDGET FY1415	PROPOSED BUDGET FY1516
UNRESTRICTED:				
RATE STABILIZATON (10% of expense)	\$ 3,021,726	\$ 3,906,648	\$ 3,845,988	\$ 3,979,201
EMERGENCY RESERVE (10% of total expense)	\$ 3,021,726	\$ 3,906,648	\$ 3,845,988	\$ 3,979,201
EQUIPMENT REPLACEMENT (ANNUAL)	\$ 1,130,726	\$ 1,542,328	\$ 1,542,328	\$ 1,499,514
UNDESIGNATED	\$ 5,952,546	\$ 2,530,236	\$ 4,527,022	\$ 3,197,366
TOTAL UNRESTRICTED GENERAL RESERVES	\$ 13,126,724	\$ 11,885,859	\$ 13,761,325	\$ 12,655,281
COMMITTED:				
BOND PRINCIPAL PAYMENT FUND	\$ 1,004,167	\$ 1,058,330	\$ 1,058,330	\$ 1,091,667
TOTAL GENERAL RESERVES	\$ 14,130,891	\$ 12,944,189	\$ 14,819,655	\$ 13,746,947
<i>proof</i>	\$ 14,130,891	\$ 12,944,189	\$ 14,819,655	\$ 13,746,947
Other LT Projects (Fully Funded)				
SHOREWAY REMEDIATION PROJECT	\$ 1,289,283	\$ 1,209,283	\$ 1,209,283	\$ 1,239,800

Reserves Cash Flow

FY1516 PRELIMINARY BUDGET

REVENUE SUMMARY	ACTUAL FY1314	ADOPTED BUDGET FY1415	MID-YEAR PROJECTION FY1415	YTD 4/2/15	PROPOSED BUDGET FY1516	Variance to Adopted Budget	Variance to Appvd Bud %
ADMINISTRATIVE REVENUES							
409100 INVESTMENT INCOME	155,458	56,500	67,400	27,925	48,200	(8,300)	-14.7%
409101 INVESTMENT (GASB 31) MARKET VALUE ADJ						-	
409200 INTEREST INCOME	8,292					-	
TOTAL ADMINISTRATIVE	163,750	56,500	67,400	27,925	48,200	(8,300)	-14.8%
OPERATIONS							
480026 TIPPING FEES - Non Franchised	6,096,285	6,229,700	5,952,900	3,878,714	5,948,700	(281,000)	-4.5%
480027 TIPPING FEES - Franchised	25,605,623	25,992,200	25,820,200	17,599,788	26,742,000	749,800	2.9%
480028 COMMODITY SALES	10,739,075	10,812,200	10,568,100	6,769,345	10,076,700	(735,500)	-6.8%
480029 COMMODITY REVENUE SHARE	(1,235,181)	(1,521,400)	(1,407,600)	1,564,801	(1,142,500)	378,900	-24.9%
522717 BUYBACK PAYMENTS	(762,049)	(616,000)	(888,200)	(606,381)	(911,300)	(295,300)	47.9%
480025 E-SCRAP REVENUE	70,287	66,300	94,500	7,218	70,500	4,200	6.3%
480033 MRF Host Fee - 3RD PARTY TONS	203,848	361,800	390,400	296,584	416,500	54,700	15.1%
480031 HHW DOOR TO DOOR COLLECTION SERVICE	492,980	521,500	641,200	383,585	662,800	141,300	27.1%
480032 PERFORMANCE INCENTIVE / DISINCENTIVE		-				-	#DIV/0!
COMMERCIAL RECYCLING REPORTING ORDINANCE					25,000		
480008 MISCELLANEOUS REVENUE	888	25,000	25,000	-	1,000	(24,000)	-96.0%
TOTAL OPERATIONS	41,211,756	41,871,300	41,196,500	29,893,656	41,889,400	(6,900)	0.0%
TOTAL REVENUE	41,375,506	41,927,800	41,263,900	29,921,581	41,937,600	9,800	0.0%
CONTRIBUTION TO CASH RESERVES	3,851,834	2,339,825	2,158,764		1,479,293	(860,532)	-36.8%
% OF REVENUE		5.6%				-2.05%	

REVENUES

GENERAL OPERATING EXPENSES BY MAJOR CATEGORY							
EXPENDITURE SUMMARY	ADOPTED BUDGET FY1415	MID-YEAR PROJECTION FY1415	YTD SPENT 4/2/15	PROPOSED BUDGET FY1516	Variance to Adopted Budget	Variance % to Adopted Budget	Notes
ADMINISTRATIVE EXPENSES							
520305 ADMINISTRATIVE STAFF	566,900	567,500	386,662	584,521	17,621	3.1%	Staff wages and benefits for Exec. Dir., Finance Manager & Board Sec. 2.25 month overlap with new Finance Manager (July-early September); estimated cost of \$40,370. Staff wages and benefits for Recycling, Outreach, Compliance and Shoreway. Fees paid to contract HR and payroll service provider. Contracted legal counsel services. Estimated fees paid to current vendor pending results of RFP process. Fees paid to IT service provider. Fees paid to website management service provider. Fees paid to auditors to complete FY & calendar year financial statements. Annual insurance premium for Director's and Officer's insurance. Bank fees exclusive of fees paid to BNY as the Bond Trustee. Assumes one-year extension on lease with one option year at current terms. City going out to bid for new janitorial services but currently approx. \$2,000/qr. This may change if we need to change phones with new service. Assumes notice for 2 bids. Reimbursement for employee work related cell phone costs. Staff attendance at trade conferences and travel related to budgeted projects. Up to \$1250/employee per year for qualified educational, job related development activities, and personal development as approved by Executive Director. Sponsorships for Acterra, SSMC, CAW and CPSC. Two new laptops. Minor other hardware.
520306 AB 939 PROGRAM STAFF	703,000	692,300	485,688	731,661	28,661	4.1%	
520328 EMPLOYEE RECRUITMENT / HR SUPPORT	25,000	25,000	450	5,000	(20,000)	-80.0%	
520337 PEO COST (HR & PR FEES)	19,000	19,400	6,000	19,900	900	4.7%	
520312 BOARD COUNSEL	65,000	65,000	22,169	55,000	(10,000)	-15.4%	
520300 BOARD MEETINGS	3,000	3,000	2,281	3,000	-	0.0%	
520310 ACCOUNTING SERVICES (City of San Carlos)	131,900	131,900	65,950	136,500	4,600	3.5%	
520334 INFORMATION TECHNOLOGY	27,000	27,000	25,096	28,000	1,000	3.7%	
520338 WEBSITE	15,000	15,000	12,578	11,500	(3,500)	-23.3%	
520301 ANNUAL FINANCIAL AUDIT	9,700	9,700	5,500	9,800	100	1.0%	
520701 D&O INSURANCE	32,500	34,600	34,570	39,000	6,500	20.0%	
520202 BANK FEES	7,900	7,900	5,581	8,400	500	6.3%	
520203 RENT (office lease)	53,000	52,450	39,314	54,300	1,300	2.5%	
520204 PRINTING AND POSTAGE	150	150	71	150	-	0.0%	
520107 UTILITIES & PHONE	17,000	17,000	10,181	17,500	500	2.9%	
520905 OFFICE/TENANT IMPROVEMENTS	1,000	1,000	654	1,000	-	0.0%	
520201 OFFICE SUPPLIES	17,000	17,000	12,446	15,500	(1,500)	-8.8%	
520215 OFFICE EQUIPMENT COSTS	25,500	25,500	14,407	24,300	(1,200)	-4.7%	
520504 PUBLICATIONS & PUBLIC NOTICES	3,000	3,000	-	3,000	-	0.0%	
520501 PROFESSIONAL DUES & MEMBERSHIPS	2,300	2,300	1,014	2,300	-	0.0%	
520801 VEHICLE MILEAGE & TOLLS	125	75	39	75	(50)	-40.0%	
520105 CELL PHONES	4,000	4,000	2,892	4,500	500	12.5%	
520503 CONFERENCE & MEETINGS	10,000	10,000	5,477	10,500	500	5.0%	
520502 TRAINING	6,500	6,500	1,250	5,500	(1,000)	-15.4%	
520511 SPONSORSHIPS & DONATIONS	9,000	9,000	6,500	9,500	500	5.6%	
522706 COMPUTER PURCHASE	8,000	8,000	6,555	6,000	(2,000)	-25.0%	
TOTAL ADMINISTRATIVE	\$ 1,762,475	\$ 1,754,275	\$ 1,153,325	\$ 1,786,407	\$ 23,932	1.4%	
CONTRACT COMPLIANCE AND SUPPORT							
520307 RATE REVIEW	40,000	40,000	6,377	30,000	(10,000)	-25.0%	3rd party consulting support if needed.
TOTAL RATE REVIEW	40,000	40,000		30,000	(10,000)	-25.0%	
CONSULTANT SUPPORT							
520308 FACILITY IMPROVEMENT OVERSIGHT	30,000	30,000	16,733	50,000	20,000	66.7%	Operations assessment @\$20K, disaster mgt. plan, utility analysis for CNG and mixed waste processing. Annual financial audit of RSMC and SBR at \$40k.\$15k for reviewing annual route assessment. \$15k call center monitoring. \$40k annual reporting system audit. \$25k operational assessment. On-call consultant support as needed. Bi-annual Recology contamination sampling.
520309 HCM01 CONTRACT MANAGEMENT SUPPORT	66,400	66,400	14,496	55,000	(11,400)	-17.2%	
520309 HCS02 COLLECTION SERVICES FRANCHISE ADMIN.	75,000	75,000	11,844	80,000	5,000	6.7%	
FINANCE MANAGER SUPPORT - NEW				35,000	35,000		
520336 QUARTERLY LOAD CONTAMINATION MONITORING	46,000	46,000	43,895	46,000	-	0.0%	
TOTAL CONSULTANT	\$ 217,400	\$ 217,400	\$ 86,969	\$ 266,000	\$ 48,600	22.4%	
TOTAL CONTRACT COMPLIANCE & SUPPORT	\$ 257,400	\$ 257,400	\$ 86,969	\$ 296,000	\$ 38,600	15.0%	

GENERAL OPERATING EXPENSES BY MAJOR CATEGORY							
EXPENDITURE SUMMARY	ADOPTED BUDGET FY1415	MID-YEAR PROJECTION FY1415	YTD SPENT 4/2/15	PROPOSED BUDGET FY1516	Variance to Adopted Budget	Variance % to Adopted Budget	Notes
RECYCLING - AB939 AND AB 341 COMPLIANCE							
RECYCLING ADMINISTRATION							
520311 CIWMB ANNUAL REPORTS	25,000	25,000	19,750	25,000	-	0.0%	CalRecycle Electronic Annual Report for 10 Member Agencies.
520341 SBWMA ANNUAL REPORT	5,000	5,000	-	5,000	-	0.0%	
520309 HDV01 DIVERSION PROGRAM SUPPORT	60,000	60,000	-	36,000	(24,000)	-40.0%	Public Spaces pilot and Member Agency Assistance.
520508 RECYCLING REPORTING ORDINANCE EXPENSES				15,000	15,000		
520604 EVENT GIVEAWAYS	1,500	1,500		1,500	-	0.0%	
TOTAL RECYCLING ADMINISTRATION	91,500	91,500	19,750	82,500	\$ (9,000)	-9.8%	
LONG RANGE PLAN/DIVERSION PROGRAMS							
520340 LONG RANGE PLAN ALTERNATIVES	232,500	247,500	115,119	430,000	197,500	84.9%	EOW Pilot - \$120k; Split-Body Pilot Outreach - \$17k; Commercial Outreach - \$60k; Education stakeholder engagement process - \$25k. \$183k mixed waste processing system project development to 30% design level and estimate. \$25k to further refine admin. building options.
TOTAL LONG RANGE PLAN/DIVERSION PROGRAMS	232,500	247,500	115,119	430,000	197,500	84.9%	
COMMERCIAL PROGRAMS							
520331 LARGE EVENT/VENUE CONSULTING	7,500	7,500	-	7,500	-	0.0%	MD Note - Carry over project from FY1415. If done before end of FY, not needed then. Repurpose 2nd trailer as mobile education trailer, will explore grant funding opportunities.
520608 CLIMATE CHANGE REPORTING	23,000	23,000	2,924	27,000	4,000	17.4%	Incorporating all of Shoreway requires much more reporting requirements and review by outside auditors.
520604 COE01 COMMERCIAL RECYCLING TECHNICAL ASSIST.	85,000	85,000	21,504	75,000	(10,000)	-11.8%	\$15k-AB1826 and AB341 Compliance Outreach; \$20K commercial toolkit; \$10k-business awards program; \$30k-commercial accounts research.
520604 COE02 PURCHASE COMM/MFD CONTAINERS FOR RECOLO	60,000	60,000	16,666	60,000	-	0.0%	\$20k for buddy bags, \$20k for other commercial containers, \$20k for municipal bldgs. All purchases for Recology.
520604 CDCRY C&D RECYCLING PROGRAM	-	-	-	-	-	#DIV/0!	
520604 MF001 MULTI-FAMILY OUTREACH	50,000	50,000	12,359	50,000	-	0.0%	Includes \$10K AB1826 and AB 341 compliance, \$20K MFD toolkit updates/additions; \$10K battery/cell outreach; \$10K-MFD awards program.
TOTAL COMMERCIAL PROGRAMS	225,500	225,500	53,452	219,500	(6,000)	-2.7%	
RESIDENTIAL PROGRAMS							
520604 QNL01 QUARTERLY NEWLESTTER DESIGN/SETUP	15,000	20,000	17,991	20,000	5,000	33.3%	Design/produce 3 newsletters.
520604 QNLPM QUARTERLY NEWLETTER PRINTING/MAILING	95,000	90,000	27,578	90,000	(5,000)	-5.3%	Assumes 2 direct mail newsletters and one sent via bill insert.
520604 RES01 RESIDENTIAL OUTREACH PROGRAMS	135,000	120,000	47,868	120,000	(15,000)	-11.1%	Includes \$70K on-going outreach/support for existing programs; \$12K annual residential service notice development; \$15K website/social media maintenance and updates; \$23,000 mobile phone app annual fee.
520604 COMPS COMMUNITY EVENTS	1,000	1,000	675	5,000	4,000	400.0%	Covers compost giveaway, e-scrap/shred and coats drive promotion.
520604 HHWUM HHW DOOR TO DOOR COLLECTION OUTREACH	80,000	80,000	61,775	80,000	-	0.0%	Ongoing promotion for in program, includes direct mail, print and outdoor advertisements.
520335 CURBSIDE HOUSEHOLD BATTERY OUTREACH	5,000	5,000	3,200	5,000	-	0.0%	
520604 ECE01 ELECTRONIC COLLECTIONS EVENTS	1,000	1,000	945	-	(1,000)	-100.0%	Included under "Community Events" line item.
TOTAL RESIDENTIAL PROGRAMS	332,000	317,000	160,031	320,000	(12,000)	-3.6%	
TOTAL RECYCLING - AB939 AND AB 341 COMPLIANCE	\$ 881,500	\$ 881,500	\$ 348,352	\$ 1,052,000	\$ 170,500	19.3%	
SUBTOTAL SBWMA PROGRAM BUDGET	\$ 2,901,375	\$ 2,893,175	\$ 1,588,646	\$ 3,134,407	\$ 233,032	8.0%	
COLLECTION OPERATIONS							
522710 HHW DOOR TO DOOR COLLECTION SERVICES	521,500	641,200	331,706	662,800	141,300	27.1%	Added Atherton and Redwood City effective 3/1/15. This is a pass through expense 100% offset by revenue.
522719 SHRED EVENT SERVICE		4,061	1,692	3,500	3,500	#DIV/0!	
TOTAL COLLECTION OPERATIONS	521,500	645,261	333,398	666,300	144,800	27.8%	
TOTAL SBWMA PROGRAM BUDGET	\$ 3,422,875	\$ 3,538,436	\$ 1,922,043	\$ 3,800,707	\$ 377,832	11.0%	

GENERAL OPERATING EXPENSES BY MAJOR CATEGORY							
EXPENDITURE SUMMARY	ADOPTED BUDGET FY1415	MID-YEAR PROJECTION FY1415	YTD SPENT 4/2/15	PROPOSED BUDGET FY1516	Variance to Adopted Budget	Variance % to Adopted Budget	Notes
SHOREWAY OPERATIONS							
522712 OPERATOR COMPENSATION - SBR	17,061,200	17,015,900	11,438,736	17,455,900	394,700	2.3%	Payments per ton by JPA to SBR for facility operations services per Ops. Agreement. Payments per ton by JPA to third party disposal and processing vendors such as Ox. Mtn. landfill, organics processors, etc. Annual insurance premiums paid by SBWMA for Shoreway property and liability insurance. Facility repair and maintenance projects not treated as "capital" projects. Budget for three special public events, school busing (\$18k), tour supplies, etc. Monthly maintenance charge for truck tipper that JPA owns and Republic operates at Ox. Mtn. Unplanned MRF equipment repairs greater than \$10k are responsibility of JPA.
522713 DISPOSAL & PROCESSING COSTS	14,121,800	13,628,500	9,255,474	14,253,700	131,900	0.9%	
520710 INSURANCE SHOREWAY	213,400	213,000	211,439	221,400	8,000	3.7%	
522714 SHOREWAY FACILITY COST	160,000	160,000	117,594	175,000	15,000	9.4%	
570300 SHOREWAY MAINTENANCE - New					-	#DIV/0!	
522718 EDUCATION CENTER OPERATIONS	75,000	60,000	21,457	60,000	(15,000)	-20.0%	
522716 MAINTENANCE - OX MTN TIPPER	36,000	36,000	21,488	36,000	-	0.0%	
520901 SHOREWAY MRF EQUIP. MAINTENANCE > \$10k	30,000	20,000	18,501	30,000	-	0.0%	
520324 TAXES (SEWER)	35,400	34,800	33,630	35,800	400	1.1%	
SUBTOTAL SHOREWAY OPERATIONS	\$ 31,732,800	\$ 31,168,200	\$ 21,118,319	\$ 32,267,800	\$ 535,000	1.7%	
SHOREWAY OTHER							
521104 DEBT SERVICE BOND INTEREST	2,885,500	2,885,500	485,935	2,833,100	(52,400)	-1.8%	Solid Waste Enterprise Revenue Bond interest payments. 5% franchise fee payments by JPA to City of San Carlos.
522702 FRANCHISE FEE	1,546,800	1,513,000	1,164,428	1,556,700	9,900	0.6%	
SUBTOTAL SHOREWAY OTHER	\$ 4,432,300	\$ 4,398,500	\$ 1,650,363	\$ 4,389,800	\$ (42,500)	-1.0%	
TOTAL SHOREWAY OPERATING EXPENSE	\$ 36,165,100	\$ 35,566,700	\$ 22,768,682	\$ 36,657,600	\$ 492,500	1.4%	
TOTAL OPERATING EXPENSES (SBWMA Program + Shoreway Operations)	\$ 39,587,975	\$ 39,105,136	\$ 24,690,725	\$ 40,458,307	\$ 870,332	2.2%	
<i>excludes non-cash items such as depreciation</i>							

CAPITAL PROJECTS

PROJECT DESCRIPTION	ADOPTED BUDGET FY1415	MID YEAR PROJECTION FY1415	YTD 4/2/15	PROPOSED BUDGET FY1516	FORECAST FY1617	FORECAST FY1718	FORECAST FY1819	FORECAST FY1920
570300 SF044 Transfer Station (TS)Tipping floor resurfacing	200,000	-	-	100,000	100,000	100,000	100,000	100,000
570300 SF045 Site paving repairs and restriping ³						600,000		1,400,000
570300 SF047 Site signage	40,000	40,000	-	-				
570300 SF049 Truck shop building maintenance	20,000	20,000	-	20,000	20,000	20,000	20,000	20,000
570300 SF050 TS building maintenance	20,000	20,000	-	20,000	20,000	20,000	20,000	20,000
570300 SF051 MRF building maintenance	25,000	25,000	-	225,000	125,000	125,000	125,000	125,000
570300 SF052 Admin building maintenance	40,000	40,000	-	20,000	115,000	40,000	40,000	40,000
570300 SF053 Site maintenance	25,000	25,000	-	30,000	30,000	30,000	30,000	30,000
570300 SF055 Fire suppression				15,000		15,000		
570300 SF056 Repairs to landfill tipper	70,000	70,000	-	15,000	15,000	15,000	15,000	15,000
570300 SF060 Education center exhibits	15,000	-	-	-		15,000		
570300 SF061 MRF tip area canopy	450,000	25,000	21,200	510,000				
570300 SF062 Electric charging station	20,000		0	20,000		15,000		
570300 SF063 Replace diesel fuel storage and dist. System ³				-				275,000
SF066 CNG fueling station ^{1,3}								1,312,500
570300 SF064 Energy storage system				-				
570300 SF065 Baler reline				-		120,000		
570300 new Mixed waste processing equipment ³				-		10,984,400		
new Transfer Station building improvements ³					2,532,200			
new LED Lighting retrofit ³				274,000				
new MRF equipment replacement ²				113,750	207,500	407,500	199,167	472,917
520321 SF013 PROGRAM CONTINGENCY								
SUBTOTAL CAPITAL PROJECTS	925,000	265,000		1,362,750	3,164,700	12,506,900	549,167	3,810,417

¹ \$1,240,000 available in Shoreway Remediation fund to help cover capx.

² Equipment Replacement cash reserve funds will cover these expenses.

³ 2015 Long Range Plan recommended projects.

RethinkWaste FY1516 Preliminary Program Budget

ADMINISTRATION

FY1415 Adopted Budget: \$1,762,475

FY1516 Preliminary Budget: \$1,786,407

SBWMA Staff Resources: Kevin McCarthy, Executive Director; Marshall Moran, Finance Manager; and Cyndi Urman, Board Secretary/Office Manager.

Approximate FTEs (reflects estimated allocation of staff resources to this program area): 1.7 FTEs = 0.90 (Office Manager/Board Secretary), 0.45 (Finance Manager), and 0.35 (Executive Director).

Description: Provides for overall administrative operations of the agency, including: personnel administration, budget development, financial projections, expense payment processing, fiscal management, Board of Directors administration, customer service, risk management, records retention, and information technology. Budget for these functions is captured under “Administrative Expenses.”

FY1516 Key Projects/Activities

Budget and Financial Analysis

- Review the FY1516 budget to identify budget variances and plan for a mid-year adjustment if needed.
- Prepare the FY1617 budget for Board review and approval.
- Prepare two calendar year financial projections to support Shoreway tip fee assumptions and to “test” bond covenant requirements.
- Review existing tipping fees and develop recommended 2016 tipping fee adjustments if needed.

Accounting and Fiscal Management

- Complete FY1415 financial audit and 2015 calendar year financial statements for bond reporting.
- If applicable, manage the transition of a new vendor for the Annual Financial and Accounting Services contract. **NEW PROJECT**
- Complete the transition from the current Finance Manager to a new Finance Manager. **NEW PROJECT**
- Maximize use of competitive bidding for technical consulting services particularly for scopes of work exceeding \$50,000.
- Meet bond covenants and reporting requirements as specified in the Indenture to ensure compliance including the two debt coverage ratios.
- Monitor South Bay Recycling (SBR) monthly reporting (per Operations Agreement) of tonnage and review their monthly invoice for accuracy and tie all payments to source data.
- Manage monthly cash transfers to/from SBR (per Operations Agreement) for commodity revenue, public revenue, and payments for operations. Review and verify SBR’s detailed monthly calculation of commodity revenue.
- Manage monthly billing to and payment from Recology for disposal at Shoreway as prescribed in the Member Agency franchise agreements.
- Ensure all procedures are followed and receipts and payments to vendors are supported by proper documentation and made on timely basis such that cash flow is optimized.

RethinkWaste FY1516 Preliminary Program Budget

Administration (Continued)

- Review the Quarterly Investment Report to the Board prepared by the City of San Carlos.
- Renew general insurance policies (property, general liability, EIL, D&O, etc.) and ensure proper coverage is maintained.

Human Resources

- Manage the payroll and benefits administration, including managing the annual renewal of employee benefit plans to ensure cost effective and competitive plans.
- Make timely payments to vendors for payroll, retirement plan, and HSA plan.
- Monitor payroll process and ensure timely and accurate payment to employees.
- Evaluate the current model used for outsourced HR and payroll administration by a third party and make recommendations for changes if appropriate. **NEW PROJECT**

Board of Directors Administration

- Maintain the Board of Directors webpage to ensure accurate and up to date information is available.
- Update as needed the website's Board Member portal feature to house information of interest.
- Maintain accurate and up-to-date records for the SBWMA, including Board meeting minutes, resolutions, ordinances and contracts.
- Update as necessary the Board of Directors JPA and Contracts Resources Binder.
- Deliver Board Packets to the Board of Directors accurately and on time.
- Manage to compliance with record retention and other Board adopted policies.
- Meet with Board Members, particularly any new Board Members, to address questions and concerns and any unique Member Agency needs.
- Respond to Board Members, and Member Agency staff communications in a timely, professional and accurate manner.

Customer Service

- Provide high quality customer service to members of the public that contact the SBWMA, including providing helpful, accurate and timely information.

RethinkWaste FY1516 Preliminary Program Budget

CONTRACT COMPLIANCE AND SUPPORT

FY1415 Adopted Budget: \$257,400

FY1516 Preliminary Budget: \$296,000

SBWMA Staff Resources: Cliff Feldman, Recycling Programs Manager; Marshall Moran, Finance Manager; Monica Devincenzi, Recycling Outreach and Sustainability Manager; and Hilary Gans, Facility Operations and Contracts Manager.

Approximate FTEs (reflects estimated allocation of staff resources to this program area): 1.32 FTEs = 0.60 (Recycling Programs Manager), 0.30 (Finance Manager), 0.30 (Executive Director), 0.10 (Recycling Outreach and Sustainability Manager), and .02 (Office Manager/Board Secretary).

Description: Staff services provided in this area includes:

- Continued oversight and contract administration support for the 12 collection services franchise agreements with Recology, including follow-up work on audit findings and financial auditing.
- Continued oversight of SBR's operations per the Shoreway Operations Agreement (see "**Shoreway Operations**" budget worksheet).
- Management of the annual Member Agency rate review process, including review of the 2016 Recology and SBR compensation applications, and completion of the SBWMA final reports reviewing the Recology and SBR compensation applications and consolidated rate report for 2016. Initiate audit work and review of operational data included in the 2016 compensation applications.

FY1516 Key Projects/Activities

Contract Administration

- Review 2015 Annual Report from Recology required per the Member Agency franchise agreements.
- Hire contractor to conduct 2015 rate (calendar) year audit of collection services and facility operations reports, tonnage data and customer service systems. This project is conducted annually due to the fiscal impact associated with the self-reported information contained in the company's annual reports and compliance with related performance standards. Implement 2014 rate year audit findings as appropriate.
- Hire contractor to conduct 2015 rate year audit of financial systems (includes Recology's revenue reconciliation) of both contractors to verify financial risks to SBWMA and its Member Agencies. This project is conducted annually due to the fiscal impact of data included in reports submitted by the companies and since significant ongoing financial transactions are conducted between the companies.
- Implement 2014 audit findings as appropriate and follow up with Recology to ensure progress on implementing audit recommendations.
- Complete two semi-annual load contamination monitoring events as required in the Member Agency's franchise agreements with Recology. Per Member Agency's franchise agreements and because the SBWMA manages the Shoreway facility, SBWMA is tasked with overseeing various aspects of ensuring that contamination of recycle and compost materials is kept low to maximize commodity revenue.
- Hire a contractor to conduct Recology customer service call center monitoring and evaluation of compliance per the Member Agency's franchise agreements. This project is conducted annually due to the fiscal impact associated with compliance of performance standards related to the operation of the customer service call center.

RethinkWaste FY1516 Preliminary Program Budget

Contract Compliance and Support (Continued)

- Hire a contractor to assist with conducting a review of Recology's collection services operations to identify their actual costs of operations and make recommendations as appropriate for future operational and program improvements. **NEW PROJECT**
- Hire a contractor to assist with conducting a review of SBR's operations and management of Shoreway to identify their actual costs of operations and make recommendations as appropriate for future operational improvements. **NEW PROJECT**
- Provide prompt responses to questions/issues/complaints that are raised by the public and Member Agencies regarding their franchise agreements and the services provided by Recology. The RethinkWaste phone number is publicized and staff frequently responds to requests from the public.
- Provide prompt responses to questions/issues/complaints that are raised by the public and Member Agencies regarding their experiences using the Shoreway facility and the services provided by SBR.
- Develop a Member Agency snapshot report for 2015 and make presentations to Member Agency governing bodies upon request. This snapshot report has been well received by the Member Agencies in prior years and staff shall continue to consolidate the key operational and programmatic metrics of the services provided and be available to present this information in public meetings upon request.

Rate Review, Analysis and Projections

- Complete SBWMA final rate reports providing a review of the Recology and SBR compensation applications for the 2016 rate year per the Member Agency's franchise agreements and Operations Agreement, respectively. Per the franchise agreements with Recology and the Operations Agreement with SBR, the SBWMA is tasked with consolidating the pertinent data required to project the revenue requirement needed for the subsequent rate year which directly results in determining the rates that need to be charged by each Member Agency.
- Continue to provide direction and support to Recology with making changes or improvements to their Annual Compensation Application. Staff will make efforts to continuously improve this key Application submitted by Recology each year.
- Analyze the very detailed cost adjustments in the Compensation Applications from Recology and SBR. Verify the companies follow the prescribed contractual requirements and approved compensation methodology per the franchise agreements and Operations Agreement, respectively. Conduct a detailed review of any Recology special issues if needed.
- Prepare financial analysis for projected revenue and total collection costs, residual cost impact from prior year, and include pass-through costs (disposal and agency fees) to determine total rate adjustment for each Member Agency per the franchise agreement(s).
- Prepare a variance analysis of 2016 total collection cost vs. 2015 cost by detailed cost categories by Member Agency to aid in understanding collection cost changes. Per feedback from our Member Agencies, this useful variance analysis is prepared annually to assist decision makers with analyzing and recommending rate increases.
- Provide ongoing rate analysis support and projections of 2016 rate impacts associated with changes to any assumptions.
- Update 5-year collection cost projection by Member Agency for collection cost components: Recology cost, disposal expense and Member Agency fees.
- Support Member Agencies with analysis of rate issues and attend rate hearings or rate related meetings as requested.

RethinkWaste FY1516 Preliminary Program Budget

Contract Compliance and Support (Continued)

- Review Recology’s Revenue Reconciliation Report; develop outside audit of financial risks including SBR’s payments to SBWMA. The financial information provided in the Recology Revenue Reconciliation Report is self-reported and is a key component in determining the subsequent revenue requirement needed to establish rates for Recology’s annual compensation increase.

NOTE: KEY PROJECT AND ACTIVITY DETAILS ARE LISTED IN ORDER BELOW BY BUDGET LINE ITEM; THEY ARE NOT LISTED IN THE ORDER SHOWN IN THE TEXT.

<u>Budget Expense Category</u>	<u>Description of Program for FY1516</u>	<u>FY1415 Adopted</u>	<u>FY1415 Mid-Year</u>	<u>FY1516 Proposed</u>
Contract Compliance and Support – Consultant Support		\$257,400	\$257,400	\$296,000
Rate Review and Support	<ul style="list-style-type: none"> • Rate analysis and support for Member Agencies, including outside support for accounting temporary worker. 	\$40,000	\$40,000	\$30,000
Facility Improvement Oversight	<ul style="list-style-type: none"> • Preparation of a preliminary Disaster Management Plan related to the Shoreway facility operations (\$30k). The SBWMA does not currently have a Disaster Management Plan. • Hire contractor to assist with conducting review of SBR’s operations and management of Shoreway to identify actual costs of operations and make recommendations as appropriate for future operational improvements (\$20k). 	\$30,000	\$30,000	\$50,000
Contract Management Support	<ul style="list-style-type: none"> • Conduct annual financial audit of Recology. This audit reviews distribution of franchise and other fees to Member Agencies, annual revenue reconciliation and other aspects of financial related reporting and franchise agreement compliance (\$40k). Limited route auditing related to Annual Route Assessments (\$15k). 	\$66,400	\$66,400	\$55,000

RethinkWaste FY1516 Preliminary Program Budget

Collection Services Franchise Administration	<ul style="list-style-type: none"> • SBWMA is required per franchise agreements to support Member Agencies with contract compliance issues, including monitoring and auditing the companies reporting, systems and customer service functions and ensuring compliance with any previous audit findings and recommendations (\$40,000); conducting customer service call center monitoring to test customer service data self-reported by company which pertains to calculation of performance incentives/disincentives and liquidated damages (\$15,000); and, conducting an operational and cost assessment of Recology’s collection services operations (\$25,000). 	\$75,000	\$75,000	\$80,000
Finance Manager Support (NEW)	<ul style="list-style-type: none"> • On-call consultant support by retired Finance Manager to new Finance Manager for major tasks completed for the first time like rate forecasting, tipping fee analysis, mid-year budget review and new budget preparation. 	N/A	N/A	\$35,000
Bi-Annual Contamination Monitoring	<ul style="list-style-type: none"> • Twice per year contamination monitoring per Article 6.02 of the franchise agreements to determine the contamination level of various material categories (e.g., single family targeted recyclable materials, etc.) (\$46,000). 	\$46,000	\$46,000	\$46,000

RethinkWaste FY1516 Preliminary Program Budget

RECYCLING OUTREACH AND PROGRAMS – AB 939, AB 341 AND AB 1826 COMPLIANCE

FY1415 Adopted Budget: \$881,500

FY1516 Preliminary Budget: \$1,052,000

SBWMA Staff Resources: Cliff Feldman, Recycling Programs Manager; and Monica Devincenzi, Recycling Outreach and Sustainability Manager.

Approximate FTEs (reflects estimated allocation of staff resources to this program area): 1.22 FTEs = 0.8 (Recycling Outreach and Sustainability Manager), 0.25 (Recycling Program Manager), 0.15 (Executive Director), and 0.02 (Office Manager/Board Secretary).

Description: Staff services provided in this area to ensure compliance with state-mandated waste reduction, recycling and reporting requirements per the California Integrated Waste Management Act of 1989 (Assembly Bill (AB) 939), mandatory commercial recycling (AB 341), and the more recent legislation pertaining to mandatory organics recycling by the commercial sector (AB 1826) include:

- Development and implementation of public education and outreach strategies to promote residential and commercial waste reduction and recycling collection programs and services.
- Oversight of any Recology San Mateo County (Recology) services under the 12 collection services franchise agreements with the Member Agencies.
- Prepare and submit State mandated CalRecycle Annual Reports required per AB 939 on behalf of 10 participating Member Agencies.
- Implement recommended 2015 Long Range Plan projects.

FY1516 Key Projects/Activities

Public Education and Outreach

- Develop, implement and manage new AB 1826 and ongoing AB 341 outreach activities, including producing and disseminating brochures, inserts and letters of non-compliance for Member Agency and Recology use. The State's AB 341 and AB 1826 require all public agencies to implement public education efforts to encourage businesses to comply with this mandatory commercial recycling law (AB 341) and commercial organics collection (AB 1826) and the SBWMA can most effectively manage this effort on behalf of all Member Agencies.
- Develop, submit and manage the 2016 Recology Annual Public Education Plan (per the Member Agency's franchise agreements) in coordination with Recology and the Adhoc Public Education Subcommittee, including an evaluation of most cost-effective ongoing outreach activities and tools.
- Investigate public funding (e.g., grants, and public-private or public-public partnerships, as applicable) opportunities for outreach programs and activities.
- Promote residential collection services (per the franchise agreements) through three *rethinker* newsletters, five bill inserts and presentations at community groups, organizations and events in collaboration with Recology.
- Continue to develop and implement outreach strategies to increase participation and customer knowledge of CartSMART and BizSMART franchised collection services, including tailoring programs to meet specific community needs.
- Continue to develop and implement outreach strategies to increase participation and customer knowledge of the Door-to-Door HHW Collection program which is now provided to all twelve SBWMA Member Agencies. This very popular program provides an easy and convenient means for residents to have HHW and Universal Waste collected directly from their homes without the need to transport it themselves.

RethinkWaste FY1516 Preliminary Program Budget

Recycling Outreach and Programs – AB 939, AB 341 and AB 1826 Compliance (Continued)

- Measure the effectiveness of ongoing outreach tools and determine if modifications or improvements are needed or if different tools are required.
- Conduct the annual BizSMART@Work Awards program to recognize businesses and multi-family complexes for their 2014 diversion efforts.
- Provide outreach and other support to Member Agencies for compost giveaways and shred/e-scrap recycling events per the franchise agreements with Recology.
- Provide outreach materials for three seasonal compost and mulch giveaway events to be held at Shoreway. **NEW PROJECT**

Recycling (Diversion Programs)

- Continue implementation of the SBWMA-wide Commercial Recycling Reporting Ordinance to collect diversion data that is currently unavailable. Significant commercial recycling activity is carried out by the private sector; however, the SBWMA does not have data on these activities. The only commercial recycling data available is provided by Recology per the franchise agreements. This data is needed to continue updating the diversion figures used in the Long Range Plan and to assist with planning future potential expanded diversion efforts as required by State mandate.
- Continue implementation of the pilot Public Space Recycling project. This project is focused on increasing the opportunity for the public to conveniently and cost-effectively recycle in public spaces (e.g., parks). **NEW PROJECT**
- Continue to develop and implement cost-effective, ongoing outreach strategies and additional multi-family outreach materials in coordination with Recology and the Adhoc Public Education Subcommittee.
- Manage the Audit of Recology's 2015 Annual Report regarding the company's performance and compliance. The data in this report is self-reported by Recology and it impacts various fiscal implications and the measurement of performance standards associated with fiscal impacts, thus annually auditing this report is part of the due diligence of effective contract administration.

Long Range Plan

- Implement an Every Other Week residential garbage collection pilot (**\$120,000**). **NEW PROJECT**
- Develop and implement public education and notification to residents participating in the Recology Residential Split-Body Collection Vehicle pilot project (**\$17,000**). **NEW PROJECT**
- Develop and implement enhanced Commercial Recycling Outreach targeting businesses and multi-family (**\$60,000**). **NEW PROJECT**
- Implement a stakeholder engagement process for the Environmental Education Center and Tour Program. (**\$25,000**). **NEW PROJECT**
- Completion of conceptual designs for a Shoreway Transfer Station Mixed Waste processing system to recover organics materials and other recyclables from residential and commercial solid waste (**\$183,000**). **NEW PROJECT**
- Complete Recology administration building remodel design assessment to accommodate SBWMA offices (**\$25,000**). **NEW PROJECT**

RethinkWaste FY1516 Preliminary Program Budget

Recycling Outreach and Programs – AB 939, AB 341 and AB 1826 Compliance (Continued)

NOTE: KEY PROJECT AND ACTIVITY DETAILS ARE LISTED IN ORDER BELOW BY BUDGET LINE ITEM; THEY ARE NOT LISTED IN THE ORDER SHOWN IN THE TEXT.

Budget Expense Category	Description of Program for FY1516	FY1415 Adopted	FY1415 Mid-Year	FY1516 Proposed
Recycling Outreach and Programs – AB 939 and AB 341 Compliance		\$881,500	\$881,500	\$1,052,000
CIWMB (CalRecycle) Annual Report	<ul style="list-style-type: none"> SBWMA annually provides the necessary research and data compilation to draft and submit State mandated Electronic Annual Reports for ten Member Agencies to comply with requirements of AB 939 (\$25,000). 	\$25,000	\$25,000	\$25,000
SBWMA Annual Report	<ul style="list-style-type: none"> This annual report provides a snapshot of key metrics and milestones for the prior year. This budget expense covers design and production costs of this report (\$5,000). 	\$5,000	\$5,000	\$5,000
Diversion Program Support	<ul style="list-style-type: none"> Continue implementation of pilot Public Spaces Recycling project to ensure the public is provided an opportunity to recycle at parks and other public spaces and provide Member Agency assistance with as needed. (\$36,000). 	\$60,000	\$60,000	\$36,000
Recycling Reporting Ordinance Expenses	<ul style="list-style-type: none"> Continue implementation and notification of the SBWMA-wide Commercial Recycling Reporting Ordinance to collect diversion data that is currently unavailable. 	N/A	N/A	\$15,000
Event Giveaways	<ul style="list-style-type: none"> Promote the various programs and services at Member Agency community events, primarily held in the spring and summer and include educational and promotional items as giveaways. (\$1,500). 	\$1,500	\$1,500	\$1,500

RethinkWaste FY1516 Preliminary Program Budget

Long Range Plan Alternatives	<ul style="list-style-type: none"> • Implement project includes in the draft Long Range Plan provided to the Board in March 2015. Projects include: <ul style="list-style-type: none"> - Every Other Week residential garbage collection pilot (\$120,000); - Recology Residential Split-Body Collection Vehicle pilot project (\$17,000); - Enhanced Commercial Recycling Outreach (\$60,000); - Stakeholder engagement process on education and outreach project (\$25,000); - Residential and Commercial Mixed Waste Processing system project development (\$183,000); and, - Recology administration building design assessment (\$25,000). 	\$232,500	\$247,500	\$430,000
Large Event/Venue Consulting	<ul style="list-style-type: none"> • Staff is in the process of repurposing one trailer for collection of niche/reusable items at events. Staff is also considering repurposing the second trailer as a mobile education trailer to be used at community events. Will be exploring grant funding opportunities. (\$7,500). 	\$7,500	\$7,500	\$7,500
Large Event/Venue Recycling Services	<ul style="list-style-type: none"> • Use of trailers limited compared to prior years – expense not anticipated (\$0). 	\$0	\$0	\$0
Climate Change Reporting and Policy Options	<ul style="list-style-type: none"> • Staff reports GHG emissions for the SBWMA office and Shoreway Environmental Center, and is assisting with SBR’s annual reporting framework, both through The Climate Registry (\$27,000). 	\$23,000	\$23,000	\$27,000

RethinkWaste FY1516 Preliminary Program Budget

Commercial Recycling Technical Assistance	<ul style="list-style-type: none"> • Commercial accounts collection services assessment and research to understand utilization of services and commercial recycling outreach effectiveness (\$30,000); • To comply with the AB 341 (mandatory commercial recycling mandate) and AB 1826 (mandatory commercial organics recycling) , staff is charged with outreach and education to commercial/MFD sector and directly making presentations and hosting workshops at Multi-Family Dwelling HOA's and Chambers of Commerce (\$15,000). • Conduct annual Business Awards Program recognizing businesses for their 2014 diversion efforts (\$10,000). • Maintain and update commercial Toolkit in collaboration with Recology that includes sector specific outreach materials (e.g., messaging specific for restaurants, offices, etc.) (\$20,000). Staff to continue to collaborate with Recology on assessing the effectiveness of outreach efforts. 	\$85,000	\$85,000	\$75,000
Purchase Commercial/MFD Containers for Recology	<ul style="list-style-type: none"> • SBWMA is required per Franchise Agreements with Recology to purchase various types of internal containers to facilitate diversion at commercial and multi-family dwelling customers. Specifically, this expense will cover annual purchase of Slim Jims, desk-side recycling containers and Buddy Bags that the company will distribute to businesses and multi- family customers throughout the SBWMA service area (\$40,000). Another \$20,000 is assumed for purchase of containers for municipal buildings such as city hall complexes. 	\$60,000	\$60,000	\$60,000
C&D Recycling Program	<ul style="list-style-type: none"> • Develop an SBWMA list of certified C&D processors based on physical audits conducted by other jurisdictions and provide permit counter and related assistance to increase C&D recycling to Member Agencies upon request. 	\$0	\$0	\$0

RethinkWaste FY1516 Preliminary Program Budget

Multi-Family Outreach	<ul style="list-style-type: none"> • To comply with the AB 341 (mandatory commercial recycling mandate) and AB 1826 (mandatory commercial organics recycling) , staff is charged with outreach and education to the commercial/MFD sector and directly making presentations and hosting workshops at Multi-Family Dwelling HOA's and Chambers of Commerce (\$10,000). • SBWMA is required per Franchise Agreements with Recology to provide outreach materials in the form of the toolkit. The toolkit includes posters, brochures and flyers on programs and service, move-in/move-out guides and a property manager guide. Staff will continue to update existing toolkit materials and develop cost-effective strategies and additional materials as needed in collaboration with Recology (\$20,000). Staff to collaborate with Recology on developing plan to assess the toolkit's effectiveness. • Promote subscriptions to Recology MFD batteries/cell phones collection service through targeted outreach pieces and strategies (\$10,000). • Conduct the annual Multi-Family Awards Program recognizing multi-family complexes for their 2014 diversion efforts (\$10,000). 	\$50,000	\$50,000	\$50,000
Rethinker Newsletter Design/ Set-up	<ul style="list-style-type: none"> • SBWMA is required per Franchise Agreements with Recology to develop the <i>rethinker</i> newsletter for SFD and MFD residents. Previously this was a quarterly newsletter, however, per Board approved FY1415 budget, it is now published 3 times per year. Development of the newsletter content and layout (\$20,000). 	\$15,000	\$20,000	\$20,000
Rethinker Newsletter Printing/Mailing	<ul style="list-style-type: none"> • SBWMA is required per Franchise Agreements with Recology to develop and issue the <i>rethinker</i> newsletter to single family and multi-family residents. Previously this was a quarterly newsletter, however, per the Board approved FY1415 budget, it is now published 3 times per year. This is for printing and mailing/insertion of 3 issues (\$90,000). Staff has assumed two are direct mailed and one is inserted into the garbage bill. <p>Staff will continue to promote sign-ups for the electronic version to reduce costs.</p>	\$95,000	\$90,000	\$90,000

RethinkWaste FY1516 Preliminary Program Budget

Residential Outreach Programs	<ul style="list-style-type: none"> • SBWMA is responsible for all outreach and education efforts, including ongoing outreach support/maintenance for existing collection programs through brochures, posters, flyers and new opportunities such as signs on Recology collection vehicles, and addressing niche issues including illegal dumping, storm water trash, anti-scavenging (\$70,000). • Update annual residential Service Notice per Franchise Agreements with Recology that will provide key program and services related information (\$12,000). • RethinkWaste website and social media (FB, Twitter, You Tube) outreach, includes maintenance and updates to keep current and relevant (\$15,000). • Mobile Phone App annual fee for RethinkWaste and all Member Agencies, to continue making it more convenient for tech-savvy customers to have access to program information and make service requests/report issues (\$23,000). 	\$135,000	\$120,000	\$120,000
Community Events	<ul style="list-style-type: none"> • SBWMA is responsible for assisting Member Agencies with promotion of Community Events, including compost giveaway and shred/e-scrap events, and coats for kids (\$2,000). • Provide outreach materials for three seasonal compost and mulch giveaway events to be held at Shoreway (\$3,000). 	\$1,000	\$1,000	\$5,000
HHW Door-to-Door Collection Outreach	<ul style="list-style-type: none"> • Continue ongoing “rolling” public education/marketing campaign to further promote these services to participating Member Agencies. Promotional activities will include direct mail, outdoor and print advertising, social media, etc. (\$80,000). • Continue discussion with WM Curbside, LLC for the company to provide the service to Member Agency facilities if the program can be negotiated in a cost effective manner staff will promote and manage this enhanced service (included above). 	\$80,000	\$80,000	\$80,000
Curbside Household Battery Outreach	<ul style="list-style-type: none"> • Continue to promote curbside recycling of household batteries and cell phones collection service provided by Recology as this is one of the programs requiring additional awareness per the results of 2012 Customer Satisfaction Survey (\$5,000). 	\$5,000	\$5,000	\$5,000
Electronics Collection Events	<ul style="list-style-type: none"> • SBWMA is responsible for assisting Member Agencies with promotion of the E-scrap and shred events (\$0). Now included in Community Events. 	\$1,000	\$1,000	\$0

RethinkWaste FY1516 Preliminary Program Budget

COLLECTION OPERATIONS (curbside cell phone/battery collection and Door-to-Door HHW program only)

FY1415 Budget: \$521,500

FY1516 Budget: \$666,300

SBWMA Staff Resources: Cliff Feldman, Recycling Programs Manager; and Monica Devincenzi, Recycling Outreach Manager

Approximate FTEs (reflects estimated allocation of staff resources to this program area): 0.29 FTEs = 0.15 (Recycling Program Manager), 0.10 (Recycling Outreach and Sustainability Manager), and 0.04 (Office Manager/Board Secretary).

Description: Staff services provided in this area is to ensure compliance with state-mandated Universal Waste recycling and disposal regulations through administration of the Door-to-Door Household Hazardous Waste (HHW) collection services with WM Curbside LLC and oversight of the household batteries and cell phone collection services provided by Recology.

FY1516 Key Projects/Activities (outreach projects listed below are included in the Recycling – AB 939, AB 341 and AB 1826 Compliance category of our SBWMA program budget)

- Implement additional public education and outreach to increase collection of HHW through the Door-to-Door HHW collection program.
- Continue discussions for a potential contract extension with WM Curbside LLC as the current contract expires on December 31, 2015; however, the SBWMA has the option to extend this contract for one more year through the end of 2016.
- Identify alternatives to the contract with WM Curbside, LLC. **NEW PROJECT**
- Continue discussions with management at WM Curbside LLC to expand the HHW collection services to Member Agency facilities such as corporation yards and begin managing this new service.
- Continue and expand public education and outreach to increase participation in Recology’s franchised recycling collection services with specific emphasis on increasing the collection of cell phones and batteries from the Multi-Family Dwelling sector which includes approximately 3,800 customers and 41,000 residential living units.

NOTE: KEY PROJECT AND ACTIVITY DETAILS ARE LISTED IN ORDER BELOW BY BUDGET LINE ITEM; THEY ARE NOT LISTED IN THE ORDER SHOWN IN THE TEXT.

Budget Expense Category	Description of Program for FY1516	FY1415 Adopted	FY1415 Mid-Year	FY1516 Proposed
Collection Operations		\$521,500	\$641,200	\$666,300
HHW Door To Door Collection Services	<ul style="list-style-type: none"> • Disposal and processing expenses paid by RethinkWaste to WM Curbside LLC for operating the Door-to-Door Household Hazardous Waste Collection Services for all 12 Member Agencies. 	\$521,500	\$641,200	\$662,800
Shred Event Services	<ul style="list-style-type: none"> • Expenses to pay vendor for shred services at events. 	\$0	\$0	\$3,500

RethinkWaste FY1516 Preliminary Budget Items

SHOREWAY OPERATIONS

FY1415 Budget: \$36,165,100

FY1516 Budget: \$36,657,600

SBWMA Staff Resources: Hilary Gans, Facility Operations and Contracts Manager; Marshall Moran, Finance Manager; Faustina Mututa, Environmental Education Coordinator; and Heather Co, Environmental Education Associate.

Approximate FTEs (reflects estimated allocation of staff resources to this program area): 3.47 FTEs = 1.0 (Facility Manager), 2.0 (Environmental Education staff), 0.25 (Finance Manager), 0.20 (Executive Director) and 0.02 (Office Manager/Board Secretary).

Description: This includes SBWMA staff directed activities regarding Shoreway operations including: oversight of SBR operations per the Operations Agreement, including contract compliance and review and payment of SBR invoices; Shoreway facility capital repairs and maintenance; education center operations, exclusive of staff wages and benefits which are included in the Administration portion of the SBWMA program budget; management of disposal and processing contracts, including review and payment of invoices; facility insurance; and billing Recology for tons delivered to Shoreway.

FY1516 Key Projects/Activities

Contract Administration

- Continued operational oversight and contract compliance of Materials Recovery Facility (MRF), transfer station, and transportation operations performed by SBR to meet or exceed contractual standards and financial and environmental goals.
- Ongoing management of third party recycling and disposal contracts for solid waste, organics, and construction and demolition (C&D) debris.
- Manage organics processing contracts for residential and commercial organics to meet operational, financial and environmental requirements.
- Continue to identify and pursue new third party tonnage opportunities to generate net income to help lower our Shoreway operating costs.
- Hire a contractor to assist with conducting a review of SBR's operations and management of Shoreway to identify their actual costs of operations and make recommendations as appropriate for future operational improvements. **NEW PROJECT**

Management of Facility Infrastructure and Improvements

- Ongoing management of Shoreway Facility capital and maintenance projects at or below budget.
- Completion of conceptual designs for a Shoreway transfer station processing system to recover organics materials and other recyclables. **NEW PROJECT**
- Complete a sign plan identifying recommended improvements onsite to enhance customer service, safety and operational results. **NEW PROJECT**
- Complete a Disaster and Emergency Management Plan for the Shoreway operations. **NEW PROJECT**
- Develop and implement a dust mitigation plan for the Shoreway MRF. **NEW PROJECT**

Shoreway Operations Continued

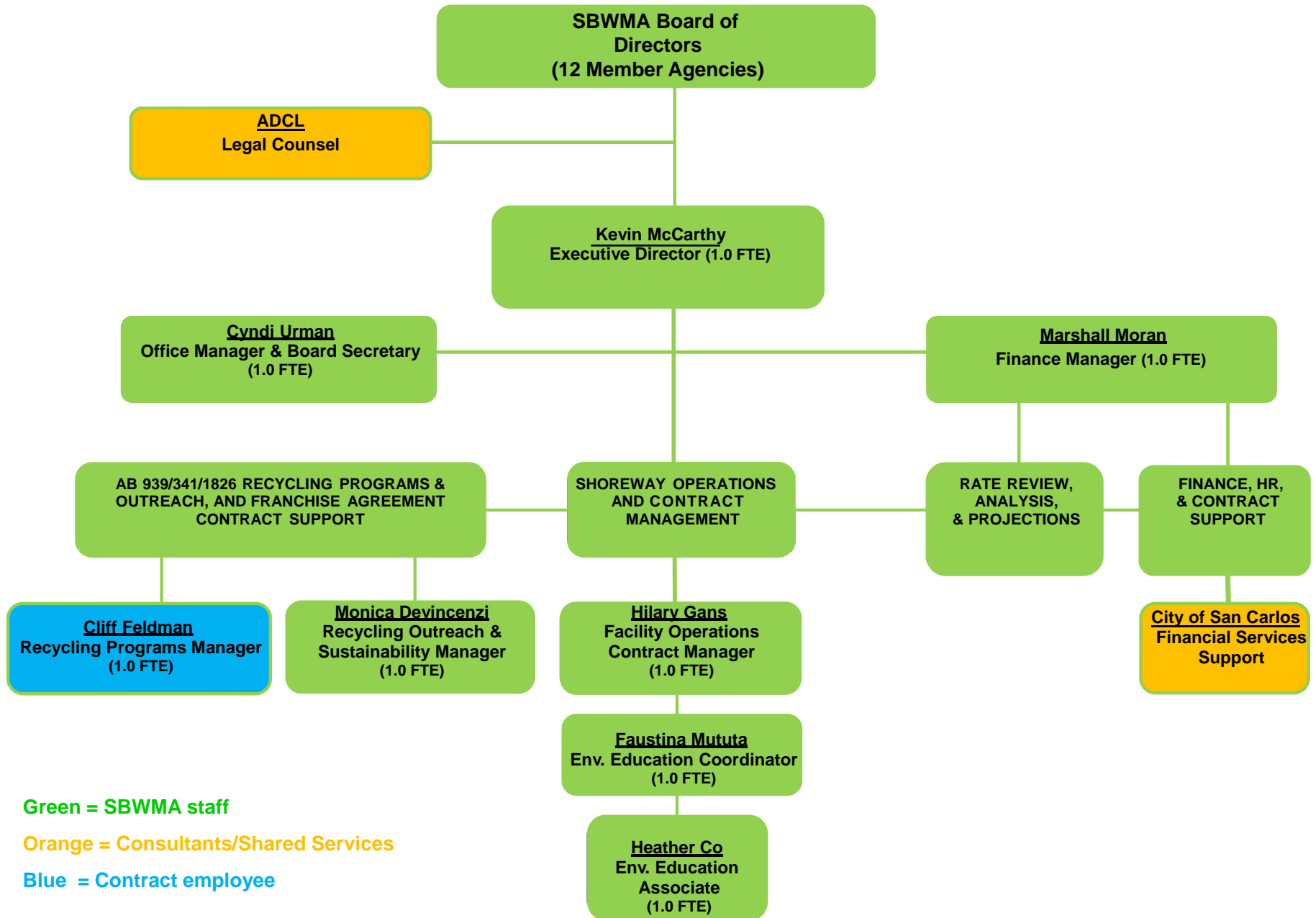
Tour Program

- Conduct the Shoreway school and public tours program, including developing new partnership opportunities to support the program, and to meet goals for increased number of visitors. The goal is to increase total tour visitors by 5% over prior year totals.
- Conduct onsite events and activities that increase community awareness of the waste reduction, recycling and composting programs in the service area and also further the resource conservation message of our Environmental Education program. Events and activities include the following: “Earth Day” community event at Shoreway, “America Recycles Day” event at Shoreway **(NEW)**, and “Fix-it Clinic” or similar event at Shoreway; “Recycled Art” Contest, Tile-art project and installation of tiles at MRF, and Poster contest; School compost donation program; and “Night at Shoreway” two time per year. Investigate public funding (e.g., grants, and public-private or public-public partnerships, as applicable) opportunities as applicable for the tour program.

<u>Budget Expense Category</u>	<u>Description of Program for FY1516</u>	<u>FY1415 Adopted</u>	<u>FY1415 Mid-Year</u>	<u>FY1516 Proposed</u>
Shoreway Operations		\$31,732,800	\$31,168,200	\$32,267,800
Operator Compensation	<ul style="list-style-type: none"> • Contractually required payments (per ton and/or per ton mile rates) by SBWMA to SBR to operate the MRF and Public Recycling Center, scale house and Transfer Station, and transport materials for disposal and processing. Includes reimbursement of contractor pass through costs (i.e., interest payments, supplemental processing fees, buyback payments, universal waste disposal and processing expenses, backhaul charges for compost and mulch, etc.). 	\$17,061,200	\$17,015,900	\$17,455,900
Disposal and Processing Costs	<ul style="list-style-type: none"> • Tipping fees paid by SBWMA to third party vendors (under contract w/ RethinkWaste) for disposal (Republic Services Ox Mountain landfill), and processing (Zanker Road for C&D, Recology Grover for composting, and Republic Services Newby Island for composting). All such contracts include per ton rates subject to annual CPI adjustments. 	\$14,121,800	\$13,628,500	\$14,253,700
Insurance Shoreway	<ul style="list-style-type: none"> • Annual insurance premiums paid by SBWMA for Shoreway property and liability insurance, excluding Director’s and Officer’s insurance which is shown in a line item under Administrative expense. 	\$213,400	\$213,000	\$221,400
Shoreway Facility Cost	<ul style="list-style-type: none"> • Non capital related expenses to maintain the 16-acre Shoreway Environmental Center, including nearly 300,000 square feet of building space and \$20 million in equipment owned by SBWMA. 	\$160,000	\$160,000	\$175,000

Education Center Operations	<ul style="list-style-type: none"> • Non labor related expenses to manage Shoreway facility school and public visitor tour program. Includes \$19K for busing assistance within our service area, funds for Trash to Art Contest, annual Earth Day event and America Recycles Day events, compost donations to schools, safety equipment and supplies, and outreach materials. 	\$75,000	\$60,000	\$60,000
Maintenance – Ox Mountain Tipper	<ul style="list-style-type: none"> • Non capital related expenses associated with maintaining a hydraulic tipper (used to unload transfer trailers at the landfill). The tipper is owned by SBWMA, but operated by Republic at their Ox Mtn. landfill. 	\$36,000	\$36,000	\$36,000
Shoreway MRF Equipment Maintenance >10k	<ul style="list-style-type: none"> • Unplanned MRF equipment repairs greater than \$10k are the responsibility of JPA per the Operations Agreement with SBR. 	\$30,000	\$20,000	\$30,000
Taxes (sewer)	<ul style="list-style-type: none"> • Sewer fees paid to the City of San Carlos. 	\$35,400	\$34,800	\$35,800
Shoreway Other		\$4,432,300	\$4,398,500	\$4,389,800
Debt Service Bond Interest	<ul style="list-style-type: none"> • Annual interest payments on the 2009A Solid Waste Enterprise Revenue Bonds of \$53.5 million. 	\$2,885,500	\$2,885,500	\$2,833,100
Franchise Fee	<ul style="list-style-type: none"> • 5% franchise fee paid by SBWMA to City of San Carlos for the Shoreway facility. The fee is collected on gate (tipping) fees, but not on commodity revenues. There is no floor or cap on the fees paid to City of San Carlos. 	\$1,546,800	\$1,513,000	\$1,556,700
TOTAL SHOREWAY OPERATIONS EXPENSE		\$36,165,100	\$35,566,700	\$36,657,600

SBWMA Organization Chart (April 2015)



Green = SBWMA staff

Orange = Consultants/Shared Services

Blue = Contract employee

PERSONNEL AND BENEFIT ASSUMPTIONS FOR FY1516

Staff:	<u>FY1415</u>	<u>Proposed FY1516</u>
Executive Director	1.0	1.0
Facility Operations Contract Manager	1.0	1.0
Finance Manager	1.0	1.0
Recycling Outreach & Sustainability Manager	1.0	1.0
Recycling Programs Manager*	1.0	1.0
Board Secretary/Office Manager	1.0	1.0
Environmental Education Coordinator	1.0	1.0
Environmental Education Associate	<u>1.0</u>	<u>1.0</u>
Total Staff	8.0	8.0

* Contract employee employed by Local Government Services, a public joint powers agency, with PERs benefits.

FY1516 Proposed Position Changes

No recommended changes to headcount.

The budget reflects up to 10-weeks of overlap (July – early September 2015) between the current Finance Manager and a newly hired Finance Manager; this is to ensure a successful transition given the critical nature of this position. The estimated cost for this overlap period in wages and benefits is \$40,370.

Budget Assumptions for Merit Increases

A merit increase pool of 3.0% of wages is assumed for all positions, except for the Executive Director, within the current salary ranges. Actual merit increases are awarded by the Executive Director on a calendar year basis per the Board adopted Compensation Policy. The Board will separately consider and approve or not the actual merit increase pool for calendar year 2016.

Salary Ranges

The salary ranges were last modified in June 2013 per Board approval. No changes to the salary ranges are currently proposed for FY1516.

<u>Position</u>	<u>Current Salary</u>	<u>% of Top of Salary Range</u>	<u>Current Salary Range/Year</u>
Executive Director	\$191,931	N/A	N/A
Finance Manager	\$139,251	99.3%	\$112,196 - \$140,245
Facility Operations Contract Manager	\$136,233	97.1%	\$112,196 - \$140,245
Recycling Program Manager ¹	\$137,583	98.1%	\$112,196 - \$140,245
Recycling Outreach & Sustainability Manager	\$116,992	92.7%	\$100,976 - \$126,220
Office Manager/Board Secretary	\$65,983	88.5%	\$59,659 - \$74,573
Environmental Education Coordinator	\$69,676	85.4%	\$65,267 - \$81,580
Environmental Education Associate	\$56,419	86.5%	\$52,208 - \$65,250
¹ Contract employee through Local Government Services			

Employee Benefits

No proposed changes in the employee benefit plans. Total benefit expense as percent of base compensation is estimated at 35.3% for FY1516. A summary of the current benefits is as follows:

Deferred Compensation (Retirement): SBWMA has adopted a self-directed retirement plan under Section 401(a) of the Internal Revenue Service Code to which the Employer contributes an amount equal to 10 percent of the employee's base

salary. The plan is with John Hancock which holds all of the employee accounts. The employee vests in the 401(a) retirement plan immediately. SBWMA also has a 457b plan into which employees can voluntarily contribute. SBWMA matches the first 2% of employee contributions.

Employees may join both plans on the first of the month following the date of hire. The contribution amounts are subject to IRS limitations.

SBWMA does not participate in the federal Social Security system which would cost 6.2% of salary up to the statutory limit of \$117,000.

Group Health Insurance – General:

SBWMA strives to offer group insured plans for medical, dental, vision, life insurance, and long term disability insurance for the benefit of the employee and his/her family that are competitive with similar industry benefits. The health insurance is brokered through Arrow Benefits Group.

Medical insurance:

The SBWMA currently offers a high deductible HSA medical plan with UnitedHealthCare for employees and their families. There is a 20% copay after the deductible has been met for most services. Currently, four employees participate in the plan and three employees have opted out. The premium is age based – the average premium is \$1,078 per month plus the HSA average contribution of \$417 per month per employee.

Dental insurance:

Dental insurance is provided by Guardian Insurance for employees and their families. Basic care is covered 100% and major care (crowns, dentures) is covered at 60% up to the maximum annual benefit of \$1,500. The average monthly premium per employee is \$200.

Vision Plan:

Vision insurance is provided by Guardian Insurance for employees and their families. A \$10 copay applies to most services. Frames are covered up to \$120 once per year. The average monthly premium per employee is \$45.

Life Insurance:

Term life insurance is provided by Guardian on the employee is provided at 100% of salary up to \$200,000. The average monthly premium per employee is \$96.

HR and Payroll Support:

The SBWMA currently utilizes a CPE HR, a third party professional employment organization for the following scope of work:

- (a) Support on an as needed basis regarding human resources issues including, but not limited to, hiring, firing and discipline.
- (b) Support on an as needed basis regarding compliance with federal, state and local laws and ordinances regarding employment.
- (c) Consult on various Client projects as agreed upon.
- (d) Provide payroll and payroll tax filing services.
- (e) Workers' Compensation insurance.

We pay \$112 / month per employee for their services.

CAPITAL PROJECTS - FIVE YEAR FORECAST						
Project Name	Proposed FY1516	Forecast				Project Summary
		FY16/17	FY17/18	FY18/19	FY19/20	
Transfer Station tipping floor resurfacing	100,000	100,000	100,000	100,000	100,000	Heavily worn areas of the Transfer station concrete floor need routine repair.
Site paving repairs and restriping	-	-	600,000	-	1,400,000	Repair and resurfacing of Recology truck parking area. Includes restriping for traffic flow and new parking layout after CNG fuel system install.
Site signage	-	-	-	-	-	Additional way-finding signage, replacement of faded signs.
Truck Shop building maintenance	20,000	20,000	20,000	20,000	20,000	Budget is for unanticipated capital repairs to the building and utilities. Past items include roof replacement, HVAC replacement, rollup door repair, etc. (Two buildings totaling ~20,000 square feet used by Recology for truck maintenance and repairs).
Transfer Station building maintenance	20,000	20,000	20,000	20,000	20,000	Budget is for unanticipated capital repairs to the building and utilities. Past items include tunnel pump and electrical repairs. (~75,000 square foot building used by SBR for the unloading of and transfer of garbage, green waste, food scraps, C&D and other materials).
MRF building maintenance	225,000	125,000	125,000	125,000	125,000	Budget is for unanticipated capital repairs to the building and utilities and anticipated repairs to worn areas of the tipping floor (\$100K per year). Past projects include door replacement, flooring replacement, etc. (~70,000 square foot building used by SBR to process recyclables).
Admin. building maintenance	20,000	115,000	40,000	40,000	40,000	Budget is for unanticipated capital repairs to the building and utilities. Past projects include, HVAC duct replacement, fire code upgrades, transformer replacement, etc. (~11,000 square foot office building occupied by Recology staff). FY16/17 included \$75K for new HVAC system.
Site maintenance	30,000	30,000	30,000	30,000	30,000	Budget is for unanticipated capital repairs to site utilities and paving for the 16 acre site Shoreway facility.
Fire suppression	15,000		15,000			Additional water supply to new MRF canopy area for fire suppression.
Repairs to landfill tipper	15,000	15,000	15,000	15,000	15,000	Budget is for unanticipated repairs to hydraulic tipper at the Ox. Mountain Landfill owned by the JPA but operated by Republic Services to empty garbage from transfer trailers.
Education center exhibits			15,000			Additional small exhibit on the energy inputs for manufacturing and recycling materials; complements existing exhibit on how products come from renewable and/or nonrenewable resources.
MRF tip area canopy	510,000					Extension of MRF tipping area to accommodate additional facility tonnage from third-parties. Project planned to be completed in FY14/15.
Electric charging station	20,000		15,000			Electric vehicle charging station and electrical installation to be installed in the visitor parking area.
Replace diesel fuel storage and dist. system					275,000	Removal of old underground fuel tanks and replace with small tank and fuel system for SBR transfer trucks only. Project linked to CNG fleet conversion.
CNG fueling station ¹					1,312,500	Installation of utility connection to CNG fueling system to supply CNG fuel for anticipated collection contractor vehicle fleet fuel conversion. CNG system installation cost estimated at \$4M to be financed by fuel supplier. \$1,240,000 available in Shoreway Remediation fund to help cover project expenses.
Baler Reline			120,000			Planned reline of SBWMA balers in the MRF that are used to compress/bale commodities prior to shipment to end consumers.
Mixed waste processing system equipment			10,984,400			Mixed waste processing and organics separation system (in conjunction with SVCW or similar entity) for increased recyclable material recovery and conversion of the organics stream into a biogas. Financing arrangements to be determined.
Transfer Station building improvements		2,532,200				4,400 square foot Transfer Station building expansion to accommodate the mixed waste processing system.
LED lighting retrofit	274,000					Conversion of existing metal halide high-bay lights to energy efficient LED lights in all buildings. (Includes rebate from PG&E)
MRF equipment replacement ²	113,750	207,500	407,500	199,167	472,917	MRF sort system equipment replacement of worn equipment funded from Equipment Replacement cash reserve.
Subtotal	\$1,362,750	\$3,164,700	\$12,506,900	\$549,167	\$3,810,417	
Total (w/ designated funds applied)	\$1,249,000	\$2,957,200	\$12,099,400	\$350,000	\$2,097,700	

¹ \$1,240,000 available in Shoreway Remediation fund to help cover capx.

² Equipment Replacement cash reserve funds will cover these expenses.

Attachment F

Back-up Financial and Operational Data

This attachment provides additional supporting data and explanations for variances in revenue and Shoreway Environmental Center operating expense figures for FY1516 vs. FY1415.

OPERATING REVENUE

Table 1 provides supporting data on commodity revenue projections.

- Commodity tonnage (sold) is up 5.9% from the FY1415 budget.
- Commodity prices are currently experiencing a slump and are budgeted to decrease an average of \$20.58 per ton (full-year comparison of FY16 vs. FY15) based on current prices which have been forecasted to increase slightly going forward.
- Revenue share with SBR is on a calendar year basis so the budgeted fiscal year revenue is not the basis for the revenue share expense.
- Buyback payments are the CRV rates paid to public customers who “drop off” eligible recyclables at Shoreway. Volume and therefore payments have increased including more clean cardboard and PET plastic.

Table 1 – Commodity Revenue

COMMODITY REVENUE		FY1415 Adopted Budget	FY1415 Mid-Year Projections	FY1516 Proposed Budget	2016 vs 2015 Budget Variance	%
	Tons Sold	63,134	64,935	66,878	3,744	5.9%
	Wtd Avg. Price	\$ 171.26	\$ 162.75	\$ 150.67	\$ (20.58)	-12.0%
	Gross Revenue	\$ 10,812,190	\$ 10,568,093	\$ 10,076,664	\$ (735,526)	-6.8%
	Revenue Share w/ SBR	\$ (1,521,368)	\$ (1,407,569)	\$ (1,142,458)	378,910	-24.9%
	Buyback Payments	\$ (615,972)	\$ (888,242)	\$ (911,340)	-295,368	48.0%
	Net Commodity Revenue	\$ 8,674,850	\$ 8,272,282	\$ 8,022,865	\$ (651,985)	-7.5%
	Price / Volume Impact		Price	Volume	Total	
	Tonnage Change		\$ 150.67	\$ 3,744	\$ 564,046	
	Price Change		\$ (20.58)	\$ 63,134	\$ (1,299,572)	
	Total Change (Gross)				\$ (735,526)	

Table 2 provides a history of commodity prices per ton by quarter. The figures shown are the blended average price per ton for all commodities sold in a given quarter. (Q1 2015 is through February, only).

Table 2

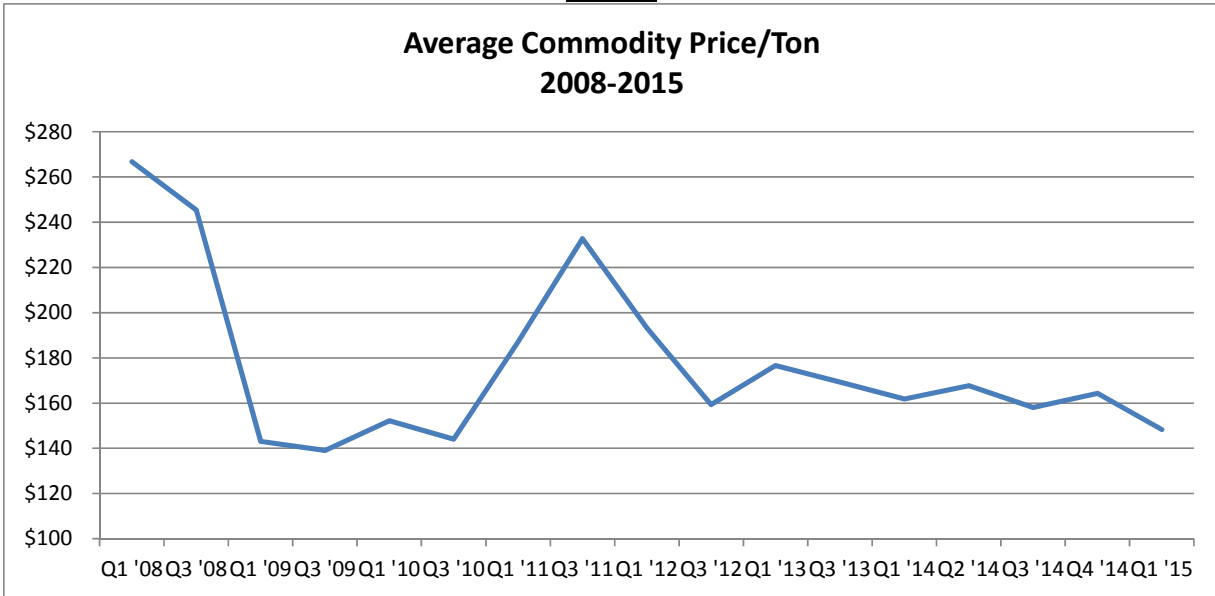


Table 3 shows the actual commodity tonnage, average price and revenue sold by commodity type as of December 2014 YTD (twelve months) from all customers: curbside residential, commercial, buyback, and drop-off.

Table 3 – Commodity Revenue Detail

Outbound Commodity Tons & Revenue - 2014						
Commodity	Tons	Price / Ton	Revenue	% Tons	% Revenue	
OCC (cardboard)	17,584	\$ 142	\$ 2,496,199	26.9%	22.4%	
ONP #8 (newspaper)	14,667	\$ 104	\$ 1,521,697	22.5%	13.6%	
Mixed Paper	14,832	\$ 96	\$ 1,416,883	22.7%	12.7%	
Glass (Mix)	13,004	\$ 97	\$ 1,256,553	19.9%	11.3%	
PET (plastic)	1,151	\$ 1,612	\$ 1,855,022	1.8%	16.6%	
Tin	1,083	\$ 166	\$ 180,146	1.7%	1.6%	
Bi Metal	502	\$ 135	\$ 67,866	0.8%	0.6%	
HDPE Natural (plastic)	472	\$ 941	\$ 444,036	0.7%	4.0%	
HDPE Color (plastic)	466	\$ 624	\$ 290,853	0.7%	2.6%	
Mixed Rigid Plastic	464	\$ 251	\$ 116,296	0.7%	1.0%	
Glass (Clean)	430	\$ 128	\$ 55,156	0.7%	0.5%	
Plastic 3-7	341	\$ 105	\$ 35,979	0.5%	0.3%	
Aluminum	320	\$ 4,431	\$ 1,416,004	0.5%	12.7%	
Mixed Film Plastic	17	\$ 60	\$ 1,031	0.0%	0.0%	
Total	65,332	\$ 171	\$ 11,154,399	100.0%	100.0%	
Total Fibers	47,083	\$ 115	\$ 5,434,779	72.1%	48.7%	
Total Containers	18,249	\$ 313	\$ 5,719,621	27.9%	51.3%	
Total	65,332	\$ 171	\$ 11,154,399	100.0%	100.0%	
CRV from state included in price of PET, HDPE, glass, and aluminum <i>approximate</i>						

SHOREWAY OPERATING EXPENSES

Table 4 provides supporting data for SBR's operating expense.

- MRF inbound tons are up 6.7% over the FY1415 budget causing their budgeted expense to increase accordingly.
- SBR is paid on a fee per ton as approved by the Board for calendar year 2015. The FY1516 budgeted fee increase to SBR on 1/1/2016 is assumed to be 1.8% (half of the fiscal year).
- The Transfer Station and transportation tonnage matches the total disposal tonnage in Table 5.
- The transportation blended rate below reflects the rates to all five destinations (i.e., landfill, organics processors, and C&D processor).
- Total expense is budgeted to increase by \$395k primarily due to higher MRF volume.

Table 4 – SBR Operating Expense

SBR OPERATING EXPENSE					
	FY1415 Adopted Budget	FY1415 Mid-Year Projections	FY1516 Proposed Budget	2016 vs 2015 Budget Variance	%
a. Summary					
MRF	\$ 5,502,124	\$ 5,702,512	\$ 5,922,796	420,672	7.6%
Transfer Station	\$ 4,434,402	\$ 4,319,579	\$ 4,456,771	22,369	0.5%
Transportation	\$ 6,913,235	\$ 6,607,342	\$ 6,895,604	-17,631	-0.3%
Port Slowdown Extra Cost		\$ 175,000	\$ -	0	
Interest	\$ 211,488	\$ 211,488	\$ 180,684	-30,804	-14.6%
TOTAL SBR EXPENSE	\$ 17,061,249	\$ 17,015,921	\$ 17,455,855	\$ 394,606	2.3%
	FY1415 Adopted Budget	FY1415 Mid-Year Projections	FY1516 Proposed Budget	2016 vs 2015 Budget Variance	%
b. SBR Expense Detail					
MRF					
Tons, net	62,672	64,935	66,878	4,206	6.7%
Rate	\$ 87.79	\$ 87.82	\$ 88.56	\$ 0.77	0.9%
Expense	\$ 5,502,124	\$ 5,702,512	\$ 5,922,796	\$ 420,672	7.6%
Transfer Station					
Tons	353,556	344,470	350,861	(2,695)	-0.8%
Rate	\$ 12.54	\$ 12.54	\$ 12.70	\$ 0.16	1.3%
Expense	\$ 4,434,402	\$ 4,319,579	\$ 4,456,771	\$ 22,369	0.5%
Transportation					
Tons	353,556	344,470	350,861	(2,695)	-0.8%
Wtd. Avg. Rate	\$ 19.55	\$ 19.18	\$ 19.65	\$ 0.10	0.5%
Expense	\$ 6,913,235	\$ 6,607,342	\$ 6,895,604	\$ (17,631)	-0.3%
Port Slowdown Extra Cost		\$ 175,000			
Interest	211,488	\$ 211,488	\$ 180,684	\$ (30,804)	-12.8%
TOTAL SBR EXPENSE	\$ 17,061,248	\$ 17,015,921	\$ 17,455,855	\$ 394,606	2.3%

Table 5 below provides supporting data for the disposal and processing expense.

- Disposal processors generally receive a CPI adjustment on January 1.
- The budget rates below are affected by the two rates in each fiscal year and the number of tons assumed in each period; i.e. the change in mix also affects the budgeted average rates below.
- Outbound tons are based on inbound franchise tons and public yards converted to estimated tons.

Table 5 – Disposal & Processing Expense

DISPOSAL & PROCESSING EXPENSE					
	FY1415 Adopted Budget	FY1415 Mid-Year Projections	FY1516 Proposed Budget	2016 vs 2015 Budget Variance	%
a. Summary					
Solid Waste	\$ 8,195,189	\$ 8,223,160	\$ 8,400,746	\$ 205,557	2.5%
Organics	\$ 4,499,569	\$ 4,061,457	\$ 4,389,309	\$ (110,260)	-2.5%
C&D, dirt	\$ 1,480,759	\$ 1,443,588	\$ 1,526,872	\$ 46,113	3.1%
Other	\$ 192,526	\$ 193,938	\$ 232,038	\$ 39,512	20.5%
Subtotal	\$ 14,368,043	\$ 13,922,143	\$ 14,548,965	\$ 180,922	1.3%
Paid by SBR	\$ (246,226)	\$ (293,180)	\$ (295,289)	\$ (49,063)	19.9%
TOTAL DISPOSAL EXPENSE	\$ 14,121,817	\$ 13,628,963	\$ 14,253,675	\$ 131,858	0.9%
B. Detail					
<u>Solid Waste (Ox Mtn)</u>					
Tons, net	209,704	209,474	210,161	457	0.2%
Rate	\$ 39.08	\$ 39.26	\$ 39.97	\$ 0.89	2.3%
Expense	\$ 8,195,189	\$ 8,223,160	\$ 8,400,746	\$ 205,557	2.5%
<u>Organics (Newby, Grover)</u>					
Tons, net	112,773	103,193	110,685	(2,088)	-1.9%
Rate	\$ 39.90	\$ 39.36	\$ 39.66	\$ (0.24)	-0.6%
Expense	\$ 4,499,569	\$ 4,061,457	\$ 4,389,309	\$ (110,260)	-2.5%
<u>C&D (Zanker)</u>					
Tons, net	31,078	29,003	30,015	(1,063)	-3.4%
Rate	\$ 47.65	\$ 49.77	\$ 50.87	\$ 3.22	6.8%
Expense	\$ 1,480,759	\$ 1,443,588	\$ 1,526,872	\$ 46,113	3.1%
<u>Other</u>					
Tires	6,354	8,500	5,396	(958)	-15.1%
Mattresses	20,332	24,967	24,896	4,564	22.4%
Appliances	8,810	19,195	13,946	5,136	58.3%
Hazardous Waste	151,487	129,858	180,938	29,451	19.4%
Misc.	\$ 5,543	\$ 11,418	\$ 1,740	(3,803)	-68.6%
Expense	\$ 192,526	\$ 193,938	\$ 226,916	\$ 34,390	17.9%
<u>Summary</u>					
TS Tons	353,555	341,670	350,861	-2,694	-0.8%
Wtd Avg. Rate	\$ 39.94	\$ 39.87	\$ 40.62	\$ 0.68	1.7%
Disposal Expense	\$ 14,121,816	\$ 13,623,407	\$ 14,253,675	\$ 131,859	0.9%

STAFF REPORT

To: SBWMA Board Members
From: Kevin McCarthy, Executive Director, and Senior Staff
Date: April 23, 2015 Board of Directors Meeting
Subject: Review of Draft 2015 Long Range Plan

Recommendation

This staff report is for discussion purposes only and no formal action is requested of the Board of Directors. Based on Board Member feedback and any other updates (e.g., re-forecasting measured diversion figures once non-franchise commercial recycling numbers are first reported in early May) staff will bring the Plan document back to an upcoming Board meeting for consideration for approval.

Follow-up items from March Board Meeting and April TAC Meeting

Since presenting the draft 2015 Long Range Plan document at the March 26, 2014 Board meeting staff has revised the Plan (see **Attachment A**) to address specific feedback from Board Members and TAC Members as follows:

- Recommended projects have been included in the preliminary FY1516 budget, including inclusion of capital projects in the five-year capital forecast.
- Revised the format of the Plan document so background information (previous sections 2 and 3) are now appendices to the document. This has reduced the size of the main body of the report from 178 pages to 112 pages. The Executive Summary has also been focused down from 32 pages to 16 pages and only addresses project recommendations.
- Incorporated specific Board Members edits including adding estimated collection cost impacts for major projects (see **Table 1.2** in the Executive Summary); added a new summary of project costs (see **Table 1.3**) to the Executive Summary; and added text to the discussion on the CNG project (see pp. 91-92 of the Plan document) to note other potential, offsite CNG fueling options will be researched and evaluated.
- There were no specific changes to the Plan document recommended by the TAC per the discussion at the April 9, 2015 TAC meeting. TAC members were very positive and supportive of the Plan. TAC members did ask some clarifying questions regarding AB 32 credits for the greenhouse gas reductions from converting the collection fleet to CNG, the potential source for CNG fuel to include offsite sources, and the potential benefits of co-collection vehicles. Via email, the TAC representative from San Carlos stated his support for many of the recommended projects and reiterated the point of potentially partnering with an existing CNG station or with SVCW if they develop plans for producing CNG from their biogas. This TAC member did state they do not believe relocating staff to Shoreway is necessary given that they believe "the current lease arrangements are adequate and help keep costs down."

The Executive Director has offered to meet with Board Members individually to discuss the draft Plan but to date no meetings have been requested. Staff continues to be available to meet and review this important document.

Staff has also not received any specific feedback on the Plan document from Recology or SBR. It should be noted again that both contractors were involved in all phases of the development of the draft 2015 Long Range Plan including providing cost information, drafting pilot project details, and/or providing an operational review of major projects (i.e., collection fleet conversion to CNG and mixed waste processing operation in Transfer Station).

Summary

This 2015 Draft Long Range Plan is the key deliverable for phase four of a five-phase effort to complete the JPA's first comprehensive long range plan since 2002. The TAC has been involved in reviewing the initial project ideas for evaluation and inclusion in the draft Plan and has reviewed the draft Plan itself at its April 9th meeting. The last phase of this Long Range Plan process is the Board's approval of a final Plan.

The Plan is really a blueprint to assist the Board of Directors with future decision-making on enhancements to the existing solid waste, recycling, and organics collection and processing system for our service area of approximately 450,000 people in San Mateo County with a primary focus on the next five-year period.

The JPA's last Long Range Plan was drafted in 2002, then updated in 2005 and became the starting point for the development of the franchised collection programs and services rolled out in January 2011. A masterplan for the Shoreway Environmental Center was approved by the Board in April 2007 and was the basis for the \$46 million in capital improvements completed between the fall of 2009 and the spring of 2011.

With the rollout of new franchised collection services and completion of the Shoreway masterplan improvements in 2011, the SBWMA now has one of the highest regarded and most innovative collection and processing systems in the country. This system provides a solid foundation to build on to address any future diversion needs, changes in State laws and regulations, and new policy goals established by the SBWMA Board of Directors.

This draft Plan addresses policy, programmatic and infrastructure needs to meet the requirements of Assembly Bill (AB) 341 with its 75% statewide recycling goal by 2020 and more recent legislation such as AB 1826 and its mandatory commercial organics recycling provisions. This 75% statewide goal is not a local mandate, but the SBWMA Board at its September 11, 2014 Board meeting adopted this goal as a key guiding principle for development of the Long Range Plan. The draft Plan also includes recommendations for operational improvements affecting collection and Shoreway operations with a goal of improved efficiency, cost savings and environmental improvements.

The draft Plan in and of itself is not a decision-making tool for future decisions by Member Agencies in 2017 to extend or not the term of their existing Franchise Agreements with Recology San Mateo County and other critical contractual decisions such as:

- Future decision by the JPA whether or not to extend the term of the Shoreway Operations Agreement with South Bay Recycling (SBR)
- Future expiration after December 31, 2019 of the Ox Mountain Disposal Agreement

There are recommendations in this draft Plan that do affect the future scope of work for the Franchise Agreements and Shoreway Operations Agreement, but staff will outline separate processes in the coming months for how the JPA and Member Agencies can successfully prepare for and execute on critical contractual decisions. Agenda item 6A addresses a draft plan and recommended process to support Member Agencies with future decisions regarding their current Franchise Agreements with Recology.

Analysis

Assessment and Evaluation of Policy, Program and Infrastructure Enhancements

In assessing and evaluating potential enhancements to our existing recycling and solid waste collection and processing system the key guiding principles were:

- Meeting the State's 75% recycling goal by 2020
- Leveraging existing infrastructure and investments
- Programs that address any existing service voids or deficiencies

- Cost-effective and efficient programs

More specific to the existing Shoreway Environmental Center infrastructure not only was there a focus on achieving cost effective waste diversion but also identifying enhancements that would improve the efficiency of facility operations, and customer and worker experience and safety.

There were also specific enhancements developed through collaboration with Recology including two operational improvements: conversion of the existing collection fleet from using 5% biodiesel to a future fleet that runs on CNG, and potential use of split-body (two-compartment) collection vehicles to service residential customers.

Staff also worked closely with Recology to develop future measured diversion forecasts associated with existing commercial recycling and organics outreach efforts, notably to address the mandatory commercial organics requirements of Assembly Bill (AB) 1826 which take effect in April 2016.

Recommendations

The draft Plan provides recommendations with decision-making timelines and estimated costs, both one-time and ongoing, and capital requirements. Please see Table 1.1 in the Executive Summary for a listing of all recommendations for policies, programs, and Shoreway infrastructure enhancements. The recommendations can be summarized as follows:

Collection Operational Improvements and Program Enhancements

- Use of CNG in future collection fleet effective January 2021 or earlier if operationally and financially prudent.
- Conduct a pilot project in FY1516 to study routing efficiencies using split-body collection vehicles over two four-week pilot periods between September and November 2015 for approximately 16,000 single family homes. Split-body vehicles allow for the collection of two types of material streams (e.g., garbage and recycling) utilizing one truck as opposed to two trucks.
- Piloting every other week collection of garbage from approximately 8,000 residential homes over a three month pilot period sometime in FY1516.
- Modify Recology's current commercial outreach reporting requirements to implement a Commercial Subscription and Participation Compliance Status Report for use in setting outreach priorities and tracking progress to diversion goals. This change will be supplemented with enhanced commercial public education and outreach efforts to be piloted in FY1516.
- Implement a model public spaces recycling collection pilot in a downtown area and a park setting with a goal of ultimately developing a more uniform approach across Member Agencies to complement existing residential and commercial recycling and organics collection services. Existing funds are available to start this pilot in FY1415 with some supplemental funds required to continue into FY1516.
- Rollout an enhanced residential public education and outreach pilot in FY1617 to test a dedicated campaign service area-wide and for specific Member Agencies with lower residential diversion rates. The pilot goal is to measure the cost effectiveness of enhanced public education to increase residential diversion rates.

Policy Initiatives

- Develop a model Extended Producer Responsibility (EPR) policy for Board consideration and approval in FY1516. The policy will facilitate more active SBWMA engagement with supporting state EPR legislation.
- Do not consider implementing any mandatory recycling ordinances until measured diversion results are known after 2020.
- Do not consider any disposal bans on designated materials (e.g., green waste, cardboard, etc.) until measured diversion results are known after 2020.

Shoreway Facility Enhancements

- Install a mixed waste processing system in the Transfer Station in 2018 to recover organics and recyclables from residential and commercial waste delivered to the Transfer Station by Recology collection vehicles. Recovered organics to be transferred to the Silicon Valley Clean Water wastewater treatment plant for digestion and energy production. Recyclables to be processed further as needed at existing onsite MRF.
- Expand Transfer Station building in 2017/2018 to accommodate the new mixed waste processing system.
- Pursue one of three options to provide for onsite SBWMA office space and new public meeting space (for Board meetings and other public uses). The specific option to be pursued should be determined after a final decision is made on the mixed waste processing system and related Transfer Station building improvements. The preferred option would be to remodel the second floor of the Recology administration building which would produce long-term savings compared to the existing lease option at the San Carlos Library.
- Install a CNG fueling system in 2020 to provide for future fuel needs for the collection fleet. This project would also involve the closeout of the existing diesel fuel storage and dispensing system. It is assumed that the CNG fueling system would be capitalized by a third party in exchange for a long-term supply agreement to purchase the CNG from the third party. Staff will also evaluate to what extent CNG can be supplied by other offsite sources, including the potential to use bio-CNG produced from methane gas generated at a local wastewater treatment plant.
- Include a multi-year capital plan for repairing approximately four acres of paving in the corporation yard area used by Recology.
- Replace all large light fixtures in the MRF, Transfer Station and Recology maintenance shop areas with LED lighting in FY1516. The project would be developed in partnership with PG&E in order to identify and secure any available grants or credits for the project.
- Conduct a stakeholder engagement process in FY1516 to determine what additional components can be added to our existing environmental education program with a focus on increasing recycling and composting efforts at schools in our service area.

Based on the above recommendations and a baseline forecast for current commercial recycling and organics outreach efforts, staff projected future measured diversion levels by sector and overall as shown in **Table 1** below:

Table 1: Baseline Forecast w/ Enhanced Residential Public Education and MSW Processing Starting in 2018*

<u>Sector</u>	<u>Actual Results</u>		<u>Projected Results</u>					
	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Residential	66.90%	66.48%	66.59%	66.59%	66.59%	71.32%	76.35%	76.60%
Commercial/MFD	29.77%	31.04%	32.01%	34.79%	37.13%	48.75%	58.77%	58.77%
Overall	48.83%	48.90%	49.39%	50.77%	51.94%	60.09%	67.61%	67.73%

**Commercial Recycling Reporting Ordinance data is not included in the forecasted Commercial/MFD and Overall measured diversion*

These figures do not include any diversion data as a result of the implementation of the Commercial Recycling Reporting Ordinance as the first required reports per the Ordinance are not due until May 1, 2015. When this data becomes available and is reviewed by staff an updated diversion forecast will be prepared which will likely put us even closer to the State's 75% diversion goal by 2020.

Background

At the March 26, 2015 Board meeting staff gave a presentation on the Long Range Plan document and addressed questions and comments offered by Board Members.

At the November 20, 2014 Board meeting staff provided a progress report on phase two of the Long Range Plan workplan and noted the upcoming milestone of the visioning workshop. A successful Long Range Plan visioning workshop was held on November 6, 2014 which was well-attended by Board and TAC Members, Member Agency staff and community leaders.

On September 12, 2014 the Board approved the guiding principles for use in assessing and evaluating program, policy, and Shoreway infrastructure enhancements. The approved guiding principles reflect Board Member feedback to incorporate meeting the State's 75% recycling goal by 2020, making sure product quality and end-market considerations reflect economic considerations, and that proposed programs address any existing service voids or deficiencies.

The SBWMA FY1415 budget approved by the Board on June 26, 2014 included a workplan and budget of \$232,500 for the development of a Long Range Plan. \$187,500 was earmarked for the Plan development and \$45,000 for research associated with the organics recovery project with Silicon Valley Clean Water.

Fiscal Impact

The Board review and approval of the 2015 Long Range Plan has no specific fiscal impact as separate Board actions will have to be taken in future fiscal years to approve recommended projects. The draft Plan in Section 3 outlines decisions by year which will be requested of the SBWMA Board and/or Member Agencies to implement the recommendations. **Table 2** shows actual projected costs by fiscal year for the recommended projects.

Table 2: Projected Costs by Fiscal Year

	<u>FY1516</u>	<u>FY1617</u>	<u>FY1718</u>	<u>FY1819</u>	<u>FY1920</u>
Operating Expense	\$439,591	\$175,000	\$25,000	\$25,000	
Other Expenses	\$55,422 ¹				
Capital Expenses ²	\$274,000		\$2,807,200	\$10,984,859	\$1,375,000 - \$1,800,000
Subtotal:	\$713,591	\$175,000	\$2,832,200	\$11,009,859	\$1,375,000 - \$1,800,000
¹ Recology collection expense					
² Currently available cash to fund capital projects includes approximately \$3 million in undesignated cash reserves and \$1.24 million in Shoreway remediation fund monies.					

Specific recommendations for FY1516 are included in the preliminary FY1516 budget documents included under agenda item 5A.

Existing cash is available to fund about \$4.24 million of the \$15.2-15.6 million in projected capital projects; \$3 million in existing cash could be used to fund the FY1718 capital needs (i.e., Recology admin. building remodel and Transfer Station building improvements) and the FY1920 capital (i.e., CNG fueling operation and USTs closeout) project with the unfunded needs of approximately \$11 million in FY1819 for the mixed waste processing equipment.

Table 3 summarizes the preliminary collection rate impact analysis for a number of the projects with an overall collection rate impact of 0.9% (in today's dollars).

Table 3: Collection Rate Impact

LRP PROJECTS	Life (yrs.)	Annual Financial Impact - Positive / (Negative)	Collection Rate Impact	
CNG Collection Fleet Conversion	10	\$992,960	-1.0%	rate reduction
Mixed Waste Processing (\$13.5M)	10 - 30	(\$1,905,487)	1.9%	rate increase
SBWMA Admin. Offices Option #1 (\$275k)	10	\$32,500	0.0%	rate reduction
Shoreway - Paving (\$2M)	10	(\$200,000)	0.2%	rate increase
Shoreway - LED Lighting Improvements (\$274K)	10	\$181,600	-0.2%	rate reduction
TOTAL BASE CASE RATE IMPACT			0.9%	

Staff did a sensitivity analysis on the mixed waste project, expected to come on line in 2018, to address the potentially significant increase in landfill disposal rates in 2020 after expiration of our current disposal agreement with Ox Mountain. If disposal rates increase 20% in 2020 then the mixed waste project estimated collection rate impact drops from 1.9% to 1.5% which lowers the overall "base case rate impact" to 0.5%.

Attachments:

Attachment A – Draft 2015 Long Range Plan

SOUTH BAYSIDE WASTE MANAGEMENT AUTHORITY 2015 DRAFT LONG RANGE PLAN



April 23, 2015

Acknowledgements

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SECTION 1






INTRODUCTION

1. Introduction

A. Organization of the Document

The draft Long Range Plan has been organized in a manner to make it as reader-friendly as possible, using color coding, summary tables and sections. The color coding is located in the header of each page. Each page number is in a color coded text box to allow the reader to quickly identify whether the information on that page (and section) pertains to the entire collection and processing system/overview, collection programs and policies, or processing and transfer infrastructure. The color coding used is as follows:

-  = Entire Collection and Processing System/Overview
-  = Collection Programs and Policies
-  = Processing and Transfer Infrastructure

The draft Plan can be read in full, however, one of the significant features used in this document are the summary tables to capture the major details of the respective section. These summary tables were developed intentionally using a reader-friendly 11"x17" landscape format.

The Plan has been organized into sections as follows:

- **Section 1 – Introduction.** This section provides an overview through the Executive Summary and highlights the recommendations for Board consideration.
- **Section 2 – Evaluation of Waste Reduction, Recycling and Composting Policies, Programs and Shoreway Infrastructure.** This section provides details on the measured diversion forecast service area wide for 2015-2020 and possible enhancements to the SBWMA's existing collection and processing systems to reach the State's 75% recycling goal by 2020.
- **Section 3 – Recommendations and Next Steps.** This section provides a summary of the recommended enhancements to the existing SBWMA collection and processing systems, timeline, cost projections and next steps.
- **Appendices**
 - **Appendix A – State and Local Policy and Regulatory Framework.** This section provides a background on State policies that impact the SBWMA and Member Agencies related to solid waste and recycling; and also provides a summary of the JPA governance structure, contracts and policies.
 - **Appendix B – Waste Reduction, Recycling and Composting Policies, Programs and Shoreway Infrastructure.** This section provides an overview and assessment of the SBWMA's existing collection and processing systems.
- **Attachments.** This section includes the attachments referenced in the Plan.

B. SBWMA Guiding Principles

At the September 11, 2014 Board of Directors meeting, the Board approved the Guiding Principles listed below which were used to evaluate any proposed policy, program and infrastructure enhancement considered in this draft Long Range Plan to ensure that it was in line with the Agency's goals and objectives.

- **Maintain and Support an Economically Sustainable Solid Waste System**
 - Leverage existing infrastructure
 - Provide cost-effective and efficient programs
 - Maintain rate stability and predictability
 - Incorporate economic incentives through:
 - Commodity revenue sharing
 - Rate structure improvements
 - Performance standards
 - Promote economic development where feasible
 - Ensure the highest and best use of recoverable materials and implications for end markets so program are economically and environmentally sustainable
 - Support product stewardship policies and initiatives

- **Enhance Environmental Benefits to the Community**
 - Increase and maximize participation in programs and services to reduce and reuse waste
 - Reduce and mitigate landfill and other facility impacts
 - Reduce collection fleet and transfer trailer fleet emissions
 - Develop and sustain strategic community partnerships
 - Support local, state and national mandates, including the State's 75% recycling goal by 2020
 - Promote behavior change through public education
 - Invest in new, safe technologies and processes for infrastructure

- **Provide High Quality and Convenient Programs and Services**
 - Ensure that program initiatives are convenient, accessible and appropriate
 - Provide incentives to participate in programs where feasible
 - Enhance public education to maximize participation
 - JPA Member Agency facilities and the Shoreway facility to serve as models for high diversion facilities
 - Ensure proposed programs identify any service voids or deficiencies

C. Executive Summary

Purpose and Use for the Long Range Plan

This draft Long Range Plan is the key deliverable for phase four of a five-phase effort to complete the JPA's first comprehensive long range plan since 2002. The last phase is the Board's approval of a final Plan. The Plan is really a blueprint to assist the Board of Directors with future decision-making on enhancements to the existing solid waste, recycling, and organics collection and processing system for our service area of approximately 450,000 people in San Mateo County with a primary focus on the next five-year period.

The JPA's last Long Range Plan was drafted in 2002, then updated in 2005 and became the starting point for the development of the franchised collection programs and services rolled out in January 2011. A masterplan for the Shoreway Environmental Center was approved by the Board in April 2007 and was the basis for the \$46 million in capital improvements completed between the fall of 2009 and the spring of 2011.

With the rollout of new franchised collection services and completion of the Shoreway masterplan improvements in 2011, the SBWMA now has one of the highest regarded and most innovative and efficient collection and processing systems in the country. This system provides a solid foundation to build on to address any future diversion needs, changes in State laws and regulations, and new policy goals established by the SBWMA Board of Directors.

The Plan addresses policy, programmatic and infrastructure needs to meet the requirements of Assembly Bill (AB) 341 with its 75% statewide recycling goal by 2020 and more recent legislation such as AB 1826 and its mandatory commercial organics recycling provisions. The Plan also includes recommendations for operational improvements affecting collection and Shoreway operations with a goal of improved efficiency, cost savings and environmental improvements.

The Plan in and of itself is not a decision-making tool for future decisions by Member Agencies in 2017 to extend or not the term of their existing Franchise Agreements with Recology San Mateo County and other critical contractual decisions such as:

- Future decision by the JPA whether or not to extend the term of the Shoreway Operations Agreement with South Bay Recycling (SBR)
- Future expiration after December 31, 2019 of the Ox Mountain Disposal Agreement
- Future expiration of disposal and processing agreements for HHW, C&D processing and source separated organics (for composting) processing

There are recommendations in this draft Plan that do affect the future scope of work for the Franchise Agreements and Shoreway Operations Agreement but staff will outline separate processes in the coming months for how the JPA and Member Agencies can successfully prepare for and execute on the critical contractual decisions related to the Franchise Agreements.

The Plan provides final recommendations with decision-making timelines and estimated costs, both one-time and ongoing, and capital requirements. Preliminary collection cost impacts are noted as appropriate, but more detailed analysis will be required in the future.

In assessing and evaluating potential enhancements to the existing recycling and solid waste collection and processing system the key guiding principles applied were:

- Meeting the State's 75% recycling goal by 2020
- Leveraging existing infrastructure and investments
- Programs that address any existing service voids or deficiencies
- Cost-effective and efficient programs

More specific to the existing Shoreway Environmental Center infrastructure not only was there a focus on achieving cost effective waste diversion but also identifying enhancements that would improve the efficiency of facility operations, and customer and worker experience and safety.

There were also specific enhancements developed through collaboration with Recology including two operational improvements: conversion of the existing collection fleet from using 5% biodiesel to a future fleet that runs on compressed natural gas (CNG), and potential use of split-body (two-compartment) collection vehicles to service residential customers.

Staff also worked closely with Recology to develop future measured diversion forecasts associated with existing commercial recycling and organics outreach efforts, notably to address the mandatory commercial organics requirements of Assembly Bill (AB) 1826 which take effect in April 2016.

Collection Programs and Policies

In order to identify opportunities for enhancing existing programs and services, specific program metrics were reviewed such as sector (e.g., residential, commercial, etc.) specific diversion rates, customer participation rates, and an analysis of the types of materials (i.e., waste composition) that are being disposed. Staff's review of the program metrics resulted in the following findings:

- While we have a relatively high residential diversion rate of 66.5%, there remains opportunity to further increase participation and setout rates to divert more materials in a cost effective manner.
- The continued drought has contributed to an annual reduction in residential compost set-out participation levels.
- The overall diversion rate has remained stable and while still below 50%, it will likely increase once the data obtained through implementing the commercial recycling reporting Ordinance is included.
- Multi-family continues as a unique challenge and opportunity for diversion improvement especially due to this sector's high rate of disposal of both recycling and compost materials.
- The commercial sector contributes the largest percentage by sector of garbage and approximately half of the recycling and compost materials targeted for recycling are recovered through the BizSMART program. Therefore, while the extent of improvement in recycling and compost collection services remains unknown until more non-franchise recycling data is obtained from this sector, there appears to be considerable room for improvement in existing recycling and compost collection services.
- Public education and outreach is critically connected to the success of all the programs and affects participation and diversion rates.
- Public education and outreach spending has declined to an ongoing maintenance level and new, targeted outreach spending is needed to address both the residential and commercial sectors.

Shoreway Processing and Transfer Infrastructure

Staff's review of waste diversion options at Shoreway was focused primarily on a review of waste composition data at the Transfer Station to determine the potential for additional materials recovery. Such waste composition data was projected into future years as part of our measured diversion forecast to identify actual disposed tons available for "back-end" (i.e., after source separation collection programs at homes and businesses) recovery at the Transfer Station. Significant quantities of organics and to a lesser extent recyclable materials were identified for recovery. Such a "back-end" recovery effort has the benefit of not impacting or requiring changes to the existing collection system; the existing source separation collection programs for solid waste, recycling and organics will remain in place.

Significant effort also went into identifying specific infrastructure enhancements that would be needed to support potential collection program enhancements such as the future use of CNG collection vehicles. A new CNG facility may be required to be built at Shoreway along with closeout of the existing diesel fuel storage and dispensing system. Staff will continue to evaluate other potential sources of CNG fuel to supplement or replace the need for an onsite CNG system. The Shoreway facility remains the most logical place for a future CNG fueling facility as this is where the collection fleet is based; having to fuel somewhere offsite will add collection expense as some vehicles will have to go "off route" to fuel.

Due to the JPA's interest in having office and public meeting space at Shoreway, several options were explored as part of this Plan. Such options to some extent are impacted by other Shoreway enhancements (i.e., Transfer Station building improvements) identified, though potentially there is a very cost effective solution in terms of creating office space (not meeting space) through remodeling the 2nd floor of the Recology administrative building.

Recommendations and Next Steps

Table 1.1 on the next page summarizes all of the recommendations for Board consideration. The recommendations are broken out into collection related operational improvements, programs/services enhancements; policy initiatives; and Shoreway infrastructure improvements. Cost estimates associated with the recommendations are current year estimates and preliminary collection cost impacts are provided namely for the CNG project and mixed waste processing in the Transfer Station; additional collection rate analysis will be required in the future.

Finally, it is critical to understand that the Long Range Plan is really a “blueprint” for future Board actions related to increasing measured diversion, and driving operational improvements. As outlined on the following pages there are a number of decisions that flow from the recommendations in **Table 1.1**.

As shown in **Table 1.1**, implementing the recommendations will increase measured diversion from our forecasted baseline of **54.35% in 2020 to an estimated 67.73% in 2020**. These figures do not include any diversion data as a result of the implementation of the Commercial Recycling Reporting Ordinance as the first required reports per the Ordinance are not due until May 1, 2015. When this data becomes available and is reviewed by staff an updated diversion forecast will be prepared which will likely put us even closer to the State’s 75% diversion goal by 2020.

Table 1.1: Summary of Recommendations for Policies, Program and Shoreway Infrastructure Enhancements

Name/Title	Recommendation	Project Benefits
Collection Operational Improvement:		
CNG Fleet Conversion Project	The franchised service provider collection fleet to run on CNG effective 1/1/21 (assumed start of new Franchise Agreements). Recology to include this assumption in their proposal for an extension of their existing Franchise Agreements in 2017.	<ul style="list-style-type: none"> • Net collection ops. cost savings of \$992,960/year starting in 2021 • Approximately 20%-23% reduction in greenhouse gas emissions • Estimated collection rate reduction of 1.0%
SFD Split-Body Collection Vehicle Pilot Project	Conduct pilot project in FY1516 to study routing efficiencies using split-body (two- compartment) collection vehicles over two four-week pilot periods between September and November 2015. Recology proposes to conduct first pilot in Menlo Park and the other in Burlingame and adjoining County pockets. Approximately 8,000 homes per week (two routes) effected during each pilot period.	<ul style="list-style-type: none"> • Pilot project to assess potential routing efficiencies to determine if this type of collection vehicle can be cost effectively deployed in the future in our service area
Collection Program/Service Enhancement:		
SFD Every Other Week Garbage Collection Pilot Project	<p>Conduct a pilot project in FY1516 to study the cost effectiveness of collecting garbage every other week. Pilot details not final but assumes would cover approximately 8,000 homes (two routes) over a three month period.</p> <p>Pilot would have to be approved by the County LEA which enforces State solid waste and related laws and regulations.</p>	<ul style="list-style-type: none"> • Potentially significant increase in diversion • Potential cost savings from reduced collection routes • Potential reduction in greenhouse gas and other harmful vehicle emissions <p>Note: Pilot project results to be evaluated to determine if this change in residential service levels and routing are to be included in the future Franchise Agreements. A solid waste rate study would need to be completed to assess this option and others for future consideration in the Franchise Agreements.</p>
Commercial Recycling Outreach Program Project	Modify Recology's current reporting requirements to implement a Commercial Subscription and Participation Compliance Status Report for use in setting outreach priorities and tracking progress to diversion goals. Couple this change with enhanced commercial public education and outreach efforts. Project to be implemented in FY1516.	<ul style="list-style-type: none"> • Supports Recology's efforts to achieve the forecasted commercial diversion shown in Table 2.1 and Table 2.2A • Establish clear diversion targets for collection services contractor • Increase return on investment in franchised commercial outreach program
Public Spaces Recycling Pilot Program	Implement model public spaces recycling collection in a downtown area and a park setting. Goal is to develop a more uniform approach across the Member Agencies that complements the existing residential and commercial recycling and organics collection services. Project to be implemented in FY1415 and FY1516.	<ul style="list-style-type: none"> • Increased diversion from the commercial sector (public spaces) • Reduce litter • Expand opportunities to engage public in recycling and reinforce messaging

<u>Name/Title</u>	<u>Recommendation</u>	<u>Project Benefits</u>
<p>Enhanced Residential Public Education and Outreach Pilot Program</p>	<p>Conduct a pilot program focusing on cost-effective, measurable dedicated campaigns service-area wide and for specific Member Agencies with lower diversion rates. Pilot to be conducted in FY1617.</p>	<ul style="list-style-type: none"> • Increase in residential recycling and organic materials: 2.5% in 2018, 5% in 2019, and 2% in 2020 resulting in 2,490 tons of new diversion • Forecasted increase in residential diversion from 66.59% in 2015 to 68.22% in 2020 per Table 2.2A • New diverted tons in 2018-2020 produce avoided disposal cost savings of \$156,300 • Low cost per divided ton of approximately \$28/ton
Policy Initiative:		
<p>EPR Policy Framework</p>	<p>Establish a framework for Board consideration to facilitate supporting EPR legislation and policy. Implement in FY1516.</p>	<ul style="list-style-type: none"> • Provides SBWMA the opportunity to become engaged in State-wide efforts to enact EPR related policy • Requires product manufacturers to take financial responsibility for collection, recycling and disposal of their products • Provides incentive for manufacturers to design products for recyclability and with reduced toxicity • Reduces cost to ratepayers for proper handling, recycling and disposal of various product types
Shoreway Infrastructure Enhancement:		
<p>Mixed Waste Processing in Transfer Station</p>	<p>Installation of a mixed waste processing system located in an expanded footprint in the existing Transfer Station. System to recover recyclables and organics from residential and commercial waste delivered to the Transfer Station by Recology collection vehicles. Recyclables to be processed further at existing onsite MRF. Organics to be transferred to SVCW for digestion and energy production. System can also process, at a projected expense less than existing organics processing, source separated organics from Recology franchised collection programs. System operational in 2018.</p>	<ul style="list-style-type: none"> • Significant diversion potential of 49,591 tons/year starting in 2018 • Increases overall measured diversion from 51.94% in 2017 to 67.73% in 2020 per Table 2.2B • Estimate collection rate increase of 1.9% for base case scenario; drops to 1.5% if assume 20% increase in landfill disposal costs in 2020 • Low cost per diverted ton at \$38.42/ton for base-case scenario (small TS expansion with fiber recovery) • Leverages existing infrastructure at SVCW to reduce the project capital costs • Reduction of greenhouse gasses through recovery of green energy from waste and reduced landfilling • Viable project for State grant funding

Name/Title	Recommendation	Project Benefits
<p>Shoreway Transfer Station Building Improvements</p>	<p>Expand Transfer Station footprint to accommodate a mixed waste processing system. Two Transfer Station expansion scenarios: small expansion of 4,400 sq. ft. or large expansion of 12,000 sq. ft. Small expansion would not provide for new office and public meeting space. Large expansion would require demolition of Recology Administration building and construction of new Administration building. Large expansion would allow for new office and public meeting space as described further below.</p>	<ul style="list-style-type: none"> • See Mixed Waste Processing in Transfer Station project benefits on previous page
<p>SBWMA Administrative Offices and Public Meeting Space</p>	<p>Pursue one of three options to provide for onsite (at Shoreway) SBWMA office space and new public meeting space (e.g., for Board meetings, seasonal workshops and other public needs). There are three options for SBWMA office space with two of the options also providing public meeting space.</p> <p>Option 1 would be to remodel 3,000 sq. ft. of space on the second floor of Recology Administration Building; this option does not provide for public meeting space. Option 1 is possible if do small Transfer Station expansion. Option 2 would consist of constructing a new two-story building in the existing visitor parking lot. The first floor would be a parking garage and the second floor will be split between office space and public meeting space totaling 5,614 sq. ft. Option 3 would be associated with the large Transfer Station expansion scenario. Office space and public meeting space would be housed in a two-story building adjacent to the Transfer Station. Both floors would be approx. 3,000 sq. ft.</p> <p><u>Staff recommends that no decision be made on these improvements until a final decision is made on the mixed waste processing project and related Transfer Station building improvements.</u></p>	<ul style="list-style-type: none"> • All options would provide for SBWMA office space and thus save approx. \$60,000 per year in office lease costs; these annual cost savings would exceed the new depreciation expense for the required building improvements • Options 2 and 3 would provide for public meeting space for Board meetings and other public meetings and onsite public events
<p>MRF Single Stream Processing Equipment Replacement</p>	<p>No recommended change to existing Board policy or direction. Staff to include a forecast for MRF equipment replacement in the FY1516 budget; the budget will include a rolling five-year capital budget. Existing cash reserves include an equipment replacement reserve fund to pay for such equipment replacement.</p>	<p>N/A</p>

Name/Title	Recommendation	Project Benefits
MRF Building Tipping Area Expansion	This is an existing and budgeted project to construct MRF canopy to expand tipping area for collection vehicles to unload recyclables. Project required to for 3 rd party tonnage into MRF. FY1415 budget of \$450,000. Current project construction estimate of \$438,741.	N/A
CNG Fueling System at Shoreway	Installation of a CNG fueling system at Shoreway in 2020 to support future fuel needs for collection fleet. Would also involve the closeout of the existing UST system. Would add one new AST for diesel for SBR transfer trailers.	<ul style="list-style-type: none"> • Supports conversion of the collection fleet to CNG with significant operational cost savings • Eliminates future potential groundwater contamination at Shoreway from fueling operations • Assumes onsite fueling station capitalized by a 3rd party
Other Shoreway Infrastructure Improvements	<p>Site Paving No recommended change to existing Board policy or direction. Staff to include a forecast for site paving costs in capital spending portion of FY1516 budget.</p> <p>New LED Lighting LED lighting retrofit in the MRF, Transfer Station and Recology maintenance shops.</p>	<ul style="list-style-type: none"> • Extend life of pavement in the corp. yard area used by Recology. • Estimated collection rate impact of 0.2% • Power cost savings after 1.3 year payback period • Improved interior lighting for safer environment • Estimated collection rate savings of 0.2%
Environmental Education Center and Tour Program Enhancements	Conduct a stakeholder engagement process in FY1516 to determine what additional components can be added to our existing environmental educational efforts with a focus on increasing recycling and composting efforts at schools in our service area. RethinkWaste is only minimally engaged in school or community based environmental education outside of the existing tour program.	<ul style="list-style-type: none"> • Complements existing RethinkWaste recycling outreach efforts to residents and businesses • Engages local educators to identify synergies to maximize effectiveness of new programs • Enhances return on investment in broader outreach campaigns

Timeline and Cost Projections Associated with Future Decisions by SBWMA Board and/or Member Agencies

In order to implement the recommendations outlined in **Table 1.1**, the following decisions by year will be requested of the SBWMA Board and/or Member Agencies.

Timeline

2015

- **SFD Split-body Collection Vehicle Pilot Project** – SBWMA Board decides whether to include one-time expenses of \$16,391 in FY1516 budget. Board also provides direction to Recology as to whether to include one-time expenses of \$55,422 in their 2016 Compensation application submitted in June.
- **SFD Every Other Week Garbage Collection Pilot Project** – SBWMA Board decides whether to include one-time expenses of \$119,200 in FY1516 budget. No impact on 2015 or 2016 Recology compensation.
- **Commercial Recycling Outreach Program Project** – SBWMA Board decides whether to include one-time expenses of \$50,000 - \$60,000 in FY1516 budget. No impact on 2015 or 2016 Recology compensation.
- **Public Spaces Recycling Pilot Program** – SBWMA Board decides whether to include one-time expenses of \$11,000 in FY1516 budget. No impact on 2015 or 2016 Recology compensation.
- **EPR Policy Framework** – SBWMA Board decides whether to adopt an EPR Policy Framework.
- **Mixed Waste Processing in the Transfer Station** – SBWMA Board decides whether to include one-time project development expenses of \$183,000 in FY1516 budget. No impact on 2015 or 2016 contractor compensation.
- **SBWMA Administrative Offices and Public Meeting Space** – SBWMA Board decides whether to include \$25,000 in one-time costs in FY1516 budget to further refine building cost estimates. Board could also decide to move forward on Option 1 (\$275,000) to remodel the upstairs portion of the Recology Administration building or Option 2 (\$3.33 million) to build a new two-story building in the visitors parking lot. Staff recommends that no decision be made on these improvements until a final decision is made on the mixed waste processing project and related Transfer Station building improvements.
- **MRF Single Stream Processing Equipment Replacement** – SBWMA Board will adopt annual budget with five-year capital spending plan (plan updated each year for a rolling five-year period). Sufficient cash reserves already in place for forecasted equipment replacement needs.
- **MRF Building Tipping Area Expansion** – SBWMA Board considers approval of construction contract award in April or May 2015. Capital line item already included in adopted FY1415 budget.
- **Site Paving** – SBWMA Board approval of FY1516 budget with five-year capital spending plan to include site paving needs.
- **New LED Lighting** – SBWMA Board will decide whether to approve or not inclusion of the estimated \$274,000 in the FY1516 capital budget.
- **Environmental Education Center and Tour Program Enhancements** – SBWMA Board decides whether to include \$25,000 in one-time costs in FY1516 budget to complete stakeholder engagement process.

2016

- **CNG Fleet Conversion Project** - SBWMA and Member Agencies decide if CNG fleet to be included in future scope of work for Franchise Agreements (2017 decision by Member Agencies whether to extend or not current Recology Franchise Agreements beyond 12/31/20).
- **SFD Split-body Collection Vehicle Pilot Project** – Based on pilot project results, SBWMA and Member Agencies decide if split-body vehicles to be included in future scope of work for Franchise Agreements.

- **SFD Every Other Week (EOW) Garbage Collection Pilot Project** – Based on pilot project results, SBWMA and Member Agencies decide if EOW solid waste collection to be included in future scope of work for Franchise Agreements.
- **Commercial Recycling Outreach Program Project** – Based on outreach pilot project results, SBWMA Board decides if expanded commercial outreach should be continued.
- **Public Spaces Recycling Pilot Program** – Based on pilot project results, SBWMA and Member Agencies decide if there is to be a full scale rollout across service area; could impact SBWMA FY1617 budget and Recology 2017 compensation.
- **Enhanced Residential Public Education and Outreach Pilot Program** – SBWMA Board decides whether to include one-time expenses of \$175,000 in FY1617 budget and \$25,000 in FY1718 and FY1819 budgets. No impact on 2016 or 2017 Recology compensation.
- **Mixed Waste Processing in the Transfer Station** – SBWMA Board makes decision on project based on updated project financial proforma. If decision is to implement, then would initiate project design and permitting in 2016 and develop plan of finance. Capital costs in FY1617- FY1718 budgets. Would also negotiate updated MOU with SVCW for Board consideration.

The above decision would also relate to the associated Transfer Station building improvements required to accommodate the new mixed waste processing system.

- **SBWMA Administrative Offices and Public Meeting Space** – The above decisions may effect which option, if any, the Board chooses for new SBWMA office space and public meeting space at the Shoreway Environmental Center.
- **Environmental Education Center and Tour Program Enhancements** - When staff completes the stakeholder engagement process then recommendations will come back to the Board for consideration for FY1617 budget.

2017

- **Enhanced Residential Public Education and Outreach Pilot Program** – Based on pilot project results, SBWMA Board decides if ongoing enhanced outreach effort is to be continued. Staff assumes \$25,000 in new spending in FY1718 and FY1819.
- **Mixed Waste Processing in the Transfer Station** – Board approval of construction contract award for building improvements and purchase of processing equipment. Negotiate Operations Agreement amendment for SBR compensation to operate new processing system; such amendments require approval of the SBWMA Board and separate approval by two-thirds (at least 8 of the 12) of the Member Agencies.

The above decision would also relate to the associated Transfer Station building improvements required to accommodate the new mixed waste processing system.

If issuance of new debt is needed to finance the project then this will require SBWMA Board approval and separate approval by two-thirds (at least 8 of the 12) of the Member Agencies.

2018/2019

- **CNG Fueling System** – SBWMA Board approval of Shoreway project expenses for site improvements, including closeout of USTs, installation of new AST, and site improvements required for new CNG fueling system. Current estimate of \$1.375 million to \$1.8 million with \$1.24 million in Shoreway remediation funds available to help offset costs.

2021

- **Mandatory Residential and Commercial Recycling Ordinance** – Analyze programmatic efforts through 2020 to determine measured diversion rate and progress towards State goal of 75%. If still short of goal then the SBWMA Board may decide to approve new policy tools.
- **Organic Materials (Green Waste and Food Scraps) Disposal Ban** – Analyze programmatic efforts through 2020 to determine measured diversion rate and progress towards State goal of 75%. If still short of goal then the SBWMA Board may decide to approve new policy tools.

Cost Projections

Table 1.2 summarizes the preliminary collection rate impact analysis for a number of the projects with an overall collection rate impact of **0.9%** (in today’s dollars).

Table 1.2: Collection Rate Impact

LRP PROJECTS	Life (yrs.)	Annual Financial Impact - Positive / (Negative)	Collection Rate Impact	
CNG Collection Fleet Conversion	10	\$992,960	-1.0%	rate reduction
Mixed Waste Processing (\$13.5M)	10 - 30	(\$1,905,487)	1.9%	rate increase
SBWMA Admin. Offices Option #1 (\$275k)	10	\$32,500	0.0%	rate reduction
Shoreway - Paving (\$2M)	10	(\$200,000)	0.2%	rate increase
Shoreway - LED Lighting Improvements (\$274K)	10	\$181,600	-0.2%	rate reduction
TOTAL BASE CASE RATE IMPACT			0.9%	

Table 1.3 shows actual projected costs by fiscal year for the recommended projects. Existing cash is available to fund about \$4.24 million of the \$15.2-15.6 million in projected capital projects; \$3 million in existing cash could be used to fund the FY1718 capital needs (i.e., Recology admin. building remodel and Transfer Station building improvements) and the FY1920 capital (i.e., CNG fueling operation and USTs closeout) project with the unfunded needs of approximately \$11 million in FY1819 for the mixed waste processing equipment.

Table 1.3: Projected Costs by Fiscal Year

	FY1516	FY1617	FY1718	FY1819	FY1920
Operating Expense	\$439,591	\$175,000	\$25,000	\$25,000	
Other Expenses	\$55,422 ¹				
Capital Expenses ²	\$274,000		\$2,807,200	\$10,984,859	\$1,375,000 - \$1,800,000
Subtotal:	\$713,591	\$175,000	\$2,832,200	\$11,009,859	\$1,375,000 - \$1,800,000

¹ Recology collection expense

² Currently available cash to fund capital projects includes approximately \$3 million in undesignated cash reserves and \$1.24 million in Shoreway remediation fund monies.

In the upcoming fiscal year (FY1516) there are a number of recommendations for one-time expenditures to support implementation of pilot projects, and complete additional technical and financial analysis of the mixed waste processing system, including building improvements.

For FY1516, the projected spending from the operating expense budget totals \$439,591 with \$206,591 for collection related programs and outreach, and \$233,000 related to Shoreway operations. \$274,000 is also recommended as a capital expense to retrofit large lighting fixtures in the MRF, Transfer Station, and Recology maintenance shop with high efficiency LED lights. A \$55,422 adjustment is also recommended to Recology's 2016 compensation to cover costs associated with the split-body collection vehicle pilot project.

\$175,000 is recommended to be included in the FY1617 operating budget to complete a residential outreach pilot to measure potential enhancements to diversion levels. Future residential diversion increases are assumed starting in calendar year 2018 based on increased outreach spending, with additional spending estimate at \$25,000 in FY1718 and FY1819.

Based on the results of the various pilots conducted in 2015 and 2016, there will be follow-up SBWMA Board and/or Member Agency decisions in 2016, 2017 and 2018 regarding full-scale rollout of programs and services (e.g., enhanced public education and outreach, Public Spaces recycling, etc.) and future franchised collection service operations (e.g., use of split-body collection vehicles and EOW solid waste collection). Notably, any changes to collection service operations would need to be analyzed from a rate perspective along with any other changes proposed by Recology and/or recommended by the SBWMA Board and Member Agencies.

Major decisions on the Shoreway facility capital improvements are assumed to occur in 2016 for the mixed waste processing system and related Transfer Station building expansion. Currently, the assumed base-case project would involve spending \$13.51 million, with \$2.53 million for a small expansion of the Transfer Station and \$10.58 million for processing equipment. Project funding sources could include the use of current undesignated cash reserves estimated at \$3.9 million (FY1415 mid-year budget document), new incremental undesignated cash reserves resulting from tipping fee increases at Shoreway, State grant funding, and new debt (bank loan, bonds, etc.) An analysis of tipping fees and other aspects of the Shoreway operations budget would need to be completed as part of any Board decision-making process for this project.

The above decisions related to the mixed waste processing project will also effect potential options related to the development of SBWMA office space and public meeting space at Shoreway. The SBWMA currently spends approximately \$60,000 per year to lease office space, and the Board Chair and Vice Chair requested an analysis of alternatives be included in the Long Range Plan. Three options are presented with a cost range of \$275,000 (to remodel the upstairs portion of the Recology Administration building) to \$3.33 million (to build a new two-story building in the visitors parking lot). Another option at a cost of \$977,550 would be tied to the large expansion option for the Transfer Station. The lowest cost of \$275,000 provides for SBWMA office space, but no provision for public meeting space; if this option was pursued, however, an offsite location would need to be secured for Board meetings. The next lowest cost option at \$977,750 provides office and meeting space and is tied to a much more expensive (i.e., \$9.9 million higher) Transfer Station expansion scenario that is not the preferred option for the mixed waste processing project. The preferred alternative would be the \$3.3 million option that provides for both SBWMA office space and public meeting space on a long-term basis.

Finally, in 2019 the Board would face decisions around capital expenditures to support installation of a new CNG fueling system at Shoreway. Fortunately, the current estimated project costs of \$1.38 - \$1.8 million would largely be

covered by an existing source of funds; \$1.24 million is currently available in a Shoreway remediation fund. Further, the net project costs would be more than offset by the annual franchised collection services operational savings identified at approximately \$1 million per year starting in 2021.

SECTION 2 (Previously Section 4)



EVALUATION OF WASTE REDUCTION, RECYCLING AND COMPOSTING POLICIES, PROGRAMS AND SHOREWAY INFRASTRUCTURE ENHANCEMENTS

2. Evaluation of Waste Reduction, Recycling and Composting Policies, Programs and Shoreway Infrastructure Enhancements

A. Disposal and Diversion Tonnage Forecast for 2015-2020

Table 2.1: Baseline Measured Diversion % Forecast*

Sector	Actual Results		Projected Results					
	2013	2014	2015	2016	2017	2018	2019	2020
Residential	66.90%	66.48%	66.59%	66.59%	66.59%	66.59%	66.59%	66.59%
Commercial/MFD	29.77%	31.04%	32.01%	34.79%	37.13%	38.72%	40.64%	41.99%
Overall	48.83%	48.90%	49.38%	50.77%	51.94%	52.73%	53.68%	54.35%

*Commercial Recycling Reporting Ordinance data is not included in the forecasted Commercial/MFD and Overall measured diversion rates.

Table 2.1 above provides a forecast of the baseline measured diversion rate by sector and overall for the RethinkWaste service area from 2015-2020 assuming there are no changes to existing programs, policies or infrastructure (with the exception of anticipated impacts AB 1826 will have on the Commercial/MFD sector starting in 2016). As can clearly be seen from these projections, the SBWMA and its Member Agencies will not be anywhere near achieving the State 75% recycling goal by 2020. More detail on the assumptions used to create **Table 2.1** are provided below.

Residential

The residential 2015 forecast is based on adjusting the 2014 actual figures by the average change in tonnage over the three prior years. This resulted in decreasing residential solid waste by 0.42%, increasing residential recycling by 0.30% and decreasing residential organic materials by 0.21%. The residential forecast for 2016-2020 assumes no changes to diversion or disposal which is based primarily on maintaining the current level of public education and outreach. However, it is important to note that many factors ultimately influence materials generation, including but not limited to economic conditions and weather conditions; wet weather tends to increase green waste generation and the opposite is true with drought conditions.

Commercial

The commercial 2015 forecast is also based on trends from the prior three years in tonnage. This resulted in increasing commercial, multi-family and roll-off solid waste by 5%, 5% and 10%, respectively; while commercial organic materials is increased by 3% and roll-off organic materials is decreased by 2%. In addition, the forecast includes an analysis of data and projections provided by Recology related to performance of its commercial recycling and organics outreach program. This analysis resulted in increasing the capture rate of recycling by 2.0% and organic materials by 3%.

Staff also used data and projections from Recology for commercial recycling and organics (per AB 1826) to arrive at tonnage assumptions for 2016-2018. The assumed tonnage forecast is as follows: 2016 – recycling increased by 5%, organic materials by 10%; 2017 – organic materials increased by 10%; 2018 – recycling and organic materials increased by 2.5%. No tonnage adjustments were assumed for 2019 and 2020 given the projected start-up of the mixed waste processing operation in July 2018; such a system can be used to comply with AB 1826 requirements. Ongoing use of public outreach and education tools are assumed for 2015-2020.

For all of the commercial diversion assumptions, it was assumed if a ton was diverted than one corresponding less ton was disposed of; staff made no assumptions regarding factors influencing overall generation such as economic conditions and drought.

Overall

The overall measured diversion rate forecast by year is simply a combination of total tons diverted and disposed from all sectors (i.e., residential and commercial/MFD).

Table 2.2A below provides a forecast of the measured diversion rate by sector and overall RethinkWaste service area from 2015-2020 assuming the implementation of the Enhanced Residential Public Education and Outreach Program, and no other changes to existing programs, policies or infrastructure (with the exception of anticipated impacts AB 1826 will have on the commercial/MFD sector starting in 2016). The effects of the enhanced outreach are anticipated to be felt starting in the last half of 2018, resulting in a 2.5% increase in residential recycling and organic materials tonnages, 5% increase in 2019 as the full impacts are realized over the whole year, and dropping to an additional 2% in 2020 as the program effects wind down. There is parallel decrease in residential garbage from 2018-2020 with estimated total disposal cost savings of \$156,300. The same assumptions that were used to create the residential diversion rate in **Table 2.1** for 2015-2017 were used in **Table 2.2A**. The same assumptions that were used to create the commercial diversion rate in **Table 2.1** for 2015-2020 were used in **Table 2.2A**.

Adding the enhanced residential outreach results in increasing the residential forecasted baseline diversion rate in 2020 from 66.59% to 68.22%.

Table 2.2A: Baseline Forecast w/ Enhanced Residential Public Education Starting in 2018*

Sector	Actual Results		Projected Results					
	2013	2014	2015	2016	2017	2018	2019	2020
Residential	66.90%	66.48%	66.59%	66.59%	66.59%	67.02%	67.88%	68.22%
Commercial/MFD	29.77%	31.04%	32.01%	34.79%	37.13%	38.72%	40.64%	41.99%
Overall	48.83%	48.90%	49.39%	50.77%	51.94%	52.95%	54.33%	55.17%

*Commercial Recycling Reporting Ordinance data is not included in the forecasted Commercial/MFD and Overall measured diversion rates.

Table 2.2B on the following page provides a forecast of the measured diversion rate by sector and overall RethinkWaste service area from 2015-2020 assuming the implementation of the Enhanced Residential Public Education and Outreach Program as noted in **Table 2.2A**, and the Mixed Waste Processing System in the Transfer Station starting in July 2018. No other changes to existing programs, policies or infrastructure have been assumed (with the exception of anticipated impacts AB 1826 will have on the Commercial/MFD sector starting in 2016 through 2018). Based on the timing of the project, the effects of the mixed waste processing result in the recovery of an additional 24,795 tons of organic materials in 2018 from the residential and commercial sectors, and 49,591 tons in both 2019 and 2020. There is parallel decrease in garbage from 2018-2020.

The same assumptions that were used to create the residential and commercial diversion rates in **Table 2.2A** for 2015-2017 were used in **Table 2.2B**. Adding the enhanced residential outreach and mixed waste processing results in increasing the overall forecasted baseline diversion rate in 2020 from 54.35% to 67.73%.

Table 2.2B: Baseline Forecast w/ Enhanced Residential Public Education and MSW Processing Starting in 2018*

<u>Sector</u>	<u>Actual Results</u>		<u>Projected Results</u>					
	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Residential	66.90%	66.48%	66.59%	66.59%	66.59%	71.32%	76.35%	76.60%
Commercial/MFD	29.77%	31.04%	32.01%	34.79%	37.13%	48.75%	58.77%	58.77%
Overall	48.83%	48.90%	49.39%	50.77%	51.94%	60.09%	67.61%	67.73%

**Commercial Recycling Reporting Ordinance data is not included in the forecasted Commercial/MFD and Overall measured diversion rates.*

B. Evaluation of Policies, Programs and Shoreway Infrastructure Enhancements

Appendix B of this Plan covers an inventory of the existing programs and infrastructure to help identify if any program and service enhancements are needed in the future, and a summary of the enhancements and new programs recommended for evaluation and consideration.

Table 2.3 below summarizes the enhancements and new programs by sector, and the subsequent **Tables 2.4** and **2.5** provide greater detail on the enhancements and new programs, including diversion impacts and costs. Following the summary tables is a detailed description of each individual policy, program and infrastructure enhancement recommended for evaluation and consideration.

Table 2.3: Summary of Policy and Program Enhancements by Sector

<u>Proposed Enhancement</u>	<u>Sector</u>		<u>Type of Program</u>		
	<u>Residential</u>	<u>Commercial</u>	<u>Policy</u>	<u>Program/Service</u>	<u>Operational Improvement</u>
CNG Fleet Conversion Project	✓	✓			✓
SFD Split-Body Collection Vehicle Pilot Project	✓				✓
SFD Every Other Week Garbage Collection Pilot Project	✓			✓	
Commercial Recycling Outreach Program Project		✓		✓	
Public Spaces Recycling Pilot Program		✓		✓	
Enhanced Residential Public Education and Outreach Pilot Program	✓			✓	
Mandatory Residential and Commercial Recycling Policy	✓	✓	✓		
Organic Materials (Green Waste and Food Scraps) Disposal Ban	✓	✓	✓		
EPR Policy Framework	✓	✓	✓		
Mixed Waste Processing in Transfer Station	✓	✓			✓
Shoreway Transfer Station Building Improvements	✓	✓			✓
SBWMA Administrative Offices and Public Meeting Space					✓
MRF Single Stream Processing Equipment Replacement	✓	✓			✓
MRF Building Tipping Area Expansion	✓	✓			✓
CNG Fueling System	✓	✓			✓
Other Shoreway Infrastructure Improvements					✓
Environmental Education Center and Tour Program Enhancements	✓	✓		✓	

Table 2.4: Diversion Potential by Policy or Program Enhancement

Proposed Enhancement	Sector	2015 Estimated Diversion (Tons/year)	2016 Estimated Diversion (Tons/year)	2017 Estimated Diversion (Tons/year)	2018 Estimated Diversion (Tons/year)	2019 Estimated Diversion (Tons/year)	2020 Estimated Diversion (Tons/year)
CNG Fleet Conversion Project	Residential	N/A					
SFD Split-Body Collection Vehicle Pilot Project	Residential	N/A					
SFD Every Other Week Garbage Collection Pilot Project	Residential	N/A					
Commercial Recycling Outreach Program Project	Commercial	Supports continued growth in existing commercial recycling outreach program and new mandates of AB 1826.					
Public Spaces Recycling Pilot Program	Commercial	N/A	N/A	Diverted tons to be estimated after FY1516 pilot			
Enhanced Residential Public Education and Outreach Pilot Program	Residential	N/A	N/A	Limited diversion in pilot phase	759	1,302	429
Mandatory Residential and Commercial Recycling Policy	Commercial	No diversion estimates provided					
Organic Materials (Green Waste and Food Scraps) Disposal Ban	Commercial	No diversion estimates provided					
EPR Policy Framework	Comm. & Residential	No diversion estimates provided					
Mixed Waste Processing in Transfer Station	Comm. & Residential	N/A	N/A	N/A	24,795	49,591	49,591

Table 2.5: Summary of Programs, Services and Shoreway Infrastructure Enhancements

Proposed Enhancement	Program Cost Summary	Targeted Materials	Required Policy Change by Member Agency	Collection Changes	Shoreway Facility Changes	Pros	Cons	Implementation Issues	Schedule
COLLECTION PROGRAMS AND POLICY									
<p>CNG Fleet Conversion Project The fuel used to run the collection fleet will be changed from B5 biodiesel to CNG.</p>	<ul style="list-style-type: none"> Annual fuel savings of \$1,556,100 Other reduced ops. expense of \$103,438 Annual increase in depreciation expense (year 1) of \$570,717 10-year average interest expense of \$95,862 Net savings per year of \$992,960 or \$9,929,600 over 10 years 	N/A	N/A	Requires purchase of 127 CNG compatible collection vehicles to deliver services for 120 existing routes.	Requires installation of a CNG fueling system. Would also involve closeout of existing underground storage tank (UST) system. Would add 1 new aboveground storage tank (AST) for diesel for SBR transfer trailers. See Table 2.37 for more details on Shoreway operational costs associated with this project.	<ul style="list-style-type: none"> Net collection ops. cost savings of \$0.99M/year starting in 2021 Approximately 20%-23% reduction in greenhouse gas emissions Eliminates future potential groundwater contamination at Shoreway from fueling operations 	<ul style="list-style-type: none"> Subject to price fluctuations of CNG fuel CNG dispensing system may impact collection vehicle parking capacity 	<ul style="list-style-type: none"> Need to negotiate CNG fueling system financing and supply agreement between franchised service provider and 3rd party Need to implement Shoreway site improvements Complex project management to phase in new CNG system and closeout old USTs 	<ul style="list-style-type: none"> Closeout of old diesel system, installation of new AST diesel system for SBR and installation of new CNG system in six to nine month period in 2020 Recology purchase and delivery of new CNG collection vehicles in late 2020
<p>SFD Split-Body Collection Vehicle Pilot Project (proposed by Recology) Conduct a pilot project to study routing efficiencies using split-body collection vehicles.</p>	<p>Pilot program cost to Recology: \$55,422 in 2016.</p> <p>RethinkWaste additional public education expense: \$16,391 in FY1516.</p>	N/A	Participating Member Agencies would be requiring a modification to the current collection service provided to residential customers. Participating Member Agencies requested to provide relief on specific Liquidated Damages during pilot phase.	<ul style="list-style-type: none"> Garbage and recycling will be collected in different compartments of the same truck No day of week routing changes are anticipated 	Minor impact on scale house operations due to trucks weighing twice for each load delivered.	TBD	TBD	<ul style="list-style-type: none"> Requires public education campaign Recology customer service call center may be impacted with additional calls May cause resident confusion since one truck will be collecting both garbage and recycling Service change of limited duration may result in resident confusion 	Recology may include results in proposal for an extension to the existing Franchise Agreements in 2017.

Proposed Enhancement	Program Cost Summary	Targeted Materials	Required Policy Change by Member Agency	Collection Changes	Shoreway Facility Changes	Pros	Cons	Implementation Issues	Schedule
<p>SFD Every Other Week Garbage Collection Pilot Project Conduct a pilot project to study the cost effectiveness of collecting garbage every other week.</p>	<p>Pilot Program Cost: \$119,200 in FY1516.</p>	<p>Residential recycling, organic materials and garbage</p>	<p>Participating Member Agencies would be requiring a modification to the current collection service provided to residential customers. Participating Member Agencies requested to provide relief on specific Liquidated Damages during pilot phase.</p>	<p>Affects pilot area only: Residents can subscribe to EOW garbage service; no changes to existing routes.</p>	<p>N/A</p>	<ul style="list-style-type: none"> • Potential increase in diversion • Potential cost savings • Potential reduction in greenhouse gas and other harmful vehicle emissions • Heightened awareness of residents leading to long-term positive behavior change 	<ul style="list-style-type: none"> • Service provided will be temporary and will revert to weekly collection at end of pilot; some residents may be upset with this • Customers may have concerns with increased vectors or aesthetic issues • If full rollout, potential reduced rate revenue • If rolled out before 2021, service provider would have some “stranded” assets 	<ul style="list-style-type: none"> • Requires approval of the Local Enforcement Agency • Requires approval of effected Member Agencies 	<ul style="list-style-type: none"> • Design pilot: Fall 2015 • Commence public education and outreach: January 2016 • Conduct pilot project: March-May 2016 • Compile results & make recommendations: June 2016
<p>Commercial Recycling Outreach Program Project Implement a metrics driven sales oriented approach to increase diversion coupled with enhanced outreach efforts.</p>	<p>Supplemental outreach costs: \$50,000 - \$60,000 in FY1516. Recology (annual) staffing cost for 2015 is \$912,362.</p>	<p>Recycling, organic materials and garbage</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<ul style="list-style-type: none"> • Increased diversion from the commercial sector, though not clear how much • Establish clear diversion targets for contractor • Increase return on investment in franchised program 	<ul style="list-style-type: none"> • Some up-front administrative effort in consolidating reports • Cultural shift regarding program management by contractor • Without full cooperation and ownership of new approach by contractor, limited results will be achieved 	<ul style="list-style-type: none"> • Requires full cooperation from contractor • Requires contractor to adjust their approach and may take some time to realize the full benefit 	<ul style="list-style-type: none"> • By summer 2015 modified reports can be utilized to set diversion goals for business types and accounts • January 2016-ongoing; analysis of program results • FY1516: development and launch of supplemental public education and outreach efforts

Proposed Enhancement	Program Cost Summary	Targeted Materials	Required Policy Change by Member Agency	Collection Changes	Shoreway Facility Changes	Pros	Cons	Implementation Issues	Schedule
<p>Public Spaces Recycling Pilot Program Implement model public spaces recycling collection in a downtown area and a park setting.</p>	<p>Pilot program cost: \$46,000 total \$35,000 budgeted in FY14/15 \$11,000 to be budgeted in FY15/16</p>	<p>Commercial and Member Agency Facility (public space) recycling, organic materials and garbage</p>	<p>Pilot participants cooperation is required; no policy changes applicable.</p>	<ul style="list-style-type: none"> Increased number of public space receptacles for franchised collection services Increased number of receptacles handled by Agency staff Potential increase in capacity of bins on site at Agency facilities 	<p>N/A</p>	<ul style="list-style-type: none"> Increased diversion from the commercial sector (public spaces) Reduce litter Expand opportunities to engage public in recycling and reinforce messaging Member Agency and RethinkWaste commitment to leadership in recycling and improvement to public spaces Increase value to the ratepayers of current franchise agreement Provides opportunity for community partnerships with park users 	<ul style="list-style-type: none"> Potentially result in increased workload for parks and public space maintenance staff Increases Member Agency assets that require maintenance (public space containers) 	<ul style="list-style-type: none"> Requires cooperation from Member Agency staff and Recology 	<ul style="list-style-type: none"> April-June 2015: purchase new assets July 2015 install assets August-Dec 2015: monitor pilot sites Jan-Feb 2016: review results, issue lessons learned and recommendations April 2016: budget for full-scale roll-out July-December 2016: commence full-scale roll-out
<p>Enhanced Residential Public Education and Outreach Pilot Program Conduct a pilot program focusing on cost-effective, measurable dedicated campaigns for the residential sector, incentives and new messaging/tools</p>	<p>Service area wide campaign cost: \$100,000 in FY1617. Community based outreach cost: \$75,000 in FY1617.</p>	<p>Residential recycling, organic materials and garbage</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<ul style="list-style-type: none"> Increased diversion from the residential sector Facilitate long-term behavior change requiring less future investment in outreach 	<p>N/A</p>	<ul style="list-style-type: none"> Design public outreach campaigns Work with Member Agencies on tailored campaigns for their community 	<ul style="list-style-type: none"> FY1617: development and campaign launches
<p>Mandatory Residential and Commercial Recycling Ordinance Develop a policy framework to implement mandatory recycling.</p>	<p>Implementation (first-year) expense: \$303,000 Annual recurring expense: \$268,000</p>	<p>Residential, commercial, multi-family and Member Agency organic materials and recycling</p>	<p>Yes – potential Member Agency adoption of new ordinance.</p>	<p>May result in additional franchised collection services.</p>	<p>N/A</p>	<ul style="list-style-type: none"> Increase diversion cost-effectively Heighten public awareness leading to long-term positive behavior change Reduced greenhouse gas emissions Increase competitive advantage of businesses that embrace recycling and sustainable practices 	<ul style="list-style-type: none"> Requires individual Member Agencies to adopt policy or for SBWMA to adopt policy and implement on behalf of Agencies Ideally would include regional cooperation 	<ul style="list-style-type: none"> Requires extensive stakeholder engagement process Requires wide-spread public education campaign 	<ul style="list-style-type: none"> Recommended for consideration in future years if 75% goal is not met by end of 2020

<u>Proposed Enhancement</u>	<u>Program Cost Summary</u>	<u>Targeted Materials</u>	<u>Required Policy Change by Member Agency</u>	<u>Collection Changes</u>	<u>Shoreway Facility Changes</u>	<u>Pros</u>	<u>Cons</u>	<u>Implementation Issues</u>	<u>Schedule</u>
<p>Organic Materials (Green Waste and Food Scraps) Disposal Ban Develop a policy framework to implement a Countywide ban on disposal of organic materials.</p>	Implementation expense: \$60,000	Residential, commercial, multi-family and Member Agency organic materials	Yes – adoption of Countywide ordinance.	N/A	Potential modification to rates charged to self-haul customers to impose a premium to deliver banned materials without proper separation.	<ul style="list-style-type: none"> • Increase diversion cost-effectively • Heighten public awareness • Reduced greenhouse gas emissions 	<ul style="list-style-type: none"> • Requires Countywide implementation • Ideally would include regional cooperation 	<ul style="list-style-type: none"> • Would require cooperation from the County Board of Supervisors to adopt new ordinance 	<ul style="list-style-type: none"> • Recommended for consideration in future years if 75% goal is not met by end of 2020
<p>EPR Policy Framework Establish a framework for Board consideration to facilitate supporting EPR legislation and policy</p>	N/A Policy implementation and ongoing expense to be incurred in existing RethinkWaste staffing expense.	A variety of materials and product types depending on the scope of the policy initiative(s)	Yes – if individual Member Agency's want to adopt an EPR framework.	N/A	N/A	<ul style="list-style-type: none"> • Requires product manufacturers to take financial responsibility for collection, recycling and disposal of their products • Provides incentive for manufacturers to design products for recyclability and with reduced toxicity • Reduces cost to ratepayers for proper handling, recycling and disposal of various product types 	<ul style="list-style-type: none"> • Requires action at state level • Increases RethinkWaste staff responsibilities related to reviewing state legislation • Ideally would include regional cooperation 	<ul style="list-style-type: none"> • Relies heavily on State legislative action 	<ul style="list-style-type: none"> • October 2015: Draft Resolution presented to TAC for review and comment • November 2015: Board considers adopting Resolution • January 2016-ongoing: RethinkWaste staff participation in development of policy initiatives

Proposed Enhancement	Program Cost Summary	Targeted Materials	Required Policy Change by Member Agency	Collection Changes	Shoreway Facility Changes	Pros	Cons	Implementation Issues	Schedule
SHOREWAY INFRASTRUCTURE									
<p>Mixed Waste Processing in the Transfer Station Mixed Waste Processing system located at the Transfer Station to recover recyclables and organics. Recyclables to be processed further at onsite MRF. Organics to be transferred to SVCW for digestion and energy production.</p>	<ul style="list-style-type: none"> Year 1 net increase (\$5.19M in new ops. expense - \$3.28 in new commodity revenue) in cost of \$1.9M to process all waste in TS Annual depreciation expense (year 1) of \$1.28M FY1516 project development cost of \$183,000 	Residential and commercial recyclables and organics.	No	No	Installation of new processing equipment within the Transfer Station and a westward expansion of the Transfer Station building. Depending upon size of Transfer Station building expansion may require demolition of the Recology Administration building and construction of a new Admin bldg. to the east of the Transfer Station. New processing system assumed to be operational by July 2018.	<ul style="list-style-type: none"> Significant diversion potential of 49,591 tons/year Leverages existing infrastructure at SVCW to reduce the project capital costs Reduction of greenhouse gasses through recovery of green energy from waste and reduced landfilling Viable project for state grant funding 	<ul style="list-style-type: none"> Significant capital requirements for processing equipment of \$10.98 million Short-term impacts to Transfer Station operations Potential amendment to Operations Agreement Some operational risk with new "organics press" technology from Anaergia 	<ul style="list-style-type: none"> Need to procure new processing equipment Complex project management to install and start-up new processing system while continuing Transfer Station operations Need to negotiate a scope of work and associated compensation for SBR to operate new processing system Need to negotiate terms and conditions associated with SVCW accepting organic slurry feedstock from SBWMA May need to secure new financing (bank loan, bond, etc.) 	Key FY1516 tasks include: complete additional waste comp. studies, 30% design level complete for processing system layout within Transfer Station, identify permitting issues and needs, development of updated MOU between SBWMA and SVCW, development of draft agreement with Anaergia for provision of technology, development of draft agreement with SBR to operate processing system, and prepare draft plan of finance.
<p>Shoreway Transfer Station Building Improvements Existing site building layout will need to be altered to accommodate waste processing system at Transfer Station.</p>	<ul style="list-style-type: none"> Est. building cost of \$2.53 million for small TS building expansion Est. building cost of \$11.52 million for Large TS building with new Recology office area FY 1516 building design and estimating cost of \$51,000 for Small TS building (incl. in Mixed Waste Processing project dev. costs) 	N/A	No	No	Two Transfer Station build out scenarios: small expansion of 4,400 square feet or large expansion of 12,000 square feet (large expansion would require demolition of administration building and construction of new administration building).	<ul style="list-style-type: none"> Maximizes use of existing Transfer Station footprint Provides for significant new, cost effective diversion option within Transfer Station Large expansion scenario provides opportunity for new SBWMA administrative offices and public meeting space (e.g., for Board meetings) See option 3 below 	<ul style="list-style-type: none"> Significant capital requirements for building improvements of \$2.53M million for small expansion to \$11.52M for large expansion Short-term impacts to Transfer Station operations Potential significant short-term impacts to Recology administrative operations New permitting requirements May impact already limited site parking capacity 	<ul style="list-style-type: none"> Need to bid out construction project(s) Complex project management to construct building improvements while continuing Transfer Station operations May need to establish interim Recology administrative operations May need to secure new financing (bank loan, bond, etc.) Secure permit revisions 	<ul style="list-style-type: none"> Identify costs associated with an interim Transfer Station operations plan and interim Recology administrative operations plan Prepare draft plan of finance

Proposed Enhancement	Program Cost Summary	Targeted Materials	Required Policy Change by Member Agency	Collection Changes	Shoreway Facility Changes	Pros	Cons	Implementation Issues	Schedule
<p>SBWMA Administrative Offices and Public Meeting Space Options for building SBWMA office were researched and are presented.</p>	<p>Three cost options for SBWMA office space were developed:</p> <p>Option 1: Recology building remodel estimated cost of \$275,000</p> <p>Option 2: would cost an estimated \$3.33M</p> <p>Option 3: would cost an estimated \$977,550</p> <p>FY1516 design support for option analysis and decision making \$25,000.</p>	<p>N/A</p>	<p>No</p>	<p>No</p>	<p>Three options for SBWMA office space with two of the options also providing public meeting space. Option 1 would be to remodel 3,000 sq. ft. of space on the second floor of Recology Admin. Building; this option does not provide for public meeting space. Option 1 is possible if do small Transfer Station bump out.</p> <p>Option 2 would consist of constructing a new two-story building in the existing visitor parking lot. The first floor would be a parking garage and the second floor split between office space and public meeting space. Both floors would be approx. 5,614 sq. ft.</p> <p>Option 3 would be associated with the large Transfer Station expansion scenario. Office space and public meeting space would be housed in a two-story building adjacent to the Transfer Station. Both floors would be approx. 3,000 sq. ft.</p>	<ul style="list-style-type: none"> • All options would provide for SBWMA office space and thus save approx. \$60,000 per year in office lease costs • Options 2 and 3 would provide for public meeting space for Board meetings and other public meetings and onsite public events 	<ul style="list-style-type: none"> • Significant capital requirements for Options 2 and 3. • New permitting requirements • May impact already limited site parking capacity 	<ul style="list-style-type: none"> • Need to bid out construction project(s) • May need to secure new financing (bank loan, bond, etc.) • Secure permit revisions • May need to identify offsite parking options 	<ul style="list-style-type: none"> • Prepare draft plan of finance • Potentially identify and secure offsite parking
<p>MRF Single Stream Processing Equipment Replacement Need to replace specific equipment components due to intensive use since original installation in 2011.</p>	<p>Existing cash reserves include an equipment replacement reserve fund to pay for such equipment replacement.</p>	<p>N/A</p>	<p>No</p>	<p>No</p>	<p>Table 2.36 identifies a schedule for equipment component replacement from 2015 thru 2023.</p>	<p>N/A</p>	<p>N/A</p>	<ul style="list-style-type: none"> • Need to confirm with SBR and equipment manufacture a final equipment replacement schedule 	<ul style="list-style-type: none"> • Completion of project summer 2015

Proposed Enhancement	Program Cost Summary	Targeted Materials	Required Policy Change by Member Agency	Collection Changes	Shoreway Facility Changes	Pros	Cons	Implementation Issues	Schedule
MRF Building Tipping Area Expansion Existing identified and budgeted project to construct a MRF canopy to expand tipping area for collection vehicles to unload recyclables. Project required to handle 3 rd -party tonnage into MRF.	FY1415 budget of \$450,000 . Current project construction estimate of \$438,741 .	N/A	No	No	Construction of a 2,720 sq. ft. expansion of MRF tipping area	N/A	N/A	N/A	<ul style="list-style-type: none"> Board consideration of approval of construction contract award in April or May 2015 Three month project construction period
CNG Fueling System Installation of a new CNG fueling system.	New utility connection infrastructure for CNG system estimated at \$1.375 – \$1.8M . Current SBWMA reserve of \$1.24M in Shoreway remediation fund to substantially cover project costs.	N/A	N/A	Requires purchase of 127 CNG compatible collection vehicles to deliver services for 120 existing routes.	Requires installation of a CNG fueling system. Would also involve the closeout of the existing underground storage tank (UST) system. Would add 1 new aboveground storage tank (AST) for diesel for SBR transfer trailers. See Table 2.37 for more details on Shoreway operational costs associated with this project.	<ul style="list-style-type: none"> Minimal new funding needed given existing funds available in Shoreway remediation fund Net collection ops. cost savings of \$0.99M/year starting in 2021. Approximately 20%-23% reduction in greenhouse gas emissions Eliminates future potential groundwater contamination at Shoreway from fueling operations 	<ul style="list-style-type: none"> CNG dispensing system may impact collection vehicle parking capacity 	<ul style="list-style-type: none"> Need to negotiate CNG fueling system financing and supply agreement. Need to implement Shoreway site improvements Complex project management to phase in new CNG system and closeout old USTs 	<ul style="list-style-type: none"> Closeout of old diesel system, installation of new AST diesel system for SBR and installation of new CNG system in six-nine month period in 2019 Recology purchase and delivery of new CNG collection vehicles in late 2020
Other Shoreway Infrastructure Improvements Improvements include improved paving and other enhancements promoting energy conservation.	Paving cost estimated at \$2.0M . \$45,000 LED lighting retrofit in FY1415 and \$274,000 in FY1516.	N/A	N/A	N/A	Remove and replace 4 acres asphalt Install new LED high-bay lighting in all Shoreway buildings	<ul style="list-style-type: none"> Extend life of Recology operations area Power cost savings after 1.3 year payback period for LED lighting installation Improved interior lighting for safer environment 	<ul style="list-style-type: none"> Cost of paving Capital cost of lighting 	N/A	<ul style="list-style-type: none"> Need for paving work based on failure rate of existing paving – estimated 2-4 years LED lighting pilot in FY1415 and full Shoreway lighting replacement in FY1516
Environmental Education Center and Tour Program Enhancements Conduct stakeholder engagement process with local educators to identify which environmental education programs best complement existing efforts.	\$25,000 in one-time costs to be included in the FY1516 budget	Residential and commercial recyclables and organics	No	No	No	<ul style="list-style-type: none"> Complements existing RethinkWaste recycling outreach efforts to residents and businesses Engages local educators to identify synergies to maximize effectiveness of new programs 	<ul style="list-style-type: none"> Potential future costs associated with new programs 	<ul style="list-style-type: none"> Need to identify key stakeholders and complete research and engagement tasks 	<ul style="list-style-type: none"> April 2016 staff prepares final report and recommendation to Board for potential inclusion in FY1617 budget

1. Collection Programs and Policies

a. CNG Fleet Conversion

Goals

Franchised collection service provider to rollout on January 1, 2021 a new collection fleet run CNG so as to reduce operational costs (namely fuel cost savings vs. diesel) and realize associated reductions in greenhouse gas emissions. This collection operations improvement project supports multiple LRP Guiding Principles including:

- Reduce collection fleet emissions
- Provide cost-effective and efficient programs
- Invest in new, safe technologies and processes for infrastructure



Overview

Staff worked closely with Recology to prepare a financial analysis of this fleet conversion to CNG fuel effective January 1, 2021. Based on an analysis of a capital and depreciation schedule assuming replacement of 127 collection vehicles (for 120 collection routes), and a comparison of current CNG fuel price vs. diesel fuel price the following was determined:

- Incremental change in truck capital of \$5.136 million resulting in annual increase in depreciation of **\$570,717**.
- 10-year annual average interest expense associated with new capital of **\$95,862**. Vehicle purchase financed by Recology at an assumed interest rate of 3.5%.
- Annual fuel savings of **\$1,556,100** million based on assumed CNG fuel price of \$1.80 per gallon vs. a diesel price of \$3.48 per gallon. The \$1.80 per gallon figure includes assumed finance charges associated with a 3rd party vendor purchasing, installing and maintaining the CNG fuel supply system.
- Reduced operating ratio (profit) to Recology on lower annual operating expense of \$103,438
- **Net savings per year of \$992,960 or \$9,929,600 over ten years.**

A review of historical CNG and diesel fuel prices shows that the actual projected fuel savings could be significantly higher than assumed above. The historical price trends over the last eight years indicate that CNG prices on average changed 4.5% below diesel prices; this means the “spread” between the prices we have assumed above (CNG at \$1.80/gallon vs. \$3.48/gallon for diesel) would be 4.5% greater. Assuming a 2% greater spread scenario and the 4.5% spread scenario, the ten year savings could be from \$16.4 million to \$24.0 million. It should be noted, though, that in 2014, CNG rose 3% higher than diesel and 1.3% higher in 2013. To understand the price spread risk, this project would break even if diesel prices declined 4% per year and CNG prices increased 4.5% per year over the next ten years. This scenario is highly unlikely.

In addition to the cost benefits, conversion to CNG includes environmental benefits through reduced emissions. CNG is estimated to produce approximately 20%-23% less carbon dioxide (CO₂) emissions than diesel. Based on calculations provided by Recology, there would be a 909 kg/gasoline gallon equivalent (gge) reduction in CO₂ annually per collection route if converted to CNG, for a total of 109,134 kg/gge reduction annually for all 120 routes. These reductions equal removing approximately 38 passenger vehicles off the road annually. In addition, CNG trucks have been found to average 10 decibels quieter than diesel engines.

Please see **Section 2.B.2.e** (page 90) for a full description on the required infrastructure improvements at Shoreway to support this project. In order to support the installation of a CNG fuel supply system, the SBWMA will be required to make site improvements including removal of the existing diesel storage (underground storage tanks) and dispensing system, installation of an aboveground diesel storage and dispensing system (for SBR transfer trailer fleet), electrical and gas connections from the CNG system to PG&E utility lines, Maintenance Shop upgrades, piping to fuel dispensers, etc.

b. SFD Split-Body Collection Vehicle Pilot Project

Goals

Recology has proposed to implement a pilot project to determine whether the use of split-body collection vehicles would provide routing efficiencies and other benefits to the residential sector. It is anticipated that the results of this pilot project, if deemed favorable, would be included by the company in an extension proposal to the Franchise Agreements in 2017. (The Franchise Agreements with Recology will expire in 2020, and these agreements provide a deadline by the end of 2017 for both Recology and the Member Agencies to make a decision regarding extending the current contracts or putting the services out to bid.)



This program expansion option supports multiple LRP Guiding Principles including:

- Ensure that program initiatives are convenient, accessible and appropriate
- Produce cost-effective and efficient programs

Overview

This option proposed by Recology involves conducting an eight-week pilot program to test split-body collection vehicles to co-collect garbage and recycling from residential customers in order to measure the potential operational savings, benefits and drawbacks. Recology is currently using single-compartment collection vehicles throughout the RethinkWaste service area, resulting in three different trucks to service a home (i.e., recycling, composting and garbage). While this collection approach does provide for larger route sizes (more homes collected per route than can be accomplished with a split-body vehicle) and less trips to unload at the Shoreway Environmental Center, it has resulted in some complaints to Recology about the number of vehicles driving through residential neighborhoods.

The pilot would be divided into two four-week periods between September and November 2015. Recology has proposed leasing four split-body vehicles (three route vehicles and one spare) with a 60:40 split ratio to collect both recycling (60%) and garbage (40%) to replace four total routes during the pilot – two single-body recycle and two single-body garbage routes during each period of the pilot. Thus, three split-body trucks will replace four single-body trucks. Recology has identified two routes in Menlo Park for the first four-week pilot covering approximately 8,330 homes per week, and another two routes servicing Burlingame and San Mateo County's franchised area for approximately 7,950 homes for the second pilot period.

As new split-body vehicles are not currently available for leasing from the truck manufacturer, Recology will use semi-automated split-body vehicles currently in use at other Recology companies. The leased split-body vehicles will not have Recology's local onboard GPS tracking system, Routeware, thus the company has proposed hiring three temporary employees to ride along on the pilot routes to document the data needed for the pilot. The data collected will include the number of customers per route, number of set-outs by commodity (recycling and/or garbage), on-route time, unloading time, and tons delivered by commodity and by load. RethinkWaste will take the lead in education and outreach by notifying customers in the selected pilot routes through bill inserts, cart hangers/tags, robocalls and truck signs.

Recology is anticipating a potential increase in the number of customer calls during the pilot as their normal service time may change. As such, Recology will be contacting the Member Agencies in the pilot to request that certain liquidated damages related to the call center be waived during the pilot.

Recology is currently using split-body vehicles to service residential customers in San Francisco, San Bruno, Vacaville, Vallejo and Gilroy. Possible benefits include routing efficiency from reduced time to service each home, reduced number of vehicles on streets on service days from three to two vehicles, lessening road impacts, reduced greenhouse gas emissions, and reduced operational costs. Potential negative impacts could include non-optimal payload capacities requiring additional trips to Shoreway when one compartment fills before the other and increased unloading times at Shoreway as vehicles will be required to weigh in and out twice per load. In addition, the split-body vehicles may not be suitable for all of the jurisdictions in the service area, which may result in a net zero effect to the current number of routes. The cost allocation to Member Agencies would also need to be revisited if the program is rolled out service area wide as the garbage and recycle collection times would be identical.

The budget pilot project would include \$71,813 in one-time costs to be included in the Recology's 2016 compensation application and the SBWMA's FY1516 budget as follows:

- \$55,422 pilot program cost to Recology, including vehicle lease and hiring of temporary employees
- \$16,391 RethinkWaste additional public education expense

Please refer to **Attachment A** for Recology's pilot proposal and cost breakdown.

c. SFD Every Other Week Garbage Collection Pilot Project

Goals

RethinkWaste is proposing to implement an every other week (EOW) residential garbage collection pilot project to cost-effectively gather information and data on collection operations, participation rates, outreach strategies, and customer perceptions related to EOW residential garbage collection service. While this service is not commonly provided in North America, many jurisdictions in the U.S. and Canada have successfully implemented this service and realized cost savings, increased diversion and reduced the greenhouse gas emissions impact of providing typical residential collection services.



Implementation of this pilot project, which could eventually be extended and expanded to other Member Agencies, supports several LRP Guiding Principles including:

- Support local, state and national mandates, including meeting the State's 75% recycling goal by 2020
- Provide cost-effective and efficient programs
- Increase and maximize participation in programs and services to reduce, reuse, recycle and compost waste
- Promote behavior change through public education
- Provide incentives to participate in programs where feasible

Overview

EOW residential garbage collection refers specifically to biweekly residential garbage collection and weekly recycling and compost collection. A pilot project will be designed to offer this service to 2 routes or approximately 8,200 households over a 3 month period (for each route). The routes will be selected to test a wide range of variables related to providing collection services in an effort to obtain data that can be applied to the entire service area. RethinkWaste will work closely with Recology in selecting the routes, obtaining the necessary approvals from the targeted communities and in final design of the pilot project. It is important to note that RethinkWaste has discussed this pilot project at length with Recology and they do not anticipate operational impacts that would increase collection expense during the pilot. The cost of the pilot will be primarily related to public education and outreach, subsidizing a nominal discount to customers who subscribe to participate, data collection and related administrative expenses.

Regulatory Considerations

A primary challenge that will need to be addressed to implement an EOW collection pilot is regulatory related. In 2011, RethinkWaste explored conducting an EOW collection pilot and requested authorization from the local enforcement agency (LEA), the San Mateo County Department of Environmental Health. The LEA, noted at that time that there were factors that precluded their approval of a pilot program. The LEA specifically cited State law that requires that "...refuse, except for inert materials, shall not remain on any premises for more than seven days."¹ This determination effectively precluded implementation of the EOW residential garbage collection pilot which the City of San Carlos had agreed to explore. Since the majority of "refuse" that concerned

¹California Code of Regulations (CCR) Title 14, Chapter 3, Section 17331. Frequency of Refuse Removal.

the LEA consisted of food scraps, which would still be collected weekly in the green compost cart, the primary concerns was related to used diapers and pet waste which are not targeted for composting.

However, since 2011, the City of San Francisco², through the services of Recology, have successfully implemented a program which mandated that diapers and pet waste be placed in the garbage container and collected weekly, preventing households that produce this waste from participating in the pilot. The RethinkWaste pilot project will be designed to take this approach and perhaps other approaches that would mitigate the operational inefficiency (and limit the potential associated cost savings) of requiring collection weekly if these materials are generated. For example, options cited for managing diapers and pet wastes by other communities which have implemented EOW collection include:

- Offering a diaper tag program which allows families with children of diaper age to receive an annual allotment of complimentary diaper tags to be placed on a clear bag of diapers and collected curbside;
- Providing vouchers to residents to dispose of diapers and pet waste at Shoreway for free;
- Encouraging the use of reusable/cloth diapers;
- Encouraging the practice of flushing human and dog waste;
- Bagging pet waste and diapers using an approved type of bag (compostable vs non-compostable);
- Encouraging the use of a pet waste collection service;
- Bagging garbage and storing it in a container with a tight fitting lid to prevent access by vectors;
- Encouraging that containers be stored in a cool place, out of direct sunlight; and
- Using an odor neutralizer (e.g., baking soda, clothes dryer sheets, air fresheners, including activated carbon products and a few drops of perfume).

While several jurisdictions surveyed reported public health/quality of life issues due to EOW collection, some jurisdictions, including Bellingham, Olympia, Renton, Yakima, and Tacoma, Washington did not report an increase in public health issues as compared to weekly garbage collection.

Examples of Other Communities

Our research identified more than 30 jurisdictions that have implemented full-scale EOW collection programs in the U.S. and Canada, with Olympia, Washington being the first to implement EOW collection in 1998. Other jurisdictions that are currently conducting pilot programs include the City of San Francisco and the City of Yakima, Washington, while other California cities, including Berkeley and Santa Monica are considering EOW residential garbage collection.

Implementation of EOW residential garbage collection is a relatively new concept in North America; however, it is widespread in the United Kingdom.³ Twelve years ago only 13 local jurisdictions in the United Kingdom provided EOW garbage collection; however, presently 299 out of 406 local authorities (74%) have introduced

²The City of San Francisco's EOW pilot program (Pay Per Setout Service) allows residents to opt out of trash pickup each week although residents are required to have at least one trash pickup per month. For each week an account does not put out their black trash bin they receive a 10 percent discount off their trash bill. To participate in the "Pay Per Setout Service" residents must place all food scraps, soiled paper and yard trimmings in their green compost bin. Accounts that generate disposable diapers and pet waste must place that material in the black trash bin and have it collected weekly (i.e., they cannot participate in the EOW collection program).

³The United Kingdom of Great Britain is comprised of the island of Great Britain the north-eastern part of the island of Ireland (Northern Ireland), and many smaller islands.

alternatives to weekly garbage collection, including 100% of those in Wales and Northern Ireland and 84% in Scotland.⁴

While EOW collection has been implemented in numerous jurisdictions in North America, and is being actively considered by others, some jurisdictions have decided not to pursue EOW, perhaps most notably Seattle. The City of Seattle implemented a six-month EOW pilot program in 2012 covering 800 accounts. A post pilot survey found that approximately one third of the participants opposed City-wide implementation of the program due to odor, increased scavenger sightings, and increased street litter due to overflowing containers. As a result, Seattle decided not to implement EOW collection.

Contamination Issues

As discussed in **Appendix B**, RethinkWaste has placed a high priority on minimizing contamination of recycling and organics collection to increase diversion and maximize commodity revenue. If residents are provided an incentive to reduce the frequency of garbage collection, it is possible that contamination of the recycling and compost containers may result. Jurisdictions which have implemented an EOW program and have experienced this problem, include Portland, OR, Seattle, WA, Surrey, BC, and Durham, Ontario.

As part of the pilot project, RethinkWaste will conduct a pre-project baseline contamination sampling survey and monitor this aspect of the program frequently. In addition, RethinkWaste will also be testing the correlation of various public education and outreach strategies with several aspects of participation, including but not limited to the impact on contamination of the recycling and compost set-outs.

Benefits

Benefits associated with EOW collection that have been cited include the following:

- Increased diversion;
- Reduced costs; and
- Reduced truck traffic and greenhouse gas emissions.

In addition to greenhouse gas emission reductions, reductions in other vehicle emissions impacting air quality and public health would also result, including reduced generation of particulates contributing to smog.

Increased Diversion

As discussed in **Appendix B**, residential recycling rates across the RethinkWaste service area have effectively been flat for the past 3 years. While residents are diverting a significant portion of the targeted materials, the majority of the waste stream is comprised of material that may be diverted through the existing residential recycling and compost services. The potential for increased diversion associated with EOW collection is a significant reason for RethinkWaste to consider this pilot project.

In general, EOW residential garbage collection appears to incentivize recycling and composting, and helps increase recycling awareness. Experience in the United Kingdom has shown that EOW collection results in an increase in both participation in recycling and set-out rates for recycling containers. The Daventry District Council (England) experienced a 45% increase in recyclables collected when they switched to EOW residential garbage collection. Experience also suggests that rather than doubling the amount of garbage per set-out every

⁴Alternate Weekly Waste Collections Work, David Riggle, BioCycle Magazine July 2013.

other week versus weekly, it is more likely to be 1.5 times the weight, due to the reduced capacity for garbage and increased diversion of materials.⁵

Table 2.6 below provides a summary of reported changes in disposal rates and diversion tonnages for various jurisdictions in North America that have implemented EOW residential garbage collection. As shown, in all cases the jurisdictions reported decreases in disposal and increases in diversion, although as noted, the implementation of EOW residential garbage collection was often done in conjunction with other program changes (e.g., adding collection of organics, increasing organics collection to weekly service), which does not enable the diversion impact specific to EOW collection to be quantified. However, those jurisdictions where the only reported change to the collection program was the implementation of EOW collection (Seattle, WA; North Vancouver, British Columbia, and York, Ontario), all reported an associated decrease in disposal and increased diversion. This finding was supported by a survey of municipalities across North America conducted by the City of Ottawa that found that, in general, **those jurisdictions with EOW collection of garbage and weekly collection of compost have a significantly higher diversion rate than those jurisdictions with weekly collection of garbage.**

Table 2.6: EOW Residential Garbage Collection Disposal and Diversion Impacts

Jurisdiction	Population	Program Phase	Disposal Change	Recycling Change	Organics Change	Diversion Change	Notes
USA							
Portland, OR	609,456	Active	-44%		+24%		Implemented w/ weekly organics and recyclables collection.
Renton, WA	97,003	Active	-18%	+27%	+44%		Implemented w/ updated recycling program and compost program.
Seattle, WA	652,405	Pilot	-15%	+13%		+1.3%	Biweekly garbage alone.
Canada							
Durham, ON	561,258	Active	-10%	-15%	+6%	+27%	Implemented w/ with organics collection - Phase 1, 4/8 jurisdictions. Has PAYT.
Halton, ON	501,669	Active				+4%	Implemented w/ region-wide Green Cart program. Has PAYT.
Ottawa, ON	883,391	Active			+25%	+9%	Implemented w/ organics collection increased to weekly.
Peel, ON	1,296,814	Pilot	-13%	+4%	+9%	+5%	Pilot results, currently being evaluated. Has PAYT.
Port Coquitlam, BC	150,000	Active			+6%	+10%	Implemented w/ increased organics collection frequency seasonally.
Surrey, BC	394,980	Active	-43%	+81%	+6%	+18%	Implemented w/ with organics collection.
Vancouver, BC	578,040	Active	-39%	+10%	+2000%		Implemented w/ organics collection increased to weekly.
York, ON	1,032,524	Active				+6%	Biweekly garbage alone.
average			-26%	+20%	+17%	+10%	"Organics Change" does not include Vancouver, BC
median			-18%	+12%	+9%	+8%	

As shown in **Table 2.6**, several jurisdictions reported diversion that ranged from 1.3% for Seattle’s pilot program to 27% for Durham, Ontario. For purposes of developing planning level projections of the potential diversion that RethinkWaste might achieve with EOW collection we would therefore suggest using relatively conservative planning level estimates as compared to the figures reported in **Table 2.6**.

Table 2.7 on the following page provides an analysis of the additional tons that would result from the implementation of EOW residential garbage collection by RethinkWaste based on various assumed increases

⁵WRAP Final Report; Alternate weekly collections guidance, July 2007 (page 20 Section 2.6.1 and 2.6.2).

in the residential diversion rate. As an example, if the implementation of EOW collection increased the residential diversion rate by 1%, this would equate to the diversion of an additional 1,736 tons, and increase the system-wide diversion rate by 0.5%. Similarly, if the implementation of EOW collection increased the residential diversion rate by 10%, this would equate to the diversion of an additional 17,360 tons, and increase the system-wide diversion rate by more than 5% to 53.9%.

The greatest potential for cost savings and a potential increase in diversion is associated with the assumption that this program would be implemented system-wide.

The cost savings would be realized through re-routing and reducing the number of collection vehicles. Thus, a system-wide roll-out of this service would likely not transpire until expiration of the current Recology Franchise Agreements in 2020. Implementation of an EOW program in the short term for all or part of the service area may result in underutilized assets (i.e., idle vehicles which depreciation expense is still owed) and would require re-routing, which to gain maximize cost effectiveness, would require a service-area wide roll-out.

Table 2.7: Projected Diversion Impact of Implementing EOW Collection in RethinkWaste’s Service Area (Based on 2014)

Assumed Increase in Residential Diversion Percentage	Additional Tons Diverted	Residential Diversion Rate	Total Increase in System-Wide Diversion Rate	System-Wide Diversion Rate
0%	--	66.5%	--	48.9%
1%	1,736	67.5%	0.5%	49.4%
2%	3,472	68.5%	1.0%	49.9%
5%	8,680	71.5%	2.5%	51.4%
10%	17,360	76.4%	5.0%	53.9%

Reduced Costs

EOW garbage collection may result in reduced costs due to:

- Increased collection efficiency and fewer solid waste routes with associated labor, capital and operating and maintenance cost savings;
- Reduced disposal expense due to less generation of garbage; and
- Increased commodity revenue due to increase in collection of recyclable materials.

Mitigating Factors:

- The reduced costs may be limited by an increase in collection costs associated with more recycling and composting routes.
- Higher compost expense may be accrued if participation in compost collection increases, since compost is more expensive than disposal.
- The initial implementation of the program will require an investment in public education, although this outreach would likely supplant other outreach efforts.

Our research suggests that EOW collection, without a weekly option, might result in a total net residential solid waste system savings on the order of perhaps 10-20%. If an option for weekly collection of diapers, pet waste and/or other materials is required, the potential for cost savings may be reduced. While some level of cost

savings would be expected, the potential for increased diversion is perhaps the most significant resulting benefit.

Table 2.8 illustrates identified cost impacts associated with EOW residential garbage collection reported by a number of jurisdictions.

Table 2.8: EOW Residential Garbage Collection Cost Savings

Jurisdiction	Population	Program Phase	Cost Savings	Other
USA				
Berkeley, CA	116,768	Planning Level Projection	\$469,000/yr	Estimated if biweekly garbage collection is implemented.
Portland, OR	609,456	Active	Offset	Stable rates due to reduced solid waste fees and increased food composting fees.
Renton, WA	97,003	Active		Increase in customer rates due to organics processing.
Seattle, WA	652,405	Pilot	\$6.4 million/yr. (Based on Pilot Program results)	30% total cost reduction. 30% reduction in truck traffic. 15% reduction in hauling emissions.
Tacoma, WA	203,446	Active	\$1 million/yr	44% reduction in Fuel Costs ~ \$163,000. 20% reduction in CO ₂ Emissions.
Canada				
Guelph, ON	114,940	Active	\$1.5-2.8 million/yr	Includes moving to a cart system.
Ottawa, ON	883,391	Active	\$9 million/yr	Net annual collection savings.
Peel, ON	1,296,814	Pilot	\$5-7 million/yr (Based on Pilot Program results)	Net annual collection savings, without implementation costs.
Toronto, ON	2,503,000	Active	\$343,000	Savings after one year of implementation in 2002.

Reduced Truck Traffic and Greenhouse Gas Emissions

EOW garbage would be expected to result in reduced greenhouse gas emissions due to:

- Reduced collection vehicles and associated fuel consumption and associated emissions; and
- Reduced methane from organics decomposition at landfill.

The Seattle PUC estimated that EOW pickups should reduce garbage truck traffic by an estimated 30 percent, resulting in a 15 percent drop in trash hauling emissions. The City of Tacoma reported a 20 percent reduction in CO₂ emissions.

Pilot Program Budget

As stated above, the costs associated with this pilot project are primarily related to public education and outreach, subsidizing a nominal discount to customers who subscribe to participate, data collection and related administrative expenses. We do not anticipate disrupting the collection services provided by Recology which would otherwise result in increased operational costs.

Table 2.9: EOW Pilot Budget

<u>Expense Item</u>	<u>Amount</u>
Public Education and Outreach	\$25,000
Discount to Customers (4,100 customers; \$2.00/month discount for 3 months)*	\$49,200
Contamination Sampling	\$15,000
Customer Surveys	\$5,000
Data Management and Administrative Expense	\$15,000
Total Budget	\$119,200

**Assumes full participation which is not anticipated. The discount will only be provided to eligible customers that subscribe to the service during pilot.*

Rate Structure Considerations

The Member Agencies rates are by and large publicized as the “solid waste rate.” However, the rate actually covers the full cost of collection services which includes recycling, composting, twice annual bulky items collection, initial overages, etc.; as well as the processing of recyclables and compost, operation of the Shoreway Environmental Center, Recology’s customer service call center, public education and outreach, etc. If residents are offered EOW garbage collection services, it is likely that they will expect a 50% reduction in cost commensurate with the less frequent service, given the terminology associated with what they are paying for (i.e., the “solid waste rate”). However, as discussed above EOW garbage collection service equates to one fewer truck trip of six every two weeks; thus, reducing on-route vehicle time by 1/6 or 17%, not 50%.

Implementation of a wide-scale EOW program will likely require restructuring rates to shift the paradigm of how the cost of collection services are paid for. This is basically a shift in terminology as currently the Member Agencies associate the cost to ratepayers as their “solid waste rate.” However, the rates charged ratepayers do not just cover the cost to collect “solid waste,” but rather the full cost of collection services and this change in messaging and adjustment to public perceptions will need to be addressed to avoid confusion and ensure clarity of messaging and transparency.

As mentioned prior, the LRP is not intended to address issues with the current rate structure; however, this is a critical challenge that would need to be addressed in order to implement EOW residential garbage collection service for an entire jurisdiction or to the service area as a whole. This pilot project will explore customers perceptions regarding the terminology used to convey what the “solid waste rate” covers and the services offered.

d. Commercial Recycling Outreach Program Project

Goals

Through the Member Agencies Franchise Agreements with Recology, the SBWMA ratepayers fund a commercial recycling technical assistance program run by Recology which will cost \$912,362 in 2015. Recology reported a commercial sector measured diversion rate of 31% for 2014 (see **Appendix B**). Another performance measure reported by Recology is the “service level” diversion rate of 53.43%⁶. The difference between these two “diversion rates” is that the former denotes the actual percentage of recycling (which includes compost) tons collected by Recology (thus disposal is 69%) and the latter represents customer subscription levels.



RethinkWaste has developed recommendations to improve the functioning of Recology’s Commercial Recycling Outreach Program and increase diversion through the BizSMART commercial recycling and composting collection services. While Recology has increased commercial recycling each year, the company has previously indicated that reporting requirements in the Franchise Agreements for this program are onerous and can be streamlined; unfortunately staff has not received specific feedback on what Recology would like to change in the reports. With this in mind, staff and its consultant R3 took the initiative to try and improve the reports so they are more useful and can be better used by Recology to track progress against specific diversion related metrics.

Staff believes the components of this project, improved reporting and enhanced outreach, are critical pieces needed so Recology can meet the forecasted commercial recycling and commercial organics diversion levels found in **Tables 2.1** and **2.2A**.

Improvement of the current Recology Commercial Recycling Outreach Program supports the following LRP Guiding Principles:

- Leverage existing infrastructure
- Provide cost effective and efficient programs
- Support local, state and national mandates, including meeting the State’s 75% recycling goal by 2020
- Increase and maximize participation in programs and services to reduce, reuse, recycle and compost waste
- Promote behavior change through public education

Overview

In reviewing Recology reports and the waste composition data collected by RethinkWaste, the following observations can be shared:

- Approximately 60% of garbage that is sent to landfills by Recology commercial and multi-family customers could be diverted by existing source separation programs;

⁶The “service level” diversion rate is the ratio of collection containers in service for recycling and organics to garbage. Thus, 53% means a little more than ½ of all collection service is for recycling and compost, and a little less than ½ is for garbage.

- Approximately half of targeted recyclables generated by these customers are collected for recycling (for a capture rate of around 50%), yet virtually 100% of commercial and multi-family customers subscribe to recycling collection service so customer participation rates are lagging; and
- Approximately one-third of materials landfilled by commercial and multi-family customers are targeted organics, and levels of subscription in organics collection programs remains low (12-15%).

Recology Commercial Recycling Outreach Program Franchise Agreement Requirements

RethinkWaste and Recology have dedicated a considerable amount of resources to outreach and public education for purposes of increasing the diversion of materials from the commercial and multi-family sectors. Section 7.04.A (Commercial Recycling Promotion Staff) of the Recology Franchise Agreement(s) state:

- *Contractor shall maintain a Commercial Recycling promotion program staff that will be primarily responsible for supporting Commercial and Multi-Family Dwelling Accounts and Agency Facilities Recycling-related Collection services. The Commercial Recycling promotion staff for the SBWMA Service Area shall consist of a minimum of the following full-time staff: eight (8) "sales" representatives (recycling coordinators), two (2) diversion auditors and one (1) supervisor (commercial recycling manager) as specified in Attachment O.*

Note: Per improvements (i.e., amendments) to the Franchise Agreements negotiated in 2012/2013 that resulted in cost savings for both Recology and the SBWMA, the headcount for the Commercial Recycling Outreach Program was reduced from 11 to 9 by eliminating the diversion auditor positions. The direct labor cost associated with Recology's Commercial Recycling Outreach Program Staff for 2014 was \$895,393 (2015 is \$912,362).

Section 7.04.E states that:

- *Contractor shall provide full on-site waste assessments and technical assistance to, at a minimum, one-hundred (100) of the Agency's largest Commercial Generators (based on weekly Solid Waste generation) annually to assist in maximizing diversion. For all other Commercial Generators, Contractor shall provide technical assistance as needed or requested and visual on-site Collection Container assessments at least once every three (3) years. Contractor shall document the site assessments, the date of the assessment, the Person contracted, the Solid Waste, Source Separated or Targeted Recyclable Materials, and Organic Materials service levels at the time of the assessment, and recommended changes to service level(s). Contractor shall submit results of site assessments monthly, or upon request, provide copies of assessment data and recommendations for individual site assessments.*

Note: Per the contract amendments mentioned above, the total number of on-site waste assessments which Recology is obligated to perform was reduced from 1,061 to 796.

Section 7.05.A.1 requires Recology to:

Provide on-site assessments to all Multi-Family Residential Complexes containing twenty (20) or more residential units once every three years (Section 7.05.A.1). Therefore, all commercial accounts and all multi-family accounts with 20 or more residential units should have been audited at least once at this point of the term of the agreement which commenced on January 1, 2011, and at least two more times before the end of the current term in 2020.

Prioritizing Recology Commercial Outreach Efforts and Resources

Increasing diversion through the BizSMART commercial and multi-family recycling and compost collection services will result from increasing the number of accounts that subscribe to service for each program (Subscription Compliance) and increasing the capture rate of targeted materials by accounts subscribed to each service (Participation Compliance). To support increasing Subscription Compliance and Participation Compliance there are two basic initial pieces of information that should be tracked and reported:

1. Subscription Compliance: How many and which targeted businesses are and are not subscribed to the commercial recycling and commercial organics programs?
2. Participation Compliance: Of those businesses that are Subscription Compliant, what is their level of participation or what percentage of their waste stream is comprised of targeted materials (i.e., both recycling and compost)?

Recology currently tracks and reports overall Subscription Compliance rates by Member Agency⁷ and by individual accounts.⁸ Recology also tracks and reports the results of the required waste assessments.⁹ This information includes estimates of the percentage of disposal comprised of targeted recyclables and organics based on one-time visual observations conducted at the time of the audits, essentially a Participation Compliance snapshot. However, it has not been determined what effort would be needed to combine the pertinent data (i.e., subscription and participation information) into a single report, which would be the most useful way to collect and maintain this data.

Having a list of all accounts that conveniently identifies Subscription Compliance status and Participation Compliance (i.e., the percentage of recyclables and organics in the waste stream) would be extremely useful for purposes of prioritizing efforts to increase diversion and to subsequently establish diversion goals for accounts. Incorporating these two elements into one report (a Commercial Subscription and Participation Compliance Status Report), would facilitate establishing diversion goals and additionally greatly support the ultimate goal of increasing diversion from the commercial and multi-family waste streams. Ideally that report would include each account's business type's designation and would enable the data to be sorted based on the percentage of recyclables and/or organics in each account's waste stream.

Attachment B (Example - Commercial Subscription and Participation Compliance Report) provides an example of the type of individual account information envisioned for the Commercial Subscription and Participation Compliance Status Report. RethinkWaste anticipates using a Commercial Subscription and Participation Compliance Report database as follows to focus and prioritize Recology's outreach efforts and resources:

Commercial Recycling

- Sort the database by total weekly recycling service level and identify those accounts that are not Subscription Compliant with the commercial and multi-family recycling program and target those businesses for subscription to the recycling program;
- Sort the percentage of recyclables in the "MSW" (i.e., garbage) column (Total Weekly MSW x RCY) from largest to smallest. The accounts with the largest percentages are currently disposing the greatest volume of recyclables and should be prioritized for outreach to increase Participation Compliance.

⁷Recology Quarterly Report worksheet source files provided to RethinkWaste - tab "M7a. Acct Summary Subscription."

⁸Recology Quarterly Report worksheet source files provided to RethinkWaste - tab "M10a. Top 100 MSW Gen Diversion."

⁹Recology Quarterly Report worksheet source files provided to RethinkWaste - tab "M4a. On-site Assmnts Vis Audits."

Commercial Organics

- Sort the database by business type and then by total weekly organics service level. Identify all those accounts in “Food Services/Groceries”: that are not Subscription Compliant and target those businesses for subscription to the organics program;
- Sort the percentage of organics in the MSW waste stream (Total Weekly MSW x ORG) from largest to smallest. The accounts with the largest percentages are disposing the greatest volume of organics and should be prioritized for outreach to increase Participation Compliance.

Table 2.10 below provides a comparison of how a Commercial Subscription and Participation Compliance Status Report can be used to assist with setting commercial outreach priorities and tracking and quantifying progress.

Staff also can supplement these reports through utilizing existing contractual tools, namely the Franchise Agreement provisions 7.06 and 7.07, waste generation/characterization studies and program monitoring respectively, to further track and quantify progress towards Subscription and Participation compliance.

Table 2.10: Commercial Outreach Setting Priorities and Tracking and Quantifying Progress

Objectives	Current Method	Enhanced Method
Setting Priorities	Staff meets with representatives from each Member Agency annually to identify specific businesses to target for onsite waste assessments and also develops additional internal annual commercial outreach goals and objectives.	Use Commercial Subscription and Participation Compliance Status Report as basis for setting initial priorities for each Member Agency within each of the following four areas: (1) Increase commercial recycling program Subscription Compliance (2) Increase commercial recycling program Participation Compliance (3) Increase commercial organics program Subscription Compliance (4) Increase commercial organics program Participation Compliance Meet with representatives from each Member Agency annually and revise above priorities.
Tracking and Quantifying Progress	Limited use of metrics and tracking specific progress related to increasing commercial recycling program and commercial organics program Subscription and Participation Compliance.	Commercial Subscription and Participation Compliance Status Report can be used to track and report: (1) Percentage of commercial accounts that are Subscription Compliant with commercial recycling and organics programs; and (2) Percentage of total commercial waste stream comprised of recyclable materials and organic materials

The metrics driven approach envisioned by RethinkWaste will facilitate Recology focusing its Commercial Recycling Outreach Program staff resources dedicated to the commercial and multi-family sector to specifically:

- Increase commercial and multi-family organic program Subscription Compliance;
- Increase commercial and multi-family recycling program Participation Compliance; and
- Establish metrics driven diversion goals for commercial account types and specific businesses.

Prioritizing the above three objectives will assist Recology with:

- Identifying commercial recycling Subscription Compliant accounts that have the highest percentage of recyclable materials in their waste stream and targeting those accounts for increased Participation Compliance; and
- Efforts to increase organic program Subscription Compliance focus on identifying which commercial businesses with business type designations of: Food Service/Groceries; Hotels; and Education, are not Subscription Compliant and targeting those accounts for compliance.

Rationale for Program Improvements

While RethinkWaste has a mature commercial and multi-family recycling program, 27% of the landfilled commercial tons are comprised of materials targeted by the commercial recycling program. The majority of those tons are comprised of mixed paper (i.e., 64%). However, as shown in **Table 2.11** below, there is virtually 100% Subscription Compliance for the commercial recycling program within both the commercial and multi-family sectors. As such, the opportunity to maximize diversion through increasing subscription levels appears to be largely realized. Any additional increases in the diversion of targeted recyclable materials from the commercial and multi-family waste streams will therefore be largely dictated by the ability of RethinkWaste and Recology to increase Participation Compliance. This simply put means to collect more recycling from the accounts which Recology provides collection service.

Table 2.11: Commercial and Multi-Family Subscription Compliance Percentages

Sector	Subscription Compliance Rates		
	Solid Waste	Recycling	Organics
Commercial	100%	99%	15%
Multi-Family	100%	98%	12%

Source: Recology San Mateo County

This project with Recology will focus in-part on providing answers to the following questions and to institutionalize the key takeaways that are learned in answering and documenting the data associated with answering these questions:

1. Which specific businesses are not Subscription Compliant?
2. Of those businesses that are not Subscription Compliant which are non-compliant by choice (i.e., do not wish to participate) and which are non-compliant due to factors beyond their control (e.g., space limitations)?
3. Of those businesses that are Subscription Compliant:
 - a. Which have Participation Compliance information (i.e., visual waste composition data from waste audits)?
 - b. Can a report be generated that lists the waste composition data for: (1) each of the top 100 commercial accounts; and (2) all commercial accounts, ideally by business type, so that:
 - i. Those accounts that have not received waste audits or for which waste composition data is not available can be identified, and future audits planned; and
 - ii. Those accounts that have the greatest percentage of recyclables and/or organics in the waste stream can be identified and targeted.
 - c. Are there programmatic changes that can be made to increase Participation Compliance?

- d. Is there additional outreach, public education or technical support that can be provided to increase Participation Compliance?
- e. What specific next steps should RethinkWaste and Recology take to increase BizSMART commercial recycling program Participation Compliance?
- f. What if any associated reporting should there be (content, format and frequency)?

Reporting and reports should be used as a tool. The specific information that is tracked and reported should have a clear purpose in support of overall program goals. As such, opportunities to enhance and/or streamline current reporting requirements should be identified to eliminate any unnecessary, labor intensive reporting requirements, and implement new reporting requirements that can service as effective tools for supporting future commercial and multi-family outreach efforts. In order to accomplish this, Recology's capability to generate a Commercial Subscription and Participation Compliance Status Report shall be determined. If that capability does not currently exist, the company will be requested to develop a proposal explaining what it would take to develop that capability.

In addition, to further support efforts to increase the diversion from the commercial and multi-family sectors, RethinkWaste suggest the following goals be applied to the Recology Commercial Recycling Outreach Program:

1. Develop the ability to generate a Commercial Subscription and Participation Compliance Status Report by end of 2015, with the capability to sort accounts based on the established commercial account categories (i.e., business types) and the percentage of recyclables and/or organics in the waste stream.
2. Identify accounts that are not Subscription Compliant and begin tracking whether that is by choice (i.e., do not wish to participate) or due to factors beyond their control (e.g., space limitations)?
3. Begin reporting the results of the waste assessments to enable sorting by the percentage of recyclables and/or organics in the waste stream of each account (i.e., reporting those percentages in dedicated worksheet columns).
4. Set capture rate goals for the commercial and multi-family recycling and organics programs and continue to measure progress via periodic waste composition studies.
5. In cooperation with RethinkWaste, implement a Management by Metrics (M&M) approach to the Commercial Recycling Outreach Program, where feasible, to quantify the effectiveness of specific outreach efforts in support of identifying the most effective deployment of available resources.
6. Achieve a 5% increase in the commercial recycling program Participation Compliance as measured by average tons per account diverted by the end of 2015 and 10% by the end of 2016.
7. Achieve a 100% organics Subscription Compliance for Food Services/Groceries, Hotels and Education accounts by the end of 2015.
8. Realize no more than 10 percent of readily recyclable or compostable materials landfilled by 2020 (i.e., a 90% capture rate).

To support these goals and maximize diversion through enhancing recycling participation rates and organics subscription and participation rates, RethinkWaste would suggest supplementing the existing BizSMART public education and outreach efforts with the following projects:

Recycling Ambassador Program: Multi-family continues to be a labor-intensive sector in terms of outreach needs. While the current practice of on-site visits by Recology, using buddy bags, door hangers and the

toolkits have been identified through the consultants' research as best practices, additional tools and efforts are needed to supplement the existing outreach if greater diversion rates are to be achieved.

This pilot would entail recruiting and training MFD tenants as Ambassadors for their complex, to network with their neighbors and educate them on the programs and services. They would support such tactics as a customized newsletters, posters and signage with a door-to-door element. Such programs have been proven to be successful in other communities. As an example, Toronto, Canada needed to increase recycling at its MFD complexes in order to meet a 70% diversion goal by 2010. Their outreach team trained 180 "3R Ambassadors" representing 5% of the buildings in the city. Citywide, MFD recycling rose 13%-20% in four years, and waste generation declined. In addition, results of the program showed that buildings with ambassadors saved an average of 15% on their garbage bills.

In addition, a recycling party to kick off the program, or recognition event at the end of the pilot with incentives or prizes could be used to incentivize participation.

The budget for this outreach pilot to be included in the FY1516 budget would be \$25,000-\$30,000.

Commercial Focused Outreach: To move business beyond compliance with AB 341's mandatory recycling component and simply having recycling service to truly making the most of it to maximize diversion, more touch points are needed to help businesses see value in fully embracing recycling. This outreach pilot would target those businesses identified as having the highest percentage of recyclable or organic materials in their waste stream with the aim of further building upon the relationships already formed by Recology. This effort would include a series of direct mail pieces, both in the form of official letters and brochures/postcards, updated website page with resources, toolkits, direct contact following each targeted piece, increased technical assistance and partnerships with business organizations such as chambers of commerce.

The budget for this outreach pilot to be included in the FY1516 budget would be \$25,000-\$30,000.

e. Public Spaces Recycling Pilot Project

Goals

Staff is recommending implementation of a pilot project to increase recycling in two different public space settings: a downtown shopping district area and a park. The project will test public education and promotion strategies, monitor participation, diversion, contamination and assess operational impacts and costs.

A downtown area is recommended due to the high foot traffic and associated generation of high garbage and potential recyclables. Based on the field study observations conducted during RethinkWaste's prior research¹⁰, the City of Burlingame's downtown area is a strong candidate for a potential pilot study. This site could serve as a good baseline to identify the effects of adding public space recycling containers to an area that did not previously have recycling containers.



The second setting, a park area, is selected for the pilot due to this type of setting being underserved in many Member Agencies per observations conducted during RethinkWaste's prior research. Staff will work with a Member Agency to develop and implement a park area pilot project. The pilot will fund a trailer to haul Recology carts (interior of park away from curb or street) to a central location for collection by the company. Public education and outreach strategies will be tested along with the other variables mentioned above for the downtown area. In addition, the parks and recreation staff who handle the containers at the park will be surveyed as part of the pilot project to document their experiences and lessons learned.

This pilot project supports several LRP Guiding Principles including:

- Leverage existing infrastructure
- Provide cost effective and efficient programs
- Increase and maximize participation in programs and services to reduce, reuse, recycle and compost waste
- Support local, state and national mandates, including meeting the State's 75% recycling goal by 2020
- Promote behavior change through public education
- Enhance public education to maximize participation
- JPA Member Agency facilities and the Shoreway facility to serve as models for high diversion activities
- Ensure proposed programs identify any service voids or deficiencies

Overview

RethinkWaste conducted a project with Cascadia Consulting in 2014 to explore improving public space recycling programs with the goal of increasing the amount of recyclables captured. Public space recycling generally refers to permanent recycling containers installed in open areas accessible to the public in locations such as parks, shopping centers, streetscapes, beaches, and may also include temporary recycling bins at special events. Collection from public space recycling containers offers the opportunity to capture recyclables that may otherwise be landfilled. However, public space recycling programs generally recover minimal

¹⁰RethinkWaste Public Space Recycling Best Practices and Recommendations Summary Report July 2014

quantities of lower value recyclable materials due to improperly designed or implemented programs and the challenges associated with “community” containers. Recyclables are also heavily scavenged from these containers.

The project researched successful public space recycling programs and identified recommended program implementation strategies for RethinkWaste’s twelve Member Agencies to improve recovery rates in public space recycling programs. The project entailed a literature review of public space recycling best practices and common barriers and developing case studies of successful public space recycling programs in other jurisdictions. In addition, an online survey of Member Agency staff and a field survey of existing public space recycling and garbage collection programs in RethinkWaste’s Member Agencies were also conducted.

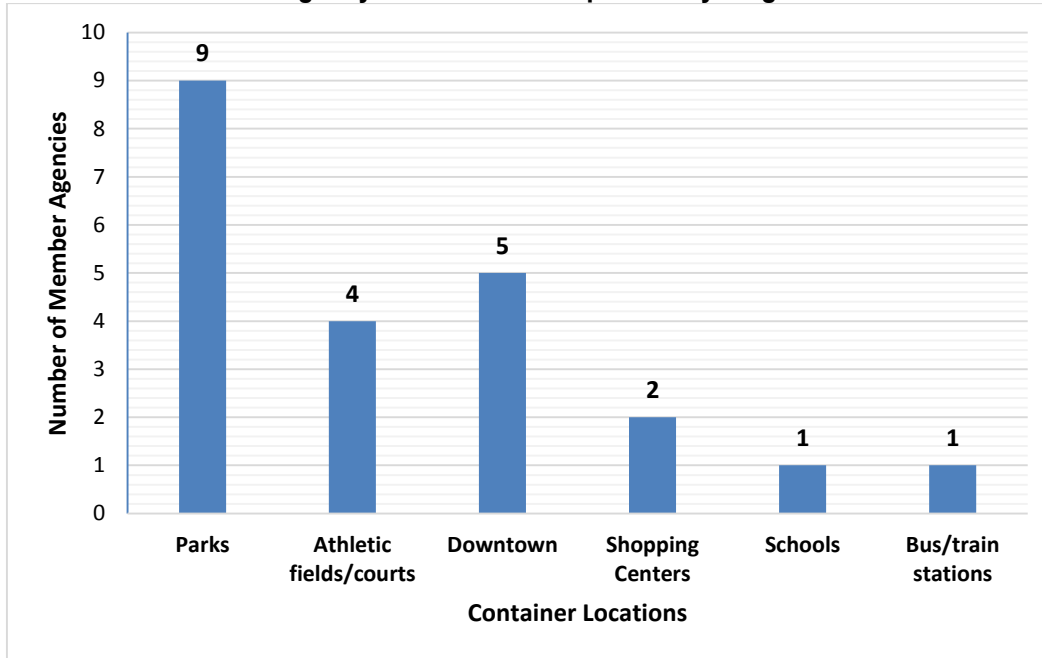
Common best practices resulting from the literature review include: locating recycling containers adjacent to garbage containers, using consistent or standardized container types and messaging (e.g., signs, text, colors), locating containers in high foot traffic areas, and involving all responsible staff in container purchasing and maintenance decisions. The project also included research and interviews to develop case studies of successful public space recycling programs in the following cities: New York City, St. Paul, Philadelphia and Seattle. The case studies identified program costs as the greatest barrier to program success and highlighted the importance of utilizing pilot studies and purchasing containers in stages rather than all at once to manage program costs.

Ten Member Agencies completed a web-based survey that was used to provide insights on current public recycling practices at each Member Agency. The field study performed in eleven Member Agencies documented current recycling infrastructure in public spaces in each Member Agency. The survey and field study results indicate that each Member Agency needs to implement the best practices identified in the literature review and case studies to successfully capture more recyclables in their public space recycling programs, particularly in the areas of container location and design, messaging and program management.

RethinkWaste Service Area-wide Findings

The results of surveying Member Agency staff are cited in **Table 2.12** on the following page and identify parks and downtown areas as the most popular and with the highest potential to increase recycling. Identifying high foot traffic areas is important to ensuring sufficient public space recycling and garbage containers to capture the recyclables and garbage that the public generates. The Member Agencies reported that container locations are most commonly selected based on: land use type, pedestrian traffic patterns, and feedback from the public and collection staff.

Table 2.12: Member Agency Current Public Space Recycling Container Locations



Responsible Departments/Divisions

Member Agencies reported that the current public space recycling programs involve coordination between multiple departments or divisions, as shown in **Table 2.13**. This division of responsibility can lead to budget and servicing issues, so regular and efficient inter-departmental coordination is important to ensure program success.

Table 2.13: Public Space Recycling Program Member Agency Responsible Departments/Divisions

Member Agency	Agency Department/Division				
	Parks	Streets	Environmental Programs	Public Works	Franchised Hauler
Atherton	P, I, S				
Belmont	P, I, S		P	P	S
County of San Mateo		I	P, S		
East Palo Alto		P, I, S			
Foster City	P, I, S		P		S
Hillsborough		I, S	P	P, I	S
Redwood City	P, I	P, I			
San Carlos	S	I	P		S
San Mateo	P, I, S	P, I, S	P, I, S		S

P=Purchase, I=Installation, S=Service/Collection

Implementation of the Pilot Project Service Area Wide

The results of the pilot project will be analyzed and used by RethinkWaste to design a system-wide program since improvements to public space recycling are needed throughout the service area. The aforementioned research conducted by RethinkWaste in-part resulted in overall recommendations for Member Agency program

design and operation (see **Table 2.14** on the next page). These recommendations are based on the literature review and case study best practice findings, and the Member Agency web and field survey findings, which demonstrated what changes the current Member Agency public space recycling programs need to implement. The pilot project results will be used to develop approaches to assist each Member Agency with adopting the recommendations based on the feasibility for their program.

It is important to note that the recommendations presented in **Table 2.14** on the following page are relevant to all RethinkWaste Member Agencies. RethinkWaste and its Member Agencies should consider developing consistent messaging throughout the RethinkWaste service area to increase awareness and ease of proper participation. In addition, as a long term goal, the purchase of new or replacement containers that are similar throughout the RethinkWaste service area would also be conducive to increasing the public's recognition of the program and containers across jurisdictional boundaries. However, this may not be feasible as some Member Agencies may have their own aesthetic needs for containers, but whenever possible, Member Agencies should work together to create a consistent program across the RethinkWaste service area.

Table 2.14: Overall Recommendations for Member Agency Public Space Recycling Programs

Recommendations	
Container Type	<ul style="list-style-type: none"> • Be consistent in container type to avoid confusion among public • Select recycling containers that are clearly different than garbage containers (e.g., color-coded) • Install containers with the proper capacity based on site-specific projected generation and frequency of collection • Ensure containers are properly designed to deter scavenging and illegal dumping • Reduce contamination with restrictive lids designed for desired recyclables (e.g., restricted opening for paper/bottle openings) • Select durable, easy to service containers
Container Location	<ul style="list-style-type: none"> • Always locate garbage and recycling containers together • Supply sufficient number of container sets in heavy foot traffic areas (e.g., park entrances, restrooms, train/bus stations) • Research busiest, high-traffic locations for best container placement
Container Signage	<ul style="list-style-type: none"> • Ensure design of messaging is consistent for all types of containers at all locations • Large, clear, consistent text • Graphics • Multi-lingual • Color-coded containers/lids • Supplemental sign on or around containers can support recycling message
Program Administration	<ul style="list-style-type: none"> • Get feedback from collection staff on container design and location • Determine desired recyclables (single-stream vs. select materials) and implement across Member Agencies for consistency • Form a partnership with transit organizations (e.g. Caltrain, SamTrans) to provide public space recycling containers at transit stations • Require franchised hauler to participate in program through the provision/collection of containers as a contract requirement • Track recycling progress (volumes/tonnage) and monitor program for improvements
Program Outreach	<ul style="list-style-type: none"> • Assign Recycling Coordinator/Ambassador • Promote program at kick-off/special events • Use social media and agency websites to promote program • Educate city employees, businesses, vendors, and other community members using or providing services near the bins • Items accepted in public space recycling containers should mirror what is accepted in residential/commercial recycling programs
Program Maintenance	<ul style="list-style-type: none"> • Place bins near access points (e.g., park entrances) for easy collection • Keep bins cleaned and well maintained to avoid overflow that deters public from using containers properly • Monitor/remove contamination prior to collection • Replace/repair broken or outdated containers/signage • Use existing collection routes to service containers
Program Cost	<ul style="list-style-type: none"> • Place containers in locations suitable for the franchised hauler to collect to maximize value of existing franchise agreement(s) • Purchase containers in bulk for cost discounts • Select city staff, hauler, or other contractor to service containers based on the most economical collection and transport process • Partner with business improvement districts, building owners and property managers, schools and universities, transit organizations (e.g. Caltrain, SamTrans) and individual corporate businesses to provide/maintain public containers

Common Barriers to Success in Public Space Recycling

The literature review found that common barriers to implementing and maintaining successful public space recycling programs was securing funding sources for container purchases and ongoing operational costs, such as labor time for collection and maintenance. Insufficient recycling container quantities related to limited funding can lead to reduced capacity to capture recyclables and associated contamination, resulting in lower quality recyclables. Poorly designed containers (including lid shape and signage), poorly located containers, and a lack of outreach can also result in contaminated recycling streams. The most common barriers to successful public space recycling programs cited among the organizations researched as part of the literature review are identified in **Table 2.15**.

Table 2.15: Literature Review Results: Common Barriers for Public Space Recycling Programs

<u>Barriers</u>
Limited funding for container purchases and ongoing program maintenance and collection service.
Ensuring consistent collection service based on limitations in existing program infrastructure and contracts.
Poorly designed containers and those located in infrequently used areas.
Contaminated low quality recyclables recovered.
The ability to adapt program needs and design based on local conditions which can vary from site to site.
Containers can attract illegal dumping or be used improperly by the public to dispose of trash, which compromises the quality of the recyclables collected.

Diversion Potential

The literature and case study review revealed that tracking volumes of recyclables collected and encouraging feedback from the staff that service/collect materials from the containers are important for monitoring public space recycling program success in recovering recyclables. However, none of the Member Agencies responding to the survey reported that they track the volume of materials collected from public space garbage or recycling containers and this is not currently tracked by Recology. The City of San Mateo did report that their public space recycling program is working and their best practices of color coding recycling containers to match the franchised hauler carts and using the carts themselves in public spaces have aided in public recognition of the containers and subsequent success in recovering recyclables.

The pilot project will attempt to quantify participation, diversion and contamination. The lessons learned will be shared with the intent of developing a system to quantify diversion from public space recycling for each Member Agency.

While in both the downtown area and park setting the garbage containers are anticipated to be filled to capacity daily, the recycling containers will not due to scavenging, based on observations of similar downtown areas and parks. Therefore, the actual diversion results will depend on statistics derived from collection services, anecdotal information obtained through interviews and direct observations conducted during monitoring activities.

Pilot Project Budget

As shown in **Table 2.16** below, the FY1415 budget includes \$35,000 to implement a public spaces recycling pilot project. The FY1516 budget will include \$11,000 in expense to conduct the follow-up surveying and contamination sampling.

Table 2.16: Budget for FY1415 and FY1516

<u>Item</u>	<u>FY1415</u>	<u>FY1516</u>
16 Sets of Containers (Downtown Area)	\$18,000	
Installation	\$3,000	
2 Cart Trailers (2 Park Areas)	\$8,000	
Public Education & Outreach	\$5,000	
Contamination Sampling		\$10,000
Administration and Surveys	\$1,000	\$1,000
Total	\$35,000	\$11,000

f. Enhanced Residential Public Education and Outreach Pilot Program

Goals

Identify and implement cost-effective, measurable public education and outreach campaigns for the residential sector with targeted new messages, calls to action, incentives and tools as a pilot program with a primary goal of supporting the JPA's goal of increasing the current SBWMA-wide residential diversion rate of 66.5% to the State's goal of 75% diversion by 2020. Based on historical diversion trends, new and additional efforts are needed to revitalize the residential program as diversion rates have leveled off, and slightly declined this past year.



This pilot program option supports multiple LRP Guiding Principles including:

- Enhance public education to maximize diversion
- Promote behavior change through public education
- Increase and maximize participation in programs and services to reduce and reuse waste
- Provide cost-effective and efficient programs
- Support local, state and national mandates, including meeting the State's 75% recycling goal by 2020

Overview

This pilot program involves developing and implementing dedicated public education campaigns targeting residents and measuring/tracking changes to residential diversion rates. The pilot efforts proposed are based on identified best practices to drive behavioral change and increase participation rates. Current outreach efforts that have proven to be effective to raise awareness and participation, including newsletters, bill inserts, and truck signs, among others would be integrated into the pilot projects. Existing staff would manage the process with assistance from technical consultant(s) to produce any outreach materials needed. The proposed pilot outreach campaigns are detailed below.

While there was a significant increase in residential diversion from 54.7% to 66.2% due to the rollout of new services in 2011, residential diversion has since levelled off to approximately 66%, reaching a high of 66.9% in 2013, and slightly declining to 66.5% in 2014. However, waste characterization research shows that there are still significant amounts of recyclable and organic materials left in the waste stream. To move the current residential diversion rate to 75% equates to an increase of 8.5%. To increase the residential diversion rate by 1% equates to increasing recycling and organic materials collected by approximately 1,736 tons over 2014 tonnages, and decreasing garbage tonnages by the equivalent 1,736 tons at the same time over 2014.

The outreach targeting residents would entail two approaches, with the first being a service area wide approach, and the second, a grassroots/community based approach targeting Member Agencies with below-average residential diversion rates.

Service Area Wide Campaign:

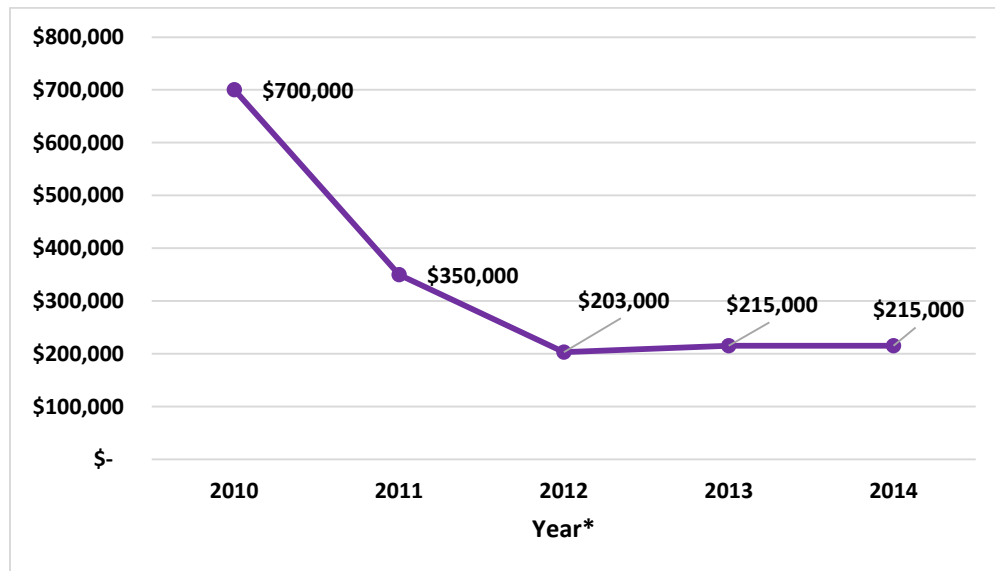
This campaign would be a year-long campaign in FY1617 designed to create new awareness for the CartSMART program, with a focus on the recycle and compost carts. The campaign would include a call to action based on research of messages that motivate the target audience to drive more material out of the garbage into recycling primarily through mass media and advertising using newspapers, online media and

bus shelters, as well as newsletters, bill inserts and direct mail. The difference between this campaign and what has been done the last few years is that it would be focused and build on each other with a uniform theme/tagline/message. While there has been consistency in prior messaging, content and look, it has been focused at a general level of program awareness. In addition, while some advertising has been done to promote special programs like the Door-to-Door HHW program, there has not been any advertising done to promote the overall CartSMART program since its launch in 2011.

As an example of a service area wide approach, Milwaukee’s “Recycle for Good” brand and campaign reinvigorated their program and resulted in a 10.4% increase in recycling tonnage. The amount of organic materials set out by residents in the RethinkWaste service area in the last quarter of 2010 increased almost by nearly 2,000 tons when compared to the same period in 2009 because there was consistent messaging and reminders to residents about what went into the green compost cart. There was no change in service, capacity or types of materials accepted in the program. SF Environment also relies heavily on this service area wide approach for its residential outreach.

The budget for this outreach pilot to be included in the FY1617 budget would be approximately \$100,000 above the FY1415 budget levels. **Table 2.17** below shows the historical residential outreach spending.

Table 2.17: CartSMART Residential Outreach Spending for 2010 – 2014



*RethinkWaste operates on a fiscal year budget. The amounts shown in the table are averaged to show costs on a calendar year basis.

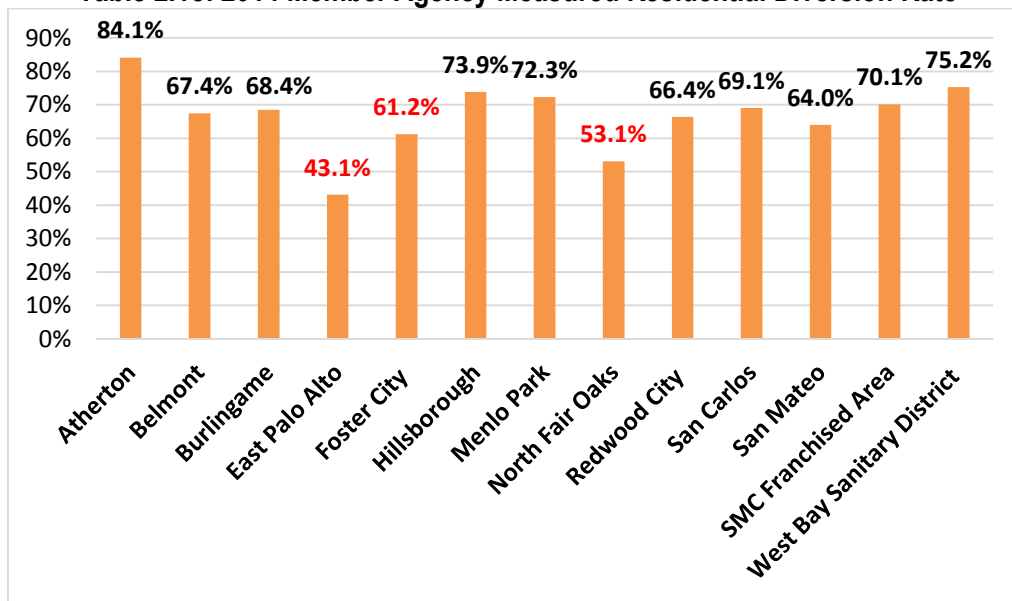
Community Based Campaign:

This campaign would also be a year-long campaign in FY1617 targeting Member Agencies with below-average residential diversion rates in comparison to others in the JPA through a grassroots, community based effort incorporating research, cart/door hangers; contests and/or incentives; a “peer-to-peer” strategy featuring residents in newsletters, brochures, social media; and door-to-door outreach among others. The efforts would tie back to the service area wide campaign, but be customized to address the unique needs of

the communities as identified by the specific Member Agency. Research shows that it often takes hearing or seeing a message between six and ten times for it to be recalled.

Table 2.18 below shows the 2014 measured residential diversion rate by Member Agency. East Palo Alto (43.1%), North Fair Oaks (53.1%) and Foster City (61.2%) have the lowest residential diversion rates. Both East Palo Alto and North Fair Oaks have mandatory garbage subscription levels to address the needs of their respective communities. East Palo Alto mandates a minimum 96-gallon garbage service level and North Fair Oaks requires a minimum 64-gallon garbage service level. While Foster City does not have garbage service level requirements, they do have a high number of smaller residential lots and multi-family complexes with no or limited individual yards that fall under the single-family category due to how they are serviced. These factors contribute to all three communities being the only Member Agencies whose residents continue to set out more garbage than organic materials. As of 2011, all other communities set out more organic materials than garbage by their residents.

Table 2.18: 2014 Member Agency Measured Residential Diversion Rate



The budget for this outreach pilot to be included in the FY1617 budget would be approximately \$75,000 above the FY1415 budget levels.

g. Mandatory Residential and Commercial Recycling Ordinance

Goals

SBWMA or its Member Agencies could implement mandatory requirements in order to motivate all residential, commercial, institutional, and public agency generators to separate recyclable and compostable materials from the waste they generate at their homes or places of business, and place it in the appropriate recycling or organics container on a regular basis for collection.

A Mandatory Recycling and Composting Ordinance would need to be carefully developed based on feedback from various stakeholder groups, and publicized adequately to inform all residents, businesses, service providers, and others of the intent and purpose of the ordinance.

This policy tool could be initiated by individual Member Agencies or the SBWMA Member Agencies could participate in a single, uniform ordinance adopted by the SBWMA. An ordinance of this type would be developed to require all single-family residences, multi-family complexes, commercial businesses, institutions, and public agencies to participate in recycling and organics diversion programs offered by RethinkWaste such as the CartSMART and BizSMART programs, notwithstanding specific limitations on the scope of the Franchise Agreements (see Appendix A).



This policy initiative supports several LRP Guiding Principles including:

- Leverage existing infrastructure
- Provide cost-effective and efficient programs
- Increase and maximize participation in programs and services to reduce and reuse waste
- Support local, state and national mandates, including meeting the State's 75% recycling goal by 2020
- Promote behavior change through public education
- Provide incentives to participate in programs where feasible
- Enhance public education to maximize participation

Overview

RethinkWaste would first develop a model ordinance for consideration by the SBWMA Board that could be adopted by the SBWMA or by individual Member Agencies. Upon completion of a comprehensive stakeholder engagement process, RethinkWaste would report back to the Board comments, concerns, inquiries and lessons learned. The Board and/or the Member Agencies could then decide their preferred approach regarding participating in a regional ordinance adopted and administered by RethinkWaste or adopting individual ordinances at the Member Agency level and tasking RethinkWaste to assist with public education/outreach and enforcement.

Local examples of mandatory ordinances include:

Mandatory Commercial and Multi-Family Residential Recycling Ordinance – City of San Carlos

Adopted by the City Council in April 2010, the ordinance was implemented in two phases. Commercial and multi-family residential solid waste customers that have 2 cubic yards or more of garbage collection service per week were required to have recycling services by January 1, 2011. Food service establishments and special events that have 2 cubic yards or more of garbage collection service per week were required to have organics collection services by January 1, 2012. Enforcement of the ordinance is a three-step process: issuance of a courtesy notice, issuance of a warning notice, and issuance of a violation notice. The City has the authority to impose administrative penalties of up to \$500 per violation. Prior to adoption of the ordinance, SBWMA led an extensive stakeholder outreach process on behalf of the City. According to a case study¹¹ prepared by the Institute for Local Government, businesses in San Carlos were very supportive of the City's efforts to move from a voluntary to a mandatory recycling program. Many businesses were motivated to support the ordinance because it was a locally designed program as opposed to a potential mandate. Businesses wanted broader coverage – that is, more businesses and material types included – and faster implementation. The mandatory phase of the program began in January 2011. Recology works with the individual businesses proactively to explain the program and promote compliance. To date, no enforcement actions have been taken since the program became mandatory.

Mandatory Commercial Recycling and Composting Ordinance – Alameda County Waste Management Authority/StopWaste

The Alameda County Waste Management Authority (StopWaste) was formed in 1976 as a joint powers authority to ensure sufficient landfill capacity in the region. The 17 member agencies include Alameda County, all of the cities in Alameda County and two sanitary districts. In 1990, Alameda County voters passed a ballot initiative that established a 75% goal and assessed fees on tons disposed at landfill to fund waste prevention and recycling programs. The StopWaste Executive Director, Mr. Gary Wolff, provided a detailed presentation on his agency's mandatory commercial recycling ordinance at the RethinkWaste Visioning Workshop on November, 6, 2014.

This ordinance, adopted in January 2012 and phased in over two years, requires businesses, institutions and multi-family properties with five or more units to sort their recyclables from their garbage. Single-family residences up to four units are not affected by the ordinance. Multi-family property owners as well as businesses and institutions that generate food waste, such as restaurants and grocery stores, must also sort compostables from their garbage. These requirements are effective within participating areas of Alameda County.¹²

The ordinance requires the recycling and compost service to be sufficient to handle the amount of targeted materials generated at the location. This includes cardboard, newspaper, white paper, mixed recyclable paper, recyclable glass food and beverage containers, metal (aluminum and steel) food and beverage containers, PET (#1) and HDPE (#2) plastic bottles, food scraps and compostable paper. Unlike other

¹¹Institute for Local Government: Adopting a Mandatory Commercial Recycling Ordinance: The Experience of the City of San Carlos <http://www.ca-ilg.org/sustainability-case-story/adopting-mandatory-commercial-recycling-ordinance> (compiled May 2011).

¹²Member agencies had the opportunity to “opt out” of participation in the mandatory ordinance. Two out of the 17 member agencies have opted-out of Phase 1 (mandatory recycling) and Phase 2 (mandatory composting) of the ordinance and two more of the member agencies have opted-out of Phase 2 only.

communities, where the requirement is on the books, but not enforced, the Authority is making a serious effort to enforce the ordinance. Inspectors hired by StopWaste lift lids of the solid waste containers at businesses and check whether there are recyclable or compostable materials present. Violators receive notices of non-compliance. The intent of enforcement is to change behavior rather than to punish or generate revenue through fines. This intent is codified by the enforcement policies for the ordinance which requires a three step process of Official Notification, Warning, and finally as a last resort, Citation. Implementing these policies requires staff and inspector trainings, inspections, and official communications with regulated parties about enforcement (including legal review). The Authority's 2014-15 budget for enforcement is \$1,078,743, which includes: 3 full-time equivalent (FTE) contract inspectors, 1/2 FTE contract enforcement officer (retired Alameda Co. Sheriff), 1/2 FTE clerical, 1/2 FTE inspection/data manager, 1/4 FTE enforcement officer, and 1/4 FTE for IT, media, and communications and non-staff expenses.

The ordinance is still in the implementation phase, thus no diversion results have been reported. StopWaste has initiated a benchmark study to evaluate its progress towards its goal of less than 10% recyclable and compostable materials disposed in the garbage by 2020.

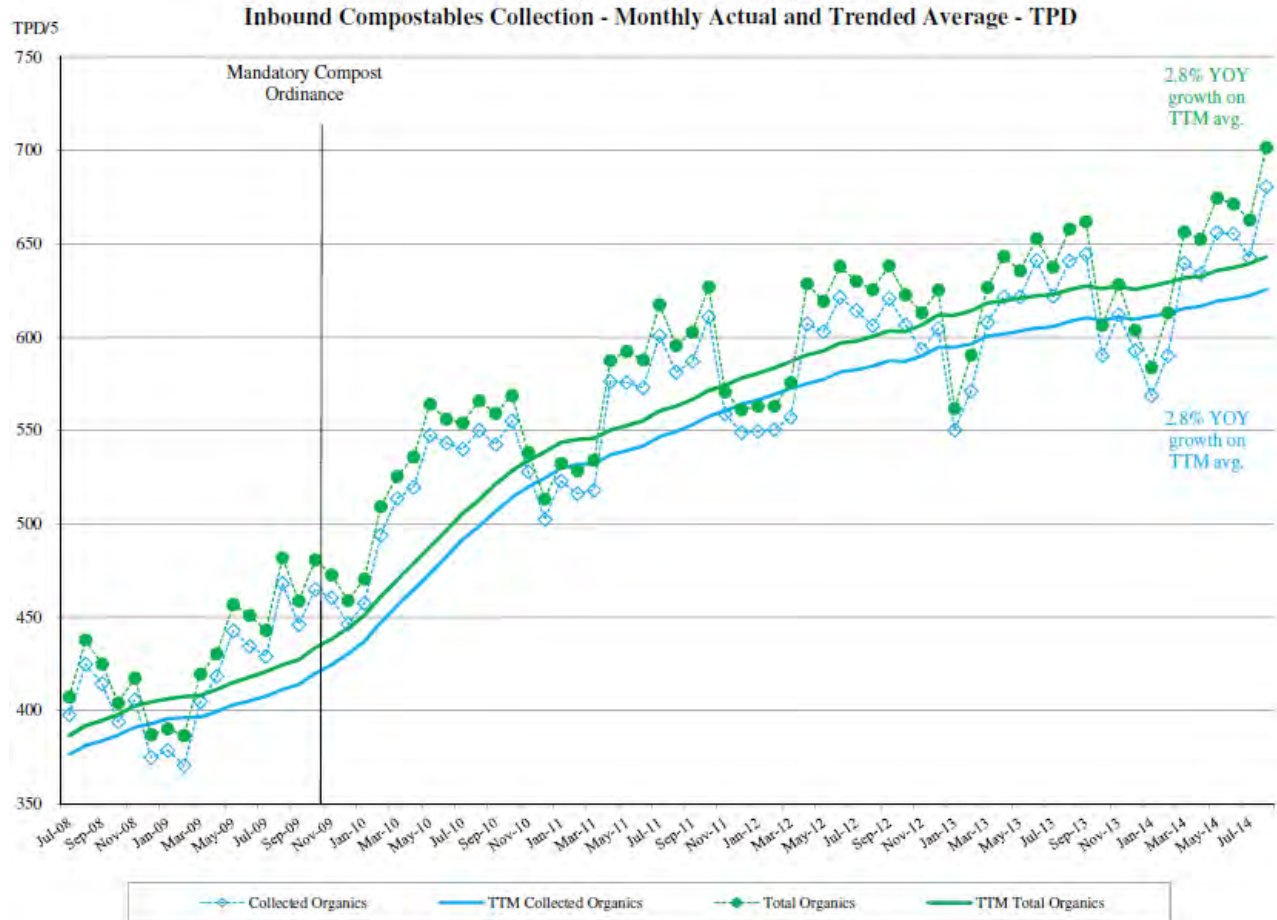
Mandatory Recycling and Composting Ordinance – City and County of San Francisco

San Francisco's Mandatory Recycling and Composting Ordinance requires residents and businesses to keep recyclables and organic materials out of their garbage container. Passed by the San Francisco Board of Supervisors in 2009, it became the first local municipal ordinance in the United States to universally require source separation of all organic material, including food scraps. All residents and businesses are required to subscribe to adequate recycling, composting, and garbage service and to properly participate by ensuring targeted materials are not disposed. Residents can also choose to compost at home and take recyclables to appropriate recycling centers. Building owners can be fined if they fail to provide tenants with adequate recycling, composting and garbage services and information on their proper use. The City has focused its efforts on ensuring that all buildings have the necessary recycling and composting collection services. Door-to-door outreach is conducted by the City's Environment Now interns. San Francisco's Commercial Recycling Manager provided a detailed presentation on his agency's mandatory recycling and composting ordinance at the RethinkWaste Visioning Workshop on November 6, 2014. During this presentation, it was noted that the City's diversion of organics increased by approximately 50% from November 2009 (when the Ordinance was passed) to July 2014. (See **Table 2.19** on the next page.)

Environment Now is a green careers program that helps prepare workers for jobs in the green industry. The interns conduct environmental outreach activities throughout San Francisco including programs for energy efficiency, recycling, toxics reduction and food security, with an emphasis on neighborhoods in need. Because many Environment Now participants come from these underserved communities, they are able to reach traditionally hard-to-reach audiences and boost community participation in the City's environmental initiatives. Environment Now was originally funded through a federal grant and is now included in the outreach budget for the City. Environment Now currently employs ten interns. The 2014 Environment Now budget was \$1.5 million and the revenue source was the City's Impound Account (which is a collection rate surcharge).¹³

¹³San Francisco Department of the Environment 2013-2014 Budget
http://www.sfenvironment.org/sites/default/files/agenda/attach/departementoftheenvironment_budget_fy13and14_0.pdf

Table 2.19: Mandatory Ordinance Results on San Francisco Organics Materials
Recology San Francisco Region



Advantages and disadvantages of mandatory requirements are similar to those of disposal bans and include:

Advantages

- Allows local communities to tailor recycling requirements and provides more specificity and certainty of compliance than the requirements under State law
- Ensures that generators of recyclable and compostable materials are fully participating in diversion programs
- Can address all generators (not just those specified under State law)
- Provides an incentive to source-separate materials at home and at work
- Similar to seat belt laws, enacting the requirement will change behavior even without heavy enforcement
- Enforcement can be scaled based on violations
- Instills sustained behavior change

Disadvantages

- May appear duplicative of State requirements (for multi-family and commercial)
- Requires education and enforcement

- Could be perceived as onerous

Mandatory Recycling and Composting Implementation Plan

A key recommendation from RethinkWaste's mandatory ordinance pilot project for San Carlos was to undertake a stakeholder engagement process to assist in the program design. Businesses in San Carlos encouraged the City to create a level playing field by requiring a broader range of commercial generators (including those with 2 cubic yards or more of solid waste collection) and a broader range of material types (including organics) than the ordinance originally contemplated.

As a result, the ordinance adopted by the City with the endorsement of the Chamber and business community had more requirements than those imposed by the State's AB 341 mandatory commercial recycling law. Staff recommends that the lessons learned from the San Carlos pilot should be considered when developing a future model mandatory recycling ordinance, including, but not limited to:

- Require all customers (residential, commercial, industrial, institutional and member agency facilities) to be covered by the ordinance
- Require all services (recycling, organics, and construction and demolition diversion) to be covered by the ordinance
- In addition to receiving collection services, require customers to sort properly (no recycling or organics in the garbage, no garbage in the recycling or organics)
- Emphasize education rather than enforcement, but provide a scaled enforcement program with courtesy notices, warning notices, and violation notices
- Use existing outreach staff or contractor resources, including the franchised solid waste and recycling service provider to provide outreach and technical assistance, as included in the Franchise Agreements¹⁴
- Use contract staff to provide quarterly inspections and issuance of notices

Since full scale implementation of the SBWMA CartSMART and BizSmart programs, there is nearly universal acceptance of recycling and organics services by residential customers and recycling services by commercial customers. However, the commercial sector subscription rate for compost collection service is still quite low as discussed above. This will likely change per implementation of AB 1826 which requires businesses to subscribe to compost collection services in a phased in approach from 2016 to 2020 based on levels of organics generation, and thus may significantly increase the commercial sector subscription rate for the BizSMART compost collection services.

For these reasons, staff is recommending the Board consider this policy alternative after 2020 as the results of other programs to increase diversion are tracked and measured. While a mandatory ordinance may result in

¹⁴Franchise Agreement(s) Section 7.04(l): Mandatory Commercial Recycling Assistance to Agency. In the event Agency adopts a policy or strategy to encourage or require Recycling at Commercial and Multi-Family Dwelling Customers, Contractor shall assist Agency and SBWMA with implementing the policy or strategy. Contractor shall be required to provide Agency with prompt notification of Customers that do not comply with the policy or strategy based on the observations of Contractor's employees. Contractor shall assist the Agency and SBWMA with collecting related data from Commercial and Multi-Family Dwelling Customers and facilitating outreach and education programs focusing on encouraging participation by these Customers in the mandatory Recycling policy or strategy. Upon request from Agency, Contractor shall modify its protocol regarding use of non-collection notices pursuant to subsection 8.02.F to include Solid Waste Containers, in order to assist with implementing Agency's mandatory Commercial Recycling policy or strategy.

significant cost-effective diversion, staff views this approach as a low priority in the short term given the potential to enhance the existing system and make improvements with the goal of increasing diversion. In addition, in the coming years the results of the SBWMA Commercial Recycling Reporting Ordinance will provide valuable insights on commercial sector diversion, which in turn will allow the SBWMA to more fully consider the implications of adopting this policy alternative.

Mandatory Ordinance Cost Estimate

In developing a cost estimate for implementing the Mandatory Recycling and Composting ordinance, the following was taken into account:

- Staff time will be needed for program and ordinance development
- Staff time will be needed to conduct stakeholder meetings (assume 24 meetings, two for each Member Agency)
- Education materials including website updates, direct mail, advertisements and press releases
- Contractor resources for quarterly inspections and issuance of notices
 - Assumes 250 commercial customers inspected per quarter, targeting different geographic areas and generator sectors each quarter. (Another 250-500 to be inspected by Recology.)
 - Assumes 500 residential customers inspected per quarter, targeting different geographic areas and generator sectors each quarter
 - Notices would be mailed to non-compliant generators
 - Referrals for technical assistance would be made to existing SBWMA and Recology staff

Table 2.20 below provides the costs for both the first year of implementation and in subsequent years; these costs are above and beyond existing RethinkWaste outreach spending and the Recology commercial outreach program costs. It is important to note that these projected costs are significantly below the costs of the benchmarked communities, StopWaste and San Francisco, based on several factors:

- SBWMA has significant programs in place for outreach and technical assistance (which is the focus of San Francisco’s efforts in implementing its mandatory ordinance)
- SBWMA’s territory is somewhat smaller than StopWaste’s (17 member agencies compared to 12, 1.5 million population compare to less than 500,000)
- SBWMA staff have been able to implement similar large-scale efforts cost-effectively with minimal staffing

Table 2.20: Mandatory Ordinance Estimated Program Costs

Program Cost	Residential Sector	Commercial Sector	Implementation Expense (Year One)	Second Year & Annually Recurring
Program/Ordinance Development	N/A	N/A	\$5,000	N/A
Stakeholder Meetings	\$4,000	\$4,000	\$8,000	N/A
Public Education & Outreach	\$25,000	\$25,000	\$50,000	\$28,000
Quarterly Inspections	\$160,000	\$80,000	\$240,000	\$240,000
Total Annual “New” Cost:	N/A	N/A	\$303,000	\$268,000

h. Organic Materials (Green Waste and Food Scraps) Disposal Ban

Goals

RethinkWaste can lead by example in encouraging the County Board of Supervisors to consider adopting an Organic Materials (Green Waste and Food Scraps) Disposal Ban which would significantly increase diversion of these materials from the Ox Mountain landfill. While the SBWMA could adopt an ordinance banning these materials from disposal at Shoreway, this approach may only result in customers bringing these materials to other disposal facilities and essentially drive away business with little impact on diversion. However, if this were a countywide initiative and even a multi-county effort, the impact could be significant with regard to diversion, saving landfill space and reducing the most potent greenhouse gas generating materials deposited in landfills (i.e., green waste and food scraps sent to landfill are potent methane producing materials and methane is 27 times more potent a greenhouse gas than CO₂).



This program supports multiple LRP Guiding Principles including:

- Ensure the highest and best use of recoverable materials and implications for end markets so programs are economically and environmentally sustainable
- Reduce and mitigate landfill and other facility impacts
- Support local, state and national mandates, including meeting the State's 75% recycling goal by 2020
- Promote behavior change through public education
- JPA Member Agency facilities and the Shoreway facility to serve as models for high diversion facilities

Overview

Communities across the U.S. have increased participation in recycling and composting programs through the implementation of disposal bans. Most of the focus on disposal bans has been on toxic materials, electronic waste, appliances and yard trimmings. Over half of the states in the U.S. have a disposal ban for yard trimmings. State bans are also supplemented by local bans and enforcement. For example, Mecklenburg County, North Carolina is reinforcing the state ban on plastic beverage containers, aluminum cans, wood pallets and appliances through implementation of local bans and enforcement. The City of Seattle, Washington has achieved a 70% diversion rate in its residential programs through implementation of a local disposal ban of recyclable materials and yard trimmings, where residents may not place recyclable materials or yard trimmings in their collection containers for solid waste. Metro Vancouver, British Columbia is also considering implementation of a food scrap ban. Bans may be enforced at transfer stations, landfills or at the point of collection.

Examples of Other Communities

Each of the disposal bans described below have been implemented at a countywide level. SBWMA operates one of the several transfer and disposal facilities within San Mateo County. Thus, a disposal ban is more likely to be effective if it was implemented in cooperation with the San Mateo County Board of Supervisors, since the Ox Mountain Landfill, the primary disposal facility in the County, is located in the unincorporated area of San Mateo County. In addition, a disposal ban should be implemented throughout the local area, to ensure that self-haulers were not driven away from Shoreway to facilities that do not require separation. To accomplish this, SBWMA would work with other communities in San Mateo and Santa Clara counties and the program operators

of the transfer stations and landfills to implement countywide ordinances requiring targeted materials to be diverted from disposal.

Plant/Yard Debris – Alameda County Waste Management Authority (StopWaste)

The Alameda County Waste Management Authority (StopWaste) is a joint powers agency (JPA) which includes as its member agencies all 17 jurisdictions in the County. The plant debris disposal ban took effect January 1, 2010 and was targeted at professional landscapers and gardeners who collect and haul substantial amounts of plant debris to Alameda County solid waste facilities (i.e., transfer stations and landfills). While all communities in Alameda County provide residential curbside collection of plant debris, the ban requires landscapers to segregate the loads of materials brought to transfer stations and landfills. The ban also requires public agencies to separate plant debris from other materials hauled from debris boxes located at municipal corporation yards and materials delivered directly via municipal vehicles. Plant debris that is problematic to effectively compost (such as palm fronds and sod) is exempt from the ban. The ordinance requires landfills and transfer stations to assess a 50% surcharge on mixed loads or require customers to separate their loads. StopWaste spent \$100,000 on outreach and technical assistance to implement the ban. In addition, the equivalent of 0.5 full time equivalent (FTE) in staff time was used during the first year of implementation to coordinate efforts and inform landscapers and gardeners of the new requirements. Since 2010, less than 100 hours per year are spent in monitoring and enforcing the ban. StopWaste has not conducted a waste characterization study since enacting the ban; however, staff report that the ban has been very successful and very little plant debris is disposed in landfills.

Appliances, Cardboard, Tires, Scrap Metal, Wood, Yard Debris – Sonoma County

Landfills and transfer stations in the County prohibit the disposal of specific materials, including appliances, cardboard, tires, scrap metal, wood and yard debris. The ordinance was enacted by the Sonoma County Board of Supervisors in 1994 and targeted self-haul customers at the County's transfer stations and landfills. Violators are required to pay to the County a sum equal to three times the amount of the County standard tipping fee. The ordinance has been lightly enforced, but the requirement and notification of the requirement has changed the behavior of self-haul generators. The County has spent minimal staff effort in enforcing the ban, but self-haulers at the landfills and transfer stations have generally complied with the requirements.

Recyclable Materials¹⁵ – Santa Cruz County

The Santa Cruz County disposal ban took effect on January 1, 2006 and applies to all recyclable and compostable materials. Self-haulers must separate their loads prior to delivering them to the County's transfer stations and landfills. Residential and commercial generators in the county must not place recyclable or compostable materials in solid waste containers. Recyclable materials and yard trimmings collection is available to all residential and commercial customers within the county and is included as a part of the solid waste collection service. Violators are required to remove recyclable materials from solid waste prior to collection or disposal. The Public Works Director is empowered to grant exemptions. The

¹⁵"Recyclable materials" or "recyclables" means that portion of solid waste which is separated from other solid waste for recycling and includes, without limitation, newspaper, cardboard, office paper, mixed waste paper (including junk mail, catalogues, craft bags and craft paper, paperboard, egg cartons, phone books, brown paper, grocery bags, colored paper, construction paper, envelopes, legal pad backings, shoe boxes, cereal and similar food boxes), computer paper, magazines, aseptic packaging, milk and juice cartons, glass, aluminum cans, trays and foil, tin cans, steel cans, small metal scrap, appliances, PETE, HDPE and mixed plastic containers (all types of numbers 3 through 7), used motor oil, used automotive oil filters, and dry cell batteries. "Recyclable materials" also means yard waste, wood waste and reuse materials.

County has spent minimal staff effort in enforcing the ban, but self-haulers at the landfills and transfer stations have generally complied with the requirements. The County has not enforced the ban at the household or business generator level and the level of compliance with the ordinance is not known.

Advantages and disadvantages of disposal bans include:

Advantages

- Ensures that generators of recyclable and compostable materials are fully participating in diversion programs
- Provides an incentive to source-separate materials at job sites and corporation yards
- Similar to seat belt laws, enacting the requirement will change behavior even without heavy enforcement or investment in enforcement
- Enforcement can be scaled based on violations
- Instills sustained behavior change

Disadvantages

- Could drive mixed loads to other disposal facilities
- Requires education and enforcement (Santa Cruz County initiated a three-year enforcement schedule: first year - communicated requirements, second year - issued warnings, third year - issued fines)
- Could be perceived as onerous

Disposal Ban Program Design

The initial implementation of a disposal ban would apply to self-haul customers and municipal vehicles using the Shoreway Environmental Center (and potentially the Ox Mountain Landfill within the unincorporated area of San Mateo County). Self-haul customers would be expected to only bring segregated loads such that materials could be readily unloaded and placed in their appropriate bins or bunkers. Targeted materials would include those prevalent in the self-haul discard stream, including but not limited to plant debris, yard trimmings and clean lumber. To implement this program, the self-haul customer incentive could be changed so that customers are assessed a surcharge for bringing in loads of targeted material mixed with other solid waste (or these customers could simply be turned away for not being compliant, which is not a preferable alternative). Alameda County requires facility operators to assess a 50% surcharge on mixed loads and Sonoma County can assess a 300% surcharge.

Staff is recommending the Board consider this policy alternative after 2020 as the results of other programs to increase diversion are tracked and measured, particularly implementation of AB 1826. While a disposal ban may result in significant cost-effective diversion, staff views this approach as a low priority in the short term given the potential to enhance the existing system and make improvements with the goal of increasing diversion. In addition, in the coming years the results of the SBWMA Commercial Recycling Reporting Ordinance will provide valuable insights on commercial sector diversion, which in turn will allow the SBWMA to more fully consider the implications of adopting this policy alternative.

Disposal Ban Cost Estimate

In developing a cost estimate for implementing the Organic Materials Disposal Ban, the following was taken into account:

- Staff time will be needed for program and ordinance development
- SBWMA supporting development of a Countywide ordinance and participating in countywide stakeholder meetings (assume 300-400 staff hours)
- Education materials including website updates, self-haul flyers, posters, bill inserts, advertisements and press releases
- One-time costs are annualized over 10 years to estimate total annual costs

Based on these assumptions, the total expense for RethinkWaste to implement a disposal ban would be approximately \$60,000.

i. EPR Policy Framework

Goals

The SBWMA can support State and federal efforts to build the environmental costs into the price of products and packaging and then require manufacturers to take back products at the end of their useful life. SBWMA already does this on a limited basis through its support of groups like the California Product Stewardship Council (CPSC) and Californians Against Waste (CAW) at the State level. SBWMA has been a long-time supporter of both CPSC and CAW, and annually donates \$3,500 and \$1,250 to these organizations, respectively.

Adopting a resolution in support of product stewardship would provide a more formal way for SBWMA to weigh-in in a timely manner in response to legislation, issue letters of support or concern, and attend meetings and hearings, as appropriate.



Currently, 37 California counties and 108 cities have adopted product stewardship policy resolutions, representing 64% of the State population.¹⁶

Product stewardship policies implemented at the State level have had a direct positive effect on SBWMA operations and resources. SBWMA and the Member Agencies receive revenues and avoid the cost of disposal for targeted materials covered by State law. For 2014 the revenues received include:

- Electronic Waste - \$70,515
- California Redemption Value Beverage Containers - \$3,724,000
- Latex paint (PaintCare program) – \$23,124

Adopting a formal product stewardship policy in turn supports several LRP Guiding Principles including:

- Support product stewardship policies and initiatives
- Support local, state and national mandates, including meeting the State's 75% recycling goal by 2020
- Promote behavior change through public education

Overview

According to the Institute for Local Self-Reliance, each ton of garbage landfilled or burned, creates about 71 tons of waste on average "upstream" from the mining, manufacturing and distribution of materials in the product lifecycle. By recycling one ton of waste, we can divert one ton of waste from disposal. However, by reducing waste by one ton, through waste prevention strategies, effectively 72 tons of waste (one ton of garbage plus 71 tons of upstream waste) are diverted from disposal.¹⁷

Product Stewardship is the act of minimizing health, safety, environmental and social impacts, and maximizing economic benefits of a product and its packaging throughout all lifecycle stages. A fundamental premise of

¹⁶California Product Stewardship Council 2014 Annual Report, http://calpsc.org/mobius/cpsc-content/uploads/2014/12/2013-14_AnnualReport_FINAL_2014_8_15_2014.pdf

¹⁷Brenda Platt and Neil Seldman, Institute for Local Self-Reliance, Waste and Recycling in the U.S. 2000, GrassRoots Recycling Network, 2000, p. 13. Based on data reported in Office of Technology Assessment, Managing Industrial Solid Wastes from Manufacturing, Mining, Oil, and Gas Production, and Utility Coal Combustion (OTA-BP-O-82), February 1992, pp. 7, 10.

product stewardship is that the producer of the product has responsibility to minimize adverse impacts, along with other stakeholders, such as suppliers, retailers, and consumers, who also play a role. Stewardship can be either voluntary or required by law.

Extended Producer Responsibility (EPR) is a mandatory type of product stewardship that includes, at a minimum, the requirement that the producer's responsibility for their product extends to post-consumer management of that product and its packaging. There are two related features of EPR policy: 1) shifting financial and management responsibility, with government oversight, upstream to the producer and away from the public sector; and 2) providing incentives to producers to incorporate environmental considerations into the design of their products and packaging.

Formed by local zero waste communities, the mission of CPSC is to shift California's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in order to reduce public cost and drive improvements in product design that promote environmental sustainability. SBWMA has been a local government member of CPSC since its inception. One of the initiatives of the CPSC is to implement producer responsibility at the State level.

On September 19, 2007, CalRecycle adopted an overall framework for an Extended Producer Responsibility System in California. Many of the concepts that are part of this framework have been included in State legislation that has been introduced and that would authorize CalRecycle to implement a statewide product stewardship program and select products that would be regulated under that program. The goal of the legislation is to improve product design, encourage reuse and recycling, address excessive packaging, provide convenient collection alternatives for consumers, provide incentives for producers to reduce the lifecycle impacts of products and packaging, and reduce the use of toxics in products. Since adoption of the framework, the State legislature has enacted several bills addressing problem products including, mercury thermostats, paint, carpet, mattresses, and single-use plastic bags.

Additional problem products targeted for policy action by CPSC are pharmaceuticals and batteries.

There are many specific types of product policies, including:

- Product stewardship where there is shared responsibility (between consumers, ratepayers, local governments and manufacturers) for managing discarded products
- Extended Producer Responsibility where the manufacturer pays for and provides the infrastructure for managing its products from cradle to cradle
- Product redesign where manufacturers are required to make their products less toxics or more recyclable, compostable or repairable
- Recycled content where manufacturers are required to include a minimum amount of recycled content in their products

Examples of Other Communities

The CPSC has confirmed that 138 local governments in California have passed an EPR resolution. Attached as **Attachment C** is an example of a model policy is Resolution No. 27741 passed by the City of Santa Rosa City Council on September 28, 2010. In addition, numerous local governments, businesses and non-profits have endorsed CPSC's Product Stewardship and Extended Producer Responsibility: Definitions and Principles which is provided as **Attachment D**.

Product Policy Resolution Cost Estimate

No significant costs are expected to be incurred in the adoption of the Extended Producer Responsibility Policy Resolution. SBWMA has been a long-time supporter of both CPSC and CAW. Each of these Sacramento-based advocacy organizations work on product policies at the State level, including product stewardship and Extended Producer Responsibility initiatives, problem product bans and fees, product redesign, and recycled content requirements. These organizations provide timely information on pending legislation and keep SBWMA staff informed on the issues. On occasion, RethinkWaste staff may travel to Sacramento or to regional meetings to participate in discussions regarding the pertinent policy initiatives; however, no significant fiscal impact is anticipated as this travel expense is already budgeted.

Product Stewardship Policy Resolution Diversion Potential

The diversion potential of the product policy resolution is directly related to the materials targeted in future legislation. Previous legislative efforts have addressed large items, such as tires, mattresses and carpet; and toxic materials, such as mercury containing devices (e.g., thermostats, switches), used oil, paint and electronics. Current legislative efforts have been aimed at household batteries, pharmaceuticals, and sharps. These products do not represent a significant fraction of the disposed waste by the SBWMA Member Agencies. However, they are difficult to handle, potentially toxic, are expensive for SBWMA to manage appropriately and are, therefore, appropriate targets for product stewardship legislation.

Table 2.21: Product Policy Resolution Implementation

<u>Action Step</u>	<u>Responsible Party</u>	<u>Timeframe</u>	<u>Resources</u>
Develop SBWMA Product Stewardship policy resolution	SBWMA staff	Fall 2015	Staff time
Participate in policy discussions and prepare letters of support for State legislation and local initiatives	SBWMA staff	Ongoing	Staff time

2. Processing and Transfer Infrastructure

a. Mixed Waste Processing in the Transfer Station

Goals

The goal of this project is to design, install and operate a mixed waste processing system in the Transfer Station to recover recyclables and organic materials that are currently being discarded in the trash by residential and commercial franchised customers. As required by state legislation AB 1826, starting in 2016 most commercial, institutional, and MFD locations must implement an organics recycling program. Installing a mixed waste processing system with organics recovery is a method of complying with AB 1826 and can complement existing source separated organics collection programs. Organics that are recovered will be transported to the SVCW wastewater treatment plant to be anaerobically digested to produce green energy (biogas).



The development of a mixed waste processing system in the Shoreway Transfer Station supports multiple LRP Guiding Principles including:

- Support local, state and national mandates, including meeting the State's AB1826 requirements for commercial organics recycling and the 75% recycling goal by 2020
- Leveraging existing infrastructure
- Develop and sustain strategic community partnerships
- Provide cost-effective and efficient programs
- Reduce and mitigate landfill and other facility impacts
- Invest in new, safe technologies and processes for infrastructure
- JPA Member Agency facilities and the Shoreway facility to serve as models for high diversion facilities

Overview

Significant improvement in the recovery of recyclable and organic materials can be achieved through a combination of enhancements to collection, outreach programs, and back-end recovery of such materials from the garbage tipped at the Shoreway Transfer Station. Compliance with commercial organic regulation AB 1826 and high levels of diversion can be achieved through a mixed waste processing system in the Transfer Station to significantly increase the agency's overall diversion levels towards the 75% goal. The conceptual project development of a mixed waste processing system to recover recyclables and organic materials from the garbage stream has been under evaluation by staff since last year and project updates have been presented to the Board most recently in January 2015. The state has approved this type of system as an alternative to source separated commercial organics (food rich organics and not green waste) collection programs to comply with future AB 1826 commercial organics recycling requirements. The cost to SBWMA businesses for the implementation of AB 1826 is currently being evaluated by Recology and by SBWMA staff.

Project Evaluation

Garbage that is delivered to the Transfer Station is composed of waste from three different sectors collected by Recology – single family residential, multi-family dwelling, and commercial. Though each stream has a different waste composition, **Table 2.22** on the following page shows that there are high volumes of recyclables and organic materials still present in the garbage from all of the sectors, but notably in multi-family and commercial.

By analyzing the waste stream, it is estimated that there is a total of 49,591 tons of recyclable material that could potentially be recovered from the waste stream through a mixed waste processing system.

Table 2.22: Percent of Recoverable Materials Currently Disposed

Sector	Percent of Material Disposed	
	Recycling Program Targeted Materials	Organics Program Targeted Materials
Single-Family Residential	29%	15%
Multi-Family Residential	59%	93%
Commercial	45%	54%

(Table 2.24 provides the amount of Recyclable and Organic materials that are still present in the garbage as determined by waste characterization studies conducted for the Commercial/MFD sector, SFD sector and MFD sector in February 2012, November 2012, and September 2013, respectively).

Staff has researched the effectiveness of different types of mixed waste processing systems at capturing recyclable and organic materials to determine how much material could be recovered from the SBWMA's franchise waste stream. As part of this research, staff has visited many of the large mixed waste processing systems that are operating in California (see **Table 2.23** for a listing of mixed waste processing facilities) and has consulted with industry experts and system manufacturers. In principle, mixed waste processing systems use similar materials processing technology to the equipment currently operating at the Shoreway MRF to separate single stream recyclable materials (e.g., mixed waste systems employ a combination of screening, air, optical and magnetic separation technologies to recover recyclable and organic material from garbage). Based on the evaluation of mixed waste processing systems currently in operation and the reliability of the sorting equipment used at the Shoreway MRF, staff is confident that a mixed waste system can effectively recover the targeted materials. It should be noted that the system can also process the current stream (~15,000 tons per year) of source separated organic materials that are already collected by Recology or if financially beneficial, this stream can continue to go to composting).

Table 2.23: List of Mixed Waste Processing Systems in California

City	Project Description	Approx. Tons/year Processed
San Jose	Commercial waste MRF processing system 2013 Organics to energy AD project 2014	
Sunnyvale	MSW MRF – operating since 2000	
City of Industry	Athens Mixed Waste MRF – 1997	500,000
City of Los Angeles	Athens Mixed Waste MRF – 2014	250,000
City of Stanton	CR&R Mixed Waste MRF – 1995	300,000
City of Los Angeles	Community Recycling (now Recology) – 1994	300,000
City of Huntington Beach	Rainbow Disposal – Mixed Waste MRF	250,000

The number of mixed waste processing technologies in California that target organic material for recovery and treatment is growing. The Bay Area in particular is leading the State in the implementation of these systems to

convert organic material through anaerobic digestion (AD) into green energy and compost. For example, the following projects have been constructed locally:

- San Jose's commercial wet/dry program that was initiated in July 2012 involves mixed waste processing and organic materials recovery at Newby Island and subsequent processing of the food waste fraction at a nearby anaerobic digestion facility operated by Zero Waste Energy (commenced operations in 2014).
- Also in San Jose, Green Waste Recovery installed a mixed waste processing system where recyclable and organic materials are recovered from multi-family accounts and the organic fraction is transported to Z-Best composting facility in Gilroy.
- An organic material digester was completed in January 2015 at South San Francisco Scavenger/Blue Line Transfer to digest source separated organics into a bio-CNG for use in fueling the collection vehicles.
- Several AD projects that target the organic fraction of the waste stream are in various stages of development and implementation by waste processors and wastewater treatment plants in the Bay Area including Marin Sanitary, Napa wastewater treatment facility and East Bay Municipal Utility District in Oakland.

Since organic material (food waste) is the single largest fraction of the waste stream (roughly 28%), diverting this stream has been a primary focus in designing a mixed waste processing system for Shoreway. Effectively diverting organic materials is a complicated process because it involves two distinct processing steps: first the organic material must be separated from the garbage, and second the organic material must be anaerobically digested in a completely different system to convert the material to biogas. While there are AD systems that are being constructed in the Bay Area to treat the organic fraction from solid waste, staff has found that there is a high capital and operating cost to running a stand-alone AD treatment system. Specifically, the staff evaluated dry anaerobic digestion systems sold by Zero Waste Energy and Harvest Power; and wet anaerobic digestion systems sold by OWS, and Clean World Partners and found the capital intensiveness of these treatment systems has made it difficult for them to compete with the comparatively low-cost of landfilling).

Anaerobic digestion is a foundational treatment technology used by wastewater treatment facilities around the world to digest organic materials. Though early conversations with SVCW, staff learned that their wastewater treatment facility located at Redwood Shores, has a large AD system with an excess capacity that could be adapted to process the SBWMA's organic material into biogas that could be used by SVCW to power their plant. Since 2012, the SBWMA and SVCW have been researching a processing partnership that would leverage each other's existing infrastructure and would reduce the capital expense of constructing a stand-alone AD facility. Through a processing partnership, the SBWMA would operate a mixed waste process system at the Transfer Station to extract the organic fraction from the garbage and transport this organic material to SVCW for anaerobic digestion and electricity generation. In 2014, the SBWMA and the SVCW Boards of Directors approved a memorandum of understanding to research the technical and financial feasibility of the concept and both agencies have substantially completed the preliminary research.

Description of the Processing System and Technology

A mixed waste processing system to recover recyclable and organic materials would be located inside of the Shoreway Transfer Station and would involve waste processing equipment somewhat similar to the single stream processing system used at the Shoreway MRF. As illustrated in the **Figure 2.1** below, a mixed waste processing system at the Shoreway Transfer Station would first recover recyclable materials that would be

further processed at the Shoreway MRF and sold with the other commodities; and second the organic fraction would be extracted from the waste stream and the recovered organic fraction or slurry would be transported to SVCW in an end-dump trailer for further cleaning and digestion.

Figure 2.1: Mixed Waste Process Flow Diagram

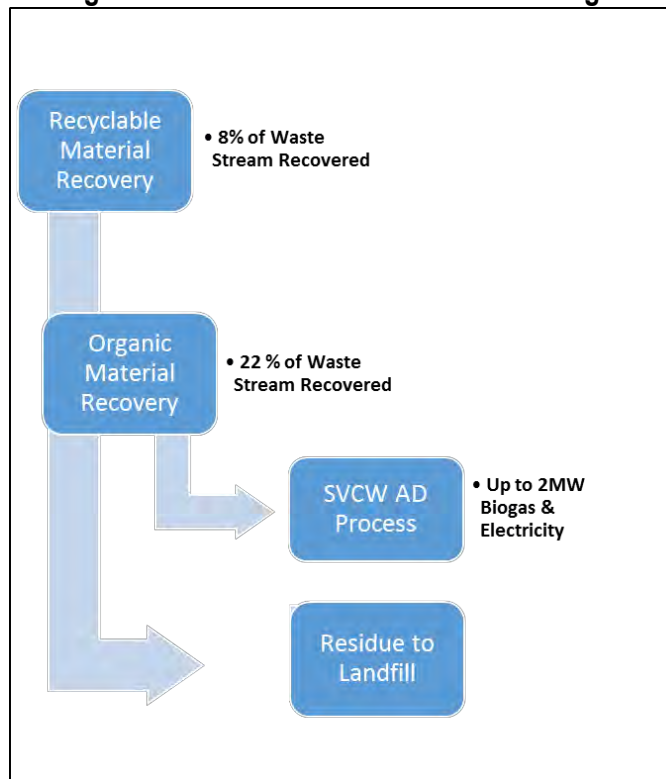
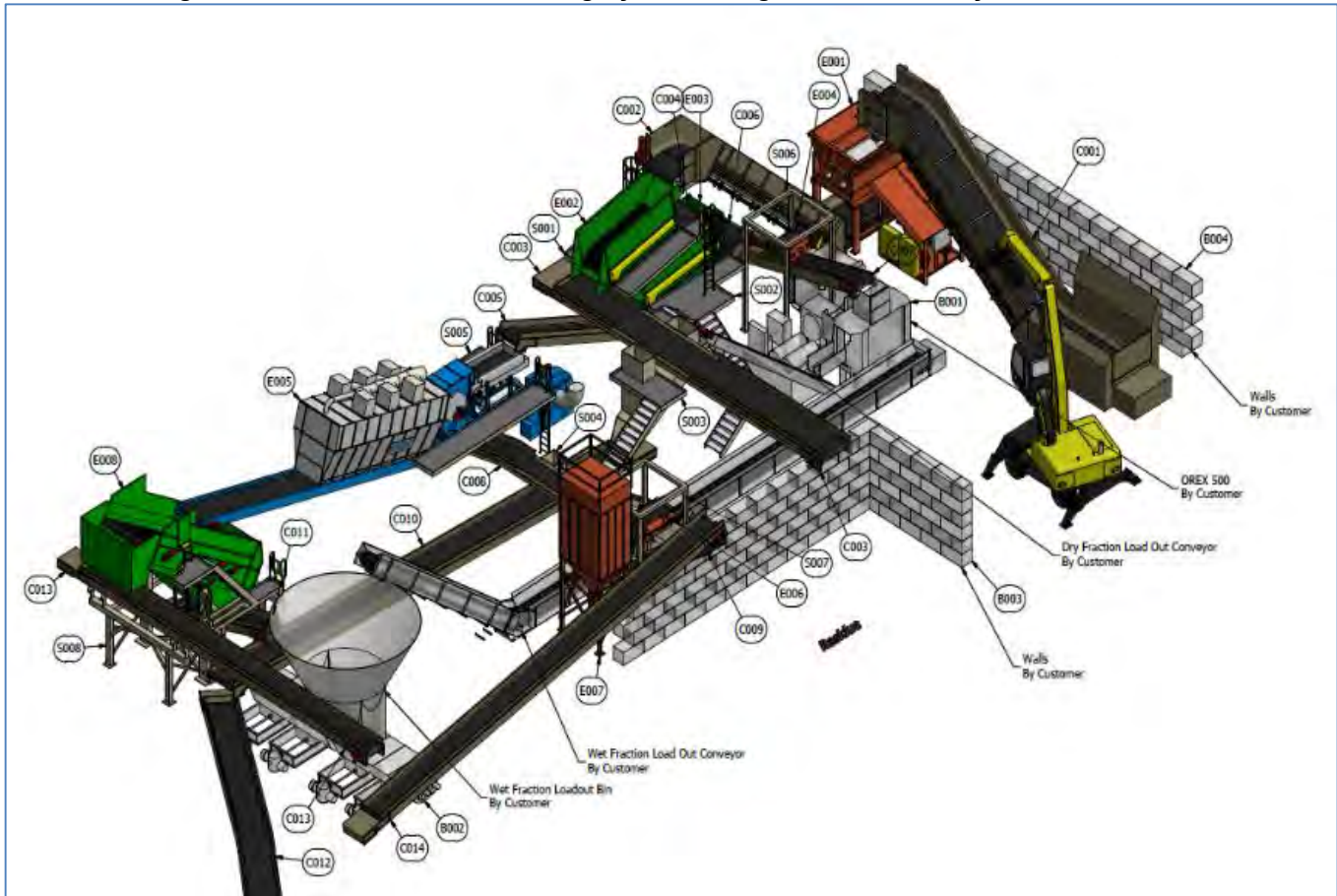


Figure 2.2: Mixed Waste Processing System Designed for Shoreway Transfer Station



A mixed waste processing system designed specifically to fit inside of the Shoreway Transfer Station (shown in **Figure 2.2** above) would process the nearly 625 tons per day of garbage delivered by Recology collection vehicles. The system would process waste at a rate of 45 tons per hour, would operate two-shifts per day, and would require an operational and maintenance staff of about fourteen people. SBR would operate the processing system under newly negotiated terms of the Operations Agreement. The mixed waste process system would involve shredding the waste into smaller than 18 inches and then utilizing screening, air, and optical separation systems to separate the waste into recyclable materials (e.g., containers, paper, and metals) and organic material / food waste. The organic materials would be further processed onsite by using an extraction press (a high-pressure press similar to a baler provided by Anaergia) to produce an organic slurry. Roughly seven loads per day of organic slurry would be trucked from the Shoreway Transfer Station to SVCW for cleaning and anaerobic digestion. The biogas produced from the anaerobic digestions process would be used to generate green electricity to power SVCW's onsite power needs or sold to PG&E.

Financial Analysis

For the purpose of comparing the proposed mixed waste processing system to the agency’s current costs of waste disposal at Ox Mountain, a financial model (proforma) was created that captures project revenues, expenses (capital and operational costs) and projected cash flow for year 1 of this proposed new operation. In terms of revenues, the existing franchise disposal rate of \$92 per ton was used as the tipping fee and conservative recovery rates and commodity price assumptions were used for recovered recyclables (i.e., assumes a recovery rate of 75% for containers and 50% for dry paper). Operating cost assumptions include using the 2015 MRF processing fee per ton of \$82.73 for all recovered recyclables (i.e., paper and containers) that will require secondary separation, current Ox Mountain disposal rate of \$39.62 per ton, current Transfer Station handling fee per ton of \$12.59 paid to SBR, current transportation rates per ton mile (equates to \$15.73 per ton to Ox Mountain and proposed rate of \$6.76 per ton to SVCW) paid to SBR, and a new processing fee of \$33.24 per ton or organic material to be paid to SVCW. Capital cost assumptions were as follows: an interest of 4.5% was used; and depreciable life assumptions of 10 years for processing equipment, 30 years for building improvements, and 7 years for rolling stock. **Table 2.24** summarizes the project capital requirements, and depreciation and interest assumptions.

Table 2.24 Capital for Mixed Waste Processing System				
Building / Facility	Life	Sq. Ft.	Cost (\$)	
Building	30	4,400	1,902,000	
Site Development	30	-	400,000	
Contingency	30	10%	230,200	
Subtotal			2,532,200	
Processing Equipment	Life		Sorting Equip.	Organics Extraction
System cost w/ 15% site work	10		5,428,396	3,150,000
Transfer Conveyor	10		500,000	-
Soft Costs	10	10%	592,840	315,000
Contingency	10	10%	652,124	346,500
Subtotal			7,173,359	3,811,500
SUBTOTAL			9,705,559	3,811,500
TOTAL SBWMA CAPITAL				13,517,059
<i>Note: Interest Rate @ 4.5%</i>				
Other Capital:				
SBR Rolling Stock (w/ contingency)			385,000	217,433
TOTAL CAPITAL				14,119,492

Given these assumptions above, **Table 2.25** on the next page provides a financial summary of the base- case project (year 1) which shows that there would be a net cost (above current Transfer Station operating costs) of **\$10.76 per ton** for each ton of solid waste processed by the mixed waste processing system at the Transfer Station.

Table 2.25: Mixed Waste Processing System – Base-Case System (Small TS with Fiber Recovery)

	<u>Current</u>	<u>Proposed</u>	<u>Better / <Worse></u>
Inbound Tons - Franchise Solid Waste	177,098	177,098	-
Disposed Tons - Franchise Solid Waste	177,098	127,507	49,591
New Diverted Tons	-	49,591	49,591
<hr/>			
Revenue - Tip Fee	\$ 16,293,016	\$ 16,293,016	\$ -
Revenue - Commodity Revenue	\$ -	\$ 3,282,030	\$ 3,282,030
Revenue Total	\$ 16,293,016	\$ 19,575,046	\$ 3,282,030
Expense	\$ 12,032,038	\$ 17,219,555	\$ (5,187,517)
Contribution to Reserves	\$ 4,260,978	\$ 2,355,491	\$ (1,905,487)
<hr/>			
Revenue / Inbound Ton	\$ 92.00	\$ 110.53	\$ 18.53
Cost / Inbound Ton	\$ 67.94	\$ 97.23	\$ (29.29)
Contribution / Inbound Ton	\$ 24.06	\$ 13.30	\$ (10.76)
Incremental Net Contribution / Incremental Diverted Ton			\$ (38.42)
SBWMA Capital		\$ 13,517,059	

The estimated collection rate impact for the base-case system would be 1.9%.

Based on a large expected increase in our landfill disposal costs in 2020, the base-case scenario was modified to reflect a 20% increase in disposal costs in 2020. Assuming all other project cost assumptions remained the same, this would lower the estimated collection rate impact to 1.5%. **Table 2.26** shows the modified financial results for the base-case system.

Table 2.26: Mixed Waste Processing System – Base-Case System w/ 20% Increase in Disposal Rate

	<u>Current</u>	<u>Proposed</u>	<u>Better / <Worse></u>
Inbound Tons - Franchise Solid Waste	177,098	177,098	-
Disposed Tons - Franchise Solid Waste	177,098	127,507	49,591
New Diverted Tons	-	49,591	49,591
<hr/>			
Revenue - Tip Fee	\$ 16,293,016	\$ 16,293,016	\$ -
Revenue - Commodity Revenue	\$ -	\$ 3,282,030	\$ 3,282,030
Revenue Total	\$ 16,293,016	\$ 19,575,046	\$ 3,282,030
Expense	\$ 13,435,363	\$ 18,229,920	\$ (4,794,558)
Contribution to Reserves	\$ 2,857,653	\$ 1,345,125	\$ (1,512,528)
<hr/>			
Revenue / Inbound Ton	\$ 92.00	\$ 110.53	\$ 18.53
Cost / Inbound Ton	\$ 75.86	\$ 102.94	\$ (27.07)
Contribution / Inbound Ton	\$ 16.14	\$ 7.60	\$ (8.54)
Incremental Diverted Ton			\$ (30.50)
SBWMA Capital		\$ 13,517,059	

Modeling of Alternative Scenarios and Financial Sensitivity

Several alternative scenarios were considered in the financial evaluation of the mixed waste processing system at Shoreway described above. Specifically, three alternative scenarios are presented below have potential impacts on the overall system processing costs.

1) Adjust the size of the Transfer Station building expansion from the assumed 4,400 square foot addition to a 12,000 square foot addition that would include the construction of a new Recology administration building. The mixed waste processing system designed for the Shoreway Transfer Station assumes that the Transfer Station building will be expanded by 4,400 square feet to accommodate mixed waste processing system, however, the operational space needs of the processing system have not been fully explored and still have a degree of uncertainty. For the purpose of providing a conservative alternative scenario for the Transfer Station building costs, a Transfer Station building design was evaluated that would enlarge the Transfer Station to the site maximum size of 12,000 square feet. In this scenario, the Recology administration building would be demolished for the expanded Transfer Station and a new 10,000 square foot Recology administration building would be constructed. The total capital costs associated with this alternative scenario are \$12,497,010 inclusive of a 10% contingency. When compared to the construction costs assumed in the base-case, the large Transfer Station build-out would add \$9,964,819 in construction expense and produces financial results summarized below in **Table 2.27**.

Table 2.27: Mixed Waste Processing System – Alternative Large TS with Fiber Recovery

	Current	Proposed	Better / <Worse>
Inbound Tons - Franchise Solid Waste	177,098	177,098	-
Disposed Tons - Franchise Solid Waste	177,098	127,507	49,591
New Diverted Tons	-	49,591	49,591
Revenue			
Revenue - Tip Fee	\$ 16,293,016	\$ 16,293,016	\$ -
Revenue - Commodity Revenue	\$ -	\$ 3,282,030	\$ 3,282,030
Revenue Total	\$ 16,293,016	\$ 19,575,046	\$ 3,282,030
Expense			
Expense	\$ 12,032,038	\$ 18,055,665	\$ (6,023,627)
Contribution to Reserves	\$ 4,260,978	\$ 1,519,380	\$ (2,741,597)
Per Ton Metrics			
Revenue / Inbound Ton	\$ 92.00	\$ 110.53	\$ 18.53
Cost / Inbound Ton	\$ 67.94	\$ 101.95	\$ (34.01)
Contribution / Inbound Ton	\$ 24.06	\$ 8.58	\$ (15.48)
Incremental Net Contribution / Incremental Diverted Ton			\$ (55.28)
SBWMA Capital		\$ 24,459,419	

2) Adjust the commodity value of the paper recovered by the mixed waste processing system from the assumed average commodity price of \$118.00 per ton to \$0 per ton. The mixed waste processing system at the Transfer Station is designed to capture containers (bottles and cans) and paper (cardboard, newspaper, and mixed paper) from the waste stream. There is some concern about quality and “marketability” of the paper that would be recovered from the waste steam primarily due to moisture

contamination. While staff visited other processing facilities to understand the fiber quality that could be captured by a mixed waste processing system at Shoreway, the high degree of waste stream variability coupled with the use of different recovery technologies made it difficult to ascertain paper quality that would be captured through mixed waste processing system at Shoreway. **Table 2.28 Small TS without Fiber Recovery** and **2.29 Large TS without Fiber Recovery** capture the financial impact of not recovering / selling paper (\$645,280 per year) on the Small and Large Transfer Station expansion scenarios.

Table 2.28: Mixed Waste Processing System - Small TS without Fiber Recovery

	<u>Current</u>	<u>Proposed</u>	<u>Better / <Worse></u>
Inbound Tons - Franchise Solid Waste	177,098	177,098	-
Disposed Tons - Franchise Solid Waste	177,098	127,507	49,591
New Diverted Tons	-	49,591	49,591
Revenue - Tip Fee	\$ 16,293,016	\$ 16,293,016	\$ -
Revenue - Commodity Revenue		\$ 2,636,750	\$ 2,636,750
Revenue Total	\$ 16,293,016	\$ 18,929,766	\$ 2,636,750
Expense	\$ 12,032,038	\$ 17,193,590	\$ (5,161,552)
Contribution to Reserves	\$ 4,260,978	\$ 1,736,176	\$ (2,524,802)
Revenue / Inbound Ton	\$ 92.00	\$ 106.89	\$ 14.89
Cost / Inbound Ton	\$ 67.94	\$ 97.09	\$ (29.15)
Contribution / Inbound Ton	\$ 24.06	\$ 9.80	\$ (14.26)
Incremental Net Contribution / Incremental Diverted Ton			\$ (50.91)
SBWMA Capital		\$ 13,517,059	

Table 2.29: Mixed Waste Processing System – Large TS without Fiber Recovery

	<u>Current</u>	<u>Proposed</u>	<u>Better / <Worse></u>
Inbound Tons - Franchise Solid Waste	177,098	177,098	-
Disposed Tons - Franchise Solid Waste	177,098	127,507	49,591
New Diverted Tons	-	49,591	49,591
Revenue - Tip Fee	\$ 16,293,016	\$ 16,293,016	\$ -
Revenue - Commodity Revenue	\$ -	\$ 2,636,750	\$ 2,636,750
Revenue Total	\$ 16,293,016	\$ 18,929,766	\$ 2,636,750
Expense	\$ 12,032,038	\$ 18,081,630	\$ (6,049,592)
Contribution to Reserves	\$ 4,260,978	\$ 848,136	\$ (3,412,842)
Revenue / Inbound Ton	\$ 92.00	\$ 106.89	\$ 14.89
Cost / Inbound Ton	\$ 67.94	\$ 102.10	\$ (34.16)
Net Income per Ton	\$ 24.06	\$ 4.79	\$ (19.27)
Incremental Net Contribution / Incremental Diverted Ton			\$ (68.82)
SBWMA Capital		\$ 24,459,419	

3) Adjustment of the SVCW tip fee for organics slurry by +/- \$10 per ton. SVCW has been working on a parallel path of modeling the financial feasibility of a system to anaerobically digest the 32,300 tons per year of organic fraction produced from the mixed waste processing system at Shoreway. SVCW has not fully vetted all of their capital improvement costs associated with the project and the SVCW tip fee of \$33.73 per ton of organic slurry assumed in the base-case could change. It is estimated that SVCW will need to spend \$15-\$19 million in capital plant improvements to be able to digest the organic slurry material into electricity. To provide a sensitivity analysis on the SVCW tip fee's impact to the SBWMA mixed waste processing cost, a range +/- \$10 per ton was analyzed and results in increase or decrease of \$365,000 per year or \$7.36 per ton for all of the scenarios.

Project Benefits

There are numerous project benefits to the agency from the implementation of a mixed waste processing system at the Transfer Station that include:

- Operation of mixed waste processing system with organics recovery and AD at SVCW would meet organics waste recycling requirements of AB1826 and may minimize the need for greatly expanded food waste collection for commercial, institutional, and MFD in the service area after 2018.
- 25-30% of the SBWMA's garbage can be recovered through a mixed waste processing system that can significantly boost the agency's overall measured diversion levels.
- Processing organic fraction at SVCW's wastewater treatment facility reduces capital requirements to treat organic material by leveraging SVCW's existing infrastructure and thereby reduces overall cost project
- The organic materials that are captured through a mixed waste processing system will be diverted from landfill and be anaerobically digested to generate green power.
- Up to two-megawatts of green electricity can be produced on a continuous basis by digesting the organic materials from Shoreway creating a new revenue stream that helps to offset cost of project. The estimated value of the power generated through SVCW's AD and biogas combustion is valued at roughly \$2 million per year.
- The sale of additional recyclable materials creates a new revenue stream valued at \$3,282,030 per year that helps to lower the cost of the project.
- With less garbage being sent to the landfill the JPA's disposal and transportation cost are reduced which helps to lower the cost of the project; it is estimated that the reduction in garbage disposal at Ox Mtn. landfill would reduce the JPA's annual disposal and transportation cost by \$2,652,000 per year. The landfill contract at Ox Mtn. landfill will expire in 2019. A landfill survey completed by the SBWMA in 2014 estimates that tip fees at Ox Mtn. could increase 20% starting in 2020. Reducing the amount of garbage sent to the landfill would reduce the impact of this potential landfill tip fee increase.
- A reduction in the amount of garbage shipped to Ox Mtn. landfill would help preserve the disposal capacity and extend the life of the landfill for the County's future use.
- There are several grant funding opportunities (CalRecycle, California Energy Commission (CEC) and other State entities) that are applicable to this project. In fact, SCVW has recently received a grant of \$1.4 million from the California Energy Commission to research how a food waste digestion project such as this could increase energy production.
- The materials diversion success of mixed waste processing system does not rely on changes to existing residential and commercial source separation collection programs managed by Recology.

- Since the SBWMA would own and control the mixed waste processing system at the Transfer Station, there would be a high level of assurance that the money spent to boost diversion would be well spent.
- A mixed waste processing system would not disrupt the Member Agency's revenue streams. Since the Member Agency's collection revenues are tied to garbage service, any reduction in garbage generation translates to a reduction in rate revenue. Diversion achieved through a mixed waste processing system captures recyclable materials after garbage fees have been paid by customers and therefore Member Agency revenues remain unaffected.

Both the SBWMA and SVCW has progressed rapidly in completing the preliminary technical and financial feasibility of the mixed waste processing system. Based on the positive results from the study to date, SVCW has expressed their interest in continuing to develop the project to a point where a "go/no-go" decision can be made. The analysis by both the SBWMA and SVCW have identified areas that require further study and design in order to make a final determination on the project's viability, however, from the research completed to date, no "fatal flaws" have been identified by either SVCW or the SBWMA. The next phase of project feasibility analysis will include: design to a 30% design level on the capital components and structures associated with the project and defining the roles and contractual responsibilities of the many project stakeholders. **Table 2.30** below provides details of the next steps in project development.

Table 2.30: Mixed Waste Processing System Development Tasks

<u>Task</u>	<u>Description</u>	<u>Timeframe</u>
Updated project budget	Project budget to be included in FY1516 budget	March-June 2015
Additional waste composition research	System capture rates of recyclable and organic material need to be verified through a waste analysis and materials marketability needs to be verified	March-May 2015
Final decisions on viability of fiber recovery and commodity sales	Based on samples collected from waste analysis, the commodity value of recovered fiber will be assessed	May 2015
Final system layout and decision on Transfer Station building construction	Detailed system layout and floor space utilization analysis completed to determine Transfer Station space needs and building construction costs	June 2015
Consult with regulatory agencies	CalRecycle regulates the Transfer Station operation and will need to be consulted about the project for concept approval	July 2015
Development of Draft MOU between SBWMA and SVCW for the Boards of Directors to consider	MOU will be developed that clarifies core terms of project and commits each agency to fund continued project feasibility development to 30% design level	November 2015
Completion of draft agreement with Anaergia for provision of equipment and services	Anaergia is a key vendor stakeholder in process that links organic material extraction at Shoreway and SVCW digestion process and would supply equipment and services	November 2015
Completion of draft agreement with SBR for the operation of the mixed waste processing system	SBR is a key stakeholder in operation of the mixed waste processing system at the Transfer Station and the terms and costs to be agreed upon	November 2015
Grant applications completed to CalRecycle, CEC, and others	Grant opportunities are being explored and present an opportunity to reduce the cost of processing	Ongoing
Development of a draft Plan of Finance	Financing options and financing expense estimates for the SBWMA portion of the project will be evaluated	February 2016

For the next phase of the mixed waste processing system project development, staff will come back to the Board with a final recommended budget for FY1516 that will include items and estimated costs shown in **Table 2.31** Mixed Waste Processing System – FY1516 Project Development Budget below. It is expected that through the completion of the tasks listed in the **Table 2.30** Implementation Schedule above and items shown in **Table 2.31**, staff will be in a position to present a final mixed waste processing project study and cost proposal to the Board in early 2016 that defines the costs and benefits of the project. (Note that the architectural design fees shown in **Table 2.31** would be removed from the final project costs as the preliminary architectural design work will have been completed in FY1516.)

Table 2.31: Mixed Waste Processing System – FY1516 Project Development Budget

<u>Description of Item</u>	<u>Estimate Cost of Item</u>
Transfer Station equipment space utilization assessment	\$12,000
Building architectural design (30% design) and estimating	\$51,000 (\$342,000 Large TS)
Waste composition analysis and market study	\$30,000
Legal and financial contract development support	\$30,000
<u>Project development consulting and permitting support</u>	<u>\$60,000</u>
Total Project development expenses for FY1516	\$183,000 (\$474,000 Large TS)

b. Shoreway Transfer Station and Other Building Improvements

Goals

The installation of a mixed waste processing system will require an expansion of the Transfer Station building to meet the equipment and operating space needs of the system as described in **Section 2.B.2.a.** Working with JRMA architects (the firm that designed the master plan improvements completed in 2011) staff has evaluated several Transfer Station building expansion options and has also evaluated several options for building onsite office and public meeting space for the SBWMA. This infrastructure expansion option supports multiple LRP Guiding Principles including:



- Support local, state and national mandates, including meeting the State's 75% recycling goal by 2020
- Leverage existing infrastructure
- Provide cost-effective and efficient programs
- Reduce and mitigate landfill and other facility impacts
- Invest in new, safe technologies and processes for infrastructure
- JPA Member Agency facilities and the Shoreway facility to serve as models for high diversion facilities

Overview

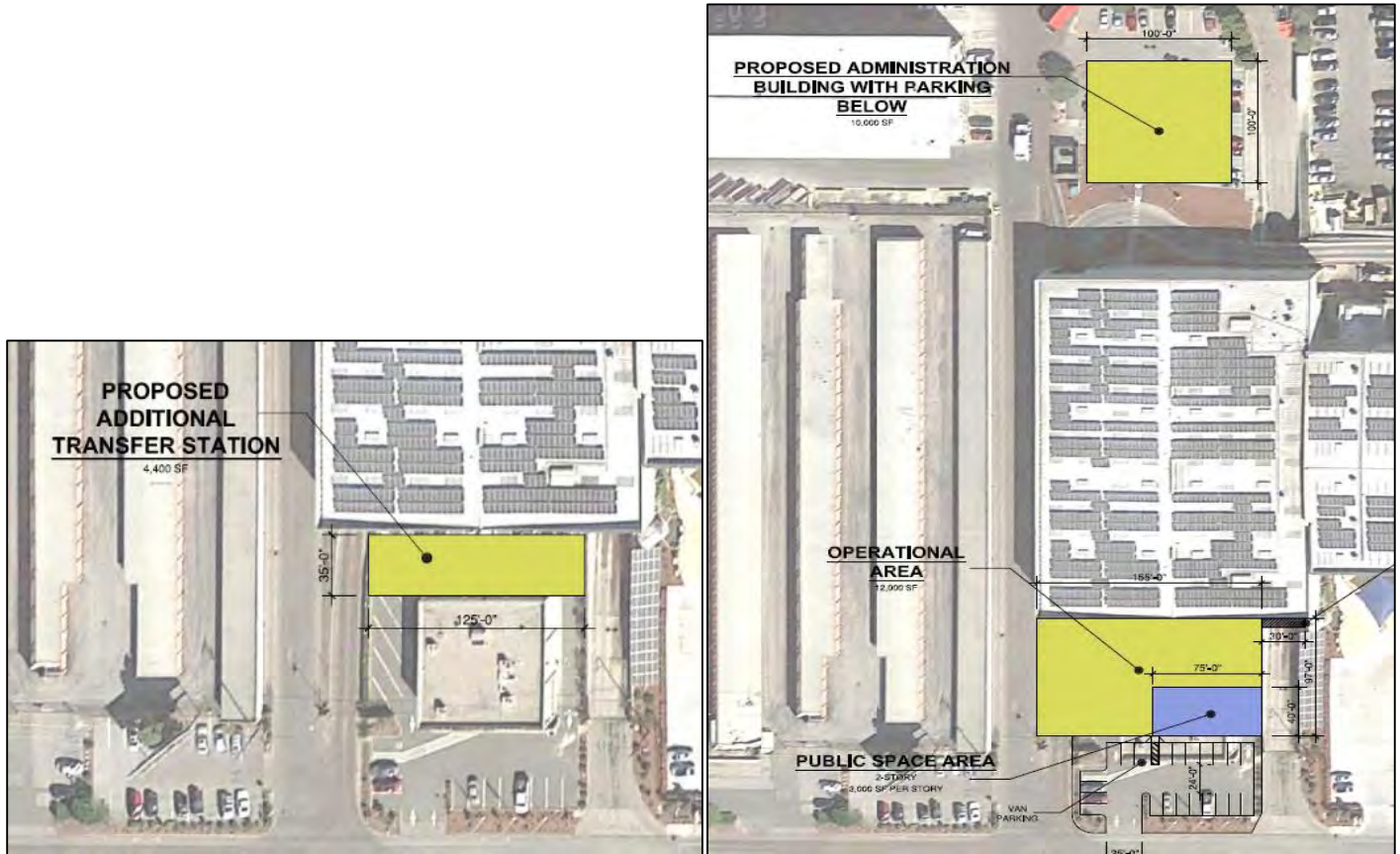
Transfer Station Operational Areas

The existing operational area of the Transfer Station building is roughly 70,000 square feet with 56,000 square feet dedicated to truck unloading, materials storage, and transfer of garbage and green waste into tractor trailers for transport to offsite disposal and processing locations. The mixed waste processing system has been designed to fit into the northwest side of the Transfer Station building and an expansion of the northwestern side of the building would be required. As presented in the mixed waste processing section above, the base-case system assumes a Transfer Station expansion of 4,400 square feet at an estimated cost of \$2,532,200.

While the current project evaluation assumes that an additional 4,400 square feet will accommodate the needs of the new processing system operation, the site footprint could accommodate a larger Transfer Station expansion of roughly 12,000 square feet (toward the northwest front of the property to the edge of Shoreway road and in line with the front of the MRF building) if needed for additional materials processing space. In the large Transfer Station expansion of 12,000, the 10,000 square foot Recology administration building would be demolished and a new Recology 10,000 square foot administration building would be constructed behind (to the southeast) the Transfer Station in an area that is currently used for parking. The new Recology administration building would be a two-story structure with understory parking space for employee vehicle parking needs (see **Figure 2.3** for both Transfer Station expansion options). As described below, the larger Transfer Station expansion option would also provide space for SBWMA administrative offices and public meeting space. A budget amount of \$25,000 will be included in the FY1516 budget for additional design and concept development to assist in the decision making process on the preferred SBWMA administration area construction.

Figure 2.3: Proposed Transfer Station Building Expansion Options

(Shows Small 4,400 sq. ft. and Large 12,000 sq. ft. Transfer Station expansion with new proposed Recology Administration Building with Parking Below shown in back of the Transfer Station)



c. SBWMA Administrative Offices and Public Meeting Space

The SBWMA leases roughly 2,500 square feet of office space from the City of San Carlos and has use of the adjoining community meeting room at the library building (at no cost) for Board of Directors meeting and other meetings. The current rent expense with utilities is roughly \$60,000 per year. Staff has worked with JRMA Architects to evaluate options for creating new SBWMA office and meeting space at Shoreway. Three potential options were evaluated and associated construction costs were estimated. These three options are presented in the tables below.

Table 2.32: Option 1 – Remodel of Recology Administration Building for SBWMA Offices

Description	Cost	Evaluation Findings
<p>Take over and remodel 3,000 square feet of space on the second floor on the Recology administration building and add an elevator for public access.</p> <p>The site plan below shows the location of proposed additional Transfer Station area and the existing Recology administration building where the SBWMA offices would be located.</p>	<p>\$275,000</p>	<p>This option consumes surplus office space, meeting space and kitchen space used by Recology on an as-needed basis.</p> <p><u>This options does not provide meeting space for SBWMA Board meetings.</u> The addition of SBWMA staff would strain current parking availability and could require the rental of additional parking offsite.</p>
<p><i>The site plan below shows the location of proposed 4,400 sq. ft. Transfer Station expansion and the existing Recology administration building where the SBWMA offices would be located.</i></p>		

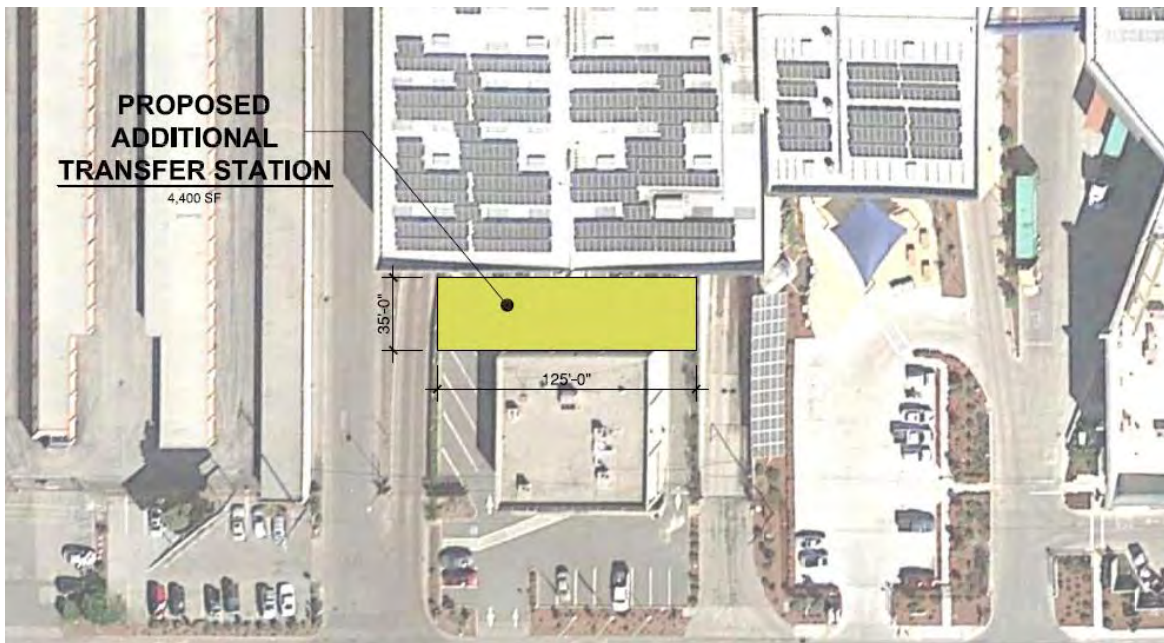


Table 2.33: Option 2 – Construction of New Stand Alone SBWMA Office and Public Meeting Space

<u>Description</u>	<u>Cost</u>	<u>Evaluation Findings</u>
Construction of a new two-story 5,628 sq. ft. stand-alone office building between the MRF and the Transfer Station; this is currently the visitors parking lot. The building has understory parking and 5,628 sq. ft. of upstairs space for SBWMA offices and public meeting space.	\$3,339,000	<p>Provides SBWMA office and meeting space. Building is separate from SBR and Recology buildings.</p> <p>Increases onsite parking needs that could require additional parking to accommodate SBWMA staff and meetings.</p>

The site plan below shows in yellow the location of proposed SBWMA office and public meeting space with parking below.

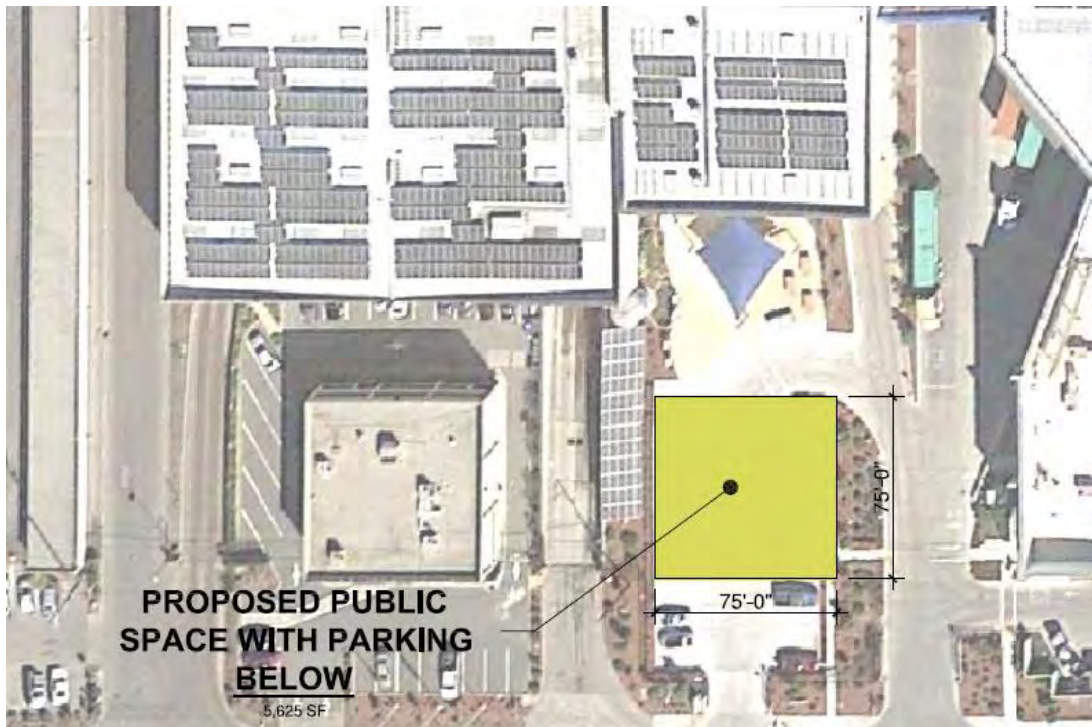
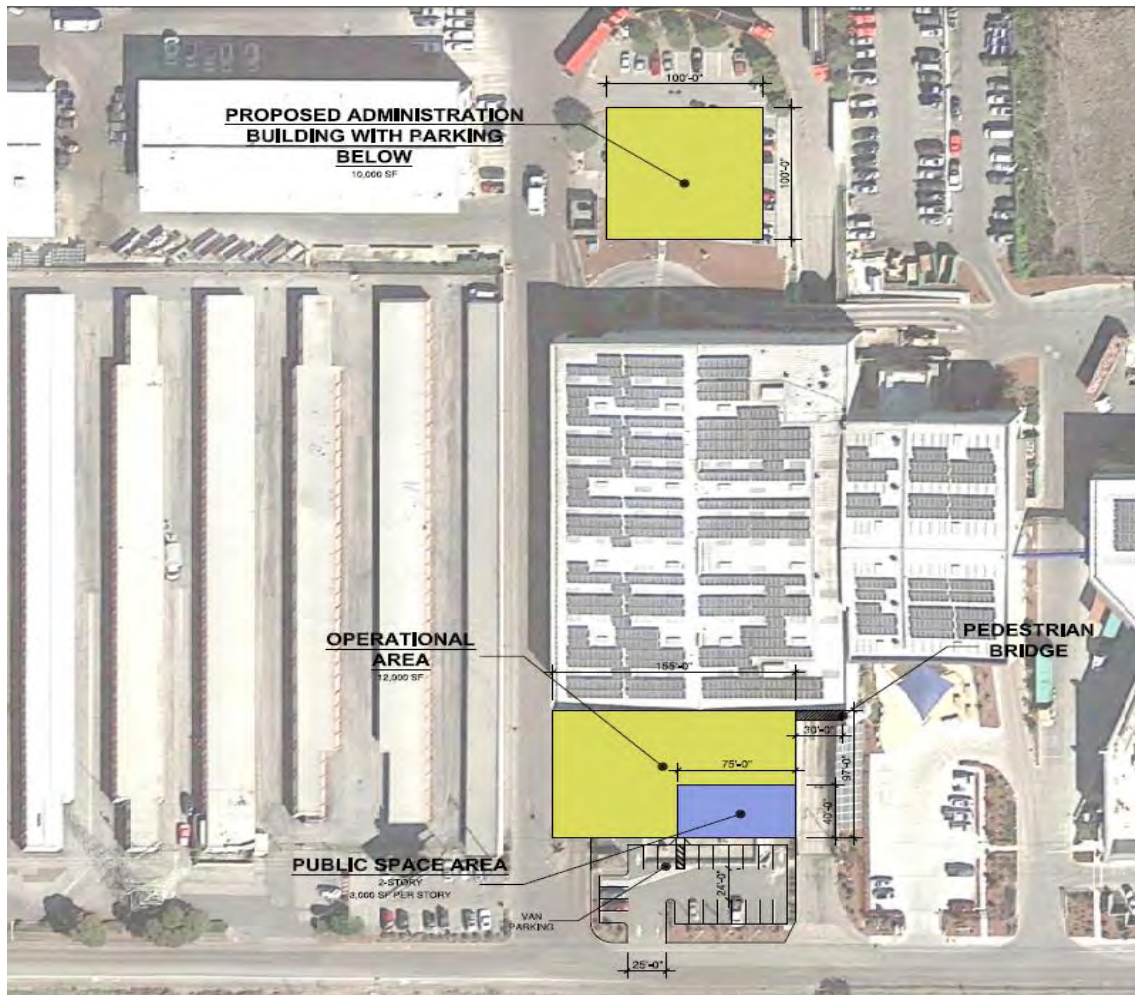


Table 2.34: Option 3 - Construction of New SBWMA Office and Public Meeting Space (Shown in Blue) within Transfer Station Expansion

Description	Cost	Evaluation Findings
Construct office and meeting space that would be added to and integrated with an enlargement to the Transfer Station building. Only an option if the Transfer Station is fully built out.	\$977,550	Can only be constructed if the Transfer Station is fully built out for the mixed waste processing system or for TS future processing needs. Two level construction with first level providing 3,000 sq. ft. of meeting space and second level providing 3,000 sq. ft. of office space. The addition of SBWMA staff would require the addition of parking area.

The site plan below shows the large Transfer Station expansion labeled "Operational Area" where the current Recology administration building is located, proposed SBWMA office and meeting space shown in blue labeled "Public Space", and a new Recology administration building with parking below shown in yellow behind the existing Transfer Station building.



d. MRF Single Stream Processing Equipment and Building Expansion

This section summarizes future processing equipment needs and the expansion of the MRF tipping area. The information is provided for the purposes of completeness related to Shoreway improvements. The SBWMA already has cash reserve funds set aside in an equipment replacement fund for single stream processing equipment replacement and the Board has already approved a budget which includes capital funds for the MRF tipping area expansion (“MRF canopy project”).



MRF Single Stream Processing System Equipment Replacement Schedule

In 2011, the SBWMA purchased and installed the single stream processing equipment currently operated by SBR to sort residential and commercial recyclables. The SBWMA paid roughly \$17 million for the MRF system and the equipment is being depreciated over a 12-year schedule. Due to the intensive use of the equipment and the physical and mechanical wear over time, staff anticipates the need to replace specific system components and has factored equipment replacement expense into the agency’s long-term financial forecasts. The equipment replacement schedule shown in **Table 2.35** below shows the expenditures by year on the MRF equipment and the status of the SBWMA’s Equipment Replacement Reserve (The MRF Equipment Replacement Schedule was developed in consultation with BHS (the system manufacturer) and reflects the current rate of system utilization (currently operating two 7-hours shifts per day). Note that staff and SBR continue to evaluate the rapid changes in consumer packaging and have included upgrades to specific sort system components to ensure that the Shoreway MRF processing system stays current with the changing inbound recycling stream.

Table 2.35: MRF Equipment Replacement Schedule

Based on MRF Equipment Manufacturer Replacement Estimate									
	FY1415	FY1516	FY1617	FY1718	FY1819	FY1920	FY2021	FY2122	FY2223
Beginning Reserve Balance	\$1,426,611	\$1,562,156	\$1,744,291	\$1,832,677	\$1,721,062	\$1,817,781	\$1,640,749	\$1,495,044	\$1,411,838
MRF Equipment Reserve	\$295,885	\$295,885	\$295,885	\$295,885	\$295,885	\$295,885	\$295,885	\$295,885	\$295,885
Forecasted Equipment Replacement	-\$160,341	-\$113,750	-\$207,500	-\$407,500	-\$199,167	-\$472,917	-\$441,591	-\$379,091	-\$559,091
Ending Reserve Balance	\$1,562,156	\$1,744,291	\$1,832,677	\$1,721,062	\$1,817,781	\$1,640,749	\$1,495,044	\$1,411,838	\$1,148,633

MRF Building Tipping Area Extension

The Shoreway MRF is processing roughly 110 tons per day of third party tonnage. The MRF building was designed to handle only the franchise tonnage and the additional third party tonnage has expanded the daily inbound tonnage beyond the building’s designed storage capacity. To accommodate the additional tonnage at the MRF, the SBWMA Board budgeted \$450,000 in construction capital in FY1415 to expand the MRF tipping area. The MRF tipping area extension project will provide the necessary vehicle unloading area and materials storage space to ensure that the MRF stays in regulatory compliance. The State’s solid waste regulatory agency (CalRecycle/LEA) that oversees the Shoreway facility and the City of San Carlos Planning and Building Departments have reviewed and approved the architectural plans for the MRF tipping areas extension project. **Figure 2.4** shows a rendering of the MRF tipping area extension and the location of the new area on the Shoreway site. The actual construction period is estimated to take three months with project completion anticipated in fall of 2015 (depending on whether a contract for construction is approved by the Board at the April or May 2015 meeting, the construction is estimated to end in September or November 2015).

Figure 2.4: Rendering of Shoreway MRF Tipping Area Extension and Site Plan with Construction Location Shown



Project Cost

The total cost estimate for the project is \$438,741 on a budgeted amount of \$450,000.

e. CNG Fueling System

Goals

The conversion of the collection fleet from diesel to CNG fuel and the installation of a CNG fueling system meets the long-term goals of the agency and supports multiple LRP

Guiding Principles including:

- Reduce collection fleet emissions
- Provide cost-effective and efficient programs
- Reduce and mitigate landfill and other facility impacts
- Investing in new, safe technologies and processes for infrastructure
- JPA Member Agency facilities and the Shoreway facility to serve as models for high diversion facilities



Project Details

Recology operates 127 route collection vehicles and consumes roughly one million gallons of diesel per year to provide collection services to the 12 Member Agencies. Diesel fuel is a significant annual operating expense for Recology, and the SBWMA and Recology have been evaluating ways to reduce the cost of fuel and the collection fleet's air emissions impact. Amongst the nation's largest waste hauling companies, there is a trend to convert collection fleets to CNG fuel to capture the benefit of CNG's lower fuel cost. As discussed in **Section 2.B.1.a** (page 30), CNG is currently less than half the cost of diesel and could potentially provide the \$0.99 million in annual savings compared to current fuel costs. Recology uses the Shoreway fuel system infrastructure to fuel all collection vehicles and a conversion of the current diesel collection fleet would require a complete retrofit of the fueling system at Shoreway. Staff has evaluated the logistics, the site constraints, and the costs of installing CNG fuel system so that these infrastructure changes can be factored into the overall cost of converting the collection fleet to CNG.

Given the tight space constraints at Shoreway, the area currently utilized by the diesel fuel system would need to be repurposed to accommodate a new CNG fueling system. This would require the diesel dispensing system (including the three 15,000 gallon UST tanks) be removed and closed to the standards of the State Water Board prior to the installation of a new CNG dispensing system. This process would need to be closely coordinated to minimize the fuel system down-time and the SBWMA would need to ensure that the new CNG fuel system is reliably operating prior to the new CNG collection fleet coming online. Through consultation with Recology, consultants, CNG fuel system vendors, and other agencies SBWMA staff has concluded that Shoreway has enough space for a new CNG fuel system but that the truck parking area will need to be reconfigured (CNG refueling requires that each vehicle be connected to fuel lines overnight, thus each vehicle must have its own dispenser installed in the parking area between trucks which requires greater separation between vehicles than the current parking layout allows).

The main component of a CNG fuel system is a central gas compression and storage facility - a system sized to handle the large number of vehicles at Shoreway would require a compression and storage supply system that would take up roughly 32,000 square feet. This system would need to be connected to PG&E's electrical and gas supply lines. PG&E supplies gas at a fairly low pressure (60 PSI) so the natural gas from the pipeline needs to be compress prior to filling the collection vehicle tanks. Connecting the CNG compression and storage system to the PG&E utility lines (in Shoreway's case at the front of the property roughly one thousand feet from the fuel station) is typically the responsibility of the property owner, while the installation of the CNG gas

compression and storage facility, the individual vehicle fuel connections, and the onsite dispensers are typically installed by a CNG vendor. (See images in **Figure 2.5** where these components are shown displayed in order.)

Figure 2.5: Components of a CNG Fuel System



CNG fuel providers offer many contracting and financing options for the installation of a CNG fuel system. Staff has evaluated a “turn-key” contracting method that was recently followed by another JPA, the Monterey Regional Waste Management District (MRWMD), in their conversion from diesel to CNG. In their turn-key contracting method, MRWMD contracted with a CNG fuel vendor to provide “design, build, own, operate, and finance” services to the JPA in exchange for a long-term (15year) fuel purchase agreement. The advantages to this type of arrangement are as follows:

- The CNG vendor takes all risk and responsibility for the fueling system installation and operations.
- All CNG facility maintenance items and costs related to potential interruptions of fuel supply are the responsibility of the CNG system vendor.
- The Collection Services provider would likely contract directly with the CNG fuel vendor for the provision of CNG and the CNG station and thus the SBWMA would be removed from liability.
- The substantial cost of the CNG fuel system (estimated at \$2.5M) would be financed by the CNG fuel vendor.
- The existing Shoreway site lease agreement between Recology and the SBWMA can be structured to serve as a contractual tool to transfer the ownership of the CNG fuel system to the SBWMA at the end of the fuel purchase agreement.

If the SBMMA decides to enter into a turn-key CNG system installation agreement as described above, the SBWMA would still bear the responsibility and the cost for timely connection to PG&E’s utilities’ (from the PG&E utility supply lines to the CNG fuel system). This installation would need to be carefully budgeted and scheduled so that the work is completed prior converting the collection fleet to CNG.

The SBWMA is exploring the potential of including Bio-CNG as a fuel option for the collection truck fleet. Like CNG, Bio-CNG is a methane based gas, but is derived from the decomposition of organic matter rather than from the earth’s crust. The benefit of Bio-CNG over CNG is that it is “waste derived” and therefore does not add to atmospheric carbon emissions. As part of the mixed waste processing system and organic materials digestion project that is being developed in conjunction with SVCW, staff is exploring the potential to utilize a portion of the bio-gas from this project for truck fuel. SVCW will be conducting a biogas utilization study that analyzes their facility’s power needs and the replacement of grid-power with power generated from bio-gas

from the SBWMA's organic material. If there is excess bio-gas from the anaerobic digestion process, SVCW could potential clean and compress this into Bio-CNG that could be added to the SBWMA CNG supply to create a Bio-blended fuel. (As well as the SVCW project, the SBWMA plans to evaluate all other potential sources of Bio-CNG as a possible truck fuel.) There are many important and complex aspects that will need to be studied in the evaluation of a Bio-CNG fuel including: the cost of the Bio-CNG, the proximity and accessibility of the Bio-CNG source to the truck fleet, quantity and quality of the Bio-CNG fuel, reliability of the supply of Bio-CNG, and collection truck engine manufacturer's warranty restrictions.

Cost of CNG Fuel System

As shown in **Table 2.36**, the SMWMA capital costs for utility connection and the costs to the prepare collection vehicle maintenance areas for CNG vehicles is estimated at \$1,100,000 - \$1,525,000. Prior to converting to CNG, the SBMWA will need to pay for the removal the existing diesel system estimated at one-time costs of \$275,000 and pay to install a small diesel tank and dispensing system to fuel the transfer trucks estimated at \$100,000.

In 2014, the SBMWA completed a groundwater remediating project to remediate pre-existing contamination at the site. The SBWMA maintains an unspent reserve of approximately \$1,240,000 (Allied Waste Remediation Settlement) that could be applied to cover most of the expenses associated with the diesel system removal and CNG connection. (Staff would recommend using the Shoreway remediation fund balance of \$1.24 million to help pay for the CNG project costs.)

Table 2.36: Shoreway CNG Fuel Supply System Project Costs

FY1920	SBWMA Cash Flow	
	Low Estimate	High Estimate
Remove Underground Tanks	\$275,000	\$275,000
SBWMA Capital for CNG System	\$1,100,000	\$1,525,000
Cash Flow	\$1,375,000	\$1,800,000
Shoreway Remediation Funds Available	\$1,240,000	\$1,240,000
CNG Project Cost (Net SBWMA Funds)	\$135,000	\$560,000

Financing arrangement for the purchase of the CNG compression and storage system are offered by CNG fuel vendors and the terms and scope of the contracts are quite flexible. Financing services provided by the CNG fuel vendor would need to be defined to evaluate the best financial arrangement for the SBWMA. **Table 2.37** on the next page the combined financial picture of the collection operations savings and the SBWMA Shoreway CNG project costs in **Table 2.36** above.

Table 2.37: Total CNG Costs

CNG COLLECTION COST IMPACT		2020	2021
Franchised Service Provider (Recology estimates)			
Net Annual Operating Cost Savings (Fuel and ops. savings - capital expense)		N/A	(\$992,960)
Estimated Collection Rate Impact:			-1.0%
SHOREWAY OPERATIONS EXPENSE (SBWMA)			
Remove Underground Tanks (one-time expense)		\$275,000	
SBWMA Capital (Low Estimate)		\$1,100,000	
SBWMA Capital (High Estimate)		\$1,525,000	
subtotal:		\$1,375,000 - \$1,800,000	
SBWMA Available Funds**		\$1,240,000	
	potential funding needed:	\$135,000 - \$560,000	
* Annual savings through 10-year franchise Agreement			
**Current balance in Shoreway remediation fund. Funds leftover from Allied Waste remediation settlement fund.			

Implementation

The implementation schedule for a CNG fuel system installation at Shoreway is expected to take one year and would involve a lengthy application, grid evaluation and transformer installation required by PG&E. The schedule for actual site construction (i.e., installation of the connection lines and placement of the CNG compression and storage facility is estimated to take 6 months excluding the SBWMA funds approval process). Since the removal of the existing diesel tank and fuel supply system is a necessary critical path item and since the risk of ground water contamination could significantly lengthen removal process, it is recommended that the time schedule to complete this work be evaluated and completed well in advance (two years prior) of converting the collection fleet to CNG fuel.

f. Other Shoreway Infrastructure Improvements

As the critical hub for the collection services and materials handling infrastructure, the SBWMA staff closely monitor the condition of the Shoreway Environmental Center and make facility improvements to keep the center functioning efficiently. Staff has evaluated opportunities to improve the efficiency of the facility operations, worker and customer safety and experience and has considered how the Shoreway infrastructure fits into the long-term goals and needs of the JPA. As an outcome of this evaluation process, staff has identified the following projects for further consideration: Shoreway site paving improvements, and implementation energy conservation systems (e.g., battery storage system and LED lighting retrofit).



Site Paving

The paving areas around the MRF and Transfer Station were largely replaced with new concrete during the 2011 master plan construction, however, the paved areas in the back half of the Shoreway property have not been improved. These paved areas are heavily used by Recology as their base of operations for truck parking, maintenance and fueling. Staff has been monitoring the condition of the pavement over the past several years and in the areas of heavy vehicle travel, the asphalt paving has started to fail. Of the roughly six acres of paved area, four acres will need to be removed and replaced at some point in the next five years. The rate of failure is largely dependent on the amount of rain during the winters as saturation and instability of the subsoil is the largest factor in hastening the pavement degradation. Staff has obtained cost estimates of \$2 million for the removal and replacing four acres of paving to a depth of 6 inches (note that this cost will fluctuate slightly with the price of oil). Patch paving will be performed to maintain the operability of the paved areas on an as-needed basis or until the area is repaved. Staff will include a forecast of this sending in the FY1516 budget, five-year capital spending worksheet.

Shoreway LED Lighting Retrofit

Goals

The conversion of the Shoreway lighting from the metal halide lighting to newer LED lighting technology meets the long-term goals of the agency and support multiple LRP Guiding Principles including:

- Reduce emissions
- Provide cost-effective and efficient programs
- Reduce and mitigate landfill and other facility impacts
- Invest in new, safe technologies and processes for infrastructure
- JPA Member Agency facilities and the Shoreway facility to serve as models for high diversion facilities

Overview


When the master plan construction was completed in 2011, LED lighting technology was not mature and large high-bay light fixtures used at Shoreway were not available. Since 2011, there has been rapid advancement in LED chip technology and the costs for LEDs have come down to the point where it makes financial sense to replace the existing lighting fixtures at Shoreway with energy saving LEDs. There are 783 industrial lighting fixtures (high-bay fixtures) at the Shoreway MRF, Transfer Station and in the Recology shop buildings. The cost

to retrofit all of these fixtures is estimated at \$274,000. Staff will work with PG&E on identifying any rebate opportunities for this project.

Financial Analysis

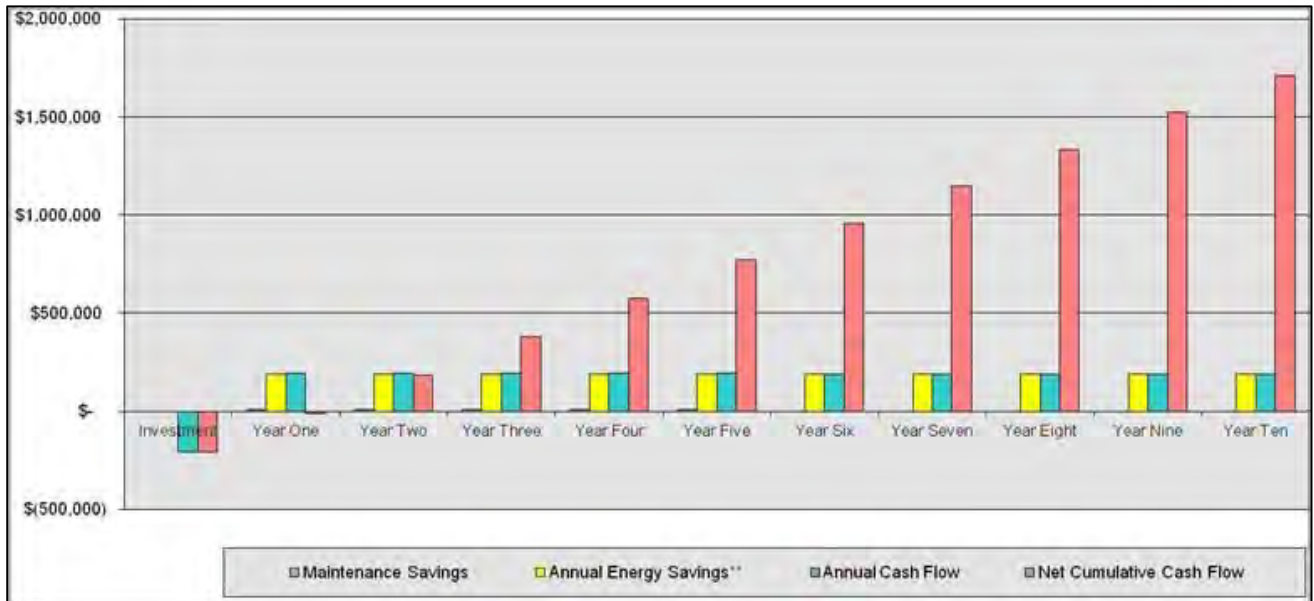
A LED lighting retrofit that assumes all of the 783 high-bay lights at Shoreway are replaced with LEDs and is expected to have a payback of approximately 1.3 years (i.e., the project would achieve positive net cash flow after finance payments within 1.3 years). **Figure 2.6** below provides a sample financial analysis of a Shoreway LED lighting retrofit project.

Figure 2.6: LED Retrofit Energy Saving Analysis

LED Lighting Upgrade Analysis	
Prepared for: <u>Shoreway Environmental Center</u>	
	
Project Cost:	\$274,050.00
<i>(783 fixtures, includes sales tax and rebate of \$125,280.00)</i>	
Annual Energy Savings	\$162,611.64
Annual Demand Savings	\$15,628.74
Annual Tax Avoidance	\$9,756.70
Annual Maintenance savings	\$20,877.91
Total Annual Savings	\$208,874.99
Return on Investment	76.22%
Payback (Years)	1.31
Warranty	10 Years
Longevity (based on L70)	18.5 Years

A summary of the cumulative net cash flow impact over a 10 year period is shown in **Table 2.38** on the following page. The LED fixtures are estimated to last roughly 18 years however, with the rapid pace of LED technology improvements along with rising energy costs there will likely be cost justification to retrofit again before the end of the 18 year estimated life.

Table 2.38: LED Retrofit Ten Year Cumulative Cash Flow Benefit



Benefits

LED technology provides improved CRI (higher clarity), better distribution (improved spread), significantly longer life (10x+), and reduced maintenance and disposal costs (no mercury).

Implementation

A pilot project is planned to be completed before the end of this fiscal year (initial pilot project of 90 fixtures costing approximately roughly \$45,000). Information regarding the lighting color, intensity, and location would be refined based on the pilot and the full retrofit of the high-bay fixtures at the Shoreway buildings would happen in FY1516.

Battery Storage Project

Shoreway’s PG&E electric bill consists of two types of charges: *energy* costs, and instantaneous or peak power usage called *demand* costs. The Shoreway MRF has several major pieces of equipment (including balers, large fans used in air separation, and conveyor motors) that cause demand spikes. The demand cost portion of the electric bill from this equipment is significant, sometimes tens of thousands of dollars per month and they vary from 24 cents per kW in winter part peak periods to almost 33 dollars per kW in summer peak periods.

Figure 2.7 shows a portion of a Shoreway electric bill from April 2014 where the demand charge peak during the month was 657 kW, which created a cost of over \$8,000, or about one-third of the total bill expense. This is a typical level for Shoreway electric bills, however, as noted above summer Demand rates are almost three times higher than this rate, so Shoreway summer demand charges are even higher and represent an even greater proportion of the total electric bill expense. In addition, PG&E has been increasing the demand charges portion of the power bill (e.g., recently, PG&E raised the summer demand charges 17% from 2014 to 2015). A battery storage system can be used to reduce electric demand charges by capping the spikes or surges in power created by large equipment operating at peak load. In so doing, the battery’s storage system “erases” the power demand peaks seen by the PG&E meter and thus reduce PG&E’s demand charge

Figure 2.7. PG&E Electricity Bill with Demand Charges Circled

ENERGY STATEMENT		Account No: 8995189956-9
www.pge.com/MyEnergy		Statement Date: 04/30/2014
		Due Date: 05/19/2014
Details of Electric Charges		Service Information
03/29/2014 - 04/28/2014 (31 billing days)		Meter # 1009398442
Service For: 333 SHOREWAY RD		Current Meter Reading 9,890
Service Agreement ID: 8995189497		Prior Meter Reading 9,320
Rate Schedule: E19S Medium General Demand-Metered TOU Service		Difference 570
		Meter Constant 300 000000
		Total Usage 170,400 000000 kWh
03/29/2014 - 04/28/2014		Meter # 1009398442
Customer Charge	31 days @ \$19 71253	Current Meter Reading 8,485
Demand Charge		Prior Meter Reading 7,995
Max Part Peak	657 000000 kW @ \$0 21000	Difference 490
Max Demand	657 000000 kW @ \$12 24000	Meter Constant 300 000000
Energy Charges		Reactive Power 147,000 000000 kVar
Part Peak	104,700 000000 kWh @ \$0 09975	Serial D
Off Peak	65,700 000000 kWh @ \$0 07832	Rotating Outage Block 5F
Power Factor Adjustment (@ 76 00% Power Factor)		
Energy Commission Tax		
Total Electric Charges		

Because the battery system is constantly discharging and recharging throughout the day and the month, it requires a battery that is able to sustain a high cycle life and therefore are constructed out of lithium-ion that has a cycle life of ~10,000 cycles. Additionally, demand occurs at random times due to random events caused by real time loads turning on and off. Predictably offsetting this demand on a consistent basis, and anticipating and reserving an appropriate amount of battery capacity to compensate for them, requires a complex system and software to perform this task. Five battery storage system vendors were evaluated in 2014. Of these five vendors, GreenCharge Networks and GELI, were short listed because they could accommodate the large battery size required by the Shoreway operation, they had proven technologies that have been installed in several locations, and they provided financing options the SBWMA was looking for.

- STEM
- Sharp Electronics
- Demand Energy
- GreenCharge Networks (GCN)
- GELI (Growing Energy Labs, Inc.)

With the information that has been collected from this survey of battery storage systems, staff has concluded the following:

- 1) Battery storage systems can provide a meaningful reduction to current PG&E demand charges (estimated at \$10,000 or more per year).
- 2) With the addition of a mixed waste processing system at the Transfer Station, the power usage and energy savings potential will increase.
- 3) The energy storage market is fast evolving and new technologies and vendors are emerging all of the time.

- 4) The State rebate program is at risk of running out of funds in future years and this funding pool needs to be monitored to take advantage of available rebates.
- 5) By reducing PG&E demand charges, a battery storages system will also serve to hedge against future PG&E demand charge increases.

While staff is encouraged at the prospect of the battery storage systems to reduce the current and future demand charges that are a large component of the Shoreway PG&E electrical bill, there will likely be changes at Shoreway and within the battery storage system industry that make it prudent to wait before installing a system. For this reason, staff is recommends a resurvey of the battery storage market and a new financial analysis be completed within two to three years.

g. Environmental Education Center and Tours Program

Goals

Identify environmental education and service learning program expansion options with a primary goal of supporting the JPAs goal of reaching 75% diversion.

Resource conservation messaging, including education on how our current recycling and organics collection and processing programs work, from our existing tour program will be integrated into the classroom in schools in our service area to support and compliment the JPAs recycling outreach to homes, and businesses. Public education and outreach is proven to be most effective when delivered in multiple ways and in a continuous and pervasive manner to our target audience (i.e., where our customers live, learn, work and play).



This program expansion option supports multiple LRP Guiding Principles including:

- Support local, state and national mandates, including meeting the State’s 75% recycling goal by 2020
- Increase and maximize participation in programs and services to reduce, reuse, recycle and compost waste
- Develop and sustain strategic community partnerships
- Promote behavior change through public education

Overview

This option involves completing a nine-month stakeholder engagement process to address a few critical questions: what environmental education programs fit best into existing efforts in the schools in our service area and what areas for expansion make the most sense? One of the JPA’s two existing environmental educators would manage the engagement process, along with a consultant, which would include the following key steps:

- **Expanded Information Gathering and Networking**
 - Survey schools and school districts on their existing recycling/composting programs, school gardens, environmental initiatives, and environmental service learning programs to identify best practices. Gather information through onsite visits, surveys, small group meetings, etc.
 - Through such surveying identify environmental education champions and leaders to engage more fully through participation in a blue ribbon committee, adhoc advisory groups, etc.
 - Survey recycling service providers to gain statistics and build profiles of school and district-wide recycling programs and diversion levels to tie back to school tour database (i.e., understand details of school diversion, school recycling program participation, profile and costs of recycling/composting services offered).
 - Develop informational profiles of the “green awareness” of schools: What is their level of interest and current involvement in recycling? What are their challenges and constraints to recycling? What do the schools need the most in order to expand green awareness on campus?
 - As the above information is gathered, revise as necessary the pre and post-tour teacher surveys to capture information about what environmental topics are currently being taught in the classroom so that tour messaging and pre/post curriculum can be custom tailored.

- Convene a blue-ribbon committee, ad hoc advisory groups, and/or focus groups, etc. to explore and discuss environmental education and environmental program best practices and identify how best RethinkWaste can support broader implementation of such best practices. Develop a short-list of pilot program ideas based on feedback from stakeholders.
- Evaluate collaboration opportunities and partnerships with non-profits and businesses for expansion of tour and environmental education programs.
- Host a community workshop if applicable, with panels of educators, non-profit service providers, Green Teams, community service organizations. This may or may not be connected to the blue-ribbon committee noted above.
- Develop an implementation plan, time-line, budget and staffing needs for 1) pilot level expansion of programs and 2) full program build-out.

The budget for this engagement process would include \$25,000 in one-time costs to be included in the FY1516 budget as follows:

- \$25,000 for consultant support during the engagement process including assistance with managing the blue-ribbon committee process.

Staff believes this is the most cost effective approach with utilization of an existing staff person plus supplemental support from a consultant. An alternative approach of having a consultant lead the engagement process would be more costly and create a missed opportunity for one of our existing environmental educators to more fully engage with our customer base of local schools and environmental educators.

By April 2016, staff would come back with a final report and recommendations on what environmental education programs the JPA can best integrate into our current program to meet the needs of our customers; these will be recommendations vetted by key stakeholders from local schools, nonprofits and related organizations focused on environmental education.

RethinkWaste is fortunate in that there are several innovative and cost-effective programs in the Bay Area where local governments partnered with the community, their waste haulers, local businesses and schools to further robust educational and experiential programs that have quantifiable and measurable outcomes. An example of these best practices implemented by StopWaste can be found in **Attachment E**.

SECTION 3

(Previously Section 5)



RECOMMENDATIONS AND NEXT STEPS

3. Recommendations and Next Steps

A. Summary of Recommendations

Table 3.1: Summary of Recommendations for Policies, Program and Shoreway Infrastructure Enhancements

Name/Title	Recommendation	Annual Diversion	Cost/Diverted Ton	Project Benefits
Collection Operational Improvement:				
CNG Fleet Conversion Project	The franchised service provider collection fleet to run on CNG effective 1/1/21 (assumed start of new Franchise Agreements). Recology to include this assumption in their proposal for an extension of their existing Franchise Agreements in 2017.	N/A	N/A	<ul style="list-style-type: none"> Net collection ops. cost savings of \$992,960/year starting in 2021 Approximately 20%-23% reduction in greenhouse gas emissions Estimated collection rate reduction of 1%
SFD Split-Body Collection Vehicle Pilot Project	Conduct a pilot project in FY1516 to study routing efficiencies using split-body (two-compartment) collection vehicles over two four-week pilot periods between September and November 2015. Recology proposes to conduct the first pilot in Menlo Park and the other in Burlingame and adjoining County pockets. Approximately 8,000 homes per week (two routes) effected during each pilot period.	N/A	N/A	<ul style="list-style-type: none"> Pilot project to assess potential routing efficiencies to determine if this type of collection vehicle can be cost effectively deployed in the future in our service area
Collection Program/Service Enhancement:				
SFD Every Other Week Garbage Collection Pilot Project	<p>Conduct a pilot project in FY1516 to study the cost effectiveness of collecting garbage every other week. Pilot details not final but assumes would cover approximately 8,000 homes (two routes) over a three month period.</p> <p>Pilot would have to be approved by the County LEA which enforces State solid waste and related laws and regulations.</p>	Potentially Significant	Determine after pilot	<ul style="list-style-type: none"> Potentially significant increase in diversion Potential cost savings from reduced collection routes Potential reduction in greenhouse gas and other harmful vehicle emissions <p>Note: Pilot project results to be evaluated to determine if this change in residential service levels and routing are to be included in the future Franchise Agreements. A solid waste rate study would need to be completed to assess this option and others for future consideration in the Franchise Agreements.</p>
Commercial Recycling Outreach Program Project	Modify Recology's current reporting requirements to implement a Commercial Subscription and Participation Compliance Status Report for use in setting outreach priorities and tracking progress to diversion goals. Couple this change with enhanced commercial public education and outreach efforts. Project to be implemented in FY1516.	Supports meeting forecasted growth in commercial diversion shown in Table 2.1 and Table 2.2A.	Determine after pilot	<ul style="list-style-type: none"> Supports Recology's efforts to achieve the forecasted commercial diversion shown in Table 2.1 and Table 2.2A Establish clear diversion targets for collection services contractor Increase return on investment in franchised commercial outreach program
Public Spaces Recycling Pilot Program	Implement model public spaces recycling collection in a downtown area and a park setting. Goal is to develop a more uniform approach across the Member Agencies that complements the existing residential and commercial recycling and organics collection services. Project to be implemented in FY1415 and FY1516.	Determine after pilot	Determine after pilot	<ul style="list-style-type: none"> Increased diversion from the commercial sector (public spaces) Reduce litter Expand opportunities to engage public in recycling and reinforce messaging
Enhanced Residential Public Education and Outreach Pilot Program	Conduct a pilot program focusing on cost-effective, measurable dedicated campaigns service-area wide and for specific Member Agencies with lower diversion rates. Pilot to be conducted in FY1617.	<p>Increase in residential recycling and organic materials:</p> <ul style="list-style-type: none"> 2.5% in 2018 5% in 2019 2% in 2020 <p>Forecasted increase in residential diversion from 66.59% in 2015 to 68.22% in 2020. See Table 2.2A.</p>	Low cost per diverted ton of approximately \$28/ton	<ul style="list-style-type: none"> Increased diversion from the residential sector of 2,490 tons between 2018-2020 Disposal cost savings of \$156,300 between 2018-2020

Name/Title	Recommendation	Annual Diversion	Cost/Diverted Ton	Project Benefits
Policy Initiative:				
<p>EPR Policy Framework</p>	<p>Establish a framework for Board consideration to facilitate supporting EPR legislation and policy. Implement in FY1516.</p>	<p>N/A</p>	<p>N/A</p>	<ul style="list-style-type: none"> • Provides SBWMA the opportunity to become engaged in State-wide efforts to enact EPR related policy • Requires product manufacturers to take financial responsibility for collection, recycling and disposal of their products • Provides incentive for manufacturers to design products for recyclability and with reduced toxicity • Reduces cost to ratepayers for proper handling, recycling and disposal of various product types
Shoreway Infrastructure Enhancement:				
<p>Mixed Waste Processing in the Transfer Station</p>	<p>Installation of a mixed waste processing system located in an expanded footprint in the existing Transfer Station. System to recover recyclables and organics from residential and commercial waste delivered to the Transfer Station by Recology collection vehicles. Recyclables to be processed further at existing onsite MRF. Organics to be transferred to SVCW for digestion and energy production. System can also process, at a projected expense less than existing organics processing, source separated organics from Recology franchised collection programs. System operational in 2018.</p>	<p>49,591 tons per year of new diversion starting in 2018.</p> <p>Would increase overall measured diversion from 51.94% in 2017 to 67.73% in 2020 per Table 2.2B.</p>	<p>\$38.42/ton for the base- case scenario (small TS expansion with fiber recovery; see Table 2.25). Large TS expansion with fiber recovery would be \$55.28/ton. (See Table 2.27)</p>	<ul style="list-style-type: none"> • Estimated collection rate impact of 1.9%. This drops to 1.5% if 20% increase in landfill disposal costs in 2020. • Significant diversion potential of 49.590 tons/year starting in 2018 • Low cost per diverted ton • Leverages existing infrastructure at SVCW to reduce the project capital costs • Reduction of greenhouse gasses through recovery of green energy from waste and reduced landfilling • Viable project for State grant funding
<p>Shoreway Transfer Station Building Improvements</p>	<p>Expand Transfer Station footprint to accommodate a mixed waste processing system. Two Transfer Station expansion scenarios: small expansion of 4,400 sq. ft. or large expansion of 12,000 sq. ft. Small expansion would not provide for new office and public meeting space. Large expansion would require demolition of Recology Administration building and construction of new Administration building. Large expansion would allow for new office and public meeting space as described further below.</p>	<p>N/A. Transfer Station building expansion options are part of mixed waste processing system project.</p>	<p>TS building expansion costs are included in the above figures.</p>	<ul style="list-style-type: none"> • See above
<p>SBWMA Administrative Offices and Public Meeting Space</p>	<p>Pursue one of three options to provide for onsite (at Shoreway) SBWMA office space and new public meeting space (e.g., for Board meetings, seasonal workshops and other public needs). There are three options for SBWMA office space with two of the options also providing public meeting space.</p> <p>Option 1 would be to remodel 3,000 sq. ft. of space on the second floor of Recology Administration Building; this option does not provide for public meeting space. Option 1 is possible if do small Transfer Station expansion.</p> <p>Option 2 would consist of constructing a new two-story building in the existing visitor parking lot. The first floor would be a parking garage and the second floor will be split between office space and public meeting space totaling 5,614 sq. ft.</p> <p>Option 3 would be associated with the large Transfer Station expansion scenario. Office space and public meeting space would be housed in a two-story building adjacent to the Transfer Station. Both floors would be approx. 3,000 sq. ft.</p> <p><u>Staff recommends that no decision be made on these improvements until a final decision is made on the mixed waste processing project and related Transfer Station building improvements.</u></p>	<p>N/A</p>	<p>N/A</p>	<ul style="list-style-type: none"> • All options would provide for SBWMA office space and thus save approx. \$60,000 per year in office lease costs • Options 2 and 3 would provide for public meeting space for Board meetings and other public meetings and onsite public events

Name/Title	Recommendation	Annual Diversion	Cost/Diverted Ton	Project Benefits
MRF Single Stream Processing Equipment Replacement	No recommended change to existing Board policy or direction. Staff to include a forecast for MRF equipment replacement in the FY1516 budget; the budget will include a rolling five-year capital budget. Existing cash reserves include an equipment replacement reserve fund to pay for such equipment replacement.	N/A	N/A	N/A
MRF Building Tipping Area Expansion	This is an existing identified and budgeted project to construct a MRF canopy to expand tipping area for collection vehicles to unload recyclables. Project required to handle 3 rd party tonnage into MRF. FY1415 budget of \$450,000. Current project construction estimate of \$438,741.	N/A	N/A	N/A
CNG Fueling System at Shoreway	Installation of a CNG fueling system at Shoreway in 2020 to support future fuel needs for collection fleet. Would also involve the closeout of the existing UST system. Would add one new AST for diesel for SBR transfer trailers.	N/A	N/A	<ul style="list-style-type: none"> • Supports conversion of the collection fleet to CNG with significant operational cost savings • Eliminates future potential groundwater contamination at Shoreway from fueling operations
<p>Other Shoreway Infrastructure Improvements: <i>Site Paving</i></p> <p><i>New LED Lighting</i></p>	<p>No recommended change to existing Board policy or direction. Staff to include a forecast for site paving costs in capital spending portion of FY1516 budget.</p> <p>LED lighting retrofit in the MRF, Transfer Station and Recology maintenance shops.</p>	N/A	N/A	<ul style="list-style-type: none"> • Extend life of pavement in the corp. yard area used by Recology. • Estimated collection rate impact of 0.2% • Power cost savings after 1.3 year payback period • Estimated collection rate reduction of 0.2% • Improved interior lighting for safer environment
Environmental Education Center and Tour Program Enhancements	Conduct a stakeholder engagement process in FY1516 to determine what additional components can be added to our existing environmental educational efforts with a focus on increasing recycling and composting efforts at schools in our service area. RethinkWaste is only minimally engaged in school or community based environmental education outside of the existing tour program.	TBD	TBD	<ul style="list-style-type: none"> • Complements existing RethinkWaste recycling outreach efforts to residents and businesses • Engages local educators to identify synergies to maximize effectiveness of new programs • Enhances return on investment in broader outreach campaigns

Table 3.1 on the previous pages summarizes all of the recommendations for Board consideration. The recommendations are broken out into collection related operational improvements, programs/services enhancements; policy initiatives; and Shoreway infrastructure improvements. As stated in **Section 1** (Executive Summary) of this Report, these recommendations do not address other critical items such as the expiration of future contracts and what actions are recommended (see **Appendix A, Table A.1** for a summary of JPA contracts and Member Agency Franchise Agreements) as those actions will be addressed through a separate process.

Cost estimates associated with the recommendations are current year estimates. Preliminary collection rate impacts with the recommendations are summarized below in **Table 3.2** below.

Table 3.2: Collection Rate Impact

LRP PROJECTS	Life (yrs.)	Annual Financial Impact - Positive / (Negative)	Collection Rate Impact	
CNG Collection Fleet Conversion	10	\$992,960	-1.0%	rate reduction
Mixed Waste Processing (\$13.5M)	10 - 30	(\$1,905,487)	1.9%	rate increase
SBWMA Admin. Offices Option #1 (\$275k)	10	\$32,500	0.0%	rate reduction
Shoreway - Paving (\$2M)	10	(\$200,000)	0.2%	rate increase
Shoreway - LED Lighting Improvements (\$274K)	10	\$181,600	-0.2%	rate reduction
TOTAL BASE CASE RATE IMPACT			0.9%	

Finally, it is critical to understand that the Long Range Plan is really a “blueprint” for future Board actions related to increasing measured diversion, and driving operational improvements. As outlined on the following pages and in **Table 3.3**, there are a number of decisions that flow from the recommendations in **Table 3.1**.

As shown in **Table 2.2B** and **Table 3.3** below, implementing the recommendations will increase measured diversion from our forecasted baseline of 54.35% in 2020 to an estimated 67.73% in 2020. These figures do not include any diversion data as a result of the implementation of the Commercial Recycling Reporting Ordinance as the first required reports per the Ordinance are not due until May 1, 2015. When this data becomes available and is reviewed by staff an updated diversion forecast will be prepared which will likely put us even closer to the State’s 75% diversion goal by 2020.

Table 3.3: Baseline Forecast w/ Enhanced Residential Public Education and MSW Processing Starting in 2018*

Sector	Actual Results		Projected Results					
	2013	2014	2015	2016	2017	2018	2019	2020
Residential	66.90%	66.48%	66.59%	66.59%	66.59%	71.32%	76.35%	76.60%
Commercial/MFD	29.77%	31.04%	32.01%	34.79%	37.13%	48.75%	58.77%	58.77%
Overall	48.83%	48.90%	49.39%	50.77%	51.94%	60.09%	67.61%	67.73%

*Commercial Recycling Reporting Ordinance data is not included in the forecasted Commercial/MFD and Overall measured diversion rates.

B. Timeline and Cost Projections Associated with Future Decisions by SBWMA Board and/or Member Agencies

In order to implement the recommendations outlined in **Table 3.1**, the following decisions by year will be requested of the SBWMA Board and/or Member Agencies. **Table 3.4** graphically depicts the overall timeline for the recommended policies, programs, and Shoreway enhancements.

Timeline

2015

- **SFD Split-body Collection Vehicle Pilot Project** – SBWMA Board decides whether to include one-time expenses of \$16,391 in FY1516 budget. Board also provides direction to Recology as to whether to include one-time expenses of \$55,422 in their 2016 Compensation application submitted in June.
- **SFD Every Other Week Garbage Collection Pilot Project** – SBWMA Board decides whether to include one-time expenses of \$119,200 in FY1516 budget. No impact on 2015 or 2016 Recology compensation.
- **Commercial Recycling Outreach Program Project** – SBWMA Board decides whether to include one-time expenses of \$50,000 - \$60,000 in FY1516 budget. No impact on 2015 or 2016 Recology compensation.
- **Public Spaces Recycling Pilot Program** – SBWMA Board decides whether to include one-time expenses of \$11,000 in FY1516 budget. No impact on 2015 or 2016 Recology compensation.
- **Extended EPR Policy Framework** – SBWMA Board decides whether to adopt an EPR Policy Framework.
- **Mixed Waste Processing in the Transfer Station** – SBWMA Board decides whether to include one-time project development expenses of \$183,000 in FY1516 budget. No impact on 2015 or 2016 contractor compensation.
- **SBWMA Administrative Offices and Public Meeting Space** – SBWMA Board decides whether to include \$25,000 in one-time costs in FY1516 budget to further refine building cost estimates. Board could also decide to move forward on Option 1 (\$275,000) to remodel the upstairs portion of the Recology Administration building or Option 2 (\$3.33 million) to build a new two-story building in the visitors parking lot. Staff recommends that no decision be made on these improvements until a final decision is made on the mixed waste processing project and related Transfer Station building improvements.
- **MRF Single Stream Processing Equipment Replacement** – SBWMA Board will adopt annual budget with five-year capital spending plan (plan updated each year for a rolling five-year period). Sufficient cash reserves already in place for forecasted equipment replacement needs.
- **MRF Building Tipping Area Expansion** – SBWMA Board considers approval of construction contract award in April or May 2015. Capital line item already included in adopted FY1415 budget.
- **Site Paving** – SBWMA Board approval of FY1516 budget with five-year capital spending plan to include site paving needs.

- **New LED Lighting** – SBWMA Board will decide whether to approve or not inclusion of the estimated \$274,000 in the FY1516 capital budget.
- **Environmental Education Center and Tour Program Enhancements** – SBWMA Board decides whether to include \$25,000 in one-time costs in FY1516 budget to complete stakeholder engagement process.

2016

- **CNG Fleet Conversion Project** - SBWMA and Member Agencies decide if CNG fleet to be included in future scope of work for Franchise Agreements (2017 decision by Member Agencies (MAs) whether to extend or not current Recology Franchise Agreements beyond 12/31/20).
- **SFD Split-body Collection Vehicle Pilot Project** – Based on pilot project results, SBWMA and Member Agencies decide if split-body vehicles to be included in future scope of work for Franchise Agreements.
- **SFD Every Other Week (EOW) Garbage Collection Pilot Project** – Based on pilot project results, SBWMA and Member Agencies decide if EOW solid waste collection to be included in future scope of work for Franchise Agreements.
- **Commercial Recycling Outreach Program Project** – Based on outreach pilot project results, SBWMA Board decides if expanded commercial outreach should be continued.
- **Public Spaces Recycling Pilot Program** – Based on pilot project results, SBWMA and Member Agencies decide if there is to be a full scale rollout across service area; could impact SBWMA FY1617 budget and Recology 2017 compensation.
- **Enhanced Residential Public Education and Outreach Pilot Program** – SBWMA Board decides whether to include one-time expenses of \$175,000 in FY1617 budget. No impact on 2016 or 2017 Recology compensation.
- **Mixed Waste Processing in the Transfer Station** – SBWMA Board makes decision on project based on updated project financial proforma. If decision is to implement, then would initiate project design and permitting in 2016 and develop plan of finance. Capital costs in FY1617- FY1718 budgets. Would also negotiate updated MOU with SVCW for Board consideration.

The above decision would also relate to the associated Transfer Station building improvements required to accommodate the new mixed waste processing system.

- **SBWMA Administrative Offices and Public Meeting Space** – The above decisions may effect which option, if any, the Board chooses for new SBWMA office space and public meeting space at the Shoreway Environmental Center.
- **Environmental Education Center and Tour Program Enhancements** - When staff completes the stakeholder engagement process then recommendations will come back to the Board for consideration for FY1617 budget.

2017

- **Enhanced Residential Public Education and Outreach Pilot Program** – Based on pilot project results, SBWMA Board decides if ongoing enhanced outreach effort is to be continued. Staff assumes \$25,000 in new spending in FY1718 and FY1819. Kevin – should I add this sentence to the exec summary too?
- **Mixed Waste Processing in the Transfer Station** – Board approval of construction contract award for building improvements and purchase of processing equipment. Negotiate Operations Agreement amendment for SBR compensation to operate new processing system; such amendments require approval of the SBWMA Board and separate approval by two-thirds (at least 8 of the 12) of the Member Agencies.

The above decision would also relate to the associated Transfer Station building improvements required to accommodate the new mixed waste processing system.

If issuance of new debt is needed to finance the project then this will require SBWMA Board approval and separate approval by two-thirds (at least 8 of the 12) of the Member Agencies.

2018/2019

- **CNG Fueling System** – SBWMA Board approval of Shoreway project expenses for site improvements, including closeout of USTs, installation of new AST, and site improvements required for new CNG fueling system. Current estimate of \$1.375 million to \$1.8 million with \$1.24 million in Shoreway remediation funds available to help offset costs.

2021

- **Mandatory Residential and Commercial Recycling Ordinance** – Analyze programmatic efforts through 2020 to determine measured diversion rate and progress towards State goal of 75%. If still short of goal then the SBWMA Board may decide to approve new policy tools.
- **Organic Materials (Green Waste and Food Scraps) Disposal Ban** – Analyze programmatic efforts through 2020 to determine measured diversion rate and progress towards State goal of 75%. If still short of goal then the SBWMA Board may decide to approve new policy tools.

Cost Projections

Table 3.5 on page 111 summarizes all the cost projections associated with each of the recommendations by year. In the upcoming fiscal year (FY1516) there are a number of recommendations for one-time expenditures to support implementation of pilot projects, and complete additional technical and financial analysis of the mixed waste processing system, including building improvements.

For FY1516, the projected spending from the operating expense budget totals \$439,591 with \$206,591 for collection related programs and outreach, and \$233,000 related to Shoreway operations. \$274,000 is also recommended as a capital expense to retrofit large lighting fixtures in the MRF, Transfer Station, and Recology maintenance shop with high efficiency LED lights. A \$55,422 adjustment is also recommended to Recology's 2016 compensation to cover costs associated with the split-body collection vehicle pilot project.

\$175,000 is recommended to be included in the FY1617 operating budget to complete a residential outreach pilot to measure potential enhancements to diversion levels. Future residential diversion increases are assumed starting in calendar year 2018 based on increased outreach spending of \$25,000 in FY1718 and FY1819.

Based on the results of the various pilots conducted in 2015 and 2016, there will be follow-up SBWMA Board and/or Member Agency decisions in 2016, 2017 and 2018 regarding full-scale rollout of programs and services (e.g., enhanced public education and outreach, Public Spaces recycling, etc.) and future franchised collection service operations (e.g., use of split-body collection vehicles and EOW solid waste collection). Notably, any changes to collection service operations would need to be analyzed from a rate perspective along with any other changes proposed by Recology and/or recommended by the SBWMA Board and Member Agencies.

Major decisions on the Shoreway facility capital improvements are assumed to occur in 2016 for the mixed waste processing system and related Transfer Station building expansion. Currently, the assumed base-case project would involve spending \$13.51 million, with \$2.53 million for a small expansion of the Transfer Station and \$10.58 million for processing equipment. Project funding sources could include the use of current undesignated cash reserves estimated at \$3.9 million (FY1415 mid-year budget document), new incremental undesignated cash reserves resulting from tipping fee increases at Shoreway, State grant funding, and new debt (bank loan, bonds, etc.) An analysis of tipping fees and other aspects of the Shoreway operations budget would need to be completed as part of any Board decision-making process for this project.

The above decisions related to the mixed waste processing project will also effect potential options related to the development of SBWMA office space and public meeting space at Shoreway. The SBWMA currently spends approximately \$60,000 per year to lease office space, and the Board Chair and Vice Chair requested an analysis of alternatives be included in the Long Range Plan. Three options are presented with a cost range of \$275,000 (to remodel the upstairs portion of the Recology Administration building) to \$3.33 million (to build a new two-story building in the visitors parking lot). Another option at a cost of \$977,550 would be tied to the large expansion option for the Transfer Station. The lowest cost of \$275,000 provides for SBWMA office space, but no provision for public meeting space; if this option was pursued, however, an offsite location would need to be secured for Board meetings. The next lowest cost option at \$977,750 provides office and meeting space and is tied to a much more expensive (i.e., \$9.9 million higher) Transfer Station expansion scenario that is not the preferred option for the mixed waste processing project. The preferred alternative would be the \$3.3 million option that provides for both SBWMA office space and public meeting space on a long-term basis.

Finally, in 2019 the Board would face decisions around capital expenditures to support installation of a new CNG fueling system at Shoreway. Fortunately, the current estimated project costs of \$1.38 - \$1.8 million would largely be covered by an existing source of funds; \$1.24 million is currently available in a Shoreway remediation fund. Further, the net project costs would be more than offset by the annual franchised collection services operational savings identified at approximately \$1 million per year starting in 2021.

Table 3.4: Implementation Timeline for Recommended Policies, Program and Shoreway Infrastructure Enhancements

Policies, Programs, and Shoreway Infrastructure Enhancements	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
COLLECTION PROGRAMS										
CNG Fleet Conversion Project										
SFD Split-Body Collection Vehicle Pilot Project										
SFD Every Other Week (EOW) Garbage Collection Pilot Project										
Commercial Recycling Outreach Program Project										
Public Spaces Recycling Pilot Program										
Enhanced Residential Public Education and Outreach Pilot Program										
Mandatory Residential and Commercial Recycling Ordinance										
Organic Materials (Green Waste and Food Scraps) Disposal Ban										
EPR Policy Framework										
SHOREWAY OPERATIONS										
Mixed Waste Processing in the Transfer Station										
Shoreway Transfer Station Building Improvements										
SBWMA Administrative Offices and Public Meeting Space										
MRF Single Stream Processing Equipment Replacement										
MRF Building Tipping Area Expansion										
CNG Fueling System										
Other Shoreway Infrastructure Improvements										
<i>Site Paving</i>										
<i>New LED Lighting</i>										
Environmental Education Center and Tour Program Enhancements										
Collection Programs										
Shoreway Operations										

Symbol: Reverse diagonal stripe pattern shown above means potential full-scale rollout.

Table 3.5: Summary of Projected Costs by Year

Policies, Programs, and Shoreway Infrastructure Enhancements	Costs					
	2015	2016	2017	2018	2019	2020
COLLECTION PROGRAMS						
CNG Fleet Conversion Project						Franchise collection service provider to purchase new CNG compatible collection vehicles. Based on current fleet would be 127 vehicles at an estimated net increase (in collection vehicle capital) of \$5.136M .
SFD Split-Body Collection Vehicle Pilot Project	\$16,391 in FY1516 budget.	\$55,422 in 2016 Recology Compensation.				
SFD Every Other Week (EOW) Garbage Collection Pilot Project	\$119,200 in FY1516 budget.					
Commercial Recycling Outreach Program Project	\$50,000 - \$60,000 in FY1516 budget.					
Public Spaces Recycling Pilot Program	\$11,000 in FY1516 budget.					
Enhanced Residential Public Education and Outreach Pilot Program		\$175,000 in FY1617 budget	\$25,000 on FY1718	\$25,000 on FY1819		
EPR Policy Framework	Existing staff time					
SHOREWAY OPERATIONS						
Mixed Waste Processing in the Transfer Station	\$183,000 in FY1516 budget for project development expense (refined design, waste comp. analysis, etc.).			\$10.98 million for processing equipment. Includes 10% contingency.		
Shoreway Transfer Station Building Improvements			\$2.53 million for Transfer Station - small expansion or \$13.47 million for Transfer Station - large expansion. Includes \$977,550 for 2-story admin. bldg to house SBWMA offices and public meeting space. Both TS expansion scenario figures include 10% contingency.			
SBWMA Administrative Offices and Public Meeting Space	\$25,000 in one-time costs in FY1516 budget to further refine building cost estimates.		Option 1 (\$275,000) to remodel the upstairs portion of the Recology Admin. building or Option 2 (\$3.33 million) to build a new two-story building in the visitors parking lot. <u>Staff recommends that no decision be made on these improvements until a final decision is made on the mixed waste processing project and related Transfer Station building improvements.</u>			

\$

Policies, Programs, and Shoreway Infrastructure Enhancements	Costs					
	2015	2016	2017	2018	2019	2020
MRF Building Tipping Area Expansion	Project already in adopted FY1415 budget.					
CNG Fueling System					\$1.375 million to \$1.8 million. \$275,000 in non-capx and \$1.1 million - \$1.525 million in capital. \$1.24 million in Shoreway remediation funds available to help offset costs.	
Other Shoreway Infrastructure Improvements						
<i>Site Paving</i>	Forecasted spending to be included in five-year capital budget in FY1516 budget documents.					
<i>New LED Lighting</i>	\$274,000 in one-time costs in FY1516 budget.					
Environmental Education Center and Tour Program Enhancements	\$25,000 in one-time costs in FY1516 budget.					



APPENDICES:

- **Appendix A – State and Local Policy and Regulatory Framework**
- **Appendix B – Waste Reduction, Recycling and Composting Policies, Programs and Shoreway Infrastructure**



ATTACHMENTS:

- **Attachment A – Recology Split-Body Pilot Proposal**
- **Attachment B – Commercial Subscription and Participation Compliance Report**
- **Attachment C – Example of EPR Policy**
- **Attachment D – CPSC Product Stewardship and EPR: Definitions and Principles**
- **Attachment E – Environmental Education Best Practices and Partnerships**