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CITY OF NAPA

Staff Reports

File #: 1766-2019, **Version:** 1

To: Honorable Mayor and Members of City Council

From: Phil Brun, Utilities Director

Prepared By: Kevin Miller, Materials Diversion Administrator

TITLE:
Solid Waste and Recycling Collection Rates

RECOMMENDED ACTION:
Authorize the Utilities Director, or his designee, to issue a notice of public hearing to all rate payers and property owners of record regarding proposed solid waste and recycling collection rates to become effective August 1, 2019, January 1, 2020, January 1, 2021 and January 1, 2022.

DISCUSSION:

BACKGROUND

The City's Solid Waste and Materials Diversion Enterprise Fund (Solid Waste Fund) operates an enterprise with an annual budget of approximately $33.5 million (based on City's FY2019/20 proposed budget) to provide solid waste/recycling collection, operate the City's Materials Diversion Facility (MDF), and manage state mandated diversion requirements and programs. Most services are provided through a contract with Napa Recycling and Waste Services, LLC (NRWS). Collection rates have historically been set annually based on contractual obligations, increased operating and other expenses and revenue projections. The current rates were approved by City Council on March 17, 2015, became effective January 1, 2016, and have not been adjusted in the intervening three and half year period.

Solid waste and recycling collection is an essential service provided by the City. Collection rates are established to recover the cost of providing the service to the customer. The Materials Diversion Division within the Utilities Department manages the expenditures and revenues such that a high level of service is delivered at the most reasonable cost to customers. Costs typically increase each year based on inflation, contractual obligations, and maintenance requirements of the MDF. While revenues from collection rates are fairly stable each year, revenue from the sale of recyclable materials (17-21% of total Fund revenue) is highly variable and is based on the global commodity market.

PROPOSED RATE ADJUSTMENTS

Staff has carefully reviewed projected revenues and expenses, programmatic impacts, debt service requirements and contractual obligations to establish a base adjustment to collection service rates

necessary to cover the needs of the enterprise, including prudent replenishment of reserves in the Solid Waste Fund. The detailed "Solid Waste & Recycling Collection Service Rate Study for 2019-2022" ("rate study") underlying this base rate recommendation is contained in Attachment 1 to this report. The details of all proposed rates are also identified in Attachment 1. The proposed monthly rates for residential services are presented in table below:

PROPOSED MONTHLY RESIDENTIAL RATES FOR THE NEXT FOUR RATE YEARS

Monthly residential rates include weekly collection of solid waste (trash) and recyclable materials as well as compostable greenwaste, soiled paper, and food scraps.

Cart Size	Current Rate Adopted Jan 1, 2016	Proposed Rate Effective Aug 1, 2019	Change	Proposed Rate Effective Jan 1, 2020	Change	Proposed Rate Effective Jan 1, 2021	Change	Proposed Rate Effective Jan 1, 2022	Change	Cumulative Change
20 gallon	$21.65	$24.25	$2.60	$26.68	$2.43	$28.81	$2.13	$30.54	$1.73	$8.89
35 gallon	$27.14	$30.40	$3.26	$33.44	$3.04	$36.12	$2.67	$38.29	$2.17	$11.15
65 gallon	$41.63	$46.63	$5.00	$51.29	$4.66	$55.39	$4.10	$58.71	$3.32	$17.08
95 gallon	$64.03	$71.71	$7.68	$78.88	$7.17	$85.20	$6.32	$90.31	$5.11	$26.28

Staff has prepared a draft Proposition 218 notice based on the proposed rates and is prepared to mail it to all property owners and rate payers by June 8, 2019, in order to meet the 45-day public review period required by Proposition 218 and return to the Council on July 23, 2019, for a public hearing to adopt rates. The proposed notice is shown in Attachment 2.

PRIMARY DRIVERS OF PROPOSED RATES

As noted above, solid waste and recycling collection service rates were last increased in January 2016. Since that last rate adjustment, many significant changes have occurred and solid waste and recycling collection service rates ("solid waste rates") need to be adjusted to address those changes in the Solid Waste and Materials Diversion Enterprise Fund ("Solid Waste Fund"). While there are many changes to such a large Fund, the three primary drivers for the proposed solid waste rates are as follows:

1. **NRWS Contract Extension**: The 2018 Contract Amendment with Napa Recycling & Waste Services, LLC ("NRWS") was approved by the Napa City Council in April of 2018. The contract amendment extended the City's agreement with NRWS for 14 years (through end of calendar year 2031). This contract extension continues the City's effort to achieve (or exceed) a 75% level of diversion from landfill disposal pursuant to both adopted City policy and State of California goals. Key cost drivers include: (1) replacement and/or refurbishment of heavy refuse and recycling collection fleet of (28 trucks); (2) new and/or upgraded collection equipment; (3) annual escalation of labor and non-labor operating costs each year with first five years fixed and agreed-upon inflation escalators thereafter; (4) new and/or upgraded sorting and processing equipment at the City-owned Materials Diversion Facility ("MDF") and (5) enhanced processing payment to NRWS for tonnage received at the MDF over and above established thresholds. The total annual impact is projected at $2.1 million per year. The impact of the 2018 Contract Amendment is described in more detail in section 3.1 of the attached rate study (Attachment 1).

2. **Significant Decline in Materials Sales Revenue**: Rapid and significant decline in global markets for certain recyclable materials began in late 2016 and has accelerated since that time. The rate-impacting material sales revenue received has decreased from an average of $98 per ton (time of last solid waste rate setting process in 2014) to $54 per ton (July-December 2018). These depressed market conditions appear to be the "new normal" and are projected to represent a $1.2 million to $1.4 million loss in material sales revenue for the foreseeable future. The impact of the recurring loss in materials sales revenue is described in more detail in section 3.2 of the attached rate study (Attachment 1).

3. **Major Capital and System Improvements**: In September of 2016, the City of Napa issued $12.5 million in solid waste revenue bonds ("SWRB") for several major capital and system improvements at the City's MDF. Approximately $8 million of the SWRB proceeds are being invested in a Covered Aerated Static Pile ("CASP") system to process compostable organic materials at the MDF. The CASP system is necessary in order to process a wide range of compostable materials including food scraps, grape pumace, soiled paper and manure (along with traditional yard trimmings) to be in compliance with permit conditions imposed on the MDF (particularly solid waste facility, air district emission and stormwater management). Beyond the CASP system, approximately $2 million of the SWRB revenue is dedicated towards a greatly improved stormwater management and treatment system at the MDF to meet the General Compost Order from the Regional Water Quality Control Board. The remainder of the SWRB proceeds has funded necessary roof extensions, additional concrete pad and loading dock improvements for storage and processing of recyclable materials at the MDF. The annual debt service for the 2016 SWRB is slightly under $900,000 per year. The impact of the 2016 SWRB issuance is described in more detail in section 3.3 of the attached rate study (Attachment 1).

ADDITION OF RESIDENTIAL LOW/FIXED INCOME ASSISTANCE PROGRAM

City of Napa water rates began a low-income assistance program called "RateShare" in 2012. While the City's solid waste/recycling rates have always considered the residential 20-gallon size as the "lifeline" option (and this might be true for seniors on a fixed income for example), it is not a truly equitable way to address larger low-income households that would presumably generate larger amount of non-recyclable, non-compostable Municipal Solid Waste (MSW). Given this inequity, City staff is recommending that a new low/fixed income assistance program modeled on Water's RateShare program be implemented. In short, the low-income assistance program for solid waste would use qualification criteria based on the established Pacific Gas & Electric (PG&E) California Alternate Rates for Energy (CARE) program. It is staff's understanding that approximately 3,600 residential households in the City of Napa currently qualify for PG&E's CARE program and that approximately 900 of these households currently utilize Water's RateShare program.

In accordance with Proposition 218, a water or solid waste customer is to pay only for the cost of service provided to that customer. Thus, to maintain Prop 218 compliance an assistance program can only be funded by a non-rate based source, to prohibit one rate paying customer from subsidizing another customer. Materials sales revenue is proposed to be used as the source of revenue for this new low-income assistance program at a level of $150,000 per year. Like Water's RateShare program, the low-income assistance program for solid waste would use eligible CARE households within the City on a first-come, first-serve basis. Staff is proposing a flat $10 per month

($120 per year) level of assistance to participating residential households. This would allow up to 1,250 solid waste customers to participate in the low-income assistance program

SPECIAL ADJUSTMENT FOR COMMERCIAL MUNICIPAL SOLID WASTE (MSW) CART RATES

In the course of developing commercial food scrap collection rates in 2014/2015, it was confirmed that the City's rates for commercial solid waste cart service were understated by approximately 25% compared to the rate for the comparable cost per cubic yard of solid waste bin service. This discrepancy presented a problem for implementing the commercial food scrap collection program because the program must contain an economic incentive for restaurants/food generating businesses to put in the time and focus required to participate. Staff recommended that the City Council adopt a 5-year phased plan to increase the rate for commercial solid waste cart service by 5% per year, in order to bring the commercial cart rate into alignment with the rates for bin service. Rates adopted for 2015 and 2016 addressed the first two years of the 5-rate year phase in plan. To complete the five-year phase in plan, all proposed rates with the exception of 2022 will include this special adjustment in addition to the proposed base adjustment for all rates.

For example, for rates effective August 1, 2019, the special adjustment for a commercial business with a 95-gallon solid waste cart emptied one time per week, would be 5% of the current rate of $89.40 per month, which equals $4.47 per month. This amount would then be added to the proposed base adjustment for this rate category. Full details of all proposed rates with this special adjustment included are shown in Attachment 1. Under the 5-year phase in plan, the fourth implementation year will be for rates effective January 1, 2020 and the final (fifth) year will be applied for MSW commercial cart rates effective January 1, 2021. There would be no additional special adjustment of MSW cart for solid waste rates effective January 1, 2022.

STAFF'S RECOMMENDATION

Staff recommends the issuance of a public notice that includes the proposed rates as shown in Attachment 1 to cover the base contractual and programmatic obligations of the Solid Waste Fund. While the proposed rates would use some reserve funds in the initial years, they will also replenishment reserves in later years to arrive at approximately the same dollar level of projected total solid waste reserves by the end of City FY2021/22 ($7,268,206) as the Solid Waste Fund had in total reserves at the end of City FY2017/18 ($7,215,579).

Council is not setting collection rates at this time with the recommended action. Council is only authorizing the mailing of a public notice regarding the proposed rates (please see Attachment 2 for draft notice). A public hearing will be held on July 23, 2019 to officially set the rates to be effective August 1, 2019, January 1, 2020, January 1, 2021 and January 1, 2022.

FINANCIAL IMPACTS:

The proposed rates will not generate revenues in excess of funds required to provide the services listed and reflect the cost of providing these services. The proposed collection service rates are projected to generate $3,449,600 in additional collection service revenue for FY2019/20 as compared to FY2018/19, $2,063,488 in additional revenue for FY2020/21 as compared to FY2019/20, and $1,748,257 in additional revenue for FY2021/22 as compared to FY2020/21.

Total Solid Waste Fund reserves were $7,215,579 at the end of FY2017/18 ($5,047,644 in operating

reserves, $1,817,935 in rate stabilization reserve and $350,000 in liability reserve). Under proposed rate adjustments, total Solid Waste Fund reserves are projected to be $4,725,296 by the end of FY2018/19, $3,622,374 by the end of FY2019/20, $4,865,961 by the end of FY2020/21, and $7,268,206 by the end of FY2021/22 (with $5,310,206 in operating reserves, $1,608,000 in capital improvement reserves and $350,000 in liability reserves). More detailed discussion on reserves and impact of proposed rate adjustments on projected reserve balances is contained in sections 4.3 and 5.3 of rate study (Attachment 1).

CEQA:
The Utilities Director has determined that the Recommended Action described in this Agenda Report is not subject to CEQA, pursuant to CEQA Guidelines Section 15060(c).

DOCUMENTS ATTACHED:
ATCH 1 - Solid Waste & Recycling Collection Service Rate Study for 2019-2022
ATCH 2 - Draft Proposition 218 Notice

NOTIFICATION:
Greg Kelley, General Manager, Napa Recycling & Waste Services (courtesy copy)
Mike Murray, CFO, Napa Recycling & Waste Services (courtesy copy)
Karen Dotson, Napa County Auditor-Controller Office (courtesy copy)
Peter Ex, Napa County Local Enforcement Agency (courtesy copy)

ATTACHMENT 2

SOLID WASTE & RECYCLING COLLECTION SERVICE RATE STUDY FOR 2019-2022

City of Napa

Utilities Department

June 2019

Solid Waste and Recycling Collection Service Rate Study for 2019-2022

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CHAPTER 1: EXECUTIVE SUMMARY

City of Napa's Solid Waste & Recycling Collection Service Rates ("Solid Waste Rates") were last adjusted in January of 2016 (with the approving Napa City Council action occurring on March 17, 2015). Since that last rate adjustment, many significant changes have occurred and the proposed rate adjustments to the Solid Waste Rates to will address those changes in the Solid Waste and Materials Diversion Enterprise Fund ("Solid Waste Fund" or "Fund"). The purpose of the "rate study" is to evaluate the current and projected overall financial position of the Solid Waste Fund and, if necessary, provide recommended (or "proposed") adjustments to the City's Solid Waste Rates for 2019 through 2022.

As an enterprise fund, the Solid Waste Fund is independent of the City's general fund and is supported by non-tax revenue, primarily from solid waste rate revenue charged for the collection and processing (including disposal) of municipal solid waste (MSW), recyclable materials and compostables. Within the Fund, there are five major "lines of service" which include (1) residential, (2) commercial, (3) roll-off debris/recycling box, (4) multi-family and (5) service to the Napa Valley Unified School District (NVUSD). Because solid waste collection rates are tied to property (with property owners within City limits generally required to subscribe to solid waste removal services), solid waste rates (like City water rates) are subject to the provision of California's Proposition 218 (or "Prop 218"). Prop 218 has provisions for a notice process to property owners and/or solid waste/recycling service customers, a 45-day public review period once the notice of potential increased rates is mailed and a public hearing and process to protest the potential rates following the public review period. In general, the rates charged to a rate-paying customer should be based on the cost of service to provide those services.

Beyond solid waste rate revenue, the Solid Waste Fund also has two other major "non-rate" sources of revenue – revenue from the sale of processed recyclable materials and revenue from "Gate Fees" charged to users of the City's Materials Diversion Facility ("MDF" or sometimes known as "Napa Recycling and Composting Facility"). The City of Napa currently contracts with a private company named Napa Recycling & Waste Services, LLC (or "NRWS") to provide for the collection and processing of solid waste, recyclable and compostable materials as well as operation of the City-owned Materials Diversion Facility ("MDF"). The City currently stands at a 69% level of recycling and composting (commonly known as "diversion rate" referring to the diversion of materials away from landfill disposal). Both the State of California and the City of Napa itself have set goals of meeting or exceeding a diversion rate of 75% or better by the year 2020. Relevant legislation and City programs toward that goal are discussed in this rate study (primarily chapter 2 and Appendix A to this rate study).

The major projected expenditures for the Solid Waste Fund include compensation to NRWS for contracted services, landfill disposal of MSW, mitigation of impacts of heavy refuse and recycling collection vehicles on City streets, capital improvements and cost associated with materials delivered to and processed at the City's MDF and salaries

and benefits of City staff serving the Solid Waste Fund. Projected revenues and expenses for the Fund are discussed in detail in Chapters 3 and 4 (as well as Appendices B through J to this rate study).

While there are many changes to such a large Fund, the most significant three changes/impacts ("primary drivers") since the time of the last City of Napa solid waste rate setting are as follows:

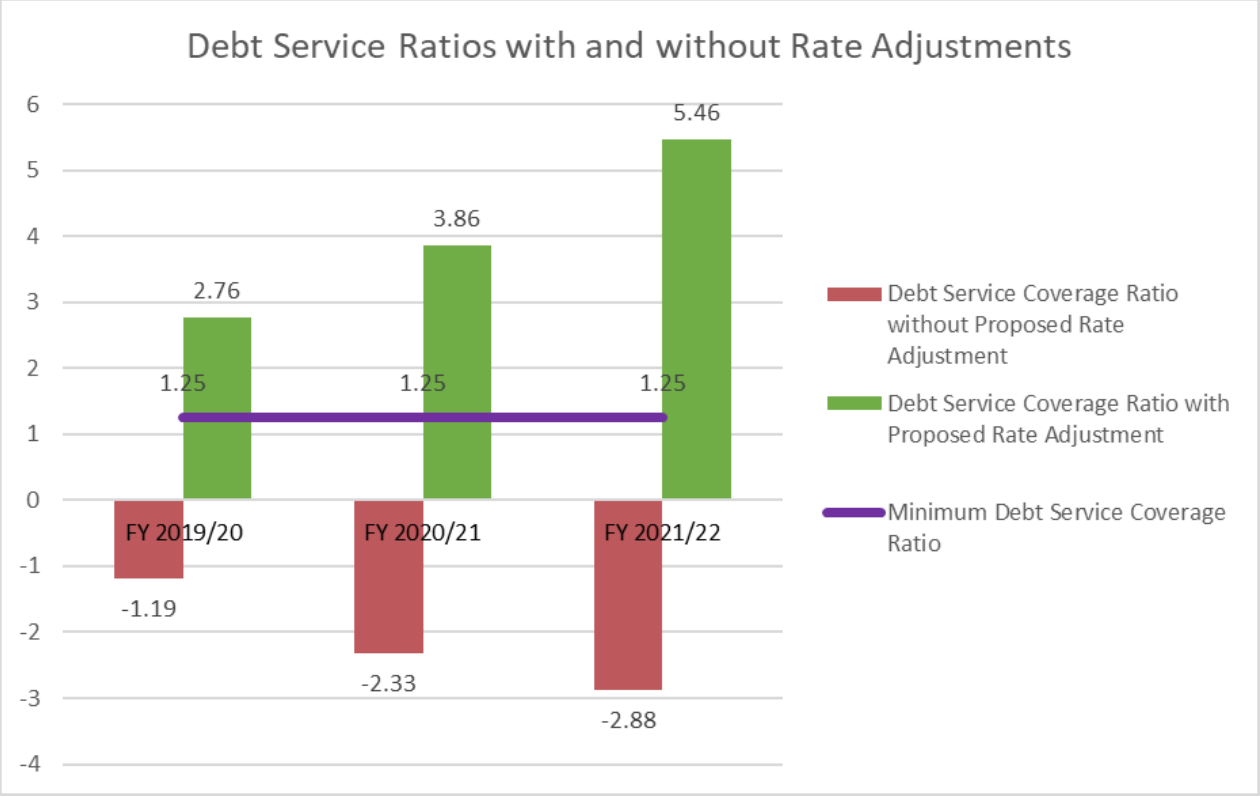
- **NRWS Contract Extension**: The 2018 Contract Amendment with NRWS was approved by the Napa City Council in April of 2018. The contract amendment extended the City's agreement with NRWS for 14 years (through end of calendar year 2031). This contract extension continues the City's effort to achieve (or exceed) a 75% level of diversion from landfill disposal pursuant to both adopted City policy and State of California goals. Key cost drivers include: (1) replacement and/or refurbishment of heavy refuse and recycling collection fleet of (28 trucks); (2) new and/or upgraded collection equipment; (3) annual escalation of labor and non-labor operating costs each year with first five years fixed and agreed-upon inflation escalators thereafter; (4) new and/or upgraded sorting and processing equipment at the City-owned Materials Diversion Facility ("MDF") and (5) enhanced processing payment to NRWS for tonnage received at the MDF over and above established thresholds. The total annual impact is projected at $2.1 million per year. At current Solid Waste Rates, approximately every $200,000 equates to 1% of rate revenue, so the 2018 contract amendment approximately 10.5% per year (all other factors being unchanged). The impact of the 2018 Contract Amendment is described in more detail in section 3.1 and Appendices B and C of this rate study.

- **Significant Decline in Materials Sales Revenue**: Rapid and significant decline in global markets for certain recyclable materials began in late 2017 and has accelerated since that time. The rate-impacting material sales revenue has decreased from an average of $98 per ton (time of last solid waste rate setting process in 2014) to $54 per ton (July-December 2018). These depressed market conditions appear to be the "new normal" and are projected to represent a $1.2 million to $1.4 million loss in material sales revenue for the foreseeable future. This translates into a 6% to 7% impact at current Solid Waste Rate revenue. The impact of the decline in material sales revenue is described in more detail in section 3.2 and Appendices E and F of this rate study.

- **Major Capital and System Improvements**: In September of 2016, the City of Napa issued $12.5 million in solid waste revenue bonds ("SWRB") for several major capital and system improvements at the City's MDF. Approximately $8 million of the SWRB proceed are being invested in a Covered Aerated Static Pile ("CASP") system to process compostable organic materials at the MDF. The CASP system is necessary in order to process a wide range of compostable materials including food scraps, grape pumace, soiled paper and manure (along with traditional yard trimmings) be in compliance with permit conditions imposed

on the MDF (particularly solid waste facility, air district emission and stormwater management). Beyond the CASP system, approximately $2 million of the SWRB revenue is dedicated towards a greatly improved stormwater management and treatment system at the MDF to meet the General Compost Order from the Regional Water Quality Control Board. The remainder of the SWRB proceeds has funded necessary roof extensions, additional concrete pad and loading dock improvements for storage and processing of recyclable materials at the MDF. The annual debt service for the 2016 SWRB is slightly under $900,000 per year which translates into annual impact of 4.5% at current Solid Waste Rate revenue. The impact of the 2016 SWRB issuance is described in more detail in section 3.3 and Appendix G of this rate study.

Beyond the major three changes described above, this rate study examines the Fund's projected revenue with existing rates against projected expenses for 2019-2022. When the City issued the SWRB in 2016, the bond indenture placed a minimum 1.25 debt coverage ratio for the Fund which the City would not meet without some level of increases in solid waste rates. Please see chart below that compares the projected debt service coverage ratio with existing rates compared to the proposed rate adjustments for City FY2019/20 through FY2021/22.



In addition to the minimum debt service coverage ratio required by the 2016 SWRB, the impact of continuing with existing solid waste rates on the Fund's reserves was also analyzed. In summary, the difference between continuing with existing solid waste rates and the proposed rate adjustments was dramatic. With no rate adjustments, the

Solid Waste Fund is projected to go from total reserves of $7,215,579 at the end of City FY2017/18 with reserves almost completely exhausted by the end of City FY2019/20 and projected to be negative $9,128,601 by the end of City FY2021/22 (and this, in turn, would require significant financial support from the City's general fund which is generally not permitted for an Enterprise fund such as the Solid Waste Fund). Please refer to Table 2 in section 5.2.1 of this rate study for more complete data.

In contrast to the dire scenario described above under existing solid waste rates, adoption of the proposed rate adjustments provides a prudent replenishment of total Solid Waste Fund reserves. As shown in the table below (as well as in Table 3 of section 5.3 of this rate study), projected total reserves under the proposed rate adjustments are $7,268,206 by the end of FY2021/22.

Projected Solid Waste Fund Position with Proposed Rate Adjustment

	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Revenues	$29,410,697	$33,637,178	$35,451,588	$37,355,845
Expenditures	($32,430,991)	($35,726,101)	($34,744,001)	($35,489,600)
Net Results	**($3,020,294)**	**($2,088,923)**	**$707,587**	**$1,866,245**

Reserves	**End of FY2017/18**	**End of FY2018/19**	**End of FY2019/20**	**End of FY2020/21**	**End of FY2021/22**
Rate Stabilization	$1,817,935	$0	$0	$0	$0
Operating	$5,047,644	$4,375,296	$2,736,374	$3,443,961	$5,310,206
CIP	$0	$0	$536,000	$1,072,000	$1,608,000
Liability	$350,000	$350,000	$350,000	$350,000	$350,000
Total	**$7,215,579**	**$4,725,296**	**$3,622,374**	**$4,865,961**	**$7,268,206**

The refunding of reserves under the proposed rate adjustments returns total solid waste reserves to a level comparable to total reserves that were available in the Fund at the end of City FY2017/18 ($7,215,579). Included in these total projected reserves is a build-up of the Capital Improvement Project (CIP) reserves within the Fund to $1,608,000 by the end of FY2021/22. This will almost certainly be needed as the MDF continues to age (the facility will be 30 years old by the end of 2024). Failure to build adequate capital reserves in the Fund would necessitate some combination of future borrowing, depletion of existing reserves or higher rate increases for future City rate payers.

CHAPTER 2: STATUS OF SOLID WASTE AND MATERIALS DIVERSION OPERATION AND PROGRAMS SINCE TIME OF LAST RATE SETTING PROCESS

Section 2.1 OVERVIEW OF SERVICES PROVIDED

The Solid Waste and Materials Diversion Enterprise Fund ("Solid Waste Fund" or the "Fund" in this report) pays for solid waste and recycling collection services provided primarily by Napa Recycling and Waste Services, LLC ("NRWS") in the City of Napa. Services and program provided by a combination of NRWS and City staff include operation of the City of Napa's Materials Diversion Facility ("MDF") where the recyclables are sorted and marketed, operation of the compost facility at the Napa MDF and provision of all of the City's recycling programs including planning and implementing recycling programs at businesses in Napa, the commercial food scrap composting program, the Electronic Waste drop off day, the Recycle More Program, carpet recycling and other programs. The main sources of revenue to the Fund are (1) solid waste and recycling collection service revenues ("solid waste rates") from residents and businesses, (2) revenue from the sale of recyclable materials, compost, and gravel from the MDF and (3) gate fees collected at the MDF from customers delivering yard trimmings, source separated concrete, wood, and other recyclable materials. Revenues also come from larger users for whom the Napa MDF processes curbside recyclable materials, yard trimmings and food scraps including the County of Napa and private companies such as Sonoma Garbage Service. Only the first source of revenue to the Solid Waste Fund listed above (solid waste rate revenue) includes property-related fees subject to California's Proposition 218. However, all three major sources of revenue are utilized to cover overall expenditures in the Fund.

Section 2.2 CURRENT STATUS OF CITY AB 939 AND DIVERSION EFFORTS

Despite very difficult global markets for recyclables, Napa has continued to achieve and maintain a very high level of recycling and composting. Measured by the older (and more conservative) "diversion-based" calculation method (diverted tons over total generation), it is estimated that the City of Napa achieved a 69% level of landfill diversion in calendar year ("CY") 2018. This represents a 7% overall improvement from CY2013 at 62% landfill diversion rate and steady progress toward the City goal of 75% diversion by the year 2020 (as set by the "Disposal Reduction Policy" passed by the Napa City Council in July of 2012).

Effective January 1, 2009, state law requires use of the per capita disposal and goal measurement system to determine compliance with AB 939. The per capita disposal and goal measurement system measures tons disposed by the City and it also

evaluates diversion program implementation efforts and results. Using this measurement system, the City of Napa's disposal target rate is 7.3 lbs. of solid waste per person per day. The City of Napa's 2016 calculated disposal rate as reported in the annual report was 3.8 lbs. per person per day. City staff calculates that the equivalent diversion rate would be approximately 74% for CY2016 (Please note that CY2017 and CY2018 data was not used as wildfire debris disposal skewed the state's landfill disposal reports and the City submitted a disposal modification request using historical averages that was accepted by the State of California). Using the per capita measurement system, jurisdictions are discouraged from comparing their own rates with those of neighboring jurisdictions due to the specificity of the per capita disposal targets. Details on recycling programs achievements and recycling grants as of CY2018 can be found in Appendix A to this rate study.

Section 2.3 NEW PROGRAMS, STAFFING AND OTHER OPERATIONAL CHANGES MADE FROM 2014-2018

2.3.1 Upgraded Position – Waste Prevention Specialist:

The City created the new position of Waste Prevention Representative in FY 2013/14. The position was later upgraded to a slightly higher "Waste Prevention Specialist" classification in FY2016/17. The Waste Prevention Specialist assist businesses, residents, schools and City facilities to increase diversion of recyclable waste and organics such as food scraps. The Waste Prevention Specialist has been very involved in the roll out of the full scale Commercial Food Scrap Diversion Program to restaurants and other food scrap generators in the City. This has been partially required by AB 1826, which has increasing requirement for compostable organics generating businesses, schools and multi-family complexes with virtually all such generators covered by January 1, 2020. The Waste Prevention Specialist has also been working with multi-family complexes and commercial businesses to increase diversion of recyclable materials and reduce contamination in the recyclables being collected. Salary and benefit costs for position are contained in row 48 of Appendix D to this rate study.

2.3.2 New Senior Scalehouse Attendant Position:

The City created the new position of "Senior Scalehouse Attendant" in FY2017/18. The MDF is operated 361 days per year (closed only on New Year's Day, Easter Sunday, Thanksgiving Day and Christmas Day). With the creation of new Senior Scalehouse Attendant, a team of three full time Scalehouse Attendants operate the MDF's scales for 95% of the time with some limited back-up coverage from NRWS personnel. The Senior Scalehouse Attendant position also allowed the City to take on primary responsibility for Gatehouse Fee accounting and customer support (with billing duties supported via NRWS). Salary and benefit costs for position are contained in row 48 of Appendix D to this rate study.

2.3.3 Expanded Recycle More Program:

In April 2013 the City commenced the Recycle More Program to collect electronic waste, metal appliances, oversized metal items, and used cooking oil from residences by appointment. In November 2013 the program was expanded to include collection of clothing, other textiles (such as linens, bedding, and towels), shoes, belts, purses, handbags, backpacks, hard cover books, compact discs ("CD's"), digital versatile discs ("DVD's"), tapes, toys and other similar re-useable items. In January 2016, the program was again expanded to collect and recycle household batteries (when combined with at least one other Recycle More item). For calendar year 2018 the program collected 640 tons of electronic waste, metals, batteries, textiles and re-use items and 293 gallons of used cooking oil. This represented a 538% increase in collected tonnage from 2013 totals (119 tons). Costs for this program are contained in row 34 of Appendix D to this rate study.

2.3.4 Mandatory Commercial Recycling and Introduction of Full Scale Commercial Food Scrap Diversion Program:

In 2011, a new change to AB 939 was signed into law (AB 341) that established a statewide goal of diverting 75% of the solid waste stream from landfill by 2020. The law required CalRecycle to prepare a statewide plan for meeting the 75% diversion goal. The draft plan relied heavily on diverting food scraps from landfill throughout the state. The City authorized NRWS to begin a pilot commercial food scrap diversion program in August 2011.

AB 341 also required all businesses and multi-family complexes of 5 units or more, generating over 4 cubic yards of solid waste per week, to participate in a recycling program. This requirement became effective July 1, 2012. Due to Napa's comprehensive commercial and multi-family recycling program already in place, staff identified only 9 generators that did not have a recycling program when AB 341 became effective. Recycling programs were offered to these generators. In addition, the City was already providing (via NRWS) the data collection on the results of the commercial recycling program plus the education program required by the new law. By CY2016, the City and NRWS had narrowed down to only 3 non-compliant generators and by CY2018 there was only one non-compliant generator; enforcement action was taken and now the City have all qualifying commercial generators (2 cubic yards of more of solid waste service per week) participating in recycling.

In September 2014, another change to AB 939 was signed into law (AB 1826) requiring all businesses generating 8 cubic yards or more of food waste (referred to as "organic waste" in the statute) per week, to participate in a food scrap diversion program beginning April 1, 2016. Businesses generating 4 cubic yards of organic waste per week had to begin participating in a food scrap diversion program by January 1, 2017. Businesses producing 4 or more cubic yards of commercial solid waste per week were required to implement an organics diversion program by January 1, 2019. Businesses

generating 2 or more cubic yards of commercial solid waste may be subject to the same requirement, at the discretion of CalRecycle, beginning in 2020.

AB 1826 also required the City to begin offering a full-scale commercial food scrap recycling program on or before January 1, 2016. Given this requirement, Council approved the existing pilot commercial food scrap program be scaled up to include all Napa food scrap generating businesses and that the program began on April 1, 2015. A rate study was conducted in late 2014 and result in the City establishing a commercial food scrap collection rate that was/is 75% of the Municipal Solid Waste (MSW) charge. This discounted rate reflected the true costs collection and processing of commercial food scraps (and soiled paper) with collection costs being roughly equivalent to MSW collection, but the cost of processing the collected compostable materials at the City's MDF being roughly half the cost of MSW landfill disposal via the Devlin Road Transfer Station (which the City is contractually bound to deliver MSW per membership agreement with the Napa-Vallejo Waste Management Authority). This rate provides revenue to pay for the program and also encouraged the restaurants/food generators to separate the food scraps in order to save money on their collection service.

Food scrap programs take time and attention to implement. Care had to be taken to train each restaurant to (a) segregate the food scraps from other trash, and (b) make sure there are no plastics or glass in the food scraps. This latter requirement is crucial, because the food scraps will be composted and made into soil amendment. The soil amendment (compost) cannot be sold if there are pieces of glass or plastic in the finished product. The food scrap diversion program has also taken into account the flow of food through a restaurant's kitchen, from raw food preparation, through cooking and clearing of leftover food scraps from customers. The program must fit into the chef's operations and provide a convenient method to segregate the food scraps from trash throughout the food preparation process, while taking up the least amount of space in kitchens that are usually already very full of equipment, personnel and supplies. Training of all restaurant management and staff is key to a successful program. And finally, the training and monitoring of the program must be continued periodically as staff and management turnover are frequent in the restaurant business. This attention training, combined investment is an organic pre-processing system at the City MDF have resulted in a very low residue/contamination rate of less than 2% in CY2018.

Due to the time required to implement the food scrap diversion program at each restaurant, staff anticipated a slow but steady increase in the commercial food scrap composting program and that has come to fruition. By the end of calendar year 2016 there were approximately 76 restaurants/food generators (building on the original 50 pilot program participants) participating in the commercial food scrap diversion program diverting over 1,500 tons of food scraps that year. By the end of calendar year 2018 there were approximately 151 restaurants/schools/food generators participating in the commercial food scrap diversion program diverting over 2,400 tons of food scraps for the year. By the end of 2020, staff anticipate that the program will be implemented at 250 Napa restaurants, schools, grocery stores and other food waste generators as required by AB 1826 and the program is projected to divert over 3,000 tons of food

scraps per year. Costs for this program are contained in row 35 of Appendix D to this rate study.

2.3.5 Full Scale Residential Food Scrap Diversion Program:

During 2013 the City authorized NRWS to conduct a pilot residential co-collection program to add food scraps to the yard trimmings collection program. The pilot commenced in June 2013 and was conducted on two residential yard trimmings collection routes serving approximately 1,500 homes in the Browns Valley area of Napa. The co-collected organics (food scraps and yard trimmings) were composted at the Napa MDF. The pilot program provided some data on the quantity of food scraps that residents would place in the yard trimmings container in the event the program was implemented on a city-wide basis. As noted in Section 4 below, the City completed the pilot and expanded it into a full-scale residential food scrap diversion program beginning in April 2015.

The program provided education and "kitchen scrap" pail to each residence for storage of food scraps. Each resident was asked to empty the pail periodically into their existing yard trimmings cart (which became a "compost" cart with food scraps and soiled paper mixed in with the yard trimmings). The expanded range of residential organics collected by the existing organics collection truck and delivered to the Napa MDF for composting.

Since the introduction of the full scale residential food scrap program, the results have been measurable and significant. On a ton-for-ton basis, the residential MSW disposal route has been reduced by 10-13% on average. This translates to approximately 1,800-2,300 tons of reduced landfill disposal each year (which in turn constitutes and annual net savings of $66,000 to $85,000 of avoided disposal/lower processing costs) each year. It also translates into somewhere between a 1 to 1 ½ percent improvement towards the City's 75% landfill diversion goal. Annual costs for this program are contained in row 25 of Appendix D to this rate study.

CHAPTER 3: PRIMARY DRIVERS FOR RATE ADJUSTMENTS

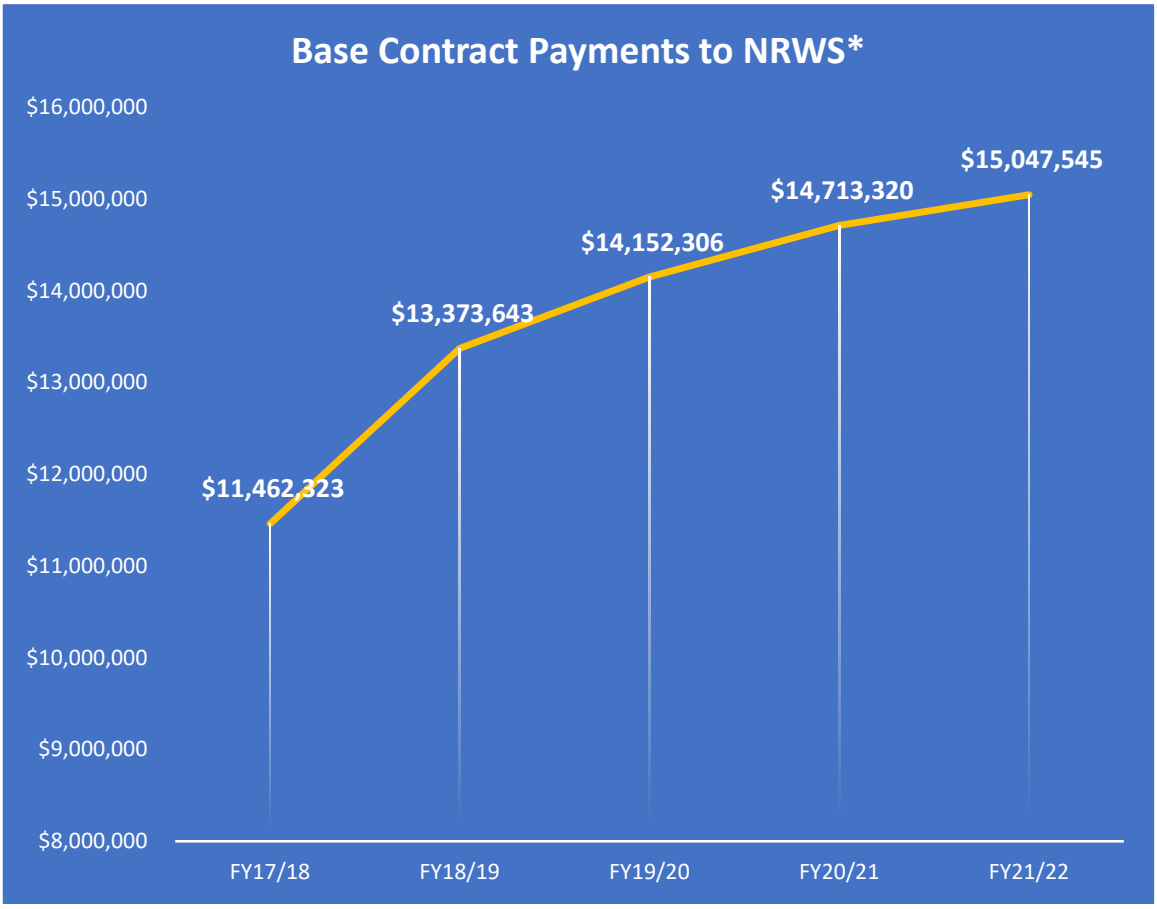
Section 3.1 2018 CONTRACT AMENDMENT WITH NRWS

On April 17, 2018, the Napa City Council considered and approved the 2018 Contract Amendment with NRWS. This amendment to City Agreement No. 8687 extended the City's agreement with NRWS for a 14-year period (through end of CY2031). Beyond extending the term of the agreement with NRWS, the 2018 contract amendment accomplished the following:

(1) Provided for new generation of NRWS heavy refuse and recycling fleet, with 20 new compressed natural gas (CNG) and 8 refurbished CNG vehicles by the end of CY2020.
(2) New and replaced-as-needed collection equipment will be provided to City customers by NRWS. This included residential carts as well as commercial carts, bins and roll-off drop boxes as needed during the 14-year contract extension term.
(3) NRWS guaranteed a new flow of 30,000 tons of compostable organic materials to the City's MDF for at least the first 10 years of the contract extension.
(4) A new full-service customer payment office within the City limits (598 Lincoln Avenue) and additional storage for the benefit of the City (at 600 Tower Road) were secured from NRWS.
(5) New processing equipment at the City MDF is secured by the 2018 Contract Amendment including millions of dollars of upgrades to the recycling sorting facility and composting operations.
(6) Reset the "base" contractual operating costs with fixed 3.5% (labor) and 2.5% (non-labor) cost of living increases for first five years of the contract extension (CY2018 through CY2022). "Base" (i.e., pre-known capital and operating) contractual costs established by the 2018 Contract Amendment are shown in Figure 1 below. Base costs do not include unit-based compensation to NRWS such as over-baseline processing payment or share of material sales revenue.
(7) Preserves and enhances financial incentives for continuously improved landfill diversion and a performance-based compensation for NRWS.

The net financial impacts of the 2018 Contract Amendment were estimated at $2,060,000 annually by the end of CY2019. The complete staff report as well as the adopting resolution (R2018-043) are contained in Appendix B to this rate study. As indicated in the April 2018 staff report, a rate increase of 10.5% is necessary to accommodate increased improvements and expenses associated with the 2018 Contract Amendment.

Figure 1: Chart Showing Changes in Base (Fixed) Capital and Operating Payments from City FY2017/18 through FY2021/22 per 2018 Contract Amendment



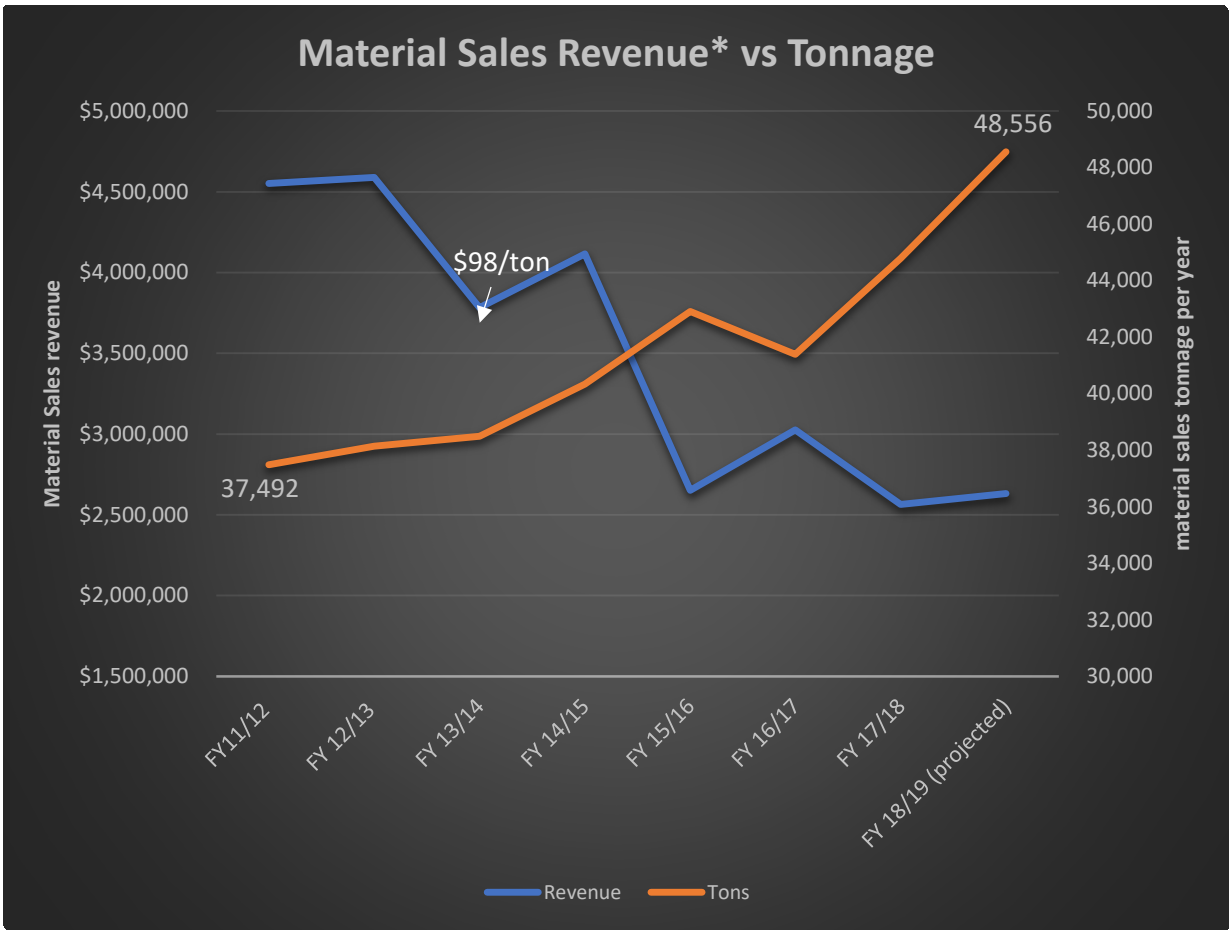
** Note: "Base" Contract Payments refers to pre-set capital and operating payments and does not include unit-based compensation to NRWS such as over-baseline processing payment or materials sales share (30% standard materials sales or 95% share of MDF direct sales).*

An independent study to review the cost associated with the 2018 Contract Amendment was commissioned by the City and conducted by the solid waste consulting firm of Hilton, Farnkopf and Hilton (HF&H). The full findings of this study are presented in Appendix C to this report. In brief, the study concluded that the 2018 Contract Amendment was: (1) mathematically accurate for proposed cost forms, (2) NRWS proposed costs are "favorable compared to HF&H benchmarks for historical and comparison data," (3) the use of fixed escalators (3.5% for labor and 2.5% for other costs) for the first 5 years of the 14-year extension appear to be reasonable, (4) costs for new and/or expanded program including Biomass/BioEnergy plant(s), commercial food scrap collection, Recycle More program, facility stormwater treatment and operation and maintenance of Covered Aerated Static Pile (CASP) composting system all appear reasonable and (5) capital costs, depreciation schedules, interest and projections for capital assets appear reasonable and in line with expected costs based on HF&H industry benchmark data.

Section 3.2 DECLINING MARKETS FOR RECYCABLE MATERIALS

Even though the amount of recyclable materials received and processed the Napa MDF grew substantially (43,600 tons in FY2013/14 to 49,881 tons in FY2017/18), the average price per ton has declined significantly. Gross materials sales revenue projections are shown in row 4 of Appendix D to this rate study. Not including the market-ready tonnage from Northern Recycling Operations & Waste Services (Northern), the average rate-impacting price per ton has declined from $98 per ton in FY2013/14 to $57 per ton in FY2017/18 (a 41% decrease in average revenue per ton). This has resulted in approximately $1.2 million less in non-Northern (rate-impacting) gross material sales in FY2017/18 versus FY2013/14 (used at time of previous solid waste rate setting) even as the processing cost paid to NRWS to process the non-Northern recyclable materials was enhanced substantially as part of the 2018 contract amendment (an increase of $10-13 per ton). The average rate-impacting price per ton for the first half of City's FY2018/19 (July 2018 to December 2018) was even further reduced to $54 per ton. Please see Figure 2 below for chart showing the recent rate-impacting materials sales history compared against increasing recycling tonnages.

Figure 2: Rate-Impacting Materials Sales Revenue Decline Chart



While markets for containers (bottles and cans) have generally maintained their value, prices for mixed paper/newsprint and non-bottle plastics have plummeted. This is primarily a result of China's "National Sword" policy where China (that purchased 61% of the planet's recyclable materials as recently as 2016) discontinued the purchases of most recyclable materials in an effort to combat excessive contamination (among other factors). This, in turn, resulted in a "glut" in the global market for recyclables from cardboard to a wide range of plastics, particular so-called "film" plastics (e.g., plastic bags, shrink wrap, etc. More information on the state, national and international ramifications of China's pull back is provided as Appendix E and Appendix F to this rate study and projections report. Gross materials sales revenue projections are further described in section 4.1.3 of this rate study and are contained in row 4 of Appendix D.

As a result of declining markets, the Fund generated between $1.2-$1.4 million less in revenue to cover expenses. To compensate for this recurring and sustained reduction in revenue, which subsidized the entire materials diversion program, a rate increase of 6% to 7% is necessitated (all other factors being equal).

Section 3.3 MDF CAPITAL IMPROVEMENTS EXPENSES AND DEBT SERVICE COSTS

3.3.1 MDF Capital Improvements:

As new light industrial uses have moved in to properties near the Napa MDF, the City determined there was a need to improve odor control at the composting facility and in the ponds that treat the water used in the compost process. Mitigating these issues were necessary in order to responsibly receive and process food scraps/food waste at the City's MDF as well as comply with more stringent solid waste, air and stormwater permit regulations. During 2012-2014 the City completed environmental mitigation improvements in and around the wood and composting processing area of the MDF including construction of two large particulate enclosures for the grinder and the screener plus enhanced bird control. The cost was $610,000 with the City and NRWS each paying half the cost.

Concurrent with the installation of these improvements, the California Air Resources Board was studying potential new regulations for discharges to air from composting facilities. Several alternate methods for capturing and treating discharges to the air of volatile organic compounds and particulate are currently available including placing finished compost "caps" on outdoor compost piles, using fabric covers on the piles, and a method called "covered composting" wherein the compost piles are placed in a fully enclosed building. During FY 2011/12 the City retained CH2MHill to assess the options available to the City for the composting of yardwaste, food scraps, pomace, manure, wood and other materials that would meet both the anticipated new stormwater regulations and the anticipated future changes to the Bay Area Air Quality Management District (BAAQMD) regulations for composting facilities. The final report was issued in August 2012. Based upon the results of the CH2MHill study, City staff determined that

specific stormwater improvements and construction of a covered compost system would enable the City to comply with both the new stormwater regulations and the anticipated changes to the BAAQMD regulations for the foreseeable future.

The Napa Renewable Resources Project (NRRP) was initiated to cover five elements of planned and/or potential improvements. The two "need to have" improvements were (1) a shift from open-air turned window system to a "covered" compost system and (2) upgrades to the Napa MDF's stormwater management system, particularly for any water that came in contact with active compost during the first 3-4 weeks of composting process.

In 2015 and 2016, a $2.5 million organics receiving building was constructed at the MDF as well as a $2.9 million "organics pre-processing system" to receive, screen, sort, grind and generally remove contamination from compostable organics received at the Napa MDF. In 2017, NRWS received a CalRecycle grant for an organics "de-packaging" machine that would allow the facility to separate expired or off-spec food from plastics or paper packaging for composting. The organics de-packager was installed in late 2018 at the Napa MDF and became operational at the beginning of 2019.

The City successfully issued $12.5 million in Solid Waste Revenue Bonds ("SWRB") in 2016. The timing of the SWRB was fortunate for the solid waste payer as the City's 2016 SWRB were issued with an overall average interest rate of 3.15% (with an annual average debt service cost of $868,646) with the total annual debt service costs (including principal, interest and fiscal agent fees) are shown in rows 19-21 of Appendix D. Please see Appendix G to this rate study for Executive Summary of the 2016 SWRB results and debt service schedule.

Design-Build (DB) Request for Proposals (RFPs) for these bond-funded facility improvements were issued in April and May 2017. A $2.1 million DB contract for construction of the southeast corner concrete and roof extensions was finalized with Ledcor Construction in September 2017 and work completed in May of 2018. In February 2018, Council approved a resolution to authorize a not-to-exceed $10.4 million DB construction contract for covered compost operations and stormwater improvements with Overaa Construction (Overaa). The work is anticipated to be completed in early 2020.

The CASP compost system will provide a fully enclosed composting area where food scraps, pomace, manure and other materials that can produce odor, will be received, pre-processed, and then composted in concrete bunkers operated in an enclosed facility. The facility will use forced air to aerate the compost in the concrete bunkers, which will promote the composting process. The existing composting system, consisting of outdoor windrows (referred to as "turned windrows" because the aeration is accomplished through manual turning of the windrows by loaders) continues to be used during the transition to the CASP system. Once CASP construction is completed and the necessary permits are issued by the Bay Area Air Quality Management District,

open-air windrow composting will be replaced entirely by active composting in the CASP system.

As a result of adding debt service to construct improvements to meet regulatory and operational requirements, cost to the Fund increased by nearly $900,000 which requires a 4.5% rate increase.

Section 3.4 NEW PROGRAMS AND COST CHANGES PLANNED OR PROPOSED FOR 2019, 2020, 2021 AND 2022

3.4.1 New Emissions Testing Requirements from Air District for CASP Composting System at City MDF:

As described previously in this rate study, a new Covered Aerated Static Pile (CASP) composting system is being installed at the City's MDF. A permit application for operation of the new CASP system is still pending with the Bay Area Air Quality Management District (BAAQMD) at the time of this report. While not yet finalized the draft permit conditions require an extensive air emissions sampling and testing protocol for the first year (four quarters) of operation to fully demonstrate the effectiveness of the CASP composting system to control and limit air emissions from the new composting system. Inbound tonnage received and composted onsite at the MDF will be restricted to approximately 63,000 tons during the first year of this testing protocol (as opposed to the approximately 44,000 tons allowed to be composted onsite with the current open air, turned window composting system). After the first year of extensive testing, annual testing and more limited monthly reporting are anticipated to be required by the BAAQMD. At the time of this report, it is estimated the first year of extensive, one-time initial emissions testing will cost approximately $800K beginning in October of 2019 and continuing through the end of September of 2020. Beginning in October of 2020, it is estimated the recurring/ongoing emissions testing for BAAQMD will cost an estimated $250K per year. Expenditure projections for this new emissions testing is also addressed row 83 of Appendix D, with the $800,000 initial testing placed in nonrecurring budget and $250,000 per year in estimated ongoing emission testing costs included in recurring expenditures thereafter.

3.4.2 Addition of Residential Low-Income Assistance Program:

City of Napa water rates began a low-income assistance program called "RateShare" in 2012. While the City's solid waste/recycling rates have always considered the residential 20-gallon size as the "lifeline" option (and this might be true for seniors on a fixed income for example), it is not a truly equitable way to address larger low-income households that would presumably generate larger amount of non-recyclable, non-compostable Municipal Solid Waste (MSW). Given this inequity, City staff is recommending that a new low-income assistance program modeled on Water's RateShare program be implemented. In short, the low-income assistance program for

solid waste would use qualification criteria based on the established Pacific Gas & Electric (PG&E) California Alternate Rates for Energy (CARE) program. It is staff's understanding that approximately 3,600 residential households in the City of Napa currently qualify for PG&E's CARE program and that approximately 900 of these households currently utilize Water's RateShare program.

In accordance with Proposition 218 (Prop 218), a water or solid waste customer is to pay only for the cost of service provided to that customer. Thus, to maintain Prop 218 compliance an assistance program can only be funded by a non-rate based source, to prohibit one rate paying customer from subsidizing another customer. Materials sales revenue is proposed to be used for this new low-income assistance program at a level of $150,000 per year (row 40 of Appendix D). Like water's RateShare program, the low-income assistance program for solid waste would use eligible CARE households within the City on a first come, first serve basis. Staff is proposing a flat $10 per month ($120 per year) level of assistance to participating residential households. This would allow up to 1,250 solid waste customers to participate in the low-income assistance program.

3.4.3 New Sunday Commercial Service:

Starting July 1, 2018 (as part of the 2018 Contract Amendment with NRWS), new commercial service on Sundays was introduced. The new Sunday service provided additional collection opportunities for three commercial solid waste streams, namely MSW, commercial food scraps and commercial recycling. The new service was prompted by sometimes over-flowing MSW, recycling and food composting equipment (particularly for restaurants and hotels). Prior to Sunday service, businesses that generated more solid waste materials over weekends would have to wait from Saturday to Monday (MSW and recycling) or even Friday to Monday (food composting) for service opportunity. The new Sunday service is gradually adding accounts towards a maximum of 75 stops for each line of service. The new Sunday service will also help with significant amount of community special events which tend to be on Saturdays and would previously have to wait until Mondays following event for collection service and haul in of temporary equipment provided to special events. As the time of this report (May 2019), the current monthly cost of commercial Sunday service is $5,345 per month ($64,140 per year) and is reflected as part of base capital and operating payments to NRWS (row 25 of Appendix D).

3.4.4 Contribution to Risk Management Fund for Hidden Glen Landfill Liability:

The City owns the property on which the former "Coombsville Dump" (aka Hidden Glen Landfill) is located. That landfill property is the subject of a closure plan, that was approved in 2001 by the then California Integrated Waste Management Board (now California Department of Resources, Recycling and Recovery or "CalRecycle"). The closure plan includes provisions for landscape improvements over the cap on the property as a part of the closure, which will be the site of future City park, along with ongoing maintenance of the property, all of which are designed to ensure the physical integrity of the cap over the former landfill.

Since the approval of the closure plan in 2001 to date, the City has incurred costs related to the closure of the Landfill in accordance with the closure plan, which has included the defense and settlement of a lawsuit alleging that the City breached its obligations under the closure plan.

To date, the City has incurred costs related to the settlement of the lawsuit in the amount of approximately $5 million and those costs have been paid from general fund revenue sources (the Risk Management Fund). Since the City's purpose of acquiring the site of the former landfill served a dual purpose of closing a former landfill (which is a legitimate cost of the Solid Waste Enterprise to be equitably allocated to ratepayers who use the services of the Enterprise), as well as providing a public benefit for a future public park (which is a legitimate expense of the City's general fund to be equitably allocated to taxpayers), the City has equally allocated the costs of closing the landfill to the Solid Waste Enterprise and the Risk Management Fund. Therefore, there is a balance of $2.5 million (50% of $5 million) to be paid by the Solid Waste Enterprise Fund to cover the proportionate costs of obligations under the closure plan.

In addition to the costs that have been previously incurred, there are pending claims filed by owner of residential property immediately adjacent to the former landfill property, alleging that debris from the former landfill has spilled into the adjacent properties and the City is responsible for costs to remediate the debris. The City is currently in the process of evaluating those claims.

The Risk Management Fund has already paid for litigation costs and will be used to pay for soil remediation costs, if necessary. The Solid Waste Fund will make annual contributions to the Risk Fund to cover the Solid Waste Fund's proportionate responsibility for closure of the landfill. The level of funding is 400,000 per year, to be transferred from the Solid Waste Fund to the Risk Management Fund (shown in row 18 of Appendix D). The source of revenue for this transfer will be material sales.

In the Solid Waste Rate revenue collected between RY2009/10 and RY2010/11, the City collected $310,000 to cover the estimated costs of the capital improvements required as part of the closure at the former landfill site. The improvements initially planned to be built with those funds have not yet been completed by the City. These funds will be deobligated and be used for other expenses in the Fund. When the improvements are constructed, the Risk Management Fund will pay for the improvements with Solid Waste Funds proportionate share being covered by the annual contribution as described above.

In addition to the above costs, the City has included a projected annual maintenance charge of $33,000 in the upcoming City FY2019/20 budget (row 15 of Appendix D). This projected maintenance cost is escalated by inflation each year to be utilized for maintenance costs at the site of the former Landfill (including local enforcement agency monitoring fees and minimum property maintenance cost, as well as costs that are anticipated to be incurred after the Hidden Glen passive park is constructed).

Chapter 4: Financial Position of Solid Waste Fund

Section 4.1 PROJECTED REVENUES UNDER EXISTING RATES

Appendix D to this rate study shows all of the projected revenues and expenditures for the Fund for Rate Year (RY) 2019, RY2020, RY2021 and RY2022. The following descriptions of the projections refer to details contained in Appendix C. The key revenue and expense line items (not already described above) are described in more detail below. The row numbers from Appendix C are included for reference to the actual spreadsheet containing all of the projected Solid Waste Fund revenues and expenses. Some rows were not used in the spreadsheet and only the significant revenues and expenses are described below, so there is not a discussion for every row. Several of the projected figures include cost escalation per the City's Long Term Financial Forecast (LTFF). This forecast is prepared by the Finance Department and includes the inflation rates to be used by City departments for each cost category included in the City's General Fund budget (3.0% for External Services, 3.9% for internal services). In the case of other costs (such as several of the NRWS operating costs) staff has utilized the pre-set 2018 Contract Amendment escalators (3.5% for labor and 2.5% for non-labor costs) per Contract/Calendar (CY) or different projected inflation rates that are more applicable to certain NRWS contractual costs (such as over-baseline throughput processing costs). All projected revenues and expenses for each rate year are shown in terms of City Fiscal Year (July through June) for consistency with City budget practices.

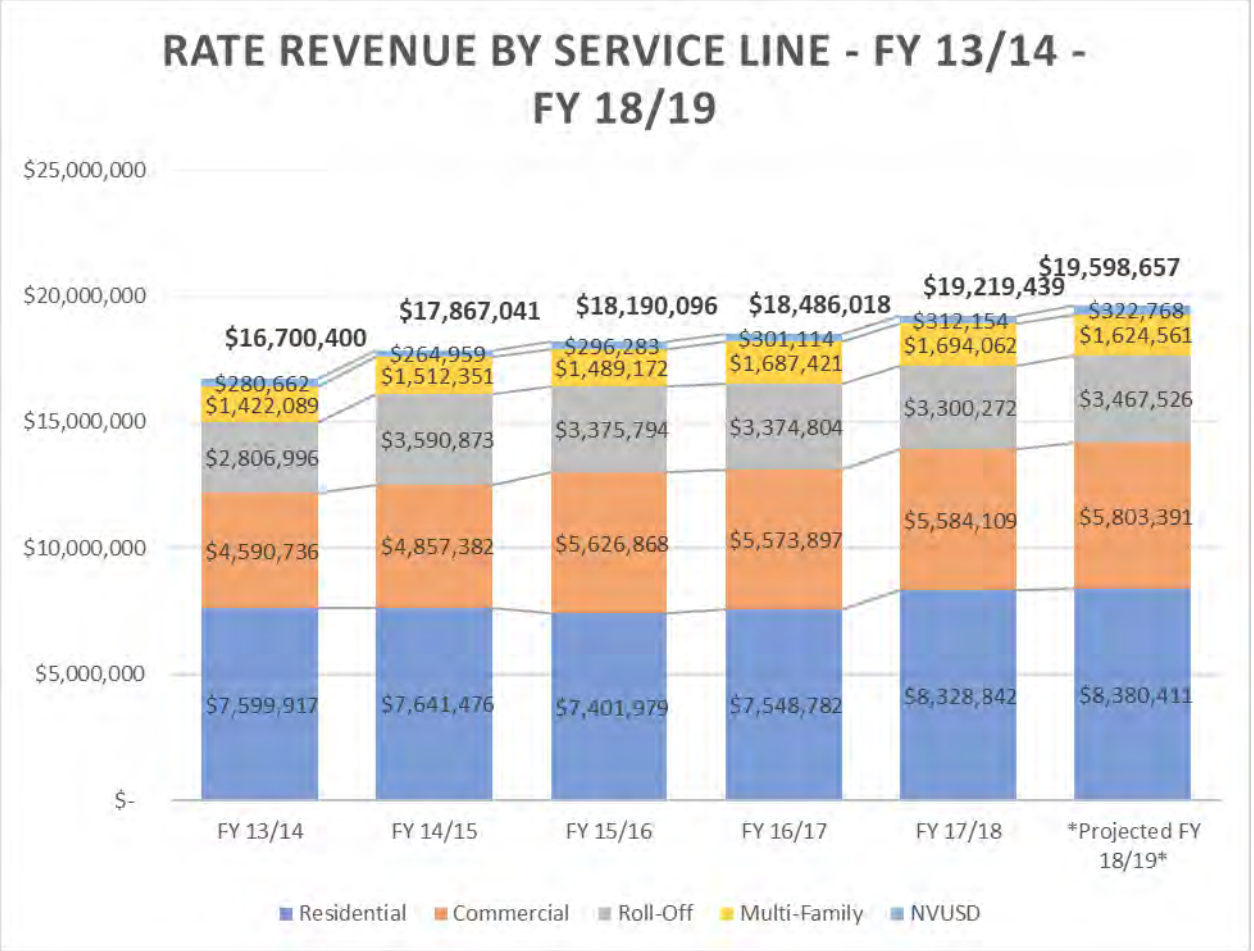
The main revenue streams for Solid Waste and Materials Diversion Fund are:

- Collection service revenues including:
    i. Payments from customers for residential, multi-family, commercial and roll off services
    ii. Payments from City Facilities for collection services
    iii. Payments from Napa Valley Unified School District (NVUSD) for collection services
- Revenues from sale of recyclable materials, compost and other materials marketed from the MDF (the City retains 70% and NRWS receives 30% for the "secondary" materials like paper, metal, glass and plastics while the NRWS receives 95% and the City retains 5% for "direct" materials sales such as compost and gravel per the terms of the 2018 Contract Amendment).
- Gate fees received from public customers delivering loads of recyclables, wood, yard waste, concrete, etc. to the Napa MDF
- Payments from Napa County for processing recyclable and compostable materials at the Napa MDF
- Processing fees paid by other regional users of the Napa MDF (e.g. Sonoma Garbage Service, Recology, Cultured Stone, etc.)

4.1.1 Collection Service Revenues (Row 2 of Appendix D)

Collection service revenues are projected for five types of customers (or "service lines") in the City: residential, commercial, multifamily, roll off/compactor, and the Napa Valley Unified School District (NVUSD). In Figure 3 below, recent solid waste rate revenue history is presented by line of service for City Fiscal Year ("FY") 2013/14, FY2014/15, 2015/16, FY 2016/17, FY 2017/18 and projected FY2018/19 (based on first half City FY - July 2018 to December 2018 - doubled).

Figure 3: Collection Service Rate Revenues from City FY2013/14 through FY2018/19 (Projected)



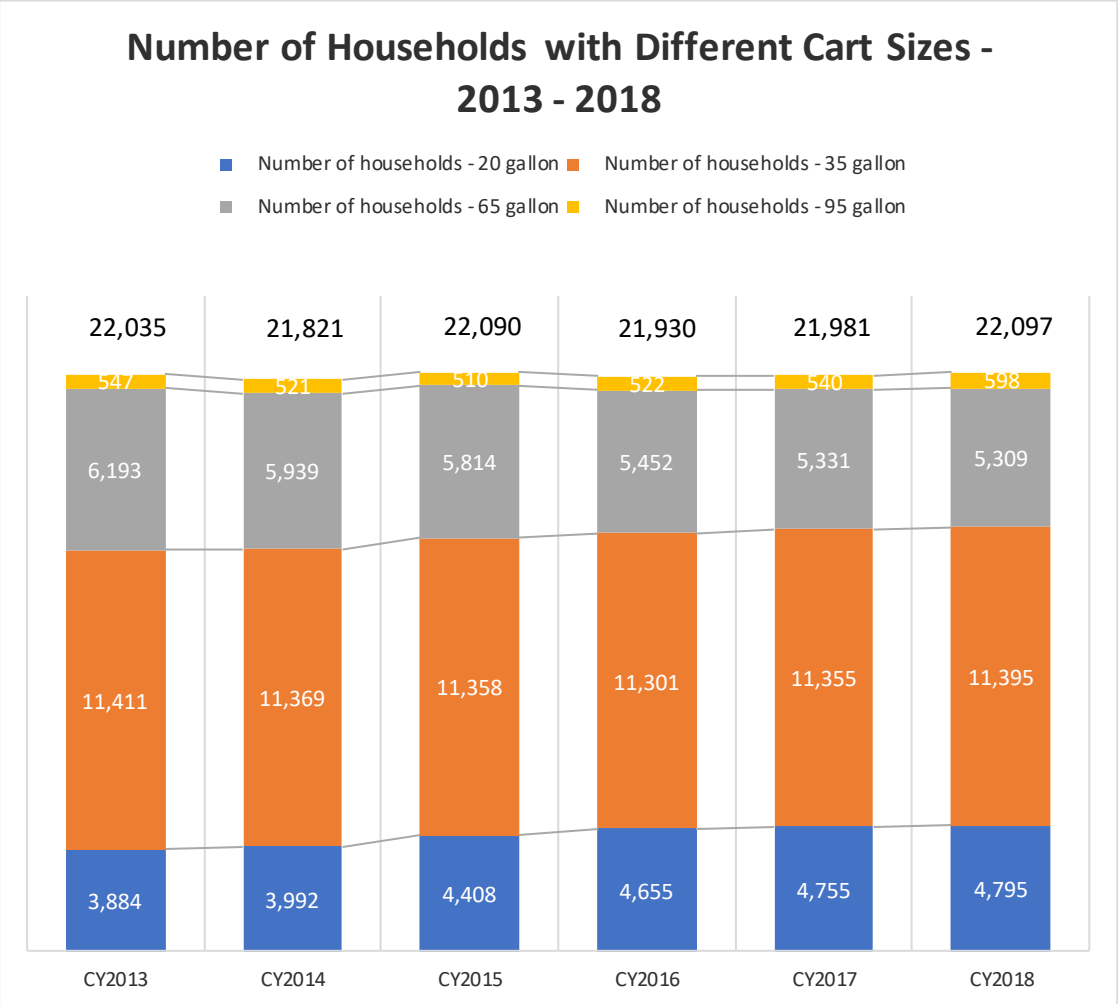
Cumulative collection service revenue (with and without collection service rate adjustments) is shown in row 2 of Appendix D. The components of this revenue are as follows:

a. Residential Revenue

Residential revenue consisted of $8,328,842 or approximately 43.3% of the total collection service revenue for City FY 2017/18 (total collection revenue was $19,219,439 for FY 2017/18). Residential revenue accounts for the largest percentage of collection revenue to the Solid Waste Fund. Residential revenue grew an average of 5.4% per year for the period 2014 through 2018. The average number of residential accounts has increased from 21,821 in 2014 to 22,097 in 2018.

Residential customers can choose to use 20, 35, 65 or 95-gallon carts for solid waste. The rate charged increases with the size of the cart. Over the past several years there has been a trend away from using the two largest size carts (65 and 95 gallons) and toward using the two smallest sized carts (20 and 35 gallons), with the 35-gallon size now being the most common customer choice (accounting for 11,395 of the total 22,097 residential service customers as of December 2018). Please see Figure 4 below for changes in residential solid waste service sizes from CY2013 through CY2018.

Figure 4: Residential Solid Waste Service Cart Sizes from CY2013 to CY2018



b. Multifamily Revenue

Multifamily revenue consisted of $1,694,062 or approximately 8.8% of the total collection service revenue for City FY 2017/18. Multifamily revenue accounts for the fourth largest percentage of collection revenue to the Fund and grew by an average of 4.8% per year for the period 2014 through 2018. The number of multifamily accounts in Napa has been relatively constant at 88-91 accounts for the period 2014 through 2018.

c. Commercial Revenue

Commercial revenue consisted of $5,584,109 or approximately 29.1% of the total collection revenue for City FY 2017/18. Commercial revenue is the second largest rate revenue stream to the Solid Waste Fund and grew by an average of 5.4% per year for the period 2014 through 2018. The average number of commercial accounts has increased from 1,107 in December of 2014 to 1,217 in December of 2018.

d. Roll Off/Compactor Revenue

Roll-Off Box/Compactor service revenue consisted of $3,300,272 or approximately 17.2% of the total collection revenue for City FY 2017/18. Roll-Off Box/Compactor revenue is the third largest rate revenue stream to the Solid Waste Fund and grew by an average of 4.4% per year for the period 2014 through 2018. The number of "permanent" (vs. one-time or "temporary") Roll-Off Box/Compactor MSW accounts has increased from 272 in December of 2014 to 342 in December of 2018.

Roll off collection service for construction and demolition debris projects in Napa is non-exclusive (and thus not property related unlike "fixed" residential and commercial accounts utilizing roll-off box collection services). This means NRWS competes with several independent companies for the roll off business at construction job sites and at businesses and residences (e.g. for roofing and remodel projects where a debris box is needed). Pursuant to its contract with the City, NRWS must charge the City-established rates for solid waste and recycling collection in roll off containers and compactors. The City-established rates for solid waste collection are higher than those charged by competitors. The City-established rates for collection of source-separated recyclable construction and demolition materials (e.g. a debris box on a construction site that contains source separated metal or cardboard or wood) are generally lower than the rates charged by competitors. The City intentionally established lower rates for collection of recyclables to provide an economic incentive to construction sites to comply with the City's Construction and Demolition Debris Recycling Ordinance and to increase the City's overall level of recycling. Due to the rate differential, construction job sites frequently split the job and use NRWS to collect the boxes of source-separated recyclable materials and another company to collect the solid waste debris boxes.

Some commercial and multifamily customers are switching to roll off service. This is not likely to create a large swing in the roll off revenue, but it may offset some of the revenue loss from the construction jobs that are ending or recently ended.

e. Revenue from Napa Valley Unified School District

The City and the Napa Valley Unified School District (NVUSD) entered into a Memorandum of Understanding in 2005 to have the City include NVUSD in its procurement for a solid waste and recycling collection contractor. NRWS was the selected contractor and provides collection services to NVUSD at a cost that was included in NRWS's proposal to the City. As an entity of the State of California, the NVUSD has a unique contractual collection service rate established and adjusted each July 1st by the terms of the Memorandum of Understanding between the City of Napa and the NVUSD. NVUSD pays NRWS (through the City) for processing its recyclable materials and for disposal of solid waste at the Transfer Station.

The collection service from the NVUSD is smallest collection service rate revenue stream. It was $312,154 or approximately 1.6% of the total collection service revenue for City FY 2017/18. The cost for collection services in the City-NVUSD contract is adjusted by specified inflation indexes each year. NVUSD revenue is projected to escalate by 3% per year for FY 2018/19 through FY 2021/22.

4.1.2 Revenues from MDF Gate Fees and Sales of Compost, Topsoil and Gravel (Row 3 of Appendix D)

This category includes revenue from (a) self-haul customers paying the posted gate fees at the MDF, (b) tip fees paid by the County of Napa for processing yard trimmings, recyclable materials and food scraps at the MDF, (c) payments from regional recycling and solid waste collection companies delivering materials to the MDF for processing, (d) tip fees paid by Cultured Stone for processing of rock, and (e) the sale of compost, topsoil and gravel produced at the MDF, also known as "direct" materials sales.

Self-haul customers include landscapers, construction companies, roofers and members of the public who bring a broad range of materials to the Napa MDF including yard waste, wood, concrete, and manure. Due to space constraint at the MDF, the City stopped accepting self-haul dirt at the MDF as of April 1, 2012. (Self-haul dirt is accepted at the Devlin Road Transfer Station for a fee, currently $40 per ton). Self-haul customers pay the posted gate fees (as approved by Council) at the MDF scale house.

In 2005, the City signed a Memorandum of Understanding (MOU) with the County of Napa to process curbside and commercial recyclable materials and to compost the yard trimmings and collected in the County. Pursuant to the Agreement the County pays the City of Napa for composting the yard trimmings. The City pays the County a fixed dollar amount per ton for the curbside and commercial recyclable materials. The value received from sale of these materials roughly covers the cost of sorting and marketing the recyclable materials at the Napa MDF. In 2013 the City began composting food scraps from the County pilot commercial food scrap collection program. The price

currently paid by the County includes the incremental cost of composting the food scraps and soiled paper at the MDF.

The existing MOU with the County of Napa ends in December 2019. City staff will be in the process of negotiating a long-term extension of the agreement with Napa County to match the County recent contract extension with its hauler (Napa County Recycling & Waste Services, LLC or "NCRWS") through CY2028 (or longer to match City's current agreement with NRWS through end of CY2031 if desired by Napa County). Under the terms being discussed, the County would pay an increased rate for processing compostable organic materials at the MDF commensurate with the capital investments and higher processing costs incurred by the City (and paid to NRWS). The arrangements for processing recyclable materials (glass, plastics, cardboard, paper, etc.) would likely be much lower than historical MOU pricing given the steep decline in markets for recyclable materials described earlier in this rate study. City rate payers cannot subsidize use of the City's MDF by Napa County and contractual pricing is adjusted accordingly periodically in response to market realities.

Depending upon market conditions and availability of other processing options, some local recycling and solid waste collection companies, such as Sonoma Garbage, deliver materials (including yard trimmings, food scraps, and/or recyclable materials) to the Napa MDF for processing. These companies usually agree to deliver a large quantity of material over a pre-established period of time and are often offered optimized pricing by the City in recognition of this commitment to use the Napa MDF.

Compost, topsoil and gravel produced at the Napa MDF are sold to local landscapers, wineries, contractors and the general public. Compost has been sold at an average price of $10 per ton in the past. As noted above, pursuant to the City's contract with NRWS for operation of the Napa MDF, the City receives 5% of the revenue from sale of the "direct" materials such as compost, topsoil and other products produced at the MDF and NRWS receives 95% of the revenues. The revenue figures included in Row 3 of Appendix D include 100% of the revenues from sale of direct sales (i.e., compost and gravel). The payment to NRWS of their 95% share of direct materials sales is described below in the section 3.5.2 of this report, and is included in the figures in Row 27 of Appendix D.

MDF gate fees are not subject to the Proposition 218 notice requirements and, therefore, may be adjusted by the City Council at any time.

4.1.3 Sale of Secondary Materials (Row 4 of Appendix D)

The recyclable materials processed at the Napa MDF include cardboard, junk mail, other types of paper, aluminum, plastic and glass beverage containers, other glass and plastic household containers, film plastics, used motor oil, used cooking oil, and electronic waste. The recyclable materials delivered to the MDF include materials collected in the City of Napa by NRWS, those collected in the County of Napa by NRWS's sister company NCRWS, those received by Northern Recycling at the transfer

station and delivered to the MDF for processing (see Section 6 B 5 below for details about the City's processing agreement with Northern), materials delivered by the public and materials delivered by other recycling and solid waste collection companies in the region. The materials are marketed by NRWS domestically and internationally directly to buyers and often using materials brokers.

As described above in section 3.2.2 of this rate study, there has been a steep decline in revenue received from secondary materials sales, particularly for material shipped to overseas buyers. This trend is expected to continue for the foreseeable future and revenue projections are largely flat

4.1.4 Total Projected Revenue

The total projected base revenue for City FY2019/20 prior to applying any collection service rate adjustment is $30,383,500. The total projected base revenue for City FY2019/20 with proposed rate adjustments is $33,833,100 as shown in row 13 and row 89 of Appendix D.

Section 4.2 PROJECTED EXPENDITURES

The projected expenses for Solid Waste and Materials Diversion Fund for FY2019/20, FY2020/21 and FY2021/22 are listed in Appendix D from rows 14 through row 88, some of which are described in more detail below.

4.2.1 Transfer to General Fund Based on Cost Allocation Study (Row 16 of Appendix D)

The Fund pays for support from other City departments based upon a periodic Cost Allocation Study. The cost for FY 2019/20 is $400,900 (which is approximately $88,750 more than FY2018/19) based on updated Cost Allocation Study. The budgeted cost for FY2020/21 is $412,900 and the projected cost for FY2021/22 is $429,500.

4.2.2 Street Mitigation/Repair Costs (Row 17 of Appendix D)

During the 2009 rate setting, the Napa City Council voted to add a cost for repair and maintenance of streets due to impacts caused by the weight of the MSW, recycling and yard waste collection vehicles and the roll-off vehicles. The cost estimate for the annual impacts caused by the collection vehicles was $1.6 million, based upon an analysis performed by Hilton, Farnkopf and Hobson (HF&H) in 2004 and updated in 2009. This cost was phased in over a three-year period. This base cost from the HF&H has been indexed for inflation each FY and was $1,960,00 for City FY2018/19. In preparation for this rate-setting process, a new street impact study was commissioned by the City and conducted by the consulting firm GHD. The GHD updated study was completed in April 2019 and full analysis and findings are as Appendix I to this rate study. Annual City street repair and maintenance costs from the City of Napa Public Works Department is Appendix J to this rate study. In summary, the updated 2019 analysis found that the

heavy refuse and recycling collection fleet account for 11.6% of the impacts to City streets (down from 15.1% in 2009). Among other changes, the 2019 study took into consideration a third axle on the new NRWS collection fleet which reduced the impacts from these vehicles on City streets. Please see following Table 1 for a summary of these findings.

Table 1: Roadway Impacts from Different Types of Vehicles on City Streets

Vehicle Type	2009 Percent of Total Impacts	2018 Percent of Total Impacts
Solid Waste Vehicle	4.3%	4.3%
Recycling Vehicle	4.6%	2.3%
Yard Waste Vehicle	6.2%	5.0%
Refuse Vehicle Subtotal	15.1%	11.6%
Others Trucks	79.0%	81.1%
Automobiles	5.9%	7.3%
Total	100%	100%

Based on the 2019 analysis and updated street maintenance and repair cost information from the City's Public Works Department, the new annual contribution for refuse and recycling collection vehicles is $1,113,60 (row 17 of Appendix D). The street mitigation/repair costs currently represent approximately 5.8% of the Solid Waste Fund's collection (rate-based) revenue.

4.2.3 Transfer Station Tipping Fees (Row 23 of Appendix D)

The Devlin Road Transfer Station is owned by the Napa Valley Waste Management Authority (NVWMA) and is currently operated by Northern under contract to the NVWMA. The tipping fee increased by $1 per ton to $70 per ton on October 1, 2018. Under the current adopted NVWMA rate plan, this rate will increase by $1 per year each October 1 with next increase slated for October 1, 2019. The budgeted cost for FY2019/20 is $3,400,000 with FY2020/21 at $3,500,000 and the projected cost for FY2021/22 is $3,605,000. Transfer Station disposal costs currently represent approximately 16.8% of the Solid Waste Fund's collection (rate-based) revenue.

4.2.4 Contractual Payments to NRWS (Rows 25-39 and Row 44 of Appendix D)

Payments to NRWS to perform solid waste and recycling collection service and to operate the Napa MDF are the largest expense of the Fund. Pursuant to the City's contract with NRWS (and as revised under the terms of the 2018 Contract Amendment), costs are adjusted annually on January 1. Per the 2018 Contract Amendment with NRWS, labor related costs were reset as of July 2017 and escalate at a fixed 3.5% with non-labor costs increased at 2.5% for first five years (through CY2022) of the 14-year extension. Starting with CY2023, contractual increase will based upon a specific group of indexes for labor, fuel, supplies, etc. Pursuant to the City's contract with NRWS, the company is compensated in the several ways:

a. Operating and Capital Cost Payment (Row 25 of Appendix D):

NRWS was selected through a competitive procurement process in 2004. They proposed a base price per year to perform all residential, commercial, multi-family and roll off solid waste and recyclables collection in the City as well as operation of the Napa MDF. This price is escalated annually by a weighted group of indexes including the CPI, PPI, fuel and labor indexes. The City's contract with NRWS was originally scheduled to end December 31, 2015 but the City had up to 4 one-year extension available of which the City exercised 2 years (CY2016 & CY2017). The 2018 Contract Amendment (approved by Council in April of 2018) extended the City's agreement with NRWS for 14 years (through end of CY2031). The budgeted cost for FY2019/20 is $13,096,000 with FY2020/21 at $13,624,500 and the projected cost for FY2021/22 is $13,928,00. The Capital and Operating Payments to NRWS disposal costs currently represent approximately 66.8% of the Solid Waste Fund's collection (rate-based) revenue.

b. 3% Base Profit Margin (Row 26 of Appendix D):

In addition to the Operating and Capital Cost payment, the City pays NRWS a fixed profit margin of 3%. The budgeted cost for base profit to NRWS FY2019/20 is $404,500 with FY2020/21 at $420,500 and the projected cost for FY2021/22 is $430,000. The Base Profit Margin Payments to NRWS currently represent approximately 1.9% of the Solid Waste Fund's collection (rate-based) revenue.

c. 30% Share of Sale of Recyclable Materials and Compost (Row 27 of Appendix D):

As noted above the City splits revenues 70%/30% with NRWS (secondary materials, which is bulk of material sales revenue) while the City splits "direct" material sales (e.g., compost and gravel) 95% to NRWS and 5% the City. The budgeted cost for share of materials sales to NRWS FY2019/20 is $2,350,000 with FY2020/21 at $2,400,000 and the projected cost for FY2021/22 is $2,472,000.

d. NVUSD (Row 28 of Appendix D):

As described above, NRWS provides collection services to the school district and is paid by the City for these services. NVUSD pays the City for these costs. Pursuant to the City's 2018 Contract Amendment with NRWS, these costs escalate by 3.5% for first five year of the 14-year extension (through CY2022) and then by a contractual Bay Area CPI labor index thereafter. The budgeted cost to NRWS for NVUSD service in FY2019/20 is $159,000 with FY2020/21 at $165,000 and $170,000 in FY2021/22.

e. Allowance Based Programs and Unit Costs (Rows 29 and 30 of Appendix D):

NRWS receives additional compensation for services that are not included in the base Operating and Capital Cost Payment. Allowance Based Programs are those for which the costs are not escalated annually (E-Waste Recycling Event, Business Recycling Awards Program and the Telephone Directory Recycling Ads). The budgeted cost to NRWS for Allowance-based service is FY2019/20 is $116,000 with FY2020/21 at $116,000 and $116,000 in FY2021/22.

Unit Costs include payment for costs based on tonnage like carpet processing and negative value materials or unit based like bulky items pick-ups. The budgeted cost to NRWS for Unit-based service in FY2019/20 is $400,000 with FY2020/21 at $414,000 and $426,500 in FY2021/22.

f. Payment for Processing Cost Over Baseline (Row 31 of Appendix D):

NRWS is paid an extra payment per ton for processing tons of materials at the MDF over certain threshold limits described in the City-NRWS contract. The 2018 Contract Amendment rewards and incentivizes NRWS to bring in more materials to the Napa MDF so that third party users of the MDF can help defray fixed costs related to the facility and provides non-City solid waste rate payer revenue. The amendment required NRWS to guarantee at least 30,000 tons per year of "new" materials to the MDF and enhanced the per ton payment to NRWS is each of the four main processing areas (composting, wood, recycling and source-separated construction and demolition debris materials). NRWS has delivered on this commitment and the inbound tonnage has grown substantially with an additional 60,000 tons per year of throughput as compared to CY2015. The Over-Baseline (OB) processing payment to NRWS for CY2018 was $3,760,508. Future OB payments include projections for increased volume and inflation escalators (as it is adjusted by the Producer's Price Index each calendar year). The budgeted cost to NRWS for OB processing payment in FY2019/20 is $3,900,000 with FY2020/21 projected at $4,017,000 and $4,137,500 in FY2021/22.

g. Diversion Incentive Payments (Row 32 of Appendix D):

With approval of the Third Amendment to the City-NRWS contract in 2014, three new Diversion Incentives for NRWS were approved by the City Council. These are the Targeted Incentive (TI) which rewards NRWS with $100 per new roll off box of source-separated recyclable materials they collect and deliver to the MDF for sorting over and above the threshold level established in the Third Amendment; the Residue Reduction Incentive (RRI) that rewards the company for achieving residue left over after all sorting and processing operations at the MDF that is lower than a baseline level established in the Third Amendment; and the Collection Incentive (CI) which rewards NRWS for collecting and diverting tons of recyclable materials over and above the baseline level established in the Third Amendment. The purpose of these incentives is to reward increased diversion of materials from the transfer station. The avoided tipping fees provide some funds toward payment of the incentives. The Diversion Incentive payment budgeted for FY2019/20 is $200,000 with FY2020/21 projected at $206,000 and $212,000 in FY2021/22.

h. Partnership Programs (Row 33 of Appendix D):

The two programs commenced in FY 2008/09 for color glass sorting and rigid (#1-#7) plastics sorting required the costs for 4 sorting employee positions at NRWS. Per the 2018 Contract Amendment, labor costs are escalated by a fixed 3.5% per year, so the costs are pre-known in advance. The City's budgeted costs for its 70% share of Partnership Program sorting positions in FY2019/20 is $154,500 with FY2020/21 at $160,000 and $165,000 in FY2021/22.

i. Recycle More Program (Row 34 of Appendix D):

As described above, NRWS now operates the Recycle More program. The costs for the program include the payment for a new vehicle (panel-type truck with a lift gate) plus certain percentages of the incremental costs for the program as described in the Third Amendment to the City-NRWS contract executed in July 2014. The City's budgeted costs for the Recycle More program per the 2018 Contract Amendment in FY2019/20 is $6,500 with FY2020/21 at $6,500 and $6,500 in FY2021/22.

j. Commercial Food Scrap Diversion Program (Row 35 of Appendix D):

As also described above, NRWS operates the commercial food scrap diversion program as it is expanded city-wide in 2015 and 2016. Row 91 shows the cost of the expanded commercial food scrap program (per terms of the 2018 Contract Amendment) of $217,000 for FY 2019/20 with FY2020/21 at $222,500 and $232,000 in FY2021/22

4.2.5 Payments for Recycled Material to Northern Recycling and Other Companies (Row 47 of Appendix D)

As noted above, NRWS markets the recycled materials processed at the MDF. NRWS receives 30% of the revenues from sale of these materials (excluding MDF direct sales such as compost and gravel which is not relevant to this budget item). This cost is shown in Row 27. The City also has an agreement with Northern Recycling (a sister company to NRWS that operates the transfer station under contract to the NVWMA) to process recyclable materials at the MDF. The agreement was approved by the City Council in July 2010. In addition to operating the transfer station and a sorting line for separating construction and demolition debris at the station, Northern also operates a Buy-Back Center at the station that accepts recycled materials and that pays for certain recycled materials. Under the terms of the agreement with the City, Northern agreed to deliver all of the recycled materials from the Buy Back Center (such as cardboard, aluminum, all grades of paper, all plastics, all glass, and all metal cans) to the Napa MDF for final marketing. Northern can also deliver other materials such as compostables (yard trimmings and/or food scraps) to the MDF if it desires. The City pays Northern 61% of the actual prices the City receives for all paper and cardboard and for plastic that are not subject to the California Redemption Value (CRV). For plastic, glass, and aluminum cans, bottles and beverage containers and all other materials subject to the California Redemption Value (CRV deposit), the City pays Northern 69% of the actual prices the City receives for these materials. Since the City splits overall revenues from sale of recycled materials with NRWS 70%/30%, the “net” revenue the City receives from the Northern materials is 9% for fiber and non-CRV plastics, and 1% for CRV plastics, glass and aluminum containers. For FY2019/20 staff estimates that the materials delivered by Northern will account for approximately 41% ($2,640,000) of the total secondary materials sales revenue shown in Row 4 of Appendix D. The payments to Northern are found in Row 47 of the Master Spreadsheet in Attachment 3. When markets allow for it, the additional payments in Row 47 are for payments to other companies that use the MDF for processing of materials such as Recology and Sonoma Garbage.

4.2.6 Total Projected Expenditures (Row 89 & 91 of Appendix D)

The total projected expenditures for FY2019/20 are $33,540,101 as shown in Rows 89 and 91 of Appendix D. The total projected expenditures for FY2020/21 are $34,208,001 and $34,953,600 for FY2021/22.

Section 4.3 STATUS OF RESERVES FOR SOLID WASTE AND MATERIALS DIVERSION FUND

On August 5, 2008 the City Council adopted a Fiscal Policy for the Solid Waste and the Materials Diversion Enterprise Fund (Resolution R2008 153C) that included specific Reserve Policies and funding targets for each of the Fund reserves. At that time the

City Council also approved rates for FY 2008/09 that allowed for all of the reserves to be fully funded by the end of FY 2008/09 (with the exception of the Capital Maintenance and Capital Replacement Reserves which each required an annual contribution in order to fund Capital Maintenance Items and to eventually replace or significantly retrofit the entire MDF at the end of its useful life).

On June 16, 2009, as part of the rate-setting process for FY 2009/10 - FY 2011/12, the City Council adopted revisions to the Fiscal Policy for the Fund (Resolution 2009-82). The main changes made were to exclude from calculation of the 25% floor for the Operating Reserve the following items: capital maintenance project costs, capital replacement project costs, and costs for street repair due to damage from heavy solid waste vehicles. Other refinements to the policy included specifying the procedure for placement of funds left over after completion of capital projects.

On June 18, 2013, as part of the process of approving the City's FY 2013/14 budget, the City Council again amended the Fiscal Policy of the Fund (Resolution 2013-55). The key changes were (a) to reduce the minimum funding level for the Operating Reserve from 25% to 20% of the Fund's operating costs (excluding debt service, capital improvement projects and street repair and maintenance costs); (b) to consolidate the Capital Maintenance and Capital Replacement Reserves into one Capital Improvement Projects (CIP) Reserve funded at $536,000 per year to pay for Capital Improvement Projects that cost more than $125,000 (Capital Improvement Projects costing less than $125,000 would now be paid for out of the operating budget); (c) directing that unspent funds from any CIP project be transferred to the CIP Reserve at the end of each fiscal year; and (d) increasing the minimum funding of the Rate Stabilization Reserve from 5% to 10% at a rate of 1% each year according to the following schedule – 5% in FY 2012/13, 6% in FY 2013/14, 7% in FY 2014/15, 8% in FY 2015/16, 9% in FY 2016/17 and 10% in FY 2017/18.

The Fiscal Policy states that the Reserves are to be funded to their minimum levels at the beginning of each fiscal year. The Finance Department carries out this function, and funds the reserves based upon the projected expenditures for the Fund in the city budget for that fiscal year. The Fiscal Policy further states that if any of the reserves are depleted during a fiscal year, the reserve is to be replenished to its minimum level at the beginning of the following fiscal year. If this is not possible, the Policy states that actions will be taken to decrease expenditures, increase revenue sources and temporarily draw upon the Operating Reserve to fund the other reserves.

The Fiscal Policy states that the order of priority for funding and replenishment of reserves is (1) Liability Reserve, (2) Capital Improvement Projects Reserve, (3) Operating Reserve. The Policy further states: "The Rate Stabilization Reserve is drawn upon and replenished at the discretion of the City Council."

A. Liability Reserve: ***Minimum: $200,000***
Projected Balance at 6/30/19: $350,000
Row 95 of Appendix D

This reserve is designed to fund liabilities of the City for items related to the operations of Solid Waste Fund. These include costs of litigation (or other unanticipated costs) related to the closure of the former Coombsville Dump/Hidden Glen Landfill Site. The minimum funding level for this reserve is $200,000 per the Fund's Fiscal Policy; however, an additional $150,000 was placed in this reserve based on advice from the City Attorney and Finance Director in 2014.

B. Capital Improvements Reserve: Projected Balance at 6/30/19: $0
Row 96 of Appendix D

Funds are placed in this reserve to pay for planned Capital Improvement Projects (CIP) at the Napa MDF. This includes projects required by new regulations, as well as all repair and maintenance of buildings, common areas, paving, fencing, scales, roof repair and other components that the City owns or is contractually responsible for maintaining, in excess of $125,000.

Pursuant to the City's standard policy for replacement of capital assets, the amount of the annual depreciation on the Napa MDF facility is placed in this reserve in order to provide for major renovation, modernization and/or rebuilding of the MDF at the end of its useful life. The MDF offices and the materials diversion sorting building were constructed in approximately 1993 and were purchased by the City in 2004. Most materials diversion facilities in California were constructed in the mid to late 1980's or the 1990's, so they are only 30-35 years old. Some have been updated and renovated, but most have not reached the age where major renovation or reconstruction is required. It is likely that the Napa MDF will require major renovation, modernization and/or rebuilding at the age of 40-50 years. In order to meet the above-described costs, the Fiscal Policy requires an annual contribution of $536,00 to this reserve.

The Fund's capital improvement reserve is currently at $0 because available funds have been expended on recent capital improvement projects at the City's MDF. Further details on recent MDF capital improvements are detailed in section 3.3.1 of this rate study.

C. Operating Reserve: ***Projected Balance at 6/30/19: $4,375,296***
Row 97 of Appendix D

The Operating Reserve provides funds to cover unforeseen revenue shortfalls (especially for volatile secondary materials markets), unanticipated expenses, and other unanticipated or emergency expenditures that could not be foreseen during preparation of the Solid Waste and Materials Diversion Fund operating budget. The Fund does not

have an “emergency reserve” per se and part of the purpose of the Operating Reserve is to provide such security, particularly in periods between formal rate setting and when various contingencies might otherwise lead to cash flow difficulties. This reserve also provides funding in the event of a permit or operational change at the MDF that requires CEQA review. Lastly, the reserve is sized to provide cash flow in the event of destruction of the MDF that requires the City to process its recyclable materials and yard waste at other sites while the MDF is rebuilt.

As described above, the Fund’s Fiscal Policy anticipates a minimum target funding level of the Operating Reserve at 20% of budgeted operating costs less debt service, capital expenses and street repair and maintenance costs. However, the projected balance includes the use of $672,348 from the operating reserve during City FY 2018/19, reducing current funding level to approximately 17%. Operating reserve funds were used (after use of rate stabilization reserves) primarily to offset contractual expenditure obligations to NRWS resulting from the 2018 Contract Amendment. The projections presented in this rate study include a one-time $1.2 million use of operating reserve fund in FY2019/20 towards the purchase of approximately 3 ½ acres of land to south of the existing City-owned MDF property for necessary expansion of operations including storage of finished recyclables and potential BioEnergy (Biomass) gasification system.

D. Rate Stabilization Reserve: Projected Balance at 6/30/19: $0
Row 98 of Appendix D

This reserve provides the City with funds to levelize and/or stabilize solid waste and recycling collection rates to avoid wide swings in rates over time. This reserve has been used by the City Council several times in the past to offset potential rate increases. The Fiscal Policy states that this reserve is to be used at the time of rate setting and/or at the discretion of the City Council. This occurred during FY2018/19 when $1,817,935 in rate stabilization reserve funds were primarily used to offset contractual expenditure obligations to NRWS resulting from the 2018 Contract Amendment.

CHAPTER 5: REVENUE REQUIREMENTS AND PROPOSED SOLID WASTE RATE ADJUSTMENTS

Section 5.1 RATE METHODOLOGY

As noted previously in this rate study, the Solid Waste and Materials Diversion Enterprise Fund has three key sources of revenue (solid waste and recycling collection service rates, MDF gate fees and materials sales). The Fund must cover all solid waste and recycling related expenditures including contractor (NRWS) collection service and processing costs for operation of the MDF, Devlin Road Transfer Station disposal fees, MDF capital improvement costs, payments for MDF materials, mitigation of impact of heavy vehicles on City streets, salaries and benefits, additional administrative support and transfers, contributions to reserves and other materials, supplies and services. The City of Napa's approach to solid waste rate setting has always been to take all projected Solid Waste Fund revenue and apply them against the overall Solid Waste Fund expenditures. Any proposed solid waste and recycling service collection rates are applied as a single recommended percentage increase to all customers and lines of collection service (i.e., residential, multi-family, commercial and roll-off service).

Section 5.2 REVENUE REQUIREMENTS

5.2.1 Projected Revenue and Solid Waste Fund Position under Existing Rates

While the Solid Waste Fund is projected to be able to address an operating deficit for City FY2018/19 through use of existing reserves (rate stabilization and operating reserves), this is not a sustainable for future years. Based on the projections identified in Chapter 4, please see Table 2 below which indicates the net results of total revenues minus total expenditures and reserve balances without a rate adjustment.

Table 2: Projected Solid Waste Fund Position without Rate Adjustment

	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Total Revenues	$29,410,697	$30,383,500	$29,938,500	$30,094,500
Total Expenditures	($32,430,991)	($35,276,101)	($34,744,001)	($35,489,600)
Net Results	**($3,020,294)**	**($4,892,601)**	**($4,805,501)**	**($5,395,100)**

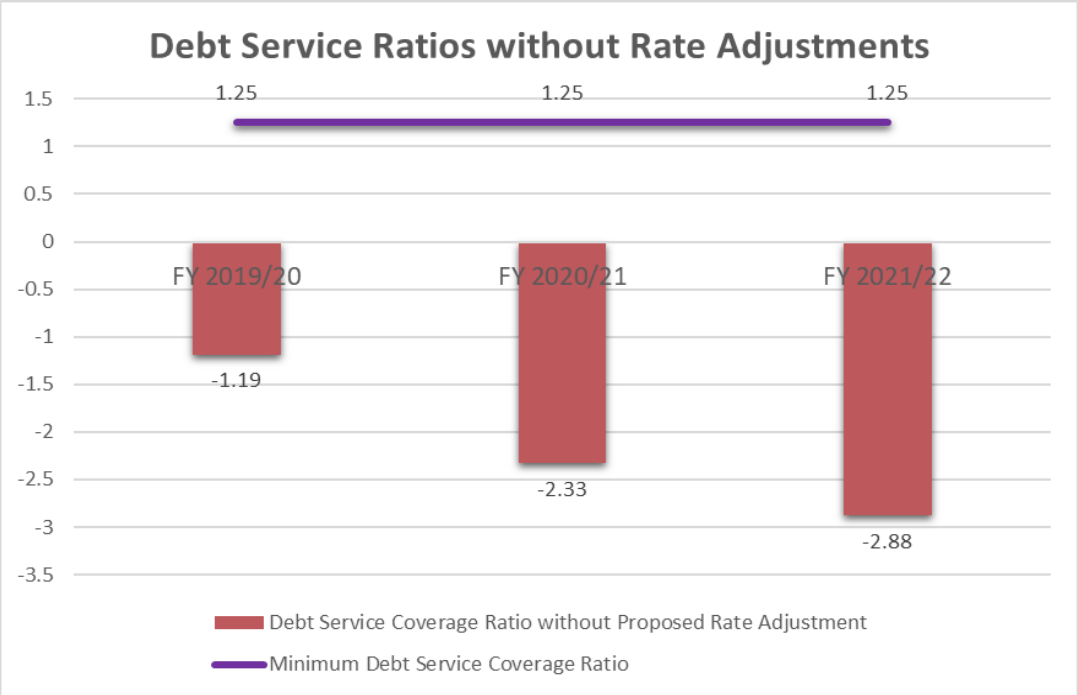
Reserves	End of	End of	End of	End of

	FY2018/19	FY2018/19	FY2019/20	End of FY2020/21	FY2021/22
Rate Stabilization	$1,817,935	$0	$0	$0	$0
Operating	$5,047,644	$4,375,296	$395	($3,919,501)	($4,859,100)
CIP	$0	$0	$0	$0	$0
Liability	$350,000	$350,000	$350,000	($350,000)	$0
Total	**$7,215,579**	**$4,725,296**	**$350,395**	**($4,269,501)**	**($9,128,601)**

5.2.2 Debt Coverage Ratio Requirements

One critical consideration in developing proposed collection service rates is the debt service coverage requirement of the 2016 Solid Waste Revenue Bond (SWRB) covenant. As described in section 3.3.2 of this rate study, the City issued $12.5 in SWRB in 2016 to install a new covered compost system, upgrade the storm water management system and other necessary capital improvement at the City-owned MDF. Debt service represents roughly 4.5% of existing rate revenue (see rows 19-21 of Appendix D) at just under $900,000 per year. Based on the revenue bond requirements, the debt service cover ratio is a minimum of 1.25x net revenues (revenue less operating expenses without solid waste capital improvements, contribution to street resurfacing fund, contributions to reserves and the debt service payment itself). With existing solid waste rates and projected revenues and expenses, the debt service ratio would be negative 1.20, which is non-compliant with the minimum debt service coverage ratio required by the 2016 SWRB obligations (please see Figure 5 below).

Figure 5: Debt Service Coverage Ratios without Proposed Rate Adjustments



5.2.3 Total Projected Solid Waste Fund Reserves under Existing Rates

Another key consideration impacting the level of the proposed rate adjustments is the use and replenishment of Solid Waste Fund reserves (see section 4.3 of this study for more detailed discussion under proposed rates). Under existing rates, the projected total Solid Waste Fund position would be negative $4,892,601 for FY2019/20, negative $4,805,501 for FY2020/21 and negative $5,395,100 for FY2021/22. Without adjustments to existing rates, all solid waste fund reserves would be exhausted by the end of FY2019/20. The cumulative Solid Waste Fund position by the end of FY2021/22 would be negative $9,128,601 with no reserves available whatsoever (and potential need to borrow from the City's general fund).

Section 5.3 SOLID WASTE FUND POSITION WITH PROPOSED RATE ADJUSTMENTS

The recommended ("proposed") solid waste rate adjustments based on this study are as follows:

- 12% rate increase effective August 1, 2019 (RY2019)
- 10% rate increase effective January 1, 2020 (RY2020)
- 8% rate increase effective January 1, 2021 (RY2021)
- 6% rate increase effective January 1, 2022 (RY2022)

Please see Appendix K for full rate schedule with proposed rate adjustments (inclusive of the remaining 3 years of special 5-year phase plan for MSW commercial cart rates described in section 5.6 of this rate study).

Table 3 indicates the Solid Waste Fund position with implementation of the proposed rate adjustments shown above.

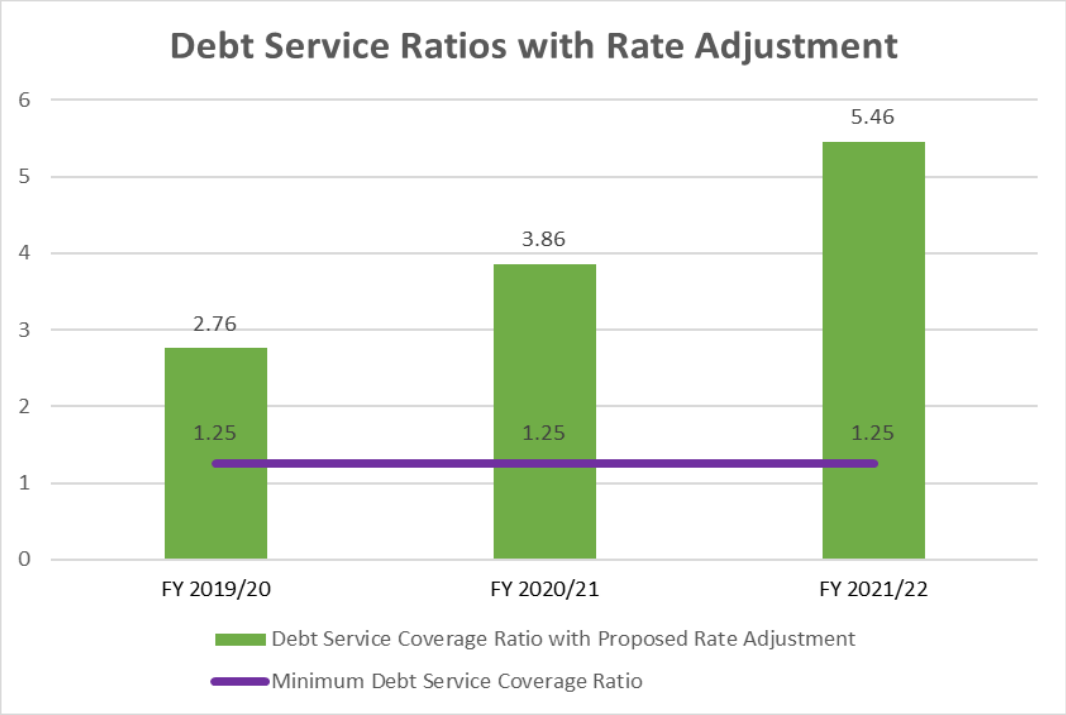
Table 3: Projected Solid Waste Fund Position with Proposed Rate Adjustment

	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Revenues	$29,410,697	$33,637,178	$35,451,588	$37,355,845
Expenditures	($32,430,991)	($35,726,101)	($34,744,001)	($35,489,600)
Net Results	**($3,020,294)**	**($2,088,923)**	**$707,587**	**$1,866,245**

Reserves	**End of FY2017/18**	**End of FY2018/19**	**End of FY2019/20**	**End of FY2020/21**	**End of FY2021/22**
Rate Stabilization	$1,817,935	$0	$0	$0	$0
Operating	$5,047,644	$4,375,296	$2,736,374	$3,443,961	$5,310,206
CIP	$0	$0	$536,000	$1,072,000	$1,608,000
Liability	$350,000	$350,000	$350,000	$350,000	$350,000
Total	**$7,215,579**	**$4,725,296**	**$3,622,374**	**$4,865,961**	**$7,268,206**

As illustrated in Table 3 above, adoption of the proposed rate adjustments will allow the Solid Waste Fund to cover expenses and use net results to replenish reserves to current roughly those of total reserve levels available at end of FY2017/18.

Figure 6: Debt Service Coverage Ratios with Proposed Rate Adjustment



As noted in section 5.2.2 of this report, without the proposed rate adjustments, the Fund will operate at a deficit in all years. Reserves funds will be essentially depleted by the end of FY2019/20 and the debt coverage will be out of compliance with the 2016 Solid Waste Revenue Bond indenture. Rate adjustments are required to generate sufficient revenue to maintain prudent reserve levels and comply with debt coverage ratio requirement. If the proposed rates are adopted, the projected debt service coverage ratio are projected to be 2.76 for FY2019/20, 3.86 for FY2020/21 and 5.46 for FY2021/22, all of which exceed the minimum SWRB required 1.25 debt service coverage ratio (see Figure 6 above). This data is also shown in row 100 of Appendix D.

Section 5.4 IMPACT OF PROPOSED RATES ON SPECIFIC LINES OF SERVICE

5.4.1 Residential Service

Current residential service is a bundled “package” menu of service including weekly collection of MSW (customer choice of 20-gallons, 35-gallons, 65-gallons or 95-gallons), recyclables (up to two 95-gallon carts for recycling) and compostable organic materials (up to two 95-galln carts for composting). As noted previously in this report, residential organics were expanded beyond traditional yard trimmings in 2015 to include food

scraps and soiled paper. Residential service also includes curbside collection of used motor oil and oil filters and appointment-based access to the "Recycle More" program for electronic waste, large scrap metal/appliances, textiles (clothing, shoes, etc.) and household batteries. The impact of proposed rate on residential service customers is shown in chart below:

Cart Size	Existing Rate	Proposed Rate Effective August 1, 2019	Proposed Rate Effective January 1, 2020	Proposed Rate Effective January 1, 2021	Proposed Rate Effective January 1, 2022
20 gallons	$21.65	$24.25	$26.68	$28.81	$30.54
35 gallons	$27.14	$30.40	$33.44	$36.12	$38.29
65 gallons	$41.63	$46.63	$51.29	$55.39	$58.71
95 gallons	$64.03	$71.71	$78.88	$85.19	$90.30

5.4.2 Commercial/Multi-Family Service

The impact of proposed rate on commercial/multi-family customers is shown in Appendix K. For a typical medium-sized commercial bin customer represented by charge for collection of a company-provided two-cubic yard commercial bin picked up weekly, the impacts are shown as follows:

Existing Rate:	$423.35 per month for company-provided 2 cubic yard (cy) MSW bin, serviced once per week
Rate as of August 1, 2019	$474.15 per month
Rate as of January 1, 2020	$521.57 per month
Rate as of January 1, 2021	$563.30 per month
Rate as of January 1, 2022	$597.10 per month

5.4.3 MSW Roll-Off Service

The impact of proposed rate on a roll-off service customer is shown in Appendix K. For an uncompacted 10 cubic yard MSW roll-off box service, the impacts are shown as follows:

Existing Rate:	$493.67 per service of uncompacted 10 cy MSW roll-off debris box
Rate as of August 1, 2019	$552.90 per service
Rate as of January 1, 2020	$608.19 per service
Rate as of January 1, 2021	$656.84 per service
Rate as of January 1, 2022	$696.25 per service

5.4.4 Recycling Roll-Off Service

The impact of proposed rate on a recycling roll-off service customer is shown in Appendix K. For a 10-cubic yard concrete recycling roll-off box service, the impacts are shown as follows:

Existing Rate:	$173.70 per service of 10 cy concrete recycling roll-off box
Rate as of August 1, 2019	$194.54 per service
Rate as of January 1, 2020	$213.99 per service
Rate as of January 1, 2021	$231.11 per service
Rate as of January 1, 2022	$244.98 per service

Section 5.5 ADJUSTMENT OF COMMERCIAL MUNICIPAL SOLID WASTE (MSW) CART RATES

In the course of developing the proposed commercial food scrap collection rates in 2014/2015, it was confirmed that the City's rates for commercial solid waste cart service were understated by approximately 25% compared to the rate for the comparable rate per cubic yard of solid waste bin service. This discrepancy presented a problem for implementing the commercial food scrap collection program because the program must contain an economic incentive for restaurants/food generating businesses to put in the time and focus required to participate. Staff recommended that the City Council adopt a 5-year phased plan to increase the rate for commercial solid waste cart service by 5% per year, in order to bring the commercial cart rate into alignment with the rates for bin service. Rates adopted for 2015 and 2016 addressed the first two years of the 5-rate year phase in plan. The next three years of the 5-year phase in plan will impact RY2019, RY2020 and RY2021 but not RY2022 (as the 5-year phase in plan will be completed in RY2021.

For RY2019 (effective August 1, 2019), the impact on a typical commercial business with a 95-gallon solid waste cart emptied one time per week, would be an increase of 5% from the current rate of $89.40 per month to $93.87 (an increase of $4.47 per month). This rate realignment is independent of the overall rate increase being recommended for RY 2019 (effective August 1, 2019). Under the 5-year phase in plan, in RY 2020 (effective January 1, 2020) and RY 2021 (effective January 1, 2021), the cost for the same 95-gallon cart would increase by another 5% each year (again, independent of and in addition to any over commercial rate increases). As noted previously, the RY2021 special 5% adjustment would complete the 5-year phase plan and the differential between commercial carts and commercial bin service will have be fully addressed and levelized. There would be no additional special adjustment of MSW cart solid waste rates for RY2022 (effective January 1, 2022).

Section 5.6 ADDITION OF "PACKAGED ORGANICS" TO FULL SCALE COMMERCIAL FOOD SCRAP DIVERSION PROGRAM

In 2011, a new change to AB 939 was signed into law (AB 341) that established a statewide goal of diverting 75% of the solid waste stream from landfill by 2020. The law required CalRecycle to prepare a statewide plan for meeting the 75% diversion goal. The draft plan relied heavily on diverting food scraps from landfill throughout the state and ultimately sought to capture and compost increasingly difficult organic faction of discarded municipal solid waste stream, including compostable organic materials "trapped" in packaging. As noted earlier in this study, NRWS applied (and received) a grant from CalRecycle for towards an organics "de-packager" that functions to separate and recover compostable organics from paper and plastic packaging. This new element of commercial food scrap diversion program was studied independently by the solid waste consulting firm EcoNomics, Inc., who conducted the 2014 study that served as the basis of the commercial food scrap diversion program collection service rate initiated in April of 2015. The Economic review concluded that it is appropriate to collect and process packaged organics at the same collection service rate level as the commercial food scrap diversion program (i.e., 75% of commercial MSW service charges). See Appendix H for full analysis and findings.

Section 5.7 PROPOSITION 218 NOTICE AND NEXT STEPS

In order to implement the proposed rates, the following actions are required:

- 6/4/19 – Council approval to issue proposition 218 notice
- 6/8/19 – Postmark of proposition 218 notice to begin minimum 45-day public review requirement. The notice must show both the existing rates for each type of service and all four proposed residential rates as well as RY 2019 rates non-residential (multi-family, commercial and roll-off customer) for service and noting subsequent maximum percentage rate increases for RY2020, RY2021 and RY2022.
- 7/23/19 – Final rate hearing to be held on July 23, 2019.
- 8/1/19 -- If proposed rates are approved by Council on July 23, 2019, the first rate adjustment would be effective August 1, 2019.

APPENDIX A: RECYCLING PROGRAM ACHIEVEMENTS AND GRANTS

Recycling and Pollution Prevention Achievements in 2018:

- In calendar year ("CY") 2018, over 170,000 tons of materials were received to be recycled or composted at the Napa Recycling & Composting Facility (aka Napa Materials Diversion Facility or "MDF"). By keeping these valuable resources out of the landfill, the City decreased carbon dioxide emissions by 135,067 metric tons and used 703,481 million fewer BTUs of energy. This is enough energy to power all the houses in Napa for over three months. Additionally, these savings are the equivalent of taking 28,434 passenger cars off the road and conserving over 15 million gallons of gasoline, helping to fight climate change and reduce our dependency on fossil fuels (source: EPA WARM model).

- Reduction of 16,533 pounds of harmful air pollution each year from the use of eight clean air (compressed natural gas or CNG) collection vehicles representing 28% of the NRWS fleet). As will be detailed later in this report, 100% of the heavy refuse and recycling fleet of 28 vehicles will be converted to CNG by the end of CY2020 as part of the 2018 Contract Amendment with NRWS.

- In 2018, 2,060 gallons of used motor oil was collected by NRWS' free curbside used oil collection program, along with 773 pounds of used oil and filters. This is important because one gallon of improperly disposed motor oil can contaminate one million gallons of clean drinking water.

- Recycling and food scrap/organics composting at 84 special events in 2018 resulted in a total of 357 tons diverted from the landfill. These events included Bottle Rock, Downtown and Oxbow Commons events, community crab feeds, 4th of July, Napa Town and County Fair and Coastal Cleanup Day. In 2018, the Earth Day Napa event achieved a 96% diversion rate. The Town & Country Fair achieved a 78% diversion rate while the City's 4th of July celebration achieved a 76% diversion rate.

- A total of 44 groups toured the Napa Recycling & Composting Facility in CY2018. In addition, dozens of recycling-focused presentations were made at private and public schools, businesses and community groups.

- Residential composting of food scraps and soiled paper was introduced Citywide in 2015. On a ton-for-ton comparison basis, residential landfill disposal was reduced by 10-13% for each year following implementation of the expanded curbside organics program (approximately 1800-2300 tons per year between CY2016, CY2017 & CY2018).

- The City and NRWS continue to expand the commercial food scrap composting program with over 150 businesses and schools on the program as of the end of CY2018. In 2018, over 300 audits were conducted with over 180 site visits, 100+

trainings and approximately 2,500 pieces of interior recycling and/or composting equipment delivered to City businesses and schools.

- In 2018, 74% of the heavy construction and demolition debris that NRWS serviced from the City was recycled or composted instead of being landfilled. This is a critical part of the City's goal to achieve 75% recycling and composting level by the year 2020.

- In 2018, the "Recycle More" curbside collection program for electronics, over-sized metal and reusable items such as clothing and shoes collected over 640 tons. This is a five-fold increase since the program was introduced in 2013. Additionally, the once-a-year collection in June 2018 at Napa Valley College collected and recycled 21.6 tons of electronics (11.7 tons), metal appliances (4.6 tons) and textiles/batteries/tires (5.3 tons).

- In addition to the June "Recycle More" event, the City (and County) hosted two productive recycling-related events in 2018. In October 2018, several agencies/organizations partnered for a special take-back collection event for unwanted medications and medical "sharps" (i.e., needles, syringes). During the four-hour event at Kaiser Permanente's Napa Clinic parking lot, over 1,000 pounds of medications and 375 pounds of sharps were collected for proper disposal (the highest single-collection site for medications in a 5-county region according to DEA). In November 2018, Napa's America Recycles Day celebration event collected over 600 coats, 150 costumes and 800+ pairs of shoes. The coats were redistributed locally by the Salvation Army to those in need for the winter season and the shoes were sent to a non-profit group called Soles4Souls that reuses and/or recycles them both domestically and abroad, including disaster-impacted regions.

- In partnership with Napa's household hazardous waste collection facility (adjacent to the Devlin Road Transfer Station), City part-time staff collected and recycled approximately 5,400 pounds of household batteries in CY2018. Besides keeping these batteries out of landfills and gutters, this collection program is an important safety step as improper disposal of household batteries can cause fires and batteries that slip through screens at Napa's recycling facility can contaminate mixed glass recycling.

- Through a public-private partnership, the City's LESS (Lighting Efficiency & Safe Stewardship) program has collected and recycled over 44,000 compact fluorescent lights (CFLs) and 38,000 fluorescent tubes from April 2011 through end of CY2018. Currently four Napa retailers have voluntarily participated in the program so that Napa residents can conveniently bring their used CFLs and tubes to these stores for proper recycling/disposal.

- In the fall of 2018, City part-time staff conducted a "Flip the Lids" visual audit and educational program for over 1,600 homes. Educational hangers and

community-based social marketing techniques were employed to help educate residents on proper recycled and resulted in a noticeable improvement in contamination for the homes that were visited. The # 1 contaminant (soft plastics/plastics bags) was reduced by 55% and other contaminants across the board were reduced as well.

- City part-time staff completed one-on-one visits in both English and Spanish to a dozen multi-family location with 315 units. This targeted outreach effort is being expanded in CY2019.

- Multiple recycling and composting-related messages were transmitted to the Napa community via social media in 2018. The Facebook post of "Curious to know if you are recycling correctly or not?" reached 15,329 Facebook users with 5,308 photo views, 151 shares and 93 comments. The City and NRWS intend to expand use of social media for recycling and composting in 2019 and beyond.

- The City and NRWS have worked closely with both public and private schools in Napa for improved and expanded recycling and composting programs. By the end of the 2017/18 school year, all 26 Napa Valley Unified School District (NVUSD) sites serviced by NRWS had an active composting program in place for food scraps and/or soiled paper. In April of 2018, the NVUSD board passed a resolution supporting the goal of 75% recycling and composting levels by the year 2020, matching City and State goals.

- As of April 2018, an improved and expanded full service customer payment center was opened by NRWS at 598 Lincoln Avenue. NRWS customers can now use the improved in-town payment center Monday through Friday for a full range of activities from making payments and service deposits to picking kitchen compost pails or extra compostable bags for the spring yard trimmings or leaves in the fall. This was one of the improvements facilitated by the 2018 Contract Amendment with NRWS.

Status of Grants Received by the City to Increase Recycling:

CITY/COUNTY PAYMENT PROGRAM

In FY 2018/19 CalRecycle awarded a grant to the City in the amount of $20,112 (which was matched by the City). This program provides funding to cities and counties to implement beverage container recycling and litter abatement projects. One of the primary goals of the grant is to increase beverage container recycling by implementing programs that increase recycling opportunities and that educate people in the Napa community about recycling beverage containers. The City of Napa is using the City/County Payment Program funds to support existing recycling programs. The funds cover costs associated with recycling equipment/infrastructure to increase recycling opportunities and capture beverage containers, fund staff time to support and promote

recycling in the City, cover costs associated with public education materials that inform the public about beverage container recycling and advertise beverage containers as a prominent and important item to be recycled, and support litter abatement expenses. These grants have historically been awarded annually, and a new round of funding is expected during 2020 for FY 2019/20.

USED MOTOR OIL RECYCLING BLOCK GRANT

The City of Napa was awarded $22,106 by CalRecycle for FY 2018/19 to promote the recycling of used motor oil and filters within the City of Napa. Most grant dollars go toward public outreach and supporting Napa's Certified and non-certified Collection Centers that collected 20,566 gallons of used motor oil and 5,906 oil filters in FY 2017/18. The curbside used oil program collected and recycled another 1,956 gallons of used motor oil and 734 oil filters in the same period. In these outreach efforts City staff emphasizes one-to-one outreach, mostly bilingual. Ongoing examples include outreach booths or tables at the Napa DMV, the Napa-Solano flea market (cost shared with the City of Vallejo) and the Napa Town and Country Fair, as well as at workplace events, Binational Health Week events, apartment complexes, and a wide variety of other venues. Using these funds, the City also contributes toward participation in two regional programs, the Adult ESL "Family Car" lessons and the "Riders Recycle" campaign. The curbside collection promotion includes a live bilingual hotline.

APPENDIX B: STAFF REPORT AND RESOLUTION R2018-043 ADOPTING 2018 CONTRACT AMENDMENT WITH NRWS (APRIL 17, 2018 NAPA CITY COUNCIL MEETING)

To: Honorable Mayor and Members of City Council

From: Jacques R. LaRochelle, Public Works Director

Prepared By: Kevin Miller, Materials Diversion Administrator

TITLE:
Services Provided by Napa Recycling & Waste Services, LLC for the Collection and Transportation of Municipal Solid Waste, Recyclable Materials, and Compostables; and for the Operation of the Napa Materials Diversion Facility

RECOMMENDED ACTION:
Adopt a resolution authorizing the City Manager to execute the 2018 Contract Amendment to City Agreement No. 8687 with Napa Recycling & Waste Services, LLC ("NRWS") for a term through December 31, 2031, for the collection and transportation of Municipal Solid Waste, Recyclable Materials, and Compostables, and operation of the Napa Materials Diversion Facility, and determining that the actions authorized by this resolution are exempt from CEQA.

DISCUSSION:
The original and existing contract between the City and NRWS labeled the "Contract for the Collection and Transportation of Municipal Solid Waste, Recyclable Materials, and Yardwaste and the Operation of the Napa Materials Diversion Facility" (City Agreement No. 8687) provided for a 10-year base term, from January 14, 2005 through December 31, 2015, with options to extend the term for up to four additional one-year terms. Council authorized three one-year extensions for calendar years (CY) 2016, 2017 and 2018. As used in this report, the term "Initial Agreement" refers to the original and existing contract (City Agreement No. 8687), as amended on March 1, 2005, July 6, 2010, and July 30, 2014, and as extended through December 31, 2018.

Concurrently with the approval of the three one-year term extensions of the Initial Agreement, based on the high quality of service the City has received from NRWS, and based on economic efficiencies that will be realized to further extend the term of the existing services, City Council directed staff to work with NRWS to negotiate a long-term extension of the Initial Agreement with a term through December 31, 2031. The City and NRWS memorialized the guiding principles and processes for negotiating the terms of the long-term extension of the Initial Agreement in a non-binding Memorandum of Understanding ("MOU"), that was approved by City Council on July 18, 2017, and November 7, 2017. Consistent with the terms of the MOU, representatives of the City and NRWS negotiated the terms of the proposed "2018 Contract Amendment." For the reasons summarized in this report, staff recommends that Council authorize the City Manager to execute and implement the 2018 Contract Amendment. Please see

Attachment 2 to this staff report for a copy of the MOU; and see Attachment 1 to this staff report for the for a copy of the proposed 2018 Contract Amendment (which is Exhibit B to the authorizing resolution described in more detail in this staff report).

HIGHLIGHTS OF PROPOSED 2018 CONTRACT AMENDMENT

As noted above, staff was tasked with negotiating a long-term extension of the Initial Agreement with our existing contractor, NRWS. Council expressed a desire to maintain the high level of service provided by NRWS at a fair and equitable cost for the City's solid waste rate-payers. Creativity and a public-private "partnership" approach was encouraged as well as the ability to incorporate new technology and respond to changing conditions over the life of the long-term extension term while at the same time providing cost stability and predictability. City staff and NRWS believe we have arrived at a mutually agreeable and fair deal for the long-term, 14-year extension, through December 31, 2031.

As memorialized in the proposed 2018 Contract Amendment, there are a number of benefits to the City from negotiating a new long-term contract amendment with the City's existing contractor. These benefits may not have been realized with an alternate process to select a contractor. By leveraging the competitive process from which NRWS was selected and maintaining core terms of the Initial Agreement, the City has managed costs and continued the high level of service without interruption. Many of the benefits of the proposed 2018 Contract Amendment are highlighted and summarized below:

1. Term – Collectively, the Initial Agreement and proposed 2018 Contract Amendment extends the useful life of major capital assets which in turn represents savings for City rate payers. The term of the Initial Agreement was extended from 10 to 12 full years. The typical life-cycle for vehicles and processing equipment is 10 years. During these one-year extensions and in anticipation of the long-term extension, NRWS has had to extend the working life of its vehicles, collection and processing equipment in anticipation of the long-term extension. Furthermore, the proposed 2018 Contract Amendment is a 14-year extension. When combined with the original 12 years of the Initial Agreement, rate payers will have a total contract time of 26 years with only 2 major cycles of vehicles and equipment. At a new capital cost of approximately $17 million for the 2018 Amendment, stretching the life of vehicles and equipment is very valuable to the City and its rate payers.

2. Operating Costs – The 2018 Contract Amendment moderates increases in operating costs. For the most part, NRWS and the City did not reset the "base" operating costs for labor and maintenance. Instead, both parties used the existing base costs which were proposed as part of a competitive process and have been adjusted annually by established indexes. It is likely that NRWS's actual costs based on negotiations with labor unions, particularly for benefits,

have exceeded the indexed payments from the City. The parties did agree to stabilize the indices for labor for the first 5 years of the 2018 Contract Amendment by setting a fixed 3.5% annual increase (and 2.5% increase for non-labor costs). This is expected to be within cost-of-living adjustments that would apply to any future contract costs.

3. Vehicles – Seven (7) current Compressed Natural Gas (CNG) collection trucks will be refurbished rather than buying new vehicles. In addition, one of the current diesel-powered vehicles will be refurbished and converted to a CNG engine for a total of eight (8) refurbished vehicles. Purchases and payments from the City to NRWS will be spread over the first 3 years to reduce rate impacts. By the year 2021, the entire NRWS fleet of twenty-eight (28) heavy refuse and recycling vehicles will be converted to 100% CNG trucks resulting in a very clean fleet with significantly reduced air emissions.

4. New Organic Material – The City challenged NRWS to bring additional flow of compostable organic material to the facility to generate City revenue to help offset additional costs of the 2018 Contract Amendment. To their credit, NRWS has already brought the additional 30,000 tons to the facility and agrees to maintain this flow for at least 10 years.

5. Customer Service Office and 600 Tower Road – Under the terms of the Initial Agreement, the City does not incur a direct cost for the NRWS's customer service office on Lincoln Avenue or the use of 600 Tower Road (adjacent to the MDF) for storage. NRWS has agreed to maintain both properties/facilities with no additional cost to the City rate payer.

6. New Processing Equipment – As part of the proposed 2018 Contract Amendment, NRWS will be upgrading and replacing sorting and processing equipment at the City's MDF. However, NRWS has been very careful to retain or repair current infrastructure (e.g., repair current expensive baler and retain heavy-gauge steel work station platforms for sort line) where it makes sense while incorporating the next generation of technology and equipment where appropriate (e.g., new sort belts, new mechanical screens for cardboard, a new sorting "robot" and a new specialized glass cleaning system utilizing density sorting and air classifiers). This combination of preserving the old while introducing the new is estimated by NRWS to save approximately $3 million dollars of potential new equipment costs for wholesale replacement. This savings is realized in the 2018 Contract Amendment while improving the efficiency of overall processing at the MDF is expected to significantly improve recovery of materials for recycling and composting while lower facility "residue" that would be sent to the transfer station for disposal (at a higher and direct cost to the City rate payer). Like the vehicles, NRWS has been tasked (and has accepted) the responsibility of maintaining the new processing equipment for a working life of fourteen years and not the industry-standard of ten years.

Stretching the life of the processing equipment is an important and valuable benefit for the City solid waste rate payer.

7. Incentives and Performance-Based Compensation – The 2018 Contract Amendment improves upon the Initial Agreement's performance-based compensation. As noted above, one of the important goals in negotiating a long-term contract extension was to preserve and, if possible, improve on a contract that would incentivize and reward NRWS for strong performance and additional diversion from landfill disposal. Instead of simply increasing the automatic base profit from the current three (3) percent to the initial NRWS request for eight (8) percent, the City and NRWS found other ways to provide (and pay for) additional contractor compensation. The new compostable organic materials secured by NRWS (and noted in item # 4 above) was rewarded by an "enhanced" over-baseline processing fee where NRWS can earn more compensation by attracting and maximizing throughput at the MDF while minimizing landfill disposal. While providing more compensation to NRWS, the additional compensation is largely offset with additional revenue (in the form of $1.35 million in additional MDF gate fees) and lower facility residue disposal costs. The proposed 2018 Contract Amendment increases the NRWS share of "direct" material sales (e.g., compost, gravel, topsoil) from 30% to 95%. Although this does provide NRWS additional compensation, it helps assure both a high level of production and high-quality product(s) being sold from the City's MDF. This, in turn, helps assure both environmental and economic sustainability for the MDF for many years to come as this value is paid by future buyers and customers of the MDF. Finally, diversion incentives from the Initial Agreement have been preserved. These incentives work to help maintain and improve recovery of recyclable and compostable materials collected by NRWS or brought to the MDF by third party jurisdiction haulers and self-hauling businesses/public. They also work to assure that the City achieves its goal of 75% (or over) diversion of solid waste from landfill disposal by the year 2020 (R2012-100, Disposal Reduction Policy).

NEW BIOMASS GASIFICATION PLANT TECHNOLOGY

One of the innovations and improvements introduced to the City by NRWS is biomass gasification technology. This technology utilizes urban wood waste at high-temperature to produce clean and renewable electricity as well as a valuable byproduct called "biochar." Biomass gasification plant technology will also help provide a much-needed local solution for a rapidly growing "biomass crisis" where older and larger biomass plants are closing and/or existing capacity at the remaining plants is being dedicated to dead and dying forest waste. The net impact of this biomass crisis means it is increasingly more difficult and more expensive to find a home for Napa's processed wood waste (Napa shipped out 16,000 tons of chipped wood as recently as CY2015). Consequently, the value of chipped wood has gone from a positive $4 to $5 per dry ton to a negative $15 per shipped ton. This cost is expected increase to $35-$40 per ton

(or more) in the next 2-3 years as more and more existing plants close and urban wood waste is crowded out of the remaining capacity at these existing plants.

The positive economic and environmental benefits of bringing two 1 MegaWatt (MW) biomass gasification plants are detailed in attachment 3 to this staff report. This 20-year cost/benefit analysis shows a positive average annual cash flow of $98,000 for the first 13 years of the biomass plant expected 20-year useful life that grows to an average of $1.16 million dollars per year in the final 7 years after the initial capital costs are retired. The non-monetary environmental benefits are impressive as well with over 900 truck trips avoided annually and combined air emission reductions equivalent to removing 600 passenger vehicles off the road every year over the 20 working years of the biomass gasification plant(s).

As noted in the resolution to this staff report, although the 2018 Contract Amendment lays the groundwork for biomass processing, the specific terms for the installation and operation of the biomass gasification plants are still being developed by the City and NRWS, and those terms will be brought back to a subsequent Council meeting for consideration and action.

ANAEROBIC DIGESTION TO BIOFUEL SYSTEM AT CITY MDF

At the time of this 2018 Contract Amendment, the City and NRWS have had extensive discussions regarding the installation and operations for an Anaerobic Digestion (AD) to biofuel system at the Materials Diversion Facility. The proposed 44,000 Tons per year AD to biofuel system would receive Compostables and Packaged Organics (meaning surplus, contaminated or expired food in original retail packaging) and are appropriate for maximum biomethane (aka “biogas”) energy production in the active phase of the AD system. The AD system would harvest the biogas and convert it to both fuel as renewable compressed natural gas and power through a combined heat and power (CHP) unit. At the end of the active phase of the AD system, a solid compostable organic material called “digestate” would be retrieved by NRWS and placed in the Covered Aerated Static Pile (CASP) system for composting. The City’s compensation to NRWS for composting of digestate from AD to biofuel system has already been addressed in Article 12 of this 2018 Contract Amendment for materials entering the composting processing area and no additional compensation will necessary to Contractor for handling and composting of AD digestate materials.

In 2014, the City was awarded a $3 million competitive grant from the California Energy Commission (CEC) for the proposed AD to biofuel system. NRWS has agreed to work in good faith with City to honor the terms and conditions of the City’s grant agreement with the CEC including cooperation with AD technology provider (Zero Waste Energy), access to purchase and maintenance records associated with the AD system as requested by the City or the CEC and honoring any related adjustments to related compensation to NRWS, including avoided fuel costs and/or labor savings from drivers

avoiding lost time on collection routes (with NRWS vehicle fueling occurring overnight at Materials Diversion Facility).

The proposed AD to biofuel system has been substantially revised since the original $3 million CEC grant presentation was made to the City Council in December of 2014. The system has changed from a "batch" feed system to continuous "plug and flow" system and the annual total throughput has increased from 25,000 inbound tons per year to 44,000 inbound tons per year (as noted in the CEQA section below, this change was addressed in a second March 5, 2018 notice of determination). The City requested (and was granted) a one-year extension on the grant agreement with CEC to accommodate these changes. City staff intends to make an administrative report to the City Council on the AD to biofuel system in May of this year to provide updated information. The 2018 Amendment lays the groundwork for the proposed AD system, but City staff is still evaluating the costs/benefits of the AD system. If the cost/benefit analysis indicates that the City should proceed with the AD system for economic and environmental reasons, a final version of the contract language will return to the City Council as a future amendment for consideration.

COST REVIEW-RECONCILATION REVIEW TO CITY-NRWS AGREEMENT

Item No. 16 of the MOU (attachment 2 to this staff report) addresses replacement of the current "Cost Review" process (under the Initial Agreement) with a revised "Reconciliation Review" process (under the proposed 2018 Contract Amendment). Under the current Initial Agreement, the Cost Review process is part of Article 12 (Compensation to Contractor) with the details of the process described in Attachment U. Under those current terms, the Cost Review process was/is very detailed, but limited. The current Cost Review process only reviews changes in cost of service related to three specific areas: growth, new programs and changes in legislation that could not have been reasonably anticipated in NRWS's proposal submitted during the competitive Request for Proposals (RFP) process that took place in 2004. Under the Initial Agreement, the two detailed "Cost Review" processes occurred in the third year (CY2008) and sixth year (CY2011) of the of the initial ten-year term. The Cost Review process was a forward-looking process that applied the final recommended adjustments to the subsequent three-year or four-year period (CY2009-CY2011 for the first contractual Cost Review and CY2012-CY2015 for second Cost Review process). Although extensive efforts went into each Cost Review process, there was no reconciliation or "true-up" process that would adjust and compare the 3-year or 4-year recommendations to actual service results between each Cost Review process. This meant that unless the final Cost Review growth projections were flawless (which is virtually impossible to achieve) the results could be unfair to either the City rate payer or to NRWS as the City's contracted service provider. Said another way, either the City would be over-paying NRWS for anticipated growth that never occurred or NRWS would be underpaid for growth that occurred over and above the final anticipated growth projections (at least until the time of the subsequent Cost Review process that would

then seek to “right-size” the compensation to actual collection service measurements/metrics).

To better address and refine compensation from the City to NRWS, both parties agreed in concept to replace the once-every-three-years “Cost Review” process with a once-every-other-year “Reconciliation Review” process that would first occur in year 3 (CY2020) of the 14-year extension presented in the 2018 Contract Amendment. While intended to address the same basic purpose of the Cost Review process, the new Reconciliation would look backwards at the previous contract/calendar year service measurements. The Reconciliation Review process would utilize these “actuals” to make a one-time lump-sum payment (or deduction) for service delivered by NRWS during the previous year. The previous calendar “actuals” would then be used to adjust the monthly compensation for the next two contract/calendar years. For example, the first Reconciliation Review process would occur in year 3 (CY2020) and look “backwards” at the actual service provided in year 2 (CY2019) of the 2018 Contract Amendment. NRWS would have a one-time lump-sum payment (or deduction) to “true-up” compensation for service provided in CY2019 and the CY2019 result would “reset” the monthly compensation from the City to NRWS for year 4 (CY2021) and year 5 (CY2022) with the next Reconciliation Review to occur in year 5 (CY2022) looking backwards again at year 4 (CY2021) actuals for the next adjustment. In this way, the City and NRWS hope that the new Reconciliation Review provide a more frequent and more accurate adjustment based on true service levels provided by NRWS as well as respond to changes in law that could not have been reasonably anticipated during the previous Reconciliation Review process. It would also allow for more timely adjustments for any major changes in the City customer base (e.g., when new Napa Pipe development households are added to residential service and new businesses such as the new CostCo store are added to commercial service).

At the time of this 2018 Contract Amendment, both the City and NRWS realize and agree of the importance and value of getting the details and service level measurements/metrics done correctly for the new “Reconciliation Review” process. More time is needed to develop the specific details of the Reconciliation Review process and establish new equitable service thresholds to be used in the new process. The proposed 2018 Contract amendment utilizes much of the MOU language to describe the goals and intent of the new Reconciliation process in Attachment U. However, as the first Reconciliation Review process will not occur until CY2020, both NRWS and the City agree that this new process needs additional detailed development. To that end, the City Manager will be authorized to administratively approve procedures that achieve the new Reconciliation Review process when the parties have arrived at mutual agreement on the specifics of the new process to replace the previous Cost Review process.

2018 CONTRACT AMENDMENT – UPDATES & FUTURE AMENDMENTS

The “core” of the proposed 2018 Contract Amendment is contained in 15 “Articles” while most of the details are presented in numerous “Attachments” to the 2018 Contract Amendment (current contract Attachments range from Attachment A through Attachment MM). Prior to this proposed 2018 Contract Amendment, there had been three contract amendments as a part of the Initial Agreement. There is one key contract Article (Article 12) and related Attachments (namely, attachments T-1 through T-12) that details the various forms of compensation to the Contractor. While both the City and NRWS have agreed on the level and forms of compensation (as described in the amended MOU), both parties agree that a little more time is needed to finalize this specific Article and related Attachments because it is so vital and critical to be done accurately and have it thoroughly reviewed and cross-checked by both parties. There are also “catch-up” provisions to be developed for pending capital and operating payments to address the changes associated with the 2018 Contract Amendment. To that end, staff intends to bring back Article 12 and Attachments T-1 through T-12 in a final form for consideration at future City Council meeting. At that same future meeting, staff will also present a mid-year budget adjustment to Solid Waste & Materials Diversion Enterprise Fund address the corresponding changes and impacts of the 2018 Contract Amendment in the City’s FY2017/18 adopted budget.

Above and beyond the pending Article 12 and Attachments T-1 through T-12 updates noted above, there are other non-financial, technical revisions, clarifications and updates that will require more time and/or information to be finalized. A good example is Attachment G to the proposed Contract Amendment which notes all the governing permits and regulations for the City’s MDF. Because the City and NRWS have pending significant permit revisions (from the air district and water board in particular), the attached resolution seeks to authorize the City Manager to be able to administratively accept and execute certain non-financial, technical Attachments as they become available. As noted above, the biomass gasification plants and anaerobic digestion to biofuel systems will need to return to City Council as future contract amendments since they do have significant financial and long-term policy and operating implications.

Therefore, staff is recommending that the City Council authorize the City Manager to finalize and execute the 2018 Contract Amendment to extend the term of the Initial Agreement between the City and NRWS through December 31, 2018, as described in the attached resolution (first attachment to this staff report), and to take all actions necessary to implement its terms, including authorizing the City Manager to approve updates of portions of the 2018 contract Amendment labeled “Fundamental Terms” in Exhibit A to the Resolution once the parties can finalize the technical details.

FINANCIAL IMPACTS:

Cost Comparison of 2018 Amendment to City-NRWS Agreement			
	Previous Contract Year (CY2017)	Year 2 (CY 2019) with 2018 Amendment & No Biomass	Year 2 (CY 2019) with 2018 Amendment & Two 1 MW Biomass Units
EXPENSES			
Total Operating Costs	$10,244,000	$11,054,000	$12,060,000
Total Capital Costs	$51,000	$1,738,000	$3,073,000
3% Base Profit Margin	$309,000	$358,000	$470,000
TOTAL Baseline "Fixed" Payments	**$10,604,000**	**$13,150,000**	**$15,603,000**
Over Baseline (CY2016 Tonnage)	$2,100,000	$2,700,000	$2,700,000
Direct Material Sales (Compost, Gravel, etc.)	$108,000	$342,000	$342,000
Secondary Material Sales (Cardboard, Aluminum, etc.)	$1,740,000	$1,740,000	$1,740,000
Diversion Incentives	$70,000	$100,000	$100,000
Bio Char Sales	NA	NA	$413,000
TOTAL Compensation to NRWS	**$14,622,000**	**$18,032,000**	**$20,898,000**
REVENUE			
30,000 Tons New Material to MDF		$1,350,000	$1,350,000
Electricity Sales back to PG&E Grid			$1,750,000
Bio Char Sales			$1,377,000
TOTAL Revenue		**$1,350,000**	**$4,477,000**
NET COST	**$14,622,000**	**$16,682,000**	**$16,421,000**
"NEW" Net Costs		**$2,060,000**	**$1,799,000**
Total Projected Rate Increase (by percent) needed over first 2 Calendar years (note these projected rate impacts are cumulative rate impacts, not per year)		**10.8%**	**9.5%**

As the above table summarizes, the projected Year Two (CY2019) net new additional cost for the proposed 2018 Contract Amendment is $2,060,000 without the two 1MW

biomass gasification plants and lowers to $1,779,000 with the two 1MW biomass gasification plants. The lower net costs with the biomass plants reflects higher offsetting revenue for sale of electricity to the PG&E grid as well as new “Bio char” material sales revenue. Because of this favorable net cost impact, installation of the two 1 Mega-Watt (MW) biomass plants is included in the MOU and proposed 2018 Contract Amendment to the Initial Agreement between the City and NRWS.

The projected rate impact over the first two calendar (contract) years of the 14-year contract extension, based solely on the new costs included in the 2018 Contract Amendment, is 10.8 percent without the biomass plants and 9.5 percent with biomass plants. As noted in the cost comparison table, it should be pointed out that the projected rate impacts are cumulative rate impacts over a two-year period (CY2018 & CY2019), not a single rate-year. A rate study will be conducted in late 2018 to establish the necessary rates to absorb the cost of the 2018 Contract Amendment while factoring in all other revenue and expenses within the Solid Waste and Materials Diversion Enterprise Fund.

CEQA:
City staff recommends that the City Council determine that the Recommended Action is exempt under CEQA Guidelines Sections 15301 and 15302 since it (1) involves the operation of an existing facility involving negligible or no expansion of use and (2) consists of replacing or reconstructing existing structures located on the same site and will have substantially the same purpose and capacity as the structure replaced. In addition, City staff recommends that the City Council determine that the potential environmental effects of portions of the Recommended Action were adequately analyzed by an Initial Study and Mitigated Negative Declaration adopted on November 7, 2013 (Resolution No. PC2013-15) that was prepared for the Napa Renewables Resources Project (File No. PL 12-0022); Technical Addendum dated June 23, 2014; Technical Addendum dated January 17, 2017; and the Notice of Determination for the Covered Aerated Static Pile system dated March 5, 2018 (issued in accordance with Resolution No. 2018-013). Based upon this prior review, subsequent environmental review pursuant to CEQA Guidelines Section 15162 is not required.

DOCUMENTS ATTACHED:
ATCH 1 – Resolution authorizing the City Manager to execute the 2018 Contract Amendment to City Agreement No. 8687 with Napa Recycling & Waste Services, LLC (NRWS) for a term through December 31, 2031, for the collection and transportation of Municipal Solid Waste, Recyclable Materials, and Compostables, and operation of the Napa Materials Diversion Facility

EX A – Process for Finalizing the 2018 Contract Amendment to City Agreement No. 8687
EX B – Proposed 2018 Contract Amendment (4/13/2018 Version)
ATCH 2 – Amended and signed City-NRWS MOU for 2018 Amendment to Agreement No. 8687 with Proposed Term through 2031

ATCH 3 – July 18, 2017 Staff Report including Financial Analysis – Costs and Benefits for Two Unit Biomass Gasification System at Napa MDF

NOTIFICATION:
Greg Kelley, General Manager/Managing Member, Napa Recycling & Waste Services (courtesy copy)
Mike Murray, Chief Financial Officer, Napa Recycling & Waste Services (courtesy copy)
Greg Pirie, Solid Waste Program Manager/Local Enforcement Agent, County of Napa (courtesy copy)
Karen Dotson-Querin, Internal Audit Manager, Napa County Auditor-Controller's Office (courtesy copy)
Ken Spencer, Administrator of General Services, NVUSD (courtesy copy)

ATTEST
This document is a correct copy of the original on file in the office of the City Clerk of the City of Napa, County of Napa, State of California
By: _____ Date: 4/19/18
No. of Pages: 7

RESOLUTION R2018-043

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NAPA, STATE OF CALIFORNIA, AUTHORIZING THE CITY MANAGER TO EXECUTE THE 2018 CONTRACT AMENDMENT TO CITY AGREEMENT NO. 8687 WITH NAPA RECYCLING & WASTE SERVICES, LLC ("NRWS") FOR A TERM THROUGH DECEMBER 31, 2031, FOR THE COLLECTION AND TRANSPORTATION OF MUNICIPAL SOLID WASTE, RECYCLABLE MATERIALS, AND COMPOSTABLES, AND OPERATION OF THE NAPA MATERIALS DIVERSION FACILITY, AND DETERMINING THAT THE ACTIONS AUTHORIZED BY THIS RESOLUTION ARE EXEMPT FROM CEQA

WHEREAS, the City of Napa (hereinafter referred to as "the City") and Napa Recycling and Waste Services, LLC, a California limited liability company (hereinafter referred to as "NRWS") entered into an agreement for the collection and transportation of Municipal Solid Waste, Recyclable Materials and Compostables and the operation of the Napa Materials Diversion Facility ("MDF") on December 7, 2004 (City Agreement No. 8687, hereinafter referred to as "Agreement"); and

WHEREAS, the parties executed the First Amendment to the Agreement on March 1, 2005 to replace seven conventional diesel fuel collection vehicles in the Agreement with seven collection vehicles powered by engines using compressed natural gas ("CNG"); and

WHEREAS, the parties executed the Second Amendment to the Agreement on July 6, 2010 to (a) formalize agreements made among the parties and an Affiliate of NRWS that had been reflected in a signed "Joint Summary Report," dated April 9, 2007, (b) to delete the diversion incentive described in Section 12.04 of the Agreement, and (c) document the parties' agreements on operational changes that evolved since NRWS commenced City collection and processing at the MDF on October 1, 2005, and

WHEREAS, the City exercised its right under Section 3.03 of the Agreement on April 16, 2014, to unilaterally extend the Term under the same terms and conditions for (1) year to December 31, 2016; and

WHEREAS, the parties executed the Third Amendment to the Agreement on July 30, 2014 to (a) create incentives to financially compensate NRWS when diversion specific materials from landfill disposal are achieved and (b) to document changes in operational procedures that have been put in place since the Second Amendment to Agreement was signed; and

WHEREAS, the City exercised its right under Section 3.03 of the Agreement on October 18, 2016, to unilaterally extend the Term under the same terms and conditions for (1) year to December 31, 2017; and

WHEREAS, the City exercised its right under Section 3.03 of the Agreement on November 7, 2017, to unilaterally extend the Term under the same terms and conditions for (1) year to December 31, 2018; and

WHEREAS, the City and NRWS desire to amend the Agreement in accordance with the terms of the "Proposed 2018 Contract Amendment" extending term through December 31, 2031, which was presented to the City Council at its meeting of April 17, 2018, and which is labeled "Proposed 2018 Contract Amendment" (4/13/2018 version) is attached as Exhibit B to this Resolution; and

WHEREAS, the City and NRWS acknowledge that additional discussions and negotiations will be required to update and clarify certain technical terms of the Proposed 2018 Contract Amendment, as described in Exhibit "A," attached hereto and incorporated herein by reference, some of which include "FUNDAMENTAL TERMS" for which the City Manager will be authorized to incorporate and execute on behalf of the City; and

WHEREAS, Exhibit "A" also identifies portions of the Proposed 2018 Contract Amendment for which the City and NRWS will need additional time to revise and finalize provisions related to Article 12 and Attachments T-1 through T-12 (compensation to NRWS as City's Authorized Contractor) with these documents, along with a corresponding mid-year budget adjustment to City FY2017/18 budget for the Solid Waste and Materials Diversion Enterprise Fund, will be brought back to City Council for final consideration at a future City Council meeting; and

WHEREAS, Exhibit "A" also identifies portions of the Proposed 2018 Contract Amendment for which the City and NRWS will need additional time to negotiate, revise and finalize Agreement provisions related to development of two biomass gasification plants and a proposed an anaerobic digestion to biofuel system at City's MDF with all of these items to anticipated to return to the City Council as future amendments to City Agreement No. 8687 for consideration by the City Council; and

WHEREAS, Council has considered all information related to this matter, as presented at the public meetings of the City Council identified herein, including any supporting reports by City Staff, and any information provided during public meetings.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Napa, as follows:

1. The City Council hereby finds that the facts set forth in the recitals to this Resolution are true and correct, and establish the factual basis for the City Council's adoption of this Resolution.

2. The City Council hereby determines that the action authorized by this resolution is exempt under CEQA Guidelines Sections 15301 and 15302 since it (1) involves the operation of an existing facility involving negligible or no expansion of use

and (2) consists of replacing or reconstructing existing structures located on the same site and will have substantially the same purpose and capacity as the structure replaced. In addition, the City Council hereby determines that the potential environmental effects of portions of the actions authorized by this resolution were adequately analyzed by an Initial Study and Mitigated Negative Declaration adopted on November 7, 2013 (Resolution No. PC2013-15) that was prepared for the Napa Renewables Resources Project (File No. PL 12-0022); Technical Addendum dated June 23, 2014; Technical Addendum dated January 17, 2017; and the Notice of Determination for the Covered Aerated Static Pile system dated March 5, 2018 (issued in accordance with Resolution No. 2018-013). Based upon this prior review, subsequent environmental review pursuant to CEQA Guidelines Section 15162 is not required.

3. The City Council hereby authorizes the City Manager to take all actions necessary to finalize the terms of, and to execute on behalf of the City, the 2018 Contract Amendment, in substantial conformance with: (a) the Proposed 2018 Contract Amendment (as defined in the recitals to this resolution), and (b) the adjustments and implementation measures set forth on Exhibit "A," attached hereto and incorporated herein by reference.

4. This Resolution shall take effect immediately upon its adoption.

I HEREBY CERTIFY that the foregoing Resolution was duly adopted by the City Council of the City of Napa at a public meeting of said City Council held on the 17th day of April, 2018, by the following vote:

AYES: Mott, Sedgley, Gentry, Krider, Techel

NOES: None

ABSENT: None

ABSTAIN: None

ATTEST: Dorothy Roberts
City Clerk

Approved as to form:

Michael W. Barrett
City Attorney

EXHIBIT A

Process for Finalizing the 2018 Contract Amendment to City Agreement No. 8687 Based on the Terms of the "Proposed 2018 Contract Amendment" (4/13/2018 Version)

The Status Tables set forth in this Exhibit A include rows, each of which identify an Article, a Section, or an Attachment to the Proposed 2018 Contract Amendment (4/13/2018 Version). For each row, there is a "Status" column. The City Manager is authorized to finalize the terms of the 2018 Contract Amendment on behalf of the City, in substantial conformance with the Proposed 2018 Contract Amendment, and subject to the approval in writing by the Contractor, and take the "Status" action described in the Status Coding Key for each relevant row (Article, Section, or Attachment).

Status Coding Key:

"FINAL" = Finalize the terms of the 2018 Contract Amendment in substantial conformance with the Proposed 2018 Contract Amendment.

"FUNDAMENTAL TERMS" = Finalize the terms of the 2018 Contract Amendment in substantial conformance with the Proposed 2018 Contract Amendment; and insert terms that are technical, administrative, or ministerial that do not modify the financial obligations of the City.

"FUTURE AMENDMENT" = Finalize the terms of the 2018 Contract Amendment in substantial conformance with the Proposed Contract Amendment; acknowledging that the 2018 Contract Amendment is intended to include conceptual terms by which the parties will continue to negotiate terms of a future amendment that will be subject to future consideration by the City Council prior to final approval by the City.

"DELETED" = A term that may have been included in the Initial Agreement is consciously omitted from the Proposed 2018 Contract Amendment, since it is obsolete or no longer applicable, and it will be omitted from the 2018 Contract Amendment.

EXHIBIT A

Status Table for 2018 Contract Amendment Articles and Future Amendments

ITEM	DESCRIPTION	STATUS
ARTICLE 1	DEFINITIONS	FINAL
ARTICLE 2	REPRESENTATIONS AND WARRANTIES OF CONTRACTOR	FINAL
ARTICLE 3	TERM OF AGREEMENT	FINAL
ARTICLE 4	COLLECTION OF MUNICIPAL SOLID WASTE, RECYCLABLE MATERIALS AND COMPOSTABLES	FINAL
ARTICLE 5	TRANSPORTATION OF MATERIALS	FINAL
ARTICLE 6	OPERATION OF MATERIALS DIVERSION FACILITY	FINAL
SECTION 6.24	PROPOSED BIOMASS GASIFICATION PLANTS AT MDF	FUTURE AMENDMENT
SECTION 6.25	ANAEROBIC DIGESTION TO BIOFUEL SYSTEM AT MDF	FUTURE AMENDMENT
ARTICLE 7	EQUIPMENT AND PERSONNEL	FINAL
ARTICLE 8	OTHER COLLECTION-RELATED SERVICES	FINAL
ARTICLE 9	RECORD KEEPING, REPORTING AND INSPECTIONS	FINAL
ARTICLE 10	INDEPENDENT CONTRACTOR	FINAL
ARTICLE 11	INDEMNITY, INSURANCE, BOND	FINAL
ARTICLE 12	COMPENSATION TO CONTRACTOR	FUNDAMENTAL TERMS (However, there is some missing information that will be brought back to Council for consideration at a subsequent public meeting).
ARTICLE 13	DEFAULT AND REMEDIES	FINAL
ARTICLE 14	OTHER AGREEMENTS OF THE PARTIES	FINAL
ARTICLE 15	MISCELLANEOUS AGREEMENTS	FINAL

EXHIBIT A

Status Table for 2018 Contract Amendment Attachments

ITEM	DESCRIPTION	STATUS
Attachment A	Definitions	FUNDAMENTAL TERMS
Attachment B	Detailed Scope of Work for Collection Operations	FINAL
Attachment C	Implementation Plan and Schedule	FUNDAMENTAL TERMS
Attachment D	Not Used	DELETED
Attachment E	School District Service	FUNDAMENTAL TERMS
Attachment F	Detailed Scope of Work for Materials Diversion Facility Operations	FUNDAMENTAL TERMS
Attachment G	Permits for Materials Diversion Facility	FUNDAMENTAL TERMS
Attachment H	Materials Diversion Facility Performance Standards	FUNDAMENTAL TERMS
Attachment I	Not Used	DELETED
Attachment J	Process Descriptions and Drawings	FUNDAMENTAL TERMS
Attachment K	Collection Vehicles to be Furnished by Contractor	FINAL
Attachment L	MSW, Recyclable Materials and Compostables Containers to be Furnished by Contractor	FUNDAMENTAL TERMS
Attachment M-1	City-Furnished Equipment for MDF	FINAL
Attachment M-2	Contractor-Furnished Equipment for MDF	FUNDAMENTAL TERMS
Attachment N	Contractor-Furnished Personnel	FINAL
Attachment O	Not Used	DELETED
Attachment P	Not Used	DELETED
Attachment Q	Billing Protocol	FINAL
Attachment R	Reports to be Submitted to City	FINAL
Attachment S-1	Performance Bond	FINAL
Attachment S-2	Bond Continuation Certificate	FINAL
Attachment T (inclusive of T-series, currently T-1 through T-12)	Combined Operating and Capital Cost for Collection and MDF Operation	FUNDAMENTAL TERMS (However, there is some missing information that will be brought back to Council for consideration at a subsequent public meeting).
Attachment U	Cost Review/Reconciliation Review Process	FUNDAMENTAL TERMS
Attachment V-1	Targeted Incentive	FINAL

EXHIBIT A

ITEM	DESCRIPTION	STATUS
Attachment V-2	Residual Reduction Incentive	FINAL
Attachment V-3	Collection Incentive	FINAL
Attachment V-4	Sample Glossary of Material and Facility Codes	FINAL
Attachment W	Transition at Expiration of Term	FUNDAMENTAL TERMS
Attachment X	Guaranty	FINAL
Attachment Y	Arbitration	FINAL
Attachment Z	Letter to Employees/Union	FINAL
Attachment AA	Agreement Between the City of Napa and Northern Recycling Operations and Waste Services, LLC; City Agreement No. 2010-147	FINAL
Attachment BB	Map of Five Mile Radius from Entrance to Materials Diversion Facility	FINAL
Attachment CC	List of Balers Provided by Contractor Pursuant to Section 6.03.02	FINAL
Attachment DD	MDF Materials Paid Sales Report	FINAL
Attachment EE	Napa MDF Operating Requirements	FUNDAMENTAL TERMS
Attachment FF	Buyer/Broker Information Sheet	FINAL
Attachment GG	Sample Over Baseline Calculations	FUNDAMENTAL TERMS
Attachment HH	Purchase Order for Recycle More Vehicle	FINAL
Attachment II	Not Used	DELETED
Attachment JJ	Bill Insert for Recycle More Program	FINAL
Attachment KK	Not Used	DELETED
Attachment LL	Agreed-Upon Procedures for Report of Materials Sales Transactions with Affiliated Entities	FINAL
Attachment MM	Sample Calculations for Disposition Costs when No Markets Exist (Negative Value Recovered Materials)	FINAL

APPENDIX C: NAPA RECYCLING AND WASTE SERVICES COST-OF-SERVICE STUDY (FOR 2018 CONTRACT AMENDMENT TO CITY-NRWS AGREEMENT)

See next page

HF&H CONSULTANTS, LLC

June 27, 2018

Mr. Kevin Miller
Recycling and Solid Waste Manager
City of Napa
1600 First Street
Napa, CA 94559

Subject: Napa Recycling and Waste Services Cost-of-Service Review

Dear Mr. Miller:

We have completed our review of Napa Recycling & Waste Services' (NRWS) proposed costs included in its Memorandum of Understanding with the City of Napa (City). Our findings are documented in the enclosed report. This report presents our findings and recommendations and is organized into three sections:

I. Background and Summary
II. Scope of Work and Limitations
III. Findings

I. BACKGROUND AND SUMMARY

Background

The City and NRWS entered into a 10-year agreement for solid waste and recycling services on December 4, 2004 that expired on December 31, 2015. The agreement included an option for up to 4 one-year extensions; three extensions have been exercised and the third will expire on December 31, 2018. The City and NRWS desired to enter into a long-term agreement and subsequently agreed to the City-NRWS MOU for 2018 Amendment to Agreement No. 8687 with a Proposed Term through 2031 (MOU).

The City requested HF&H Consultants (HF&H) perform a high-level review of Exhibit A of the MOU and provide an assessment on the costs proposed by NRWS to provide the service through 2031.

Summary

The following summarizes our review of Exhibit A of the MOU:

- Exhibit A cost forms submitted by NRWS are mathematically accurate and flow with logical consistency.
- NRWS applied the correct index to the baseline and assumed costs in Exhibit A.

- Exhibit A costs are favorable compared to HF&H benchmarks for historical and comparison data.
- The use of fixed escalators (3.5% for labor and 2.5% for other costs) for the first 5 years of the MOU appears to be reasonable.
- Costs for new and expanded programs including Biomass, commercial food waste, Recycle More, Storm Water Treatment, and Covered Aerated Static Pile (CASP), appear to be reasonable.
- Capital projections:
  - Projected capital costs appear reasonable and in line with expected costs based on HF&H industry benchmark data.
  - Projected asset lives do not follow standard industry conventions; however, all projected assets are scheduled to be fully depreciated at the end of the MOU as requested by the City.
  - Projected depreciation and interest is reasonable given the City's goal of full depreciation at the end of the 14-year MOU.

II. SCOPE OF WORK AND LIMITATIONS

Scope

In order to achieve the study objectives, HF&H performed the following tasks:

Reviewed Cost of Service

1. Reviewed NRWS' Exhibit A cost forms for logical consistency and mathematical accuracy.
2. Reviewed the baseline costs from 2017 that NRWS used to project year 1 (2018) costs. Our review included:
   - Identifying costs based on 2017 actual figures and confirming the correct application of indices utilized in the current agreement.
   - Identifying costs based on NRWS' assumptions and verifying reasonableness to available historical or comparison data.
3. Reviewed the reasonableness of utilizing fixed escalators to project costs for years 2 through 5 of the 2017 Amendment. Our review included:
   - Confirming the correct application of the fixed escalators by NRWS.
   - Comparing the fixed percentage (3.5% for labor and 2.5% for operating) to historical regional indices to support the reasonableness of utilizing fixed escalators in lieu of a published index.
   - Comparing the fixed labor escalator to NRWS' labor agreements to confirm reasonableness of the fixed percentage escalator.

4. Reviewed the collection and processing costs proposed by NRWS for labor and other operating costs by comparing industry standards to assess the overall reasonableness of the projections. Our review included a high-level review for costs associated with new or expanded programs including:
    - New Bio-Mass System
    - Expanded Commercial Food Waste Collection
    - Recycle More
    - Storm Water Treatment System
    - Covered Aerated Static Pile (CASP)
5. Reviewed NRWS's capital projections for collections and processing equipment through year 14 of the 2017 Amendment and verified:
    - Reasonableness of the purchase price
    - Reasonableness of the projected asset lives
    - Reasonableness of the annual depreciation and interest projections
    - Reasonableness of initial purchase and replacement timing

Limitations

The scope of the procedures agreed upon with the City to perform this review was limited in nature and was substantially different than an examination in accordance with Generally Accepted Auditing Standards. Had we performed additional procedures, other matters might have come to our attention that would have been reported to the City.

This report is informational and is intended solely for use by the City; this report is not intended to be, and should not be, used by any party other than the City. This restriction is not intended to limit distribution of this report, which is a matter of public record.

III. FINDINGS

Task 1: Verification of Logical Consistency and Mathematical Accuracy

HF&H reviewed the NRWS cost-of-service forms (Exhibit A) of the MOU and verified the mathematical accuracy and logical consistency. No exceptions were noted.

Task 2: Review of 2016 Baseline Costs

Proper Application of Indices

HF&H reviewed the baseline costs from 2016 that NRWS used to project year 1 (2018) costs and confirmed the proper application of various indices identified in the MOU. It was noted two of the indices have been

discontinued by the Bureau of Labor Statistics. These indices were to be used for MOU years 6-14. They are:

- CPI-Urban Wage Earners (All items) San Francisco-Oakland-San Jose, CA (Series ID CWURA422SAO) was replaced with CPI-Urban Wage Earners and Clerical Workers (Current Series), San Francisco-Oakland-Hayward, CA, All Items (Series ID CWURS49BSA0)
- CPI-All Urban Consumers (All items less food and energy) San Francisco-Oakland-San Jose, CA. (Series ID CUURA422SAOL1E) was replaced with CPI-All Urban Consumers (All items less food and energy) San Francisco-Oakland-San Jose, CA. (Series ID CUURA422SAOL1E)

We recommend the MOU be amended to reflect the available indices.

Reasonableness of the Costs

We performed a high-level review of the 2018 baseline costs by comparing recent HF&H industry benchmark data to confirm the reasonableness of the NRWS' projected cost data. Our review compared the NRWS labor costs by total headcount and total operating costs per route for collection operations. Our comparison collection companies were based on similarly sized collection operations to that of NRWS. For processing costs, we compared labor costs by total headcount and operating costs per ton. The data is summarized in Tables 1 and 2 below.

Table 1: Collection Cost Comparison

Collection Costs [1]	Labor Cost per Headcount	Headcount	NRWS % Favorable (Unfavorable) to Benchmark	Operating Cost per Route	Routes	NRWS % Favorable (Unfavorable) to Benchmark
NRWS - Napa / Collection Company	$ 101,000	39.0		$ 151,000	25.0	
Benchmark #1 - San Mateo / Peninsula / Collection Company	$ 125,000	46.0	23.8%	$ 234,000	23.0	55.0%
Benchmark #2 - South Bay Area Collection Company	$ 138,000	42.0	36.6%	$ 170,000	32.0	12.6%
Benchmark #3 - South Bay Area Collection Company	$ 134,000	43.0	32.7%	$ 174,000	22.0	15.2%
Benchmark # - South Bay Area Collection Company	$ 151,000	38.0	49.5%	$ 176,000	24.0	16.6%

[1] Labor and operating costs rounded to nearest $1000 for comparison purposes. Headcount and route statistics rounded to the nearest whole number.

As shown in Table 1, NRWS' collection costs compare favorably to HF&H benchmarks for both the labor cost per headcount and operating costs per route metric.

Table 2: Processing Cost Comparison

Processing and Biomass / AD Costs	Labor Cost per Headcount	Headcount	NRWS % Favorable (Unfavorable) to Benchmark	Operating Cost per Ton	Tons	NRWS % Favorable (Unfavorable) to Benchmark
NRWS - Napa MDF / Processing, Composting, Biomass	$ 75,043	45.75		$ 28.86	157,517	
Benchmark #1 - Central Coast / Processing, Composting, AD	$ 74,303	78.00	(1.0%)	$ 39.63	190,717	37.3%

There are several biomass projects in development that are similar to the one proposed for the Material Diversion Facility (MDF). However, there are few in operation and limited data is available for comparison purposes. For our comparison, we used proposed costs for a facility that is most similar to that proposed for the MDF. This facility will have recyclable processing, composting, and an anaerobic digester on the same site and under the same operation. Based on the available data, NRWS compares favorably with the processing benchmark data.

Task 3: Review Application of Fixed Escalators

Our review included the review of the application of the fixed escalators for labor and other costs as well as the reasonableness of the fixed percentages included in the MOU.

Correct Application of the Fixed Escalators by NRWS.

For projected years 2018 through 2022, our review indicated NRWS applied the agreed-upon fixed escalator (3.5% for labor and 2.5% for other costs). For reimbursed costs such as fuel and electricity, NRWS did not apply the fixed escalator since these costs are considered pass-through costs and have a separate methodology to be adjusted to actual costs for each year.

Determination of the Reasonableness of the Fixed Percentage Escalators

To assess the reasonableness of the fixed percentage escalators, we looked at several factors including historical indices, HF&H benchmark operational data, and local labor agreements from different benchmark data from the San Francisco Bay Area.

Comparison to Historical Indices

Table 3 shows the 5 and 10-year historical averages for the local CPI indices that will be used by NRWS from 2023 through the end of the MOU. As shown, the 5 and 10-year averages are lower than the 3.5% fixed escalator for labor costs, but they are higher than the 2.5% fixed escalator used for other costs.

While the change in the historical CPI is lower for wages than the fixed escalator, NRWS has labor agreements in place for approximately 80% of its workforce. These agreements include fixed increases that are higher than the historical CPI and discussed in more detail below.

Table 3: Historical Indexes

Index	CPI - Urban Wage Earners [1]	CPI - All Urban Consumers [2]
	Labor Costs	Other Costs
5 Year Average Change	2.6%	3.2%
10 Year Average Change	2.4%	2.6%
NRWS Fixed Comparison	3.5%	2.5%

[1] CPI-Urban Wage Earners and Clerical Workers (Current Series), San Francisco-Oakland-Hayward, CA, All Items (Series ID CWURS49BSA0)

[2] CPI-All Urban Consumers (All items less food and energy) San Francisco-Oakland-San Jose, CA. (Series ID CUURA422SAOL1E)

Comparison to HF&H Benchmark Data

HF&H compared the 5-year average to HF&H benchmark data for a collection company that is similar to that of NRWS.

For the MRF comparison, the benchmark data used is only for a MRF operation which excludes composting and other operations that are performed at the MDF. We did not have a comparable operation to the MDF for the basis of comparison.

Table 4 compares the fixed escalators against benchmark data. For the collection operation, labor costs increased by an average of 3.8% over the 5-year period while operations costs increased by an average of 4.7% over the same time.

For the MRF, the average increase for labor and operations costs exceeded a 7% average over the 5-year period. This compares favorably to the fixed escalators used by the City for the MOU.

Table 4: Fixed vs Benchmark Escalators

Business Unit	NRWS (Proposed)	HF&H Industry Database (Actual)
Collection Unit		
Labor	3.5%	3.8%
Operations	2.5%	4.7%
Recycling Unit		
Labor	3.5%	7.4%
Operations	2.5%	7.6%

Comparison to Labor Agreements

For this step, HF&H compared the NRWS labor agreements for both collection and recycling employees against other local labor agreements. We reviewed the average annual increase per hour based on the wage and benefits schedules included in each agreement. Table 5 shows the expected average hourly increase for NRWS by employee position for the length of the agreement compared to the other local labor agreements.

Based on the information, the overall increase for the unionized labor is expected to increase by more than the 3.5% that is fixed per the MOU. While this does not included non-union labor, this applies to approximately 80% of the employees so the fixed 3.5% escalator appears to be favorable for the City.

Table 5: Labor Agreements

Business Unit	NRWS [1]	NRWS (Fixed)	HF&H Industry Database	CPI - Urban Wage Earners [2]
Collection Unit				
Driver	4.5%	3.5%	3.1%	2.6%
Maintenance	4.4%	3.5%	3.3%	2.6%
Compost Operator	5.1%	3.5%	6.6%	2.6%
Helper / Spotter	5.5%	3.5%	3.2%	2.6%
Container Driver	5.5%	3.5%	6.6%	2.6%
Recycling Unit				
Sorter	6.2%	3.5%	9.6%	2.6%
Operator	5.9%	3.5%	11.3%	2.6%
Foreman	5.6%	3.5%	11.2%	2.6%

[1] Agreement does not specify plan amounts for Health and Welfare coverage. Assumed same average increase as industry database at 7% annual increase.

[2] CPI-Urban Wage Earners and Clerical Workers (Current Series), San Francisco-Oakland-Hayward, CA, All Items (Series ID CWURS49BSA0), 5 year average.

Task 4: Review of Profit Percentage

NRWS included a profit of 3% on all costs in the Exhibit A cost forms. This includes a calculated profit on fuel and electricity charges. Pass-through costs do not typically include profit; however, fuel and electricity are generally not treated as pass-through costs. It is not unreasonable for NRWS to include a profit on these costs.

A 3% profit margin is also on the lower end of the scale as far as an industry standard for which margins are more commonly in the 8% to 15% range as shown in Table 6 below.

Table 6: Summary of Profit Margins

Agency	Type of Contract	Operating Ratio	Profit Percentage
City of San Rafael	Collection/Processing/ Disposal	90%	10%*
City of Tiburon	Collection/Processing/ Disposal	90%	10%*
City of Milpitas	Collection/Processing of Recyclables & Organics	87%	13%*
City of Alameda	Collection/Processing	90%	10%*
SMaRT Station	Operation of MRF	N/A	7%

* Agreements use Operating Ratio terminology for the profit calculation. Amounts shown are the equivalent profit percentage.

Task 5: Review of Collection, Processing, and Other Operating Costs

New Biomass System

The proposed Biomass facility for two 1 megawatt power plants is similar to planned developments by Phoenix Energy, the same company that has been selected for the MDF.

NRWS proposes 12 employees to operate the Biomass system to support a 24-hour, 7-day-per-week operation. Proposed labor costs total $1,425,487, including the 3% profit. This averages out to $118,821 per employee for total wages and benefits. This is higher than the overall NRWS average shown in Table 1; however, the labor is primarily made up of equipment operators and mechanics that are at the higher end of the pay scale.

Operational costs total $764,833 for operations and maintenance (O&M) which equals $63,736 per month. Since most biomass plants of this type are currently under development, a source of information to verify the amount is not available. We did note the proposed costs are significantly less than an anaerobic digester facility with similar operations.

Commercial Food Waste Collection

NRWS currently operates one daily route for commercial food waste collection. Per the MOU, NRWS will continue with rollout to achieve a full route, 5 days a week with 100 commercial stops per day.

The Exhibits A costs include $134,366 for wages & benefits and $99,897 for operational and depreciation expenses. Both appear to be reasonable for a single driver and partial route. Operational costs are expected to increase as the route expands towards 100 stops per day.

NRWS will not receive additional reimbursement for the current costs beyond the fixed escalators until 2020. At that time it will be included in the reconciliation review for adjustments to actual customer levels.

NRWS included a new vehicle in 2025 and new carts and tablets in 2021 and 2026, as listed in Exhibit A.

The vehicle to be purchased in 2025 is depreciated over 4 years in the Exhibit A schedule starting in 2025 and ending in 2028. This is inconsistent with the other collection vehicles being depreciated through the end of the MOU (2031). However, the vehicle is projected to be fully depreciated at the end of the MOU which is consistent with the City's goal to have all assets fully paid for at the end.

Recycle More

NRWS added a new truck in 2025. Otherwise, costs are based on current figures escalated by the fixed increases over the first 5 years.

Storm Water Treatment System

The City is constructing the Storm Water Treatment System in in conjunction with the CASP. NRWS will have full responsibility to maintain and operate the system and added $41,850 in annual costs, or $3,487 per month, for O&M.

No additional headcount is included in Exhibit A forms for NRWS to manage the system. Costs for O&M appear to be nominal and reasonable for NRWS to manage the Storm Water Treatment System. However, the final costs are still to be determined and will be based on the final design and permitting approvals.

Covered Aerated Static Pile (CASP)

The City is responsible to build the CASP to convert composting from the current open system. For the length of the MOU, the City is responsible for fixed and structural capital replacement costs. NRWS is responsible to operate the CASP and maintain, repair, or replace processing equipment for the duration of the MOU.

For operation of the CASP, NRWS added incremental costs for two sorter positions (pre-processing and CASP) at a total cost of $116,413, O&M costs of $252,783, and pass-through costs of $305,747 for electricity.

At a cost of $58,206 per sorter position, labor costs appear in line with the other current sorter positions at the MDF and in line with our benchmark for sorter positions from the labor agreement used in Table 5 above.

For operational and electricity costs, we do not have a comparable benchmark for comparison for the operation of a CASP system.

However, from the Report of Composting Site Information dated November 21, 2014 (revised July 2016), the CASP can process up to 50,000 tons per year once completed. Assuming full capacity, per ton costs are $2.33 for labor, $5.26 for O&M, and $6.11 for electricity, adding a total incremental cost per ton of

$13.71 for CASP operation. Since electricity is a pass-through cost, NRWS reimbursed costs are $7.59 per ton for operation and maintenance of the CASP. The incremental additional cost per ton for the CASP appears reasonable.

Task 6: Review NRWS's Capital Projections

In order to verify the reasonableness of asset purchase prices, we reviewed purchases for similar equipment from actual and proposal data we have received and catalogued in the past couple of years. In some instances, we did not have information to make a comparison and relied on available vendor pricing information.

The benchmarks are intended to provide a basis for assurance within a range since we do not have the exact specifications for each type of equipment listed in Exhibit A. The analysis is split into three main categories. In order to make a comparison of the full purchase costs we extended the purchase and benchmark costs and calculated the percentage difference between NRWS' and the benchmarks for collection equipment, containers, processing, and Biomass equipment. The results are shown in Tables 7 through 9 below.

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HF&H CONSULTANTS, LLC

Table 7: Collections Equipment

Vehicles	Quantity	Attachment K	2018	2019	2020	2021 - 2031	Benchmark	Total Cost NRWS	Total Cost Benchmark	NRWS % Favorable (Unfavorable) to Benchmark
Residential										
29cy Sideloader / CNG	2	2	$ 424,199				$ 451,894	$ 848,398	$ 903,788	6.5%
29cy Sideloader / CNG	4	4		$ 439,046			$ 467,711	$ 1,756,183	$ 1,870,842	6.5%
29cy Sideloader / CNG	3	3			$ 454,412		$ 484,080	$ 1,363,237	$ 1,452,241	6.5%
Refurbished Sideloader / CNG	4	4	$ 239,487				$ 251,303	$ 957,946	$ 1,005,212	4.9%
Cart Delivery / CNG	1	0	$ 77,623				$ 69,075	$ 77,623	$ 69,075	(11.0%)
Engines / Transmissions						$ 390,000	$ 390,000	$ 390,000	$ 390,000	0.0%
Floors						$ 195,000	$ 195,000	$ 195,000	$ 195,000	0.0%
Hydraulic systems						$ 130,000	$ 130,000	$ 130,000	$ 130,000	0.0%
Commercial										
40cy Frontloader w/ Curotto Can / CNG	3	3	$ 506,417				$ 477,546	$ 1,519,252	$ 1,432,639	(5.7%)
40cy Frontloader w/ Curotto Can / CNG	1	1		$ 524,142			$ 494,261	$ 524,142	$ 494,261	(5.7%)
40cy Frontloader / CNG	1	1		$ 468,510			$ 494,261	$ 468,510	$ 494,261	5.5%
Refurbished Frontloader / CNG	3	3	$ 200,000				$ 251,303	$ 600,000	$ 753,909	25.7%
Refurbished Frontloader / CNG	1	1		$ 200,000			$ 251,303	$ 200,000	$ 251,303	25.7%
Bin Delivery / Diesel	1	1	$ 65,710				$ 66,739	$ 65,710	$ 66,739	1.6%
Engines / Transmissions						$ 270,000	$ 270,000	$ 270,000	$ 270,000	0.0%
Floors						$ 135,000	$ 135,000	$ 135,000	$ 135,000	0.0%
Hydraulic systems						$ 90,000	$ 90,000	$ 90,000	$ 90,000	0.0%
Rolloff										
Rolloff 4-axle / CNG	2	2	$ 338,224				$ 391,720	$ 676,448	$ 783,440	15.8%
Rolloff 4-axle / CNG	2	2		$ 349,662			$ 405,430	$ 699,324	$ 810,860	15.9%
Engines / Transmissions						$ 120,000	$ 120,000	$ 120,000	$ 120,000	0.0%
Hydraulic systems						$ 40,000	$ 40,000	$ 40,000	$ 40,000	0.0%
Pickup Trucks										
Manager / Unleaded	1	1	$ 50,000				$ 43,227	$ 50,000	$ 43,227	(13.5%)
Route Sup / Unleaded	2	2	$ 45,717				$ 43,227	$ 91,434	$ 86,454	(5.4%)
Shop / Unleaded	2	2	$ 82,574				$ 98,114	$ 165,148	$ 196,228	18.8%
Food Waste										
FW Collection, 22cy sideloader	1	1				$ 532,723	$ 532,723	$ 532,723	$ 548,010	2.9%
Recyclemore										
Recycle More Truck	1	1				$ 157,266	$ 157,237	$ 157,266	$ 157,237	(0.0%)
						Total Purchase Cost		**$ 12,123,344**	**$ 12,789,726**	**5.5%**

In Table 6, we compared the scheduled purchase cost for vehicles against benchmark data for similar types of equipment. Per the MOU, route trucks will be either purchased or refurbished by the end of 2020. Vehicles scheduled for replacement, food waste and Recycle More, are scheduled for 2025. Regardless of timing for purchase, the vehicles are anticipated to last the full length of the MOU through 2031.

Additionally, we compared the Exhibit A scheduled purchases against Attachment K in the proposed *Amended and Restated Contract for the Collection and Transportation of Municipal Solid Waste, Recyclable Materials, and Compostables and the Operation of the Napa Materials Diversion Facility* (New Agreement) and note that there was one additional vehicle listed in Exhibit A for residential cart delivery that was not listed on Attachment K.

For benchmark data, we adjusted pricing based on a factor of 3.5% for vehicles scheduled for purchase after 2018. This is consistent with the NRWS approach for purchases scheduled for 2019, 2020 and beyond.

In order to make a comparison of the full purchase costs we extended the purchase and benchmark costs and calculated the percentage difference between NRWS' and the benchmarks.

While there are some fluctuations between the pricing provided by NRWS and the benchmarks, the pricing is consistent with the benchmarks with a nominal overall 5.5% difference favorable to the City from NRWS' proposal.

Table 8: Containers

Containers	Quantity	2018	2019	2020	2021	2022	Benchmark	Total Cost NRWS	Total Cost Benchmark	NRWS % Favorable (Unfavorable) to Benchmark
1.5 CY	13	$ 489					$ 644	$ 6,354	$ 8,367	31.7%
1.5 CY	6		$ 489	$ 489	$ 489	$ 489	$ 644	$ 11,733	$ 15,447	31.7%
2 CY	78	$ 539					$ 609	$ 42,015	$ 47,520	13.1%
2 CY	35		$ 539	$ 539	$ 539	$ 539	$ 609	$ 75,430	$ 85,292	13.1%
3 CY	52	$ 619					$ 694	$ 32,197	$ 36,078	12.1%
3 CY	23		$ 619	$ 619	$ 619	$ 620	$ 694	$ 56,977	$ 63,831	12.0%
4 CY	76	$ 730					$ 814	$ 55,502	$ 61,871	11.5%
4 CY	34		$ 730	$ 730	$ 730	$ 731	$ 814	$ 99,345	$ 110,716	11.4%
6 CY	47	$ 877					$ 998	$ 41,199	$ 46,895	13.8%
6 CY	21		$ 877	$ 877	$ 877	$ 877	$ 998	$ 73,651	$ 83,812	13.8%
10 CY	15	$ 3,070	$ 3,101				$ 2,985	$ 92,561	$ 89,550	(3.3%)
20 CY	20	$ 3,919	$ 3,958				$ 4,503	$ 157,544	$ 180,132	14.3%
20 CY split	5	$ 4,311	$ 4,354				$ 4,503	$ 43,326	$ 45,033	3.9%
20 CY round bottom	20	$ 6,590	$ 6,656				$ 6,500	$ 264,918	$ 260,000	(1.9%)
30 CY	20	$ 4,584	$ 4,630				$ 4,909	$ 184,277	$ 196,360	6.6%
40 CY	5	$ 5,499	$ 5,554				$ 6,500	$ 55,265	$ 65,000	17.6%
					Total Purchase Cost			**$ 1,292,293**	**$ 1,395,905**	**8.0%**

In Table 7, we compared the scheduled purchase cost for commercial and roll-off containers for the first 5 years of the MOU. For commercial containers, NRWS repeated the purchasing pattern shown for years 2019 to 2022 and for years 2022 through 2031 at nominally varying purchase rates. For roll-off containers, NRWS only projected purchases for 2018 and 2019. NRWS cost figures are 8% less than the benchmark data.

We did not include residential carts in the table since NRWS projected the same annual cost of $250,000 for each year of the 14-year MOU. In the New Agreement, Attachment L specifies NRWS to purchase 93,900 carts in order to effectively serve the residential customers. While NRWS did not provide individual pricing details in Exhibit A, we estimated an average cost of $49.50 per container based on benchmark pricing data. At that price, NRWS would purchase approximately 5,000 per year or a 5.4% annual turnover for broken, lost, or stolen carts which is within the benchmark range for annual cart turnover is 1.5% to 10%.

Table 9: Processing Equipment

Processing and Biomass	Quantity	2018	2019	2024	2026	Total	Benchmark	Total Cost NRWS	Total Cost Benchmark	NRWS % Favorable (Unfavorable) to Benchmark
Processing										
MRF Sort line / Baler	1	$3,859,981				$ 3,859,981	$ 3,833,640	$ 3,859,981	$ 3,833,640	(0.7%)
CAT DP25N5 Forklift	2	$ 43,710				$ 43,710	$ 45,000	$ 87,420	$ 90,000	3.0%
CAT DP25N5 Forklift	1	$ 44,691				$ 44,691	$ 45,000	$ 44,691	$ 45,000	0.7%
JD 624K Loaders	3	$ 280,160				$ 280,160	$ 305,000	$ 840,480	$ 915,000	8.9%
Water truck	1	$ 75,000				$ 75,000	$ 95,000	$ 75,000	$ 95,000	26.7%
Tymco Model 435	1	$ 172,054				$ 172,054	$ 161,043	$ 172,054	$ 161,043	(6.4%)
Trommel Screen	1	$ 375,000				$ 375,000	$ 375,000	$ 375,000	$ 375,000	0.0%
Grinder - Pre-processing	1			$651,000		$ 651,000	$ 632,500	$ 651,000	$ 632,500	(2.8%)
Screens - Pre-processing	1			$651,000		$ 651,000	$ 651,000	$ 651,000	$ 651,000	0.0%
Replacements - Sort line					$225,000	$ 225,000	$ 225,000	$ 225,000	$ 225,000	0.0%
Replacements - CASP					$165,000	$ 165,000	$ 165,000	$ 165,000	$ 165,000	0.0%
1.5 CY roll dump bins	10	$ 962				$ 962	$ 814	$ 9,619	$ 8,141	(15.4%)
3 CY roll dump bins	20	$ 1,159				$ 1,159	$ 998	$ 23,183	$ 19,955	(13.9%)
20CY Boxes	4	$ 3,958				$ 3,958	$ 4,503	$ 15,831	$ 18,013	13.8%
30CY Boxes	10	$ 4,630				$ 4,630	$ 4,909	$ 46,301	$ 49,090	6.0%
40CY Boxes	24	$ 5,554				$ 5,554	$ 6,500	$ 133,292	$ 156,000	17.0%
Bio-mass										
Facility and Interconnection	1		$12,636,000			$12,636,000	$12,500,000	$ 12,636,000	$ 12,500,000	(1.1%)
					Total Purchase Cost			**$ 20,010,852**	**$19,939,382**	**(0.4%)**

In Table 8, we compared the processing equipment and Biomass facility to our benchmark costs obtained from historical data, cost proposals, and new research. The overall costs projected by NRWS are reasonable compared to benchmark data with a few clarifications:

- The MRF Sort Line / Baler- Our benchmark was from another facility that made recent sort line and baler improvements to increase its efficiency. While the cost appear to line up well (within 0.7%), we do not have necessary information to compare NRWS specific improvements to those of the benchmark.

- Screens – Pre-processing- Our benchmark database did not include a comparable piece of equipment near the price of $651,000 listed in Table 8. This could be transposition error from NRWS since it is the same cost and timing as the scheduled grinder purchase on the line above. For our benchmark, we used the figure provided by NRWS.
- Biomass Facility – Placer County is in the process of completing two Phoenix Energy 1 megawatt power plants. The cost for that facility was reported to be $12,500,000 as reported to the County Board of Supervisors on February 21, 2017.

Asset Lives:

Industry practice for asset lives are generally 8-10 years for rolling stock; 10 years for containers; 3-5 years for furniture, fixtures, and computers; and, 15-20 years for a MRF equipment and facility improvements. It is our understanding the City does not wish to have asset lives that extend beyond the length of the MOU which will end in 2031. For that reason, the asset lives on the depreciation schedules vary in order to be fully depreciated when the MOU ends in 2031.

All assets listed in the Exhibit A capital schedules are shown to be fully depreciated by the end of the MOU. Table 10 provides a summary of the asset lives by category.

Table 10: Capital Equipment Asset Lives

Type of Equipment	Asset Life	Comments
Route Vehicles	Life of MOU	Vehicles purchased or refurbished in the first year are depreciated over 14 years; those purchased or refurbished in the second year are depreciated over 13 years, and those in the third year are depreciated over 12 years.
Other Vehicles	10 Years / Life of MOU	Delivery trucks, pickup trucks, and shop trucks are depreciated either over 10 years or the length of the MOU.
Commercial and Roll-off Containers	10 years / Life of MOU	Depreciated over 10 years or the remaining life of the MOU, depending on year of purchase.
Residential Containers	Life of MOU	Depreciated over 14 years or the remaining life of the MOU, depending on year of purchase.

Type of Equipment	Asset Life	Comments
Other Assets	Useful Life	Other assets such as tools, computers, and facility repairs, are depreciated over the useful life of the asset, generally, 5-10 years.
Processing Equipment	Life of MOU	The MRF facility and improvements, equipment, and containers are all depreciated over the length of the MOU.
Biomass facility	Life of MOU	The Biomass facility is scheduled for the remaining life of the MOU from when it goes into operation, currently scheduled for 2019.
Interest Charges	10 Years / Life of MOU	NRWS projected interest charges at 10 years on collection and processing equipment and the life of the MOU for the Biomass facility

The asset live are generally non-conforming to industry standards; however, it does satisfy the goal of the City to avoid having assets that are not fully paid for at the end of the MOU. In addition, it is not uncommon for assets to exceed the industry standard life when properly maintained. NRWS has included costs starting in year 9 to rebuild and replace components such as engines and transmissions for the vehicles and screens for the MRF lines.

The projected capital costs, including capitalized repairs, for the collection equipment is $12,123,344 as shown in Table 7. Projected capitalized repair costs starting in year 9 are $1,370,000 and will be used to extend the life of the assets through the end of the MOU. This practice will save the City the depreciation cost of new equipment that potentially would have been purchased in the last years of the MOU and the potential cost to the City for stranded assets at the end of the MOU. The estimated cost savings during the term of this agreement is over $10,800,000 assuming the City maintains its goal of having assets fully depreciated at the end of the MOU.

Task 7: High-level Assessment and Risk / Benefit Analysis of the New Reconciliation Review Process

The key points of the reconciliation review process are summarized in Table 10 below. As noted, there are risks and benefits with the new process. The most significant concern is the mutual establishment of the baseline activity with a clear mechanism in place to track changes from the baseline.

Table 10: Key Points of Reconciliation Review

Cost Review/ Reconciliation Review Points	Risk to City	Reward to City

"Backward" Look vs "Forward" Look – *Current Method:* Rates were set using programs and customer base changes (growth) provided by the City and cost projections for such changes provided by NRWS. Both parties agree to future calculations and the next year's payment to NRWS is determined. There was no "true up" mechanism to adjust projections to actual (statistics or costs). *Proposed Method:* Growth "projections" will no longer be used in NRWS' compensation calculations. Rather, adjustments will be made based on **actual** change (increase or decrease) in the number of customers for the **most recent full year** of data available.	• Establishment of baseline customer activity
	  o Definition of "number of customers" is outstanding
	  ▪ Customer accounts?
	  ▪ Subscription volume?
	  ▪ Other?
	  o Support for baseline customer activity and ability to reproduce the support on an annual basis may not be available
	• During a recessionary period, City will revise NRWS compensation based on activity reduction which is usually less than the reduction in billed revenue.
	• Establishment of threshold metrics could be complex and difficult to explain to the council/ratepayers.
	• Threshold metrics may not be focused on maintaining route efficiencies, etc.
	• Inability to easily identify "new" program costs from existing programs when reviewing "actual" results.
		• Adjustments made on "actual" data rather than projections
		• Minimizes uncertainty and "guesswork" from using projections
		• Eliminates overpayment to NRWS for growth or programs that did not occur
		• City can monitor growth during the year and is able to project the rate impact for the next rate setting process
		• During a period of growth; City's cash flow benefits from receiving the revenue during the year and paying NRWS at the end of the year

Cost Review/ Reconciliation Review Points	Risk to City	Reward to City
Ineligible Items – 1)Any costs associated with purchase, operation, repair, maintenance, retrofit of collection vehicles and shop/MDF vehicles/rolling stock and equipment for compliance with BAAQMD regulations; **AND** 2) any costs related to construction, operation, maintenance, retrofits to CASP, Storm Water System and Storm Water Improvements.	1) – BAAQMD Compliance Limits risk to requirements driven by the BAAQMD but not other agencies such as CARB. 2) CASP, Storm Water System and Storm Water improvements Final actual costs for operation and maintenance are unknown at time the MOU was signed and could be substantially higher than expected.	1) – BAAQMD Compliance Risk of future BAAQMD requirements is with NRWS 2) CASP, Storm Water System and Storm Water improvements Known and expected costs are included in the initial projections but are subject to revisions once final design is approved. Once set, NRWS will be responsible for any unknown or unanticipated costs through the duration of the agreement.

* * * *

We are pleased to have had the opportunity to assist the City of Napa with this cost-of-service review, and would like to thank you for your support during the project.

If you have any questions, please call Marva Sheehan directly at (925) 977-6961.

Very truly yours,
HF&H CONSULTANTS, LLC

Marva M. Sheehan, CPA
Vice President

Scott Holt
Project Manager

Attachment 1 – Exhibit A to Amended City – NRWS MOU

NAPA RECYCLING & WASTE SERVICES, LLC
CITY OF NAPA CONTRACT - COMPENSATION

Category	Table		Year ==> Current	1 2018	2 2019	3 2020	4 2021	5 2022	6 2023	7 2024	8 2025	9 2026	10 2027	11 2028	12 2029	13 2030	14 2031
Collection Costs																	
Labor	1		3,470,762	3,626,946	3,753,890	3,885,276	4,021,260	4,162,004									
Other	1		3,533,989	2,387,535	2,447,223	2,508,404	2,571,114	2,635,391									
Collection Costs - Food Waste																	
Labor	5		124,835	130,452	135,018	139,744	144,635	149,697									
Other	5		24,338	25,335	25,969	26,618	27,283	27,966									
Collection Costs - Recycle More																	
Labor	6				-	-	-	-									
Other	6		5,490	5,715	5,858	6,004	6,155	6,308									
Total - Collection Costs			7,159,413	6,175,984	6,367,957	6,566,045	6,770,447	6,981,367	-	-	-	-	-	-	-	-	-
Processing Costs																	
Labor	4		1,611,720	1,684,247	1,743,196	1,830,356	1,921,874	2,017,967									
Other	4		1,400,861	973,578	997,918	1,022,866	1,048,437	1,074,648									
Processing Costs - Additional Sorters																	
Labor	7		190,189	198,748	205,704	212,904	220,355	228,068									
Other	7		7,040	7,329	7,512	7,700	7,892	8,090									
Processing Costs - Bio-mass																	
Labor	8				1,384,318	1,432,769	1,482,916	1,534,818									
Other	8				742,556	761,120	780,148	799,652									
Total - Processing Costs			3,209,811	2,863,902	5,081,204	5,267,714	5,461,622	5,663,242	-	-	-	-	-	-	-	-	-
Less: Shared costs	1		(125,000)	(125,000)	(129,375)	(135,844)	(142,636)	(149,768)									
Total - Operating Costs			10,244,224	8,914,886	11,319,786	11,697,915	12,089,433	12,494,841	-	-	-	-	-	-	-	-	-
Capital Costs																	
Collection	2		-	774,186	1,103,036	1,307,671	1,300,020	1,297,390	1,285,136	1,284,221	1,287,856	1,297,959	1,590,977	1,517,030	1,552,344	1,669,418	1,911,491
Collection - Food waste	2-1		51,465	51,465	51,465	44,092	50,895	50,895	50,895	50,895	148,560	142,501	142,501	142,501	9,320	9,320	-
Collection - Recycle More	2-2		-	-	-	-	-	-	-	-	39,316	39,316	39,316	39,316	-	-	-
Total Capital Costs - Collection			51,465	825,651	1,154,501	1,351,763	1,350,915	1,348,285	1,336,030	1,335,116	1,475,732	1,479,776	1,772,795	1,698,847	1,561,664	1,678,738	1,911,491
Processing	3		-	601,181	584,305	566,889	548,915	530,366	511,224	654,219	633,831	637,191	693,476	671,068	671,068	671,068	646,668
Processing - Bio-mass	3-1			-	1,603,800	1,568,131	1,530,679	1,491,354	1,450,063	1,406,708	1,361,184	1,313,385	1,263,195	1,210,496	1,155,162	1,097,062	1,036,056
Total Capital Costs - Processing			-	601,181	2,188,105	2,135,020	2,079,594	2,021,720	1,961,287	2,060,927	1,995,015	1,950,576	1,956,671	1,881,564	1,826,230	1,768,130	1,682,724
Total - Capital Costs			51,465	1,426,832	3,342,606	3,486,783	3,430,509	3,370,005	3,297,317	3,396,043	3,470,747	3,430,352	3,729,466	3,580,411	3,387,894	3,446,868	3,594,215
Reimbursed Costs (Based on actual)				1,014,072	1,014,072	1,014,072	1,014,072	1,014,072									
Total Costs			10,295,688	11,355,790	15,676,464	16,198,770	16,534,014	16,878,918	3,297,317	3,396,043	3,470,747	3,430,352	3,729,466	3,580,411	3,387,894	3,446,868	3,594,215
Profit		3%	308,871	340,674	470,294	485,963	496,020	506,368	98,920	101,881	104,122	102,911	111,884	107,412	101,637	103,406	107,826
Total Compensation - Baseline			10,604,559	11,696,464	16,146,758	16,684,733	17,030,034	17,385,286	3,396,237	3,497,924	3,574,869	3,533,263	3,841,350	3,687,823	3,489,531	3,550,274	3,702,041
Material Sales - Clean MRF & Others			1,435,000	1,435,000	1,435,000	1,435,000	1,435,000	1,435,000									
Material Sales - Compost (current feedstock)			78,000	260,000	260,000	260,000	260,000	260,000									
Material Sales - Compost (new feedstock)				200,000	200,000	200,000	200,000	200,000									
Material Sales - Bio-char				165,120													
Over baseline processing			1,400,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000									
Over baseline processing (new feedstock)				750,000	750,000	750,000	750,000	750,000									
Proposed cost savings				(198,667)	(208,600)	(219,030)	(229,982)	(241,481)									
Total Compensation			13,517,559	15,807,917	20,083,158	20,610,703	20,945,053	21,288,806	3,396,237	3,497,924	3,574,869	3,533,263	3,841,350	3,687,823	3,489,531	3,550,274	3,702,041
Change				16.9%	27.0%	2.6%	1.6%	1.6%									

REIMBURSED COSTS

Table 1	
Fuel	505,412
Table 4	
Electricity	348,488
Fuel	128,780
Table 5	
Fuel	20,187
Table 6	
Fuel	11,204
GRAND TOTAL - Reimbursed Costs	1,014,072

NAPA RECYCLING & WASTE SERVICES, LLC
CITY OF NAPA CONTRACT - COMPENSATION

Category	Table	Year ==> Current	1 2018	2 2019	3 2020	4 2021	5 2022	6 2023	7 2024	8 2025	9 2026	10 2027	11 2028	12 2029	13 2030	14 2031
NEW CITY REVENUE SOURCES:																
Tip fees (new feedstock - 30,000 tons @ $32)			960,000													
Bio-char			550,400													
C&D Hauls, exclusive			140,000													
Total - New revenue sources			1,650,400													
PROPOSED COST SAVINGS:																
Change to Quarterly Billing			106,667													
Reduce or eliminate performance bond			45,000													
Eliminate Yellow Pages Ad			22,000													
Reduce or eliminate paper billing inserts			25,000													
Total - cost savings			198,667													
NEW COLLECTIONS COSTS:																
In-town office			96,693													
Upgrade to cloud version of Soft-Pak			25,148													
Change to base scope of work			75,456													
Subtotal - Change in processing costs			197,297													
NEW PROCESSING COSTS:																
Pre-processing			224,575													
CASP			129,001													
Stormwater			41,850													
ELMINATION OF PROGRAM COSTS:																
eWaste			-													
Subtotal - Change in processing costs			395,426													
GRAND TOTAL - Change in operating costs			592,723													

NAPA RECYCLING & WASTE SERVICES, LLC
CITY OF NAPA CONTRACT - COMPENSATION

Category	Table	Year ==> Current	1 2018	2 2019	3 2020	4 2021	5 2022	6 2023	7 2024	8 2025	9 2026	10 2027	11 2028	12 2029	13 2030	14 2031

ASSUMPTIONS:

1) Labor costs increase 3.5% and Operating costs increase 2.5% per year for years 2018 thru 2022.
then use Bay Area CPI for Labor, Fuel, and other costs

Labor	3.5%
Operating	2.5%

RECONCILIATION TO TOTAL COSTS INCLUDED IN TABLES:

Table 1	9,922,674
Table 1 - Reimbursed Costs	982,680
Table 5	207,252
Table 5 - Reimbursed Costs	20,187
Table 6	5,715
Table 6 - Reimbursed Costs	11,204
Table 7	206,077
Table 8	
Table 3-1	
TOTAL COSTS BEFORE PROFITS	11,355,790
	-

ATTACHMENT 2

Instructions: Summarize all proposed costs on this table. Columns may be added as needed.

TABLE 1. PROPOSED OPERATING & CAPITAL COSTS 2018$

COST CATEGORIES	Current Annual Costs (Feb-Jan17)	Collection (base scope of work)	SoftPak	Processing (Baseline Throughput)	Pre-processing (Baseline Throughput)	CASP (Baseline Throughput)	Stormwater	Adjustments	Proposed Total	Current Index Name	Current Index	Current Annual Costs	New Index
COLLECTION													
Operating Expenses													
Labor	2,685,774								2,685,774	CPI	1.045	2,806,633	CPI-Labor
Supplies	186,235								186,235	PPI	1.041	193,870	CPI-Other
Vehicle O&M									-				
Oil & Other Fluids	44,013								44,013	PPI	1.041	45,818	CPI-Other
Vehicle Insurance	93,130	15,620							108,750	PPI	1.041	113,209	CPI-Other
Vehicle Repair & Maintenance	989,996								989,996	PPI	1.041	1,030,585	CPI-Other
Total	**3,999,147**	**15,620**	**-**	**-**	**-**	**-**	**-**		**4,014,767**			**4,190,116**	
G & A Expenses													
Customer Service													
Customer Service Labor	218,943								218,943	CPI	1.045	228,796	CPI-Labor
Billing	189,807								189,807	PPI	1.041	197,589	CPI-Other
Administration													
Admin Services	566,045								566,045	CPI	1.045	591,517	CPI-Labor
General Insurance	556,701	9,593							566,294	PPI	1.041	589,512	CPI-Other
Office Expenses	528,103	50,243	25,148						603,494	PPI	1.041	628,237	CPI-Other
Public Information & Education	111,071								111,071	PPI	1.041	115,625	CPI-Other
Total	**2,170,670**	**59,836**	**25,148**	**-**	**-**	**-**	**-**		**2,255,654**			**2,351,276**	
Vehicle & Equipment Capital	-	**774,186**							774,186				
Overhead, Tax	241,245								241,245	None	1.025	247,276	CPI-Other
Total	**241,245**	**774,186**	**-**	**-**	**-**	**-**	**-**		**1,015,431**			**247,276**	
Subtotal Collection Costs	**6,411,062**	**849,642**	**25,148**	**-**	**-**	**-**	**-**		**7,285,852**			**6,788,667**	
PROCESSING													
O&M													
Labor	1,503,565			**-**	89,228	18,928	**-**		1,611,720			1,684,247	
Operations	647,963			-	135,348	110,073	41,850	-	935,234			973,578	
Contingency													
Total	**2,151,528**	**-**	**-**	**-**	**224,575**	**129,001**	**41,850**	**-**	**2,546,954**			**2,657,826**	
Capital													
Capital Improvements													
Equipment	-			588,891			12,290		601,181			601,181	
Other Start Up Costs	-												
Contingency													
Total	**-**	**-**	**-**	**588,891**	**-**	**-**	**12,290**	**-**	**601,181**			**601,181**	
Subtotal Baseline Processing Expenses	**2,151,528**	**-**	**-**	**588,891**	**224,575**	**129,001**	**54,140**	**-**	**3,148,135**			**3,259,007**	
Total Baseline Expenses	**8,562,590**	**849,642**	**25,148**	**588,891**	**224,575**	**129,001**	**54,140**	**-**	**10,433,986**			**10,047,674**	
Less NCRWS (County) Discount	(125,000)								(125,000)			(125,000)	
Net Baseline Expenses	8,437,590	849,642	25,148	588,891	224,575	129,001	54,140	-	10,308,986			9,922,674	
Costs - Reimbursed at Current Costs													
Fuel	493,085								493,085	Fuel		505,412	Actual plus 3%
Fuel - Table 4									125,639			348,488	
Electricity - Table 4									339,988			128,780	
									958,712.42			982,680	
												10,905,354	

TABLE 2. PROPOSED COLLECTION CAPITAL COSTS 2018$

Schedule of Assets	Cost	Amortized Annual Cost	Year Purchased	Year Replacement or Refurbished	Year 1 (2018)	Year 2 (2019)	Year 3 (2020)	Year 4 (2021)	Year 5 (2022)	Year 6 (2023)	Year 7 (2024)	Year 8 (2025)	Year 9 (2026)
Residential: Number & Type of Vehicles													
29cy Sideloader / CNG / 2	$ 424,199	$ 848,398	2018	2032	$ 60,600	$ 60,600	$ 60,600	$ 60,600	$ 60,600	$ 60,600	$ 60,600	$ 60,600	$ 60,600
Refurbished Sideloader / CNG / 4	$ 239,487	$ 957,946	2018	2032	$ 68,425	$ 68,425	$ 68,425	$ 68,425	$ 68,425	$ 68,425	$ 68,425	$ 68,425	$ 68,425
29cy Sideloader / CNG / 4	$ 439,046	$ 1,756,183	2019	2033		$ 135,091	$ 135,091	$ 135,091	$ 135,091	$ 135,091	$ 135,091	$ 135,091	$ 135,091
29cy Sideloader / CNG / 3	$ 454,412	$ 1,363,237	2020	2034			$ 113,603	$ 113,603	$ 113,603	$ 113,603	$ 113,603	$ 113,603	$ 113,603
Engines / Transmissions	$ 390,000	$ 390,000	2026										
Floors	$ 195,000	$ 195,000	2026										
Hydraulic systems	$ 130,000	$ 130,000	2026										
Cart Delivery / CNG / 1	$ 77,623	$ 77,623	2018	2032	$ 7,762	$ 7,762	$ 7,762	$ 7,762	$ 7,762	$ 7,762	$ 7,762	$ 7,762	$ 7,762
Route Sup / Unleaded / 1	$ 45,717	$ 45,717	2018	2032	$ 4,572	$ 4,572	$ 4,572	$ 4,572	$ 4,572	$ 4,572	$ 4,572	$ 4,572	$ 4,572
Shop / Unleaded / 1	$ 82,574	$ 82,574	2018	2032	$ 8,257	$ 8,257	$ 8,257	$ 8,257	$ 8,257	$ 8,257	$ 8,257	$ 8,257	$ 8,257
Manager / Unleaded / .50	$ 50,000	$ 25,000	2018	2032	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ 2,500
Continue as needed													
Residential Subtotal	$ 2,528,058	$ 5,871,679			$ 152,116	$ 287,207	$ 400,810	$ 400,810	$ 400,810	$ 400,810	$ 400,810	$ 400,810	$ 400,810
Commercial: Number of & Type of Vehicles													
40cy Frontloader w/ Curotto Can / CNG / 1	$ 506,417	$ 506,417	2018	2032	$ 36,173	$ 36,173	$ 36,173	$ 36,173	$ 36,173	$ 36,173	$ 36,173	$ 36,173	$ 36,173
Refurbished Frontloader / CNG / 1	$ 200,000	$ 200,000	2018	2032	$ 14,286	$ 14,286	$ 14,286	$ 14,286	$ 14,286	$ 14,286	$ 14,286	$ 14,286	$ 14,286
40cy Frontloader w/ Curotto Can / CNG / 2	$ 506,417	$ 1,012,834	2018	2032		$ 77,910	$ 77,910	$ 77,910	$ 77,910	$ 77,910	$ 77,910	$ 77,910	$ 77,910
Refurbished Frontloader / CNG / 2	$ 200,000	$ 400,000	2018	2032		$ 30,769	$ 30,769	$ 30,769	$ 30,769	$ 30,769	$ 30,769	$ 30,769	$ 30,769
40cy Frontloader w/ Curotto Can / CNG / 1	$ 524,142	$ 524,142	2019	2033			$ 43,678	$ 43,678	$ 43,678	$ 43,678	$ 43,678	$ 43,678	$ 43,678
40cy Frontloader / CNG / 1	$ 468,510	$ 468,510	2019	2033			$ 39,043	$ 39,043	$ 39,043	$ 39,043	$ 39,043	$ 39,043	$ 39,043
Refurbished Frontloader / CNG / 1	$ 200,000	$ 200,000	2019	2033			$ 16,667	$ 16,667	$ 16,667	$ 16,667	$ 16,667	$ 16,667	$ 16,667
Engines / Transmissions	$ 270,000	$ 270,000	2026										
Floors	$ 135,000	$ 135,000	2026										
Hydraulic systems	$ 90,000	$ 90,000	2026										
Bin Delivery / Diesel / 1	$ 65,710	$ 65,710	2018	2032	$ 4,694	$ 4,694	$ 4,694	$ 4,694	$ 4,694	$ 4,694	$ 4,694	$ 4,694	$ 4,694
Route Sup / Unleaded / .75	$ 45,717	$ 34,288	2018	2032	$ 2,449	$ 2,449	$ 2,449	$ 2,449	$ 2,449	$ 2,449	$ 2,449	$ 2,449	$ 2,449
Shop / Unleaded / .75	$ 82,574	$ 61,931	2018	2032	$ 4,424	$ 4,424	$ 4,424	$ 4,424	$ 4,424	$ 4,424	$ 4,424	$ 4,424	$ 4,424
Manager / Unleaded / .35	$ 50,000	$ 17,500	2018	2032	$ 1,250	$ 1,250	$ 1,250	$ 1,250	$ 1,250	$ 1,250	$ 1,250	$ 1,250	$ 1,250
Continue as needed													
Commercial Subtotal	$ 3,344,487	$ 3,986,332			$ 63,275	$ 171,954	$ 271,342	$ 271,342	$ 271,342	$ 271,342	$ 271,342	$ 271,342	$ 271,342
Roll Off: Number & Type of Vehicles													
Rolloff 4-axle / CNG / 2	$ 338,224	$ 676,448	2018	2032	$ 48,318	$ 48,318	$ 48,318	$ 48,318	$ 48,318	$ 48,318	$ 48,318	$ 48,318	$ 48,318
Rolloff 4-axle / CNG / 2	$ 349,662	$ 699,324	2019	2033		$ 53,794	$ 53,794	$ 53,794	$ 53,794	$ 53,794	$ 53,794	$ 53,794	$ 53,794
Engines / Transmissions	$ 120,000	$ 120,000	2026										
Hydraulic systems	$ 40,000	$ 40,000	2026										
Route Sup / Unleaded / .25	$ 45,717	$ 11,429	2018	2032	$ 816	$ 816	$ 816	$ 816	$ 816	$ 816	$ 816	$ 816	$ 816
Shop / Unleaded / .25	$ 82,574	$ 20,644	2018	2032	$ 1,475	$ 1,475	$ 1,475	$ 1,475	$ 1,475	$ 1,475	$ 1,475	$ 1,475	$ 1,475
Manager / Unleaded / .15	$ 50,000	$ 7,500	2018	2032	$ 536	$ 536	$ 536	$ 536	$ 536	$ 536	$ 536	$ 536	$ 536
Continue as needed													
Roll Off Subtotal	$ 1,026,177	$ 1,575,345			$ 51,144	$ 104,939	$ 104,939	$ 104,939	$ 104,939	$ 104,939	$ 104,939	$ 104,939	$ 104,939
All Vehicle Subtotals (Sum Residential, Commercial and Roll Off):		$ 11,433,356			$ 266,535	$ 564,100	$ 777,091	$ 777,091	$ 777,091	$ 777,091	$ 777,091	$ 777,091	$ 777,091
# of Resident. Recyc. Containers													
# of Resident. Yardwaste. Containers													

Schedule of Assets	Cost	Amortized Annual Cost	Year Purchased	Year Replacement or Refurbished	Year 1 (2018)	Year 2 (2019)	Year 3 (2020)	Year 4 (2021)	Year 5 (2022)	Year 6 (2023)	Year 7 (2024)	Year 8 (2025)	Year 9 (2026)
# of Resident. MSW. Containers													
Carts		$ 250,000	2018		$ 17,857	$ 17,857	$ 17,857	$ 17,857	$ 17,857	$ 17,857	$ 17,857	$ 17,857	$ 17,857
Carts		$ 250,000	2019			$ 19,231	$ 19,231	$ 19,231	$ 19,231	$ 19,231	$ 19,231	$ 19,231	$ 19,231
Carts		$ 250,000	2020				$ 20,833	$ 20,833	$ 20,833	$ 20,833	$ 20,833	$ 20,833	$ 20,833
Carts		$ 250,000	2021					$ 22,727	$ 22,727	$ 22,727	$ 22,727	$ 22,727	$ 22,727
Carts		$ 250,000	2022						$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000
Carts		$ 250,000	2023							$ 27,778	$ 27,778	$ 27,778	$ 27,778
Carts		$ 250,000	2024								$ 31,250	$ 31,250	$ 31,250
Carts		$ 250,000	2025									$ 35,714	$ 35,714
Carts		$ 250,000	2026										$ 41,667
Carts		$ 250,000	2027										
Carts		$ 250,000	2028										
Carts		$ 250,000	2029										
Carts		$ 250,000	2030										
Carts		$ 250,000	2031										
# of Commercial Bins:													
1.5 CY 13	$ 489	$ 6,354	2018		$ 635	$ 635	$ 635	$ 635	$ 635	$ 635	$ 635	$ 635	$ 635
2 CY 78	$ 539	$ 42,015	2018		$ 4,202	$ 4,202	$ 4,202	$ 4,202	$ 4,202	$ 4,202	$ 4,202	$ 4,202	$ 4,202
3 CY 52	$ 619	$ 32,197	2018		$ 3,220	$ 3,220	$ 3,220	$ 3,220	$ 3,220	$ 3,220	$ 3,220	$ 3,220	$ 3,220
4 CY 76	$ 730	$ 55,502	2018		$ 5,550	$ 5,550	$ 5,550	$ 5,550	$ 5,550	$ 5,550	$ 5,550	$ 5,550	$ 5,550
6 CY 47	$ 877	$ 41,199	2018		$ 4,120	$ 4,120	$ 4,120	$ 4,120	$ 4,120	$ 4,120	$ 4,120	$ 4,120	$ 4,120
1.5 CY 6	$ 489	$ 2,933	2019			$ 293	$ 293	$ 293	$ 293	$ 293	$ 293	$ 293	$ 293
2 CY 35	$ 539	$ 18,853	2019			$ 1,885	$ 1,885	$ 1,885	$ 1,885	$ 1,885	$ 1,885	$ 1,885	$ 1,885
3 CY 23	$ 619	$ 14,241	2019			$ 1,424	$ 1,424	$ 1,424	$ 1,424	$ 1,424	$ 1,424	$ 1,424	$ 1,424
4 CY 34	$ 730	$ 24,830	2019			$ 2,483	$ 2,483	$ 2,483	$ 2,483	$ 2,483	$ 2,483	$ 2,483	$ 2,483
6 CY 21	$ 877	$ 18,408	2019			$ 1,841	$ 1,841	$ 1,841	$ 1,841	$ 1,841	$ 1,841	$ 1,841	$ 1,841
1.5 CY 6	$ 489	$ 2,933	2020				$ 293	$ 293	$ 293	$ 293	$ 293	$ 293	$ 293
2 CY 35	$ 539	$ 18,853	2020				$ 1,885	$ 1,885	$ 1,885	$ 1,885	$ 1,885	$ 1,885	$ 1,885
3 CY 23	$ 619	$ 14,241	2020				$ 1,424	$ 1,424	$ 1,424	$ 1,424	$ 1,424	$ 1,424	$ 1,424
4 CY 34	$ 730	$ 24,830	2020				$ 2,483	$ 2,483	$ 2,483	$ 2,483	$ 2,483	$ 2,483	$ 2,483
6 CY 21	$ 877	$ 18,408	2020				$ 1,841	$ 1,841	$ 1,841	$ 1,841	$ 1,841	$ 1,841	$ 1,841
1.5 CY 6	$ 489	$ 2,933	2021					$ 293	$ 293	$ 293	$ 293	$ 293	$ 293
2 CY 35	$ 539	$ 18,853	2021					$ 1,885	$ 1,885	$ 1,885	$ 1,885	$ 1,885	$ 1,885
3 CY 23	$ 619	$ 14,241	2021					$ 1,424	$ 1,424	$ 1,424	$ 1,424	$ 1,424	$ 1,424
4 CY 34	$ 730	$ 24,830	2021					$ 2,483	$ 2,483	$ 2,483	$ 2,483	$ 2,483	$ 2,483
6 CY 21	$ 877	$ 18,408	2021					$ 1,841	$ 1,841	$ 1,841	$ 1,841	$ 1,841	$ 1,841
1.5 CY 6	$ 489	$ 2,935	2022						$ 294	$ 294	$ 294	$ 294	$ 294
2 CY 35	$ 539	$ 18,872	2022						$ 1,887	$ 1,887	$ 1,887	$ 1,887	$ 1,887
3 CY 23	$ 620	$ 14,255	2022						$ 1,426	$ 1,426	$ 1,426	$ 1,426	$ 1,426
4 CY 34	$ 731	$ 24,855	2022						$ 2,486	$ 2,486	$ 2,486	$ 2,486	$ 2,486
6 CY 21	$ 877	$ 18,427	2022						$ 1,843	$ 1,843	$ 1,843	$ 1,843	$ 1,843
1.5 CY 6	$ 490	$ 2,938	2023							$ 326	$ 326	$ 326	$ 326
2 CY 35	$ 540	$ 18,890	2023							$ 2,099	$ 2,099	$ 2,099	$ 2,099
3 CY 23	$ 620	$ 14,269	2023							$ 1,585	$ 1,585	$ 1,585	$ 1,585
4 CY 34	$ 732	$ 24,880	2023							$ 2,764	$ 2,764	$ 2,764	$ 2,764
6 CY 21	$ 878	$ 18,445	2023							$ 2,049	$ 2,049	$ 2,049	$ 2,049
1.5 CY 6	$ 490	$ 2,941	2024								$ 368	$ 368	$ 368
2 CY 35	$ 540	$ 18,909	2024								$ 2,364	$ 2,364	$ 2,364
3 CY 23	$ 621	$ 14,284	2024								$ 1,786	$ 1,786	$ 1,786
4 CY 34	$ 732	$ 24,905	2024								$ 3,113	$ 3,113	$ 3,113
6 CY 21	$ 879	$ 18,464	2024								$ 2,308	$ 2,308	$ 2,308
1.5 CY 6	$ 491	$ 2,944	2025									$ 421	$ 421
2 CY 35	$ 541	$ 18,928	2025									$ 2,704	$ 2,704
3 CY 23	$ 622	$ 14,298	2025									$ 2,043	$ 2,043
4 CY 34	$ 733	$ 24,930	2025									$ 3,561	$ 3,561
6 CY 21	$ 880	$ 18,482	2025									$ 2,640	$ 2,640
1.5 CY 6	$ 491	$ 2,947	2026										$ 491
2 CY 35	$ 541	$ 18,947	2026										$ 3,158

Schedule of Assets	Cost	Amortized Annual Cost	Year Purchased	Year Replacement or Refurbished	Year 1 (2018)	Year 2 (2019)	Year 3 (2020)	Year 4 (2021)	Year 5 (2022)	Year 6 (2023)	Year 7 (2024)	Year 8 (2025)	Year 9 (2026)
3 CY 23	$ 622	$ 14,312	2026										$ 2,385
4 CY 34	$ 734	$ 24,954	2026										$ 4,159
6 CY 21	$ 881	$ 18,500	2026										$ 3,083
1.5 CY 5	$ 492	$ 2,458	2027										
2 CY 34	$ 542	$ 18,424	2027										
3 CY 22	$ 623	$ 13,704	2027										
4 CY 33	$ 735	$ 24,245	2027										
6 CY 20	$ 882	$ 17,637	2027										
# of Roll-Off Boxes:													
10 CY 15	$ 3,070	$ 46,050	2018		$ 4,605	$ 4,605	$ 4,605	$ 4,605	$ 4,605	$ 4,605	$ 4,605	$ 4,605	$ 4,605
20 CY 20	$ 3,919	$ 78,380	2018		$ 7,838	$ 7,838	$ 7,838	$ 7,838	$ 7,838	$ 7,838	$ 7,838	$ 7,838	$ 7,838
20 CY split 5	$ 4,311	$ 21,555	2018		$ 2,156	$ 2,156	$ 2,156	$ 2,156	$ 2,156	$ 2,156	$ 2,156	$ 2,156	$ 2,156
20 CY round bottom 20	$ 6,590	$ 131,800	2018		$ 13,180	$ 13,180	$ 13,180	$ 13,180	$ 13,180	$ 13,180	$ 13,180	$ 13,180	$ 13,180
30 CY 20	$ 4,584	$ 91,680	2018		$ 9,168	$ 9,168	$ 9,168	$ 9,168	$ 9,168	$ 9,168	$ 9,168	$ 9,168	$ 9,168
40 CY 5	$ 5,499	$ 27,495	2018		$ 2,750	$ 2,750	$ 2,750	$ 2,750	$ 2,750	$ 2,750	$ 2,750	$ 2,750	$ 2,750
Total Roll-Off Boxes 85													
10 CY 15	$ 3,101	$ 46,511	2019			$ 4,651	$ 4,651	$ 4,651	$ 4,651	$ 4,651	$ 4,651	$ 4,651	$ 4,651
20 CY 20	$ 3,958	$ 79,164	2019			$ 7,916	$ 7,916	$ 7,916	$ 7,916	$ 7,916	$ 7,916	$ 7,916	$ 7,916
20 CY split 5	$ 4,354	$ 21,771	2019			$ 2,177	$ 2,177	$ 2,177	$ 2,177	$ 2,177	$ 2,177	$ 2,177	$ 2,177
20 CY round bottom 20	$ 6,656	$ 133,118	2019			$ 13,312	$ 13,312	$ 13,312	$ 13,312	$ 13,312	$ 13,312	$ 13,312	$ 13,312
30 CY 20	$ 4,630	$ 92,597	2019			$ 9,260	$ 9,260	$ 9,260	$ 9,260	$ 9,260	$ 9,260	$ 9,260	$ 9,260
40 CY 5	$ 5,554	$ 27,770	2019			$ 2,777	$ 2,777	$ 2,777	$ 2,777	$ 2,777	$ 2,777	$ 2,777	$ 2,777
Total Roll-Off Boxes 85													
Shop & Wash Equipment:													
Compressors	$ 6,029	$ 6,029	2018		$ 603	$ 603	$ 603	$ 603	$ 603	$ 603	$ 603	$ 603	$ 603
Roll up doors	$ 8,424	$ 8,424	2018		$ 842	$ 842	$ 842	$ 842	$ 842	$ 842	$ 842	$ 842	$ 842
Welders	$ 2,681	$ 2,681	2018		$ 268	$ 268	$ 268	$ 268	$ 268	$ 268	$ 268	$ 268	$ 268
Body lift jacks	$ 4,536	$ 4,536	2018		$ 454	$ 454	$ 454	$ 454	$ 454	$ 454	$ 454	$ 454	$ 454
Air pumps	$ 6,912	$ 6,912	2018		$ 691	$ 691	$ 691	$ 691	$ 691	$ 691	$ 691	$ 691	$ 691
Battery load tester	$ 2,268	$ 2,268	2018		$ 227	$ 227	$ 227	$ 227	$ 227	$ 227	$ 227	$ 227	$ 227
Air impact wrenches 1"	$ 1,771	$ 1,771	2018		$ 177	$ 177	$ 177	$ 177	$ 177	$ 177	$ 177	$ 177	$ 177
Roll up doors	$ 9,048	$ 9,048	2023						$ 905	$ 905	$ 905	$ 905	$ 905
Welders	$ 11,600	$ 11,600	2023						$ 1,160	$ 1,160	$ 1,160	$ 1,160	$ 1,160
10 ton jacks	$ 3,306	$ 3,306	2023						$ 331	$ 331	$ 331	$ 331	$ 331
Wash Equipment	$ 15,700	$ 15,700	2023						$ 1,570	$ 1,570	$ 1,570	$ 1,570	$ 1,570
Computers:													
Laptops	$ 4,536	$ 4,536	2018		$ 907	$ 907	$ 907	$ 907	$ 907				
Workstations	$ 15,120	$ 15,120	2018		$ 3,024	$ 3,024	$ 3,024	$ 3,024	$ 3,024				
Laptops	$ 5,670	$ 5,670	2023							$ 1,134	$ 1,134	$ 1,134	$ 1,134
Workstations	$ 18,900	$ 18,900	2023							$ 3,780	$ 3,780	$ 3,780	$ 3,780
Software:													
Office licenses	$ 34,590	$ 34,590	2018		$ 6,918	$ 6,918	$ 6,918	$ 6,918	$ 6,918				
Server licenses	$ 7,854	$ 7,854	2018		$ 1,571	$ 1,571	$ 1,571	$ 1,571	$ 1,571				
Exchange licenses	$ 2,781	$ 2,781	2018		$ 556	$ 556	$ 556	$ 556	$ 556				
Interest		$ 2,396,724			$ 416,133	$ 380,168	$ 343,052	$ 304,748	$ 265,218	$ 224,423	$ 182,321	$ 138,872	$ 94,032
GRAND TOTAL Assets		$ 19,178,736			$ 774,186	$ 1,103,036	$ 1,307,671	$ 1,300,020	$ 1,297,390	$ 1,285,136	$ 1,284,221	$ 1,287,856	$ 1,297,959
Total Annual Cost													
		Foots											

Schedule of Assets	Year 10 (2027)	Year 11 (2028)	Year 12 (2029)	Year 13 (2030)	Year 14 (2031)
Residential: Number & Type of Vehicles					
29cy Sideloader / CNG / 2	$ 60,600	$ 60,600	$ 60,600	$ 60,600	$ 60,600
Refurbished Sideloader / CNG / 4	$ 68,425	$ 68,425	$ 68,425	$ 68,425	$ 68,425
29cy Sideloader / CNG / 4	$ 135,091	$ 135,091	$ 135,091	$ 135,091	$ 135,091
29cy Sideloader / CNG / 3	$ 113,603	$ 113,603	$ 113,603	$ 113,603	$ 113,603
Engines / Transmissions	$ 78,000	$ 78,000	$ 78,000	$ 78,000	$ 78,000
Floors	$ 39,000	$ 39,000	$ 39,000	$ 39,000	$ 39,000
Hydraulic systems	$ 26,000	$ 26,000	$ 26,000	$ 26,000	$ 26,000
Cart Delivery / CNG / 1	$ 7,762				
Route Sup / Unleaded / 1	$ 4,572				
Shop / Unleaded / 1	$ 8,257				
Manager / Unleaded / .50	$ 2,500				
Continue as needed					
Residential Subtotal	$ 543,810	$ 520,719	$ 520,719	$ 520,719	$ 520,719
Commercial: Number of & Type of Vehicles					
40cy Frontloader w/ Curotto Can / CNG / 1	$ 36,173	$ 36,173	$ 36,173	$ 36,173	$ 36,173
Refurbished Frontloader / CNG / 1	$ 14,286	$ 14,286	$ 14,286	$ 14,286	$ 14,286
40cy Frontloader w/ Curotto Can / CNG / 2	$ 77,910	$ 77,910	$ 77,910	$ 77,910	$ 77,910
Refurbished Frontloader / CNG / 2	$ 30,769	$ 30,769	$ 30,769	$ 30,769	$ 30,769
40cy Frontloader w/ Curotto Can / CNG / 1	$ 43,678	$ 43,678	$ 43,678	$ 43,678	$ 43,678
40cy Frontloader / CNG / 1	$ 39,043	$ 39,043	$ 39,043	$ 39,043	$ 39,043
Refurbished Frontloader / CNG / 1	$ 16,667	$ 16,667	$ 16,667	$ 16,667	$ 16,667
Engines / Transmissions	$ 54,000	$ 54,000	$ 54,000	$ 54,000	$ 54,000
Floors	$ 27,000	$ 27,000	$ 27,000	$ 27,000	$ 27,000
Hydraulic systems	$ 18,000	$ 18,000	$ 18,000	$ 18,000	$ 18,000
Bin Delivery / Diesel / 1	$ 4,694	$ 4,694	$ 4,694	$ 4,694	$ 4,694
Route Sup / Unleaded / .75	$ 2,449	$ 2,449	$ 2,449	$ 2,449	$ 2,449
Shop / Unleaded / .75	$ 4,424	$ 4,424	$ 4,424	$ 4,424	$ 4,424
Manager / Unleaded / .35	$ 1,250	$ 1,250	$ 1,250	$ 1,250	$ 1,250
Continue as needed					
Commercial Subtotal	$ 370,342	$ 370,342	$ 370,342	$ 370,342	$ 370,342
Roll Off: Number & Type of Vehicles					
Rolloff 4-axle / CNG / 2	$ 48,318	$ 48,318	$ 48,318	$ 48,318	$ 48,318
Rolloff 4-axle / CNG / 2	$ 53,794	$ 53,794	$ 53,794	$ 53,794	$ 53,794
Engines / Transmissions	$ 24,000	$ 24,000	$ 24,000	$ 24,000	$ 24,000
Hydraulic systems	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000
Route Sup / Unleaded / .25	$ 816	$ 816	$ 816	$ 816	$ 816
Shop / Unleaded / .25	$ 1,475	$ 1,475	$ 1,475	$ 1,475	$ 1,475
Manager / Unleaded / .15	$ 536	$ 536	$ 536	$ 536	$ 536
Continue as needed					
Roll Off Subtotal	$ 136,939	$ 136,939	$ 136,939	$ 136,939	$ 136,939
All Vehicle Subtotals (Sum Residential, Commercial and Roll Off):	$ 1,051,091	$ 1,027,999	$ 1,027,999	$ 1,027,999	$ 1,027,999
# of Resident. Recyc. Containers					
# of Resident. Yardwaste. Containers					

Schedule of Assets	Year 10 (2027)	Year 11 (2028)	Year 12 (2029)	Year 13 (2030)	Year 14 (2031)
# of Resident. MSW. Containers					
Carts	$ 17,857	$ 17,857	$ 17,857	$ 17,857	$ 17,857
Carts	$ 19,231	$ 19,231	$ 19,231	$ 19,231	$ 19,231
Carts	$ 20,833	$ 20,833	$ 20,833	$ 20,833	$ 20,833
Carts	$ 22,727	$ 22,727	$ 22,727	$ 22,727	$ 22,727
Carts	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000
Carts	$ 27,778	$ 27,778	$ 27,778	$ 27,778	$ 27,778
Carts	$ 31,250	$ 31,250	$ 31,250	$ 31,250	$ 31,250
Carts	$ 35,714	$ 35,714	$ 35,714	$ 35,714	$ 35,714
Carts	$ 41,667	$ 41,667	$ 41,667	$ 41,667	$ 41,667
Carts	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
Carts		$ 62,500	$ 62,500	$ 62,500	$ 62,500
Carts			$ 83,333	$ 83,333	$ 83,333
Carts				$ 125,000	$ 125,000
Carts					$ 250,000
# of Commercial Bins:					
1.5 CY 13	$ 635				
2 CY 78	$ 4,202				
3 CY 52	$ 3,220				
4 CY 76	$ 5,550				
6 CY 47	$ 4,120				
1.5 CY 6	$ 293	$ 293			
2 CY 35	$ 1,885	$ 1,885			
3 CY 23	$ 1,424	$ 1,424			
4 CY 34	$ 2,483	$ 2,483			
6 CY 21	$ 1,841	$ 1,841			
1.5 CY 6	$ 293	$ 293	$ 293		
2 CY 35	$ 1,885	$ 1,885	$ 1,885		
3 CY 23	$ 1,424	$ 1,424	$ 1,424		
4 CY 34	$ 2,483	$ 2,483	$ 2,483		
6 CY 21	$ 1,841	$ 1,841	$ 1,841		
1.5 CY 6	$ 293	$ 293	$ 293	$ 293	
2 CY 35	$ 1,885	$ 1,885	$ 1,885	$ 1,885	
3 CY 23	$ 1,424	$ 1,424	$ 1,424	$ 1,424	
4 CY 34	$ 2,483	$ 2,483	$ 2,483	$ 2,483	
6 CY 21	$ 1,841	$ 1,841	$ 1,841	$ 1,841	
1.5 CY 6	$ 294	$ 294	$ 294	$ 294	$ 294
2 CY 35	$ 1,887	$ 1,887	$ 1,887	$ 1,887	$ 1,887
3 CY 23	$ 1,426	$ 1,426	$ 1,426	$ 1,426	$ 1,426
4 CY 34	$ 2,486	$ 2,486	$ 2,486	$ 2,486	$ 2,486
6 CY 21	$ 1,843	$ 1,843	$ 1,843	$ 1,843	$ 1,843
1.5 CY 6	$ 326	$ 326	$ 326	$ 326	$ 326
2 CY 35	$ 2,099	$ 2,099	$ 2,099	$ 2,099	$ 2,099
3 CY 23	$ 1,585	$ 1,585	$ 1,585	$ 1,585	$ 1,585
4 CY 34	$ 2,764	$ 2,764	$ 2,764	$ 2,764	$ 2,764
6 CY 21	$ 2,049	$ 2,049	$ 2,049	$ 2,049	$ 2,049
1.5 CY 6	$ 368	$ 368	$ 368	$ 368	$ 368
2 CY 35	$ 2,364	$ 2,364	$ 2,364	$ 2,364	$ 2,364
3 CY 23	$ 1,786	$ 1,786	$ 1,786	$ 1,786	$ 1,786
4 CY 34	$ 3,113	$ 3,113	$ 3,113	$ 3,113	$ 3,113
6 CY 21	$ 2,308	$ 2,308	$ 2,308	$ 2,308	$ 2,308
1.5 CY 6	$ 421	$ 421	$ 421	$ 421	$ 421
2 CY 35	$ 2,704	$ 2,704	$ 2,704	$ 2,704	$ 2,704
3 CY 23	$ 2,043	$ 2,043	$ 2,043	$ 2,043	$ 2,043
4 CY 34	$ 3,561	$ 3,561	$ 3,561	$ 3,561	$ 3,561
6 CY 21	$ 2,640	$ 2,640	$ 2,640	$ 2,640	$ 2,640
1.5 CY 6	$ 491	$ 491	$ 491	$ 491	$ 491
2 CY 35	$ 3,158	$ 3,158	$ 3,158	$ 3,158	$ 3,158

Schedule of Assets	Year 10 (2027)	Year 11 (2028)	Year 12 (2029)	Year 13 (2030)	Year 14 (2031)
3 CY 23	$ 2,385	$ 2,385	$ 2,385	$ 2,385	$ 2,385
4 CY 34	$ 4,159	$ 4,159	$ 4,159	$ 4,159	$ 4,159
6 CY 21	$ 3,083	$ 3,083	$ 3,083	$ 3,083	$ 3,083
1.5 CY 5	$ 492	$ 492	$ 492	$ 492	$ 492
2 CY 34	$ 3,685	$ 3,685	$ 3,685	$ 3,685	$ 3,685
3 CY 22	$ 2,741	$ 2,741	$ 2,741	$ 2,741	$ 2,741
4 CY 33	$ 4,849	$ 4,849	$ 4,849	$ 4,849	$ 4,849
6 CY 20	$ 3,527	$ 3,527	$ 3,527	$ 3,527	$ 3,527
# of Roll-Off Boxes:					
10 CY 15	$ 4,605				
20 CY 20	$ 7,838				
20 CY split 5	$ 2,156				
20 CY round bottom 20	$ 13,180				
30 CY 20	$ 9,168				
40 CY 5	$ 2,750				
Total Roll-Off Boxes 85					
10 CY 15	$ 4,651	$ 4,651			
20 CY 20	$ 7,916	$ 7,916			
20 CY split 5	$ 2,177	$ 2,177			
20 CY round bottom 20	$ 13,312	$ 13,312			
30 CY 20	$ 9,260	$ 9,260			
40 CY 5	$ 2,777	$ 2,777			
Total Roll-Off Boxes 85					
Shop & Wash Equipment:					
Compressors	$ 603				
Roll up doors	$ 842				
Welders	$ 268				
Body lift jacks	$ 454				
Air pumps	$ 691				
Battery load tester	$ 227				
Air impact wrenches 1"	$ 177				
Roll up doors	$ 905	$ 905	$ 905	$ 905	$ 905
Welders	$ 1,160	$ 1,160	$ 1,160	$ 1,160	$ 1,160
10 ton jacks	$ 331	$ 331	$ 331	$ 331	$ 331
Wash Equipment	$ 1,570	$ 1,570	$ 1,570	$ 1,570	$ 1,570
Computers:					
Laptops					
Workstations					
Laptops	$ 1,134				
Workstations	$ 3,780				
Software:					
Office licenses					
Server licenses					
Exchange licenses					
Interest	$ 47,757				
GRAND TOTAL Assets	$ 1,590,977	$ 1,517,030	$ 1,552,344	$ 1,669,418	$ 1,911,491
Total Annual Cost					

TABLE 2-1. COLLECTION CAPITAL COSTS 2018$ - FOOD WASTE COLLECTION

Schedule of Assets	Cost	Amortized Annual Cost	Year Purchased	Year Replacement or Refurbished	Year 1 (2015) Start 3/1	Year 2 (2016)	Year 3 (2017)	Year 4 (2018)	Year 5 (2019)	Year 6 (2020)	Year 7 (2021)	Year 8 (2022)	Year 9 (2023)	Year 10 (2024)	Year 11 (2025)	Year 12 (2026)	Year 13 (2027)	Year 14 (2028)
Residential: Number & Type of Vehicles																		
Residential Subtotal	$ -	$ -			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Commercial: Number of & Type of Vehicles																		
2015 Autocar CNG, 22 yd sideloader	$ 426,178	$ 426,178	2015	2025	$ 35,515	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 7,103			
FW Collection, 22cy sideloader	$ 532,723	$ 532,723	2025	2038											$ 133,181	$ 133,181	$ 133,181	$ 133,181
Commercial Subtotal	$ 958,901	$ 958,901			$ 35,515	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 140,284	$ 133,181	$ 133,181	$ 133,181
Roll Off: Number & Type of Vehicles																		
Roll Off Subtotal	$ -	$ -			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
All Vehicle Subtotals (Sum Residential, Commercial and Roll Off):		$ 958,901			$ 35,515	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 42,618	$ 140,284	$ 133,181	$ 133,181	$ 133,181
# of Resident. Recyc. Containers																		
# of Resident. Yardwaste. Containers																		
# of Resident. MSW. Containers																		
# of Commercial Bins:																		
65 gal Carts, #536	$ 67	$ 36,030			$ 6,005	$ 7,206	$ 7,206	$ 7,206	$ 7,206	$ 1,201								
65 gal Carts, #536	$ 76	$ 40,534									$ 8,107	$ 8,107	$ 8,107	$ 8,107	$ 8,107			
65 gal Carts, #536	$ 85	$ 45,600														$ 9,120	$ 9,120	$ 9,120
Cart Cleaning System	$ 4,898	$ 4,898			$ 816	$ 980	$ 980	$ 980	$ 980	$ 163								
# of Roll-Off Boxes:																		
Total Roll-Off Boxes																		
Shop & Wash Equipment:																		

Schedule of Assets	Cost	Amortized Annual Cost	Year Purchased	Year Replacement or Refurbished	Year 1 (2015) Start 3/1	Year 2 (2016)	Year 3 (2017)	Year 4 (2018)	Year 5 (2019)	Year 6 (2020)	Year 7 (2021)	Year 8 (2022)	Year 9 (2023)	Year 10 (2024)	Year 11 (2025)	Year 12 (2026)	Year 13 (2027)	Year 14 (2028)
Computers:																		
Tablet	$ 629	$ 629	2015	2021	$ 105	$ 126	$ 126	$ 126	$ 126	$ 21								
Licensing	$ 2,678	$ 2,678	2015		$ 446	$ 536	$ 536	$ 536	$ 536	$ 89								
Tablet	$ 850	$ 850	2020	2026							$ 170	$ 170	$ 170	$ 170	$ 170			
Tablet	$ 1,000	$ 1,000	2026													$ 200	$ 200	$ 200
Interest																		
GRAND TOTAL Assets		$ 1,091,119			$ 42,887	$ 51,465	$ 51,465	$ 51,465	$ 51,465	$ 44,092	$ 50,895	$ 50,895	$ 50,895	$ 50,895	$ 148,560	$ 142,501	$ 142,501	$ 142,501
Total Annual Cost		Foots																

TABLE 2. COLLECTION CAPITAL COSTS 2018$ - RECYCLE MORE

Schedule of Assets	Cost	Amortized Annual Cost	Year Purchased	Year Replacement or Refurbished	Year 1 (2015) Start 3/1	Year 2 (2016)	Year 3 (2017)	Year 4 (2018)	Year 5 (2019)	Year 6 (2020)	Year 7 (2021)	Year 8 (2022)	Year 9 (2023)	Year 10 (2024)	Year 11 (2025)	Year 12 (2026)	Year 13 (2027)	Year 14 (2028)
Residential: Number & Type of Vehicles																		
Recycle More Truck	$ 157,266	$ 157,266	2025	2039											$ 39,316	$ 39,316	$ 39,316	$ 39,316
Residential Subtotal	$ 157,266	$ 157,266			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 39,316	$ 39,316	$ 39,316	$ 39,316
Commercial: Number of & Type of Vehicles																		
Commercial Subtotal	$ -	$ -			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Roll Off: Number & Type of Vehicles																		
Roll Off Subtotal	$ -	$ -			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
All Vehicle Subtotals (Sum Residential, Commercial and Roll Off):		$ 157,266			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 39,316	$ 39,316	$ 39,316	$ 39,316
# of Resident. Recyc. Containers																		
# of Resident. Yardwaste. Containers																		
# of Resident. MSW. Containers																		
# of Commercial Bins:																		
# of Roll-Off Boxes:																		
Total Roll-Off Boxes																		
Shop & Wash Equipment:																		

Schedule of Assets	Cost	Amortized Annual Cost	Year Purchased	Year Replacement or Refurbished	Year 1 (2015) Start 3/1	Year 2 (2016)	Year 3 (2017)	Year 4 (2018)	Year 5 (2019)	Year 6 (2020)	Year 7 (2021)	Year 8 (2022)	Year 9 (2023)	Year 10 (2024)	Year 11 (2025)	Year 12 (2026)	Year 13 (2027)	Year 14 (2028)
Computers:																		
Interest																		
GRAND TOTAL Assets		$ 157,266			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 39,316	$ 39,316	$ 39,316	$ 39,316
Total Annual Cost																		
		Foots																

TABLE 3. PROCESSING CAPITAL COSTS - BASELINE THROUGHPUT 2018$

Capital Cost Item	Cost	Amortized Annual Cost	Year Purchased	Year Replacement or Refurbished	Economic Life (years)	Year 1 (2018)	Year 2 (2019)	Year 3 (2020)	Year 4 (2021)	Year 5 (2022)	Year 6 (2023)
Capital Improvements											
Subtotal	$ -	$ -				$ -	$ -	$ -	$ -	$ -	$ -
Fixed Equipment											
Recondition MRF Sort line / Baler	$ 3,859,981	$ 3,859,981	2018	2032	14	$ 275,713	$ 275,713	$ 275,713	$ 275,713	$ 275,713	$ 275,713
Replacements - Sort line	$ 225,000	$ 225,000	2026	2030-2032 & 2037 - 2041	5						
Replacements - CASP	$ 165,000	$ 165,000	2026	2030-2032 & 2037 - 2041	5						
Subtotal	$ 4,249,981	$ 4,249,981				$ 275,713	$ 275,713	$ 275,713	$ 275,713	$ 275,713	$ 275,713
Rolling Stock											
CAT DP25N5 Forlifts (2)	$ 43,710	$ 87,420	2018	2032	14	$ 6,244	$ 6,244	$ 6,244	$ 6,244	$ 6,244	$ 6,244
CAT DP25N5 Forklift	$ 44,691	$ 44,691	2018	2032	14	$ 3,192	$ 3,192	$ 3,192	$ 3,192	$ 3,192	$ 3,192
JD 624K Loaders (3)	$ 280,160	$ 840,480	2018	2032	14	$ 60,034	$ 60,034	$ 60,034	$ 60,034	$ 60,034	$ 60,034
Water truck (1)	$ 75,000	$ 75,000	2018	2032	14	$ 5,357	$ 5,357	$ 5,357	$ 5,357	$ 5,357	$ 5,357
Tymco Model 435 - Street Sweeper (1)	$ 172,054	$ 172,054	2018	2032	14	$ 12,290	$ 12,290	$ 12,290	$ 12,290	$ 12,290	$ 12,290
Trommel Screen - post-processing	$ 375,000	$ 375,000	2018	2032	14	$ 26,786	$ 26,786	$ 26,786	$ 26,786	$ 26,786	$ 26,786
Grinder - pre-processing	$ 651,000	$ 651,000	2024	2032	8						
Screens - Pre-processing	$ 651,000	$ 651,000	2024	2032	8						
Replacements - Front & Rear axles (loaders)	$ 62,000	$ 62,000	2018	2035	5						
Replacements - Water truck	$ 15,000	$ 15,000	2018	2035	5						
Replacements - Street sweeper	$ 45,000	$ 45,000	2018	2035	5						
Subtotal	$ 2,370,905	$ 3,018,645				$ 113,903	$ 113,903	$ 113,903	$ 113,903	$ 113,903	$ 113,903
Other Costs											
1.5 CY roll dump bins (10)	$ 962	$ 9,619	2018	2032	14	$ 687	$ 687	$ 687	$ 687	$ 687	$ 687
3 CY roll dump bins (20)	$ 1,159	$ 23,183	2018	2032	14	$ 1,656	$ 1,656	$ 1,656	$ 1,656	$ 1,656	$ 1,656
20CY Boxes (4)	$ 3,958	$ 15,831	2018	2032	14	$ 1,131	$ 1,131	$ 1,131	$ 1,131	$ 1,131	$ 1,131
30CY Boxes (10)	$ 4,630	$ 46,301	2018	2032	14	$ 3,307	$ 3,307	$ 3,307	$ 3,307	$ 3,307	$ 3,307
40CY Boxes (24)	$ 5,554	$ 133,292	2018	2032	14	$ 9,521	$ 9,521	$ 9,521	$ 9,521	$ 9,521	$ 9,521
Interest		$ 1,124,617				$ 195,263	$ 178,387	$ 160,971	$ 142,997	$ 124,448	$ 105,306
Subtotal	$ 16,263	$ 1,352,843				$ 211,565	$ 194,689	$ 177,273	$ 159,299	$ 140,750	$ 121,608
Contingency (__%)											
Total		$ 8,621,469				$ 601,181	$ 584,305	$ 566,889	$ 548,915	$ 530,366	$ 511,224

Foots

Capital Cost Item	Year 7 (2024)	Year 8 (2025)	Year 9 (2026)	Year 10 (2027)	Year 11 (2028)	Year 12 (2029)	Year 13 (2030)	Year 14 (2031)
Capital Improvements								
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fixed Equipment								
Recondition MRF Sort line / Baler	$ 275,713	$ 275,713	$ 275,713	$ 275,713	$ 275,713	$ 275,713	$ 275,713	$ 275,713
Replacements - Sort line				$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000
Replacements - CASP				$ 33,000	$ 33,000	$ 33,000	$ 33,000	$ 33,000
Subtotal	$ 275,713	$ 275,713	$ 275,713	$ 353,713	$ 353,713	$ 353,713	$ 353,713	$ 353,713
Rolling Stock								
CAT DP25N5 Forlifts (2)	$ 6,244	$ 6,244	$ 6,244	$ 6,244	$ 6,244	$ 6,244	$ 6,244	$ 6,244
CAT DP25N5 Forklift	$ 3,192	$ 3,192	$ 3,192	$ 3,192	$ 3,192	$ 3,192	$ 3,192	$ 3,192
JD 624K Loaders (3)	$ 60,034	$ 60,034	$ 60,034	$ 60,034	$ 60,034	$ 60,034	$ 60,034	$ 60,034
Water truck (1)	$ 5,357	$ 5,357	$ 5,357	$ 5,357	$ 5,357	$ 5,357	$ 5,357	$ 5,357
Tymco Model 435 - Street Sweeper (1)	$ 12,290	$ 12,290	$ 12,290	$ 12,290	$ 12,290	$ 12,290	$ 12,290	$ 12,290
Trommel Screen - post-processing	$ 26,786	$ 26,786	$ 26,786	$ 26,786	$ 26,786	$ 26,786	$ 26,786	$ 26,786
Grinder - pre-processing	$ 81,375	$ 81,375	$ 81,375	$ 81,375	$ 81,375	$ 81,375	$ 81,375	$ 81,375
Screens - Pre-processing	$ 81,375	$ 81,375	$ 81,375	$ 81,375	$ 81,375	$ 81,375	$ 81,375	$ 81,375
Replacements - Front & Rear axles (loaders)			$ 12,400	$ 12,400	$ 12,400	$ 12,400	$ 12,400	
Replacements - Water truck			$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 3,000	
Replacements - Street sweeper			$ 9,000	$ 9,000	$ 9,000	$ 9,000	$ 9,000	
Subtotal	$ 276,653	$ 276,653	$ 301,053	$ 301,053	$ 301,053	$ 301,053	$ 301,053	$ 276,653
Other Costs								
1.5 CY roll dump bins (10)	$ 687	$ 687	$ 687	$ 687	$ 687	$ 687	$ 687	$ 687
3 CY roll dump bins (20)	$ 1,656	$ 1,656	$ 1,656	$ 1,656	$ 1,656	$ 1,656	$ 1,656	$ 1,656
20CY Boxes (4)	$ 1,131	$ 1,131	$ 1,131	$ 1,131	$ 1,131	$ 1,131	$ 1,131	$ 1,131
30CY Boxes (10)	$ 3,307	$ 3,307	$ 3,307	$ 3,307	$ 3,307	$ 3,307	$ 3,307	$ 3,307
40CY Boxes (24)	$ 9,521	$ 9,521	$ 9,521	$ 9,521	$ 9,521	$ 9,521	$ 9,521	$ 9,521
Interest	$ 85,551	$ 65,163	$ 44,123	$ 22,408				
Subtotal	$ 101,853	$ 81,465	$ 60,425	$ 38,710	$ 16,302	$ 16,302	$ 16,302	$ 16,302
Contingency (__%)								
Total	$ 654,219	$ 633,831	$ 637,191	$ 693,476	$ 671,068	$ 671,068	$ 671,068	$ 646,668

TABLE 3. PROCESSING CAPITAL COSTS - BIO-MASS FACILITY 2018$ (Two Units)

Capital Cost Item	Cost	Amortized Annual Cost	Year Purchased	Year Replacement or Refurbished	Economic Life (years)	Year 1 (2018)	Year 2 (2019)	Year 3 (2020)	Year 4 (2021)	Year 5 (2022)	Year 6 (2023)
Capital Improvements											
Subtotal	$ -	$ -				$ -	$ -	$ -	$ -	$ -	$ -
Fixed Equipment											
Bio-mass facility	$ 11,886,000	$ 11,886,000	2019		13		$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308
		$ -									
		$ -									
Subtotal	$ 11,886,000	$ 11,886,000				$ -	$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308
Rolling Stock											
		$ -									
		$ -									
		$ -									
		$ -									
		$ -									
		$ -									
		$ -									
		$ -									
		$ -									
		$ -									
Subtotal	$ -	$ -				$ -	$ -	$ -	$ -	$ -	$ -
Other Costs											
PG&E - Generator Interconnection Agreement	$ 750,000	$ 750,000	2019		13		$ 57,692	$ 57,692	$ 57,692	$ 57,692	$ 57,692
		$ -									
		$ -									
		$ -									
		$ -									
Interest		$ 4,851,275					$ 631,800	$ 596,131	$ 558,679	$ 519,354	$ 478,063
Subtotal	$ 750,000	$ 5,601,275				$ -	$ 689,492	$ 653,823	$ 616,371	$ 577,046	$ 535,755
Contingency (__%)											
Total		$ 17,487,275				$ -	$ 1,603,800	$ 1,568,131	$ 1,530,679	$ 1,491,354	$ 1,450,063

Foots

Capital Cost Item	Year 7 (2024)	Year 8 (2025)	Year 9 (2026)	Year 10 (2027)	Year 11 (2028)	Year 12 (2029)	Year 13 (2030)	Year 14 (2031)
Capital Improvements								
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fixed Equipment								
Bio-mass facility	$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308
Subtotal	$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308	$ 914,308
Rolling Stock								
Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Costs								
PG&E - Generator Interconnection Agreement	$ 57,692	$ 57,692	$ 57,692	$ 57,692	$ 57,692	$ 57,692	$ 57,692	$ 57,692
Interest	$ 434,708	$ 389,184	$ 341,385	$ 291,195	$ 238,496	$ 183,162	$ 125,062	$ 64,056
Subtotal	$ 492,400	$ 446,876	$ 399,077	$ 348,887	$ 296,188	$ 240,854	$ 182,754	$ 121,748
Contingency (__%)								
Total	$ 1,406,708	$ 1,361,184	$ 1,313,385	$ 1,263,195	$ 1,210,496	$ 1,155,162	$ 1,097,062	$ 1,036,056

ATTACHMENT 2

Table 4

7/18/2017

	Pre-Processing (Baseline Throughput)			CASP (Baseline Throughput)			Storm water			Adjustments		Proposed Total (Baseline Throughput)			Current Index Name	Current Index	Current Annual Costs	New Index
LABOR	**Annual Salary**	**Number of FTEs**	**Annual Cost**	**Annual Salary**	**Number of FTEs**	**Annual Cost**	**Annual Salary**	**Number of FTEs**	**Annual Cost**			**Annual Salary**	**Number of FTEs**	**Annual Cost**				
Salaries (by labor category)																		
General Manager												176,559	0.50	88,280	CPI	1.045	92,252	CPI-Labor
Manager, Recycling												81,722	0.75	61,291	CPI	1.045	64,049	CPI-Labor
Administrative Assistant												43,585	0.50	21,792	CPI	1.045	22,773	CPI-Labor
Customer Service (Scale house)												54,700	1.00	54,481	CPI	1.045	56,933	CPI-Labor
Composting Equipment Operator												50,571	3.00	151,106	CPI	1.045	157,905	CPI-Labor
Composting Sorter/Processor	31,303	1.65	51,649	31,303	0.35	10,956						62,605	2.00	62,605	CPI	1.045	65,422	CPI-Labor
Clean MRF Sorter/Processor												28,991	17.00	490,875	CPI	1.045	512,964	CPI-Labor
Clean MRF Equipment Operator												31,726	3.00	94,797	CPI	1.045	99,063	CPI-Labor
Wood Processing Equipment Operator												50,571	0.34	17,125	CPI	1.045	17,896	CPI-Labor
C&D Processing (S.Sep.) Equipment Operator												49,685	0.33	16,622	CPI	1.045	17,370	CPI-Labor
C&D Processing (Mixed) Sorter/Processor												-	0.00	-	CPI	1.045	-	CPI-Labor
C&D Processing (Mixed) Equipment Operator												49,865	0.33	16,622	CPI	1.045	17,370	CPI-Labor
Residential Food Waste Equipment Operator												-	0.00	-	CPI	1.045	-	CPI-Labor
Mechanics												70,338	0.50	35,029	CPI	1.045	36,605	CPI-Labor
Mechanics Helper												41,456	0.50	20,645	CPI	1.045	21,574	CPI-Labor
Subtotal			51,649			10,956			-		-			1,131,270			1,182,177	
Fringe Benefits			37,578			7,972								480,450	CPI	1.045	502,070	CPI-Labor
Total			**89,228**			**18,928**			**-**		**-**			**1,611,720**			**1,684,247**	
Leased Equipment																		
Total																		
Other Operating Expenses																		
Water and Sewer						50,846								58,400	PPI	1.041	60,794	CPI-Other
Supplies			14,800			3,750			7,500					75,149	PPI	1.041	78,230	CPI-Other
Outside Services			5,500			4,125			8,600					50,958	PPI	1.041	53,047	CPI-Other
Maintenance			79,418			41,064			6,378					143,226	PPI	1.041	149,099	CPI-Other
Tires			4,560			3,420			3,240					11,220	PPI	1.041	11,680	CPI-Other
Oil & Filters			17,685			5,708			3,600					26,993	PPI	1.041	28,100	CPI-Other
Licenses - DMV									3,700					3,700	PPI	1.041	3,852	CPI-Other
Permits			4,800						1,632					6,432	PPI	1.041	6,696	CPI-Other
Equipment rental			1,320											1,320	PPI	1.041	1,374	CPI-Other
Taxes, Property														81,499	PPI	1.041	84,840	CPI-Other
Business Licenses			3,466			2,815								10,990	PPI	1.041	11,440	CPI-Other
Insurance														-				
Property														24,808	PPI	1.041	25,825	CPI-Other
Liability			(1,750)			(62)								12,659	PPI	1.041	13,178	CPI-Other
Pollution														12,404	PPI	1.041	12,913	CPI-Other
Worker's Comp			3,266			693								159,011	PPI	1.041	165,530	CPI-Other
Vehicle									3,600					3,600	PPI	1.041	3,748	CPI-Other
Engineering and lab services						(2,695)			3,600					7,200	PPI	1.041	7,495	CPI-Other
Fire inspection fees			1,250											1,250	PPI	1.041	1,301	CPI-Other
Payroll service			1,033			219								20,237	PPI	1.041	21,067	CPI-Other
First Aid Costs						189								6,484	PPI	1.041	6,750	CPI-Other
Management Fee														134,604	PPI	1.041	140,123	CPI-Other
Disposal:														-				
Tires														15,107	PPI	1.041	15,727	CPI-Other
Waste Oil														5,036	PPI	1.041	5,242	CPI-Other
eWaste														62,947	PPI	1.041	65,528	CPI-Other
Total			**135,348**			**110,073**			**41,850**		**-**			**935,234**			**973,578**	
SUMMARY																		
Labor			89,228			18,928			-		-			1,611,720			1,684,247	
Leased Equipment			-			-			-		-			-			-	
O&M			135,348			110,073			41,850		-			935,234			973,578	
Subtotal			**224,575**			**129,001**			**41,850**		**-**			**2,546,954**			**2,657,826**	
Contingency (__%)																		
Total			**224,575**			**129,001**			**41,850**		**-**			**2,546,954**			**2,657,826**	

	Pre-Processing (Baseline Throughput)			CASP (Baseline Throughput)			Storm water		Adjustments			Proposed Total (Baseline Throughput)		
Costs - Reimbursed at Current Costs														
Electricity			203,840			93,002			3,000					339,988
Fuel									20,020					125,639

Current Index Name	Current Index	Current Annual Costs	New Index
PPI		348,488.13	
Fuel		128,779.98	

TABLE 5. PROPOSED OPERATING & CAPITAL COSTS 2018$ - FOOD WASTE COLLECTION

COST CATEGORIES	Current Annual Costs (Feb-Jan17)	Adjustments	Proposed Total	Current Index Name	Current Index	Current Annual Costs	New Index
COLLECTION							
Operating Expenses							
Labor	124,835		124,835	CPI	1.045	130,452	CPI-Labor
Supplies			-	PPI	1.041	-	CPI-Other
Vehicle O&M			-				
Oil & Other Fluids			-	PPI	1.041	-	CPI-Other
Vehicle Insurance	2,672		2,672	PPI	1.041	2,782	CPI-Other
Vehicle Repair & Maintenance	15,317		15,317	PPI	1.041	15,945	CPI-Other
Total	**142,824**		**142,824**			**149,179**	
G & A Expenses							
Customer Service							
Customer Service Labor			-	CPI	1.045	-	CPI-Labor
Billing			-	PPI	1.041	-	CPI-Other
Administration							
Admin Services			-	CPI	1.045	-	CPI-Labor
General Insurance	270		270	PPI	1.041	281	CPI-Other
Office Expenses	6,078		6,078	PPI	1.041	6,327	CPI-Other
Public Information & Education			-	PPI	1.041	-	CPI-Other
Total	**6,348**		**6,348**			**6,608**	
Vehicle & Equipment Capital	51,465		51,465			51,465	
Overhead, Tax			-	None	1	-	CPI-Other
Total	**51,465**		**51,465**			**51,465**	
Subtotal Collection Costs	**200,637**		**200,637**			**207,252**	
PROCESSING							
O&M							
Labor			-				
Operations			-				
Contingency							
Total	**-**	**-**	**-**			**-**	
Capital							
Capital Improvements							
Equipment	-		-				
Other Start Up Costs	-						
Contingency							
Total	**-**	**-**	**-**			**-**	
Subtotal Baseline Processing Expenses	**-**	**-**	**-**			**-**	
Total Baseline Expenses	**200,637**	**-**	**200,637**			**207,252**	
Less NCRWS (County) Discount			-			-	
Net Baseline Expenses	200,637	-	200,637			207,252	

Costs - Reimbursed at Current Costs

Fuel	19,695		19,695	Fuel	20,187.44

Instructions: Summarize all proposed costs (with CASP) on this table. Columns may be added as needed.

TABLE 6. PROPOSED OPERATING & CAPITAL COSTS 2018$ - RECYCLE MORE

COST CATEGORIES	Current Annual Costs (Feb-Jan17)	Adjustments	Proposed Total	Current Index Name	Current Index	Current Annual Costs (July 17)	New Index
COLLECTION							
Operating Expenses							
Labor			-	CPI	1.045	-	CPI-Labor
Supplies			-	PPI	1.041	-	CPI-Other
Vehicle O&M			-				
Oil & Other Fluids			-	PPI	1.041	-	CPI-Other
Vehicle Insurance	2,246		2,246	PPI	1.041	2,338	CPI-Other
Vehicle Repair & Maintenance	1,822		1,822	PPI	1.041	1,897	CPI-Other
Total	**4,068**		**4,068**			**4,235**	
G & A Expenses							
Customer Service							
Customer Service Labor			-	CPI	1.045	-	CPI-Labor
Billing			-	PPI	1.041	-	CPI-Other
Administration							
Admin Services			-	CPI	1.045	-	CPI-Labor
General Insurance			-	PPI	1.041	-	CPI-Other
Office Expenses	1,422		1,422	PPI	1.041	1,480	CPI-Other
Public Information & Education			-	PPI	1.041	-	CPI-Other
Total	**1,422**		**1,422**			**1,480**	
Vehicle & Equipment Capital			-			-	
Overhead, Tax			-	None	1	-	CPI-Other
Total	**-**		**-**			**-**	
Subtotal Collection Costs	**5,490**		**5,490**			**5,715**	
PROCESSING							
O&M							
Labor			-				
Operations			-				
Contingency							
Total	**-**	**-**	**-**			**-**	
Capital							
Capital Improvements							
Equipment	-		-				
Other Start Up Costs	-						
Contingency							
Total	**-**	**-**	**-**			**-**	
Subtotal Baseline Processing Expenses	**-**	**-**	**-**			**-**	
Total Baseline Expenses	**5,490**	**-**	**5,490**			**5,715**	
Less NCRWS (County) Discount			-			-	
Net Baseline Expenses	5,490	-	5,490			5,715	

Costs - Reimbursed at Current Costs

Fuel	10,931		10,931	Fuel		11,204	

TABLE 7. PROCESSING O&M COSTS - BASELINE THROUGHPUT (with CASP) 2018$ - ADDITIONAL SORTERS

	Current Annual Costs (Feb-Jan17)			Adjustments		Proposed Total (Baseline Throughput)			Current Index Name	Current Index	Current Annual Costs	New Index
LABOR	**Annual Salary**	**Number of FTEs**	**Annual Cost**			**Annual Salary**	**Number of FTEs**	**Annual Cost**				
Salaries (by labor category)												
General Manager						-	0.00	-	CPI	1.045	-	
Manager, Recycling						-	0.00	-	CPI	1.045	-	
Administrative Assistant						-	0.00	-	CPI	1.045	-	
Customer Service (Scale house)						-	0.00	-	CPI	1.045	-	
Composting Equipment Operator						-	0.00	-	CPI	1.045	-	
Composting Sorter/Processor						-	0.00	-	CPI	1.045	-	
Clean MRF Sorter/Processor	28,882	4	115,528			28,882	4.00	115,528	CPI	1.045	120,727	
Clean MRF Equipment Operator						-	0.00	-	CPI	1.045	-	
Wood Processing Equipment Operator						-	0.00	-	CPI	1.045	-	
C&D Processing (S.Sep.) Equipment Operator						-	0.00	-	CPI	1.045	-	
C&D Processing (Mixed) Sorter/Processor						-	0.00	-	CPI	1.045	-	
C&D Processing (Mixed) Equipment Operator						-	0.00	-	CPI	1.045	-	
Residential Food Waste Equipment Operator						-	0.00	-	CPI	1.045	-	
Mechanics						-	0.00	-	CPI	1.045	-	
Mechanics Helper						-	0.00	-	CPI	1.045	-	
Subtotal			115,528		-			115,528			120,727	
Fringe Benefits			74,661					74,661	CPI	1.045	78,021	
Total			**190,189**		**-**			**190,189**			**198,748**	
Leased Equipment												
Total												
Other Operating Expenses												
Water and Sewer								-	PPI	1.041	-	
Supplies			5,731					5,731	PPI	1.041	5,966	
Outside Services								-	PPI	1.041	-	
Maintenance								-	PPI	1.041	-	
Tires								-	PPI	1.041	-	
Oil & Filters								-	PPI	1.041	-	
Licenses - DMV								-	PPI	1.041	-	
Permits								-	PPI	1.041	-	
Equipment rental								-	PPI	1.041	-	
Taxes, Property								-	PPI	1.041	-	
Business Licenses								-	PPI	1.041	-	
Insurance								-				
Property								-	PPI	1.041	-	
Liability								-	PPI	1.041	-	
Pollution								-	PPI	1.041	-	
Worker's Comp								-	PPI	1.041	-	
Vehicle								-	PPI	1.041	-	
Engineering and lab services								-	PPI	1.041	-	
Fire inspection fees								-	PPI	1.041	-	
Payroll service			1,309					1,309	PPI	1.041	1,363	
First Aid Costs								-	PPI	1.041	-	
Management Fee								-	PPI	1.041	-	
Disposal:								-				
Tires								-	PPI	1.041	-	
Waste Oil								-	PPI	1.041	-	
eWaste								-	PPI	1.041	-	
Total			**7,040**		**-**			**7,040**			**7,329**	
SUMMARY												

TABLE 7. PROCESSING O&M COSTS - BASELINE THROUGHPUT (with CASP) 2018$ - ADDITIONAL SORTERS

	Current Annual Costs (Feb-Jan17)			Adjustments		Proposed Total (Baseline Throughput)		
Labor			190,189		-			190,189
Leased Equipment			-		-			-
O&M			7,040		-			7,040
Subtotal			**197,230**		**-**			**197,230**
Contingency (__%)								
Total			**197,230**		**-**			**197,230**

Current Index Name	Current Index	Current Annual Costs	New Index
		198,748	
		-	
		7,329	
		206,077	
		206,077	

Costs - Reimbursed at Current Costs

Electricity								-
Fuel								-

TABLE 8. PROCESSING O&M COSTS - BASELINE THROUGHPUT (with CASP) 2018$ - Bio-Mass (Two Units)

	Current Annual Costs (Feb-Jan17)			Adjustments		Proposed Total (Baseline Throughput)		
LABOR	**Annual Salary**	**Number of FTEs**	**Annual Cost**			**Annual Salary**	**Number of FTEs**	**Annual Cost**
Salaries (by labor category)								
General Manager						-	0.00	-
Manager, Recycling						-	0.00	-
Administrative Assistant	26,000	1	26,000			26,910	1.00	26,910
Customer Service (Scale house)						-	0.00	-
Equipment Operator	75,294	4.5	338,821			77,929	4.50	350,680
Composting Sorter/Processor						-	0.00	-
Clean MRF Sorter/Processor						-	0.00	-
Clean MRF Equipment Operator						-	0.00	-
Wood Processing Equipment Operator						-	0.00	-
C&D Processing (S.Sep.) Equipment Operator						-	0.00	-
C&D Processing (Mixed) Sorter/Processor						-	0.00	-
C&D Processing (Mixed) Equipment Operator						-	0.00	-
Residential Food Waste Equipment Operator						-	0.00	-
Mechanics	77,077	6.5	501,001			77,077	6.50	518,536
Mechanics Helper						-	0.00	-
Subtotal			865,822		-			896,126
Fringe Benefits			471,683					488,192
Total			**1,337,505**		**-**			**1,384,318**
Leased Equipment								
Total								
Other Operating Expenses								
Water and Sewer								-
Cost of Ownership			22,080					22,632
Supplies								-
Outside Services								-
Maintenance			446,438					457,599
Tires								-
Oil & Filters								-
Licenses - DMV								-
Permits								-
Equipment rental								-
Taxes, Property			137,236					140,667
Business Licenses			4,030					4,131
Insurance								-
Property			84,661					86,778
Liability			30,000					30,750
Pollution								-
Worker's Comp								-
Vehicle								-
Engineering and lab services								-
Fire inspection fees								-
Payroll service								-
First Aid Costs								-
Management Fee								-
Disposal:								-
Tires								-
Waste Oil								-
eWaste								-
Total			**724,445**		**-**			**742,556**
SUMMARY								
Labor			1,337,505		-			1,384,318
Leased Equipment			-		-			-
O&M			724,445		-			742,556
Subtotal			**2,061,950**		**-**			**2,126,874**
Contingency (%)								
Total			**2,061,950**		**-**			**2,126,874**

Costs - Reimbursed at Current Costs								
Electricity								-
Fuel								-

YEAR 12-2017 (ACTUAL)

Fuel Fuel Series WPU05730302 (# 2 DIESEL)

Annual 2015 (p)	227
Annual 2016 (p)	179.4
Point Difference	-47.6
Adjustment Factor	-0.210

Fuel Series WPU0531 (Natural Gas)

Annual 2015 (p)	106.3
Annual 2016 (p)	96.6
Point Difference	-9.7
Adjustment Factor	-0.091

Fuel (Weighted Fuel Adjustment per Amendment 1)			Fuel Type	Fuel Indices	Weighted Average
18	diesel vehicles	0.72	Diesel	-0.210	-0.151
7	CNG vehicles	0.28	CNG	-0.091	-0.026
25	total vehicles				-0.177
	Fuel Adjustment Factor				-0.177

CPI Labor - CPI Series CWUR0000SA0 (All Items)

Annual 2015	231.81	
Annual 2016	234.076	
Point Difference	2.266	
Adjustment Factor	0.010	1.0%

PPI Other Operating - PPI Series WPUFD3500 (Finished Goods Less Food and Energy) (Disconti

Annual 2015 (p)	192.3	
Annual 2016	195.3	
Point Difference	3	
Adjustment Factor	0.016	1.6%

APPENDIX D: PROJECTED SOLID WASTE FUND REVENES, EXPENDITURES AND RESERVE BALANCES FOR CITY FY2018/19 TO FY2021/22 WITH PROPOSED RATE ADJUSTMENTS

Row #	Category	FY2018/19 Projected Actuals	Projected for FY 2019/20 with Proposed Rate Adjustments	Projected for FY 2020/21 with Proposed Rate Adjustments	Projected for FY 2021/22 with Proposed Rate Adjustments
1	Investment Earnings	308,982	120,000	100,000	103,000
2	Refuse collection charges	19,596,846	23,049,600	25,113,088	26,861,345
3	MDF Gates Fees	3,252,260	3,625,000	3,700,000	3,850,000
4	Material Sales	6,107,486	6,400,000	6,400,000	6,400,000
5	Miscellaneous	44,248	30,000	30,000	31,000
6	Investment Earnings	5,124	8,500	8,500	9,000
7	Rents and Royalties	50,946	53,000	53,000	54,500
8	Sale of Goods	1,000	2,000	2,000	2,000
9	CRV Recycling Grant	20,205	21,000	21,000	21,000
10	Used Oil Recycling Grant	20,000	21,000	21,000	21,000
11	American Canyon	3,600	3,000	3,000	3,000
12	Bond Transfer In	-	500,000		-
13	**Total Projected Revenues with Proposed Rate Adjustments**	**29,410,697**	**33,833,100**	**35,451,588**	**37,355,845**
14	Indept Charges for Labor	5,315	4,500	4,500	4,500
15	Facilities Repair and Maint (Hidden Glenn)	33,000	33,000	34,000	35,000
16	Cost Allocation Plan to General Fund	312,150	400,900	412,900	429,500
17	Intrfd Tsfr Out to Str Rsrf	1,960,000	1,113,600	1,113,600	1,113,600
18	Tsfr Out to Risk Management		400,000	400,000	400,000
19	Debt Service (Bond Principal)	-	550,000	555,000	565,000
20	Interest - Bonds	868,240	321,000	315,000	305,500
21	Fiscal Agent Fees	2,570	3,000	3,000	3,000
22	Banking Fees	3,628	4,000	4,000	4,000
23	Transfer Station Tip Fees	3,300,000	3,400,000	3,500,000	3,605,000
24	Bad Debt Expense	100,000	130,000	130,000	134,000
25	Operating and Capital Cost	13,011,402	13,096,000	13,624,500	13,928,000
26	Base Profit Margin (3%)	370,663	404,500	420,500	430,000
27	Sale of Recyclables 30% share	2,286,709	2,350,000	2,400,000	2,472,000
28	NVUSD	153,601	159,000	165,000	170,000
29	Allowance Based Programs	115,992	116,000	116,000	116,000
30	Unit Costs	223,584	400,000	414,000	426,500
31	Proc Fee thru put ovr basline	3,760,508	3,900,000	4,017,000	4,137,500
32	Diversion Incentive	-	200,000	206,000	212,000

33	Partnership Programs	149,150	154,500	160,000	165,000
34	Recycle More Route (Recurring)	5,931	6,500	6,500	6,500
35	Commercial Food Scrap Expansion	209,101	217,000	222,500	232,000
36	Residential Reconciliation Review Adjustments		0	90,000	63,000
37	Commercial/Multi-Family Reconciliation Review Adjustments		0	75,000	52,000
38	Roll-Off Box Reconcilation Review Adjustments		0	30,000	31,000
39	Changes in Law Reconciliation Review		0	-	-
40	Low Income Assistance Program		150,000	154,500	159,000
41	Professional Contract Services	20,000	50,000	300,000	301,500
42	Facilities Repair and Maint	23,658	32,000	33,000	34,000
43	Property Taxes	9,016	10,000	10,000	10,500
44	Other Purchased Services	1,098,994	495,000	510,000	525,500
45	Software Subscription (Soft-Pak)	26,000	28,000	28,000	29,000
46	Bad Debt Expense	5,000	5,000	5,000	5,000
47	Payment for Material	2,277,364	2,000,000	2,050,000	2,111,500
48	Salaries & Wages (Inc Benefits)	1,107,440	1,153,300	1,195,500	1,255,500
49	Banking Fees	240,738	260,000	280,000	288,500
50	Professional Contract Services	180,000	120,000	124,000	127,500
51	Prof Legal Services	60,500	61,000	63,000	65,000
52	Cleaning/Solid Waste Services	318	2,000	2,000	2,000
53	Equipment Repair and Maint	4,450	2,000	2,000	2,000
54	Rental of Land/Buildings	40,614	75,000	77,500	80,000
55	Rental of Vehicles	-	500	500	500
56	Fleet O&M and Admin Charges	31,580	32,200	32,600	33,500
57	General Liability / Risk	16,500	46,100	54,400	64,000
58	Communications	5,000	5,000	5,000	5,000
59	Printing/Binding	-	4,000	4,000	4,000
60	Travel	8,000	10,000	10,000	10,500
61	Dues	2,500	2,000	2,000	2,000
62	Training	1,500	2,000	2,000	2,000
63	General Supplies	40,000	35,000	36,000	37,000
64	Postage	500	500	500	500
65	IT Equpment	2,000	3,000	3,000	3,000
66	Electricity/Natural Gas	3,000	3,000	3,000	3,000
67	Food	1,000	500	500	500
68	Books/Periodicals/Subscriptions	500	500	500	500
70	Part-time Employees	58,674	70,000	72,000	75,500
71	Professional Contract Services	20,500	14,000	14,000	14,500
72	Software Subscription (RecycleList)	-	6,000	6,000	6,000

73	Advertising	40,100	30,000	30,000	31,000
74	Printing/Binding	-	15,000	15,000	15,500
75	Equipment < $5000	65,000	50,000	51,500	53,000
77	Rebates/Refunds	2,000	5,000	5,000	5,000
78	Professional Contract Services	27,500	25,500	25,500	26,500
79	Printing/Binding	5,000	5,000	5,000	5,000
80	General Supplies	2,000	3,000	3,000	3,000
81	Recycling Equipment	30,000	25,000	26,000	27,000
82	Construction Services	-	30,000	30,000	31,000
83	Buildings	19,000	125,000	130,000	134,000
84	Capital Outlay	-	500,000	-	234,500
85	Professional Contract Services	25,000	625,000	326,000	27,000
86	Miscellaneous/Contingency	20,000	20,000	21,000	21,500
87	Indept Charges for Labor	-	40,000	40,000	40,000
88	Tsfr Out to General Fund	-	500	500	500
89	**Total Projected Expenditures**	**32,430,991**	**33,540,101**	**34,208,001**	**$ 34,953,600**
90	**Total Projected Revenues with Proposed Rate Adjustments**	**29,410,697**	**33,637,178**	**35,451,588**	**37,355,845**
91	**Total Projected Operating Expenditures**	**32,430,991**	**33,540,101**	**34,208,001**	**$ 34,953,600**
92	**Total Operating Position Before Reserve Activity with Proposed Rate Adjustments**	**(3,020,294)**	**97,078**	**1,243,587**	**2,402,245**
93	**Projected Net Operating Positing with Proposed Rate Adjustments (after use of Fund reserves in FY 2018/19)**	**(1)**	**97,078**	**1,243,587**	**2,402,245**
94	**Total Projected Solid Waste Fund Position with Proposed Rate Adjustments after Reserve Activity**	**(1)**	**$ (1,638,922)**	**707,587**	**1,866,245**

#	Solid Waste Fund Reserves	Projected FY2018/19 Balance	Projected FY2019/20 Balance	Projected FY2020/21 Balance	Projected FY2021/22 Balance
95	Liability Reserve	350,000	$ 350,000	$ 350,000	$ 350,000
96	Capital Project Reserve	-	$ 536,000	$ 1,072,000	$ 1,608,000
97	Operating Reserve	4,375,296	$ 2,736,374	$ 3,443,961	$ 5,310,206
98	Stabilization Reserve	-	$ -	$ -	$ -
99	**TOTAL RESERVE BALANCES**	**4,725,296**	**$ 3,622,374**	**$ 4,865,961**	**$ 7,268,206**
100	**Projected Debt Service Coverage Ratio with Proposed Rate Adjustments**	**1.89**	**2.76**	**3.86**	**5.46**

APPENDIX E: MAY 8, 2018 CALRECYCLE LETTER TO CALIFORNIA JURISDICTIONS REGARDING CHINA'S "NATIONAL SWORD" POLICY

California Environmental Protection Agency Edmund G. Brown Jr., Governor

CalRecycle

DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

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May 8, 2018

In light of recent changes to China's import policies, I'm writing to share an update on California's recycling markets, answer questions regarding jurisdiction compliance, emphasize the importance of health and safety at solid waste facilities, and discuss what lies ahead.
On May 4th, China stopped accepting any imports of recyclable materials from the United States for one month. This decision follows China's implementation of its National Sword policy on March 1st, banning the imports of 24 categories of scrap materials including low grade plastics and unsorted mixed paper, and setting strict contamination standards for allowable bales of recyclable material. The exporting of recyclable commodities to China, primarily our traditional curbside materials, has historically been a key component of California's recycling infrastructure. Approximately two thirds of curbside collected material is exported to foreign markets. In 2016, 62 percent of the exported recyclable materials were sent to China. However, China's implementation of National Sword is a major disruption in recycling commodities markets, a signal that California can no longer be primarily reliant on exports to manage our recyclable materials.

These new policies provide California with an opportunity to take a couple of important steps: first, to reduce our waste, and second, to work together to build infrastructure and domestic markets to successfully and responsibly manage our recyclable materials. Each of these will take investment and collaboration across state and local governments, the solid waste industry, manufacturers, and rate-payers. These are critical steps to improve the environment and economy here in California and beyond, although they will take time.

We're already witnessing the effect of China's new policy. Material flow is significantly disrupted and the economics of recycling are unfavorable for many recyclable commodities, challenging what recycling means to Californians.

This letter is intended to address concerns I have been hearing from local governments and industry about the impacts of China's import policies. I would like to reassure local governments that we have existing statutory policies to address the impact of markets when determining whether or not a jurisdiction has made a good faith effort to implement its diversion programs for compliance with AB 939. I am aware that facilities are having a hard time moving recyclable materials and are keeping them on site in significant quantities. If facilities are temporarily storing materials for longer periods, public health and safety should be their number one priority. Finally, looking toward the long-term, we will need more domestic infrastructure to manufacture products using California's recycled content feedstock. This valuable infrastructure will not only support the domestic recyclable commodities market but also support SB 1383's goal to reduce disposal of organic waste by 75 percent.

Let me expand on these points.

Considering Market Factors When Evaluating Jurisdiction Performance
Given shifting markets for recyclable commodities, it is important to clarify that CalRecycle takes market conditions into consideration when evaluating a jurisdiction's compliance with the following state recycling laws; AB 939, mandatory commercial recycling, and mandatory organics recycling. I have heard many stakeholders express concerns that CalRecycle will not take market factors – e.g., the precipitous drop in ability to get collected materials to market at an adequate price or even at all – into consideration when we evaluate jurisdiction programs. Jurisdictions are concerned that this could lead to potential penalties for situations that jurisdictions cannot control. This is not what statute dictates. Specifically, under existing statute, regulations, and policy, CalRecycle already takes market conditions into consideration when determining "good faith effort" in evaluating each jurisdiction's program implementation. CalRecycle recognizes that over the short term, lack of markets is not indicative of a jurisdiction's efforts to implement its programs fully. Additionally, a jurisdiction's achievement of its 50 percent requirement is not determinative for assessing compliance. Instead, CalRecycle's jurisdictional review focuses on program implementation and includes the assessment of barriers a jurisdiction is facing, including a lack of markets.

The following is an overview of the applicable statutes, regulations, and policies utilized when evaluating a jurisdiction's performance. I am providing you with this level of detail because it is descriptive of how we have reviewed jurisdiction program implementation in the past and how we will continue to do so in light of National Sword.

California Public Resources Code 41825(e)(3) establishes that CalRecycle must consider the enforcement criteria included in its enforcement policy, known as the Countywide Integrated Waste Management Plan (CIWMP) Enforcement Policy Part II. This is the guiding process for determining compliance for a number of programs. CalRecycle periodically revises this policy to incorporate the goals of new statutes, as it did for AB 341 and AB 1826. Staff uses the criteria delineated in the policy to determine the extent to which a jurisdiction has implemented, or shown a good faith effort to implement, its selected diversion programs. Staff also uses the identified criteria to assist local jurisdictions who may need help in identifying why implementation of diversion programs is failing to achieve the results expected, or is failing to meet the diversion requirements. We want jurisdictions to be successful in implementing diversion programs.

The CIWMP Enforcement Policy Part II specifically includes consideration of markets for AB 939 Source Reduction and Recycling Element (SRRE), Mandatory Commercial Recycling (AB 341) and Mandatory Commercial Organics Recycling (AB 1826) compliance review. The following are some of our current review processes and the factors we consider when determining if a jurisdiction has met their diversion goals.

AB 939 review: As part of the review process, CalRecycle investigates the extent to which a jurisdiction has tried to meet the diversion requirements through its selected diversion programs, and the reasons it has failed to implement some or all of those diversion programs. Staff uses the criteria in the Enforcement Policy to assess the specific conditions that may have prevented a jurisdiction from meeting its 50 percent equivalent per capita disposal target, and whether a good faith effort was made by the jurisdiction to meet the requirements. The analysis for a jurisdiction that is not meeting its 50 percent target includes considering availability of markets and specific criteria can be found here: CIWMP Enforcement Policy Part II, pages 4 and 11.

Mandatory Commercial Recycling (MCR) and Mandatory Commercial Organics Recycling (MORe) review: CalRecycle also reviews jurisdictions' implementation of their MCR and MORe

programs. If a jurisdiction has not been able to implement a commercial recycling program that is appropriate for the jurisdiction and meets the needs of its businesses, CalRecycle looks at a number of factors in assessing whether the jurisdiction has made a good faith effort to implement these programs. These factors include the impact of markets and the efforts the jurisdiction has made to investigate local and regional marketing options and recycling opportunities with the private sector. More specifics can be found in the CIWMP Enforcement Policy Part II, page 22 re: MCR and 28-29 re: MORe , and PRC 42649.3(i)(5) and 42649.82(h)(6) and 14 California Code of Regulations §18839.

Health and Safety Considerations Associated with Storage

We understand that National Sword is causing back-ups and longer storage times of processed recycled materials at solid waste facilities and recycling centers. Solid waste facility operators can discuss potential permitting options or request a Solid Waste Local Enforcement Agency to grant a temporary waiver of storage restrictions. The waiver would allow additional amounts of recyclables and longer timeframes to store recyclables at the solid waste site as long as the additional storage does not create public health and safety or environmental issues. The process for requesting and processing a temporary waiver is found in state solid waste regulations. In addition, public health and safety is a priority at solid waste facilities and recycling centers. Several industry sources have published best management practices for the storage of baled recyclable materials. We've provided a synopsis of these practices below:

Have a Storage Management Operations Plan describing procedures for receiving, storing, and shipping baled recyclables.

- Unload baled recyclables by forklift and stack in a specific storage area in a configuration that provides for long-term stability. If applicable, stacked bales may be overlapped or staggered to improve the stability of the stacks. Height of the bales should be no greater than four bales high.
- The bale storage area should allow forklift operators to safely move materials and allow for the safe loading of trailers that are picking up bales of materials.

To prevent contact with storm water, and to control vectors and nuisance, the following may be employed:

- Limit bale contact with the ground (e.g., on pallets and/or tarps)
- Maintain facility cleaning, housekeeping and litter control
- Remove putrescible material, if observed
- Maintain heavy equipment to ensure no oil or fuel leakage occurs; clean up spills or leaks immediately
- Establish a first in/first out material handling process
- Where necessary, place berms or other structures to divert storm water from coming into contact with bales

Fire Hazard Mitigations:

- Consult with your local fire district to employ fire hazard mitigations
- Keep adequate heavy equipment available on-site: (e.g., front loaders, bulldozers, water trucks, bobcats), fire hoses, dedicated fire pump and water tanks, and fire extinguishers.
- Identify a maximum size of the storage area including length/width/height.
- Maintain appropriate spacing between piles and the perimeter, maintain fire lanes
- Inspect piles daily for potential fire hazards
- Monitor pile temperatures at least once a week

Coordinate with the Local Enforcement Agency and any local or state authorities responsible for the regulatory oversight of the facility.

For further information on best practices for storing materials, here are some additional resources from Waste 360 and Environmental Protection Authority, Victoria.

Reducing Waste and Increasing Domestic Infrastructure

Reducing the generation of waste before it enters the waste stream reduces costs and conserves resources. Manufacturers, consumers, and governments all have a role to play in reducing waste. For example, manufacturers can reduce unnecessary packaging on products, consumers can choose to use reusable instead of single use, disposable products, and local government can procure products with recycled content. Waste prevention has the potential to reduce reliance on foreign markets, as there is no need to export what California has not generated. We will continue to work with you and all stakeholders to develop waste prevention opportunities and policies. With that said, we will continue to generate a significant amount of materials in California. Upstream solutions will need to be paired with the development of domestic processing and manufacturing for us to successfully manage our recyclables.

Building infrastructure to handle the materials we collect now, and the even greater amounts we will need to collect when SB 1383 goes into effect, is a daunting long-term task that will take years to achieve. Given the unpredictability of the marketplace, it's even more important that state and local governments and the private sector begin making siting and investment decisions now to develop more domestic (California and the U.S.) infrastructure for manufacturers using recycled content feedstock.

As CalRecycle communicated in January, we are committed to using our available resources to help build a more robust materials processing infrastructure in California. CalRecycle currently provides funding through its greenhouse gas (GHG) grant and loan programs and Recycling Market Development Zone program (RMDZ), and we work closely with the Governor's Office of Business and Economic Development (GO-Biz) to assist manufacturers that want to site or expand their operations in the state. Over the past four years, the GHG grant program has provided $86 million in funding to 31 recycling projects and the GHG loan program has provided $1.5 million in funding for two projects for construction, renovation, and expansion of new in-state capacity. The RMDZ loan program has provided $145 million in funding to 192 recycling manufacturers in the state, since inception of the RMDZ loan program in FY 1993-94. There is increasing enthusiasm from companies interested in utilizing California's waste stream to make new products such as compost, biofuels, fibers and plastics. I urge you to take advantage of these.

Another opportunity to support manufacturers using recycled content feedstock is for jurisdictions to ensure their General Plan includes these types of facilities in their land use element. Just last year the California Governor's Office of Planning and Research (OPR) completed the first comprehensive update to the General Plan Guidelines (GPG) since 2003 (General Plan Guidelines Update, Completed August 2, 2017). One of the major changes includes an expanded section addressing the need for additional recycling, anaerobic digestion, composting, and manufacturing facilities in the land use element. This new guidance provides examples for local jurisdictions to use when updating their General Plans. Additional information is on the OPR General Plan Guidelines website. You can stay informed about GPG-related information by signing up for the GPG email list.

Next Steps

CalRecycle will host a workshop in Sacramento in early June to encourage dialogue and share information about the impacts of China's import policies. Workshop details will be posted on our National Sword website. We will use this convening as an opportunity to discuss changing market dynamics, impacts on facilities, domestic capacity for processing and manufacturing using recycled content, and to identify other short and long-term solutions to the current recycling challenges. This is not the first time the international recycling commodities market has faced a major disruption and it won't be the last. California must capitalize on these disruptions and turn them into an opportunity to strengthen our environmental resilience and our economy. This will require us to reassess product design, materials collection, and processing systems. I look forward to working with you to build a more sustainable recycling infrastructure in California.

Scott Smithline
Director

APPENDIX F: SUMMARY OF RECYCLING PROGRAM CHANGES AS OF AUGUST 17, 2018 FROM NATIONAL WASTE & RECYCLING ASSOCIATION (REPRINTED WITH PERMISSION)

National Waste & Recycling Association℠
Collect. Recycle. Innovate.

Recycling Program Changes – Ongoing through August 17, 2018

Overview

NWRA members are seeing the impacts of China's policies limiting imported recyclables. Numerous programs across the country are making programmatic changes. Here is a sampling of some of the changes.

Discussion

- **Programmatic changes.** Communities are focused on improving recycling quality and changing what is acceptable.
  - The City of Austin identified the following common contaminants: garden hoses, plastic foam, pizza boxes, and syringes.
  - The Stark-Tuscarawas-Wayne Joint Solid Waste Management District in Ohio also mentions food contaminated pizza boxes as well as plastic bags, partially filled bottles and cans as well as garden hoses and window pane glass.
  - Rogue Disposal in Southern Oregon dropped glass from curbside. Instead it is being redirected to drop-off locations. Rogue now only accepts four items: OCC, metal cans, milk jug style containers and ONP.
  - Brookline, Massachusetts residents received reminders through OOPS! Stickers passed out in their carts when volunteers peered into bins to determine whether the public was throwing trash into their recycling bins.
  - Wyckoff, NJ switched to dual stream recycling with every other week collection alternating between fiber and container streams.
  - Bosque Farms, NM was informed by their contractor AC Disposal that the local MRF will no longer accept their single-stream leading to a suspension of recycling services. Recycling will now be limited to a drop-off location where material will be required to be segregated. AC Disposal has reached out to three facilities in Albuquerque but does not know when they will begin accepting materials again.
  - Due to increases in the cost of recycling, Republic Services has increased rates to customers in Indianapolis by as much as 100%.
  - In Connecticut, Housatonic Resources Recovery Authority contracts for recycling with 11-member towns has seen tip fees for recyclables go from $10/ton four years ago to $25/ton two years ago to $40/ton earlier this year. Commodity rebates from Winter Brothers have also declined.
  - Ecomaine has sent two bills totaling $5500 to the town of Sanford, ME as a penalty for 25% contamination. Penalties could reach $100,000/year. Waterboro, ME is considering removing its unmanned drop-off location due to contamination. Along

with Casella Waste Systems, these communities are focused on improving education.

- Andover, MA will modify what will be acceptable in the recycling stream in the near future. They plan on removing pizza boxes, shredded paper and #6 plastics. An updated list is expected by the end of July.
- Deerfield Beach and Sunrise, FL residents' recycling will not be sent to either the landfill or WTE after the cities did not replace the previous contracts. Recyclables in Florida that are sent to the WTE facility will "count as recycling" due to electricity generation. Deerfield Beach will cease curbside collection after the City Commission did not approve a new recycling contract with WM after the previous one expired on July 2nd. The processing costs were anticipated to rise to $96/ton from the previous $51/ton. Coupled with a potential fee for contamination, the city was facing a price increase of $400,000 annually. Deerfield Beach will resume recycling services on September 3rd but, depending on contamination may drop commercial and multi-family recycling in the future.
- Lincolnton, NC stopped recycling last month because Sonoco could not find a home for the material. Mecklenburg County's contractor, Republic Services, now gives away bales of material or even pays to get rid of them leading officials to say that the economics of recycling is "broken" with recycling costing $70/ton with a potential to rise to $90/ton whereas disposal only costs $33/ton. To manage contamination, the 35 ton/hour MRF operates at only 25 tons/hour with plastic bags as the "bane" of recycling.
- Westfield, NJ announced that new guidelines for recycling eliminating #3-#7 plastic by the end of the year and immediately banning plastic bags and shredded paper.
- Washington, DC Director of Public Works, Christopher Shorter, said that it used to be cheaper to recycle material, but now that has changed. The city wants to better educate the residents and is considering other options including a third cart for organics and pay-as-you-throw.
- Monterey Regional Waste Management District in California will no longer accept plastic bags for recycling beginning August 1st.
- Jefferson County, WA contractor Skookum's broker has stopped accepted mixed paper and commingled tin/aluminum and plastic bales.
- Arab, AL rejected a request by Republic to increase rates but will be looking to educate the public about contamination by putting out flyers on what is recyclable.
- Latah County, ID commissioners are considering whether to drop glass and plastic from their recycling drop-off program because recycling costs of $130/ton now exceed landfilling costs of $85/ton.
- Johnson County Recycling District, IN will end its dropoff recycling program on July 31st due to rising costs.
- Mt. Lebanon, PA residents and neighboring South Hills Area Council of Governments will no longer be able to recycle glass or #3-7 plastics. Rejected recyclables will result in fines of $150 beginning in 2020.
- Sierra Vista, AZ has limited recycling to metal food and beverage cans, #1 & 2 plastic and OCC. They have also increased their collection fees by 15%.

- Franklin, NH is sending recyclables to the waste-to-energy facility. They are maintaining the recycling carts to encourage residents to stay in the "recycling habit" in hopes that the market will turn around. The cost to get rid of recyclables is $129/ton up from previously being paid $20/ton and much greater than the $68/ton for disposal.
- Lincoln County, NM will no longer accept mixed paper or paperboard at its drop-off sites.
- Fort Edward, NY is sending recyclables to the waste-to-energy facility after deciding not to pay the $120/ton fee to drop off material at County Waste's recycling facility. The state Department of Environmental Conservation is working with the town on their recycling. The state recognizes the challenges and is promoting "when in doubt, keep it out" but did also say that state law requires communities to separate recyclables when markets exist.
- Fitchburg, MA is paying Waste Management more than $40/ton to tip their recycling.
- Worcester, MA is paying Casella more than $25/ton to tip.
- Weber County School District, UT has eliminated their recycling dumpsters due to costs.
- Laconia, NH adopted the motto, "glass is trash" in May.
- Frederick County, VA has been unable to find a financially viable way manage its glass and stopped accepting it at its drop-off locations in November 2016 when their contractor, Williams Recycling, began charging a tip fee of $72/ton. Reviving glass recycling would cost more than $53,000/year. Where previously the county received a rebate for mixed paper, they now receive none.
- Johnson County, IN has discontinued its drop-off program, eliminating the only option for some in the rural county to recycle. The Recycling District could not afford to pay haulers to take the material and the program was discontinued on July 31st.
- Greene County, IN stopped taking glass.
- Monroe County, IN won't take plastic bags or shrink wrap.
- Lancaster County, PA has trimmed its curbside recycling program to the "Big Four": flattened OCC, plastic bottles, metal cans and glass.
- Kankakee, IL will discontinue their curbside recycling program serviced by Republic Services on September 1st. instead, Republic will provide drop-off containers. The program's contamination was too high.
- South Hills area, PA, which represents 18 communities, will no longer accept mixed plastic or glass beginning in January. Failure to follow the new rules will result in penalties.
- Tuscon, AZ officials are considering changing the recycling program in a variety of ways including: EOW pickup, higher rates – from 15-45 cents/hh/month to 75 cents/hh/month, enforcement on contamination and increased public education.
- Flagstaff, AZ has eliminated rigid plastics from their program as of June 1st.
- Whidbey Island, WA will limit plastic recyclables to #1 & 2 plastic bottles, tubs and jars beginning August 18th.

- Nashville, TN company Hudgins Disposal let its customers know that recycling would only be picked up once/month and not at all if contaminated.
- Centre County, PA has eliminated black plastic and plastic cups and film from their recycling program.
- Douglas County, OR stopped its OCC program effective August 19th due to contamination.
- Ontario County, NY's Planning and Environmental Management Committee approved a motion providing relief from recycling mandates. The motion will be decided by the full board of supervisors.
- Adrian Township, MI will discontinue their recycling center effective September 1. The center cost $50,000 to run and the material was likely being incinerated. Modern Waste could not find a market.
- Tecumseh Township, MI who split costs for recycling with Raising Township decided not to continue when higher rates were proposed by Modern Waste.
- Unity, ME will only accept #2 and #4 platsics.

- **Recycling contracts.** The industry continues to adjust to the changes in recycling. Many communities are reviewing their recycling contracts and some are beginning to renegotiate them.
  - Western Recycling and the Pocatello City, Idaho will renegotiate their contract after the city approved this on June 14th.
  - On the east coast, Penn Waste is approaching municipalities about renegotiating their contracts. They currently collect recycling from 70 municipalities. Penn Waste updated their guidelines for recycling to go "back to basics" on July 1st. The items they will recycle is limited to: cans; newspapers; #1, 2, & 5 plastic and glass bottles and jars; cardboard; and cartons.
  - Koekuk County, Iowa will issue a one-year renewed contract to Waste Management rather than the typical three-contract due to preferences by both parties as a result of "tanking" recycling when China got "real finnicky."
  - Recology and SeaTac, WA are negotiating an amendment or surcharge to the existing contract to address changes in recycling.
  - Republic Services is requesting that Hartford, CT's Materials Innovation and Recycling Authority (MIRA) consider renegotiating the contract due to losses it is experiencing from depressed commodity prices.
  - Coeur d'Alene agreed to restructure the city's solid waste contract with Coeur d'Alene Garbage Services to "absorb a crash in market demand for recyclables."
  - Beginning July 2nd, Pensacola, FL will once again have an outlet for recyclables after reaching an agreement with Emerald Coast Utilities Authority. For nine months, recycling was landfilled after Tarpon Paper stopped taking the city's material.
  - Brighton, MI recently approved a one-year contract with Waste Management that includes a $9/household increase directly attributable to China's National Sword policy.

- Auburndale, FL commissioners are considering a request by Advanced Disposal and Republic services to increase recycling fees from $2.53/month to $4/month in October and $5.46/month in October 2019. A vote is expected in August.
- Decatur, GA switches service providers due to cost concerns related to recycling. The city signed a one-year contract with Pratt. Curbside glass will now be managed in a separate bin.
- Las Cruces-Dona Ana County, NM approved a rate hike from $5.40 to $6.50 beginning September 1. There will also be an effort to reduce contamination. However, recent efforts to limit recyclables to a "fab five" has flopped. What happens to items that do not have a market is uncertain as it is currently being stockpiled.
- Richland, WA contractor Clayton Ward has found only a single vendor to take their recyclables, Waste Management's SMaRT Center. Last year, Richland was paid about $16/ton for its materials. This year, Richland has paid SMaRT $122.60/ton to take the recycling.
- Village of Walnut, IL approved a 54 cent per household increase to Republic Services to address higher costs related to recycling.
- Staunton, VA will pay 16 times more for recycling services beginning August 1st. Sunoco Recycling will charge $52,000 annually for what the city is currently paying $3100. In addition to curbside collection, Sunoco provides drop-off containers which were previously free but will now cost the city $75/month each. Material costs will also change with the city receiving payment for OCC and aluminum but paying for mixed paper ($50/ton), plastic ($60/ton), and glass ($32.50/ton).
- Copley, OH is seeking legal advice on a 95-cent/month/household increase requested by Republic Services. They are in the third year of a five-year contract.
- Rapids City, IL agreed to pay $1900 more annually for recycling services to Republic Services for its 406 households. The current contract expires in June 2019.
- Leominster, MA's new contract with G.W. Shaw & Son went from $0 for recycling to $87.50/ton which based on last year's recycling rate could cost the city an additional $220,000.
- Fitchburg, MA also began paying for recycling for the first time in 25 years at $40/ton when Waste Management began enforcing a contract provision that allowed them to charge.
- Stamford, CT rebid their recycling contract after the previous one with City Carting expired in June. The two bids were for $58 and $80/ton with City Carting providing the low bid. Prior to this bid, recycling had been a revenue source for the city by as much as $250,000. Last year, they received $95,000. The new contract requires the city to pay $700,000.
- West Orange, NJ approved a new 5-year contract with Suburban Disposal for refuse and recycling collection. The $2.9 million contract represents a 65% increase over the previous contract.
- Chenoa City Council, IL is weighing options for managing recycling including whether to pay an additional 70 cents per customer for 12-months with rates to change again

at the end depending on markets. Alternatively, the city might consider eliminating the recycling program.

- North Salem, NJ rebid its recycling contract due to expire at the end of August. Only the current contractor, City Carting, provided a new bid at a 43% increase over the previous year. The bid went from $632,000 to $903,000. The reason for this increase is that the Beacon Plant recycling center used to pay $15/ton but now charge $61/ton and may increase to $85/ton. Garbage disposal, by comparison, is $72/ton. Other potential bidders cited gas prices and union wage increases as issues.
- Cordova, IL will face a 39 cent/month increase in waste management bills beginning in September to offset new recycling costs from Republic Services. The new recycling collection contract was extended to 2025.
- Raisin Township, MI is looking at options to keep their drop-off facility open as a result of a notice from their contractor, Modern Waste, that the cost per load would increase from $18.75 to $133. The recycling center will close by September 1.
- Valley Center, KS is facing a $1.63 increase per customer from its curbside contractor, Waste Management. A previous drop-off center operated by Waste Connections was removed by the company because of cost considerations. Waste Management stated that the reason for the increase is that they have to pay Waste Connections $90/ton at the transfer station where previously there was no cost.
- Auburndale, FL is reviewing a request from Advanced Disposal to increase curbside costs from a stipulated contract rate of $2.53/month to $4/month effective October. The rate would increase to $5.46 next October.
- Gouldsboro, ME has eliminated the curbside recycling program beginning September 1st due to rising costs. The price to recycle went from $45/ton last November to $140/ton and is expected to continue to rise, possibly as high as $200/ton by the end of the year. Casella Waste Systems will not offer a fixed price for recycling due to market volatility.
- Oyster Bay, NY will continue to be paid by Winter Brothers for their recycling through the end of 2018 at a rate of $25.08/ton. However, the four one-year extensions will not be enforced and the town will rebid the contract for 2019 and beyond.
- Roy & North Ogden, UT face increases to recycling costs. Waste Management has approached the City of Roy about raising collection costs by $1.23/month from $10.94 to $12.17 beginning in December. North Ogden faced a similar request earlier from Republic Services and raised rates by $0.49/month from $11.83 to $12.33.
- DeBary, FL voted to immediately suspend its residential recycling program at the city council meeting on August 1st after being informed by its processor, GEL Corp., proposed fees for the previously free service. The proposed fee was between $80 and $120/ton.
- Volusia County, FL has received a request from GEL Corp. to pay $80/ton for processing recycling, an increase to the current $35/ton contracted rate. The county council will consider the request at their September meeting.

- Orange City, FL has a current contract with WCA for recycling at rate of $14.28/year/household. The contract expires on September 30, 2020 and is limited to increases tied to the CPI. WCA takes the material to Waste Connection's Sanford Recycling and Transfer Station.
- Deland, FL is considering GEL Corp.'s request for processing fees. They are also considering alternative options.
- Foley, AL will sign a one-year contract with Emerald Coast Utilities Authority. The ECUA will not charge for recycling but will also not provide any revenue. This is cheaper than sending it to the landfill which would be $33/ton. The city will reevaluate its options if the price climbs above the $33/ton mark and consider dropping down to OCC and aluminum.
- Madeira Beach, FL is negotiating its new collection contract for recycling with Waste Connections. The new contract increases the rate for houses by 116% and for condos by 56%. Waste Connections cited higher processing costs as the primary reason.
- Winter Haven, FL has approved a request for a rate increase of 38% going from $2.50/resident/month to $3.44/resident/month from Advanced Disposal. The rate would go up again in FY19/20 to $3.94/resident/month.
- Waltham, MA voted to pay $100,000 to cover increased recycling costs. EZ Disposal, the city's contractor, said that it is now costing them over $90/ton to tip their recycling, significantly more than $52/ton for waste disposal. Saying that other communities pay up to $200/ton, Waltham's "recycling is cleaner…keep[s]…costs down."
- Mansfield, MA has received a request from Waste Management outlining issues that affect recycling costs. The town could face additional costs of $165,000/year for services. Both China and glass were cited as issues. Town Selectman, Neil Rhein, who is also founder of Keep Massachusetts and Keep Mansfield Beautiful said, "The whole industry is on the verge of collapse."
- Largo, FL commissioners voted to increase solid waste fees by 20%, an increase of $3.50/household/month. Since 2014, the city has received about $300,000 annually for its recyclables. Beginning in February, they will have to pay up to $500,000/year.
- Parkside, PA used to receive about $35/ton for their materials ten years ago. Now they have to pay $65/ton to get rid of it. They received word on Wednesday that it would go up to $85/ton with the potential to increase to $120/ton by the end of the year.
- Upper Darby, PA received $6-7/ton as recently as 2015. In 2017, they were paying $35/ton. They budgeted for $37/ton for 2018 but the hauler stopped offering the service in March forcing the town to use WM for $55/ton. Contaminated loads cost $150/ton.
- Livingston, MI's Recycle Livingston raise membership fees by $10 to address increased fees from GFL who used to take materials for free but beginning September 1 will charge $200/load. In addition, only #1 & 2 plastics will be accepted.

- Dartmouth, MA raised rates for residents for recycling from $80 to $90/year to address a changed contractor. Their previous contractor WeCare Environmental halted operations. Dartmouth now uses Republic Services.
- St. Joseph County, IN curbside program may be dropped next year due to bidding services instead of approving a 10-year contract extension with Borden Waste-Away Service. The contract extension would have come with no increased price. Instead, it was rebid and Borden, the only bidder, bid an increase from $28/hh/yr to $35/hh/yr. The new bid also requires the city to split expenses when sales revenue fall below $50/ton.
- Norfolk, VA's contractor, TFC Recycling, wrote a letter to the city announcing that it will be terminating its contract by the end of October originally scheduled to run through 2022.

- **Joint Advisory on Recycling Contracts.** NWRA and SWANA developed a joint advisory for recycling contracts along with two addenda. These may be helpful when approaching municipalities about contracts. NWRA and SWANA anticipate reissuing the advisory next week with a new preface to increase awareness.

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- **Dartmouth, MA.** http://www.southcoasttoday.com/news/20180531/with-rising-recycling-costs-dartmouth-residents-will-see-10-increase
- **Norfolk, VA.** https://pilotonline.com/news/government/local/article_e8932d8a-a253-11e8-8891-d73f1c2139bb.html

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- **NWRA-SWANA Joint Advisory for recycling contracts.** https://cdn.ymaws.com/wasterecycling.org/resource/resmgr/docs/resource_library/SWANA-NWRA_Best_Contracting_.pdf

APPENDIX G: EXECUTIVE SUMMARY OF CITY OF NAPA 2016 SOLID WASTE REVENUE BONDS (GREEN BONDS)

EXECUTIVE SUMMARY OF CITY OF NAPA 2016 SOLID WASTE REVENUE BONDS (GREEN BONDS)

Size of Issuance	12,500,000
Proceeds	12,230,879
Costs	269,121
Closing Date	10/20/2016
Credit Rating	AA / Stable
Security	1st lien on Net Revenue of Solid Waste Enterprise only
Tax Status	Federally taxable; CA tax-exempt
Average Payment	868,646
Max. Annual Payment	871,210
Rate Covenent	1.25x Coverage
Additional Bonds Test	1.25x Coverage
Total Interest Cost (TIC)	2.98%
All-In TIC	3.15%

Bond Payments

	February 1st	August 1st	Bond Year Total
2017	91,519.89	163,104.75	254,624.64
2018	163,104.75	708,104.75	871,209.50
2019	160,134.50	710,134.50	870,269.00
2020	156,807.00	711,807.00	868,614.00
2021	152,783.25	717,783.25	870,566.50
2022	148,178.50	718,178.50	866,357.00
2023	142,849.00	727,849.00	870,698.00
2024	136,794.25	731,794.25	868,588.50
2025	130,249.25	740,249.25	870,498.50
2026	123,142.75	743,142.75	866,285.50
2027	115,578.75	750,578.75	866,157.50
2028	106,403.00	761,403.00	867,806.00
2029	96,938.25	771,938.25	868,876.50
2030	87,184.50	782,184.50	869,369.00
2031	77,141.75	792,141.75	869,283.50
2032	66,810.00	801,810.00	868,620.00
2033	54,315.00	814,315.00	868,630.00
2034	41,395.00	826,395.00	867,790.00
2035	28,050.00	838,050.00	866,100.00
2036	14,280.00	854,280.00	868,560.00
		Total:	16,758,903.64

APPENDIX H: ABBREVIATED STUDY OBSERVATIONS ON PACKAGED ORGANICS PROGRAM

M E M O R A N D U M

Delivered Electronically

DATE: April 18, 2019

TO: Kevin Miller, Materials Diversion Administrator
Utilities Department
City of Napa
1600 First Street
Napa, CA 94559

FROM: William O'Toole, President
EcoNomics, Inc.

RE: Abbreviated Study Observations on Packaged Organics Program

Background

The City of Napa requested EcoNomics Inc. to conduct an abbreviated study on the appropriate commercial rate to charge for the Packaged Organics Program as described in Attachment F Section 3.4.4 of the City's NRWS 2018 Contract Amendment.

Study Approach

EcoNomics used the following reference documents in its review.

- The City's Calrecycle grant application for the depackaging equipment
- EcoNomics food scrap rate impact analysis done for the City in 2014
- NRWS CY2018 monthly Attachment R and MDF reports
- Notes from discussion with City staff during February/March 2019

Two approaches were weighed when constructing the Packaged Organics study. One, a cost buildup method was considered that would utilize data from the current 2019 food scrap program on costs of collection with data on vehicle operating costs, labor costs, route efficiencies, number of accounts per collection route, and number of lifts performed. A second, comparative cost method was also considered which would ask. "Are there any significant differences in Food Scrap collection versus the collection of Packaged Organics that would warrant a different rate?"

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To decide which approach to use, a reexamination of the data from EcoNomics' 2014 Food Scrap rate impact study was done. The data in the 2014 study, while useful as a baseline, would take considerable time and resources to bring up to date the formulas, spreadsheets, cost structures and the analytical process performed in the original study to actual costs and rates adopted by the City in its 2018 Contract Amendment. However, the comparative costs of food scrap collection could be qualitatively compared to answer the question, "Are there any significant differences in Food Scrap collection versus the collection of Packaged Organics that would warrant a different rate?"

Therefore, The Comparative Study approach was determined to be the fastest and most cost effective way to perform the abbreviated Organics Packaging study.

Procedure

The following basic assumptions were examined and determined in conducting this abbreviated study on the Packaged Organics Program:

- The differences in operating and labor costs of the collection vehicles for both programs are minor
- Collection of Packaged Organics on a Food Scrap route will not materially impact the quality of the route.
    - The beginning number of Packaged Organics stops will be 15 to 25 compared to the 150 food scrap stops on existing routes
    - All collected food scraps are being processed though the depackaging line and negligible amounts of Packaged Organics material will impact the existing processing procedures
- Neither route density nor routing efficiencies will be negatively impacted by inclusion of Packaged Organics on existing routes during the first 2 years of program expansion.
- The cost structure and rates established in the 2014 Food Scrap rate study were based on a participation of 200 restaurants by Q4 2016. The rate structure still retains a resiliency into 2019.

Conclusion and Recommendation

The answer to the question, *"Are there any significant differences in Food Scrap collection versus the collection of Packaged Organics that would warrant a different rate?"* is no. The current rate of 75% of the MSW charge will cover the costs of the introduction and operation of the Packaged Organics program for FY years 2019 and 2020.

It is recommended that the current food scrap rate be used for both the existing food scrap collection and the Packed Organics program.

APPENDIX I: UPDATED 2019 STUDY OF NAPA RECYCLING AND REFUSE COLLECTION WEIGHT IMPACT ON CITY STREETS

See next page

Memorandum

March 28, 2019

To:	The City of Napa	Project:	Napa Refuse Vehicle Maintenance Impact Analysis
From:	Kamesh Vedula, PE, TE Zach Stinger, EIT	Ref/Job No.:	25-1753-00
CC:	Philip Brun, PE/City of Napa	File No.:	C2485MEM004.DOCX

Subject: 2019 Refuse Vehicle Weight Update

1. Introduction

GHD has been retained by the City of Napa (City) to prepare a memorandum analyzing the impact of solid waste, recycling, and yard waste vehicles (Refuse Vehicles) on street maintenance. The objective of this memorandum are as follows:

- Determine the percentage impact of Refuse Vehicles, other trucks, and automobiles on the City's streets.

The analysis performed in this memorandum was based on available information obtained from the City pertaining to roadway types, vehicle percentages, and data for the types of Refuse Vehicles, including average weights, average refuse weights, and service frequency.

1.1 Background

The need for road maintenance is based on the deterioration of the roadway, which is primarily influenced by continued use. The deterioration of roadways is caused largely by heavy trucks, as deterioration increases exponentially with the size and weight of a vehicle. The configuration of a truck will also affect the impact on the roadway, as additional axles will spread the weight out, decreasing the weight at each wheel, thereby reducing the damage. As refuse vehicles are among the heaviest vehicles operating on city streets, they are a large factor in the cost of maintaining the roadway.

The solid waste, recycling, and yard waste services in the City are provided by Napa Recycling and Waste Services (NRWS). All residential services are provided weekly with side-loading vehicles that generally make a single pass down each side of the street to provide service for each material type collected (i.e., each truck services one side of the street on each pass). Commercial solid waste, recycling, and yard waste services are provided in varying frequencies to customers by front- and side-loading vehicles. Based on information provided by the City and NRWS, the average frequency each type of service is provided has been calculated:

- commercial solid waste approximately 2.5 times per week
- commercial recycling approximately 3.0 times per week
- commercial yard waste approximately 3.5 times per week

2. Refuse Vehicle Impact Analysis

The impacts of each vehicle type are compared by calculating the cumulative Equivalent Single Axle Load (ESAL) of each type of vehicle traveling on the City's streets. This is calculated by combining the total vehicle trips and the ESAL for each vehicle type. All of the information used to determine the traffic breakdown and ESALs was provided by the City of Napa and NRWS.

2.1 Traffic Breakdown

The traffic breakdown was determined using the City-provided Average Daily Traffic (ADT) information, roadway type breakdown, truck percentages, and the average number of trips made by refuse vehicles listed in the background section. Based on these values, the vehicle type can be broken up into the appropriate percentages of traffic. For the purposes of calculating the traffic breakdown, the residential refuse vehicles were assumed to have originally been counted as heavy vehicles and traveled along arterials and collectors to get to the residential roadways, adding to the refuse vehicle quantities on those roadways.

Table 2.1 presents roadway classifications by percentages and the vehicle percentage use by type.

TABLE 2.1: ROADWAY STATISTICS

Classification	% of roadways	Total ADT	Vehicle Type	% of Traffic
Arterial	20.8%	10,721	Passenger Vehicle	94.00%
			Heavy Truck	5.97%
			Solid Waste	0.01%
			Recycling	0.01%
			Yard Waste	0.01%
Collector	26.2%	3,341	Passenger Vehicle	94.00%
			Heavy Truck	5.90%
			Solid Waste	0.03%
			Recycling	0.03%
			Yard Waste	0.04%
Residential	53.0%	283	Passenger Vehicle	96.50%
			Heavy Truck	3.20%
			Solid Waste	0.10%
			Recycling	0.10%
			Yard Waste	0.10%

Note:
All information provided by the City of Napa and NWRS
Refuse vehicles were assumed to have been originally counted as heavy vehicles, so the percent refuse vehicles were removed form the heavy vehicle percent

2.2 Equivalent Single Axle Loads

The ESAL for each type of vehicle was calculated to determine the impact each vehicle type would have on the roadway, based on the vehicle's weight and its distribution among the vehicle's axles. The following methodology was used to calculate the ESAL for each vehicle type:

1. Determine the total weight of the vehicle before weight distribution.
    a. Automobile totals are based on the weighted average of the vehicle types on the roadway and their average weights.
    b. The Refuse vehicle weights are determined from the average of the truck weights provided by the city for the 2019 refuse vehicle weights. The majority are listed as 4 axles, so the refuse vehicles were determined to have a single axle in the front and a tandem axle and single axle in the back.
    c. The truck weights were not needed, as the truck ESALS were determined based on the ESAL constants included in the Highway Design Manual Table 613.3A. Therefore, truck weights are not needed.
2. The single Axle weights are determined for the automobile by simply cutting the weight of the vehicle in half. From there, ESAL was calculated using the equation (Axle Weight/18,000)^4 shown on

http://www.pavementinteractive.org/equivalent-single-axle-load/, following Table 2.2, presented below. The ESAL is then doubled so both axles are taken into account.

TABLE 2.2: ESAL CALCULATIONS

Axle Type (lbs)	Axle Load (kN)	Axle Load (lbs)	Load Equivalency Factor (from AASHTO, 1993) Flexible	Load Equivalency Factor (from AASHTO, 1993) Rigid
Single Axle	8.9	2,000	0.0003	0.0002
	44.5	10,000	0.118	0.082
	62.3	14,000	0.399	0.341
	80.0	18,000	1.0	1.0
	89.0	20,000	1.4	1.57
	133.4	30,000	7.9	8.28
Tandem Axle	8.9	2,000	0.0001	0.0001
	44.5	10,000	0.011	0.013
	62.3	14,000	0.042	0.048
	80.0	18,000	0.109	0.133
	89.0	20,000	0.162	0.206
	133.4	30,000	0.703	1.14
	151.2	34,000	1.11	1.92
	177.9	40,000	2.06	3.74
	222.4	50,000	5.03	9.07

Note: Table source is Pavement Interactive

3. For the Refuse Vehicles 1/4 of the weight was determined to be on the front axle, 1/2 on the tandem axle, and 1/4 on the rear single axle. The ESAL for the front axle is determined using the equation (Axle Weight/18,000)^4.

4. The residential and commercial loads are the average number of tons taken from the NRWS Vehicle Trip worksheet and converted to pounds. This was used as it had an average per vehicle instead of a monthly total. The residential and commercial loads were cut in half to better represent the average loads when traveling.

    a. The weight on the tandem axle is a combination of the empty weight on the tandem axle and 2/3 of the refuse loading. Tandem ESAL is determined by interpolating from Table 2.2 presented above.

    b. The weight on the rear single axle is a combination of the empty weight on the axle and 1/3 of the refuse loading. The rear single axle ESAL is determined using the equation (Axle Weight/18,000)^4.

    c. The total ESALs are the combinations of all axle ESALs for the refuse vehicles.

Table 2.3 presents the yearly ESAL for each vehicle type.

TABLE 2.3: YEARLY EQUIVALENT SINGLE AXLE LOADS

	Residential			Commercial			Equivalent Truck		Equivalent
	Solid Waste	Recycling	Yard Waste	Solid Waste	Recycling	Yard Waste	3-axle	2-axle	Automobile
Empty Weight (lbs)	37,131	32,508	35,764	37,131	32,508	35,764	-	-	5,375
Load Weight (lbs)	8,221	6,820	10,597	8,221	7,581	9,222	-	-	-
Yearly ESAL	249.7	129.3	287.1	249.7	145.3	247.9	184	69	0.4

5. The overall Yearly ESALs are calculated per roadway type based on the average ADT and the vehicle percentages presented in Table 2.1. This determines the percentage share of ESAL's for each vehicle type per roadway type.

6. The overall percent share is then weighted by the share of roadway types as presented in Table 2.1.

Table 2.4 presents the roadway impacts for each vehicle type for both the 2009 study and this study.

TABLE 2.4: ROADWAY IMPACTS

	2009	2018
Vehicle Type	Percent of Total Impacts	Percent of Total Impacts
Solid Waste Vehicle	4.3%	4.3%
Recycling Vehicle	4.6%	2.3%
Yard Waste Vehicle	6.2%	5.0%
Refuse Vehicle Subtotal	15.1%	11.6%
Others Trucks	79.0%	81.1%
Automobiles	5.9%	7.3%
Total	100%	100%

As presented in Table 2.4, refuse vehicles account for approximately 11.6% of the total impact that a typical street experiences. This is a decrease for the previous study's 15.1%, which is due to the new refuse vehicles in use having an additional rear axle, reducing the weight on each axle, and thereby reducing ESALs.

2.3 Limitations

- This analysis is based on a variety of assumptions, most of which have a reasonable range of values that could be used that would alter the results of this analysis. Therefore, changes to these assumptions could potentially have significant impacts on the findings and calculations.
- The calculations performed in this analysis were done following the previous methodology, however, as the previous report does not outline the exact calculations, the analysis does not follow the precise methodology. Therefore, differences in the calculations could potentially have impacts on the findings.

Appendix

City of Napa
Public Works Department
Transportation Engineering Division (TED)
Annual Traffic Count Data

July 2017

Annual Traffic Count Summary						
Street Names	Begin Location	End Location	**Functional Class**	**2015**	**2016**	**2017**
BEARD ROAD	PUEBLO AVE	TRANCAS ST	C	4,492	4,934	4,259
BIG RANCH ROAD	TRANCAS ST	NORTH CITY LIMITS	A		8,948	8,768
BORDEAUX WAY	NAPA VALLEY CORP. DR	NAPA VALLEY CORP. WY	C		838	912
BROWNS VALLEY ROAD	PARTRICK RD (W)	REDWOOD RD	C	3,666	2,437	3,660
BROWNS VALLEY ROAD	PARTRICK RD (W)	PARTRICK RD (E)	C		5,095	4,337
BROWNS VALLEY ROAD	PARTRICK RD (E)	LAUREL ST	A		12,897	11,430
BUHMAN AVENUE	SOUTH CITY LIMIT	BROWNS VALLEY RD	C	3,172	3,250	2,602
BYWAY EAST	EL CENTRO AVE	WINE COUNTRY AVE	C		2,332	1,540
CALIFORNIA BOULEVARD	LAUREL ST	SECOND ST	C		6,585	5,242
CALIFORNIA BOULEVARD	SECOND ST	FIRST ST	A		13,719	11,346
CALIFORNIA BOULEVARD	FIRST ST	LINCOLN AVE	A	19,859	13,830	13,094
CALIFORNIA BOULEVARD	LINCOLN AVE	PUEBLO AVE	A	17,680	20,112	13,115
CALIFORNIA BOULEVARD	PUEBLO AVE	TRANCAS ST	A		10,263	10,586
CLARK STREET	SILVERADO TR	EAST AVE	C		2,389	1,891
CLAY STREET	CALIFORNIA BLVD	JEFFERSON ST	C	5,197	3,874	3,752
CLAY STREET	JEFFERSON ST	FRANKLIN ST	C		2,426	2,668
COOMBS STREET	SPRUCE ST	DIVISION ST	C		6,618	6,411
COOMBS STREET	DIVISION ST	FIRST ST	C		4,904	5,373
COOMBSVILLE ROAD	SILVERADO TR	TERRACE DR	A		7,398	8,313
COOMBSVILLE ROAD	TERRACE DR	EAST CITY LIMIT	A		6,708	5,694
DRY CREEK ROAD	REDWOOD RD	TROWER AVE	C		4,191	3,975
DRY CREEK ROAD	TROWER AVE	NORTH CITY LIMIT	C		3,017	2,641
EAST AVENUE	SILVERADO TR (SOUTH)	FIRST ST	C		2,465	2,706
EAST AVENUE	FIRST ST	SILVERADO TR (NORTH)	C			2,679
EL CENTRO AVENUE	BYWAY EAST	JEFFERSON ST	C		1,893	1,822
EL CENTRO AVENUE	JEFFERSON ST	EAST CITY LIMIT	C		4,053	3,951
FIFTH STREET	COOMBS ST	MAIN ST	C	2,475	2,210	2,259
FIRST STREET	LAUREL ST	CALIFORNIA BLVD	A		17,444	15,890
FIRST STREET	CALIFORNIA BLVD	JEFFERSON ST	A	6,452	6,484	5,877
FIRST STREET	JEFFERSON ST	SOSCOL AVE	A	5,815	6,208	5,055
FIRST STREET	SOSCOL AVE	SILVERADO TR	A	5,460	4,517	5,075
FIRST STREET	SILVERADO TR	EAST AVE	C	1,506	1,466	1,293
FOOTHILL BOULEVARD	OLD SONOMA RD	LAUREL ST	C	2,661	2,715	2,722
FOSTER ROAD	SOUTH CITY LIMIT	ST. FRANCIS CIR	C	1,000	946	942
FOSTER ROAD	ST. FRANCIS CIR	IMOLA AVE WEST	C	1,972	2,579	2,466
FOSTER ROAD	IMOLA AVE WEST	OLD SONOMA RD	C	3,953	4,403	4,147
FRANKLIN STREET	FOURTH ST	PEARL ST	C	1,135	951	976
FREEWAY DRIVE	OLD SONOMA RD	LAUREL ST	C		7,403	7,307
FREEWAY DRIVE	LAUREL ST	FIRST ST	C	9,915	10,304	9,310
GARFIELD LANE	END BRIDGE	BIG RANCH RD	C	568	859	1,485

ATTACHMENT 2

Annual Traffic Count Summary						
Street Names	Begin Location	End Location	**Functional Class**	**2015**	**2016**	**2017**
GASSER DRIVE	IMOLA AVE	KANSAS ST	C		6,748	7,333
GOLDEN GATE DRIVE	SOUTH CITY LIMIT	IMOLA AVE WEST	C		1,157	1,091
HAYES STREET	JEFFERSON ST	SEMINARY ST				2,544
IMOLA AVENUE	SOSCOL AVE	SHURTLEFF AVE	C		10,561	8,393
IMOLA AVENUE	SHURTLEFF AVE	EAST CITY LIMIT	C	5,533	5,589	5,190
JACKSON STREET	MAIN ST	SOSCOL AVE	C		2,184	2,143
JEFFERSON STREET	OLD SONOMA RD	THIRD ST	A		11,523	10,500
JEFFERSON STREET	THIRD ST	CALISTOGA AVE	A		14,469	12,675
JEFFERSON STREET	CALISTOGA AVE	LINCOLN AVE	A		15,691	13,406
JEFFERSON STREET	LINCOLN AVE	TRANCAS ST	A		17,652	16,460
JEFFERSON STREET	TRANCAS ST	TROWER AVE	A	24,032	12,595	11,047
JEFFERSON STREET	TROWER AVE	SALVADOR AVE	A	5,507	5,510	5,438
KAISER ROAD	BASALT RD	HIGHWAY 221	A		6,655	6,299
KANSAS AVENUE	GASSER DR	SOSCOL AVE	C	6,087	8,209	6,990
KANSAS AVENUE	SOSCOL AVE	SHURTLEFF AVE	C		5,142	976
LAUREL STREET	FIRST ST	FOOTHILL BLVD	C		3,391	2,651
LAUREL STREET	FOOTHILL BLVD	FREEWAY DR	C	1,448	1,705	2,381
LAUREL STREET	WEST END	JEFFERSON ST	C		2,965	2,464
LAUREL STREET	JEFFERSON ST	COOMBS ST	C		927	1,080
LINCOLN AVENUE	SOLANO AVE	JEFFERSON ST	A		19,317	15,876
LINCOLN AVENUE	JEFFERSON ST	SOSCOL AVE	A		15,123	16,252
LINCOLN AVENUE	SOSCOL AVE	SILVERADO TR	A		16,188	14,330
LINDA VISTA AVENUE	LONE OAK AVE	PUEBLO AVE	C	3,494	3,916	3,561
LINDA VISTA AVENUE	PUEBLO AVE	REDWOOD RD	C	3,252	3,240	3,065
LINDA VISTA AVENUE	REDWOOD RD	TROWER AVE	C	2,840	2,682	2,793
LINDA VISTA AVENUE	TROWER AVE	NORTH CITY LIMIT	C	3,078	3,750	2,905
LONE OAK AVENUE	LINDA VISTA AVE	WEST LINCOLN AVE	C		3,790	3,588
MAIN STREET	FIFTH ST	PEARL ST	C		5,972	6,271
MAIN STREET	PEARL ST	LINCOLN AVE	C	4,465	4,686	3,984
MAIN STREET	LINCOLN AVE	PUEBLO AVE	C		3,144	3,058
MCKINSTRY STREET	FIRST ST	SOSCOL AVE	C	1,672	1,423	1,578
MONTECITO BOULEVARD	EAST AVE	LAKEVIEW BLVD	C		1,023	886
NAPA VALLEY CORPORATE D	SOUTH CITY LIMIT	NAPA VALLEY CORP WY	A		4,654	4,544
NAPA VALLEY CORPORATE D	NAPA VALLEY CORP WY	KAISER RD	A		3,390	3,666
NAPA VALLEY CORPORATE W	NAPA VALLEY CORP. DR	HIGHWAY 221	A		4,912	4,319
OLD SONOMA ROAD	WEST CITY LIMIT	FREEWAY DR	A		7,714	6,536
OLD SONOMA ROAD	FREEWAY DR	JEFFERSON ST	A	4,313	8,464	7,489
ORCHARD AVENUE	WEST CITY LIMIT	SOLANO AVENUE	C		1,373	
PARTRICK ROAD	WEST CITY LIMIT	BROWNS VALLEY RD (W)	C	701	2,709	627
PARTRICK ROAD	BROWNS VALLEY RD (W)	BROWNS VALLEY RD (E)	C	3,306	3,408	2,951
PEARL STREET	FRANKLIN ST	SOSCOL AVE	C	4,841	4,287	4,934

Annual Traffic Count Summary						
Street Names	Begin Location	End Location	**Functional Class**	**2015**	**2016**	**2017**
PUEBLO AVENUE	CALIFORNIA BLVD	JEFFERSON ST	C		6,719	6,532
PUEBLO AVENUE	JEFFERSON ST	SOSCOL AVE	C		6,497	6,251
REDWOOD ROAD	WEST CITY LIMITS	BROWNS VALLEY RD	C		1,679	1,556
REDWOOD ROAD	BROWNS VALLEY RD	DRY CREEK RD	C		4,243	3,621
REDWOOD ROAD	DRY CREEK RD	LINDA VISTA AVE	A	8,233	7,042	6,625
REDWOOD ROAD	LINDA VISTA AVE	HIGHWAY 29	A		13,938	16,389
SALVADOR AVENUE	SOLANO AVE	JEFFERSON ST	C		6,534	5,600
SALVADOR AVENUE	JEFFERSON ST	EAST CITY LIMIT	C		3,044	3,509
SARATOGA DRIVE	SILVERADO TR	CAPITOLA DR	C	1,655	2,517	2,272
SARATOGA DRIVE	CAPITOLA DR	TERRACE DR	C		2,253	2,102
SECOND STREET	CALIFORNIA BLVD	JEFFERSON ST	A	5,021	4,548	4,329
SECOND STREET	JEFFERSON ST	MAIN ST	A	5,095	6,273	5,951
SEMINARY STREET	LAUREL ST	HAYES ST	C	1,123	1,649	1,571
SHETLER AVENUE	SOSCOL AVE	SOMMER AVE	C	2,905	4,392	3,783
SHURTLEFF AVENUE	IMOLA AVE	TERRACE DR	C	3,200	2,739	2,889
SIERRA AVENUE	HWY 29	JEFFERSON ST	C		1,905	1,832
SIERRA AVENUE	JEFFERSON ST	EAST END	C	986	1,091	1,042
SOLANO AVENUE	LINCOLN AVE	REDWOOD RD	C		8,856	8,210
SOLANO AVENUE	REDWOOD RD	TROWER AVE	C		5,190	4,932
SOLANO AVENUE	TROWER AVE	SALVADOR AVE	C			4,703
SOLANO AVENUE	SALVADOR AVE	NORTH CITY LIMIT	C		5,010	4,700
SOSCOL AVENUE	SILVERADO TR	THIRD ST	A		27,754	23,624
SOSCOL AVENUE	THIRD ST	LINCOLN AVE	A		23,758	21,810
SOSCOL AVENUE	LINCOLN AVE	PUEBLO AVE	A		25,887	12,663
SOSCOL AVENUE	PUEBLO AVE	TRANCAS ST	A			20,546
SOUTH COOMBS STREET	IMOLA AVE	SPRUCE ST	C	6,731	7,140	7,058
SOUTH FREEWAY DRIVE	IMOLA AVE WEST	OLD SONOMA RD	C		5,937	5,635
SOUTH JEFFERSON STREET	SOUTH END	IMOLA AVE	C		5,540	5,375
SOUTH JEFFERSON STREET	IMOLA AVE	OLD SONOMA RD	A		9,712	9,173
SOUTH TERRACE DRIVE	IMOLA AVE	KANSAS AVE	C		763	738
SOUTH TERRACE DRIVE	KANSAS AVE	NORTH END (creek)	C		2,083	1,492
TERRACE DRIVE	SHURTLEFF AVE	COOMBSVILLE RD	C	4,088	3,609	3,545
THIRD STREET	CALIFORNIA BLVD	JEFFERSON ST	C		3,159	3,220
THIRD STREET	JEFFERSON ST	SOSCOL AVE	A	6,166	8,325	8,383
THIRD STREET	SOSCOL AVE	SILVERADO TR	A		6,786	6,350
TRANCAS STREET	HIGHWAY 29	JEFFERSON ST	A		31,664	25,151
TRANCAS STREET	JEFFERSON ST	BIG RANCH RD	A		22,369	20,850
TRANCAS STREET	BIG RANCH RD	EAST CITY LIMIT	A		18,385	14,223
TROWER AVENUE	DRY CREEK RD	LINDA VISTA AVE	A	4,637	5,242	5,112
TROWER AVENUE	LINDA VISTA AVE	SOLANO AVE	A	5,958	7,482	7,066
TROWER AVENUE	SOLANO AVE	JEFFERSON ST	A	8,362	7,541	7,893

Annual Traffic Count Summary						
Street Names	Begin Location	End Location	**Functional Class**	**2015**	**2016**	**2017**
TROWER AVENUE	JEFFERSON ST	EAST END	A	3,782	3,898	3,216
VILLA LANE	TRANCAS ST	NORTH END	C		2,751	729
WALNUT STREET	OLD SONOMA RD	LAUREL ST	C		4,432	3,087
WEST IMOLA AVENUE	FOSTER RD	HIGHWAY 29	C		5,331	6,095
WEST LINCOLN AVENUE	LONE OAK AVE	SOLANO AVE	C	4,238	4,229	3,618
WEST PUEBLO AVENUE	REDWOOD RD	LINDA VISTA AVE	C		2,280	1,915
WEST PUEBLO AVENUE	LINDA VISTA AVE	SOLANO AVE	C		4,436	2,960
WEST SALVADOR AVENUE	WEST CITY LIMITS	SOLANO AVE	C	346	397	403
WESTVIEW DRIVE	BROWNS VALLEY RD	REDWOOD RD	C		3,755	3,018
WINE COUNTRY AVENUE	DRY CREEK RD	EAST END	C		596	503
WINE COUNTRY AVENUE	LINDA VISTA AVE	BYWAY EAST	C	2,927	3,057	2,824
YAJOME STREET	PEARL ST	LINCOLN AVE	C	2,629	2,710	3,164
YAJOME STREET	LINCOLN AVE	PUEBLO AVE	C	1,800	1,970	2,081

2016 and 2017 NRWS Vehicle Trip by Service Type

ORIG DESC	NAPA CITY
MATERIAL	SINGLE

2017 Commercial Recycling

Row Labels	Count of VEHICLE	Average of TONS	Average of TARE
BIN TRUCK 421	1	1.71	18040
ROUTE TRUCK 203	254	5.741811024	38480
ROUTE TRUCK 205	6	5.135	36320
ROUTE TRUCK 206	92	5.272391304	36420
ROUTE TRUCK 207	85	4.917294118	38428.70588
ROUTE TRUCK 208	57	5.281578947	38681.40351
ROUTE TRUCK 209	2	3.375	37500
ROUTE TRUCK 210	33	6.053030303	37160
ROUTE TRUCK 211	484	5.633161157	37540
ROUTE TRUCK 212	338	6.121065089	36120
ROUTE TRUCK 306	1	5.57	32000
ROUTE TRUCK 312	1	6.81	33260
ROUTE TRUCK 324	1	0.86	33540
SPLIT BODY TRUCK	2	2.715	27960
Grand Total	**1357**	**5.685747973**	**37336.56595**

ORIG DESC	NAPA CITY
MATERIAL	(All)

2017 Commercial Yard Waste

Row Labels	Count of VEHICLE	Average of TONS	Average of TARE
NAPA RECYCLING TRUCK	3	9.676666667	35900
ROUTE TRUCK 201	1	9.64	38360
ROUTE TRUCK 207	184	6.408478261	37099.13043
ROUTE TRUCK 208	48	5.848333333	38462.5
ROUTE TRUCK 209	1	6.58	37500
ROUTE TRUCK 212	2	7.765	36120
ROUTE TRUCK 308	1	10.98	32040
ROUTE TRUCK 324	154	7.749350649	33540
Grand Total	**394**	**6.916345178**	**35851.37056**

ORIG DESC	NAPA CITY
MAT DESC	SINGLE STREAM RECYCL

2017 Residential Recycling

Row Labels	Count of VEHICLE	Average of TONS	Average of TARE
BIN TRUCK 421	3	2.813333333	18040
NAPA RECYCLING TRUCK	6	4.756666667	31523.33333
ROUTE TRUCK 201	1	7.77	38360
ROUTE TRUCK 203	2	4.62	38480
ROUTE TRUCK 208	31	6.076451613	38680
ROUTE TRUCK 301	1	2.94	32220
ROUTE TRUCK 302	463	5.006436285	32120
ROUTE TRUCK 303	460	5.821326087	31800
ROUTE TRUCK 304	5	3.64	32060
ROUTE TRUCK 305	3	4.08	32200
ROUTE TRUCK 306	4	4.31	32000
ROUTE TRUCK 307	1	4.97	32000
ROUTE TRUCK 308	169	4.936923077	32040
ROUTE TRUCK 309	4	3.175	31800
ROUTE TRUCK 310	2	3.365	31760
ROUTE TRUCK 311	5	3.292	31760
ROUTE TRUCK 312	198	4.462070707	33260
ROUTE TRUCK 313	316	4.490253165	33380
ROUTE TRUCK 314	434	5.684539171	33360
ROUTE TRUCK 315	4	5.6525	32620
ROUTE TRUCK 324	101	3.625841584	33540
SPLIT BODY TRUCK	2	3.83	27960
Grand Total	**2215**	**5.11510158**	**32711.67494**

ORIG DESC	NAPA CITY
MAT DESC	YARDWASTE

2017 Residential Yard Waste

Row Labels	Count of VEHICLE	Average of TONS
NAPA RECYCLING TRUCK	16	8.31875
ROUTE TRUCK 203	3	8.34
ROUTE TRUCK 207	2	10.075
ROUTE TRUCK 208	41	8.017560976
ROUTE TRUCK 302	2	8.9
ROUTE TRUCK 303	1	8.17
ROUTE TRUCK 304	2	6.62
ROUTE TRUCK 305	2	5.31
ROUTE TRUCK 306	5	6.138
ROUTE TRUCK 307	513	8.010565302
ROUTE TRUCK 308	108	8.14
ROUTE TRUCK 309	1	9.6
ROUTE TRUCK 310	566	7.916784452
ROUTE TRUCK 311	4	5.865
ROUTE TRUCK 312	29	7.545172414
ROUTE TRUCK 313	4	7.5125
ROUTE TRUCK 314	2	9.405
ROUTE TRUCK 315	593	8.352344013
ROUTE TRUCK 324	188	6.574468085
Grand Total	**2082**	**7.947463977**

ORIG DESC	NAPA
MATERIAL	(Multiple Items)

2016 Solid Waste

Row Labels	Count of VEHICLE	Average of TONS	Average of TARE
NAPA COUNTY 103	105	3.097142857	30062.66667
NAPA COUNTY 104	189	3.574179894	30823.38624
NAPA COUNTY 201	3	2.363333333	13060
NAPA COUNTY 205	2	7.435	36700
NAPA COUNTY 305	7	6.627142857	32140
NAPA COUNTY 411	1	8.86	28220
NAPA RECYCLING 003	15	3.454666667	28396
NAPA RECYCLING 101	379	3.240369393	30710.29024
NAPA RECYCLING 105	670	3.831597015	32747.43284
NAPA RECYCLING 106	184	3.490217391	31667.93478
NAPA RECYCLING 107	1	0.75	28840
NAPA RECYCLING 202	262	8.282099237	38286.41221
NAPA RECYCLING 203	1	7.91	38240
NAPA RECYCLING 206	443	7.601828442	36394.94357
NAPA RECYCLING 207	90	5.750222222	39360
NAPA RECYCLING 208	45	6.998888889	38520
NAPA RECYCLING 209	517	8.103017408	36919.72921
NAPA RECYCLING 210	401	7.8419202	37153.76559
NAPA RECYCLING 211	1	8.51	37720
NAPA RECYCLING 212	53	7.072075472	36181.13208
NAPA RECYCLING 301	460	6.653934783	31840.95652
NAPA RECYCLING 302	2	5.235	32540
NAPA RECYCLING 303	3	6.48	33160
NAPA RECYCLING 304	287	8.556445993	32220
NAPA RECYCLING 307	2	7.445	31720
NAPA RECYCLING 308	58	6.462931034	32020
NAPA RECYCLING 309	487	6.212587269	31467.47433
NAPA RECYCLING 311	451	6.140842572	31518.3592
NAPA RECYCLING 312	95	6.988210526	33520
NAPA RECYCLING 313	1	6.26	33860
NAPA RECYCLING 314	4	6.8775	34180
NAPA RECYCLING 315	6	5.316666667	32680
NAPA RECYCLING 324	69	7.624347826	33720
NAPA RECYCLING 421	2	2.485	18620
Grand Total	**5296**	**6.165951662**	**33620.22659**

NRWS Truck Info 12-12

ATTACHMENT 2

County Vehicles Legal Loads
MDF/DRTS

Year	Truck #	GVWR CA	Tare	Axles	Style	Material	Legal Load Lbs	Legal Load Tons	
2018	101	60,000	31,000	4	Roll Off	Various	29,000	14.5	Replacement in 2019
2018	106	60,000	31,000	4	Roll Off	Various	29,000	14.5	Replacement in 2019
2018	116	60,000	31,000	4	Roll Off	Various	29,000	14.5	city
2018	117	60,000	31,000	4	Roll Off	Various	29,000	14.5	city
2018	202	60,000	38,280	4	FEL with work bucket	MSW	21,720	10.86	Replacement in 2019
2018	203	60,000	38,280	4	FEL with work bucket	Single Stream	21,720	10.86	Replacement in 2019
2018	206	60,000	38,280	4	Front Loader	MSW	21,720	10.86	Replacement in 2019
2018	208	60,000	38,280	4	Front Loader	All	21,720	10.86	Replacement in 2019
2005	209	60,000	37,400	4	Front Loader	MSW	22,600	11.3	To be Refurbished
2005	210	60,000	37,400	4	Front Loader	MSW	22,600	11.3	To be Refurbished
2005	211	60,000	37,400	4	Front Loader	Single Stream	22,600	11.3	To be Refurbished
2005	212	60,000	37,400	4	Front Loader	Single Stream	22,600	11.3	To be Refurbished
2018	301	60,000	36,000	4	Side Loader	MSW	24,000	12	Replacement in 2019
2018	302	60,000	36,000	4	Side Loader	Single Stream	24,000	12	Replacement in 2019
2018	304	60,000	36,000	4	Side Loader	MSW	24,000	12	Replacement in 2019
2018	307	60,000	36,000	4	Side Loader	YW	24,000	12	Replacement in 2019
2018	309	60,000	36,000	4	Side Loader	MSW	24,000	12	Replacement in 2019
2018	311	60,000	36,000	4	Side Loader	MSW	24,000	12	Replacement in 2019
2005	312	54,000	32,000	3	Side Loader	Single Stream	22,000	11	To be Refurbished
2005	313	54,000	33,000	3	Side Loader	Single Stream	21,000	10.5	To be Refurbished
2005	314	54,000	33,000	3	Side Loader	Single Stream	21,000	10.5	To be Refurbished
2018	315	60,000	36,000	3	Side Loader	Spare	24,000	12	Replacement in 2019
2018	331	60,000	36,000	4	Side Loader	YW	24,000	12	city
2018	334	60,000	36,000	4	Side Loader	YW	24,000	12	city
2018	335	60,000	36,000	4	Side Loader	Single	24,000	12	city
2016	324	54,000	32,000	3	AutoCar	Food Scraps	22,000	11	city
2018	333	60,000	36,000	4	Side Loader	Single Stream	24,000	12	city
2013	429	26,000	17,000		Recycle More Truck	Various	9,000	4.5	city
2004	430	20,000	13,000		Bin Delivery	Various	7,000	3.5	city
2016	436	16,000	10,000		Flat Bed Delivery	Various	6,000	3	city
2005	500	10,000	6,500		Service Truck		3,500	1.75	Replacement in 2009
2005	504	10,000	6,500		Service Truck		3,500	1.75	Replacement in 2009
2018	217	60,000	38,820	4	Front Loader	MSW	21,180	10.59	city
2018	218	60,000	38,820	4	Front Loader	YW	21,180	10.59	city
2018	219	60,000	38,820	4	Front Loader	Spare	21,180	10.59	city
Paid the 60,000 lb rate for both FEL trucks									Replacement in Pai9

Previous Refuse Vehicle Impact Study

HF&H CONSULTANTS, LLC
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April 6, 2009

Mr. Philip Brun, P.E.
Deputy Director of Public Works
City of Napa
1600 First Street
Napa, CA 94559

Sent via e-mail

Subject: Refuse Vehicle Street Maintenance Cost Analysis - Final Report

Reference Number: S2004

Dear Mr. Brun:

HF&H Consultants, LLC (HF&H) was engaged by the City of Napa (City) to analyze the impact of solid waste, recycling, and yard waste vehicles (Refuse Vehicles) on street maintenance costs (i.e., maintenance, rehabilitation, and reconstruction costs).

Our analysis is based on available information related to street maintenance costs, funding sources, street design specifications, and vehicle profiles for the types of Refuse Vehicles providing service in the City, their weights, axle configurations, and service frequency. Should there be any future material changes to that information, the City should review the results of the analysis and change the calculated impacts and any associated fees that might be established.

Objectives

The objectives of the engagement were to:

1. Calculate the City's Average Annual Expenditures for pavement-related street maintenance net of Restricted Funding Apportionments (Average Annual Expenditures); and,
2. Allocate the Average Annual Expenditures based on the percentage impact of Refuse Vehicles, other trucks, and automobiles on the City's streets.

Findings

As shown in the following table and based on the approach described below:

1. We calculate Average Annual Expenditures of $10,590,000 based on actual pavement-related spending as demonstrated in the City's Streets and Roads Report to the State of California Controller's Office for Fiscal Years Ending (FYE) 2004 through 2008; and,
2. Refuse Vehicles account for approximately 15.1% of the total impact that a typical street experiences.

Assuming this percentage of the Average Annual Expenditures can be attributed to Refuse Vehicles, the share of the Average Annual Expenditures attributable to Refuse Vehicles is $1,595,000.

TABLE 1: SUMMARY FINANCIAL IMPACTS

Vehicle Type	Street Maintenance Cost Impact	Percent of Total Impacts
Solid Waste Vehicles	$ 460,000	4.3%
Recycling Vehicles	$ 482,000	4.6%
Yard Waste Vehicles	$ 653,000	6.2%
REFUSE VEHICLE SUBTOTAL	**$ 1,595,000**	**15.1%**
Other Trucks	$ 8,370,000	79.0%
Automobiles	$ 625,000	5.9%
TOTAL	**$ 10,590,000**	**100.0%**

Note: Numbers may not sum precisely due to rounding

It should be noted that reasonable ranges exist for various key assumptions used in our analysis, and that the analysis is highly sensitive to changes in certain key assumptions. A discussion of key assumptions and sensitivities is provided later in this report. In a number of cases, this report relied on City records and City staff's representations (which we assumed to be informed and reliable).

Overview

Road maintenance is based on deterioration. While roads will deteriorate if simply left unused, most deterioration is associated with use. The damage caused by vehicles increases much more than proportionately with size and weight. Hence, maintenance costs are greater for trips made by heavy vehicles. A single, large truck can cause as much damage as thousands of automobiles, and a truck's configuration can affect the amount of damage as well. If the load is spread over more axles, allowing for less weight on each wheel, then damage is reduced.[1] Refuse Vehicles are generally some of the heaviest vehicles regularly operating on city streets. Accordingly, these vehicles contribute significantly to the cost of maintaining those streets.

The unit of measure used to rate the condition of pavement is the Pavement Condition Index (PCI), which rates pavements on a score of 0 to 100. Local roads within the Bay Area have an average PCI of 65. The City has reported that its streets have an average PCI of 58, which falls in the category of "Fair" (45-59). Pavements in this range are deteriorated and require immediate attention, including rehabilitative work. Rapid deterioration of pavement typically

[1] Rufolo, Cost-Based Road Taxation, Cascade Policy Institute, Policy Perspective #5, November 1995.

occurs after roadways drop to a PCI score of 60 or lower; therefore, assuring adequate funding for an effective pavement management program for the City's streets is critical and is one of the most financially prudent steps the City can take. Delays in preventative maintenance increase the quantity and severity of pavement defects, and result in higher costs during pavement life. Consequently, using only a routine and reactive approach will considerably increase the life cycle costs of the pavement.[2]

Background

Napa Recycling and Waste Services (Company) provides solid waste, recycling, and yard waste services in the City. Residential solid waste, recycling, and yard waste services are provided weekly with side-loading vehicles that generally make a single pass down each side of a street to provide service for each material type collected (i.e., each truck services one side of the street on each pass). Commercial solid waste and recycling service is provided in varying frequencies to customers by front- and side-loading vehicles. Based on information provided by the Company and the City, HF&H has calculated that these vehicles service the average: commercial solid waste container approximately 2.5 times per week; commercial recycling container approximately 3.0 times per week; and, commercial yard waste container approximately 3.5 times per week.

Approach

Our analysis is based on the City's projected Average Annual Expenditures and allocates the Average Annual Expenditures attributed to the impacts of Refuse Vehicles on the City's streets. The basis for allocating the Average Annual Expenditures is made by calculating the Equivalent Single Axle Load (ESAL) of each type of vehicle traveling on the City's streets, as described below.

The underlying premise for the analysis is that the weight and loading of Refuse Vehicles impose a particular, specific, and quantifiable impact on City streets. The analysis is based on the fact that the City's streets are designed to handle a certain amount of vehicle traffic (loading) over their design life. That loading is a function of both the number and weight of vehicles. The lifetime "vehicle loading" that a street can accommodate can be expressed as the total number of ESALs. Each vehicle type (e.g., Refuse Vehicles, other trucks and automobiles) can be converted into an associated ESAL, based on the vehicle's weight and its distribution among the vehicle's axles. By projecting the type and number of vehicles that will travel on a street over its design life, the total number of ESALs can be calculated, and the street designed to handle that projected loading. Similarly, the relative impact of each type of vehicle on that street can be calculated, based on the percentage of the total ESALs attributed to each vehicle type.

[2] A Pavement Preventative Maintenance Program; Larry Galehouse, P.E., L.S.; Michigan Department of Transportation.

HF&H has calculated the ESALs associated with each vehicle type on residential, collector, and arterial streets throughout the City based upon the: vehicle weight and loading; weight distribution; and, number of trips associated with each vehicle type. From this HF&H has calculated that the ESALs associated with Refuse Vehicles represent approximately 15.1% of the total ESALs experienced by City streets.

Methodology

The methodology used to project the impact of Refuse Vehicles can be summarized as follows:

Determine Number of Vehicle Trips by Vehicle Type

HF&H worked with the City to develop an understanding of the number of average daily vehicle trips by vehicle type (Refuse Vehicles, other trucks, and automobiles). During this process, HF&H:

- Reviewed information provided by the City and Company to determine the number of trips Company vehicles took on each street within the city;
- Reviewed information provided by the City that reported average daily traffic counts; and,
- Reviewed the City's design standards for each functional classification (i.e. residential, collector, and arterial) of streets.

Determine the Impact of Each Vehicle Type

HF&H collected from the City and through independent investigation, vehicle weights and profiles for the various vehicles being studied in this analysis. Each vehicle type was modeled based on weight, vehicle specifications, axle profile, and average payload. This modeling produced an average ESAL for each vehicle type, which was then used to assess the direct impact of each vehicle trip by each vehicle type.

Project Maintenance Costs Associated with Each Vehicle Type

- The City provided their annual Streets and Roads Report data for the period FYE 2004 through FYE 2008. These annual costs were escalated by the five-year average of the Engineering News Record California Construction Cost Index to bring the costs into current 2009 dollars. This data was used to calculate the percentage of funding that was dedicated to pavement versus non-pavement related activities. This calculation was used as the basis for the Average Annual Expenditures at the current spending level;
- The Average Annual Expenditures were allocated among residential, collector, and arterial streets in proportion to the percentage of lane miles for each of those street classifications; and,

- The residential, collector, and arterial street portions of the Average Annual Expenditures were allocated among the various vehicle types in proportion to the calculated impact of each vehicle type, as determined above.

Sources of Data

The analysis relied on the following data sources:

- Annual Street and Roads Reports submitted to the State of California Controller's Office – These reports were used to determine the pavement related expenses (e.g. street reconstruction, patching, overlay and sealing) as separate from the non-pavement related expenses (e.g. lights, signals, safety devices, storm drains, pedestrian ways, bike paths, etc.) and to determine the share of overhead expenses (e.g. property, plant, equipment, engineering and administration, etc.) to be allocated to pavement and non-pavement related activities. The report also provides information on restricted funding sources (e.g. gas taxes, traffic congestion relief fund, etc.) that have been removed from the funding analysis to prevent double-counting.
- Transfer Station and Material Recovery Facility Reports – These reports provided information on the weight of each vehicle, by type and material, used by the Company in providing collection services to the City.
- Monthly Collection Reports – These reports provided information on the number of accounts and tonnage of materials collected within the City.
- NRWS Cost Review Report – This report provided information on the number of times that each container within the City is serviced by the Company, providing the basis for determining the number of trips that each truck collecting each material type takes on City streets.
- Engineering News Record California Construction Cost Index – This data source provided the information necessary to adjust historical spending to current (2009) dollar equivalents.
- Pavement Management Program Update – This report provided the information regarding the number of miles of each street type within the City as well as the current pavement condition of streets within the City.
- City of Napa Public Works Standard Specifications – This report was used to determine the design standards of each type of street within the City.
- City of Napa Traffic Counts – This data, derived from routine studies performed by the City, was used to determine the average volume of vehicles traveling on each street type within the City as well as the percentage of vehicles that are trucks, as opposed to passenger vehicles.

Key Assumptions/Inputs

The analysis relied in part on the following key assumptions, provided largely by the City and the Company (supplemented with data from other sources as noted):

- Residential streets account for approximately 53.0% of the total residential, collector, and arterial lane miles in the City;
- Collector streets account for approximately 26.2% of the total residential, collector, and arterial lane miles in the City;
- Arterial streets account for approximately 20.8% of the total residential, collector, and arterial lane miles in the City;
- Residential streets experience an average daily traffic volume of approximately 283 vehicles with approximately 3.5% of that volume being truck traffic;
- Collector streets experience an average daily traffic volume of approximately 4,404 vehicles with approximately 6.0% of that volume being truck traffic;
- Arterial streets experience an average daily traffic volume of approximately 12,512 vehicles with approximately 6.0% of that volume being truck traffic;
- Residential solid waste, recycling, and yard waste services are provided weekly;
- Refuse Vehicles servicing residential solid waste, recycling, and yard waste containers typically travel on each residential street segment twice to provide service for each material collected (i.e., they service one side of the street on a single pass);[3]
- Commercial Refuse Vehicles service the average solid waste container 2.5 times per week;
- Commercial Refuse Vehicles service the average recycling container 3.0 times per week;
- Commercial Refuse Vehicles service the average yard waste container 3.5 times per week;
- Refuse Vehicle tare weight and payload weight data was provided by the City, and was based on actual data for loads entering the City's material recovery facility and transfer station;
- Refuse Vehicle axle weight distribution profiles were based on data provided by vehicle manufacturers for the same or similar vehicle types;
- Axle weight data for other trucks and automobiles was based on data compiled from a variety of sources including vehicle manufacturers and industry publications;
- The impact of other activities (e.g. trench cutting), which may degrade the quality of streets, is sufficiently mitigated by the parties engaging in those activities;

[3] The analysis does not account for any additional passes due to vehicle routing (e.g., "dead-heading" over a previously serviced street).

- The negative impacts of weather or other natural conditions are considered a routine part of the lifecycle cost of streets and are not analyzed separately; and,
- The City's Average Annual Expenditures are approximately $10,590,000.

Using the assumptions noted above, the portion of the City's Average Annual Expenditures associated with Refuse Vehicles was calculated following the previously described methodology.

Limitations

- Our analysis is based on the various assumptions noted, including the total number of vehicle trips and average ESALs associated with the various vehicle types. Changes to these assumptions may have a material impact on the analysis.
- Annual street maintenance costs can vary widely, both in total and specific to pavement- and non-pavement-related expenses as well the amount spent on residential versus collector and arterial streets. Our analysis is based on the City's actual street maintenance costs and funding data for FYE 2004 through 2008 and the noted assumptions regarding those factors. Changes to those assumptions may have a material impact on the associated projections.

* * * *

We appreciate the opportunity to be of service to the City. If you have any questions regarding this submittal, please do not hesitate to call me directly at (925) 977-6959.

Very truly yours,
HF&H CONSULTANTS, LLC

Robert C. Hilton
Project Manager

cc: Kevin Miller, City of Napa
Eric Whan, P.E., City of Napa
Robert D. Hilton, President, HF&H Consultants
HF&H Client Files

APPENDIX J: ESTIMATE OF ANNUAL STREET MAINTENANCE COST FROM CITY OF NAPA PUBLIC WORKS DEPARTMENT

Over the last 10-years, the City has developed and executed an aggressive annual street maintenance program to improve the condition of the City's streets. The standard rating system for streets is the pavement condition index (PCI). Through the City's program the citywide PCI average has increased from the poor/fair condition of 55 in 2009 to the fair/good condition of 71 as reported for 2019. It is critical to the success of the City's street maintenance program that the impact of the truck traffic associated with solid waste collection be accounted for to ensure that the deterioration of the City's street network caused by solid waste collection activities is repaired.

An engineering analysis was conducted to determine the impact of the truck traffic associated with the solid waste collection activities on the City's street system. The analysis considered the truck axel loading and the number of truck trips. The analysis determined that 11.6% of the total vehicle impacts to streets was caused by the solid waste collection vehicles. In order to maintain the streets at the current PCI level, funding for 11.6% of the cost to maintain the streets is required. The Public Works Department completed an evaluation to determine the full cost to maintain the streets at the current level and the funding required by solid waste to offset their impact. The evaluation methodology is explained below.

StreetSaver Explained

The City uses a software package called StreetSaver which is a Pavement Management Program (PMP) that assists in developing work plans to efficiently maintain our roadways. StreetSaver was developed by the Metropolitan Transportation Commission and is used by all towns, cities, and counties in the nine county Bay Area. StreetSaver assists in developing street maintenance plans that integrate three main pavement preservation components: preventive maintenance, minor rehabilitation (non-structural) including routine maintenance activities, as well as pavement rehabilitation and reconstruction.

The software allows cities and counties to inventory their street networks, determine their maintenance needs, devise maintenance programs and determine required funding. The software develops a list of recommended treatments and prioritizes treatments based on a benefit/cost approach. Within the constraints of each jurisdiction's budget, the software prioritizes the most cost-effective treatments for implementation and defers the remainder.

StreetSaver uses a decision tree matrix to model the decision-making process that agencies follow to select a maintenance or rehabilitation strategy. The decision tree matrix contains "branches" for each functional classification, surface type, and condition category. Jurisdictions outline their strategies for maintenance and rehabilitation (M&R) by programming a treatment for each branch. The unit costs associated with the decision tree branches include all costs involved with the work (i.e. administration, engineering, construction management, labor, materials, tools, equipment, etc.). This matrix defines the specific treatments needed for streets with varying Pavement Condition Index (PCI) ratings.

Using the StreetSaver budget scenarios module, the impact of various budget scenarios can be evaluated. The program projects the effects of the different scenarios on pavement condition and deferred maintenance (backlog). By examining the effects on these indicators, the advantages and disadvantages of different funding levels and maintenance strategies can be evaluated.

Future Expenditures for Pavement Maintenance

The City's street network consists of approximately 219 centerline miles of streets. In January 2019, the City's streets resulted in a calculated average PCI of 71, based on the most recent pavement evaluation report. Using a 0-100 PCI scale, with 100 being the most favorable, a rating of 71, places the City's street network in the 'Good' condition category. In order to maintain this pavement condition level, a budget and maintenance work plan was developed in StreetSaver to determine the funding level that is required to maintain the current average PCI of 71 (as determined in January 2019) over the next ten (10) years.

Prior to the development of the budget and maintenance work plan, a decision tree matrix was setup to reflect typical City M&R practices. Such practices include: asphalt paving as part of our City's Local Streets and Paving Program and our Capital Improvement Program, and preventative maintenance work that is performed on streets that have recently been paved as part of the aforementioned programs.

Decision Tree Matrix				
Maintenance Type	**Treatment Type**	**Functional Classification**		
		Arterial	**Collector**	**Residential**
Preventative Maintenance	Crack Seal	$4 LF	$3 LF	$2 LF
	Asphalt Rejuvenation	$4 SY	$3 SY	$2 SY
Pavement Rehabilitation	Thin Asphalt Overlay (< 3")	$75 SY	$65 SY	$55 SY
	Thick Asphalt Overlay (≥ 3")	$80 SY	$70 SY	$60 SY
Pavement Reconstruction	Roadway Reconstruct	$155 SY	$135 SY	n/a

Based on the data that was compiled from historical City projects over the past 7 years, which has been incorporated into the matrix, it is recommended that the City spend $96,014,785 over a span of 10 years in order to maintain the current pavement conditions. This averages out to a needed annual investment level of approximately $9.6 million per year.

Projected Network Average PCI				
Year	**Maintenance Type**	**Area Treated (SY)**	**Cost**	**Total Cost**
2020	Preventative Maintenance	1,424,396	$3,550,928	$9,277,572
	Pavement Rehabilitation	108,236	$5,726,644	
2021	Preventative Maintenance	799,695	$1,795,125	$9,033,851
	Pavement Rehabilitation	119,480	$7,238,726	
2022	Preventative Maintenance	102,855	$235,518	$10,130,022
	Pavement Rehabilitation	161,403	$9,894,504	
2023	Preventative Maintenance	102,598	$226,863	$9,670,695

	Pavement Rehabilitation	134,029	$9,443,832	
2024	Preventative Maintenance	0	$0	$10,469,853
	Pavement Rehabilitation	143,375	$10,469,853	
2025	Preventative Maintenance	1,493,028	$4,190,667	$4,190,667
	Pavement Rehabilitation	0	$0	
2026	Preventative Maintenance	983,218	$2,758,614	$8,331,158
	Pavement Rehabilitation	58,336	$5,572,544	
2027	Preventative Maintenance	254,844	$733,022	$12,469,328
	Pavement Rehabilitation	130,859	$11,736,306	
2028	Preventative Maintenance	237,881	$681,846	$10,860,093
	Pavement Rehabilitation	118,797	$10,178,247	
2029	Preventative Maintenance	145,864	$471,972	$11,581,546
	Pavement Rehabilitation	22,463	$11,109,574	

SUMMARY		
Functional Classification	**Pavement Rehabilitation**	**Preventative Maintenance**
Arterial	$41,445,231	$2,849,175
Collector	$1,071,849	$2,991,429
Residential	$38,853,150	$8,803,951
TOTAL:	**$81,370,230**	**$14,644,555**
GRAND TOTAL: $96,014,785		

Under this scenario, the PCI would remain at the current level of 71 through 2029.

Projected Network Average PCI ($9.6 million per year)		
Year	**Never Treated**	**With Selected Treatment**
2020	68	71
2021	66	71
2022	64	71
2023	62	71
2024	60	71
2025	57	71
2026	55	71
2027	53	71
2028	51	71
2029	49	71

APPENDIX K: FULL SOLID WASTE AND RECYCLING COLLECTION SERVICE RATES UNDER PROPOSED RATE ADJUSTMENTS FOR 2019-2022

See next page

RESIDENTIAL AND MULTIFAMILY

Residential monthly rates include weekly collection of solid waste, recyclable materials and co-collected yard trimmings and food scraps. Residential rates include one solid waste cart of the selected size and up to four 35-gallon carts for recyclable materials and up to four 35-gallon carts for yard trimmings/food scraps OR up to two 95-gallon carts for recyclable materials and up to two 95-gallon carts for yard trimmings/food scraps. These rates apply to single-family residences, duplexes, triplexes and multifamily units that have individual weekly cart service for each unit. For carts used in common multifamily areas and/or enclosures (and not serving a single, specific multifamily unit) see the rates in Table 4.

Table 1

RESIDENTIAL AND MULTIFAMILY CART RATES FOR WEEKLY SERVICE TO INDIVIDUAL HOMES AND INDIVIDUAL MULTIFAMILY UNITS

CART SIZE	MONTHLY RATE
20 gallon	$24.25
35 gallon	$30.40
65 gallon	$46.63
95 gallon	$71.71

Table 2

COMMERCIAL AND MULTIFAMILY RATES

MONTHLY RATES FOR BINS PROVIDED BY NAPA RECYCLING AND WASTE SERVICES, LLC TO CUSTOMERS

	NUMBER OF COLLECTIONS PER WEEK					
Bin Size (Cubic Yards)	1x/wk	2x/wk	3x/wk	4x/wk	5x/wk	6x/wk
One 1.5 yd.	$368.83	$772.50	$1,150.45	$1,542.25	$1,965.73	$2,452.62
Two 1.5 yd.	$785.98	$1,668.59	$2,484.98	$3,331.23	$4,245.98	$5,297.62
Three 1.5yd	$1,168.07	$2,479.69	$3,692.95	$4,950.58	$6,309.97	$7,872.87
Four 1.5 yd.	$1,571.99	$3,337.17	$4,969.92	$6,662.45	$8,491.91	$10,595.24
One 2 yd.	$474.15	$1,009.86	$1,513.41	$2,035.41	$2,599.46	$3,247.65
Two 2 yd.	$1,009.99	$2,181.31	$3,268.94	$4,396.45	$5,614.85	$7,014.92
Three 2 yd.	$1,458.89	$3,150.74	$4,721.83	$6,350.47	$8,110.30	$10,132.65
Four 2 yd.	$1,963.86	$4,241.40	$6,356.31	$8,548.68	$10,917.73	$13,640.12
One 3 yd.	$695.27	$1,507.80	$2,262.97	$3,045.84	$3,891.72	$4,863.64
Two 3 yd.	$1,432.28	$3,106.05	$4,661.75	$6,274.42	$8,016.94	$10,019.15
Three 3 yd.	$2,169.27	$4,704.32	$7,060.51	$9,503.03	$12,142.17	$15,174.64
One 4 yd.	$902.70	$1,982.52	$2,988.91	$4,032.17	$5,159.20	$6,453.76
Two 4 yd.	$1,859.52	$4,084.01	$6,157.16	$8,306.28	$10,627.94	$13,294.77
Three 4 yd.	$2,816.36	$6,185.46	$9,325.39	$12,580.36	$16,096.68	$20,135.74
One 6 yd.	$1,343.54	$2,961.80	$4,471.12	$6,035.79	$7,726.00	$9,667.27
Two 6 yd.	$2,767.71	$6,101.30	$9,210.53	$12,433.71	$15,915.55	$19,914.57

Table 3

MONTHLY RATES FOR CUSTOMER OWNED BINS

	NUMBER OF COLLECTIONS PER WEEK					
Bin Size (Cubic Yards)	1x/wk	2x/wk	3x/wk	4x/wk	5x/wk	6x/wk
One 1.5 yd.	$316.04	$712.10	$1,088.89	$1,479.50	$1,901.22	$2,385.19
Two 1.5 yd.	$728.99	$1,603.34	$2,418.47	$3,263.46	$4,176.29	$5,224.76
Three 1.5yd.	$1,111.59	$2,415.08	$3,627.06	$4,883.44	$6,240.93	$7,800.70
Four 1.5 yd.	$1,514.99	$3,271.95	$4,903.45	$6,594.71	$8,422.25	$10,522.37
One 2 yd.	$421.41	$949.46	$1,451.84	$1,972.66	$2,534.96	$3,180.22
Two 2 yd.	$953.00	$2,116.07	$3,202.46	$4,328.69	$5,545.21	$6,942.17
Three 2 yd.	$1,403.98	$3,087.95	$4,657.80	$6,285.19	$8,043.20	$10,062.53
Four 2 yd.	$1,908.46	$4,177.98	$6,291.67	$8,482.77	$10,849.99	$13,569.30
One 3 yd.	$622.22	$1,424.17	$2,177.75	$2,958.98	$3,802.43	$4,770.32
Two 3 yd.	$1,357.01	$3,019.95	$4,661.75	$6,184.96	$7,924.97	$9,922.99
Three 3 yd.	$2,093.29	$4,617.36	$6,971.88	$9,412.68	$12,049.31	$15,077.56
One 4 yd.	$829.63	$1,898.92	$2,903.66	$3,945.31	$5,069.89	$6,360.42
Two 4 yd.	$1,784.26	$3,997.88	$6,069.36	$8,216.79	$10,535.95	$13,198.62
Three 4 yd.	$2,740.37	$6,098.50	$9,236.75	$12,490.02	$16,003.80	$20,038.68
One 6 yd.	$1,244.43	$2,848.35	$4,355.50	$5,917.97	$7,604.83	$9,540.62
Two 6 yd.	$2,665.61	$5,984.46	$9,091.43	$12,312.35	$15,790.76	$19,784.14

Table 4

COMMERCIAL AND MULTIFAMILY SOLID WASTE CART RATES*

The following rates apply to multifamily solid waste carts that are used in common areas and/or enclosures throughout the multifamily property. For carts that are assigned to, and serving a single, specific, multifamily unit, see the rates in Table 1.

	1X/WEEK	2X/WEEK	3X/WEEK	4X/WEEK	5X/WEEK	6X/WEEK
35 gallon	$34.85	$69.70	$104.55	$139.41	$174.26	$209.10
65 gallon	$69.85	$139.67	$209.51	$279.38	$349.22	$419.08
95 gallon	$104.60	$209.20	$313.81	$418.43	$523.01	$627.63

*Prior to April 1, 2015, commercial/multifamily cart rates for solid waste were lower than the cost of equivalent gallons of commercial bin service. The commercial/multifamily solid waste cart rates will be increased by 5% per rate adjustment for the next 5 rate adjustments beginning in April 1, 2015 and concluding with January 1, 2021 (in addition to the rate increases of 12% for 2019; in addition to the rate increases of 10% for 2020; in addition to the rate increases of 8% for 2021). The rates above include both the 12% rate increase for 2019 and the 5% commercial/multifamily cart increase.

COMPACTOR, ROLL OFF BOX AND TEMPORARY BIN RATES

Table 5

RATES FOR COMMERCIAL AND MULTIFAMILY COMPACTOR SERVICE – LESS THAN 6 CUBIC YARDS

	Compacted Rate Per Cubic Yard = $103.51
To calculate rate per month = [(rate per compacted cubic yard x size of compactor x # of pick ups per week x 52 weeks)/12 months]	

Table 6

RATES FOR ROLL OFF SERVICE – 10 CUBIC YARD BOXES AND LARGER (UNCOMPACTED)

	Uncompacted Rate per Cubic Yard = $36.86
SIZE OF ROLL OFF (CUBIC YARDS)	**RATE PER SERVICE**
10	$368.60
15	$552.90
20	$737.20
25	$921.50
30	$1,105.80
40	$1,474.40

To calculate rate per month: [(Uncompacted rate per cubic yard x size of roll off box x number of pickups per week x 52 weeks)/12 months]
To calculate rate per service: size of roll off box x uncompacted rate per cubic yard

Table 7

RATES FOR ROLL OFF SERVICE FOR COMPACTORS – 6 CUBIC YARDS AND LARGER

	Compacted Rate Per Cubic Yard = $103.51	
SIZE OF COMPACTOR (CUBIC YARDS)	**RATE PER MONTH (1X/WEEK SERVICE)**	**RATE PER SERVICE**
6	$2,691.26	$621.06
10	$4,485.43	$1,035.10
15	$6,728.15	$1,552.65
20	$8,970.87	$2,070.20
25	$11,213.58	$2,587.75
30	$13,456.30	$3,105.30

To calculate rate per month: [(Compacted rate per cubic yard x size of compactor x number of pickups per week x 52 weeks)/12 months]
To calculate rate per service: size of compactor x compacted rate per cubic yard

Table 8

RATES FOR SERVICE FOR TEMPORARY BINS FOR SOLID WASTE

TEMPORARY BIN SIZES	RATE PER MONTH
1.5 cubic yards	$191.06
2.0 cubic yards	$191.06
3.0 cubic yards	$227.92
4.0 cubic yards	$264.77
6.0 cubic yards	$338.50
Cost Per Cubic Yard	$36.87

Table 9

RATES FOR ROLL OFF BOXES CONTAINING SOURCE SEPARATED RECYCLABLE MATERIALS

10 CUBIC YARDS	RATE PER SERVICE
Asphalt	$163.42
Concrete	$194.54
Dirt	$233.46
20 CUBIC YARDS	**RATE PER SERVICE**
Wood	$155.64
Yard Trimmings	$264.60
30 CUBIC YARDS	**RATE PER SERVICE**
Metal	$0.00
Wood	$194.54
Yard Trimmings	$342.41
Manure	$155.64
Pomace	$155.64
Sheetrock	$155.64

Table 10

RATES FOR ROLL OFF BOXES CONTAINING SOURCE SEPARATED CARPET FOR RECYCLING

(Rates apply to residential, commercial and multifamily carpet collection service)

ROLL OFF BOX SIZE	RATE PER SERVICE
20 Cubic Yards	$239.52
30 Cubic Yards	$320.38
40 Cubic Yards	$401.23

RATES FOR COMMERCIAL AND SPECIAL EVENT FOOD SCRAP COLLECTION

Table 11

MONTHLY RATES FOR COMMERCIAL FOOD SCRAP COLLECTION

CART SIZE	1X/WEEK	2X/WEEK	3X/WEEK	4X/WEEK	5X/WEEK
35 gallon	$26.14	$52.28	$78.41	$104.56	$130.70
65 gallon	$52.39	$104.75	$157.13	$209.54	$261.92
95 gallon	$78.45	$156.90	$235.36	$313.82	$392.26

Table 12

SPECIAL EVENT FOOD SCRAP COLLECTION – RATE PER CONTAINER PER SERVICE

35-gallon Food Scrap Cart	$9.11
65-gallon Food Scrap Cart	$13.65
95-gallon Food Scrap Cart	$18.19
1.5 Cubic Yards Food Scrap Bin	$98.38
2 Cubic Yards Food Scrap Bin	$111.60
3 Cubic Yards Food Scrap Bin	$138.05
4 Cubic Yards Food Scrap Bin	$164.50
6 Cubic Yards Food Scrap Bin	$218.24

Table 13

FOOD SCRAP COMPACTOR SERVICE

Cost Per Cubic Yard (Compacted)	$77.63	
COMPACTORS (CUBIC YARDS)	**PER MONTH/1XWK**	**PER SERVICE**
6	$2,018.38	$465.78
10	$3,363.97	$776.30
15	$5,045.95	$1,164.45
20	$6,727.93	$1,552.60
25	$8,409.92	$1,940.75
30	$10,091.90	$2,328.90

Table 14

RATES PER SERVICE FOR SPLIT 20 CUBIC YARD ROLL OFF BOXES CONTAINING TWO SOURCE SEPARATED RECYCLABLE MATERIALS

MATERIALS (TWO PER SPLIT BOX)	RATE PER SERVICE
Municipal Solid Waste & Wood	$446.42
Municipal Solid Waste & Yard Trimmings	$500.91
Municipal Solid Waste & Sheetrock	$446.42
Municipal Solid Waste & Metal	$368.60
Municipal Solid Waste & Cardboard	$368.60
Municipal Solid Waste & Mixed Recyclable Materials	$368.60
Wood & Yard Trimmings	$210.12
Wood & Sheetrock	$155.64
Wood & Metal	$77.82
Wood & Cardboard	$77.82
Wood & Mixed Recyclable Materials	$77.82
Yard Trimmings and Sheetrock	$210.12
Yard Trimmings & Metal	$132.31
Yard Trimmings & Cardboard	$132.31
Yard Trimmings and Mixed Recyclable Materials	$132.31
Sheetrock & Metal	$77.82
Sheetrock & Cardboard	$77.82
Sheetrock & Mixed Recyclable Materials	$77.82
Metal & Cardboard	No Charge
Metal & Mixed Recyclable Materials	No Charge
Cardboard & Mixed Recyclable Materials	No Charge

Table 15
RATES FOR MISCELLANEOUS SERVICES

RESIDENTIAL Additional Carts (Cost/Cart/Month)	RATE
Solid Waste	Provided at monthly rate in Table 1 multiplied by number of carts

RECYCLING (AFTER 4-35 GAL OR 2-95 GAL CARTS INCLUDED IN BASE RESIDENTIAL RATE)	RATE
20 gallon	$4.11
35 gallon	$4.11
65 gallon	$4.11
95 gallon	$4.11

YARD TRIMMINGS/FOOD (AFTER 4-35 GAL OR 2-95 GAL CARTS IN BASE RESIDENTIAL RATE)	RATE
20 gallon	$4.11
35 gallon	$4.11
65 gallon	$4.11
95 gallon	$4.11

SPECIAL SERVICES (COST PER SERVICE)	RATE
Bulky Items: large non-metal furniture that cannot fit in standard carts/bins & are not accepted in City's Recycle More Program e.g sofas, wood furniture, etc. ($/service up to 4 bulky items/service)	$45.14
Each bulky item over 4 bulky items ($/Item - excluding e-waste & cardboard)	$18.21
Cardboard and single stream recyclables	No Charge
E-Waste (CRTs/LCDs), Metal Items and Cooking Oil	No Charge

EXTRA SERVICE ($/BIN/SERVICE)	RATE
On day of service (Monday-Friday) up to 9 30-gal. bags or up to 9 30-gal. cans	$7.64/each barrel or bag
On day of service (Monday-Friday) 10 or more 30-gal. bags or cans	$36.87/yard
Not on day of service (Monday-Friday) up to 9 30-gal. bags or cans	$7.64/barrel or bag + $60.94 trip charge
Not on day of service (Monday-Friday) 10 or more 30-gal. bags or cans	$36.87/yard + $60.94 trip charge
Not on day of service (Saturday, Sunday) up to 9 30-gal. bags or cans	$7.64/barrel + $176.09 trip charge
Not on day of service (Saturday, Sunday) 10 or more 30-gal. bags or cans	$36.87/yard + $176.09 trip charge

BACKYARD SERVICE (INCLUDES SOLID WASTE, RECYCLING, YARD TRIMMINGS/FOODSCRAPS - COST/MONTH)	RATE
5-600 feet from curb to backyard cart location	$27.52
601 feet or more from curb to backyard cart location	$34.04
With letter from physician indicating resident is physically unable and/or advised not to wheel cart(s) to the curb	No Charge

COMMERCIAL & MULTI-FAMILY	RATE
Bulky Items: large non-metal furniture that cannot fit in standard carts/bins & are not accepted in City's Recycle More Program e.g., sofas, wood furniture, etc. ($/service up to 4 bulky items/service)	$90.26
Each bulky item over 4 bulky items ($/Item – excluding e-waste)	$18.21
Cardboard and single stream recyclables	No Charge
Electronic Waste (CRTs/LCDs), Metal Items and Cooking Oil	No Charge
Pallets (Up to 10 pallets)	$90.26

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

EXTRA SERVICE (COST/CART/SERVICE AND COST/BIN/SERVICE)	RATE
35 gallon	$18.21
65 gallon	$27.31
95 gallon	$36.39
1.5 cubic yards	$196.75
2 cubic yards	$223.20
3 cubic yards	$276.10
4 cubic yards	$329.00
6 cubic yards	$436.49

MISCELLANEOUS	RATE
Bin Cleaning/Bin Exchange ($/Bin/Service)	$246.31
Heavy Waste (Rocks, dirt or other materials in bins or carts that exceed manufacturer's maximum weight for container) Cost / collection	$109.23
Hourly labor charge (for 2 persons) for on-site transfer of solid waste/materials from smaller exterior collection containers to larger exterior collection container(s)	$129.30
Locking Bin or Key Fee (if bin must be unlocked prior to service or if key must be used to access container(s)) ($/month)	$9.11

RECYCLING ($/Service)	RATE
Single Stream Recyclables (less than 10 cubic yard)	No Charge
Source Separated Recyclables (less than 10 cubic yard)	No Charge
Yard Trimmings (less than 10 cubic yard)	No Charge

SATURDAY, SUNDAY SERVICE (Cost/month for 1x/week solid waste service)	RATE
35 gallon	$136.77
65 gallon	$136.77
95 gallon	$136.77

TRIP CHARGES for return to collect containers not available/ accessible for pickup or for a one-time collection on a special (non-regular route) day (Cost/Trip)	
up to 35 gallon	$60.95
35 gallon – 6 cubic yards	$117.39

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

ROLL OFF/COMPACTOR/TEMPORARY BINS	RATE
Overweight Surcharge (10 cubic yards and more) if roll off box or compactor weight causes collection truck to exceed legal highway weight limit established by State of California. Cost of labor and equipment to empty the excess into another container.	Trip charge ($195.63) plus cost to bring in equipment capable of removing such materials plus $109.23 per ton
Sealed watertight roll off boxes (for wet materials such as pomace) Additional cost/ service for special sealed box and added labor	$41.14
Demurrage for non-removal after 3 days (Cost/Bin/Day)	$24.30
Trip Charge - Move/Relocate Box (Cost/Box/ Service)	$195.63
Rental Fee (Cost/day)	$24.30
Temporary Bins (Cost/5 days)	
2 cubic yards	$191.05
3 cubic yards	$227.92
4 cubic yards	$264.77

OTHER FEES	RATE
City Directed Spill Clean Up (waste around overflowing bins/carts after 2 warnings and direction from City)	$326.83
Contaminated Recycling Charges (materials containing 5% or more contamination that must be disposed as solid waste)	
Contaminated residential recyclable materials, yard trimmings, and co-collected food scraps/yard trimmings	
35 gallon	$18.21
65 gallon	$27.31
95 gallon	$36.39
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in carts**	Rates in Table 4 apply
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in bins**	
1.5 cubic yards	$196.75
2 cubic yards	$223.20
3 cubic yards	$276.10
4 cubic yards	$329.00
6 cubic yards	$436.49
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in roll off boxes**	Rates in Table 6 apply
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in compactors**	Rates in Tables 5 and 7 apply

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

DEPOSITS Residential Service and Commercial Cart Service: One-time deposit to initiate service, refundable after 12 months with 1% interest for customer in good standing	RATE
Deposit for Commercial Cart Service	$60.00
Deposit for Residential Service	$30.00
Residential Cart Redelivery Charge	$25.00
Deposit for Commercial Bins	Cost of 1 month's service refundable after 12 months with 1% interest for customer in good standing

Deposit for Roll Off/Compactor Service (Applies to new customers – deposit applied to cost of first service)	**RATE**
Solid Waste	50% of service
Recyclable Materials	50% of service

RESIDENTIAL AND MULTIFAMILY

Residential monthly rates include weekly collection of solid waste, recyclable materials and co-collected yard trimmings and food scraps. Residential rates include one solid waste cart of the selected size and up to four 35-gallon carts for recyclable materials and up to four 35-gallon carts for yard trimmings/food scraps OR up to two 95-gallon carts for recyclable materials and up to two 95-gallon carts for yard trimmings/food scraps. These rates apply to single-family residences, duplexes, triplexes and multifamily units that have individual weekly cart service for each unit. For carts used in common multifamily areas and/or enclosures (and not serving a single, specific multifamily unit) see the rates in Table 4.

Table 1

RESIDENTIAL AND MULTIFAMILY CART RATES FOR WEEKLY SERVICE TO INDIVIDUAL HOMES AND INDIVIDUAL MULTIFAMILY UNITS

CART SIZE	MONTHLY RATE
20 gallon	$26.68
35 gallon	$33.44
65 gallon	$51.29
95 gallon	$78.88

Table 2

COMMERCIAL AND MULTIFAMILY RATES

MONTHLY RATES FOR BINS PROVIDED BY NAPA RECYCLING AND WASTE SERVICES, LLC TO CUSTOMERS

	NUMBER OF COLLECTIONS PER WEEK					
Bin Size (Cubic Yards)	1x/wk	2x/wk	3x/wk	4x/wk	5x/wk	6x/wk
One 1.5 yd.	$405.71	$849.75	$1,265.50	$1,696.48	$2,162.30	$2,697.88
Two 1.5 yd.	$864.58	$1,835.45	$2,733.48	$3,664.35	$4,670.58	$5,827.38
Three 1.5yd	$1,284.88	$2,727.66	$4,062.25	$5,445.64	$6,940.97	$8,660.16
Four 1.5 yd.	$1,729.19	$3,670.89	$5,466.91	$7,328.70	$9,341.10	$11,654.76
One 2 yd.	$521.57	$1,110.85	$1,664.75	$2,238.95	$2,859.41	$3,572.42
Two 2 yd.	$1,110.99	$2,399.44	$3,595.83	$4,836.10	$6,176.34	$7,716.41
Three 2 yd.	$1,604.78	$3,465.81	$5,194.01	$6,985.52	$8,921.33	$11,145.92
Four 2 yd.	$2,160.25	$4,665.54	$6,991.94	$9,403.55	$12,009.50	$15,004.13
One 3 yd.	$764.80	$1,658.58	$2,489.27	$3,350.42	$4,280.89	$5,350.00
Two 3 yd.	$1,575.51	$3,416.66	$5,127.93	$6,901.86	$8,818.63	$11,021.07
Three 3 yd.	$2,386.20	$5,174.75	$7,766.56	$10,453.33	$13,356.39	$16,692.10
One 4 yd.	$992.97	$2,180.77	$3,287.80	$4,435.39	$5,675.12	$7,099.14
Two 4 yd.	$2,045.47	$4,492.41	$6,772.88	$9,136.91	$11,690.73	$14,624.25
Three 4 yd.	$3,098.00	$6,804.01	$10,257.93	$13,838.40	$17,706.35	$22,149.31
One 6 yd.	$1,477.89	$3,257.98	$4,918.23	$6,639.37	$8,498.60	$10,634.00
Two 6 yd.	$3,044.48	$6,711.43	$10,131.58	$13,677.08	$17,507.11	$21,906.03

Table 3

MONTHLY RATES FOR CUSTOMER OWNED BINS

	NUMBER OF COLLECTIONS PER WEEK					
Bin Size (Cubic Yards)	1x/wk	2x/wk	3x/wk	4x/wk	5x/wk	6x/wk
One 1.5 yd.	$347.64	$783.31	$1,197.78	$1,627.45	$2,091.34	$2,623.71
Two 1.5 yd.	$801.89	$1,763.67	$2,660.32	$3,589.81	$4,593.92	$5,747.24
Three 1.5yd.	$1,222.75	$2,656.59	$3,989.77	$5,371.78	$6,865.02	$8,580.77
Four 1.5 yd.	$1,666.49	$3,599.15	$5,393.80	$7,254.18	$9,264.48	$11,574.61
One 2 yd.	$463.55	$1,044.41	$1,597.02	$2,169.93	$2,788.46	$3,498.24
Two 2 yd.	$1,048.30	$2,327.68	$3,522.71	$4,761.56	$6,099.73	$7,636.39
Three 2 yd.	$1,544.38	$3,396.75	$5,123.58	$6,913.71	$8,847.52	$11,068.78
Four 2 yd.	$2,099.31	$4,595.78	$6,920.84	$9,331.05	$11,934.99	$14,926.23
One 3 yd.	$684.44	$1,566.59	$2,395.53	$3,254.88	$4,182.67	$5,247.35
Two 3 yd.	$1,492.71	$3,321.95	$5,127.93	$6,803.46	$8,717.47	$10,915.29
Three 3 yd.	$2,302.62	$5,079.10	$7,669.07	$10,353.95	$13,254.24	$16,585.32
One 4 yd.	$912.59	$2,088.81	$3,194.03	$4,339.84	$5,576.88	$6,996.46
Two 4 yd.	$1,962.69	$4,397.67	$6,676.30	$9,038.47	$11,589.55	$14,518.48
Three 4 yd.	$3,014.41	$6,708.35	$10,160.43	$13,739.02	$17,604.18	$22,042.55
One 6 yd.	$1,368.87	$3,133.19	$4,791.05	$6,509.77	$8,365.31	$10,494.68
Two 6 yd.	$2,932.17	$6,582.91	$10,000.57	$13,543.59	$17,369.84	$21,762.55

Table 4

COMMERCIAL AND MULTIFAMILY SOLID WASTE CART RATES*

The following rates apply to multifamily solid waste carts that are used in common areas and/or enclosures throughout the multifamily property. For carts that are assigned to, and serving a single, specific, multifamily unit, see the rates in Table 1.

	1X/WEEK	2X/WEEK	3X/WEEK	4X/WEEK	5X/WEEK	6X/WEEK
35 gallon	$40.08	$80.16	$120.23	$160.32	$200.40	$240.47
65 gallon	$80.33	$160.62	$240.94	$321.29	$401.60	$481.94
95 gallon	$120.29	$240.58	$360.88	$481.19	$601.46	$721.77

*Prior to April 1, 2015, commercial/multifamily cart rates for solid waste were lower than the cost of equivalent gallons of commercial bin service. The commercial/multifamily solid waste cart rates will be increased by 5% per rate adjustment for the next 5 rate adjustments beginning in April 1, 2015 and concluding with January 1, 2021 (in addition to the rate increases of 10% for 2020; in addition to the rate increases of 8% for 2021). The rates above include both the 10% rate increase for 2020 and the 5% commercial/multifamily cart increase.

COMPACTOR, ROLL OFF BOX AND TEMPORARY BIN RATES

Table 5

RATES FOR COMMERCIAL AND MULTIFAMILY COMPACTOR SERVICE – LESS THAN 6 CUBIC YARDS

	Compacted Rate Per Cubic Yard = $113.86
To calculate rate per month = [(rate per compacted cubic yard x size of compactor x # of pick ups per week x 52 weeks)/12 months]	

Table 6

RATES FOR ROLL OFF SERVICE – 10 CUBIC YARD BOXES AND LARGER (UNCOMPACTED)

	Uncompacted Rate per Cubic Yard = $40.55
SIZE OF ROLL OFF (CUBIC YARDS)	**RATE PER SERVICE**
10	$405.50
15	$608.25
20	$811.00
25	$1,013.75
30	$1,216.50
40	$1,622.00

To calculate rate per month: [(Uncompacted rate per cubic yard x size of roll off box x number of pickups per week x 52 weeks)/12 months]
To calculate rate per service: size of roll off box x uncompacted rate per cubic yard

Table 7

RATES FOR ROLL OFF SERVICE FOR COMPACTORS – 6 CUBIC YARDS AND LARGER

	Compacted Rate Per Cubic Yard = $113.86	
SIZE OF COMPACTOR (CUBIC YARDS)	**RATE PER MONTH (1X/WEEK SERVICE)**	**RATE PER SERVICE**
6	$2,960.36	$683.16
10	$4,933.93	$1,138.60
15	$7,400.90	$1,707.90
20	$9,867.87	$2,277.20
25	$12,334.83	$2,846.50
30	$14,801.80	$3,415.80

To calculate rate per month: [(Compacted rate per cubic yard x size of compactor x number of pickups per week x 52 weeks)/12 months]
To calculate rate per service: size of compactor x compacted rate per cubic yard

Table 8

RATES FOR SERVICE FOR TEMPORARY BINS FOR SOLID WASTE

TEMPORARY BIN SIZES	RATE PER MONTH
1.5 cubic yards	$210.17
2.0 cubic yards	$210.17
3.0 cubic yards	$250.71
4.0 cubic yards	$291.25
6.0 cubic yards	$372.35
Cost Per Cubic Yard	$40.56

Table 9

RATES FOR ROLL OFF BOXES CONTAINING SOURCE SEPARATED RECYCLABLE MATERIALS

10 CUBIC YARDS	RATE PER SERVICE
Asphalt	$179.76
Concrete	$213.99
Dirt	$256.81
20 CUBIC YARDS	**RATE PER SERVICE**
Wood	$171.20
Yard Trimmings	$291.06
30 CUBIC YARDS	**RATE PER SERVICE**
Metal	$0.00
Wood	$213.99
Yard Trimmings	$376.65
Manure	$171.20
Pomace	$171.20
Sheetrock	$171.20

Table 10

RATES FOR ROLL OFF BOXES CONTAINING SOURCE SEPARATED CARPET FOR RECYCLING

(Rates apply to residential, commercial and multifamily carpet collection service)

ROLL OFF BOX SIZE	RATE PER SERVICE
20 Cubic Yards	$263.47
30 Cubic Yards	$352.42
40 Cubic Yards	$441.35

RATES FOR COMMERCIAL AND SPECIAL EVENT FOOD SCRAP COLLECTION

Table 11

MONTHLY RATES FOR COMMERCIAL FOOD SCRAP COLLECTION

CART SIZE	1X/WEEK	2X/WEEK	3X/WEEK	4X/WEEK	5X/WEEK
35 gallon	$30.06	$60.12	$90.17	$120.24	$150.30
65 gallon	$60.25	$120.47	$180.71	$240.97	$301.20
95 gallon	$90.22	$180.44	$270.66	$360.89	$451.10

Table 12

SPECIAL EVENT FOOD SCRAP COLLECTION – RATE PER CONTAINER PER SERVICE

35-gallon Food Scrap Cart	$10.02
65-gallon Food Scrap Cart	$15.02
95-gallon Food Scrap Cart	$20.01
1.5 Cubic Yards Food Scrap Bin	$108.22
2 Cubic Yards Food Scrap Bin	$122.76
3 Cubic Yards Food Scrap Bin	$151.86
4 Cubic Yards Food Scrap Bin	$180.95
6 Cubic Yards Food Scrap Bin	$240.06

Table 13

FOOD SCRAP COMPACTOR SERVICE

Cost Per Cubic Yard (Compacted)	$85.40	
COMPACTORS (CUBIC YARDS)	**PER MONTH/1XWK**	**PER SERVICE**
6	$2,220.40	$512.40
10	$3,700.67	$854.00
15	$5,551.00	$1,281.00
20	$7,401.33	$1,708.00
25	$9,251.67	$2,135.00
30	$11,102.00	$2,562.00

Table 14

RATES PER SERVICE FOR SPLIT 20 CUBIC YARD ROLL OFF BOXES CONTAINING TWO SOURCE SEPARATED RECYCLABLE MATERIALS

MATERIALS (TWO PER SPLIT BOX)	RATE PER SERVICE
Municipal Solid Waste & Wood	$491.06
Municipal Solid Waste & Yard Trimmings	$551.00
Municipal Solid Waste & Sheetrock	$491.06
Municipal Solid Waste & Metal	$405.46
Municipal Solid Waste & Cardboard	$405.46
Municipal Solid Waste & Mixed Recyclable Materials	$405.46
Wood & Yard Trimmings	$231.13
Wood & Sheetrock	$171.20
Wood & Metal	$85.60
Wood & Cardboard	$85.60
Wood & Mixed Recyclable Materials	$85.60
Yard Trimmings and Sheetrock	$231.13
Yard Trimmings & Metal	$145.54
Yard Trimmings & Cardboard	$145.54
Yard Trimmings and Mixed Recyclable Materials	$145.54
Sheetrock & Metal	$85.60
Sheetrock & Cardboard	$85.60
Sheetrock & Mixed Recyclable Materials	$85.60
Metal & Cardboard	No Charge
Metal & Mixed Recyclable Materials	No Charge
Cardboard & Mixed Recyclable Materials	No Charge

Table 15
RATES FOR MISCELLANEOUS SERVICES

RESIDENTIAL Additional Carts (Cost/Cart/Month)	RATE
Solid Waste	Provided at monthly rate in Table 1 multiplied by number of carts

RECYCLING (AFTER 4-35 GAL OR 2-95 GAL CARTS INCLUDED IN BASE RESIDENTIAL RATE)	RATE
20 gallon	$4.52
35 gallon	$4.52
65 gallon	$4.52
95 gallon	$4.52

YARDWASTE/FOOD (AFTER 4-35 GAL OR 2-95 GAL CARTS IN BASE RESIDENTIAL RATE)	RATE
20 gallon	$4.52
35 gallon	$4.52
65 gallon	$4.52
95 gallon	$4.52

SPECIAL SERVICES (COST PER SERVICE)	RATE
Bulky Items: large non-metal furniture that cannot fit in standard carts/bins & are not accepted in City's Recycle More Program e.g., sofas, wood furniture, etc. ($/service up to 4 bulky items/service)	$49.65
Each bulky item over 4 bulky items ($/Item - excluding e-waste & cardboard)	$20.03
Cardboard and single stream recyclables	No Charge
E-Waste (CRTs/LCDs), Metal Items and Cooking Oil	No Charge

EXTRA SERVICE ($/BIN/SERVICE)	RATE
On day of service (Monday-Friday) up to 9 30-gal. bags or up to 9 30-gal. cans	$8.40/each barrel or bag
On day of service (Monday-Friday) 10 or more 30-gal. bags or cans	$40.56/yard
Not on day of service (Monday-Friday) up to 9 30-gal. bags or cans	$8.40/barrel or bag + $67.03 trip charge
Not on day of service (Monday-Friday) 10 or more 30-gal. bags or cans	$40.56/yard + $67.03 trip charge
Not on day of service (Saturday, Sunday) up to 9 30-gal. bags or cans	$8.40/barrel + $193.70 trip charge
Not on day of service (Saturday, Sunday) 10 or more 30-gal. bags or cans	$40.56/yard + $193.70 trip charge

BACKYARD SERVICE (INCLUDES SOLID WASTE, RECYCLING, YARDWASTE/FOODSCRAPS - COST/MONTH)	RATE
5-600 feet from curb to backyard cart location	$30.27
601 feet or more from curb to backyard cart location	$37.44
With letter from physician indicating resident is physically unable and/or advised not to wheel cart(s) to the curb	No Charge

COMMERCIAL & MULTI-FAMILY	RATE
Bulky Items: large non-metal furniture that cannot fit in standard carts/bins & are not accepted in City's Recycle More Program e.g., sofas, wood furniture, etc. ($/service up to 4 bulky items/service)	$99.29
Each bulky item over 4 bulky items ($/Item – excluding e-waste)	$20.03
Cardboard and single stream recyclables	No Charge
Electronic Waste (CRTs/LCDs), Metal Items and Cooking Oil	No Charge
Pallets (Up to 10 pallets)	$99.29

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

EXTRA SERVICE (COST/CART/SERVICE AND COST/BIN/SERVICE)	RATE
35 gallon	$20.03
65 gallon	$30.04
95 gallon	$40.03
1.5 cubic yards	$216.43
2 cubic yards	$245.52
3 cubic yards	$303.71
4 cubic yards	$361.90
6 cubic yards	$480.14

MISCELLANEOUS	RATE
Bin Cleaning/Bin Exchange ($/Bin/Service)	$270.94
Heavy Waste (Rocks, dirt or other materials in bins or carts that exceed manufacturer's maximum weight for container) Cost / collection	$120.15
Hourly labor charge (for 2 persons) for on-site transfer of solid waste/materials from smaller exterior collection containers to larger exterior collection container(s)	$142.23
Locking Bin or Key Fee (if bin must be unlocked prior to service or if key must be used to access container(s)) ($/month)	$10.02

RECYCLING ($/Service)	RATE
Single Stream Recyclables (less than 10 cubic yard)	No Charge
Source Separated Recyclables (less than 10 cubic yard)	No Charge
Yard Trimmings (less than 10 cubic yard)	No Charge

SATURDAY, SUNDAY SERVICE (Cost/month for 1x/week solid waste service)	RATE
35 gallon	$150.45
65 gallon	$150.45
95 gallon	$150.45

TRIP CHARGES for return to collect containers not available/ accessible for pickup or for a one-time collection on a special (non-regular route) day (Cost/Trip)	
up to 35 gallon	$67.05
35 gallon – 6 cubic yards	$129.13

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

ROLL OFF/COMPACTOR/TEMPORARY BINS	RATE
Overweight Surcharge (10 cubic yards and more) if roll off box or compactor weight causes collection truck to exceed legal highway weight limit established by State of California. Cost of labor and equipment to empty the excess into another container.	Trip charge ($215.19) plus cost to bring in equipment capable of removing such materials plus $120.15 per ton
Sealed watertight roll off boxes (for wet materials such as pomace) Additional cost/ service for special sealed box and added labor	$45.25
Demurrage for non-removal after 3 days (Cost/Bin/Day)	$26.73
Trip Charge - Move/Relocate Box (Cost/Box/ Service)	$215.19
Rental Fee (Cost/day)	$26.73
Temporary Bins (Cost/5 days)	
2 cubic yards	$210.16
3 cubic yards	$250.71
4 cubic yards	$291.25

OTHER FEES	RATE
City Directed Spill Clean Up (waste around overflowing bins/carts after 2 warnings and direction from City)	$359.51
Contaminated Recycling Charges (materials containing 5% or more contamination that must be disposed as solid waste)	
Contaminated residential recyclable materials, yard trimmings, and co-collected food scraps/yard trimmings	
35 gallon	$20.03
65 gallon	$30.04
95 gallon	$40.03
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in carts**	Rates in Table 4 apply
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in bins**	
1.5 cubic yards	$216.43
2 cubic yards	$245.52
3 cubic yards	$303.71
4 cubic yards	$361.90
6 cubic yards	$480.14
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in roll off boxes**	Rates in Table 6 apply
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in compactors**	Rates in Tables 5 and 7 apply

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

DEPOSITS Residential Service and Commercial Cart Service: One-time deposit to initiate service, refundable after 12 months with 1% interest for customer in good standing	RATE
Deposit for Commercial Cart Service	$60.00
Deposit for Residential Service	$30.00
Residential Cart Redelivery Charge	$25.00
Deposit for Commercial Bins	Cost of 1 month's service refundable after 12 months with 1% interest for customer in good standing

Deposit for Roll Off/Compactor Service (Applies to new customers – deposit applied to cost of first service)	**RATE**
Solid Waste	50% of service
Recyclable Materials	50% of service

RESIDENTIAL AND MULTIFAMILY

Residential monthly rates include weekly collection of solid waste, recyclable materials and co-collected yard trimmings and food scraps. Residential rates include one solid waste cart of the selected size and up to four 35-gallon carts for recyclable materials and up to four 35-gallon carts for yard trimmings/food scraps OR up to two 95-gallon carts for recyclable materials and up to two 95-gallon carts for yard trimmings/food scraps. These rates apply to single-family residences, duplexes, triplexes and multifamily units that have individual weekly cart service for each unit. For carts used in common multifamily areas and/or enclosures (and not serving a single, specific multifamily unit) see the rates in Table 4.

Table 1

RESIDENTIAL AND MULTIFAMILY CART RATES FOR WEEKLY SERVICE TO INDIVIDUAL HOMES AND INDIVIDUAL MULTIFAMILY UNITS

CART SIZE	MONTHLY RATE
20 gallon	$28.81
35 gallon	$36.12
65 gallon	$55.39
95 gallon	$85.19

Table 2

COMMERCIAL AND MULTIFAMILY RATES

MONTHLY RATES FOR BINS PROVIDED BY NAPA RECYCLING AND WASTE SERVICES, LLC TO CUSTOMERS

	NUMBER OF COLLECTIONS PER WEEK					
Bin Size (Cubic Yards)	1x/wk	2x/wk	3x/wk	4x/wk	5x/wk	6x/wk
One 1.5 yd.	$438.17	$917.73	$1,366.74	$1,832.20	$2,335.28	$2,913.71
Two 1.5 yd.	$933.75	$1,982.29	$2,952.16	$3,957.50	$5,044.23	$6,293.57
Three 1.5yd	$1,387.67	$2,945.87	$4,387.23	$5,881.29	$7,496.25	$9,352.97
Four 1.5 yd.	$1,867.53	$3,964.56	$5,904.26	$7,915.00	$10,088.39	$12,587.14
One 2 yd.	$563.30	$1,199.72	$1,797.93	$2,418.07	$3,088.16	$3,858.21
Two 2 yd.	$1,199.87	$2,591.40	$3,883.50	$5,222.99	$6,670.45	$8,333.72
Three 2 yd.	$1,733.16	$3,743.07	$5,609.53	$7,544.36	$9,635.04	$12,037.59
Four 2 yd.	$2,333.07	$5,038.78	$7,551.30	$10,155.83	$12,970.26	$16,204.46
One 3 yd.	$825.98	$1,791.27	$2,688.41	$3,618.45	$4,623.36	$5,778.00
Two 3 yd.	$1,701.55	$3,689.99	$5,538.16	$7,454.01	$9,524.12	$11,902.76
Three 3 yd.	$2,577.10	$5,588.73	$8,387.88	$11,289.60	$14,424.90	$18,027.47
One 4 yd.	$1,072.41	$2,355.23	$3,550.82	$4,790.22	$6,129.13	$7,667.07
Two 4 yd.	$2,209.11	$4,851.80	$7,314.71	$9,867.86	$12,625.99	$15,794.19
Three 4 yd.	$3,345.84	$7,348.33	$11,078.56	$14,945.47	$19,122.86	$23,921.25
One 6 yd.	$1,596.12	$3,518.62	$5,311.69	$7,170.52	$9,178.49	$11,484.72
Two 6 yd.	$3,288.04	$7,248.34	$10,942.11	$14,771.25	$18,907.68	$23,658.51

Table 3

MONTHLY RATES FOR CUSTOMER OWNED BINS

	NUMBER OF COLLECTIONS PER WEEK					
Bin Size (Cubic Yards)	1x/wk	2x/wk	3x/wk	4x/wk	5x/wk	6x/wk
One 1.5 yd.	$375.45	$845.97	$1,293.60	$1,757.65	$2,258.65	$2,833.61
Two 1.5 yd.	$866.04	$1,904.76	$2,873.15	$3,876.99	$4,961.43	$6,207.02
Three 1.5yd.	$1,320.57	$2,869.12	$4,308.95	$5,801.52	$7,414.22	$9,267.23
Four 1.5 yd.	$1,799.81	$3,887.08	$5,825.30	$7,834.51	$10,005.64	$12,500.58
One 2 yd.	$500.63	$1,127.96	$1,724.78	$2,343.52	$3,011.54	$3,778.10
Two 2 yd.	$1,132.16	$2,513.89	$3,804.53	$5,142.48	$6,587.71	$8,247.30
Three 2 yd.	$1,667.93	$3,668.49	$5,533.47	$7,466.81	$9,555.32	$11,954.28
Four 2 yd.	$2,267.25	$4,963.44	$7,474.51	$10,077.53	$12,889.79	$16,120.33
One 3 yd.	$739.20	$1,691.92	$2,587.17	$3,515.27	$4,517.28	$5,667.14
Two 3 yd.	$1,612.13	$3,587.71	$5,538.16	$7,347.74	$9,414.87	$11,788.51
Three 3 yd.	$2,486.83	$5,485.43	$8,282.60	$11,182.27	$14,314.58	$17,912.15
One 4 yd.	$985.60	$2,255.91	$3,449.55	$4,687.03	$6,023.03	$7,556.18
Two 4 yd.	$2,119.71	$4,749.48	$7,210.40	$9,761.55	$12,516.71	$15,679.96
Three 4 yd.	$3,255.56	$7,245.02	$10,973.26	$14,838.14	$19,012.51	$23,805.95
One 6 yd.	$1,478.38	$3,383.85	$5,174.33	$7,030.55	$9,034.53	$11,334.25
Two 6 yd.	$3,166.74	$7,109.54	$10,800.62	$14,627.08	$18,759.43	$23,503.55

Table 4

COMMERCIAL AND MULTIFAMILY SOLID WASTE CART RATES*

The following rates apply to multifamily solid waste carts that are used in common areas and/or enclosures throughout the multifamily property. For carts that are assigned to, and serving a single, specific, multifamily unit, see the rates in Table 1.

	1X/WEEK	2X/WEEK	3X/WEEK	4X/WEEK	5X/WEEK	6X/WEEK
35 gallon	$45.29	$90.58	$135.86	$181.16	$226.45	$271.73
65 gallon	$90.77	$181.50	$272.26	$363.06	$453.81	$544.59
95 gallon	$135.93	$271.86	$407.79	$543.74	$679.65	$815.60

*Prior to April 1, 2015, commercial/multifamily cart rates for solid waste were lower than the cost of equivalent gallons of commercial bin service. The commercial/multifamily solid waste cart rates will be increased by 5% per rate adjustment for the next 5 rate adjustments beginning in April 1, 2015 and concluding with January 1, 2021 (in addition to the rate increases of 8% for 2021). The rates above include both the 8% rate increase for 2021 and the 5% commercial/multifamily cart increase.

COMPACTOR, ROLL OFF BOX AND TEMPORARY BIN RATES

Table 5

RATES FOR COMMERCIAL AND MULTIFAMILY COMPACTOR SERVICE – LESS THAN 6 CUBIC YARDS

	Compacted Rate Per Cubic Yard = $122.97
To calculate rate per month = [(rate per compacted cubic yard x size of compactor x # of pick ups per week x 52 weeks)/12 months]	

Table 6

RATES FOR ROLL OFF SERVICE – 10 CUBIC YARD BOXES AND LARGER (UNCOMPACTED)

	Uncompacted Rate per Cubic Yard = $43.79
SIZE OF ROLL OFF (CUBIC YARDS)	**RATE PER SERVICE**
10	$437.90
15	$656.85
20	$875.80
25	$1,094.75
30	$1,313.70
40	$1,751.60

To calculate rate per month: [(Uncompacted rate per cubic yard x size of roll off box x number of pickups per week x 52 weeks)/12 months]
To calculate rate per service: size of roll off box x uncompacted rate per cubic yard

Table 7

RATES FOR ROLL OFF SERVICE FOR COMPACTORS – 6 CUBIC YARDS AND LARGER

	Compacted Rate Per Cubic Yard = $122.97	
SIZE OF COMPACTOR (CUBIC YARDS)	**RATE PER MONTH (1X/WEEK SERVICE)**	**RATE PER SERVICE**
6	$3,197.22	$737.82
10	$5,328.70	$1,229.70
15	$7,993.05	$1,844.55
20	$10,657.40	$2,459.40
25	$13,321.75	$3,074.25
30	$15,986.10	$3,689.10

To calculate rate per month: [(Compacted rate per cubic yard x size of compactor x number of pickups per week x 52 weeks)/12 months]
To calculate rate per service: size of compactor x compacted rate per cubic yard

Table 8

RATES FOR SERVICE FOR TEMPORARY BINS FOR SOLID WASTE

TEMPORARY BIN SIZES	RATE PER MONTH
1.5 cubic yards	$226.98
2.0 cubic yards	$226.98
3.0 cubic yards	$270.77
4.0 cubic yards	$314.55
6.0 cubic yards	$402.14
Cost Per Cubic Yard	$43.80

Table 9

RATES FOR ROLL OFF BOXES CONTAINING SOURCE SEPARATED RECYCLABLE MATERIALS

10 CUBIC YARDS	RATE PER SERVICE
Asphalt	$194.14
Concrete	$231.11
Dirt	$277.35
20 CUBIC YARDS	**RATE PER SERVICE**
Wood	$184.90
Yard Trimmings	$314.34
30 CUBIC YARDS	**RATE PER SERVICE**
Metal	$0.00
Wood	$231.11
Yard Trimmings	$406.78
Manure	$184.90
Pomace	$184.90
Sheetrock	$184.90

Table 10

RATES FOR ROLL OFF BOXES CONTAINING SOURCE SEPARATED CARPET FOR RECYCLING

(Rates apply to residential, commercial and multifamily carpet collection service)

ROLL OFF BOX SIZE	RATE PER SERVICE
20 Cubic Yards	$284.55
30 Cubic Yards	$380.61
40 Cubic Yards	$476.66

RATES FOR COMMERCIAL AND SPECIAL EVENT FOOD SCRAP COLLECTION

Table 11

MONTHLY RATES FOR COMMERCIAL FOOD SCRAP COLLECTION

CART SIZE	1X/WEEK	2X/WEEK	3X/WEEK	4X/WEEK	5X/WEEK
35 gallon	$33.97	$67.94	$101.90	$135.87	$169.84
65 gallon	$68.08	$136.13	$204.20	$272.30	$340.36
95 gallon	$101.95	$203.90	$305.84	$407.81	$509.74

Table 12

SPECIAL EVENT FOOD SCRAP COLLECTION – RATE PER CONTAINER PER SERVICE

35-gallon Food Scrap Cart	$10.82
65-gallon Food Scrap Cart	$16.22
95-gallon Food Scrap Cart	$21.61
1.5 Cubic Yards Food Scrap Bin	$116.88
2 Cubic Yards Food Scrap Bin	$132.58
3 Cubic Yards Food Scrap Bin	$164.01
4 Cubic Yards Food Scrap Bin	$195.43
6 Cubic Yards Food Scrap Bin	$259.26

Table 13

FOOD SCRAP COMPACTOR SERVICE

Cost Per Cubic Yard (Compacted)	$92.23	
COMPACTORS (CUBIC YARDS)	**PER MONTH/1XWK**	**PER SERVICE**
6	$2,397.98	$553.38
10	$3,996.63	$922.30
15	$5,994.95	$1,383.45
20	$7,993.27	$1,844.60
25	$9,991.58	$2,305.75
30	$11,989.90	$2,766.90

Table 14

RATES PER SERVICE FOR SPLIT 20 CUBIC YARD ROLL OFF BOXES CONTAINING TWO SOURCE SEPARATED RECYCLABLE MATERIALS

MATERIALS (TWO PER SPLIT BOX)	RATE PER SERVICE
Municipal Solid Waste & Wood	$530.34
Municipal Solid Waste & Yard Trimmings	$595.08
Municipal Solid Waste & Sheetrock	$530.34
Municipal Solid Waste & Metal	$437.90
Municipal Solid Waste & Cardboard	$437.90
Municipal Solid Waste & Mixed Recyclable Materials	$437.90
Wood & Yard Trimmings	$249.62
Wood & Sheetrock	$184.90
Wood & Metal	$92.45
Wood & Cardboard	$92.45
Wood & Mixed Recyclable Materials	$92.45
Yard Trimmings and Sheetrock	$249.62
Yard Trimmings & Metal	$157.18
Yard Trimmings & Cardboard	$157.18
Yard Trimmings and Mixed Recyclable Materials	$157.18
Sheetrock & Metal	$92.45
Sheetrock & Cardboard	$92.45
Sheetrock & Mixed Recyclable Materials	$92.45
Metal & Cardboard	No Charge
Metal & Mixed Recyclable Materials	No Charge
Cardboard & Mixed Recyclable Materials	No Charge

Table 15
RATES FOR MISCELLANEOUS SERVICES

RESIDENTIAL Additional Carts (Cost/Cart/Month)	RATE
Solid Waste	Provided at monthly rate in Table 1 multiplied by number of carts

RECYCLING (AFTER 4-35 GAL OR 2-95 GAL CARTS INCLUDED IN BASE RESIDENTIAL RATE)	RATE
20 gallon	$4.88
35 gallon	$4.88
65 gallon	$4.88
95 gallon	$4.88

YARDWASTE/FOOD (AFTER 4-35 GAL OR 2-95 GAL CARTS IN BASE RESIDENTIAL RATE)	RATE
20 gallon	$4.88
35 gallon	$4.88
65 gallon	$4.88
95 gallon	$4.88

SPECIAL SERVICES (COST PER SERVICE)	RATE
Bulky Items: large non-metal furniture that cannot fit in standard carts/bins & are not accepted in City's Recycle More Program e.g., sofas, wood furniture, etc. ($/service up to 4 bulky items/service)	$53.62
Each bulky item over 4 bulky items ($/Item - excluding e-waste & cardboard)	$21.63
Cardboard and single stream recyclables	No Charge
E-Waste (CRTs/LCDs), Metal Items and Cooking Oil	No Charge

EXTRA SERVICE ($/BIN/SERVICE)	RATE
On day of service (Monday-Friday) up to 9 30-gal. bags or up to 9 30-gal. cans	$9.07/each barrel or bag
On day of service (Monday-Friday) 10 or more 30-gal. bags or cans	$43.80/yard
Not on day of service (Monday-Friday) up to 9 30-gal. bags or cans	$9.07/barrel or bag + $72.39 trip charge
Not on day of service (Monday-Friday) 10 or more 30-gal. bags or cans	$43.80/yard + $72.39 trip charge
Not on day of service (Saturday, Sunday) up to 9 30-gal. bags or cans	$9.07/barrel + $209.20 trip charge
Not on day of service (Saturday, Sunday) 10 or more 30-gal. bags or cans	$43.80/yard + $209.20 trip charge

BACKYARD SERVICE (INCLUDES SOLID WASTE, RECYCLING, YARDWASTE/FOODSCRAPS - COST/MONTH)	RATE
5-600 feet from curb to backyard cart location	$32.69
601 feet or more from curb to backyard cart location	$40.44
With letter from physician indicating resident is physically unable and/or advised not to wheel cart(s) to the curb	No Charge

COMMERCIAL & MULTI-FAMILY	RATE
Bulky Items: large non-metal furniture that cannot fit in standard carts/bins & are not accepted in City's Recycle More Program e.g., sofas, wood furniture, etc. ($/service up to 4 bulky items/service)	$107.23
Each bulky item over 4 bulky items ($/Item – excluding e-waste)	$21.63
Cardboard and single stream recyclables	No Charge
Electronic Waste (CRTs/LCDs), Metal Items and Cooking Oil	No Charge
Pallets (Up to 10 pallets)	$107.23

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

EXTRA SERVICE (COST/CART/SERVICE AND COST/BIN/SERVICE)	RATE
35 gallon	$21.63
65 gallon	$32.44
95 gallon	$43.23
1.5 cubic yards	$233.74
2 cubic yards	$265.16
3 cubic yards	$328.01
4 cubic yards	$390.85
6 cubic yards	$518.55

MISCELLANEOUS	RATE
Bin Cleaning/Bin Exchange ($/Bin/Service)	$292.62
Heavy Waste (Rocks, dirt or other materials in bins or carts that exceed manufacturer's maximum weight for container) Cost / collection	$129.76
Hourly labor charge (for 2 persons) for on-site transfer of solid waste/materials from smaller exterior collection containers to larger exterior collection container(s)	$153.61
Locking Bin or Key Fee (if bin must be unlocked prior to service or if key must be used to access container(s)) ($/month)	$10.82

RECYCLING ($/Service)	RATE
Single Stream Recyclables (less than 10 cubic yard)	No Charge
Source Separated Recyclables (less than 10 cubic yard)	No Charge
Yard Trimmings (less than 10 cubic yard)	No Charge

SATURDAY, SUNDAY SERVICE (Cost/month for 1x/week solid waste service)	RATE
35 gallon	$162.49
65 gallon	$162.49
95 gallon	$162.49

TRIP CHARGES for return to collect containers not available/ accessible for pickup or for a one-time collection on a special (non-regular route) day (Cost/Trip)	
up to 35 gallon	$72.41
35 gallon – 6 cubic yards	$139.46

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

ROLL OFF/COMPACTOR/TEMPORARY BINS	RATE
Overweight Surcharge (10 cubic yards and more) if roll off box or compactor weight causes collection truck to exceed legal highway weight limit established by State of California. Cost of labor and equipment to empty the excess into another container.	Trip charge ($232.41) plus cost to bring in equipment capable of removing such materials plus $129.76 per ton
Sealed watertight roll off boxes (for wet materials such as pomace) Additional cost/ service for special sealed box and added labor	$48.87
Demurrage for non-removal after 3 days (Cost/Bin/Day)	$28.87
Trip Charge - Move/Relocate Box (Cost/Box/ Service)	$232.41
Rental Fee (Cost/day)	$28.87
Temporary Bins (Cost/5 days)	
2 cubic yards	$226.97
3 cubic yards	$270.77
4 cubic yards	$314.55

OTHER FEES	RATE
City Directed Spill Clean Up (waste around overflowing bins/carts after 2 warnings and direction from City)	$388.27
Contaminated Recycling Charges (materials containing 5% or more contamination that must be disposed as solid waste)	
Contaminated residential recyclable materials, yard trimmings, and co-collected food scraps/yard trimmings	
35 gallon	$21.63
65 gallon	$32.44
95 gallon	$43.23
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in carts**	Rates in Table 4 apply
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in bins**	
1.5 cubic yards	$233.74
2 cubic yards	$265.16
3 cubic yards	$328.01
4 cubic yards	$390.85
6 cubic yards	$518.55
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in roll off boxes**	Rates in Table 6 apply
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in compactors**	Rates in Tables 5 and 7 apply

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

DEPOSITS Residential Service and Commercial Cart Service: One-time deposit to initiate service, refundable after 12 months with 1% interest for customer in good standing	RATE
Deposit for Commercial Cart Service	$60.00
Deposit for Residential Service	$30.00
Residential Cart Redelivery Charge	$25.00
Deposit for Commercial Bins	Cost of 1 month's service refundable after 12 months with 1% interest for customer in good standing

Deposit for Roll Off/Compactor Service (Applies to new customers – deposit applied to cost of first service)	**RATE**
Solid Waste	50% of service
Recyclable Materials	50% of service

RESIDENTIAL AND MULTIFAMILY

Residential monthly rates include weekly collection of solid waste, recyclable materials and co-collected yard trimmings and food scraps. Residential rates include one solid waste cart of the selected size and up to four 35-gallon carts for recyclable materials and up to four 35-gallon carts for yard trimmings/food scraps OR up to two 95-gallon carts for recyclable materials and up to two 95-gallon carts for yard trimmings/food scraps. These rates apply to single-family residences, duplexes, triplexes and multifamily units that have individual weekly cart service for each unit. For carts used in common multifamily areas and/or enclosures (and not serving a single, specific multifamily unit) see the rates in Table 4.

Table 1

RESIDENTIAL AND MULTIFAMILY CART RATES FOR WEEKLY SERVICE TO INDIVIDUAL HOMES AND INDIVIDUAL MULTIFAMILY UNITS

CART SIZE	MONTHLY RATE
20 gallon	$30.54
35 gallon	$38.29
65 gallon	$58.71
95 gallon	$90.30

Table 2

COMMERCIAL AND MULTIFAMILY RATES

MONTHLY RATES FOR BINS PROVIDED BY NAPA RECYCLING AND WASTE SERVICES, LLC TO CUSTOMERS

	NUMBER OF COLLECTIONS PER WEEK					
Bin Size (Cubic Yards)	1x/wk	2x/wk	3x/wk	4x/wk	5x/wk	6x/wk
One 1.5 yd.	$464.46	$972.79	$1,448.74	$1,942.13	$2,475.40	$3,088.53
Two 1.5 yd.	$989.78	$2,101.23	$3,129.29	$4,194.95	$5,346.88	$6,671.18
Three 1.5yd	$1,470.93	$3,122.62	$4,650.46	$6,234.17	$7,946.03	$9,914.15
Four 1.5 yd.	$1,979.58	$4,202.43	$6,258.52	$8,389.90	$10,693.69	$13,342.37
One 2 yd.	$597.10	$1,271.70	$1,905.81	$2,563.15	$3,273.45	$4,089.70
Two 2 yd.	$1,271.86	$2,746.88	$4,116.51	$5,536.37	$7,070.68	$8,833.74
Three 2 yd.	$1,837.15	$3,967.65	$5,946.10	$7,997.02	$10,213.14	$12,759.85
Four 2 yd.	$2,473.05	$5,341.11	$8,004.38	$10,765.18	$13,748.48	$17,176.73
One 3 yd.	$875.54	$1,898.75	$2,849.71	$3,835.56	$4,900.76	$6,124.68
Two 3 yd.	$1,803.64	$3,911.39	$5,870.45	$7,901.25	$10,095.57	$12,616.93
Three 3 yd.	$2,731.73	$5,924.05	$8,891.15	$11,966.98	$15,290.39	$19,109.12
One 4 yd.	$1,136.75	$2,496.54	$3,763.87	$5,077.63	$6,496.88	$8,127.09
Two 4 yd.	$2,341.66	$5,142.91	$7,753.59	$10,459.93	$13,383.55	$16,741.84
Three 4 yd.	$3,546.59	$7,789.23	$11,743.27	$15,842.20	$20,270.23	$25,356.53
One 6 yd.	$1,691.89	$3,729.74	$5,630.39	$7,600.75	$9,729.20	$12,173.80
Two 6 yd.	$3,485.32	$7,683.24	$11,598.64	$15,657.53	$20,042.14	$25,078.02

Table 3

MONTHLY RATES FOR CUSTOMER OWNED BINS

	NUMBER OF COLLECTIONS PER WEEK					
Bin Size (Cubic Yards)	1x/wk	2x/wk	3x/wk	4x/wk	5x/wk	6x/wk
One 1.5 yd.	$397.98	$896.73	$1,371.22	$1,863.11	$2,394.17	$3,003.63
Two 1.5 yd.	$918.00	$2,019.05	$3,045.54	$4,109.61	$5,259.12	$6,579.44
Three 1.5yd.	$1,399.80	$3,041.27	$4,567.49	$6,149.61	$7,859.07	$9,823.26
Four 1.5 yd.	$1,907.80	$4,120.30	$6,174.82	$8,304.58	$10,605.98	$13,250.61
One 2 yd.	$530.67	$1,195.64	$1,828.27	$2,484.13	$3,192.23	$4,004.79
Two 2 yd.	$1,200.09	$2,664.72	$4,032.80	$5,451.03	$6,982.97	$8,742.14
Three 2 yd.	$1,768.01	$3,888.60	$5,865.48	$7,914.82	$10,128.64	$12,671.54
Four 2 yd.	$2,403.29	$5,261.25	$7,922.98	$10,682.18	$13,663.18	$17,087.55
One 3 yd.	$783.55	$1,793.44	$2,742.40	$3,726.19	$4,788.32	$6,007.17
Two 3 yd.	$1,708.86	$3,802.97	$5,870.45	$7,788.60	$9,979.76	$12,495.82
Three 3 yd.	$2,636.04	$5,814.56	$8,779.56	$11,853.21	$15,173.45	$18,986.88
One 4 yd.	$1,044.74	$2,391.26	$3,656.52	$4,968.25	$6,384.41	$8,009.55
Two 4 yd.	$2,246.89	$5,034.45	$7,643.02	$10,347.24	$13,267.71	$16,620.76
Three 4 yd.	$3,450.89	$7,679.72	$11,631.66	$15,728.43	$20,153.26	$25,234.31
One 6 yd.	$1,567.08	$3,586.88	$5,484.79	$7,452.38	$9,576.60	$12,014.31
Two 6 yd.	$3,356.74	$7,536.11	$11,448.66	$15,504.70	$19,885.00	$24,913.76

Table 4

COMMERCIAL AND MULTIFAMILY SOLID WASTE CART RATES

The following rates apply to multifamily solid waste carts that are used in common areas and/or enclosures throughout the multifamily property. For carts that are assigned to, and serving a single, specific, multifamily unit, see the rates in Table 1.

	1X/WEEK	2X/WEEK	3X/WEEK	4X/WEEK	5X/WEEK	6X/WEEK
35 gallon	$48.01	$96.01	$144.01	$192.03	$240.04	$288.03
65 gallon	$96.22	$192.39	$288.60	$384.84	$481.04	$577.27
95 gallon	$144.09	$288.17	$432.26	$576.36	$720.43	$864.54

COMPACTOR, ROLL OFF BOX AND TEMPORARY BIN RATES

Table 5

RATES FOR COMMERCIAL AND MULTIFAMILY COMPACTOR SERVICE – LESS THAN 6 CUBIC YARDS

	Compacted Rate Per Cubic Yard = $130.35
To calculate rate per month = [(rate per compacted cubic yard x size of compactor x # of pick ups per week x 52 weeks)/12 months]	

Table 6

RATES FOR ROLL OFF SERVICE – 10 CUBIC YARD BOXES AND LARGER (UNCOMPACTED)

	Uncompacted Rate per Cubic Yard = $46.42
SIZE OF ROLL OFF (CUBIC YARDS)	**RATE PER SERVICE**
10	$464.20
15	$696.30
20	$928.40
25	$1,160.50
30	$1,392.60
40	$1,856.80

To calculate rate per month: [(Uncompacted rate per cubic yard x size of roll off box x number of pickups per week x 52 weeks)/12 months]
To calculate rate per service: size of roll off box x uncompacted rate per cubic yard

Table 7

RATES FOR ROLL OFF SERVICE FOR COMPACTORS – 6 CUBIC YARDS AND LARGER

	Compacted Rate Per Cubic Yard = $130.35	
SIZE OF COMPACTOR (CUBIC YARDS)	**RATE PER MONTH (1X/WEEK SERVICE)**	**RATE PER SERVICE**
6	$3,389.05	$782.09
10	$5,648.42	$1,303.48
15	$8,472.63	$1,955.22
20	$11,296.84	$2,606.96
25	$14,121.06	$3,258.71
30	$16,945.27	$3,910.45

To calculate rate per month: [(Compacted rate per cubic yard x size of compactor x number of pickups per week x 52 weeks)/12 months]
To calculate rate per service: size of compactor x compacted rate per cubic yard

Table 8

RATES FOR SERVICE FOR TEMPORARY BINS FOR SOLID WASTE

TEMPORARY BIN SIZES	RATE PER MONTH
1.5 cubic yards	$240.60
2.0 cubic yards	$240.60
3.0 cubic yards	$287.02
4.0 cubic yards	$333.42
6.0 cubic yards	$426.27
Cost Per Cubic Yard	$46.43

Table 9

RATES FOR ROLL OFF BOXES CONTAINING SOURCE SEPARATED RECYCLABLE MATERIALS

10 CUBIC YARDS	RATE PER SERVICE
Asphalt	$205.79
Concrete	$244.98
Dirt	$293.99
20 CUBIC YARDS	**RATE PER SERVICE**
Wood	$195.99
Yard Trimmings	$333.20
30 CUBIC YARDS	**RATE PER SERVICE**
Metal	$0.00
Wood	$244.98
Yard Trimmings	$431.19
Manure	$195.99
Pomace	$195.99
Sheetrock	$195.99

Table 10

RATES FOR ROLL OFF BOXES CONTAINING SOURCE SEPARATED CARPET FOR RECYCLING

(Rates apply to residential, commercial and multifamily carpet collection service)

ROLL OFF BOX SIZE	RATE PER SERVICE
20 Cubic Yards	$301.62
30 Cubic Yards	$403.45
40 Cubic Yards	$505.26

RATES FOR COMMERCIAL AND SPECIAL EVENT FOOD SCRAP COLLECTION

Table 11

MONTHLY RATES FOR COMMERCIAL FOOD SCRAP COLLECTION

CART SIZE	1X/WEEK	2X/WEEK	3X/WEEK	4X/WEEK	5X/WEEK
35 gallon	$36.01	$72.01	$108.01	$144.02	$180.03
65 gallon	$72.17	$144.29	$216.45	$288.63	$360.78
95 gallon	$108.07	$216.13	$324.20	$432.27	$540.32

Table 12

SPECIAL EVENT FOOD SCRAP COLLECTION – RATE PER CONTAINER PER SERVICE

35-gallon Food Scrap Cart	$11.47
65-gallon Food Scrap Cart	$17.19
95-gallon Food Scrap Cart	$22.91
1.5 Cubic Yards Food Scrap Bin	$123.89
2 Cubic Yards Food Scrap Bin	$140.53
3 Cubic Yards Food Scrap Bin	$173.85
4 Cubic Yards Food Scrap Bin	$207.16
6 Cubic Yards Food Scrap Bin	$274.82

Table 13

FOOD SCRAP COMPACTOR SERVICE

Cost Per Cubic Yard (Compacted)	$97.76	
COMPACTORS (CUBIC YARDS)	**PER MONTH/1XWK**	**PER SERVICE**
6	$2,541.76	$586.56
10	$4,236.27	$977.60
15	$6,354.40	$1,466.40
20	$8,472.53	$1,955.20
25	$10,590.67	$2,444.00
30	$12,708.80	$2,932.80

Table 14

RATES PER SERVICE FOR SPLIT 20 CUBIC YARD ROLL OFF BOXES CONTAINING TWO SOURCE SEPARATED RECYCLABLE MATERIALS

MATERIALS (TWO PER SPLIT BOX)	RATE PER SERVICE
Municipal Solid Waste & Wood	$562.16
Municipal Solid Waste & Yard Trimmings	$630.78
Municipal Solid Waste & Sheetrock	$562.16
Municipal Solid Waste & Metal	$464.17
Municipal Solid Waste & Cardboard	$464.17
Municipal Solid Waste & Mixed Recyclable Materials	$464.17
Wood & Yard Trimmings	$264.60
Wood & Sheetrock	$195.99
Wood & Metal	$98.00
Wood & Cardboard	$98.00
Wood & Mixed Recyclable Materials	$98.00
Yard Trimmings and Sheetrock	$264.60
Yard Trimmings & Metal	$166.61
Yard Trimmings & Cardboard	$166.61
Yard Trimmings and Mixed Recyclable Materials	$166.61
Sheetrock & Metal	$98.00
Sheetrock & Cardboard	$98.00
Sheetrock & Mixed Recyclable Materials	$98.00
Metal & Cardboard	No Charge
Metal & Mixed Recyclable Materials	No Charge
Cardboard & Mixed Recyclable Materials	No Charge

Table 15
RATES FOR MISCELLANEOUS SERVICES

RESIDENTIAL Additional Carts (Cost/Cart/Month)	RATE
Solid Waste	Provided at monthly rate in Table 1 multiplied by number of carts

RECYCLING (AFTER 4-35 GAL OR 2-95 GAL CARTS INCLUDED IN BASE RESIDENTIAL RATE)	RATE
20 gallon	$5.17
35 gallon	$5.17
65 gallon	$5.17
95 gallon	$5.17

YARDWASTE/FOOD (AFTER 4-35 GAL OR 2-95 GAL CARTS IN BASE RESIDENTIAL RATE)	RATE
20 gallon	$5.17
35 gallon	$5.17
65 gallon	$5.17
95 gallon	$5.17

SPECIAL SERVICES (COST PER SERVICE)	RATE
Bulky Items: large non-metal furniture that cannot fit in standard carts/bins & are not accepted in City's Recycle More Program e.g sofas, wood furniture, etc. ($/service up to 4 bulky items/service)	$56.84
Each bulky item over 4 bulky items ($/Item - excluding e-waste & cardboard)	$22.93
Cardboard and single stream recyclables	No Charge
E-Waste (CRTs/LCDs), Metal Items and Cooking Oil	No Charge

EXTRA SERVICE ($/BIN/SERVICE)	RATE
On day of service (Monday-Friday) up to 9 30-gal. bags or up to 9 30-gal. cans	$9.61/each barrel or bag
On day of service (Monday-Friday) 10 or more 30-gal. bags or cans	$46.43/yard
Not on day of service (Monday-Friday) up to 9 30-gal. bags or cans	$9.61/barrel or bag + $76.73 trip charge
Not on day of service (Monday-Friday) 10 or more 30-gal. bags or cans	$46.43/yard + $76.73 trip charge
Not on day of service (Saturday, Sunday) up to 9 30-gal. bags or cans	$9.61/barrel + $221.75 trip charge
Not on day of service (Saturday, Sunday) 10 or more 30-gal. bags or cans	$46.43/yard + $221.75 trip charge

BACKYARD SERVICE (INCLUDES SOLID WASTE, RECYCLING, YARDWASTE/FOODSCRAPS - COST/MONTH)	RATE
5-600 feet from curb to backyard cart location	$34.65
601 feet or more from curb to backyard cart location	$42.87
With letter from physician indicating resident is physically unable and/or advised not to wheel cart(s) to the curb	No Charge

COMMERCIAL & MULTI-FAMILY	RATE
Bulky Items: large non-metal furniture that cannot fit in standard carts/bins & are not accepted in City's Recycle More Program e.g., sofas, wood furniture, etc. ($/service up to 4 bulky items/service)	$113.66
Each bulky item over 4 bulky items ($/Item – excluding e-waste)	$22.93
Cardboard and single stream recyclables	No Charge
Electronic Waste (CRTs/LCDs), Metal Items and Cooking Oil	No Charge
Pallets (Up to 10 pallets)	$113.66

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

EXTRA SERVICE (COST/CART/SERVICE AND COST/BIN/SERVICE)	RATE
35 gallon	$22.93
65 gallon	$34.39
95 gallon	$45.82
1.5 cubic yards	$247.76
2 cubic yards	$281.07
3 cubic yards	$347.69
4 cubic yards	$414.30
6 cubic yards	$549.66

MISCELLANEOUS	RATE
Bin Cleaning/Bin Exchange ($/Bin/Service)	$310.18
Heavy Waste (Rocks, dirt or other materials in bins or carts that exceed manufacturer's maximum weight for container) Cost / collection	$137.55
Hourly labor charge (for 2 persons) for on-site transfer of solid waste/materials from smaller exterior collection containers to larger exterior collection container(s)	$162.83
Locking Bin or Key Fee (if bin must be unlocked prior to service or if key must be used to access container(s)) ($/month)	$11.47

RECYCLING ($/Service)	RATE
Single Stream Recyclables (less than 10 cubic yard)	No Charge
Source Separated Recyclables (less than 10 cubic yard)	No Charge
Yard Trimmings (less than 10 cubic yard)	No Charge

SATURDAY, SUNDAY SERVICE (Cost/month for 1x/week solid waste service)	RATE
35 gallon	$172.24
65 gallon	$172.24
95 gallon	$172.24

TRIP CHARGES for return to collect containers not available/ accessible for pickup or for a one-time collection on a special (non-regular route) day (Cost/Trip)	
up to 35 gallon	$76.75
35 gallon – 6 cubic yards	$147.83

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

ROLL OFF/COMPACTOR/TEMPORARY BINS	RATE
Overweight Surcharge (10 cubic yards and more) if roll off box or compactor weight causes collection truck to exceed legal highway weight limit established by State of California. Cost of labor and equipment to empty the excess into another container.	Trip charge ($246.35) plus cost to bring in equipment capable of removing such materials plus $137.55 per ton
Sealed watertight roll off boxes (for wet materials such as pomace) Additional cost/ service for special sealed box and added labor	$51.80
Demurrage for non-removal after 3 days (Cost/Bin/Day)	$30.60
Trip Charge - Move/Relocate Box (Cost/Box/ Service)	$246.35
Rental Fee (Cost/day)	$30.60
Temporary Bins (Cost/5 days)	
2 cubic yards	$240.59
3 cubic yards	$287.02
4 cubic yards	$333.42

OTHER FEES	RATE
City Directed Spill Clean Up (waste around overflowing bins/carts after 2 warnings and direction from City)	$411.57
Contaminated Recycling Charges (materials containing 5% or more contamination that must be disposed as solid waste)	
Contaminated residential recyclable materials, yard trimmings, and co-collected food scraps/yard trimmings	
35 gallon	$22.93
65 gallon	$34.39
95 gallon	$45.82
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in carts**	Rates in Table 4 apply
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in bins**	
1.5 cubic yards	$247.76
2 cubic yards	$281.07
3 cubic yards	$347.69
4 cubic yards	$414.30
6 cubic yards	$549.66
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in roll off boxes**	Rates in Table 6 apply
Contaminated commercial, multifamily & special event recyclable materials, yard trimmings, food scraps **in compactors**	Rates in Tables 5 and 7 apply

Table 15, continued

RATES FOR MISCELLANEOUS SERVICES

DEPOSITS Residential Service and Commercial Cart Service: One-time deposit to initiate service, refundable after 12 months with 1% interest for customer in good standing	RATE
Deposit for Commercial Cart Service	$60.00
Deposit for Residential Service	$30.00
Residential Cart Redelivery Charge	$25.00
Deposit for Commercial Bins	Cost of 1 month's service refundable after 12 months with 1% interest for customer in good standing

Deposit for Roll Off/Compactor Service (Applies to new customers – deposit applied to cost of first service)	**RATE**
Solid Waste	50% of service
Recyclable Materials	50% of service

PROPOSED INCREASE TO SOLID WASTE AND RECYCLING RATES

PUBLIC HEARING - *JULY 23, 2019 AT 6:30PM,*
CITY HALL, 955 SCHOOL STREET, NAPA, CA 94559

Solid Waste Rates Proposed to Increase

Residents can be proud of Napa's solid waste program that diverts approximately 69% of collected materials from landfill. We have a robust recycling, food scrap and composting facility, and clean Compressed Natural Gas (CNG) collection vehicles. The City extended the life of equipment and vehicles with a contract extension with Napa Recycling & Waste Services (NRWS) but expenses are expected to exceed revenues by nearly $3.2 million in 2020. Rates have not increased since 2016 but changes are proposed to meet the increasing costs of the City's dynamic materials diversion program. Here's what residential customers can expect to see in their future monthly solid waste bills from NRWS:

Level of Service	Current (Since 2016)	Aug 2019	Change	Jan 2020	Change	Jan 2021	Change	Jan 2022	Change	Total Change
20 gallon	$21.65	$24.25	**$2.60**	$26.68	**$2.43**	$28.81	**$2.13**	$30.54	**$1.73**	$8.89
35 gallon	$27.14	$30.40	**$3.26**	$33.44	**$3.04**	$36.12	**$2.68**	$38.29	**$2.17**	$11.15
65 gallon	$41.63	$46.63	**$5.00**	$51.29	**$4.66**	$55.39	**$4.10**	$58.71	**$3.32**	$17.08

Low/Fixed Income Assistance
A discount of $10.00 per month for low-income customers will be proposed. If you qualify for PG&E's CARE Program, you may qualify for this discount.

Napa's Rates Will Still be Among Average for the Area

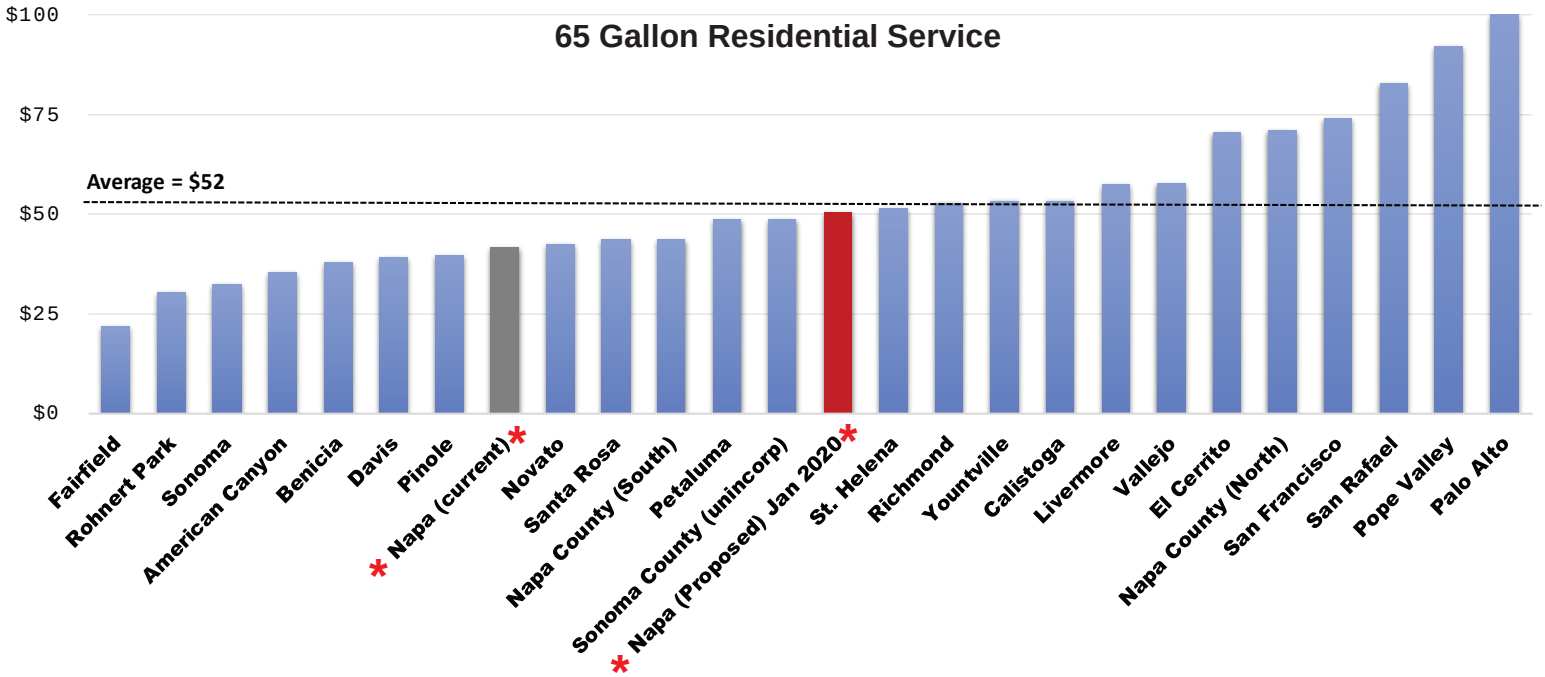


Chart based on current jurisdiction rates, many of which will likely increase over the next year.

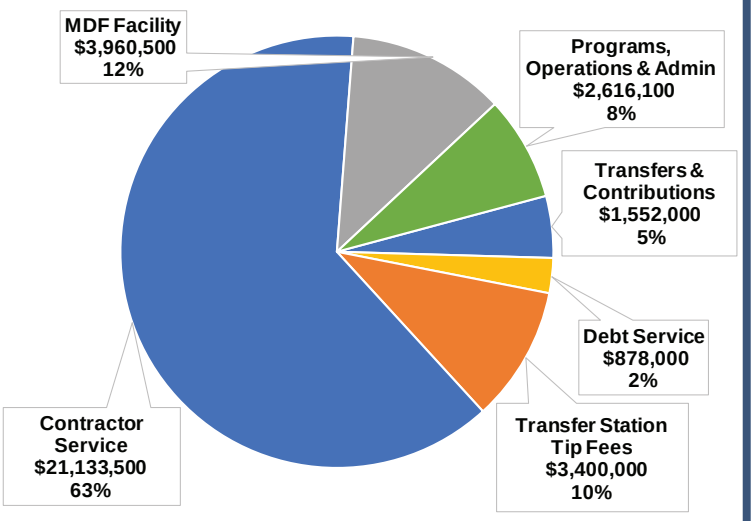
Please take a look at the complete contents of this notice.
An explanation of proposed rates, what rates are used for and an overview of services received has been highlighted. Full details on proposed rates, the public hearing on the rates, and the opportunity to protest are also included.

How are solid waste and recycling rates used?

ATTACHMENT 2

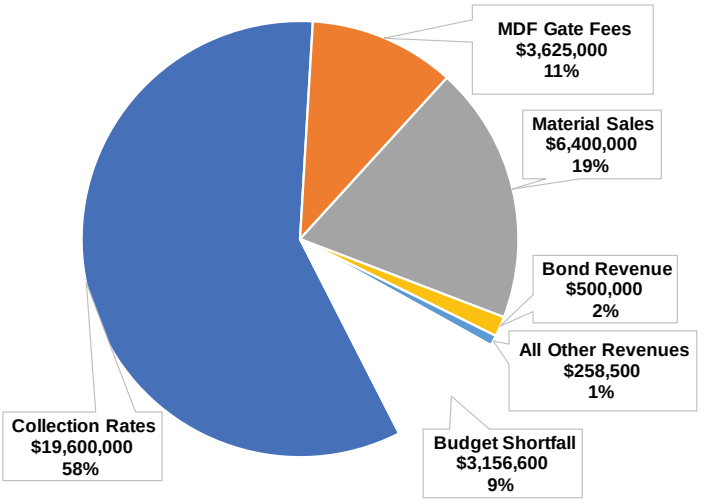
The cost to provide a high level of solid waste and recycling services and divert 69% from landfill is about $33.5 million per year. As shown in the chart below, a large portion of the cost is our contract with Napa Recycling & Waste Services for approximately 70 employees, 28 refuse trucks and state of the art recycling, sorting and composting equipment to collect and process all material. The revenue to support these services is also shown below. A combination of shrinking revenue from material sales due to China export issues and increasing expenses has left a $3.2 million gap that will be addressed through the proposed rates.

Fiscal Year 2020 Budgeted Expenditures



Total: $33,540,100

Fiscal Year 2020 Budgeted Revenues



Total: $30,383,500

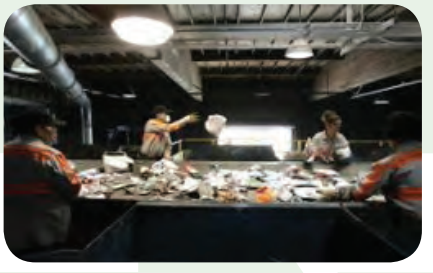
By the numbers...

Collection

- Over 23,000 residential and commercial accounts serviced
- More than 85,000 tons of material collected annually
- Moving to 100% full fleet of Clean Compressed Natural Gas (CNG) collection trucks by 2020

Processing

- 170,000 tons processed at our regional reycling and compost facility
- 20 sorters and automated sorting equipment work daily to process recyclables
- Composting of both yard trimmings and food scraps



Landfill Diversion

- 69% in 2018, compared to 27% in 1997
- Over 20 different types of materials separated and returned to market

Community

- Customer service
- Waste prevention assistance
- Development review

What's Included in Residential Solid Waste and Recycling Services?

Trash	Recycling	Compost
20/35/65 or 95 Gal	2 - 95 Gallon Carts	2 - 95 Gallon Carts

ALL THIS FOR $6 - $12 per week

RECYCLE MORE

JOIN NAPA TO RECYCLE

Free Pickup (with appointment) for:

- Electronic Waste
- Household and Large Appliances
- Oversized Metal Items
- Cooking Oil
- Household Batteries
- Bagged clothing and shoes

Twice a Year Collection of Unlimited Compost in Compostable Bags

Free Annual Electronic Waste Event

Free Annual Tire Disposal Coupon

Free Pickup of Used Motor Oil and Filters

Free Annual Bulky Item Drop Off Coupon

Visit naparecycling.com or call (707) 255-5200 to:

schedule pick-up, request additional services, commercial needs, billing and service related questions, as well as a full version of the Reduce, Reuse & Recycle Guide for Napa County.

Why is a Rate Increase Needed?

ATTACHMENT 2

Beginning in the 2018 fiscal year, expenditures began to exceed revenues. The three primary drivers of this increase are outlined below.

Collection & Processing

In 2018, the City executed a 14-year contract extension with Napa Recycling & Waste Services to continue efforts to achieve 75% diversion from landfill through an environmentally sustainable operation to recycle and compost waste locally. Key costs:

- 28 CNG refuse and recycling trucks resulting in a very clean fleet with significantly reduced air emissions ($11.5M)
- Replaced or upgraded facility processing equipment in mixed recycling processing area ($4M)

Cost Increase = $2.1M/year

Declining Material Sales

Sales of recyclable materials generates revenue to reduce rates and avoids cost and impacts of disposal at landfills. As shown below, the amount of recyclable material has grown considerably (great news), but the sale price per ton has declined drastically due to China/market conditions.

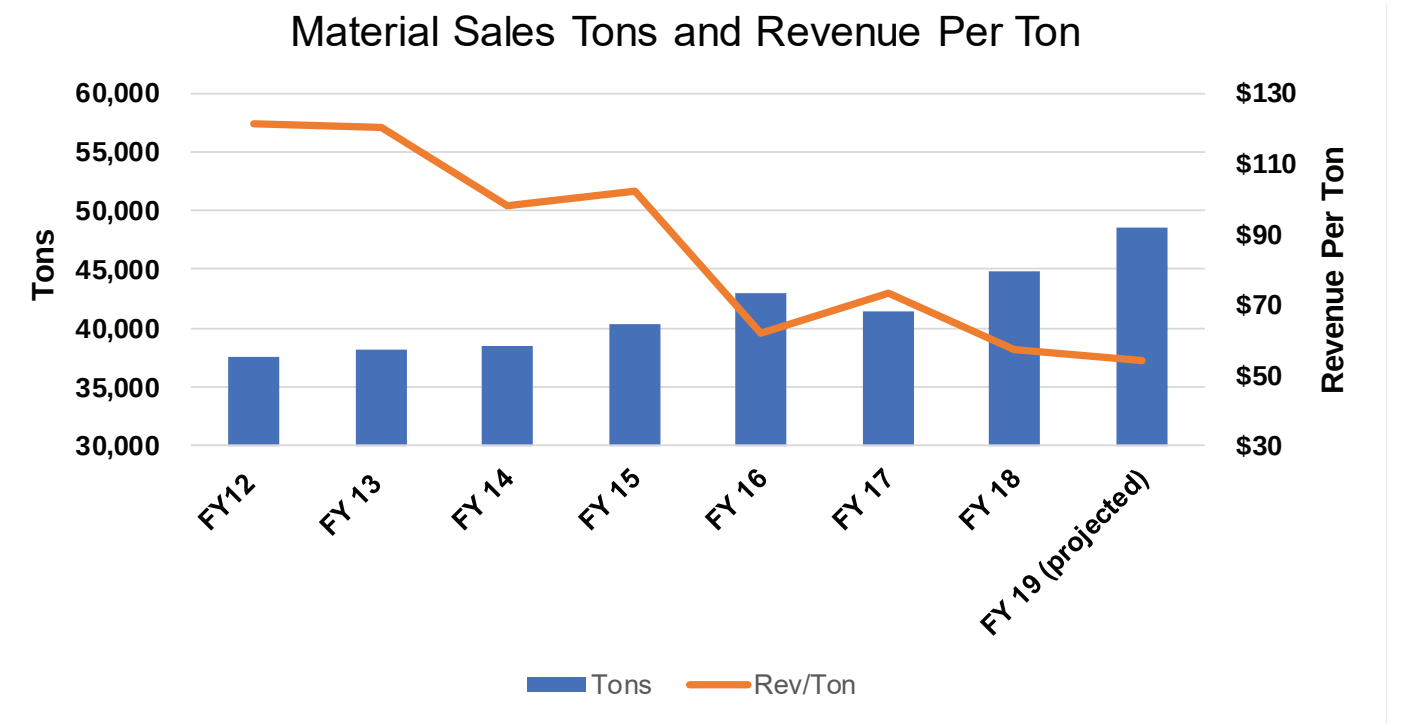
Revenue Loss = $1.2M/year

Capital Improvements

Issued $12.5M in Solid Waste Revenue Bonds in 2016 to fund improvements that include:

- Composting system ($8M) to comply with State regulations to process food waste and air district regulations for emissions
- Stormwater system ($2M) to comply with Composting Order from Regional Board
- Covered processing and storage areas for recyclables ($2.5M) to comply with stormwater discharge permits

Cost Increase = $900K/year



What is Being Done to Minimize Rate Impacts?

The recent contract extension with NRWS allowed the City to implement activities totaling $10.7M in COST SAVINGS over the life of the contract:

- $3.4M - Extended life of collection fleets by 3 years
- $2.5M - Extended life of carts/bins vs. buying new
- $2.0M - Extended life of sorting line
- $1.6M - Refurbished 8 trucks vs. buying new
- $1.2M - Sorting line upgrades: sorting "robot" & glass cleaning system (added net revenue)

As part of the recent budget process:

- Increased contract gate fees at MDF/lowered payments out
  - » $180K net benefits in FY19
  - » $960K - $1.08M in net benefits in FY20 (and future years)
- Reduced greenwaste transfer cost through cost share with NRWS
  - » $210K lower costs in FY19
  - » $420K lower costs in FY20

Visit www.cityofnapa.org/SolidWasteRates for:
cost of service analysis, rate tables,
waste prevention information and more!

ATTACHMENT 2

CITY OF NAPA

NOTICE OF PUBLIC HEARING ON PROPOSED CHANGES TO RATES FOR COLLECTION OF SOLID WASTE

The Napa City Council will hold a public hearing at City Hall, 955 School Street, on Tuesday, July 23, 2019 at 6:30 pm, to consider proposed changes to the rates charged for collection of solid waste and recyclable materials from residential, multi-family, and commercial customers (Solid Waste and Recycling Rates) for the next four years. The specific proposed maximum residential solid waste and recycling rates to be charged for each of the four upcoming rate years are shown in the table below. The specific commercial, multi-family, and roll off solid waste and recycling rates proposed to become effective August 1, 2019 are shown in the tables starting on the reverse side of this notice. Tables showing the specific maximum commercial, multi-family and roll off solid waste and recycling rates proposed to become effective January 1, 2020; January 1, 2021; and January 1, 2022 may be viewed on the City's web site at www.cityofnapa.org/solidwasterates.

City Council will receive oral and written comments, and oral or written protests, at the hearing. Per the California Constitution (Prop 218), if written protests representing a majority of the parcels subject to the proposed rates are received prior to the close of the hearing, the City may not implement the proposed rates. Written comments or protests on the proposed solid waste and recycling rates may be submitted to the City Clerk at: P.O. Box 660, Napa, CA 94559-0660. **Written comments or protests may also be submitted in person at the hearing. You may use the protest form that is included at the end of this mailer.**

If you would like to view the staff report to the City Council and the Rate Study that explains the basis and rationale for the proposed solid waste and recycling rates in detail, you may access it directly at www.cityofnapa.org/solidwasterates. These documents are also available for review in the City Clerk's office at City Hall, located at 955 School Street in Napa. The Clerk's Office can be reached at (707) 257-9503, or clerk@cityofnapa.org.

SUMMARY OF ALL PROPOSED INCREASES TO MONTHLY SOLID WASTE AND RECYCLING RATES

PROPOSED RESIDENTIAL RATES FOR AUGUST 1, 2019 THROUGH DECEMBER 31, 2022

Rates include weekly collection of recyclable materials as well as compostable greenwaste, soiled paper, and food scraps

Cart Size	Existing Rate	Proposed Rate Effective August 1, 2019	Proposed Rate Effective January 1, 2020	Proposed Rate Effective January 1, 2021	Proposed Rate Effective January 1, 2022
20 gallon	$21.65	$24.25	$26.68	$28.81	$30.54
35 gallon	$27.14	$30.40	$33.44	$36.12	$38.29
65 gallon	$41.63	$46.63	$51.29	$55.39	$58.71
95 gallon	$64.03	$71.71	$78.88	$85.19	$90.30

PROPOSED COMMERCIAL AND MULTI-FAMILY RATES FOR AUGUST 1, 2019 THROUGH DECEMBER 31, 2022

NOTE REGARDING COMMERCIALAND MULTI-FAMILY RATES: All the commercial and multi-family rates with the proposed increase effective on August 1, 2019 are shown below in detail. Each of these rates will be further increased on January 1, 2020 by an additional 10.00%; on January 1, 2021 by an additional 8.00%; and January 1, 2022 by an additional 6.00%.

Napa Recycling and Waste Services (NRWS) Provided Bins

	Existing						Proposed Rates August 1, 2019					
Bin Size	**1x/wk**	**2x/wk**	**3x/wk**	**4x/wk**	**5x/wk**	**6x/wk**	**1x/wk**	**2x/wk**	**3x/wk**	**4x/wk**	**5x/wk**	**6x/wk**
One 1.5 yd	$329.31	$689.73	$1,027.19	$1,377.01	$1,755.12	$2,189.84	$368.83	$772.50	$1,150.45	$1,542.25	$1,965.73	$2,452.62
Two 1.5 yd.	$701.77	$1,489.81	$2,218.73	$2,974.31	$3,791.05	$4,730.02	$785.98	$1,668.59	$2,484.98	$3,331.23	$4,245.98	$5,297.62
Three 1.5 yd	$1,042.92	$2,214.01	$3,297.28	$4,420.16	$5,633.90	$7,029.35	$1,168.07	$2,479.69	$3,692.95	$4,950.58	$6,309.97	$7,872.87
Four 1.5 yd	$1,403.56	$2,979.62	$4,437.43	$5,948.62	$7,582.06	$9,460.04	$1,571.99	$3,337.17	$4,969.92	$6,662.45	$8,491.91	$10,595.24
One 2 yd.	$423.35	$901.66	$1,351.26	$1,817.33	$2,320.95	$2,899.69	$474.15	$1,009.86	$1,513.41	$2,035.41	$2,599.46	$3,247.65
Two 2 yd.	$901.78	$1,947.60	$2,918.70	$3,925.40	$5,013.26	$6,263.32	$1,009.99	$2,181.31	$3,268.94	$4,396.45	$5,614.85	$7,014.92
Three 2 yd.	$1,302.58	$2,813.16	$4,215.92	$5,670.06	$7,241.34	$9,047.01	$1,458.89	$3,150.74	$4,721.83	$6,350.47	$8,110.30	$10,132.65
Four 2 yd.	$1,753.45	$3,786.96	$5,675.28	$7,632.75	$9,747.97	$12,178.68	$1,963.86	$4,241.40	$6,356.31	$8,548.68	$10,917.73	$13,640.12
One 3 yd.	$620.78	$1,346.25	$2,020.51	$2,719.50	$3,474.75	$4,342.54	$695.27	$1,507.80	$2,262.97	$3,045.84	$3,891.72	$4,863.64
Two 3 yd.	$1,278.82	$2,773.26	$4,162.28	$5,602.16	$7,157.98	$8,945.67	$1,432.28	$3,106.05	$4,661.75	$6,274.42	$8,016.94	$10,019.15
Three 3 yd.	$1,936.85	$4,200.29	$6,304.03	$8,484.85	$10,841.22	$13,548.79	$2,169.27	$4,704.32	$7,060.51	$9,503.03	$12,142.17	$15,174.64
One 4 yd.	$805.98	$1,770.11	$2,668.67	$3,600.15	$4,606.43	$5,762.29	$902.70	$1,982.52	$2,988.91	$4,032.17	$5,159.20	$6,453.76
Two 4 yd.	$1,660.29	$3,646.44	$5,497.46	$7,416.32	$9,489.23	$11,870.33	$1,859.52	$4,084.01	$6,157.16	$8,306.28	$10,627.94	$13,294.77
Three 4 yd.	$2,514.61	$5,522.73	$8,326.24	$11,232.46	$14,372.04	$17,978.34	$2,816.36	$6,185.46	$9,325.39	$12,580.36	$16,096.68	$20,135.74
One 6 yd.	$1,199.59	$2,644.46	$3,992.07	$5,389.10	$6,898.21	$8,631.49	$1,343.54	$2,961.80	$4,471.12	$6,035.79	$7,726.00	$9,667.27
Two 6 yd.	$2,471.17	$5,447.59	$8,223.69	$11,101.53	$14,210.31	$17,780.87	$2,767.71	$6,101.30	$9,210.53	$12,433.71	$15,915.55	$19,914.57

Customer Owned Bins

	Existing						Proposed Rates August 1, 2019					
Bin Size	**1x/wk**	**2x/wk**	**3x/wk**	**4x/wk**	**5x/wk**	**6x/wk**	**1x/wk**	**2x/wk**	**3x/wk**	**4x/wk**	**5x/wk**	**6x/wk**
One 1.5 yd	$282.18	$635.80	$972.22	$1,320.98	$1,697.52	$2,129.63	$316.04	$712.10	$1,088.89	$1,479.50	$1,901.22	$2,385.19
Two 1.5 yd.	$650.88	$1,431.55	$2,159.35	$2,913.80	$3,728.83	$4,664.96	$728.99	$1,603.34	$2,418.47	$3,263.46	$4,176.29	$5,224.76
Three 1.5 yd	$992.49	$2,156.32	$3,238.45	$4,360.21	$5,572.26	$6,964.91	$1,111.59	$2,415.08	$3,627.06	$4,883.44	$6,240.93	$7,800.70
Four 1.5 yd	$1,352.67	$2,921.38	$4,378.08	$5,888.13	$7,519.87	$9,394.97	$1,514.99	$3,271.95	$4,903.45	$6,594.71	$8,422.25	$10,522.37
One 2 yd.	$376.26	$847.73	$1,296.29	$1,761.30	$2,263.36	$2,839.48	$421.41	$949.46	$1,451.84	$1,972.66	$2,534.96	$3,180.22
Two 2 yd.	$850.89	$1,889.35	$2,859.34	$3,864.90	$4,951.08	$6,198.37	$953.00	$2,116.07	$3,202.46	$4,328.69	$5,545.21	$6,942.17
Three 2 yd.	$1,253.55	$2,757.10	$4,158.75	$5,611.78	$7,181.43	$8,984.40	$1,403.98	$3,087.95	$4,657.80	$6,285.19	$8,043.20	$10,062.53
Four 2 yd.	$1,703.98	$3,730.34	$5,617.56	$7,573.90	$9,687.49	$12,115.45	$1,908.46	$4,177.98	$6,291.67	$8,482.77	$10,849.99	$13,569.30
One 3 yd.	$555.55	$1,271.58	$1,944.42	$2,641.95	$3,395.03	$4,259.21	$622.22	$1,424.17	$2,177.75	$2,958.98	$3,802.43	$4,770.32
Two 3 yd.	$1,211.62	$2,696.38	$4,162.28	$5,522.29	$7,075.87	$8,859.81	$1,357.01	$3,019.95	$4,661.75	$6,184.96	$7,924.97	$9,922.99
Three 3 yd.	$1,869.01	$4,122.64	$6,224.89	$8,404.18	$10,758.31	$13,462.11	$2,093.29	$4,617.36	$6,971.88	$9,412.68	$12,049.31	$15,077.56
One 4 yd.	$740.74	$1,695.46	$2,592.55	$3,522.60	$4,526.69	$5,678.95	$829.63	$1,898.92	$2,903.66	$3,945.31	$5,069.89	$6,360.42
Two 4 yd.	$1,593.09	$3,569.54	$5,419.07	$7,336.42	$9,407.10	$11,784.48	$1,784.26	$3,997.88	$6,069.36	$8,216.79	$10,535.95	$13,198.62
Three 4 yd.	$2,446.76	$5,445.09	$8,247.10	$11,151.80	$14,289.11	$17,891.68	$2,740.37	$6,098.50	$9,236.75	$12,490.02	$16,003.80	$20,038.68
One 6 yd.	$1,111.10	$2,543.17	$3,888.84	$5,283.90	$6,790.03	$8,518.41	$1,244.43	$2,848.35	$4,355.50	$5,917.97	$7,604.83	$9,540.62
Two 6 yd.	$2,380.01	$5,343.27	$8,117.35	$10,993.17	$14,098.89	$17,664.41	$2,665.61	$5,984.46	$9,091.43	$12,312.35	$15,790.76	$19,784.14

PROPOSED COMMERCIAL MSW CART RATES

	1x/week		2x/week		3x/week		4x/week		5x/week		6x/week	
	Current	**Proposed**	**Current**	**Proposed**	**Current**	**Proposed**	**Current**	**Proposed**	**Current**	**Proposed**	**Current**	**Proposed**
35 gallon	$29.79	$34.85	$59.57	$69.70	$89.36	$104.55	$119.15	$139.41	$148.94	$174.26	$178.72	$209.10
65 gallon	$59.70	$69.85	$119.38	$139.67	$179.07	$209.51	$238.79	$279.38	$298.48	$349.22	$358.19	$419.08
95 gallon	$89.40	$104.60	$178.80	$209.20	$268.21	$313.81	$357.63	$418.43	$447.02	$523.01	$536.44	$627.63

*Commercial cart rates in the above table include Rate Year 2019 adjustment plus a 5.00% increase to make the cost per gallon of commercial cart service more equal to commercial bin service. An additional 5.00% will also be added to the commercial cart rate increases effective on January 1, 2020 and January 1, 2021.

COMMERCIAL AND MULTI-FAMILY COMPACTORS (Less Than 6 Yards)

- Existing Compacted Rate Per Yard = $92.42
- To calculate rate per month = ((cost per yard x size bin x # of pick-ups per week x 52 weeks)/12 months)
- Proposed Compacted Rate Per Yard = $103.51

ATTACHMENT 2

ROLL OFFS (Uncompacted)

Existing Uncompacted Rate Per Yard = $32.91 Proposed Uncompacted Rate per Yard = $36.60

Size of Roll Off (yards)	Current Rate Per Service	Proposed Rate Per Service
10	$329.11	$368.60
15	$493.67	$552.90
20	$658.23	$737.20
25	$822.78	$921.50
30	$987.34	$1,105.80
40	$1,316.45	$1,474.40

To calculate rate per month: ((rate per yard x size of bin x number of pickups per week x 52 weeks)/12 months)

To calculate rate per service: Size of Bin x Uncompacted Rate Per Yard

ROLL OFFS (Compacted)

Existing Compacted Rate Per Yard = $92.42 Proposed Compacted Rate Per Yard = $103.51

Size of Compactor (yards)	Current Rate Per Month (1x week service)	Proposed Rate Per Month (1xweek service)	Current Rate Per Service	Proposed Rate Per Service
6	$2,402.99	$2,691.26	$554.54	$621.06
10	$4,004.98	$4,485.43	$924.23	$1,035.10
15	$6,007.47	$6,728.15	$1,386.34	$1,552.65
20	$8,009.97	$8,970.87	$1,848.45	$2,070.20
25	$10,012.46	$11,213.58	$2,310.57	$2,587.75
30	$12,014.95	$13,456.30	$2,772.68	$3,105.30

To calculate rate per month: ((rate per yard x size of bin x number of pickups per week x 52 weeks)/12 months)

To calculate rate per service: Size of Bin x Uncompacted Rate Per Yard

Temporary Bin Sizes and Rates – MSW

Temporary Bin Sizes	Current Rate	Proposed Rate
1.5 yard	$170.59	$191.06
2.0 yard	$170.59	$191.06
3.0 yard	$203.50	$227.92
4.0 yard	$236.40	$264.77
6.0 yard	$302.23	$338.50
Cost Per Yard	$32.92	$36.87

Residential & Commercial Carpet Roll-off Service (Recycling)

	Current Rate	Proposed Rate
Roll Off Box Size	Rate Per Service	Rate Per Service
20 Cubic Yards	$213.86	$239.52
30 Cubic Yards	$286.05	$320.38
40 Cubic Yards	$358.24	$401.23

ROLL OFFS (Recycled Materials)

	Current Rate	Proposed Rate
10 YARDS	Per Service	Per Service
Asphalt	$145.91	$163.42
Concrete	$173.70	$194.54
Dirt	$208.45	$233.46
20 YARDS		
Clean Wood	$138.96	$155.64
Yard Trimmings	$236.25	$264.60

	Current Rate	Proposed Rate
30 YARDS	Per Service	Per Service
Metal	$0.00	$0.00
Clean Wood	$173.70	$194.54
Yard Trimmings	$305.72	$342.41
Manure	$138.96	$155.64
Pomace	$138.96	$155.64
Drywall	$138.96	$155.64

Commercial Food Scrap Rates*

	1x/week		2x/week		3x/week		4x/week		5x/week	
Cart Size	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed
35 gallon	$21.32	$26.14	$42.65	$52.28	$63.97	$78.41	$85.30	$104.56	$106.62	$130.70
65 gallon	$42.74	$52.39	$85.46	$104.75	$128.20	$157.13	$170.95	$209.54	$213.68	$261.92
95 gallon	$64.00	$78.45	$128.00	$156.90	$192.01	$235.36	$256.02	$313.82	$320.02	$392.26

Special Events Food Scrap Collection – rate per container per service**

	Current	Proposed
35-gallon Food Scrap Cart	$8.13	$9.11
65-gallon Food Scrap Cart	$12.19	$13.65
95-gallon Food Scrap Cart	$16.25	$18.19
1.5 Cubic Yards Food Scrap Bin	$87.83	$98.38
2 Cubic Yards Food Scrap Bin	$99.64	$111.60
3 Cubic Yards Food Scrap Bin	$123.25	$138.05
4 Cubic Yards Food Scrap Bin	$146.88	$164.50
6 Cubic Yards Food Scrap Bin	$194.86	$218.24

*Commercial food scrap rate provide a 25% savings compared to equivalent MSW service. **Special event food scrap composting rate provide a 50% savings compared to equivalent MSW service.

Food Scrap Compactor Service*

Cost Per Yard (Compacted)	Current:	$69.32	Proposed:	$77.63
	Per Month 1x/week		Per Service	
Compactors (yds)	Current	Proposed	Current	Proposed
6	$1,802.24	$2,018.38	$415.90	$465.78
10	$3,003.74	$3,363.97	$693.17	$776.30
15	$4,505.61	$5,045.95	$1,039.76	$1,164.45
20	$6,007.47	$6,727.93	$1,386.34	$1,552.60
25	$7,509.34	$8,409.92	$1,732.93	$1,940.75
30	$9,011.21	$10,091.90	$2,079.51	$2,328.90

Split 20-cubic Yard Roll-off Boxes – 2 Material Types per Box

Materials (Two Per Split Box)	Current	Proposed
	Rate Per Service	Rate Per Service
MSW & Clean Wood	$398.59	$446.42
MSW & Yard Trimmings	$447.24	$500.91
MSW & Drywall	$398.59	$446.42
MSW & Metal	$329.11	$368.60
MSW & Cardboard	$329.11	$368.60
MSW & Mixed Recyclable Materials	$329.11	$368.60
Clean Wood & Yard Trimmings	$187.61	$210.12
Clean Wood & Drywall	$138.96	$155.64
Clean Wood & Metal	$69.48	$77.82
Clean Wood & Cardboard	$69.48	$77.82
Clean Wood & Mixed Recyclable Materials	$69.48	$77.82

Materials (Two Per Split Box) Cont.	Current	Proposed
	Rate Per Service	Rate Per Service
Yard Trimmings & Drywall	$187.61	$210.12
Yard Trimmings & Metal	$118.13	$132.31
Yard Trimmings & Cardboard	$118.13	$132.31
Yard Trimmings & Mixed Recyclable Materials	$118.13	$132.31
Drywall & Metal	$69.48	$77.82
Drywall & Cardboard	$69.48	$77.82
Drywall & Mixed Recyclable Materials	$69.48	$77.82
Metal & Cardboard	Free	Free
Metal & Mixed Recyclable Materials	Free	Free
Cardboard & Mixed Recyclable Materials	Free	Free

MISCELLANEOUS CHARGES

ATTACHMENT 2

The proposed increase effective August 1, 2019 is shown in the Proposed Rate column below. Each of these rates will be increased on January 1, 2020 by an additional 10.00%; on January 1, 2021 by an additional 8.00%; and January 1, 2022 by an additional 6.00%.

		Current Rate	Proposed Rate
	Residential		
	Additional Carts ($/Cart/Month)		
1	MSW	to be provided at monthly rate multiplied by number of carts	
	Recycle (after 4-35gal or 2-95gal)		
2	20 gallon	$3.67	$4.11
3	35 gallon	$3.67	$4.11
4	65 gallon	$3.67	$4.11
5	95 gallon	$3.67	$4.11
	Yard trimmings (after 4-35 gal or 2-95 gal)		
6	20 gallon	$3.67	$4.11
7	35 gallon	$3.67	$4.11
8	65 gallon	$3.67	$4.11
9	95 gallon	$3.67	$4.11
10	Bulky Items ($/service up to 4 items)	$40.30	$45.14
11	Each item over 4 items ($/Item) - excluding e-waste, cardboard	$16.26	$18.21
12	Cardboard and single stream recyclables	Free	Free
13	E-Waste (CRTs/LCDs), Metal Items and Cooking Oil	Free	Free
	Extra Empty ($/bin/Service)		
14	On day of service (Monday-Friday) up to 9 bags (30 gal.)/barrels	$6.82/each barrel	$7.64/each barrel
15	On day of service (Monday-Friday) 10 or more bags/barrels	$32.92/yard	$36.87/yard
16	Not on day of service (Monday-Friday) up to 9 bags/barrels	$6.82/barrel + $54.41 trip charge	$7.64/barrel + $60.94 trip charge
17	Not on day of service (Monday-Friday) 10 or more bags/barrels	$32.92/yard + $54.41 trip charge	$36.87/yard + $60.94 trip charge
18	Not on day of service (Saturday, Sunday) up to 9 bags/barrels	$6.82/barrel + $157.22 trip charge	$7.64/barrel + $176.09 trip charge
19	Not on day of service (Saturday, Sunday) 10 or more bags/barrels	$32.92/yard + $157.22 trip charge	$36.87/yard + $176.09 trip charge
	Backyard Service (includes MSW, Recycle, YW) ($/Month)		
20	5-600 feet	$24.57	$27.52
21	601 feet or more	$30.39	$34.04
22	With doctors note	Free	Free
	Commercial & Multi-family		
1	Bulky Items ($/service up to 4 items)	$80.59	$90.26
2	Cardboard and single stream recyclables	Free	Free
3	Each item over 4 items ($/Item) - excluding e-waste, occ	$16.26	$18.21
4	E-Waste (CRTs/LCDs), Metal Items and Cooking Oil	Free	Free
5	Pallets	$80.59	$90.26
	Extra Empty ($/Bin/Empty) – Special Event Bins		
	Commercial		
6	35 gallon	$16.26	$18.21
7	65 gallon	$24.38	$27.31
8	95 gallon	$32.49	$36.39
	Commercial and Multi-Family		
9	1.5 yard	$175.67	$196.75
10	2 yard	$199.29	$223.20
11	3 yard	$246.52	$276.10
12	4 yard	$293.75	$329.00
13	6 yard	$389.72	$436.49

		Current Rate	Proposed Rate
	Miscellaneous		
14	Bin Cleaning/Bin Exchange ($/Bin/Service)	$219.92	$246.31
15	Heavy Waste	$97.53	$109.23
		Current Rate	**Proposed Rate**
	Hourly labor charge (for 2 persons) for on-site transfer of solid waste/materials from smaller exterior collection containers to larger exterior collection container(s)	$115.45	$129.30
16	Locking Bin or Key Fee	$8.13	$9.11
	Recycling Services ($/Service)		
17	Single Stream Recyclables (less than 10 yard)	Free	Free
18	Source Separated Recyclables (less than 10 yard)	Free	Free
19	Yard trimmings (less than 10 yard)	Free	Free
	Saturday, Sunday, Holiday Service ($/day(s)/month)		
20	35 gallon	$122.12	$136.77
21	65 gallon	$122.12	$136.77
22	95 gallon	$122.12	$136.77
	Trip Charges ($/Trip)		
23	up to 35 gallon	$54.42	$60.95
24	35 gallon - 6 yards	$104.81	$117.39
	Roll Off/Compactor/Temporary Bins		
1	Overweight Surcharge (10 yards and more)	Trip charge ($174.67) plus cost to bring in equipment capable of removing such materials plus $97.53 per ton	Trip charge ($195.63) plus cost to bring in equipment capable of removing such materials plus $109.23 per ton
	Sealed watertight roll off boxes (for wet materials such as pomace). Additional charge/service for special sealed box and added labor	$36.73	$41.14
	Miscellaneous		
2	Demurrage for non-removal after 3 days ($/Bin/Day)	$21.70	$24.30
3	Trip Charge - Move/Relocate Box ($/Box/Service)	$174.67	$195.63
4	Rental Fee ($/day)	$21.70	$24.30
	Temporary Bins ($/5 days)		
5	2 yard	$170.58	$191.05
6	3 yard	$203.50	$227.92
7	4 yard	$236.40	$264.77
	Other Fees		
1	City Directed Spill Clean Up	$291.81	$326.83
	Contaminated Recycling Fees		
	Residential recyclables, yard trimmings		
2	35 gallon	$16.26	$18.21
3	65 gallon	$24.38	$27.31
4	95 gallon	$32.49	$36.39
	Commercial (bins) recyclables, yard trimmings		
5	1.5 yard	$175.67	$196.75
6	2 yard	$199.29	$223.20
7	3 yard	$246.52	$276.10
8	4 yard	$293.75	$329.00
9	6 yard	$389.72	$436.49
	Deposit		
10	Commercial cart	$60.00	$60.00
11	Resident	$30.00	$30.00
	Residential Cart Redelivery Charge	$25.00	$25.00
	Roll Off/Compactors/Commercial bin		
12	MSW	50% of service	50% of service
13	Recycle	50% of service	50% of service

Questions? Go to
NapaRecycling.com

Recycle it.

CITY OF NAPA
SOLID WASTE RATES PROTEST FORM

You do not need to complete this form if you do not oppose the proposed rate increase. If you wish to protest the proposed rate increase, you may use this sample form.

☐ Check the box if you protest the proposed rate increase and agree with the following:

I protest the proposed rate increase for the collection of solid waste (trash), recycling, and compostables. I certify that I am the property owner and/or responsible for paying the solid waste rates for this property.

Comments or Reason for Protest (optional):

_____

_____

_____

_____

_____

Street Address _____

_____ _____

Signature Printed Name

Mail to:
Napa City Clerk
P.O. Box 660
Napa, CA 94559-0660
Attn: Proposition 218 Protest

- OR -

Deliver in person to:
Napa City Clerk
955 School Street
Napa, CA 94559-0660
Attn: Proposition 218 Protest

Please mail this protest form back in a stamped envelope.

In order to be counted, all written protests must be received by the City, whether sent by mail or delivered in person, by the close of the public hearing July 23, 2019 at 6:30pm.

ATTACHMENT 2

DO NOT DISCARD.
IMPORTANT
SOLID WASTE/
RECYCLING RATE
INFORMATION
ENCLOSED.

PO Box 660
Napa, CA 94559

If you own more than one parcel, you may receive multiple notices. We apologize for the inconvenience.

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PROPOSED INCREASE TO SOLID WASTE AND RECYCLING RATES

PUBLIC HEARING - *JULY 23, 2019 AT 6:30PM,*
CITY HALL, 955 SCHOOL STREET, NAPA, CA 94559

Printed on 100% Post-Consumer Recycled Paper

ATTACHMENT 2

Solid Waste & Recycling Collection Rates 2019 to 2022

Rate Study & Proposed Rate Notice

June 4, 2019

Solid Waste & Recycling Collection Rates – 2019-2022

1. Quick Overview of Solid Waste& Materials Diversion Enterprise Fund
2. Financial Position of Solid Waste Fund
3. Primary Drivers for Rate Adjustments
   - 2018 Contract Amendment with NRWS
   - Declining Markets for Recyclable Materials
   - MDF Capital Improvements & Debt Service
4. Proposed Solid Waste Rate Adjustments
5. Next Steps – Direction from Council

CITY OF NAPA

1. QUICK OVERVIEW OF SOLID WASTE & MATERIALS DIVERSION ENTERPRISE FUND

Collection Services Provided

- 5 major “Lines of Service” for Collection:

1. Residential
2. Commercial
3. Roll-off Box
4. Multi-Family
5. NVUSD

Programmatic Status

- **Weekly Residential Curbside Service** - Trash, Recycling and Compost Service (including Food Scraps/Soiled Paper since 2015)
- **4 streams of Commercial Service** – Trash, Recycling, Greenwaste (Yard Trimmings) and Food Scraps Composting (since 2015)
- **Roll-Off Debris Box** – Trash and Multiple Recyclable/Compostable Materials (includes Clean Wood, Concrete, Dry Wall, Carpet, Metals, Cardboard, Mixed Recyclables, Dirt, Pumace & Yard Trimmings)
- **City Diversion Rate** - 69% overall landfill diversion (recycling and composting) for 2018 (74% by State formula). City and State goal is 75% level (or more) by 2020.

CITY OF NAPA

Materials Diversion Facility (MDF)

Built: 1993; Expanded 1997; City Purchased 2004

Compost Operations

Greenwaste Truck

Pre-Processing Line

Compost Windows

New Composting Area

CITY OF NAPA

Recycling Operations

CITY OF NAPA

Tonnage Processed at MDF in 2018

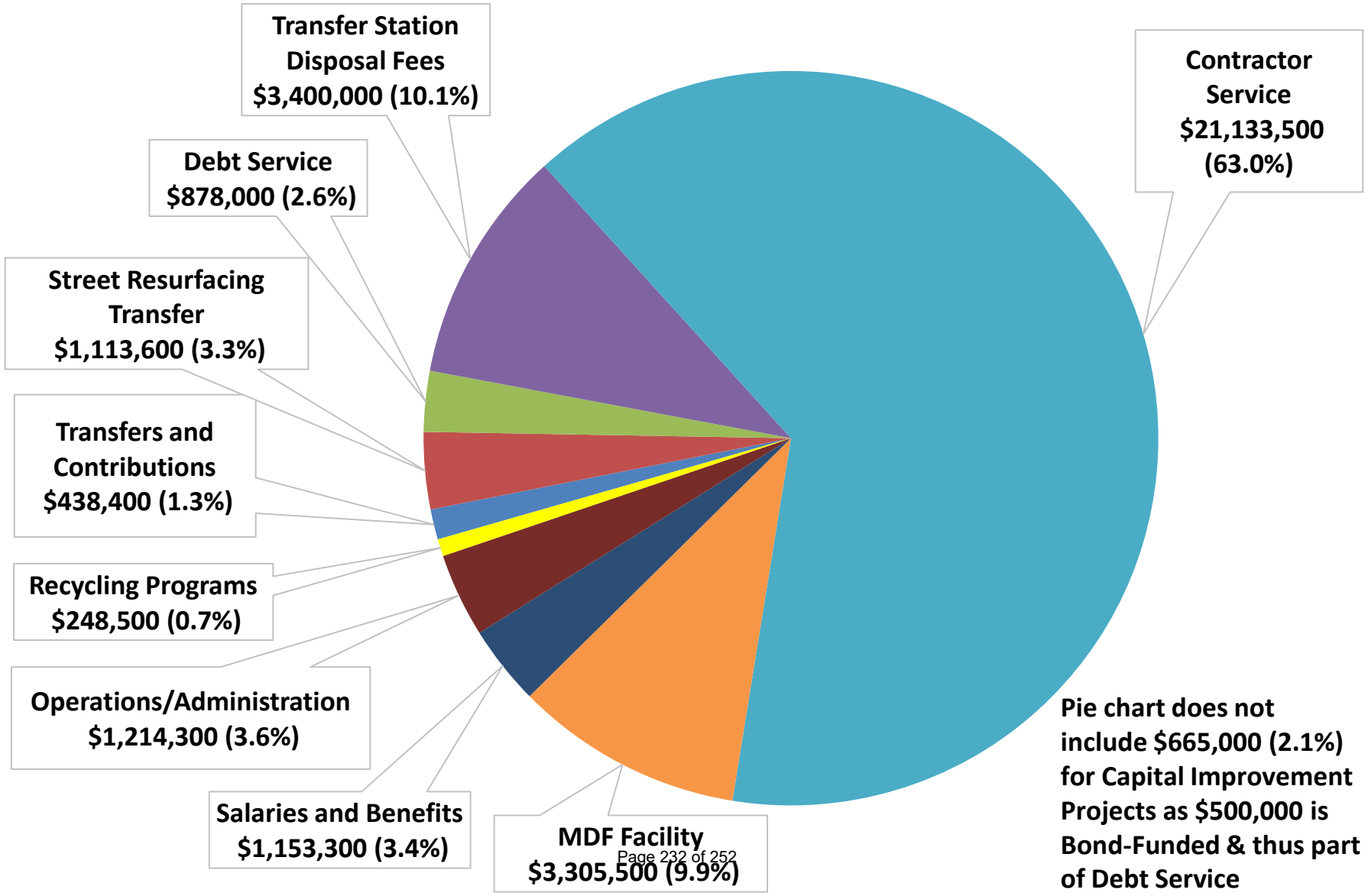
- Recycling = 48,500 tons
- Composting = 95,400 tons
- Construction & Demolition = 17,200 tons
- Wood = 7,900 tons
- Other Materials (e-waste, tires, bulky items) = 1300 tons
- Facility Residue (disposal) = 13,900 tons
- 92% overall facility diversion (recovery) rate
- Total Inbound Tons = 170,200 (vs. 157,400 in 2017)

CITY OF NAPA

2. FINANCIAL POSITION OF SOLID WASTE FUND

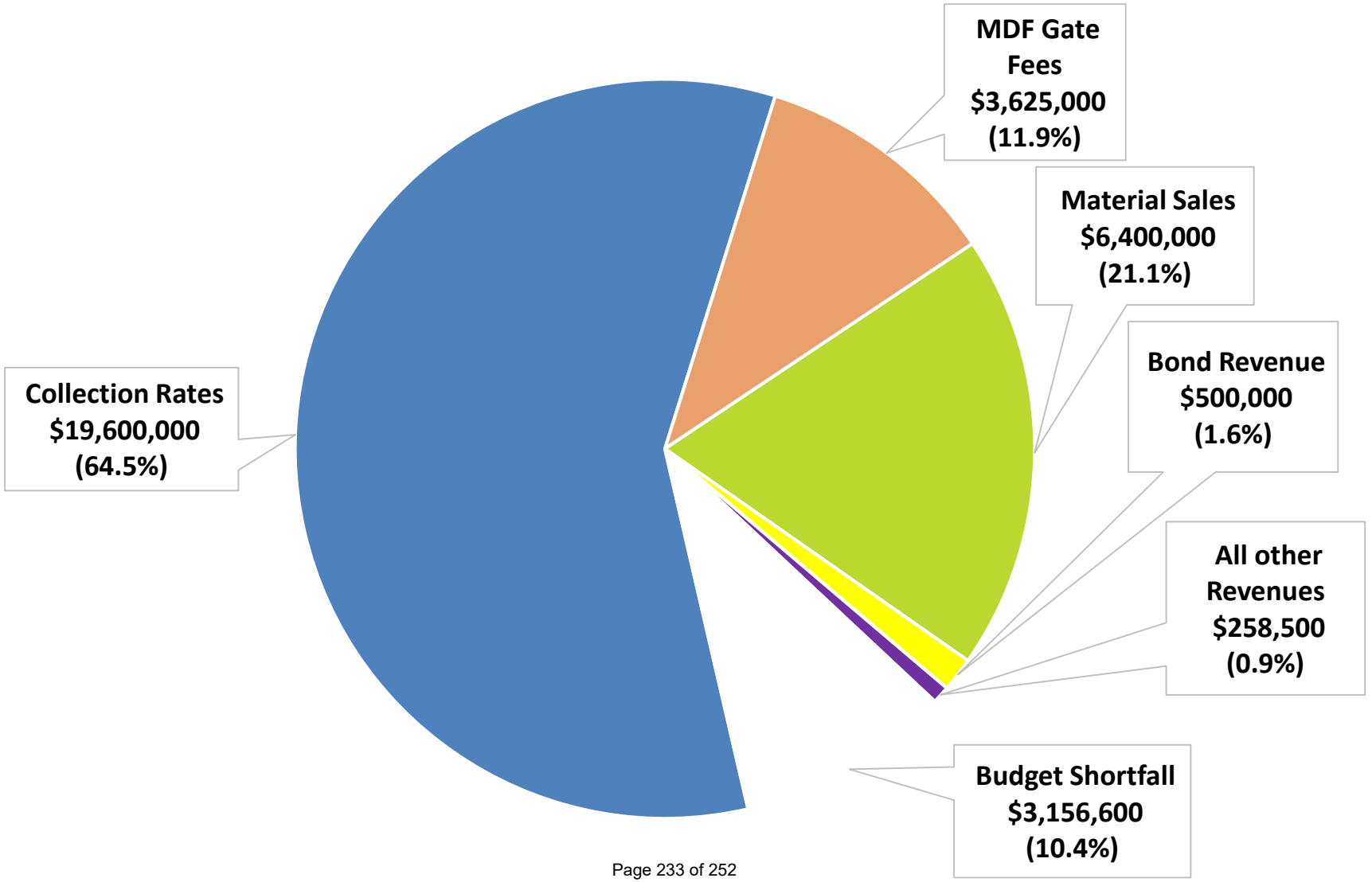
Fund Overview – FY20 Expenditures

FY 2020 Budgeted Expenditures (Total = $33,540,100)

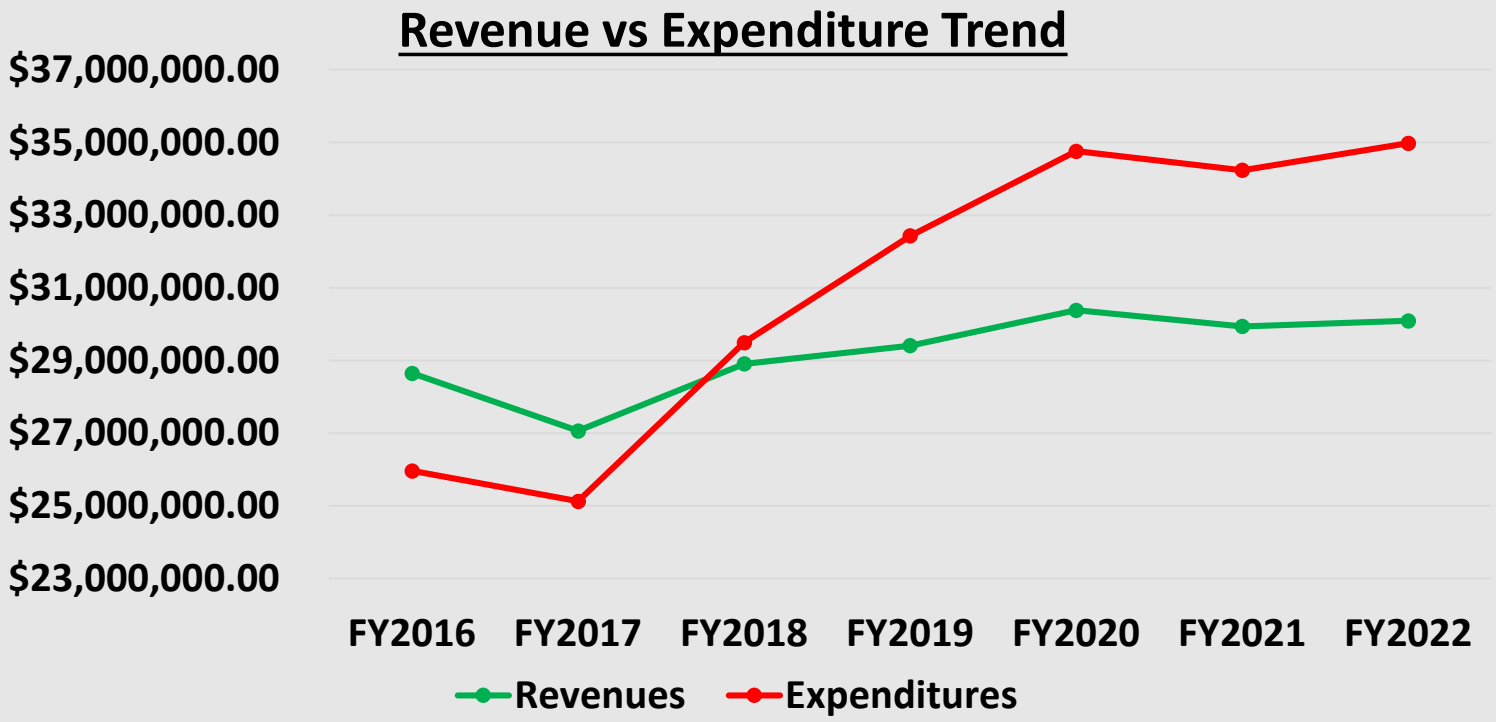


Fund Overview – FY20 Revenue

FY 2020 Budgeted Revenues (Total = $30,383,500)



Why are Rate Increases Needed?



- Last increase was January 2016
- Now, expenditures exceed revenues
- Reserves being used in current fiscal year

Budget Adjustments to Reduce Rate Impacts

$1.0M - $1.2M/year

- Increase gate fees to Napa County & Northern
- Decreased payments for recyclables to Napa County and eliminated payments for other MDF users

$420K (FY20 only)

- Split cost of greenwaste transfers out from MDF with NRWS as new covered compost system comes online

CITY OF NAPA

3. PRIMARY DRIVERS OF PROPOSED RATE ADJUSTMENTS

3 Primary Drivers for Rates

1. 2018 Contract Extension with NRWS
2. Materials Sales Revenue Decline
3. Capital Improvements at MDF

1. 2018 NRWS Contract Extension

Long-Term Cost Saving = $10.7M in savings/net benefits for City over 14-year extension:

- $3.4M – Extended life of collection fleet by 3 years
- $2.5M – Extended life of carts/bins vs. buying new
- $2.0M – Extended life of sorting line by 3 years
- $1.6M – Refurbished 8 trucks vs. buying new
- $1.2M – Sorting “robot” & glass cleaning system (added net revenue; NRWS shared cost)

Added together, the savings/net revenue benefit is approximately $820K per year through end of 2031.

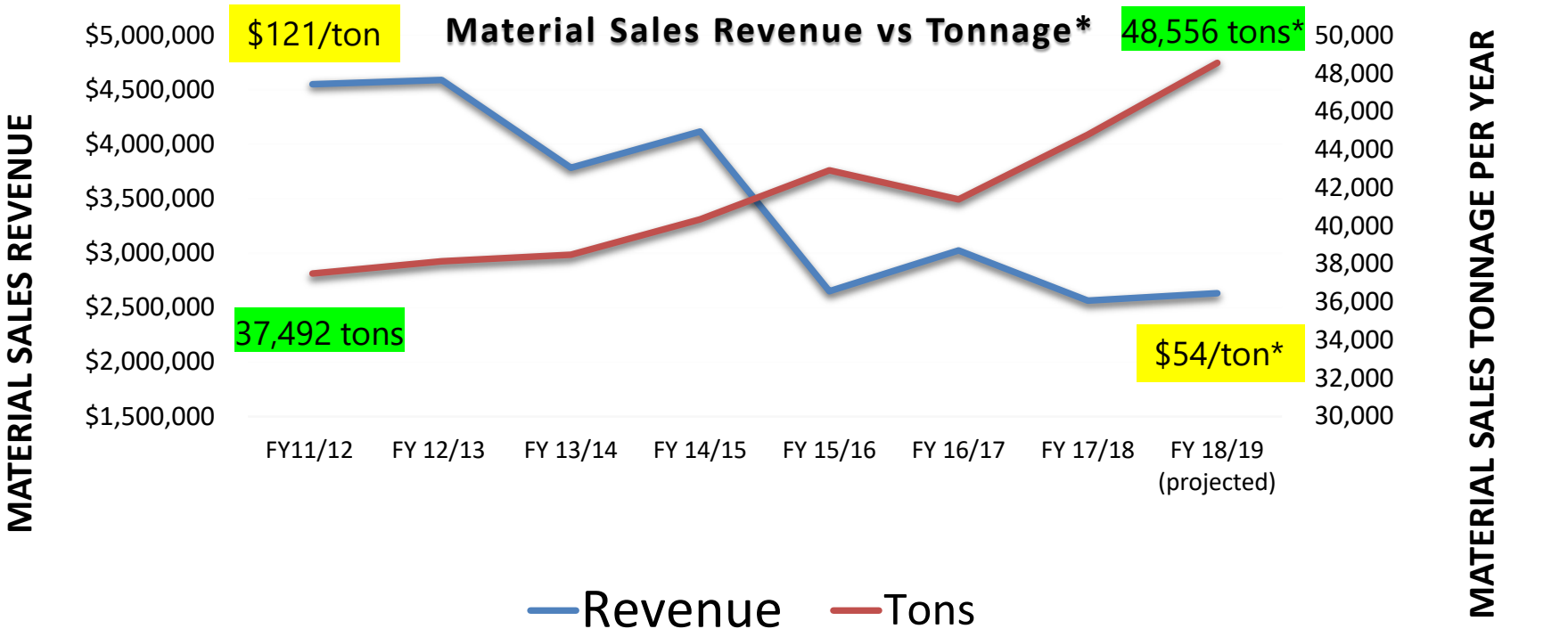
1. 2018 NRWS Contract Extension (Continued)

- **Base Cost Increase** = As compared to the base cost of previous contract, the new contract starts at a base level that in $2.1M/year higher.
- **Contributing Factors to Base Increase** =
  - Higher Vehicle Costs: As compared to 2005 purchase of vehicles, cost of new trucks has doubled (or more)
  - New Collection & Processing Equipment:

    A good portion of 12/13 year-old equipment needed to be upgraded and/or replaced
  - Labor Costs: While extension limited labor increase to 3.5% per year for first 5 years, labor & benefit costs continue to rise

CITY OF NAPA

2. Material Sales Revenue Decline



- MDF Recyclable Materials tonnage **increased 30%** from FY12 to FY19* (Projected)
- Average Price per Ton paid **decreased by 55%** from FY12 to FY19* (Projected)
- **China's "National Sword" Policy** has depressed global recycled materials commodity markets; Worst appears fall of 2018 (-$25/ton negative for mixed paper/newsprint) but all market indications are that a "New Normal" has been set for foreseeable future for West Coast states (CA, Oregon & Washington)
- **Recurring revenue loss of $1.2M-$1.4M per year** in rate-impacting revenue.

3. Capital Improvements at MDF

- In 2016, the City issue $12.5 in Solid Waste Revenue Bonds for the following:
  - $8.0M – “Covered” Composting system to comply with State regulations to process food scraps and air district regulations for emissions
  - $2.5M – Covered processing and storage area for recyclables to comply with stormwater discharge permits
  - $2.0M – Stormwater system improvement to comply with Statewide “Compost Order” from Regional Board
- Increased annual expenses by approximately $900/year
- Requires a minimum 1.25x coverage ratio which must be considered for rate-setting

CITY OF NAPA

4. PROPOSED SOLID WASTE RATE ADJUSTMENTS

Proposed Rate Adjustments

Monthly Proposed Residential Rates 2019 to 2022 (does not show 95-gal)

Level of Service	Current (Since 2016)	Aug 2019	Change	Jan 2020	Change	Jan 2021	Change	Jan 2022	Change	Total Change
20 gallon	$21.65	$24.25	$2.60	$26.68	$2.43	$28.81	$2.13	$30.54	$1.73	$8.89
35 gallon	$27.14	$30.40	$3.26	$33.44	$3.04	$36.12	$2.68	$38.29	$2.17	$11.15
65 gallon	$41.63	$46.63	$5.00	$51.29	$4.66	$55.39	$4.10	$58.71	$3.32	$17.08

Monthly Cost for Commercial/Multi-Family Service
(2 cubic yard bin picked up weekly)

Current (Since 2016)	August 2019	January 2020	January 2021	January 2022	Cumulative Increase
$423.00	$474.00	$522.00	$563.00	$597.00	$174.00

Proposed Rate Adjustments by Percentage for All Rates including Commercial/Multi-Family & Roll-Off Box Service:

August 1, 2019 12%
January 1, 2020 10%
January 1, 2021 8%
January 1, 2022 6%

Continued 5-year “phase-in” for commercial MSW carts

Rate Gap Issue

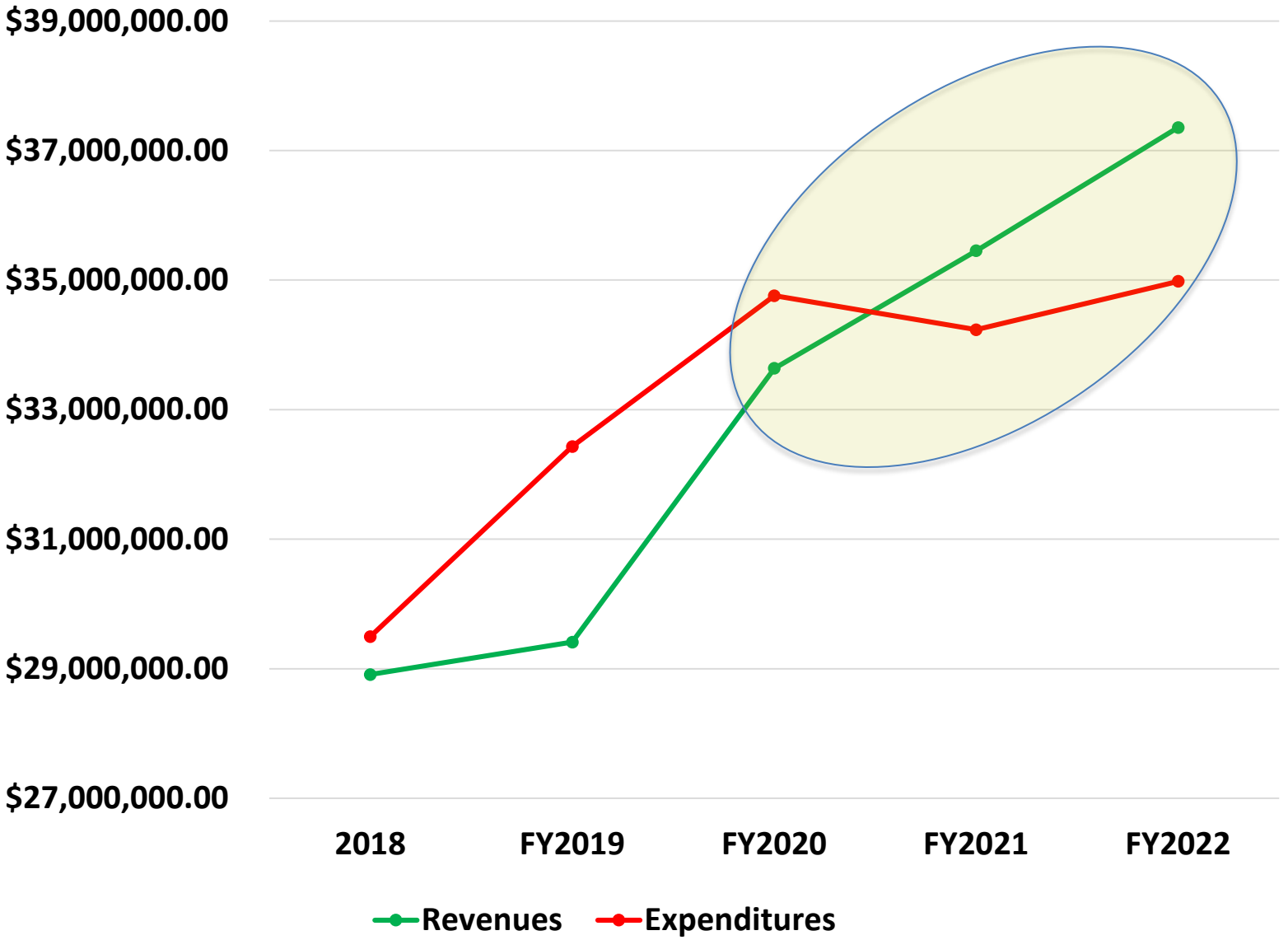
- During Commercial Food Composting Program study in 2014, a 25% service rate discrepancy was identified between commercial cart vs. bin customers.
- Council adopted a 5-year “linearization” corrective action of an additional 5% per year for 5 rate years to align the per gallon service rate charge between commercial bin & cart customers (first two phase-in years occurred in RY2015 & RY2016).
- Proposed Rates include special adjustment for Aug 2019, Jan 2020 & Jan 2021 rates (not Jan 2022) to complete years 3-5 of 5-year phase-in.

CITY OF NAPA

Addition of Low/Fixed Income Assistance Program

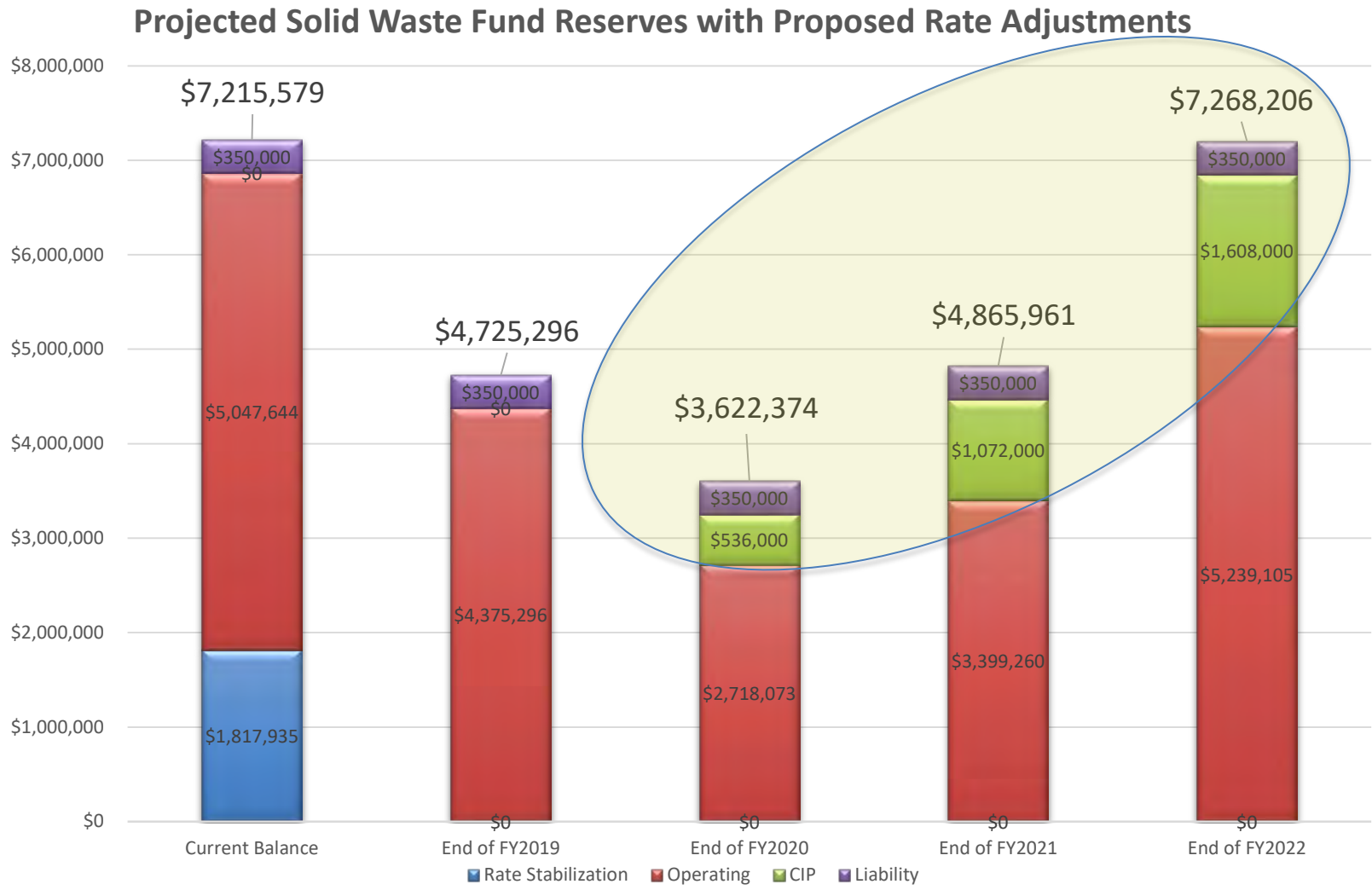
- Eligible if qualified for PG&E “CARE” Program
- Similar to Water’s program in place since 2012
- $10/month for up to 1,250 households (out of 3,600 eligible “CARE” households; 900 households currently participating in Water’s RateShare program)
- Revenue source is material sales (not rate revenue)

Revenue vs. Expenditure Trends*



** Projections with Proposed Rate Adjustments*

Replenishment of Solid Waste Reserves



Net Revenue from Proposed Rate Adjustments used to Refund Solid Waste Reserves

Napa's proposed residential rates will still be among average for the area

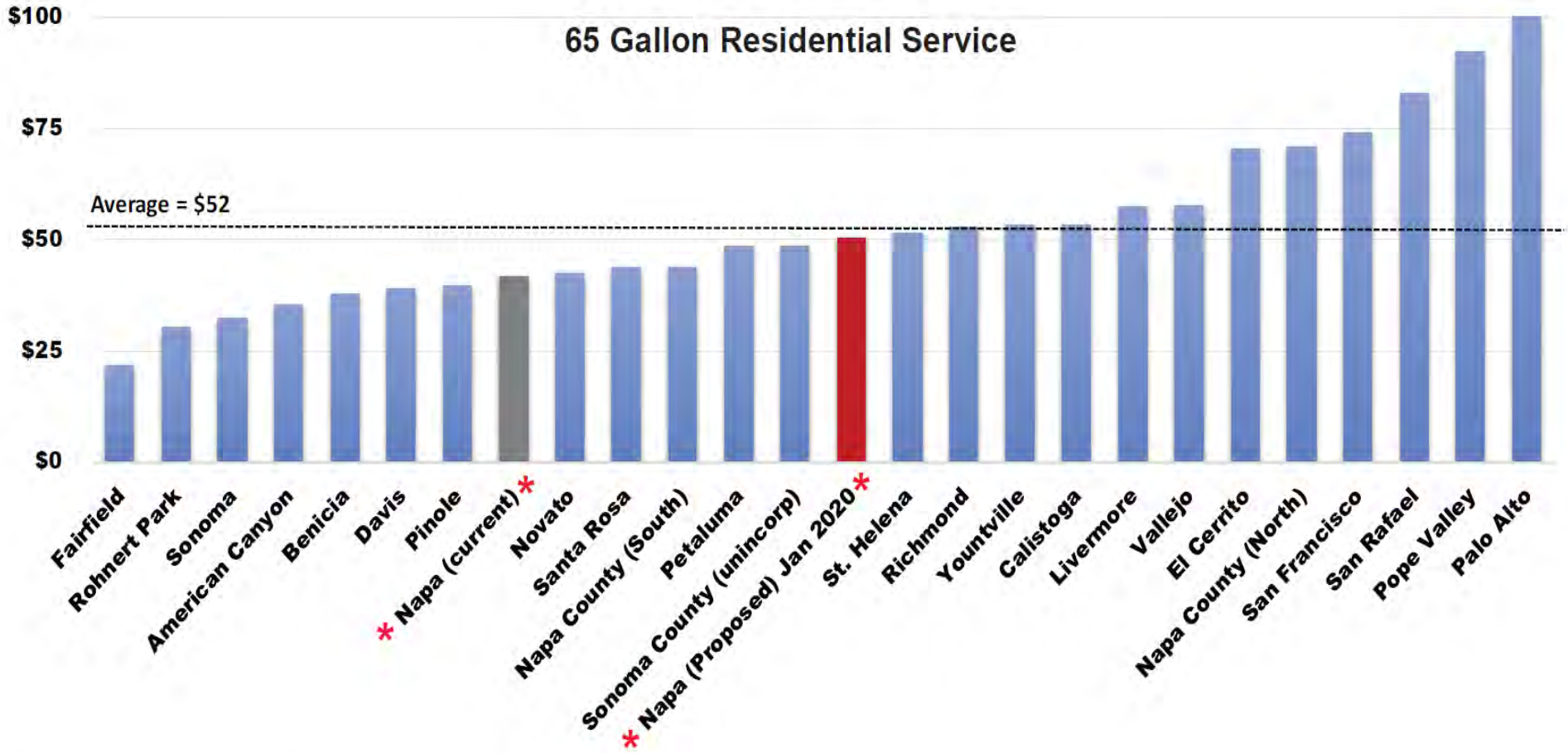


Chart based on current jurisdiction rates, many of which will likely increase over the next year.

5. NEXT STEPS – DIRECTION FROM COUNCIL

Next Steps – Proposition 218 Notice

- Attachment 2 to Staff Report
- Proposition 218 Notice includes:

1. Proposed Rates
2. Reasons/Data behind Proposed Rate Adjustments
3. Information on Public Hearing (July 23rd)
4. Protest Form & Instructions

PROPOSED INCREASE TO SOLID WASTE AND RECYCLING RATES

PUBLIC HEARING - *JULY 23, 2019 AT 6:30PM,*
CITY HALL, 955 SCHOOL STREET, NAPA, CA 94559

Solid Waste Rates Proposed to Increase

Residents can be proud of Napa's solid waste program that diverts approximately 69% of collected materials from landfill. We have a robust recycling, food scrap and composting facility, and clean Compressed Natural Gas (CNG) collection vehicles. The City extended the life of equipment and vehicles with a contract extension with Napa Recycling & Waste Services (NRWS) but expenses are expected to exceed revenues by nearly $3.2 million in 2020. Rates have not increased since 2016 but changes are proposed to meet the increasing costs of the City's dynamic materials diversion program. Here's what residential customers can expect to see in their future monthly solid waste bills from NRWS:

Level of Service	Current (Since 2016)	Aug 2019	Change	Jan 2020	Change	Jan 2021	Change	Jan 2022	Change	Total Change
20 gallon	$21.65	$24.25	$2.60	$26.68	$2.43	$28.81	$2.13	$30.54	$1.73	$8.89
35 gallon	$27.14	$30.40	$3.26	$33.44	$3.04	$36.12	$2.68	$38.29	$2.17	$11.15
65 gallon	$41.63	$46.63	$5.00	$51.29	$4.66	$55.39	$4.10	$58.71	$3.32	$17.08

Low/Fixed Income Assistance
A discount of $10.00 per month for low-income customers will be proposed. If you qualify for PG&E's CARE Program, you may qualify for this discount.

Napa's Rates Will Still be Among Average for the Area

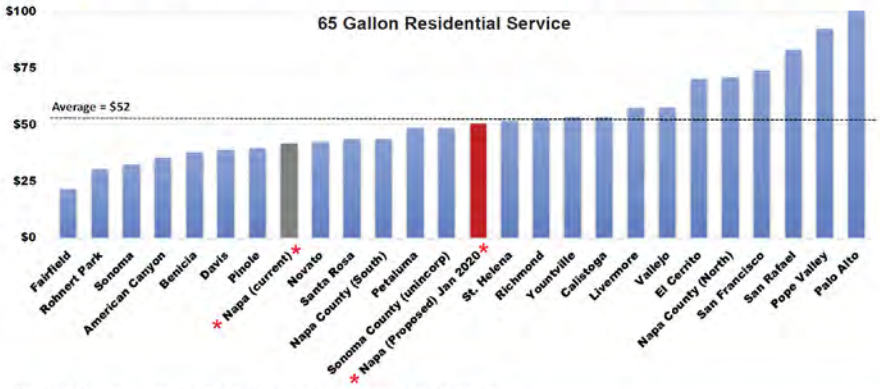


Chart based on current jurisdiction rates, many of which will likely increase over the next year.

Please take a look at the complete contents of this notice.
An explanation of proposed rates, what rates are used for and an overview of services received has been highlighted. Full details on proposed rates, the public hearing on the rates, and the opportunity to protest are also included.

Next Steps – Proposition 218 Notice

- Modeled on 2017 Water Rate Notice
- Met with Napa County Taxpayers Association Chairman on May 31st; incorporated requested revision to wording adjacent to check box on protest form.

CITY OF NAPA
SOLID WASTE RATES PROTEST FORM

You do not need to complete this form if you do not oppose the proposed rate increase. If you wish to protest the proposed rate increase, you may use this sample form.

☐ Check the box if you protest the proposed rate increase and agree with the following:

I protest the proposed rate increase for the collection of solid waste (trash), recycling, and compostables. I certify that I am the property owner and/or responsible for paying the solid waste rates for this property.

Comments or Reason for Protest (optional):

_____

_____

_____

_____

_____

Street Address _____

_____ _____

Signature Printed Name

Mail to:
Napa City Clerk
P.O. Box 660
Napa, CA 94559-0660
Attn: Proposition 218 Protest

- OR -

Deliver in person to:
Napa City Clerk
955 School Street
Napa, CA 94559-0660
Attn: Proposition 218 Protest

Please mail this protest form back in a stamped envelope.

In order to be counted, all written protests must be received by the City, whether sent by mail or delivered in person, by the close of the public hearing July 23, 2019 at 6:30pm.

CITY OF NAPA

Council Direction – Issuance of Proposition 218 Notice

- Authorize Utilities Director, or his designee, to issue a notice of public hearing to all rate payers and property owner of record regarding proposed solid waste and recycling collection rates become effective August 1, 2019, January 1, 2020, January 1, 2021 and January 1, 2022.

- Rate Hearing to be held on July 23, 2019 at 6:30 pm at City Hall, 955 School Street.