Attachment 1



FINAL REPORT

Review of Santa Rosa Recycling and Collection's Performance, Customer Rates and Diversion Rates







SUBMITTED TO:

City of Santa Rosa

May 17, 2016



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May 17, 2016

Ms. Gloria Hurtado Deputy City Manager City of Santa Rosa 100 Santa Rosa Ave. Room 10 Santa Rosa, CA 95404

Subject: Performance Review – Final Report

Dear Ms. Hurtado:

R3 Consulting Group (R3) is pleased to provide the City of Santa Rosa (City) with the attached Final Report of our Review of Performance, Customer Rates, and Diversion Rates of the City's franchised solid waste hauler, North Bay Corporation (Company).

This report describes the findings from our review. Key findings include the fact that the Company is not operating vehicles meeting the requirements of the franchise agreement, and did not meet the 45% minimum diversion requirement in 2013 and 2014. Additionally, the Company has not consistently met a number of other primary performance requirements in the franchise agreement, and is facing a number of systematic performance issues in nearly all departments.

* * * * * * *

We appreciate the opportunity to be of service to the City. Please feel free to contact me by phone at (916) 782-7821, or by e-mail at rterwin@r3cgi.com, if you have any questions or comments regarding the attached Final Report.

Sincerely,

R3 CONSULTING GROUP

Richard Tagore-Erwin | Principal

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1 Executive Summary

1.1 Background

The City of Santa Rosa (City) has a franchise agreement (Agreement or Contract) with North Bay Corporation (Company). The Agreement grants the Company the right to provide exclusive solid waste collection services in the City. Franchised collection services are defined as single family dwelling (SFD) collection service, multi-family dwelling (MFD) collection service, and commercial collection service. Commercial collection service includes commercial solid waste collection service and commercial recycling services, but does not include roll-off collection service for construction and demolition debris (C&D).

The original Agreement began on February 1, 2003 and was amended and restated in February 2010. The current term of the Agreement expires on December 31, 2017. Per Article 2.02 (Extension of Term) on or about July 1, 2016, at the Company's written request, the Agreement can be extended for an additional five (5) years through December 31, 2022 provided the City determines that the Company has met the minimum performance and diversion requirements and is not in breach of any other provision of the Agreement.

The City had previously contracted with MuniServices to conduct a Compliance and Fee Audit covering fiscal years 2011 through 2014. That review focused in large part on financial matters, including fee payments to the City. While the review did address certain compliance requirements, the MuniServices audit report focused little attention to assessing actual performance, processing standards, customer service operations and the effectiveness of public education efforts. R3 Consulting Group (R3) was engaged by the City to conduct a Performance and Billing Review (Review) of the Company per Article 3.13 (Performance and Billing Review) of the Agreement. This report describes our methodology for conducting the review and details our findings. Unless otherwise noted, our review was limited to one year, which the Company reported was agreed to by the City due to the relatively recent MuniServices audit.

1.2 Scope of Review

The objective of R3's performance review is to determine the Company's compliance with the applicable terms and conditions of the Agreement, review the effectiveness of current operations, and identify opportunities for program improvement. Our review involved the following tasks, which are the subject of each of the following sections of this report:

- Diversion Rate Audit to determine whether the Company's reported diversion rate is accurate and recalculate the diversion rate if required;
- Franchise Agreement Compliance Review to determine the Company's compliance with the contractual requirements of the Agreement;
- Management and Administration Review to assess of the Company management system, and to identify potential changes or improvements to management practices;
- Customer Service Review to assess the Company's customer service functions and structure;

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- Collection Operations Review to ensure that drivers are providing collection services in a safe and effective manner and adhering to the requirements of the Agreement;
- Customer Rate Review to determine if service rates have been properly calculated, and if customers are charged the proper service rate based on their service level;
- Vehicle and Equipment Maintenance, Repair and Replacement Review to determine
 if the Company is maintaining vehicles and equipment in a safe operating condition;
- Assessment of Required Reports to determine if the Company is in compliance with the reporting requirements specified in the Agreement; and
- Recyclables Characterization Study to determine the material composition by weight of the residential and commercial recyclables streams.

1.3 Franchise Agreement Compliance Findings

Our review found that the Company is not meeting a number of Agreement provisions, with major findings detailed below. Failure to comply with each could be cause for the City to levy Administrative Charges per Article 21.04.

Article 1.46 – Recyclable Materials

The Company does not accept all recyclable materials, including plastic bags and film, as required by the Agreement.

Article 5.01 – Minimum Diversion Requirement

Our review found that the Company failed to meet the 45% minimum diversion requirement specified in Article 5 (Diversion Requirements). While the Company reported diversion rates of 45.41% and 45.08% for 2013 and 2014, respectively, those figures included non-franchised construction and demolition (C&D) debris tonnages, which are not subject to the Agreement. After adjustments to remove non-exclusive C&D debris which is not subject to the Agreement, R3 has calculated the Company's diversion rates as 44.22% in 2013 and 44.70% in 2014.

Our separate independent review of support documentation for diversion tonnages calculated a 2014 diversion rate of approximately 39%. In addition, the reported Material Recovery Facility (MRF) residue figures reported in the Company's 2013 and 2014 diversion rates are well below what it has been reporting to the Local Enforcement Agency (LEA) over the past several months as required by its Cease and Desist Order. We requested that the Company review and comment on our findings and provide support for its reported 2014 diversion rate on multiple occasions, but did not receive a response.

As a result of not meeting the diversion requirement, the Company was also not entitled to its full rate adjustments in 2013 and 2014; instead of receiving 100% of the rate adjustment, the Company should have only been entitled to 75% of the rate adjustment as per Article 4.02.3. However, because of potential error made by the Company in calculating their annual adjustments (see page 38 in Section 7 of this Report) the impact of not meeting the diversion requirement is slight (0.18% in 2013 and 0.0013% in 2014).

Additionally, Article 2.03 (Voiding of Extensions) states the five-year extension option provided by Article 2.02 is voided if the Company fails to meet the minimum service and diversion requirement. Article 12.01 also states that the Company "must meet or exceed" the minimum performance and diversion requirements in order to receive the extension.



Article 7.05 - Manner of Collection

The Company is required to provide SFD collection service with as little disturbance as possible and to leave carts in an upright position at the same point they were collected without obstructing alleys, roadways, driveways, sidewalks or mail boxes. Our route audits found approximately 2% of the carts knocked over and 1% placed greater than 3 feet from the curb. An average of 15% of the carts were returned with lids left open. While returning containers with lids closed in not a requirement of the Agreement, it is a "best practice" and in our experience a rate of 15% is high.

Articles 7.16.4 and 7.16.5 – Maximum Reuse and Recycling

The Agreement states that the Company shall dispose of large items collected from customers pursuant to this Contract in accordance with the hierarchy of: reuse as is (where energy efficiency is not compromised); disassemble for reuse or recycling; recycle; and disposal. Furthermore, the Company may not landfill such large items unless the large items cannot be reused or recycled. The Company reported that the major types of large items that it collects include: mattresses, large appliances, couches, televisions, dressers, toilets, patio furniture, landscaping/backyard material, and other furniture (tables, chairs, etc.).

The Company is not fully meeting these requirements, and is consequently missing diversion opportunities. When the Company delivers appliances, metals and electronics collected through its large item collection program to its MRF at 3417 Standish Avenue, these materials are subsequently diverted by recycling. The Company reported that all other materials, including mattresses, are disposed at the Sonoma County Landfill. There are a number of available options for diverting mattresses in Sonoma County, and the Sonoma County landfill has a Reuse and Recycling Center that provides free drop-off for reusable items.

Articles 7.13.4., 8.03.5 and 9.04 – Materials Recovery Facility

The Company is required to deliver all of its Recyclable Materials to a legally permitted facility. The Company's materials recovery facilities (MRFs)¹ do not have the required solid waste facility permits and it has been issued a Cease and Desist Order, and an Order Violation for not complying with the Cease and Desist Order, by the Sonoma County Department of Health Services (Appendix A).

Article 14 - Collection Equipment

The Company may not use collection equipment that is more than 10 years old, and vehicles that are more than 5 years old (or have accumulated more than 250,000 miles) are required to be rebuilt. The Company was unable to produce documentation to prove compliance with these requirements. All of the Company's vehicles used to service the City's franchise are 2006 or 2007 model years, with the exception of two roll-off vehicles that are model year 2005 (both chassis and body). While the Company provided various maintenance records for its vehicles, we did not find any documentation in the information provided that any of those vehicles have been rebuilt and satisfy the "Rebuilt Vehicle" requirement.

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Executive Summary



There are two MRFs operated by the Company, one at 3417 Standish Avenue that largely processes the Company's residential recyclables, the other at 3400 Standish Avenue that largely processes the Company's commercial recyclables.

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Article 15.01.4 - Speed of Call Answer

Per the Agreement, the Company must answer all incoming calls within 5 rings. Furthermore, the Agreement states that any call "on-hold" in excess of 1.5 minutes shall have the option to remain "on-hold" or to be switched to a message center where the customer can leave a message. Per the Company's call statistics for 2014 (R3 requested 2015 data but it was not provided by the Company) only 21% of incoming calls are answered within 30 seconds, whereas 5 rings equates to approximately 26 seconds. The Company's telephone system also does not provide the option to be switched to a message center where the caller can leave a message after 1.5 minutes or at any time while remaining on hold.

1.4 Other Findings

R3 identified significant issues with the Company's management, collection and processing operations, customer service and billing functions, and diversion reporting. While the Company provided us with some of the requested information, other requested information was not provided. As a result, we have insufficient data to make findings regarding certain elements of the Company's performance. Rather than include speculative findings in this Report, we have opted to present a discussion of performance issues rooted in available facts. That said, other than the findings included in this Report we have serious concerns about the Company's internal communications, data management and tracking, and lack of overall management.

Management and Administration

The Company does not have a well-defined or documented organizational and administrative structure. There are no documented policies, procedures or performance standards, which preclude the ability to provide training for established policies and procedures, and manage and assess performance. There are limited operating statistics that are regularly tracked, reported, and analyzed, which limits the Company's ability to identify areas requiring improvement. There are no formal job descriptions, staff do not appear to have clearly defined roles and responsibilities, and there are no formal processes or procedures for holding staff accountable for performance.

At least some of, if not a majority of, the identified contract compliance and operational deficiencies we identified can be attributed to the lack of sufficient management and supervisor staffing throughout the Company's solid waste management operations. During our Review, the Company reported that is has made the following recent management staffing changes, including hiring of a General Manager (previously vacant for 10+ years), Maintenance Manager, Audit/Collections Manager, Outreach Manager, new Customer Service Manager, and additional Human Resources staff person. The new General Manager has also identified the need for a Safety Officer and additional Route Supervisors, and has provided R3 with a list of additional planned actions to improve identified deficiencies. Appendix B contains a list of Company Goals and Objectives, Actions and Planned Actions and Recent Accomplishments that the General Manager prepared at R3's request. That said, bringing the Company's operations up to an acceptable standard of performance will require considerable additional financial commitments by its owner.

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Collection Operations

The Company's fully automated residential collection system and front-loader commercial collection system both provide for optimizing collection productivity and efficiency, and

collection routes are effectively organized. Driver training, however, is limited. Additionally, while the Company has assigned a qualified supervisor to be in charge of the collection service within the City's service area, as required by the Agreement, the level of field supervision (one supervisor for more than 30 daily routes) is not sufficient to provide effective supervision of collection services.

Vehicle and Equipment Maintenance, Repair and Replacement

The Company's terminal where the City's franchised vehicles are parked and repaired is in compliance with the California Highways BIT Inspection Program, and the ratio of vehicles to mechanics is reasonable. The Company also lacks an effective maintenance software system.

Safety

Contrary to our findings and observations, the Company's Experience Modification Factor (Mod Factor) for its Santa Rosa franchise, which provides a measure of the frequency and severity of its workers' compensation losses, is better than the industry standard. While the Company reported that its Risk Manager has significantly reduced its Mod Factor since his hiring, and his efforts have likely contributed to the Company's relatively low Mod Factor, given the safety deficiencies we observed we can only speculate that "good luck" has also played a major role. Regardless, we recommend that the Company take immediate steps to address the many deficiencies in its operations that present immediate and ongoing safety risks.

1.5 Administrative Charges

Per Article 21.04 of the Agreement, the City may assess administrative charges to the Company for failure to comply with the performance requirements identified in the Agreement and detailed in this report. For example, per Article 21.04(y), the City could assess administrative charges of \$500 per day for each Company vehicle not meeting the requirements of the Agreement. Likewise the City could assess administrative charges of \$50,000 per year for not meeting the diversion requirement, per Article 21.04(w). Administrative charges applicable to each area of non-compliance are detailed in Section 3 (Franchise Agreement Compliance) of this Report.

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Executive Summary

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Executive Summary

2 Diversion Rate Audit

Objective:

Determine whether the Company's reported diversion rate, used in the annual compensation application, is accurate and recalculate the diversion rate if required.

2.1 Background

The Agreement grants the Contractor the right to provide exclusive Collection Services, where Collection Services is defined as single family dwelling (SFD) Collection Service, multi-family dwelling (MFD) Collection Service and Commercial Collection Service. Commercial Collection Service includes Commercial Solid Waste Collection Service and Commercial Recycling Services. It does not include Roll-Off Collection Service for Construction and Demolition debris, where Construction and Demolition Debris is defined in Article 1.19 as:

"Used or discarded materials resulting from construction, remodeling, repair or demolition operations on any pavement, house, commercial building, or other structure and such other materials as may be removed during the normal cleanup process of such construction, remodeling, repair, or demolition operations."

The Company reported diversion rates of 45.41% and 45.08% for 2013 and 2014, just slightly higher than the 45% minimum diversion requirement. Those reported diversion rates reflect a MRF residual rate of 13.09% and 12.39% for 2013 and 2014 respectively. R3 requested supporting documentation for the reported diversion figures on multiple occasions but did not receive any such documentation.

The Company's reported 2013 and 2014 diversion rates include diversion of construction and demolition (C&D) debris, which is not part of franchised services and does not count towards the calculated franchised diversion rate. After adjusting for those C&D tonnages, the Company did not meet the 45% minimum diversion requirement in either 2013 or 2014.

Additionally, based on review of documentation that R3 was able to obtain, R3 calculated a diversion rate of approximately 39% for 2014. Appendix C provides the following diversion rate information:

- Company's 2013 and 2014 reported diversion rates;
- R3's Analysis of Company's 2013 and 2014 reported diversion rates; and
- R3's independent analysis of Company's 2014 diversion rate.

2.2 Material Recovery Facility Operations

The Company's two MRFs are approximately 15 years old, antiquated, and are not able to process the incoming recyclable materials to current industry standards. At the time of our site visit, the MRF at 3400 Standish Avenue was not operating due to a broken in-feed conveyor.

The ineffectiveness of the processing operations at the 3417 Standish Avenue MRF (3417 MRF) starts with the presentation of materials to the sorters and mechanical recovery equipment. There is no effective means for metering the incoming materials to the present line to present

Section 2

Diversion Rate Audit



Diversion Rate Audit the material at a consistent and reasonable height (burden depth) on the belt to provide for optimizing the processing of the material at that point. We observed materials delivered to the presort line in "slugs" as much as a foot or more in height, precluding sorter access to materials at the bottom of the belt. These slugs were often followed by little or no material on the line, negatively impacting worker productivity. In addition, the in-feed system does not include a bag breaker and we observed unopened bags in the residual waste stream that was to be landfilled that contained recoverable materials including cardboard, newspaper, mixed paper and plastic and metal containers, including aluminum cans.

In addition to the lack of an effective metering system, the MRFs do not have a preventative maintenance program in place, which impacts both productivity and safety. We observed a number of conditions and practices that not only are not consistent with industry standards, but which we believe are OSHA violations, including: the chain guard on the in-feed conveyor at the 3417 MRF was not in place during our site visit, and was not securely "stored" on the presort deck;² and the general housekeeping throughout the facility, including the stairs leading to the sorter platforms, along the sorted platforms, and along the railings of the sorter platforms, which presented numerous trip and fall hazards. In addition, we observed numerous rats in the facility; far more than our staff have observed at any of the other numerous MRFs, including "Dirty" MRFs, which we have visited over the past 20+ years.

Due to the lack of an effective proactive maintenance program, the star screen at the end of the 3417 MRF presort line is not able to effectively convey the materials from the presort line to the following sort line. Two workers were situated on either side of the star screen with two-by-four pieces of lumber pushing material up the spinning star screen. While these two workers were not available for recovering material, the larger concern is the safety hazard this practice presents. Not only does the condition and operation of the 3417 MRF preclude effective processing of material, and directly impact the Company's residual tonnage percentage, but in our opinion it is an "accident waiting to happen." Appendix D includes pictures from our MRF site visit.

2.3 Analysis of Diversion Rates

Diversion Rate Calculation

Article 5 of the Agreement states that the Company's annual diversion rate will be calculated as "the tons of materials collected by the Company from the provision of collection services that are sold or delivered to a recycler or re-user, as required by this Agreement, divided by the total tons of materials collected by the Company in each calendar year."

^{2 29} CFR Article 1910.212(a) (Machine guarding), Article 1910.212(a)(2) (General requirements for machine guards) states that: "Guards shall be affixed to the machine where possible and secured elsewhere if for any reason attachment to the machine is not possible. The guard shall be such that it does not offer an accident hazard in itself". Not only was the chain guard not in place at the time of our review, as it should be, but its location on the sort deck, unsecured, presented a hazard in itself.



2013 and 2014 Company Reported Diversion Percentages

The Company's 2013 and 2014 reported diversion percentages include diversion and disposal tonnages associated with construction and demolition (C&D) debris. C&D debris is not part of the franchises services, and based on our interpretation of the Agreement, those tonnages should not be included in the diversion rate calculation. When those tonnages are removed, R3 calculated diversion rates of 44.22% for 2013 and 44.70% for 2014, less than the 45% minimum diversion requirement. Furthermore, the Company's 2013 and 2014 diversion reports include tons of source separated wood waste and other materials. We have left these tons in our revisions to the diversion rate because it is not known whether these materials were collected via Agreement-provided collection services, or via non-franchised collection efforts. If these tons were to be removed from the calculation, the new diversion rates would be even lower than stated above. R3 requested support for the Company's 2013 and 2014 reported diversion rates on multiple occasions but did not receive the requested support.

Discrepancies in Reported Residual Rates

The Company's 2013 and 2014 reported diversion rates reflect MRF processing residual rates (meaning the percentage of materials collected through the recycling program that are processed but not recovered and subsequently disposed) of 13.09% and 12.39% for 2013 and 2014, respectively.

During the August 4, 2015 LEA investigation/inspection, Company staff stated that the incoming recyclable material collected from the residential curbside customers in blue bins is at least 50% mixed solid waste and much of the recyclable materials were contaminated with liquid and putrescible waste.³ On August 7, 2015, the Company submitted the Voluntary Residual Percentage Reporting Forms to the LEA, certifying that the residual amount for the 3400 Standish Avenue site for July 2015 was 21% and the 3417 Standish Avenue site for July was 27%.⁴ Data obtained by R3 is support of our independent 2014 diversion rate calculation supported a residual rate of 41 percent (see R3's Independent Review of 2014 Diversion Rate below).

The January 2015 MuniServices report stated that: "Our main issue with the recycling data was the high residual disposal figures for both 2013 and (2014). At 40% for residential carts and 35% for commercial bins, the percentage of contamination reported is about twice the level we normally encounter." MuniServices also reported that: "The Auditor has a number of questions regarding the validity of the 45.41% diversion rate..." for 2013. Per the Cease and Desist Order from the Sonoma County Department of Health Services dated August 27, 2015, the Company self-reported a contamination rate of 27% to CalRecycle in July 2015.

Section 2

Diversion Rate Audit



Sonoma County Department of Health Services; August 28, 2015 – Hand Delivered Cease and Desist Order (LEA Order # 15-01) – Page 2 of 9.

Sonoma County Department of Health Services; August 28, 2015 – Hand Delivered Cease and Desist Order (LEA Order # 15-01) – Page 2 of 9.

MuniServices Phase 2 Exclusive and Debris Box Franchise Hauler Compliance and Fee Audit – January 5, 2015 – Page 4.

MuniServices Phase 1 Exclusive and Debris Box Franchise Hauler Compliance and Fee Audit – December 3, 2014 – Page 21.

Diversion Rate Audit These differences in the residual rates the Company identified in its 2013 and 2014 reported diversion figures, and those that it has reported to the LEA, as well as data R3 obtained in support of our independent diversion rate calculation, raises a question as to the accuracy of the residual figures the Company represented in its 2013 and 2014 reported diversion rates.

R3's Independent Review of 2014 Diversion Rate

As discussed above, R3 requested supporting documentation for the Company's reported 2013 and 2014 diversion figures on multiple occasions but did not receive any of that requested information. While on-site we did obtain certain records related to 2014 diversion and disposal tonnages, which did not tie to the figures reported in the Company's 2014 Diversion Report figures.

Using the data obtained onsite and other tonnages reported on the Company's 2014 Annual Diversion Rate report, R3 calculated a 2014 diversion rate of 39% versus the Company's reported diversion rate of 45.08%. That 39% calculation included a MRF residual percentage of 41% versus a rate of approximately 12% based on the tonnages presented in the Company's 2014 Diversion Rate report.

3 Franchise Agreement Compliance

Objective: Determine compliance with the applicable terms and conditions of the

franchise agreement.

3.1 Background

R3 reviewed and documented the major objective items in the Agreement that require the Company to meet specific performance standards, submit information or reports, perform additional services, or document operating procedures. In support of our review, we developed a "compliance checklist" that documented the major objective requirements of the Agreement, which we used to structure or review and findings specific to the major requirements.

3.2 Findings

Our review identified the following areas where the Company is not in compliance with the terms and conditions of the Agreement. Some of these items carry specific administrative charges listed in Article 21.04, with all others are subject to the "global" administrative charge of \$100 per day for failure to comply with any other provision of the Agreement that does not have a specified charge.

Article 1.46 - Recyclable Materials

The Agreement defines Recyclable Materials as:

"Those materials which are capable of being recycled and which would otherwise be processed or disposed of as Residential Solid Waste or Commercial Solid Waste. These materials will be as defined by the City. Recyclable Materials currently being Collected include: newsprint (including inserts); mixed paper (including magazines, catalogs, envelopes, junk mail, corrugated cardboard, Kraft brown bags and paper, paperboard, paper egg cartons, office ledger paper, and telephone books); glass containers; aluminum beverage containers; small scrap and cast aluminum (not exceeding forty (40) pounds in weight nor two (2) feet in any dimension for any single item); steel including "tin" cans and small scrap (not exceeding forty (40) pounds in weight nor two (2) feet in any dimension for any single item); bimetal containers; mixed plastics such as plastic bags, plastic film, ⁷ plastic containers (1-7), and bottles including containers made of HDPE, LDPE, PET, or PVC; textiles; aseptic containers; and other materials as new recycling technologies become available."

The Company does not accept all recyclable materials as defined in the Agreement. Specifically, the Company treats plastic bags and plastic film as "contaminants" potentially resulting in refusal of collection of recycling containers with even minimal amounts of plastic bags and/or plastic film in them. Additionally, while the Company does accept scrap aluminum and steel, through interviews with customer service staff it was reported that the Company may not be accepting aluminum and steel scrap within the full range of dimensions as stated in the

Section 3

Franchise Agreement Compliance



The Company's website lists "Plastic Bags and Film" as an Unacceptable Material for the Recycling (Blue) Cart.

Franchise Agreement Compliance Agreement (i.e. up to 40 pounds and 2 feet in any dimension). There is also no mention of the acceptance of textiles in the Company's recycling outreach and education, indicating that this material is also not being accepted for recycling, which the Company confirmed. Finally, the Company is not accepting loose plastic lids for recycling, as these items are not capable of being handled via the material recovery facilities' sorting system.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 5.01 – Minimum Diversion Requirement

The Agreement states that:

"The City requires the Company to achieve a minimum annual diversion rate of fifty percent (50%) for each Contract Year unless the Countywide diversion reported to the California Integrated Waste Management Board (CIWMB) exceeds the required diversion goals for the County then this annual diversion rate may exceed forty-five percent (45%) for those Contract Years. The annual diversion rate will be calculated as "the tons of materials collected from the provision of Collection Services that are sold or delivered to a recycler or reuser, as required by this Contract, divided by the total tons of materials collected in the Contract Year."

Appendix C provides the Company's Diversion Reports for 2013 and 2014. As shown, it reported diversion rates of 45.41% and 45.08% for 2013 and 2014. Those figures include MRF residue amounts of 13.09% and 12.39%, well below that reported by the Company to the LEA, as part of the requirements of its Cease and Desist Order. Taking the Company's reported figures at face value and adjusting for the reported generation and diversion associated with Construction and Demolition Debris, which is not part of the franchise, the calculated diversion rates fall just below the 45% minimum (44.22% and 44.70% for 2013 and 2014 respectively).

R3 also requested and received various detailed supporting documentation for the tons diverted in 2014. Based on the information provided and other available information, R3 calculated a diversion rate of 39%, well below the reported 45.08%. R3 forwarded our analysis to the Company for review and comment but as of the drafting of this report, we have not received a response. This issue is discussed further in Section 2 – Diversion Rate Audit.

As stated in Article 21.04.w. there are Administrative Charges of \$50,000 annually for failure to meet the minimum diversion requirements where the shortfall is between 0.001% - 2%, and \$100,00 for a shortfall of 2.001% or greater.

Additionally, per Article 4.02.03 (Diversion Adjustment) the calculated annual rate adjustment is to be reduced if the Contractor fails to meet the 45% minimum diversion requirement. For a diversion rate of between 0% and 25% the calculated rate adjustment is to be multiplied by 50%, and for a diversion rate between 25.01% and 45% the calculated rate adjustment is to be multiplied by 75%. There is no adjustment to the calculated rate adjustment for a diversion rate of 45% or more.

Article 5.02 Failure to Meet Minimum Requirements states that: Company's failure to meet the minimum diversion requirements set forth above in Article 5.01 may result in the termination of this Contract or the imposition of administrative charges. Article 21.04 (w) specifies an Administrative Charge of \$50,000 to \$100,000 per year for each failure to meet

the minimum diversion requirement, depending on whether the actual diversion rate is greater or less than 43%.

Section 3

Franchise
Agreement
Compliance

Article 7.05 – Manner of Collection

The Agreement states that:

"The Company shall provide SFD Collection Service with as little disturbance as possible and shall leave any Garbage, Recycling or Yard Trimmings Cart in an upright position at the same point it was collected without obstructing alleys, roadways, driveways, sidewalks or mail boxes.

Our route audits found approximately 2% of the carts knocked over and 1% placed greater than 3 feet from the curb. An average of 15% of the carts were returned with lids left open. While returning containers with lids closed in not a requirement of the Agreement, it is a "best practice" and in our experience rate of 15% is quite high.

We also noted that the Company is currently using carts labeled as Waste Management, Allied, and Green Waste Recovery for both residential and commercial accounts. The Company's original proposal to the City stated that it would use "all new carts" for the franchise. It is also our understanding the "transition plan", referenced in the Agreement, called for the Company to replace existing carts with new carts, which it did not do in all cases. That transition plan, however, was not incorporated as an exhibit to the Agreement and we were not able to locate a copy of that document. Regardless, the use of carts from multiple other companies is not consistent with industry standards or best practices.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 7.16.4 and 7.16.5 – Maximum Reuse and Recycling

The Agreement states that:

"Company shall dispose of Large Items collected from Service Units pursuant to this Contract in accordance with the following hierarchy:

- Reuse as is (where energy efficiency is not compromised)
- Disassemble for reuse or Recycling
- Recycle
- Disposal

Company shall not landfill such Large Items unless the Large Items cannot be reused or recycled."

The Company reported that the major types of large items that it collects include: Mattresses, White Goods, Couches, Televisions, Dressers, Toilets, Patio Furniture, Landscaping/backyard material, and other furniture (tables, chairs, etc.).

The definition of "Garbage Carts" includes the requirement that the carts be "approved by the Contract Administrator for use by Service Recipients for Collection Services under this Contract." Regardless of the requirements of the transition plan it is not clear that the City ever approved the use of carts from multiple other companies.



Franchise Agreement Compliance The Company delivers white goods, metals and electronics collected through its Large Item Collection Program to its MRF at 3417 Standish Avenue. These materials are subsequently diverted. The Company reported that all other materials, including mattress, are disposed at the Sonoma County Landfill. There are any number of available options for diverting mattresses in Sonoma County, and the Sonoma County landfill has a Reuse and Recycling Center provides free drop-off for reusable items.⁹

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Articles 7.13.4, 8.03.5 and 9.04 – Materials Recovery Facility

The Agreement states that:

"All Recyclable Materials collected as a result of performing Recycling Services shall be delivered to an approved Material Recovery Facility. Failure to comply with this provision shall result in the levy of an administrative charge as specified in Article 20 of this Contract and may result in the Company being in default under this Contract."

The definition of Materials Recovery Facility (Article 1.36) includes the requirement that the facility be "legally permitted.

The Company's MRFs do not have the required Solid Waste Facility Permits. LEA issued a Cease and Desist Order to the Company for violation of Public Resources Code Articles 44002, operating a solid waste facility without a valid permit, and California Code of Regulations (CCR), Title 14, Article 17402.5, which requires a recycling center meet the following criteria: (1) all incoming materials must be separated for reuse; (2) putrescible waste in the incoming materials must be less than 1%; and the residual amount of solid waste in the separated for reuse materials must be less than 10%.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 7.16.1 - Conditions of Service

The Agreement states that:

"The Company shall provide SFD Large Item Collection Service to all SFD Service Units in the Service Area whose Large Items have been placed within three (3) feet of the curb, swale, paved surface of the public roadway, closest accessible roadway, or other

The Mattress Recycling Council (MRC) has just launched a program to help mitigate costs of collecting illegally dumped mattresses in California communities. This program allows agencies responsible for the collection of illegally dumped mattresses from the public right-of-way, including California local governments, certain permitted solid waste facilities, and authorized solid waste operations to receive payment from the MRC for the collection of illegally dumped mattresses. The MRC has allocated a total of \$750,000 to fund this effort for 2016. Eligible entities that wish to receive reimbursement must register and begin tracking the number of illegally dumped mattresses collected. Register for the program and see the complete eligibility requirements and reporting instructions at https://connect.re-trac.com/registration/mrc-idp, or contact Mark Patti at mpatti@mattressrecyclingcouncil.org.

such location agreed to by the Company and Service Recipient, that will provide safe and efficient accessibility to the Company's collection crew and vehicle. If requested by the Service Recipient, Company shall provide a bin for the Large Item collection at no additional cost to the Service Recipient. The Service Recipient shall be limited to three (3) cubic yards or three (3) Large Items per collection; however, in no event shall the aggregate of Large Items exceed the equivalent of three (3) cubic yards. Accordingly, Company shall be compensated for the cost of collecting Large Items in excess of this limitation in accordance with the "Additional Large Item Collection" service rate as set forth in Exhibit 1 or as may be adjusted under the terms of this Contract. Each SFD Service Unit in the Service Area shall be entitled to receive SFD Large Item Collection Service up to four (4) times per Contract Year in accordance with the "Large Item Collection" service rate as set forth in Exhibit 1 or as may be adjusted under the terms of this Contract."

The Company does provide SFD Large Item Collection Service to Santa Rosa customers. From the customer service side of the operation, R3 observed several instances of CSRs arranging for Large Item Collection service for Santa Rosa customers in the Company's "RAMS" customer service system, which included making system notes of the request, how many times the customer had requested the service that year (on a running total), and issuing work order questions to dispatch operations for scheduling the service. Many customers specifically requested bins for their Large Item Collection, which was subject to daily limitations on availability based on the number of available bins; during R3's observations, dispatch regularly updated all CSRs about the availability of bins by day. Bins were generally available within 5-7 days of the date of request.

However, R3 was also presented with information (a complaint emailed to the City) indicating that the actual provision of Large Item Collection Service, subsequent to CSRs issuing work orders to dispatch operations, may result in the scheduled services not being provided on a regular basis. R3 requested that the Company provide a detailed report of all Large Item Collections (a.k.a. "BIPs" in the Company's RAMs customer service system) indicated the date that service was requested, the date it was completed, and the status of any open work-orders. While the Company did provide a list of all BIP work orders for 2014 (not 2015 as requested), that information did not include the required information. As a result, R3 was not able to confirm that Large Item Collection Services are actually completed as requested by customers.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 10.01 - Trust Contribution

The Agreement states that:

"Beginning with the Initial Contract Year (2003) and annually thereafter during each Contract Year over the term of this Contract, Company shall contribute an amount of three hundred thousand dollars (\$300,000) to fund philanthropic, social or civic goals of the City as follows: One hundred thousand dollars (\$100,000) of each annual contribution shall be contributed directly by the Company to non-profit charities of its choice whom administer programs that are located within the municipal limits of the City of Santa Rosa and provide a direct benefit to the residents of the City of Santa Rosa.... On or before March 15, 2004, and annually thereafter, Company shall submit a report to the City detailing the charitable

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Franchise Agreement Compliance



Franchise Agreement Compliance contributions made during the previous year ended December 31. The annual report shall include the name and address of each charitable organization that received funding, the amount of funding received, a contact name and a description of the funded programs and related benefits to the City of Santa Rosa. A copy of the cancelled check or other documentation to verify receipt of funds by the organization shall be provided within five (5) days upon request. Contributions of in kind services shall not exceed fifty percent (50%) of the required contribution. Company may make contributions in excess of the amounts provided herein but shall not be entitled to carry over credit for any excess contributions to satisfy its obligations in subsequent years."

"Company shall distribute the remaining two hundred thousand dollars (\$200,000) to the City no later than July 1, 2007, and annually thereafter. The City will utilize its Community Development Block Grant (CDBG) process to distribute these funds. Approximately one hundred thousand dollars (\$100,000) will be distributed annually to fund homeless assistance programs; approximately fifty thousand dollars (\$50,000) will be distributed annually to fund youth assistance programs and fifty thousand dollars (\$50,000) shall be used for City's graffiti abatement programs."

Records were provided by the Company for 2014 that support a total of \$94,924 in charitable contributions, approximately \$5,000 less than the \$100,000 requirement. In addition, approximately \$64,000 of that total was for "in-kind services" (free collection services).

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 13.02.2 - Street Sweeping

The Agreement includes the requirement that:

"Prior to sweeping City streets, sweeper operators shall be trained annually by Company to recognize Illicit Discharges and stormwater pollution sources with Cityapproved training material. Such training shall be documented for review by the City."

Other than a Training Log on "Spills and Clean-up Policy" the Company did not provide any documentation supporting its compliance with this requirement.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement no specifically provided for elsewhere in Article 21.

Article 14.01.4 - Lubricants

The Agreement includes the requirement that:

"Company shall utilize re-refined motor oil and re-refined hydraulic fluid oil in all vehicles used in Company's performance of this Contract except as approved in writing by the Contract Administrator on an individual vehicle basis, or where the use of such re-refined motor oil or hydraulic fluid would void the original manufacturer's warranty on such vehicle."

The Company reported that it recycles its motor oil but does not used re-refined motor oil.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 14.01.6.2 - Collection Vehicles

The Agreement states that:

"Beginning March 1, 2006, and throughout the term of this Contract, Company shall not use any collection vehicle that is more than ten (10) years old. Company shall not use any collection vehicle that is more than five (5) years old or has accumulated more than 250,000 miles unless such vehicle is a Rebuilt Vehicle".

Rebuilt Vehicle is defined in Article 1.45 as:

"...at a minimum, replacement of worn parts and reconditioning or replacement, as necessary, of hydraulic systems, transmissions, differentials, electric systems, engines, and brake systems. In addition, the rebuilt vehicle must be repainted and tires must have at least eighty-five percent (85%) of tread remaining."

All of the Company's vehicles used to service the City's franchise are 2006 or 2007 model years, with the exception of two roll-off vehicles that are model year 2005 (both chassis and body). The Company provided various maintenance records for its vehicles however, we did not find any documentation in the information provided that any of those vehicles have been rebuilt and satisfy the "Rebuilt Vehicle" requirement. It appears that at least some, but not necessarily all of the Company's franchised vehicles have been repainted, but we were not provided with any associated supporting documentation.

Article 21.04 (y) specifies an Administrative Charge of \$500 per vehicle per day for failure of any vehicle to meet any of the requirements specified in the Agreement. Article 21.04 (z) also specifies an Administrative Charge of \$500 per vehicle per month for failure of any vehicle to meet any of the requirements specified in the Agreement.

Article 14.01.9 – Vehicle Signage and Painting

The Agreement states that:

"Collection vehicles shall be painted and numbered consecutively without repetition and shall have the Company's name, Company's customer service telephone number, and the number of the vehicle painted in letters of contrasting color, at least four (4) inches high, on each side and the rear of each vehicle. No advertising shall be permitted other than the name of the Company except promotional advertisement of the Recyclable Materials and Yard Trimmings programs. Company shall repaint all vehicles (including vehicles striping) during the term of this Contract on a frequency as necessary to maintain a positive public image as reasonably determined by the Contract Administrator, but not less often than every sixty (60) months beginning February 1, 2003. All vehicles obtained by Company from Empire Waste Management shall be in compliance with this standard no later than January 1, 2006."

None of the collection vehicles assigned to the City's franchise have the Company's name and telephone number on the rear of the truck. Some, but not all of the Contactor's vehicles assigned to the City's franchise have the phone number on the side of the truck in letters at least four (4) inches high. These trucks with the larger side logos appear to have been more recently painted. Of those vehicles with the "older" side logos that have the phone number on the vehicle cab door the information is less than four (4) inches high, and the information on at least one of those vehicle cab door was "washed out" and difficult to read.

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Franchise Agreement Compliance



Franchise Agreement Compliance Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 14.02 - Collection Vehicle Noise Level

The Agreement states that:

"The noise level generated by collection vehicles using compaction mechanisms during the compaction process shall not exceed eighty-five (85) decibels at a distance of twenty-five (25) feet from the collection vehicle measured at an elevation of five (5) feet above ground level using the "A" scale of the standard sound level meter at slow response. Company shall cause the collection vehicles to be tested annually during the months of March and April, beginning March of 2004, and shall submit a certificate of testing showing that the vehicles met the requirements of this Article. Company shall not use any vehicle for collection services that fails to meet the requirements of this section unless and until the vehicle has been retested and met the standards. Company shall submit to City certificates showing the retesting and that the vehicles were repaired and met the requirements within fifteen (15) days after the initial failure to meet the requirements. This section shall only apply to vehicles that are older than five (5) years.

The Company reported that it does its own vehicle noise testing, with this information included its "Vehicle Report", but does not issue a certificate of testing.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 14.04 - Equipment Maintenance

The Agreement includes the requirement that:

"Company shall maintain collection equipment in a clean condition and in good repair at all times. All parts and systems of the collection equipment shall operate properly and be maintained in a condition satisfactory to City. Company shall wash all collection vehicles at least once a week."

The Company is not currently washing its vehicles at least once a week, although given restrictions on water usage, this does not seem inappropriate. However, the Company should formal approval for this change from the City.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 14.05.1 – Equipment Inventory

The Agreement states that:

"On or before March 30, 2003, Company shall provide to City an inventory of collection vehicles and major equipment used by Company for collection or transportation and performance of services under this Contract. The inventory shall be segregated between equipment obtained from the prior Company and that purchased by Company in accordance with the terms and conditions of this Contract and shall indicate each collection vehicle by Company assigned identification number, DMV

license number, the age of the chassis and body, type of fuel used, the type and capacity of each vehicle, the number of vehicles by type, the date of acquisition, the decibel rating for vehicles with an age of five (5) years or more and the maintenance and rebuild status. Company shall submit to the Contract Administrator, either by fax or e-mail, an updated inventory annually to the City or more often at the request of the Contract Administrator. Commencing on the first of the month following the effective date of this Amended and Restated Agreement and continuing until such time as Company has fully complied with the replacement schedule set forth in Article 14.01.6.2, Company shall provide an updated monthly inventory report to City Each inventory shall also include the tare weight of each vehicle as determined by weighing at a public scale and not at a disposal or other facility scale used by Company. Each vehicle inventory shall be accompanied by a certification signed by Company that all collection vehicles meet the requirements of this Contract."

The Company's "Vehicle Report" (Vehicle Inventory) only includes collection vehicles and does not include major equipment. The Vehicle Report does not include tare weights. The Vehicle Inventory provided to R3 did not include a certification, signed by the Company, that all collection vehicles meet the requirements of this Contract.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 15.01.2 - Multilingual/TDD Service

The Agreement includes the requirement that:

"Company shall at all times maintain the capability of responding to telephone calls in English and such other languages as City may direct. Company shall at all times maintain the capability or responding to telephone calls through Telecommunications Device for the Deaf (TDD) Services."

The Company's customer service system does not offer Telecommunications Device for the Deaf (TDD) services, though the Company does offer live web chats which the City may find meets the intent of providing the TDD service. CSR's do respond to telephone calls in English and Spanish.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 15.01.4 - Customer Service

The Agreement includes the requirement that:

"All incoming calls will be answered within five (5) rings. Any call "on-hold" in excess of 1.5 minutes shall have the option to remain "on-hold" or to be switched to a message center where Service Recipient can leave a message. Company's customer service representative shall return Service Recipient calls. For all messages left before 3:00 p.m., all "call backs" shall be attempted a minimum of one time prior to 6:00 p.m. on the day of the call. For messages left after 3:00 p.m., all "call backs" shall be attempted a minimum of one time prior to noon the next Work Day. Company shall make minimum of three (3) attempts within twenty-four hours of the receipt of the call. If Company is unable to reach the Service Recipient on the next Work Day, the

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Franchise Agreement Compliance Company shall send a postcard to the Service Recipient on the second Work Day after the call was received, indicating that the Company has attempted to return the call."

Per the Company's call statistics for 2014 (R3 requested 2015 data but it was not provided by the Company) only 21% of incoming calls are answered within 30 seconds, whereas 5 rings equates to approximately 26 seconds. The Company's telephone system does not provide the option to be switched to a message center where the caller can leave a message after 1.5 minutes or at any time while remaining on hold. Customer Service Representatives (CSRs) do return calls on messages left after hours, while the customer service call center is closed, and call back attempts are made in keeping with the Agreement. However, the Company does not send a postcard to customers that are unable to be reached via repeated call-back attempts (and, in R3's experience, this provision is difficult to implement in that customers that cannot be reached via call backs generally do not provide enough information in a voice message to allow for identification of their mailing address).

Test calls conducted by R3 had some hold times exceeding five minutes, though most calls were answered in under 2 minutes. the Company reported that they had previously experienced significantly increased call volume due to questions related to the County's rate adjustment; however, call volumes have reportedly gone done, and as a result CSR response time has been reported to have improved (based on CSR interviews) though R3 was not provided with data to back-up this perception.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

Article 29.01.2 - Uniforms

The Agreement includes the requirement that:

"Company's field operations personnel shall be required to wear a clean uniform shirt bearing the Company's name. Company's employees, who normally come into direct contact with the public, including drivers, shall bear some means of individual photographic identification such as a name tag or identification card."

When we began our review the Company reported that it had not issued uniforms to field operations staff and had, therefore, been out of compliance with this requirement. During the course of our review drivers were provided with uniforms. Field operations staff do not have company issued photographic identification.

Article 21.04 (aa) specifies an Administrative Charge of \$100 per day for failure to comply with provisions of the Agreement not specifically provided for elsewhere in Article 21.

4 Management and Administration

Objective: Review and analyze the Company's management system, and identify

potential changes or improvements to management practices.

4.1 Background

Overall Assessment

The Company has not had an effective management structure and management system in place for some time. There are no defined policies and procedures or operational standards, no documented new hire, refresher or supervisor training programs, no performance goals, no effective tracking of performance, and no real management reports that can be used to gage performance and more effectively manage operations.

Prior to the hiring of the new General Manager in October 2015, that position had been vacant for more than 10 years. The fact that the Company had not had a General Manager for more than 10 years is likely a major contributing factor to the deficiencies we identified during our review. Those identified deficiencies, however, are in no way a reflection of the Company's staff, whom overall we found to be qualified and dedicated, but without the necessary management support and resources that an effective solid waste operation requires. The new General Manager has taken a number of very positive steps since taking over, and has provided R3 with a list of additional planned actions to improve identified deficiencies (Appendix B), which we fully support.

4.2 Findings

Management Structure and Management Systems

The Company's management structure and management systems are loose and ill-defined. There is no organizational chart for the Company and no formal job descriptions. It is not clear that staff have clearly defined roles and responsibilities, and there are no formal processes or procedures for holding staff accountable for performance (both good and bad). There are also no formal policies and procedures, safety and other driver training is limited, and the span of control of the one route supervisor responsible for overseeing the City's collection operations is excessive, and does not allow for effective route supervision.

Staffing

As discussed above, the Company has not had a General Manager for more than 10 years, which along with the lack of sufficient route supervision, is likely a major contributing factor to the problems the Company is currently facing, and the issues and concerns identified during our review. While there are many issues that the Company needs to address, in general existing staff appear to be qualified and dedicated, although we did observe some morale issues, which were not unexpected given current conditions.

The hiring of the new General Manager, while overdue, does represent a significant step toward addressing the numerous management, administration, operation, safety and customer service deficiencies that exist. The new General Manager appears qualified and Section 4

Management and Administration



Management and Administration

based on our discussions, is aware of the issues and concerns that our review identified, and appears to have appropriate priorities in place to effect meaningful changes, some of which have already occurred.

Appendix B contains a list of Company Goals and Objectives, Actions and Planned Actions and Recent Accomplishments that the General Manager prepared at our request. Effectively executing those goals and objectives would be expected to have a material impact on the management and operation of the Company's solid waste management operations. As noted previously, however, bringing the Company's operations up to an acceptable standard of performance will require considerable additional financial commitments by its owner.

Data and Performance Tracking

While the Company tracks some basic operational data (e.g., tonnages) it does not have any established performance goals or standards (e.g., returning 100% of carts upright with lids closed to the point of collection), does not regularly produce management reports that could support more effective management of operations, and has little if any ability to conduct diagnostic review to identify areas requiring improvement and facilitate positive change.

Customer Service

5 Customer Service

Objective:

Review and analyze the Company's customer service system, its compliance with the associated contractual requirements, and identify potential changes or improvements to that system.

5.1 Background

The Company's customer service functions are operated in their main offices located in Santa Rosa. The Company's customer service operations include over-the-counter customer service, customer service by phone, customer service by email via Company's website, and through live web chat.

The customer service operation staffed by a growing number of CSRs (including one lead CSR), and one Customer Service Manager (CSR Manager), which cover the entire Company service area, including Santa Rosa. This set of employees handle customer calls and emails, respond to phone messages. CSRs are the primary contact for customers and have access to all customer account data through Company's customer service database (RAMs). CSRs are responsible for addressing service and billing questions, providing service information to route drivers and updating the computerized customer service database. Once a customer calls the center, the CSR becomes their point of contact for issuing service requests, addressing issues, and follow up.

Santa Rosa customers who call customer service first receive a short outgoing message from Company and then are placed into a call queue. When at least one CSR is available, calls coming in are then answered immediately. If all CSRs are engaged with other customers, callers remain on hold in the queue until a CSR becomes available, at which time they are automatically connected the caller to the available CSR. The Company's customer service system (RAMs) tracks all data entries by CRSs and by dispatch/operations staff.

5.2 Findings

R3 found that Company CSRs appear to be responsive, courteous, dedicated and qualified. The Company appears to have an appropriate training program in place. However, call answer and queuing technologies and data tracking systems all appear to be insufficient enough to meet incoming call volumes.

Additionally, Company management was unable to produce work order statistics from RAMs for 2015. While the Company did provide work order details for 2014, the information did not include standard information such as when a work order was completed; as a result, R3 was unable to review and measure the effectiveness and response time for key customer service and operational functions. Specific findings relating to each of the key areas reviewed are discussed below.

Trainings, Policies and Procedures

CSR staff receives several weeks of classroom training before answering phones on their own. This training is provided by the Company on-site with a dedicated trainer who works with groups of 2-4 trainees at a time. Trainees are provided with comprehensive binders of all rates



and services for the Company's service area. Not all trainees pass the training phase to become CSRs. R3 was not provided with any specific policies related to customer service functions.

Customer Service

Work Orders / Customer Complaints

With respect to complaints and missed pickups, a complaint that needs the immediate attention of a supervisor or manager is handled by an email to the Company's dispatch, and comment in the RAMs system indicating the initiation of a work order. A complaint that does not need immediate attention, but still needs the attention of a supervisor, may also be sent via email. Once an email is issued, however, there is little that a CSR can do to follow-up on the matter except wait for dispatch or a supervisor to respond; there is little direct communication between customer services and dispatch/operations. As a result, some work orders or complaints are not resolved immediately. Best industry practices generally have greater levels of communication between customer services and dispatch/operating functions than we observed at the Company.

R3 also observed calls on-site answered by a CSR, including calls from account holders in the Santa Rosa service area. The CSRs on-site demonstrated the required knowledge of services and responded with professionalism to all calls, which included requests for cart changes, billing questions, and reporting of missed pick-ups. However, it should be noted that all CSR's have the ability to place themselves off of the call queue while completing customer transactions. Because of the lack of effective communication between customer service and dispatch/operations staff, customer service staff take careful notes and enter information in two different fields in their RAMs software as a means of fully documenting their completion of customer service matters. As a result, each transaction takes more time than it should, and often resulting with 2 to 3 minutes or more between individual customer transactions. Best industry practices for customer service systems allow for CSRs to complete transactions while on the phone with a customer, and to take their next call immediately after completion of the call. R3 estimates that the Company's customer service effectiveness is about 50-75% of what it could be, due to inefficient and redundant call log / work order systems.

Missed Pickups

Missed pickup complaints are tracked by CSRs in RAMs, with the expectation of a 24-hour response/resolution still holds. A non-immediate complaint like a missed pick up is tracked by a work order that would be handled same day (if called in before 3 p.m.) or next day (if called in after 3 p.m.). The Company does not actively track these statistics.

Availability of Representatives via Telephone

Current office hours are 8 a.m. to 5:30 p.m. Monday through Friday and 7 a.m. to 3 p.m. Saturday. During this time a Company representative is onsite and available to interface with the public in person, via email, and by telephone. Company's telephone system is in operation Monday through Friday 7 a.m. to 6 p.m. and Saturday through Sunday 7 a.m. to 3 p.m.

R3 found that the customer service operation does not have sufficient equipment in place to handle the volume of calls experienced on the busiest days. Furthermore, productivity and efficiency are limited by the current systems. CSRs must navigate between numerous windows to order service requests, update records, record call notes, and perform other tasks. Redundancy in data entry required under the current system significantly increases customer wait times; R3 observed CSRs placing themselves as "unavailable" to finish entering information from a previous call before accepting new calls.

R3 conducted a test of the Company's customer service call wait times, which is detailed in the table below. The average wait time for calls was 1 minute 56 seconds, approximately 30 seconds more than the contractual standard of 1.5 minutes.

TABLE 1
Test of Customer Service Call Wait Times

Date	Called-in	Wait Time	Date	Called-in	Wait Time (sec)	
1/26/16	2:27 pm	6 min	3/3/16	4:00 pm	2 sec	
2/23/16	4:52 pm	2 min 29 sec	3/8/16	10:05 am	8 min 20 sec	
2/24/16	9:00 am	1 min 2 sec	3/14/16	1:35 pm	5 sec	
2/25/16	4:48 pm	3 min 48 sec	3/15/16	3:11 pm	1 min 50 sec	
2/26/16	10:45 am	10 sec	3/18/16	9:39 am	1 sec	
2/26/16	5:10 pm	1 min 8 sec	3/24/16	2:50 pm	3 sec	
3/3/16	11:50 am	52 sec	4/13/16	3:43 pm	28 sec	
Average Wait Time: 1 minute 56 seconds						

Website

The Company's corporate website includes a webpage specifically dedicated to Santa Rosa with residential service information and rates, in addition to one for Santa Rosa commercial customers. A link for more information regarding acceptable recyclable materials is prominently displayed on both webpages. Online visitors have the option to initiate a live web chat with a CSR, in English or in Spanish.

Section 5

Customer Service

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Customer Service

Collection Operations

6 Collection Operations

Objective:

Ensure that the Company conducts proper driver training, that it has an appropriate number of route supervisors that are actively monitoring driver performance, and that drivers are providing collection services in a safe and effective manner and adhering to the associated requirements of the Agreement.

6.1 Background

Overall Assessment

The Company's residential and commercial collection systems utilize truck and crew configurations that provide for optimizing collection efficiency and productivity, and the routes we observed in the field were achieving reasonable productivity. Collection vehicles are also routed effectively. However, while the Company has assigned a qualified route supervisor to oversee the City's collection operations, as required by the Agreement, one supervisor with responsibility for more than 30 daily routes is not sufficient to provide effective supervision.

6.2 Findings

Collection Services

The Company provides residential solid waste, recycling and yard waste collection services with one-person fully automated side loading vehicles, and commercial collection services with one-person front loading vehicles. It also provides roll-off services, and operates three (3) street sweeping routes in the City. Residential solid waste and recyclables are collected in a split body vehicle with separate compartments for each material (co-collection). Yard waste is collected in a dedicated material. At the end of the day the solid waste and recycling vehicles tip their solid waste load at the landfill and return to the corporation yard. The recyclable load is tipped at the 3417 MRF the next day prior to the vehicles beginning their collection route.

Collection Routes

The Company operates a traditional "sweep" type system will all routes operating in the same area of the City each day and sweeping across the City over the course of the week. Sweep type routing is the industry standard as it provides for more efficient route supervision, coordinating assistance among routes, and scheduling street sweeping operations the day immediately following collection activities. The Company is not allowed to commingle any material collected within the City with any material outside of the City, including county pocket areas. Based on our discussions with the Company staff and route observations, they appear to be complying with this requirement.

Route Schedule

Residential route drivers clock in at 5:00 a.m. and conduct their pre-inspection, receive their route books, and conduct any other dispatch related activities. They then deliver their recycling loads to the 3417 MRF and begin their routes no earlier than 6:00 a.m. Commercial route drivers clock in at 4:00 a.m.



Collection

Operations

Training

The Company does not have a consistent and robust training program and was not able to provide us with a specific training schedule with topics and dates of training identified. Documentation that was provided for training sessions was extremely limited with documentation for only nine (9) training sessions for Santa Rosa drivers provided for the past several years. With that said, the Company's Modification Factor for the City's franchised operations for the period January 2011 to January 2014 was 86%, which compares favorably to the industry.

Route Supervision

The Agreement requires that the Company assign a qualified supervisor to be in charge of the collection service within the service area (Article 21.02), which it has complied with. That one supervisor, however, is responsible for overseeing more than 30 daily routes, including commercial routes that are scattered throughout the City on a daily basis. This "route to supervisor ratio" is excessive and does not provide the level of staffing necessary to effectively supervise operations. At a minimum we would expect there to be at least two route supervisors spending at least 50% of their time in the field, supporting customer service and safe and effective collection operations. Essential supervisor duties typically include:

- Enforcing all safety standards, policies and procedures;
- Investigating and reporting all staff accidents and injuries;
- Ensuring customer satisfaction;
- Reviewing route sheets for accuracy and creating productivity reports; and
- Conducting weekly safety observations.

The Company does not have a formal route supervisor training program and does not conduct regular "route observations" to support good collection and customer service practices and identify and correct bad behavior. This lack of sufficient route supervision was evident during our route audits where we observed one residential route failing to return containers upright to their original position on a consistent basis. This also highlights the need for clear policies and procedures, and performance standards (i.e., returning 100% of carts upright to their original position).

Management of Overloaded Vehicles

Overloaded vehicles represent a potential safety issue because they exert significantly greater impacts on vehicle braking and other systems. They also exert significantly greater impact on streets than legally loaded vehicles, resulting in increased street impacts and associated street maintenance costs. Therefore, effectively tracking and limiting overweight vehicles is an important aspect of operations, maintenance and safety management.

R3 requested information from the Company on several occasions regarding the policies and procedures it uses to manage overweight vehicles, and requested vehicle tare weights and sample load weight data to test compliance with legal load weights but never received a response.

Missed Pickups

The Company provided a missed pickup report for 2014, we also requested a similar report for 2015 but had not received that as of the date of this report. The information contained in those reports is difficult to interpret, as some accounts seem to have multiple / duplicate entries. As with much/most of the Company's operations, there appears to be little if any diagnostic review of missed pickups (e.g., which routes are generating the pickups, which accounts are calling in repeat missed pickups) that could be used to more effectively address cases of actual missed collections, as well as identify and address accounts that fail to have their container out for collection and call it in as a missed pickup.

Route Observations

Findings from our route observations are listed below. Appendix E contains photos taken during our fieldwork, as evidence of much of what is referenced here.

Overall, routes observed appeared to be operating safely while achieving reasonable productivity, on average 2.0 pickups per minute (Co-collection). Vehicles observed in transit were driven safely with blinkers and warning lights engaged. Streets appeared to generally be clean following collection. We estimate that on average 3% of residential pickups resulted in instances of litter. Areas around commercial bins were generally free of litter or accumulated trash, although not in all cases.

Approximately 2% of containers were tipped over, and 1% were placed in excess of 3 feet from the curb after collection. In general route drivers did a poor job returning residential containers upright with lids closed. While the current contract language only requires that: "The Company shall provide SFD Collection Service with a little disturbance as possible and shall leave Garbage, Recycling and Yard Waste Carts in an upright position at the same point it was collected..." It is common to also require that "lids be closed" and we would recommend that language be added to any new franchise agreement. Though it varied greatly from driver to driver, on average, 15% of containers observed were returned with open lids, more frequently with larger sized containers 10

In general, the overall condition of the residential carts was good; however, we estimated that between 1% and 2% of the carts had some form of damage and should be repaired or replaced. Residential containers were labeled with a variety of labels, including Waste Management, Allied, Green Waste Recovery, or no label at all, rather than the more standard "Disposal Company" reference.

Commercial bins were generally clean and clearly labeled. We did note, however, that some commercial containers were rusty or otherwise in need of refurbishing, including worn or illegible labels. In addition, the commercial container inventory is not consistent, we observed green, tan and red containers for both solid waste and recyclables. We observed street sweeping routes before and after scheduled street sweeping. Streets appeared clean, and drivers seem to be providing sweeping services in adherence to the associated requirements in the Agreement.

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Collection
Operations



One route (truck # 9016) in particular did a poor job returning containers with closed lids, with 30% and 45% of the containers observed on two separate days returned with lids open. This was due at least in part to the driver operating too quickly without due care.

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Collection Operations

Rate Review

7 Rate Review

Objective: Determine if service rates have been properly calculated, and if customers are charged the proper service rate based on their service level.

Test of Rates

Background

7.1

The purpose of this test is to verify that annual adjustments to the service rates have been calculated correctly. Article 4.02.2 (RRI Adjustment) provides for annual adjustments to the Company's rates effective July 1st based on the percentage change in the Refuse Rate Index (RRI) based on the annual average percentage change between the indices for the fiscal year ending March 30, of that year, and the fiscal year ending March 30th of the prior year.

MuniServices reported in its January 2015 Phase 2 Report that, with respect to the 2014 rate adjustment:

"Required financial information was submitted to the City on April 30th (confirmed by review of correspondence). MuniServices LLC performed the most recent rate adjustment review and can herein confirm that the 1.24% increased requested therein was accurate and the methodology prescribed by the agreement was used by SRRC. Finally, discussed later herein, we have reviewed the diversion rate claimed for the exclusive franchise and can attest to its accuracy."

Since the July 1, 2014 rate adjustment the following rate adjustments have occurred:

- April 1, 2015 Increase in Disposal Tip Fee from \$114.00 per ton to \$126.45 per ton;
- July 1, 2015 Annual RRI adjustment to the rates = 0.54%; and
- October 1, 2015 Increase in Green Waste Processing Fee from \$34.10 to \$58.00 per ton.

Methodology

R3 obtained copies of the work books the Company used to calculate the above adjustments to determine if the proper tipping fees and RRI Index figures were used and the rate adjustments properly calculated. ¹¹

Findings

April 1, 2015 – We confirmed that the Company correctly applied the increase in the Solid Waste Tip Fee from \$114.00 to \$126.45 per ton, and the increase in the Green Waste Processing Fee from \$34.10 to \$53.20 per ton to calculate the required rate adjustment.

We have requested but have not received copies of the associated formal approvals for the County April 1 and October 1, 2015 tip fee increases, and the Company's formal request to the City for the October 1, 2015 tip fee increases.



Rate Review

- July 1, 2015 The Company used the proper methodology to calculate the required RRI adjustment, however, it multiplied the calculated adjustment to the "Other" RRI component by a factor of 75%. Based on our review, no such adjustment is to be applied to the calculated "Other" RRI indexed adjustment. We have requested that the Company review and comment on this finding. If confirmed our findings that the "Other" RRI calculation container an error that resulted in lower rate adjustments than the Company would otherwise have received.
- October 1, 2015 We confirmed that the Company correctly applied the Increase in Green Waste Processing Fee from \$53.20 to \$77.10 per ton to calculate the required rate adjustment.

7.2 Test of Subscribers

Background

The purpose of this test was to determine the extent to which residential and commercial subscribers are billed correctly for the level of service provided, and if billings are consistent with the appropriate rate schedule. The test of subscribers involved the following items:

- Review of Rates Charged vs. Approved Rate Schedule A review of service levels and charges from a recent billing cycle to determine if the rates charged for the various service levels are consistent with the approved rate schedule;
- Review of Rate Categories vs. Approved Rate Schedule A review of a recent billing cycle to determine if all rates charged have been approved (e.g., are there any charges that are billed but are not listed on the approved rate schedule such as finance charges, push/pull charges, etc.);
- Route Audits Auditing of selected routes to compare the rates charged to sample residential and commercial accounts to the actual level of service observed in the field. Approximately 1,360 residential accounts and 30 commercial accounts were sampled as part of the route audits; and
- Route Observations As part of the route audits we also:
 - Assessed the safety, methods and efficiency of collection routes and collector performance;
 - Observed the condition of residential and commercial carts and containers in the field;
 - Visually inspected residential route areas before and after collection services to assess quality of collection services (containers knocked over or returned with lids open, instances of litter); and
 - Visually inspected residential street sweeping route areas after sweeping to assess quality of service.

Findings

Review of Rates Charged vs. Approved Rate Schedule

R3 obtained and reviewed a recent billing cycle provided by the Company and compared the reported rates billed to the Approved Rate Schedule. We conducted a sampling of 500 accounts that identified the following two accounts that appeared to be over billed for the reported service level:

- A charge of \$268.19 for a 1.5-yard container 1 time per week that has a listed rate of \$219.36 on the "Revised 10-1-15 City of Santa Rosa Solid Waste and Recycling Collection Rates" schedule; and
- A charge of \$329.49 for a 2-yard container 1 time per week that has a listed rate of \$268.19.

The Company could not verify whether the rates were incorrect or the listed service level was incorrect.

Review of Rate Categories vs. Approved Rate Schedule

Our sampling identified the following codes that are not included on the Rate Schedule:

- 32-gallon commercial cart at a rate of \$23.08; and
- A "15-yard compactor haul" at a rate of \$330.70.¹²

The Company confirmed that these rates were not on the rate schedule, although it had established rates for those service levels. Additionally, the 15-yard compactor haul rate, which the Company reported was intended to be set at the same rate as the 20- and 30-yard container pull had not been updated to the current rate (\$332.24).

Route Audits

Residential Route Audit

- Our residential route audit identified a total of 59 apparent billing discrepancies representing approximately 4.2 percent of the total surveyed residential accounts. Of those accounts, 38 appear to be under-billed and 14 over-billed, with a total projected net loss in annual revenues of approximately \$94,000 assuming a similar impact across all residential accounts. We forwarded a list of the apparent discrepancies to the Company for its review and correction. The Company informed us that some accounts that appeared to be under-billed were actually the result of the Company providing some customers with free container size upgrades due to container shortages in the size desired by those customers; and
- On route, R3 also identified 142 residential accounts that were receiving service but were not identified on the account list that we were provided. We forwarded a list of these account to the Company and requested that they provide an explanation as to why those accounts were not listed. The Company initially stated that the majority of these were suspended accounts that should not be receiving service, but later stated that 17 of the accounts in question were inactive accounts (8.3%). The Company stated

Section 7

Rate Review



This rate (\$330.70) is almost exactly the same as the pull rate for 20 and 30-yard containers 1x per week (\$332.24).

Rate Review

that their reinitiated route and account auditing function was focused on ensuring that inactive accounts were not receiving service.

Commercial Route Audits

- Our commercial route audit identified six (6) account billing discrepancies: three (3) that appear to be under-billed, and three (3) over-billed. The Company informed us that some accounts that appeared to be under-billed were actually the result of the Company providing some customers with free container size upgrades due to container shortages in the size desired by those customers;
- In addition, R3 identified three (3) commercial accounts that were receiving service but were not identified on the account list that we were provided. The associated revenue loss from these accounts was projected at over \$431,000 assuming a similar proportion of missing accounts within the overall commercial customer base. The overall excess annual commercial revenue associated with the apparent billing discrepancies and missing accounts is approximately \$685,000, with associated excess franchise fees of approximately \$68,500 annually.

7.3 Rate Survey

The Company's rates in the jurisdictions it services have historically been generally lower than those in other jurisdictions in the region. Though not specifically part of our scope of work, R3 compared the City's rates to the Company's rates in jurisdictions in Sonoma and Marin County. That information is provided in Appendix F, and is summarized below:

Residential Rates

- The City's 20-gallon rate, which is subscribed to by approximately 9% of residential accounts, ¹³ is 24% **higher** than the average in the other jurisdictions;
- The City's 32-gallon rate, which is subscribed to by approximately 46% of residential accounts, is 3% <u>lower</u> than the average in the other jurisdictions;
- The City's 64-gallon rate, which is subscribed to by approximately 39% of residential accounts, is 21% lower than the average in the other jurisdictions; and
- The City's 96-gallon rate, which is subscribed to by approximately 7% of residential accounts, is 17% <u>lower</u> than the average in the other jurisdictions.

Commercial Rates¹⁴

accounts.

The City's commercial rates are between 6% and 13% higher than the average in the other jurisdictions.

Does not include "senior rate" accounts, which comprise approximately 13% of the residential

K3

Our commercial survey compared the rates for 1.5 cubic yards of service and 2 cubic yards of service collected one time and two times per week.

Vehicles and Maintenance

8 Vehicles and Maintenance

Objective: Determine if the Company is maintaining vehicles and equipment in a safe

operating condition.

8.1 Background

Overall Assessment

The Company's maintenance operations appear to be reasonable and effective and maintenance staffing levels are appropriate given the number of vehicles they are required to maintain. The Company, however lacks an effective maintenance software system, and it reported that its maintenance data base was compromised several years ago and it lost all historical records.

8.2 Findings

Vehicle Maintenance Operations

Staging and maintenance of the City's franchised occurs at the Company's corporation yard in Cotati, with the exception of the street sweepers which are staged and maintained at the Company's Santa Rosa corporation yard. The Cotati maintenance facility appears to be effectively maintained and staffed with a reasonable number of maintenance personnel for the number of vehicles that they are responsible for maintaining. The Company follows a typical preventative maintenance schedule that includes 250, 500, 750 and 1,000-hour service schedules.

Utilization, safety, and suitability of facilities, and equipment

The Cotati facility appears to be maintained in a safe and effective manner and is effectively designed for the required maintenance operations.

Pre-and Post-Trip Inspections

Drivers conduct daily pre- and post-trip inspections, as required by law. If a driver notes items related to safety or performance the vehicle may not exit the facility until it has been declared road worthy by maintenance personnel.

California Highway Patrol Historical Inspection of Terminus (BIT) Results

California Vehicle Code requires any person or organization directing the operation of certain trucks or trailers to participate in an inspection program conducted by the CHP. The law, which is known as the BIT Program, requires the CHP to inspect California truck terminals (the location where the vehicles are garaged and maintained) every 25 months.¹⁵ During the

On January 1, 2016 the BIT program changed to a performance based inspection selection system focusing resources on proven non-compliant motor carrier operations. Inspections selection is



Vehicles and Maintenance

inspection, CHP inspectors (non-uniformed staff) check the physical condition of a sample of the trucks and trailers in a given terminal. They also review vehicle maintenance and driver records (including vehicle inspection reports, repair records, and time cards for drivers) to ensure compliance with state laws and regulations. Terminals that pass inspection are issued a "satisfactory" safety compliance report, while those that fail are required to be re-inspected every 120 days until safety compliance is achieved.

The primary intent of the program is to determine if motor carriers are complying with Motor Carrier Safety regulations on an ongoing basis, particularly with regard to the legal requirement to maintain commercial motor vehicles according to a scheduled maintenance (preventative maintenance) program.

The BIT program covers three sections of an operation:

- Equipment (including condition, registration and insurance);
- Maintenance Program (including programs, documentation and record keeping); and
- Driver administration (including qualification files, training, drug testing programs and logbook compliance).

Terminals that pass inspection are issued a "satisfactory" safety compliance report, while those that fail are required to be re-inspected every 120 days until safety compliance is achieved.

The Company provided documentation supporting that it's Cotati Terminal (where the City's franchised vehicles are staged and maintained) received a "satisfactory" rating from the CHP in June 2011, which we confirmed was the most recent full BIT inspection.



Required

Reports

9 Required Reports

Objective: Determine if the Company is complying with its contractual reporting requirements.

9.1 Background

The Company is required to provide reports and other information to the City on a regular basis, including the following:

- 1. RRI Applications
 - a. Financial Information (Article 4.02.5) (May 1st)
 - b. Diversion Data (Article 4.02.6) (May 1st)
- 2. List of Charitable Contributions (Article 10.01) (March 15th)
- 3. Street Sweeping Reports (Article 13.10)
- 4. Vehicle Certificates of Noise Testing (Article 14.02)
- 5. CHP BIT Inspections (Article 14.03.1) (within 90 days of Inspection date)
- 6. Annual Equipment Inventory / Vehicle List (Article 14.05.1) (Annually)
- 7. Public Education and Outreach Program (Article 16.01) (Sept. 30th)
- 8. Annual Report (Article 18.02) (March 15th)
- 9. Names of Service Supervisor and Contract Manager (Article 21.02) (January 1st)
- 10. Current Insurance Certificates (Article 23.06) (to be mailed to City's Risk Manager) (January 1st)

Article 18.03.1.7 (Additional Reporting) states that "The Company shall furnish the City with any additional reports as may reasonably be required, such reports to be prepared within a reasonable time following the reporting period."

9.2 Findings

The City provided R3 with copies of each of the required reports, documenting that they had been submitted by the Company and received by the City. R3 then assessed the content of those reports for compliance with the associated contractual requirements. We noted the following issues related to the required reports:

List of Charitable Contributions

As discussed in Article 3.1 Item #7 (Article 10.01 – Trust Contribution) records provided by the Company for 2014 did not support their compliance with its contractual requirements.

Street Sweeping Reports

As reported by MuniServices in its January 2015 Phase 2 Report (pg. 15): "Prior to March 2012 no street sweeping reports were generated. The City then requested weekly reports be provided. SRRC has provided those weekly reports via email to Ron Simi of the City. Per SRRC this level of reporting is what the City desires. Therefore, no quarterly reports have been



Required Reports prepared or submitted. We consider SRRC to now be in compliant with this article but the City must confirm that no immediate or quarterly reports are required." The City provided R3 with a copy of the 3rd Quarter 2015 Street Sweeping Report, and our understanding is that the Company is providing regular quarterly reports. They also provided us with sample daily driver logs and weight tickets.

Vehicle Certificates of Noise Testing

The Company reported that it noise-tests its own vehicles and does not issue certificates.

Annual Equipment Inventory / Vehicle List

The annual Equipment Inventory does not include required vehicle tare weights.

Public Education and Outreach Program

The Company identified 4 campaigns for the 2015 calendar year, as required, including Campaign III (MFD) and Campaign IV (Recycling/Blue Cart Education). As far as the requirement that the Public Education and Outreach Program be "designed to increase diversion and resident participation", we suggest that the Company could do more to meet that intent. For example, Campaigns I and II are just Spring and Fall newsletters. In addition, it is notable that the Company does not discuss the impact of their outreach activities in the Annual Report, as called for in the Agreement.

Annual Report

R3 reviewed the 2014 Annual Report and found it to be partially in compliance with the reporting requirements specified in Article 18 of the Agreement. Instances in which Company is not strictly complying with the terms of the Agreement include:

- Reported public education and information activities undertaken during the course of the year do not detail bill inserts and collection notification tags;
- The impact of public education and information activities on recycling program participation is not discussed and amounts collected from SFD, MFD and commercial service units are not provided; and
- The analysis of recycling and yard trimmings collection, processing, and marketing issues or conditions did not include a separate discussion of possible solutions for any identified SFD, MFD and commercial program issues.

The 2014 Annual Report states that is was "Submitted by April 1st, 2015." R3 recommends that the Company include the exact date the annual report gets submitted on future reports to improve documentation of compliance.

10 Recyclables Characterization Study

Objective: Determine the material composition by weight of the residential and

commercial recyclables streams.

10.1 Background

Sampling Approach

R3's approach to the waste characterization study generally followed CalRecycle's guidelines for jurisdictions to collect their own waste characterization data. R3's sampling method was stratified, randomized, and designed to provide an accurate representation of the City's recyclables stream without bias towards any specific service area. The study took place over a 7-day period, and therefore does not account for any seasonal variations in recyclables material stream composition. R3 sorted and characterized 54 samples total, with each sample weighing at least 125 pounds.

Time and Location

R3 conducted the study over the 7-day period from April 2 to April 8, 2016. The Company provided R3's sorting crew with an isolated sorting area at the Company's corporation yard, which was used throughout the 7-day period.

Pre-Sort Meetings

Prior to beginning the field sort work, R3 met with City and Company's staff to review logistical issues. Specifically:

- Sort area safety, security and access;
- On-site emergency procedures;
- The location where loads will be tipped and samples sorted;
- The means for obtaining samples from each load;
- The means for disposing of the remaining portion of each load;
- The means for disposing/recycling sorted materials;
- Access to restrooms, drinking water, telephones (emergency only), etc.; and
- Hours of operation at the Company's designated sort location.

Sort Procedures

Pre-Sort Activities

Prior to sorting, R3 staff conducted the following activities:

- Reviewed safety protocol;
- Reviewed material types, material categories, and sort procedures with the sort crew;
- Swept the tip and sort area;

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Recyclables Characterization Study



Recyclables Characterization Study

- Set up the sort area;
- Set up the scale and data recording area(s); and
- Set tare weights for each of the containers (carts, buckets, and baskets) used for weighing the sorted materials.

Material Types

R3 sorted each sample into the following material categories. More detailed breakdowns of the characterized material types are included in Appendix G.

Approved Recyclables

- Paper
- Plastic
- Plastic Bags
- Aseptic Containers
- Polystyrene
- Glass
- Metal
- Textiles

Recyclable Contamination

- Organics
- Construction and Demolition (C&D) materials
- Tires
- Special and Other Wastes

Residual Materials

Residue

Sample Size and Selection

Prior to the week of on-site sorting work, R3 randomly selected sample loads using the Company's master route list and a random number generator in Microsoft Excel. The sampling method was stratified, randomized, and occurred in two-phases. First, routes were stratified by sector (residential vs. commercial) and collection day. In addition, Company's staff identified certain routes which were characteristically highly contaminated, and so these routes were separated into their own strata as well. Sample loads were then randomly selected from each stratum; this was the first sampling phase. The second sampling phase consisted of taking a sample of at least 125 pounds from a randomly selected section of each targeted load using random grid sampling that was pre-determined for each load. This design was used to ensure that the overall waste stream was most effectively represented by the selected samples, and that no bias occurred during the sample selection process.

Throughout the 7-day period following April 2nd, the Company captured and delivered the targeted loads to a tipping area just outside of the designated sorting area. From here, samples could be randomly selected from each load and transferred over to the sorting area. The tip

and sort areas were arranged in a manner that allowed for the sorting crew to use Company-provided debris boxes to place the sorted and weighed materials in, and that allowed for ongoing oversight and quality control.

Sorting Procedures

R3 staff sorted all materials in each sample into the material types and material categories specified above, and placed the sorted materials into designated containers for weighing. The net weight of each cart/bucket was recorded using a digital platform scale with 0.1 pound increments. During the course of the sort, some items required special handling. For example, beverage containers containing liquid were segregated from other similar beverage containers not containing liquid, and if cardboard boxes covered with plastic were found, R3 separated the cardboard box from the plastic and weighed each material separately.

After sorting, the materials weighted by the sorting crew were placed into debris boxes containers provided by the Company for recycling and disposal. Each day, upon completion of sort activities, R3 staff cleaned the sort area, stored all sort equipment, and notified Company staff that the daily field sort had been completed.

Post-Sort Analysis

To generate the data shown in our findings in Table 2 below, the material composition results for the individual sample loads within each sector were averaged for each day of the week, and then each collection day's average percentage composition was "weighted" by the total number of routes collected by the Company within the City for that day. For example, the average material composition for Monday commercial routes was given three times the weight of Sunday commercial routes because three commercial routes are collected each weekday, and only one commercial route is collected each weekend-day.

The results for each sector were then weighted by the total pounds collected per year to determine the "Combined" results for both residential and commercial sectors (i.e., greater weight was given to the residential sector as it represents a greater portion of the overall recyclables stream, an approximately a 2:1 ratio). Of the 54 total samples that were sorted and characterized over the course of the week, eight (8) of those samples were rejected during post-sort analysis, either because there was excessive shrinkage (i.e., weight loss) in the sample before and after sorting (possibly due to an error by the sorting crew during sorting and weighing) or because the load was mistakenly sent to the tipping area by the Company, and was not selected by R3 during its random sample selection.

An additional two targeted loads that were originally planned to be selected (both from the Company's "Route 12") were not characterized due to the fact that this collection route primarily collects from City parks, and typically contain high amounts of dog feces and therefore presented potential health concerns to the sorting crew. In addition, due to the highly contaminated nature of this route, the Company stated that this Route 12 recyclable material is actually delivered directly to the landfill rather than being processed through the Company's MRF. Therefore, material collected on this Route 12 is essentially not a part of the recyclable material stream that is processed through the Company's MRF facilities.

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Recyclables Characterization Study

Recyclables Characterization Study

10.2 Findings

Based on the loads sampled for this study, Table 2 below provides the material composition (by weight) for the commercial and residential sectors in the City. The material composition for both sectors combined is also shown.

TABLE 2
Detailed Recyclables Material Composition by Weight

Material Type	Residential Sector	Commercial Sector	Combined (Res. and Comm. Sectors)
Approved Recyclables			
Paper	53.0%	76.8%	60.8%
Plastic	10.2%	3.3%	7.9%
Plastic Bags	2.6%	1.9%	2.4%
Aseptic Containers	0.4%	<0.1%	0.3%
Polystyrene	0.3%	0.3%	0.3%
Glass	15.3%	3.6%	11.5%
Metal	3.8%	3.5%	3.7%
Textiles	1.9%	0.5%	1.4%
Subtotal	87.5%	90.0%	88.3%
Contamination & Residuals			
Organics	3.1%	5.9%	4.0%
C&D	1.7%	0.7%	1.4%
Tires	0.4%	0.9%	0.6%
Special and Other Wastes	1.5%	0.5%	1.2%
Residue	5.9%	1.9%	4.6%
Subtotal	12.5%	10.0%	11.7%
Total	100.0%	100.0%	100.0%

As shown in Table 2 above, we estimate that approved recyclable materials comprise approximately:

- 87.5 percent of the residential sector recyclables stream;
- 90.0 percent of the commercial sector recyclables stream; and
- 88.3 percent of the combined recyclables stream for both residential and commercial sectors.

Contamination and residual materials, on the other hand, comprise approximately:

- 12.5 percent of the residential sector recyclables stream;
- 10.0 percent of the commercial sector recyclables stream; and
- 11.7 percent of the combined recyclables stream for both residential and commercial sectors.

