



TO: Environmental Commission

FROM: Cresson S. Slotten, P.E., Public Services Area

DATE: January 22, 2019

SUBJECT: Responses to Environmental Commission Questions

PURPOSE: This memo provides responses to the written questions gathered from Environmental Commissioners after staff's status updates on various project and program efforts of the City in the Solid Waste Fund program area at the December 6, 2018 regular meeting of the Commission. Staff has organized the questions by theme/topic area.

GENERAL, CURRENT PROGRAMS/SERVICES RELATED

QUESTION: *Why hasn't the City recruited an experienced Solid Waste Manager as yet? What are the obstacles, since the funds have been available for some time?*

RESPONSE: The obstacle from undertaking this as yet is that there are desires/requests for two new positions in the solid waste programs area -- a focused solid waste enforcement position and this solid waste program manager -- and there is currently only one full-time equivalent (FTE) slot available in this area. In order to establish, fund and fill both of these requested positions/roles, an FTE position must be added to the City's budget through the City's budgeting process. It is anticipated that this additional FTE position will be included in the upcoming budget request to City Council this May. If approved by City Council, the process to hire a person to manage the solid waste program area, as well as a position focused on enforcement of the City's solid waste ordinances and regulations, can be undertaken.

Related to this, a new Public Works Supervisor joined the City on January 14, 2019 who has spent his career in the solid waste industry and will be supervising the City's collection crews.

QUESTION: *Why hasn't the City been able to ameliorate Downtown collection issues as a process of continual improvement?*

RESPONSE: The City continues to examine and work on process improvements on a case-by-case basis for individual alleys as they are raised by customers. From the broader, high-level perspective, the downtown collection services are being examined as a whole as part of the SWRMP, and to staff's understanding by the downtown merchant associations as they examine potential service models that

they may offer to the City. The SWRMP team is working on coordinating the efforts of the plan with the efforts of the merchant associations.

QUESTION: *Can the City construct a reasonable timeline, with intermediate milestone goals, to integrate regional planning, the completed APTIM report, RFP contract proposals, City Council decision making, Regional decision making, and contract execution? Several potential pathway options should be a feature of this planning process, and include thorough SWOT analyses of each pathway that can be presented to Council and Regional Partners.*

RESPONSE: See the attached pdf set of timelines. Regarding the potential pathways options, the planning process for the SWRMP is designed to explore the various options and support decision-making that is based on factual data and input from subject matter experts, interested parties, and the general public. While maybe not necessarily labeled SWOT analyses, the planning process integrates a variety of techniques throughout the course of the project that builds on information as it is received to help project participants gain an understanding about the strengths, weaknesses, opportunities, and threats for the options being considered. The report will reflect what is learned and discussed through this process.

FINANCIAL RELATED ITEMS

QUESTION: *Will the City share the spreadsheets used to capture costs and sensitivities with the Commission? For example, it was asserted that recycling will always cost the city more than landfilling. However, broad experience indicates otherwise. How “sensitive” is this determination to landfill fees and other cost structures?*

RESPONSE: Attached is the draft *Solid Waste Cost of Service Analysis* technical memorandum and its accompanying PowerPoint presentation that was provided and presented to the SWRMP Advisory Committee at its second meeting on January 15, 2019. The analysis provides a breakdown of costs by functional activity (e.g., recycling, organics, trash), and a further breakdown of collection and processing/disposal costs. Detail is provided on the cost factors that contribute to overall cost of services (e.g., labor, fuel, disposal, etc.) so that the sensitivity of total costs to specific cost factors may be assessed.

As an example, total disposal costs (including transfer, transport and landfill fees) represent approximately 16 percent of the total cost of residential trash service; landfill fees represent approximately 6 percent of the total cost of residential trash service, meaning that if landfill fees doubled (i.e., increased by 100 percent), the cost of residential trash service would increase by 6 percent.

QUESTION: *Can these spreadsheets be re-organized by activity, since this is how contracts are written?*

RESPONSE: Attached is the draft *Solid Waste Cost of Service Analysis* and its accompanying PowerPoint presentation that has been provided and presented to the SWRMP Advisory Committee at its second meeting on January 15, 2019. As requested, the analysis provides a breakdown of costs by functional activity (e.g., recycling, organics, and trash).

QUESTION: Does the City use an internal recharge system to allocate resources flexibly, for both capital and labor costs?

RESPONSE: Yes. City resources such as staff, equipment, and materials are charged to specific charge numbers (funding sources) for that activity.

QUESTION: Does the City have a financial modeling system that adequately supports decision making? The one year delay in getting “accurate” written numbers for the Solid Waste Fund doesn’t inspire confidence.

RESPONSE: A modeling process is utilized for financial planning and budgeting purposes. The budget is a planning document that utilizes: historical financial information; current fiscal year actual financial performance; as well as, information that is provided or known at the time of preparation. At this time, the City is in the process of creating a two-year (FY2020-FY2021) budget request, which is utilizing current contract assumptions and maintaining the use of full-time City employees for current services provided. However, reality can differ from planning due to unforeseen circumstances, changing regulations, market conditions, and contract environments. The budget request for FY2021 can/will be amended at the next opportunity (January, 2020) should different information become available.

MFR FACILITY RELATED

QUESTION: What is the current evaluation of the MRF? We have received several contradictory reports, and we’d appreciate a current assessment.

RESPONSE: The three most recent assessments (prepared by 3 different companies) have generally reached the same conclusion -- the MRF equipment requires substantial repairs and/or replacement. The most recent assessment provided to the City by Advanced Disposal this past summer indicates the following:

“To be able to determine the true condition of the system, an electrical contractor would be needed to re-energize the facility. Once the system has sufficient power supply, a mechanical service team capable of providing a report and quote to repair all deficiencies at the end of its evaluation process should be engaged to start the system. Power is necessary to determine the exact system condition and capabilities. This evaluation would also serve as the basis of understanding the costs associated with any mechanical and safety issues that need to be addressed...

The system will require adherence to a rigid preventative maintenance plan and schedule to achieve consistent run-time. Even if the overall mechanical evaluation is favorable; you should expect failure of integral parts in the short term based on their age and wear. We would further suggest a full time mechanic to help limit downtime with the understanding that the facility and equipment will also require regular contracted maintenance from a mechanical services contractor as well.”

QUESTION: Spending \$30,000 to turn on the MRF equipment in order to evaluate its condition seems like a small price in comparison to the guaranteed \$1.2M annual loss under the current arrangement. Why haven’t we done this?

RESPONSE: The disconnection of the MRF equipment was done at the direction of the City’s Safety Unit as a safety precaution, and the City administration has determined that this work will not be

undertaken. If this work were to be undertaken to reconnect the equipment, there would still be additional costs to this initial expense including the cost of any repairs that would be identified after the equipment would be reconnected, such as to correct/replace guarding and other safety components that are no longer in place, and the maintenance and upkeep of the equipment as noted above by Advanced Disposal.

QUESTION: *The MRF was audited in Summer 2015 and declared to be in good shape, then it was shut down after equipment failures in June-July 2016: How could the MRF capital equipment collapse in one month? Was there adequate monitoring by City staff of this \$7-10M asset? Why weren't any Solid Waste Funds spent to repair it and allow an "emergency" to continue for years?*

RESPONSE: CP Manufacturing (CP) completed an audit of the MRF equipment in July, 2015. CP did not provide an overall rating of the facility as a whole; rather it provided a rating of each component of the pieces of equipment and noted them as either "Good Condition," "Needs Repair," or "N/A." CP provided an itemized list of components that would need to be purchased and installed by the City's contractor, ReCommunity. A likely major factor in the degradation of the equipment between this audit and the termination of the contract with ReCommunity and the shutdown of operations of the equipment at the MRF, was the volume of material that the contractor was pushing through the system. In calendar year 2013, a total of 43,668 tons of inbound material was brought to the facility; in 2014 the total was 61,915 tons (a 41.8% increase); and, in 2015 the total was 76,803 tons (a 24.1% increase from 2014, and a 75.9% increase over 2013). In order to process this volume of material additional shifts were added for processing resulting in reductions in maintenance and repairs of the equipment.

With regards to monitoring of the facility, beginning in 2009 through July 2016, City staff conducted regular/monthly inspections with reports noting the deterioration of the equipment and facility and the lack of repairs/maintenance by the contractor. The contractor did not consistently remedy the items noted for repair in the monthly reports, and was ultimately deemed improper stewards of the facility and its operations. It was the contractor's contractual responsibility to maintain and repair the facility, and not an obligation of the City. The City ultimately terminated the contract with the contractor. Additional audits were completed by the City Safety Unit in October, 2016; by Waste Management in November 9, 2016 with a follow-up letter February 12, 2017; by CP Manufacturing in February, 2017; and, by Advanced Disposal in July, 2018.

CURRENT MRF OPERATIONS/RECYCLING PROCESSING

QUESTION: *A point that came up after the meeting in your updates is that the comparison of processing costs per ton failed to take into account WM's \$75k per month fee. That's a material difference that should be accounted for; indeed, if it can't be translated into a(n approximate) cost per ton, it may void the comparison on that basis void; simply stating / footnoting that there was a monthly fee could still result in the comparison being misleading.*

RESPONSE: The \$75,000 per month charge under the Waste Management contract was the cost for operation of the waste transfer station, and was not related to the MRF recyclables. That contract included operation of both the MRF and the Transfer Station, as was the case with the original contract with RRS/ReCommunity. Beginning in July, 2017 operation of the Transfer Station was separated into a different contract awarded to Advanced Disposal. This cost was charged to the solid waste (trash) cost area so it shouldn't be included in the discussion on recycling costs.

QUESTION: Another point that came up after the meeting in your updates is the fact that the City has in its last two contracts with WM and RAA in effect agreed to accept essentially all of the risk associated with the revenue from recovered recycled material sales and the underlying commodity market volatility. It's my understanding - including from the EC's Recycling 101 session - that MRF operators and municipalities typically share the risks and rewards of sales. If I'm correct, your update should address this difference in approach well as how it intends to handle the revenue in the RFP and the City's associated logic.

RESPONSE: The City has always shared commodity risk with the operator of the MRF, going back to the initial contract when the MRF was constructed. This is not a recent development with the WM and RAA contracts. The specific terms of the contract (for example, the threshold average commodity price used as a trigger for revenue share) have varied from contract to contract.

If the municipality is looking to gain more market share, then the operator will look for the municipality to share in the risk, such as the City did with ReCommunity where the City gained revenue share for both City and third party tonnage, but did run the risk of negative values where instead of a credit/payment from the contractor to the municipality, a payment is due from the City to the operator, which was experienced in FY16 as described at the meeting by the bar chart graphic in the PowerPoint presentation. But if the municipality is not looking to take much risk, e.g., a "zero floor" approach where if revenue goes negative for the operator the municipality doesn't have to pay the operator, then the operator is not going to give as high a percentage of the revenue share to the municipality. Zero floor contracts are likely difficult to obtain today given recent commodity market conditions. Kelly Rooney's discussion at the *Recycling 101* session noted that operators are fine with either approach ... High Reward/High Risk or Low Reward/Low Risk for the municipality... but not the mix of High Reward/Low Risk for the municipality.

QUESTION: What options have been considered to reduce costs of shipping loose recycling to Rumpke in Cincinnati?

RESPONSE: The City initially issued the RFP for the Interim MRF Operations contract and presented two different contracts to City Council for their consideration: Waste Management for baled recyclables transported to Akron, OH (lower cost) and Recycle Ann Arbor for loose loading recyclables to Cincinnati, Oh (higher cost). City Council chose to award the loose loading contact with Recycle Ann Arbor. For the City to be able to potentially realize reduced costs, a new RFP would need to be issued to receive and review proposals submitted by competing contractors for pricing differences.

RECYCLING PROCESSING MOVING FORWARD

QUESTION: In reference to the "sweet spot" for volume of recyclables handled, you said that the city generates roughly half the ideal. I realize the size of the "sweet spot" is somewhat flexible, but: If we move forward with an eight-community authority, as population grows, service grows (e.g. in downtown Ann Arbor), and ideally participation rate grows over time as well, is there a risk of the volume from the eight communities becoming larger than the "sweet spot"? If yes, what happens then?

RESPONSE: The "sweet spot" represents a lower bound estimate of the tonnage required to make a processing facility economically feasible. If the hypothetical scenario posed in the question were to occur, the Authority and its service provider would determine how to manage this volume. Theoretical options may be include expanding capacity by adding a second operating shift/overtime depending on the volumes, replacing/upgrading equipment, physical expansion of the facility and processing line, and transporting a portion of the increased material to another facility for processing. According to the 2017

Washtenaw County Solid Waste Management Plan, the City accounts for approximately 50 percent of the total residential recycling in the County.

QUESTION: *If the city alone (at today's volume) gets us roughly halfway to the "sweet spot," do you know where the city plus U-M's current volume would get us?*

RESPONSE: The anticipated U-M tonnage would be approximately 2750 tons, about 18% of the City's 14,909 tons in calendar year 2018.

SOLID WASTE RESOURCES MANAGEMENT PLAN (SWRMP)

QUESTION: *Will the solid waste advisory committee be empowered to make recommendations to staff or to City Council?*

RESPONSE: The Advisory Committee is an advisory group empowered to review, comment and advise the SWRMP team in its development of the SWRMP for consideration by the Environmental Commission, which is an advisory body to City Council.

QUESTION: *How independent are the APTIM consultants from City Staff's opinion? Given the recent history of poor solid waste management, we feel it is critical that APTIM consultants are given the support and the latitude to reach their own decisions, and we would like to know if they do so.*

RESPONSE: The City has contracted with APTIM to provide an outside, expert and independent perspective on the City's solid waste program area. The scope of work for the Solid Waste Resources Management Plan includes an extensive public outreach program to secure the input of a broad range of stakeholders in the Ann Arbor community.

QUESTION: *Can the City cancel APTIM's planned resident survey and use the associated funds / resources in a more constructive way? What would the options be?*

RESPONSE: The resident survey is a specific task in the contract scope that was approved by City Council and will be performed. Community engagement is a fundamental value of the City of Ann Arbor, and is one of the priorities identified by the City Council during their recent January work session. In addition, ensuring equity in our engagement efforts and inclusiveness across all members of the community is a key goal for the City. The scientifically valid resident survey will provide the opportunity for residents across the representative groups of the community to provide their perspective and input on this project. In particular for the SWRMP, the survey will: identify awareness of and utilization of the City's existing solid waste programs and services; likelihood of residents to participate in potential programs; identify what services residents desire and how much they are willing to pay for them; identify educational needs and methods for residents; and fulfill the City and City Council's goal for robust and inclusive community engagement.

RFP/PROCUREMENT FOR EXPIRING CONTRACTS

QUESTION: *We are troubled that the RFP process for commercial trash collection, recycling collection, and recycling processing appears to be moving forward separately from the planning process. If the city has hired a consultant for SWRMP, why isn't the city waiting to be guided by it? Why not opt to extend the contracts instead?*

RESPONSE: Please see the attached memo dated December 24, 2018 from City Administrator Howard Lazarus to City Council regarding the delay of this RFP process.

QUESTION: *How is the City constructing the RFP proposals that were to be issued this month? What is their intent? All that was mentioned at the December meeting was to collect costing data, which is problematic. Can't APTIM, as solid waste consultants, provide such information?*

RESPONSE: Please see the attached memo dated December 24, 2018 from City Administrator Howard Lazarus to City Council regarding the delay of this RFP process.

QUESTION: *How will the City address faults in the generic RFP process related to the weighting of criteria and weighted scores so that problems with past SW contract awards are not repeated?*

RESPONSE: The City's RFP process is a flexible process that allows for variations and adjustments to the evaluation criteria, scoring and weighting. Each RFP is specifically tailored to specify the services being procured; certain City requirements (such as the Living Wage Ordinance) are common to all RFPs, but individual RFPs are not "generic." If desired, discussion regarding the RFP evaluation criteria can occur as the RFP Document is developed.

QUESTION: *Is the City willing to solicit input on the structure and wording of the RFP so that it can be ensured that vendor submissions can be evaluated in light of possible changes to SW activities which arise as a result of the ongoing SWRMP update process?*

RESPONSE: The scope of work for the RFP will be developed based on the recommendations of the SWRMP.

QUESTION: *Will the RFP include the provision of the land on which the MRF sits as an opportunity for a bidder to construct a new MRF that is large enough to serve the potential regional partnership?*

RESPONSE: The RFP will include background and context information for bidders to be aware of the service needs of the City as well as the status of the regional authority. It is anticipated that the RFP will invite, though not require, bidders to include proposals for re-use/investment in the City's MRF facility as part of their submission.

QUESTION: *Will you consider structuring the RFP so that quotes are broken down by service? This would give the city the flexibility to bundle services as a whole, in multiple groups, or keep them separate if there are advantages for doing so. If this isn't something you're considering, can you please explain why?*

RESPONSE: The scope of work for the RFP will be developed based on the recommendations of the SWRMP. Depending on the final scope of work, it is possible that price proposals would be requested "per service" in addition to on a bundled basis. As an example, in the recent RFP to procure an operator for the City's transfer station, the City requested vendors to provide separate pricing for: a) transfer station operations; b) transport; and, c) landfill disposal. The City structured the RFP this way in order to understand the components impacting total disposal costs.

QUESTION: *The decision analysis evaluation of quotes and the associated criteria and weights should reflect the city's values. That means things that are in the Sustainability Framework like local economic development (i.e. local job creation) should also be weighted, not just things like cost or experience / expertise. Would you consider this in the RFP?*

RESPONSE: The City's RFP process is a flexible process that allows for variations and adjustments to the evaluation criteria, scoring and weighting. If desired, discussion regarding the RFP evaluation criteria can occur as the RFP Document is developed.

QUESTION: *In the RFP, will you consider working with SW experts like APTIM (and potentially members of the Advisory Committee) to attempt to structure the RFP so that improved non-financial outcomes, like diversion rates and waste to landfill, can be quoted and evaluated.*

RESPONSE: The City worked with APTIM to procure two recent contracts: a) compost facility operations; and, b) transfer station operations and disposal services. Historically, the City has engaged other SW experts to assist with its procurement efforts.

The compost facility RFP (and the resultant new contract) were developed with the goal of providing flexibility to expand the City's organics diversion program. For instance, the new contract provides a tip fee for green waste and a tip fee for food waste; the prior contract did not have a specified tip fee for food waste. Thus, the new contract will provide greater flexibility for potential expansions to the City's organics management program.

Even the transfer and disposal services RFP was designed to facilitate increased recycling/diversion in the future. Unlike many transfer and disposal contracts used by other communities, the City's agreement does not require the City to deliver a minimum amount of waste for disposal in order to secure the lower disposal pricing. The new transfer/disposal agreement therefore provides two benefits to the City's residents and businesses: 1) guaranteed low pricing; and, 2) flexibility to increase waste diversion.

The City provides a comprehensive range of services to residents and businesses. Each RFP is crafted to provide the necessary service without detracting from services provided through other contracts or limiting the future flexibility of the City. City staff must work within the policy framework established by the City Council. The primary goals of the consolidated hauling RFP, as staff initially contemplated, were to streamline the number of contracts employed, enhance efficiency, and provide maximum flexibility to incorporate future diversion initiatives. The resolution adopted by the City Council in May, 2018 (R-18-194) established boundaries that will affect how future RFPs and contracts for solid waste services are provided.

QUESTION: *What is the scope of these RFPs? Are they just for Downtown businesses/DDA or also residential and/or commercial outside of the DDA's authority?*

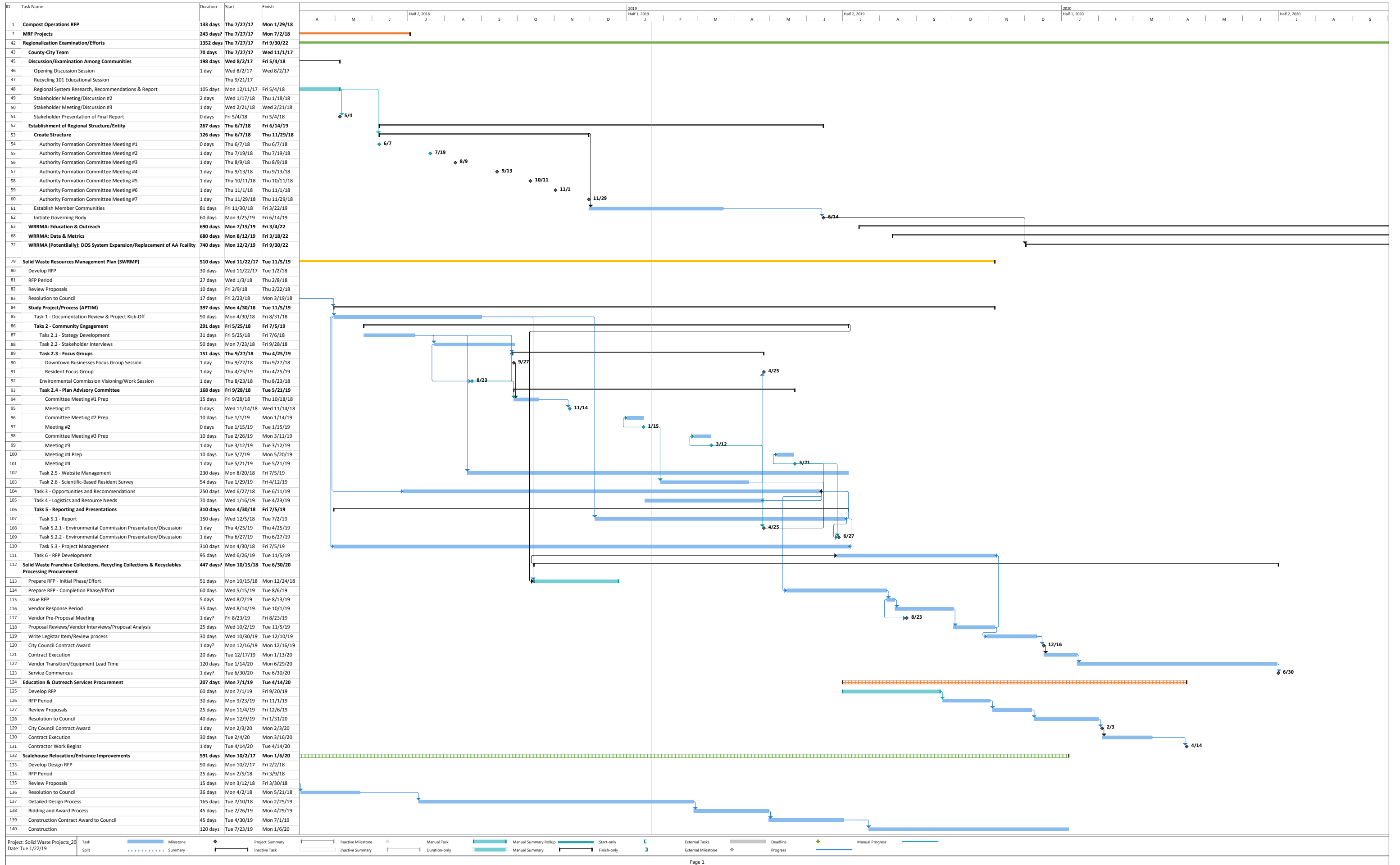
RESPONSE: The scope of the RFP(s) will be for processing of recyclables and collection services that are not performed by City crews. The City currently provides collection services in the downtown through both contractor and City crews; however, the downtown businesses and property owners are considering development of a service model where the downtown businesses and property owners are responsible for providing these services rather than the City. If this service model is completed and approved, then collection services for the downtown businesses would not be included in the RFP.

QUESTION: *Another way to bundle the RFPs is adding incremental cost/benefit analyses for expanded scopes, such as organics downtown first, then residential, then adding other commercial. Will you consider this?*

RESPONSE: It is intended that the RFP would request separate pricing for residential and commercial customers, and conceivably could entail a phased implementation schedule.

QUESTION: *UM Ford School students recommended approximately a year ago that A2 implement pay-as-you-throw for trash. There could be other collection alternatives, e.g. different container sizes resulting in different service fees. If the SWRMP Update arrives at the conclusion that the collection model should be different than the current one, will the RFP enable this?*

RESPONSE: Yes. Typically, the RFP would request pricing both on current collection methods as well as the alternative collection methods, to provide staff and the City Council with complete pricing information on the different service alternatives.



SECTION 1 PURPOSE

This report summarizes the costs of the various solid waste services provided by the City of Ann Arbor (City) and its contractors. The City tracks and reports its costs for solid waste operations based on standard accounting practices employed for all departments and activities citywide. The City's FY2018 costs were reviewed to evaluate the City's costs to provide solid waste services through each of the functional operations performed. Functional operations include:

- Residential solid waste collection and disposal
- Residential compost collection and composting
- Commingled cart recycling collection
- Commercial commingled recycling collection
- Recycling processing
- Commercial solid waste collection and disposal
- City event-related, City parks, and downtown street-side container solid waste services
- Former landfill maintenance and compliance activities

Costs were compiled by function after a thorough review of the City's cost accounts and activities. In addition, indirect administrative costs were allocated to the different functions. The resulting analysis provides a detailed accounting of costs by function in total (i.e., annual cost) and on a unit cost basis (e.g., cost per household per month, cost per ton). Presenting the costs in this manner is standard within the solid waste industry and enables comparison of the City's costs for its current programs to other communities. It will also enable options included in the Solid Waste Resources Management Plan to be evaluated for cost impacts at the customer level.

The remainder of this report provides further detail on the methodology employed and the City's costs of current solid waste services, consisting of the following sections:

- Section 2 - Overview of Services
- Section 3 - Resource Management Program Area Costs
- Section 4 - Residential Cost of Service
- Section 5 - Recyclable Material Processing Cost of Service
- Section 6 - Commercial Collection Cost of Service
- Section 7 - Program Area Revenue
- Section 8 - Conclusion

SECTION 2 OVERVIEW OF SERVICES

The City provides comprehensive resource management services to the residents and businesses of the City. Services include collection and disposal of trash; collection and processing of recyclables; and collection and composting of organic materials.

The City’s resource management services are provided by a combination of City crews and contracted services, as summarized in Table 1. Residential collection in Table 1 refers to single-family residences and properties of 1 or 2 units. Commercial collection includes multi-family residences of 3 or more units in addition to businesses and institutions.

TABLE 1. ANN ARBOR SOLID WASTE AND RECYCLING PROGRAM SERVICE PROVIDERS

Service	City Crews	Contracted Service
Trash		
Residential Collection	32, 64 and 96-gallon carts	
Commercial Collection	32, 64 and 96-gallon carts and property-owned dumpsters	Contracted dumpsters (Waste Management)
Disposal		Advanced Disposal Services
Recycling		
Residential Collection		32, 64 and 96-gallon carts (Recycle Ann Arbor)
Commercial Collection	64 and 96-gallon carts in the downtown and dumpsters	64 and 96-gallon carts outside the downtown and 300-gallon totes (Recycle Ann Arbor)
Processing		Recycle Ann Arbor
Compost		
Residential Collection	Yard waste bags, or 64 and 96-gallon carts	
Commercial Collection	Not currently offered	
Composting		WeCare Denali
Education and Outreach		
Programs and Services	Printed materials and website	School programs, recycling workshops (Ecology Center)

SECTION 3

RESOURCE MANAGEMENT PROGRAM AREA COSTS

The City's resource management program falls under the Public Works Unit of the City's Public Services Area. To assess the costs of service for the resource management program, actual expenses for FY2018 (July 1, 2017 to June 30, 2018) have been reviewed. The City contracts for a number of services in its solid waste operations, and FY2018 represents the first year of new contracts for waste transfer and disposal as well as for recycling processing. The new contracts are materially different in scope than the prior contracts, resulting in prior years' costs not being representative of current and going-forward costs.

The City's accounting structure tracks expenses by activity; however, some activities do not always align directly with the functional areas being considered for this analysis. For example, management and administrative operations for the program area are classified as discrete activities but support numerous functional areas. Revenues and expenses are reported as approximately 750 individual cost items categorized to more than 100 account types. Therefore, expenses have been allocated where appropriate to match the functional services (i.e., residential and commercial costs for trash, recycling, and compost collection and processing/disposal) being provided.

Based on the expenses for each functional service, the cost of service for an individual customer (resident or business) for each type of service provided is calculated. The cost of service is useful for assessing current funding methods, future funding options, and the costs of program changes or expansions. The remainder of this report identifies current expenses and calculates unit costs of service for the City's resource management program in FY2018.

FY2018 Expenses

For cost of service studies, expenses are broadly classified to the following categories:

- Operations expenses - These are direct expenses that are recognized and assigned to specific functions within the resource management area based on their activity type. Operations expenses include collection, transfer, disposal, material processing (recyclables and compost), container delivery, and other recurring activities. Operations expenses include costs of services provided by City employees as well as contracted services.
- Administration expenses - These are indirect or allocated expenses that are either shared, provide support to numerous activities, or can't be directly assigned to specific activities. Administration expenses include management, customer service, education and outreach, planning, and internal municipal services costs.
- Capital expenses - These include asset development or purchases that are in-progress. Capital expenses are typically recognized as depreciation, distributing the cost over the useful life of the asset. Capital expenses are typically direct expenses but in some cases are indirect (e.g., fleet maintenance facility) and must be allocated.

Table 2 summarizes the City's direct expenses by function in FY2018 and the total indirect expenses of the Program Area.

TABLE 2. RESOURCE MANAGEMENT PROGRAM EXPENSES FOR FY 2018

Function	Amount
Direct Expense	
Residential Waste Collection	\$1,546,972
Residential Recycling Collection ¹	\$2,829,604
Residential Compost Collection	\$1,001,257
Commercial Waste Collection	\$2,243,280
Commercial Recycling Collection	\$666,061
Waste Disposal	\$1,370,902
Recycling Processing	\$3,180,903
Composting	\$172,137
Special Events / Downtown Street-Side Container Collection	\$302,450
Closed Landfill Post-Closure Care and Maintenance	\$377,988
Indirect Expense	
Route Operations / Cart and Container Delivery	\$419,829
Management & Planning	\$646,910
Program Administrative and Municipal Services Costs Allocation	\$1,042,712
Customer Service	\$266,050
Education & Outreach	\$90,837
Total Expenses per City Budget Performance Report	\$16,157,890
Financial Adjustments ²	\$2,394,035
Total Expenses Impacting Fund Balance	\$18,551,925

Notes:

1. Residential Recycling Collection is cart-based recycling collection performed under contract by Recycle Ann Arbor, which includes a small amount of commercial recycling collection.
2. Financial adjustments include GASB pension liability, OPEB (retiree benefits), and capital assets, which were not included in the FY2018 expenses utilized going forward in this cost of service analysis because they are not directly tied to current solid waste operations. However, these adjustments do impact the Fund balance and therefore must be considered when assessing long-term Fund sustainability and are therefore reflected here as expenses impacting the Fund balance.
3. Subtotals may not sum exactly to totals due to rounding.

Cost Allocations

Indirect expenses are not tied exclusively to individual functions. Therefore, in order to assess costs of services, indirect expenses must be allocated to the various functions. The City's operational data and service parameters were utilized to determine the allocation of indirect expenses to each function. Allocations were made utilizing data including:

- City staffing levels and collection labor hours

- Customer counts by sector (residential, multi-family, commercial)
- Collection route data including number of routes, collection frequency, collected containers, containers on-site, container volumes
- Collection truck data including fuel consumption, repair costs, depreciation, and replacement costs reported by the City's Fleet and Facilities Unit
- Collected material tons and disposed or processed tons
- Contractor invoices from Recycle Ann Arbor, Waste Management, WeCare Denali, and Advanced Disposal to obtain tonnage data and collection parameters

Utilizing these data sources, indirect expenses were allocated as follows:

- Route Operations expenses are the costs for the collection supervisors assigned to the work area. Therefore, these costs are allocated to the various collection functions proportional to the City employee labor hours expended providing services in the function. In addition, the Solid Waste Fund's Wheeler Service Center debt payment allocation is also included here.
- Program Administrative and Municipal Services Costs Allocation expenses are allocated to each function proportional to the tonnage managed through the function because the tonnage associated with each of the services provided by the City is commensurate with the level of effort expended by the City to provide the service.
- Customer Service expenses are allocated to each collection function proportional to the customer counts for each function.
- Outreach expenses are assigned entirely to residential recycling collection, as these expenses are tied directly to outreach to the City's residential recycling customers.

Table 3 on the following page identifies costs by functional service by expense type, including allocated indirect expenses as described above. Total costs from Table 3 are utilized in the subsequent sections of this report to calculate the unit costs of the services provided by the City.

TABLE 3. SUMMARY COSTS BY FUNCTION

Expense Type	Residential Waste	Cart Recycling	Compost	Commercial Waste	Commercial Recycling	Recycling Processing	City Events	Closed Landfill	Total
Direct Expense									
Labor	\$794,470	\$5,263	\$377,142	\$365,868	\$298,189	\$99,306	\$141,690	\$7,651	\$2,089,578
Operations	\$80	\$76,832	\$958	\$1,426	\$19,411	\$14,677	\$1,400	\$168,647	\$283,432
Depreciation	\$294,975	\$387,456	\$97,120	\$101,965	\$80,052	\$624,669	\$27,960	\$6,135	\$1,620,331
Vehicle Rental	\$8,153	\$355	\$415,239	\$546	\$61,240	\$2,849	\$39,969		\$528,350
Truck R&M	\$342,471	\$517,662	\$50,248	\$145,442	\$93,038	\$8,210	\$42,654	\$5,248	\$1,204,973
Fuel	\$106,474	\$98,110	\$60,550	\$37,463	\$21,191	\$593	\$3,397	\$370	\$328,149
Equipment	\$79	\$7,237		\$4,193	\$10,629	\$4,404	\$7,217		\$33,759
Utility	\$270			\$697		\$23,129		\$189,937	\$214,033
Contracted Collections		\$1,736,689 ¹		\$1,585,679	\$82,311		\$38,163		\$3,442,843
Disposal/ Processing	\$388,115		\$172,137	\$979,516		\$2,403,065	\$3,270		\$3,946,105
<i>Direct Subtotal</i>	<i>\$1,935,087</i>	<i>\$2,829,604</i>	<i>\$1,173,394</i>	<i>\$3,222,796</i>	<i>\$666,061</i>	<i>\$3,180,903</i>	<i>\$305,721</i>	<i>\$377,988</i>	<i>\$13,691,552</i>
Allocated Expense									
Route Operations	\$135,876		\$105,985	\$68,679	\$66,844	\$17,093	\$25,352		\$419,829
Mgmt. & Planning	\$108,063	\$90,254	\$65,373	\$272,726	\$9,665	\$99,919	\$911		\$646,910
Prog Admin & MSC	\$174,179	\$145,474	\$105,371	\$439,589	\$15,578	\$161,052	\$1,468		\$1,042,712
Customer Service	\$81,527	\$81,527	\$81,527	\$10,735	\$10,735				\$266,050
Outreach		\$90,837							\$90,837
<i>Allocated Subtotal</i>	<i>\$499,645</i>	<i>\$408,091</i>	<i>\$358,256</i>	<i>\$791,730</i>	<i>\$102,822</i>	<i>\$278,063</i>	<i>\$27,731</i>		<i>\$2,466,337</i>
Total Expense	\$2,434,732	\$3,237,695	\$1,531,650	\$4,014,526	\$768,882	\$3,458,966²	\$333,451	\$377,988	\$16,157,889

Notes:

1. Contracted commingled cart collection is provided to single-family and multi-family residents and businesses. Approximately 9% of the customers are businesses.
2. Processing costs do not include the material value received for the recyclables, which is recognized by the City as a revenue and varies based on commodity markets. In FY2018, material value credits resulted in an offset of \$794,254 of the processing cost.
3. Subtotals may not sum exactly to totals due to rounding.

SECTION 4 RESIDENTIAL COST OF SERVICE

Residential Service Cost Overview

Residential service is the weekly collection of waste, recycling, and compost from single-family (1 and 2 unit) homes. Standard service¹ includes a 64-gallon cart for trash, a 64-gallon cart for recycling, and compost collection in either bags or a 96-gallon cart. Approximately 90% of Ann Arbor residents have one 64-gallon cart for waste, with the remainder either having a 32 or 96-gallon cart or multiple carts.

Table 4 summarizes the cost of residential service for a resident with a 64-gallon cart for waste, a 64-gallon cart for recycling, and a 96-gallon cart for compost. Table 4 also includes the cost for collection and disposal of waste from City events, downtown street-side containers, and bulky waste. In communities where residential collection service is provided under contract by a private hauler, these collection costs are often embedded in the residential monthly rate. Therefore, for purposes of comparison to other communities, these costs are included here, with the FY2018 cost distributed over the City’s 26,247 residential units.

TABLE 4. RESIDENTIAL WASTE, RECYCLING, AND COMPOST COST OF SERVICE PER HOUSEHOLD	
Service	Monthly Cost per HH
Residential Waste Collection and Disposal	\$7.67
Residential Compost Collection and Composting	\$4.83
Commingled Cart Recycling Collection and Processing	\$15.54
City Events / Downtown Street-side Cans / Bulky Waste	\$1.06
Total Cost of Service	\$29.09
Annual Cost (Total Cost x 12 months)	\$349.09

The subsequent tables provide a more detailed cost analysis to identify the component costs of each service: waste collection, compost, and recycling. Component costs include labor, fuel, truck repair and maintenance, truck capital, post-collection activities (disposal, composting, or processing), and allocated administrative costs.

Residential Waste Collection and Disposal

Table 5 provides a detailed breakdown of costs for residential waste collection and disposal by cost component. Additional detail is provided in the notes to Table 5, including the calculations completed

¹ Residents may opt for 32-gallon or 96-gallon cart sizes for trash and recycling, or 64-gallon cart for compost.

to derive the monthly cost per household contributed by each cost component. The notes correspond to the letters identified in the first column of Table 5.

TABLE 5. RESIDENTIAL WASTE COLLECTION AND DISPOSAL COST OF SERVICE				
Note	Cost Component	Count / Unit Cost	Unit	Cost / Household / Month
Route Parameters				
A	Residential Customers	26,247	customers	
	Truck Route Hours (Total)	12,789	hours	
	Weekly Routes	6	routes	
	Truck Route Hours per Route	2,132	hours	
	Customer Pick-Ups per Hour	107	customers per hour	
Labor Cost				
B	Labor Cost per Hour	\$31.70	per hour	
	Benefit %	96.1%	% of labor cost	
	Total Labor Cost	\$62.17	per hour	\$2.52
Fuel Cost				
C	Average Fuel Consumption	6,116	gallons	
	Fuel Cost (\$ per gallon)	\$2.93	\$ per gallon	
	Annual Fuel Cost	\$17,916	per year	
	Per Route Hour Cost	\$8.41	per hour	\$0.34
Truck Repair and Maintenance Cost				
D	Truck Repair and Maintenance Cost	\$342,471	per year	
	Per Route Hour Cost	\$26.78	per hour	\$1.08
Disposal Cost				
E	Residential Waste Tons	15,017	tons per year	
	Monthly Set Out Weight	95.36	lbs / hh / month	
	Disposal Cost per Ton	\$25.45	per ton	
	Monthly Disposal Cost	\$1.21	per hh / month	\$1.21
Truck Cost				
F	2014 Mack LEU613 (Typical)	\$278,443	per truck	
	Replacement Cost (+3% per year)	\$342,450	per truck	
	Annual Cost (7 year life)	\$48,921	per truck per year	
	Truck Cost Per Route Hour	\$22.95	per hour	\$0.93
Direct Cost, Residential Solid Waste				\$6.08
Allocated Administrative Costs				
G	Supervisor / Ops Cost	\$135,876	per year	\$0.43
	Mgmt. & Planning	\$108,063	per year	\$0.34
	Administrative & Municipal Services	\$174,179	per year	\$0.55
	Customer Service	\$81,527	per year	\$0.26
Allocated Administrative Cost, Residential Solid Waste				\$1.59
Total Residential Solid Waste Cost				\$7.67

TABLE 5. RESIDENTIAL WASTE COLLECTION AND DISPOSAL COST OF SERVICE

Notes to Table 5 (subtotals may not sum exactly to totals due to rounding):

A	Total labor hours were provided by the City. On-route hours, or truck hours, were assumed to be 95% of labor hours. The remaining 5% of labor hours are considered to be non-productive time for activities such as pre- and post-trip inspections. Based on the labor hours worked, the average automated side load collection truck is on-route 2,132 hours annually. Productivity averages 107 customers per hour. When compared to other municipal collection operations from prior cost of service studies, the City has a reasonable level of productivity.
B	The City's full labor cost is based on an average hourly labor cost of \$31.70 plus 96.1% for tax and benefit costs. Dividing the labor cost per hour by the customers per hour yields the labor cost per customer per week, which is converted to a monthly cost by multiplying by the average number of weeks per month. Full labor cost = \$62.17 per hour = \$31.70 x (1+.961) Monthly cost = \$2.52/hh/month = (\$62.17 per hour / 107 customers per hour) x 4.33 weeks/month
C	The average fuel cost per truck was \$17,916 in FY2018. Monthly cost = \$0.34/hh/month = (\$17,916 per truck / 2,132 route hours per truck) / 107 customers per hour x 4.33 weeks/month
D	The total cost for truck repair and maintenance was \$342,471 in FY2018. Monthly cost = \$1.08/hh/month = (\$342,471 / 12,789 total truck hours) / 107 customers per hour x 4.33 weeks/month
E	Waste collected from the residential routes was 15,017 tons in FY2018. The disposal cost was \$25.45 per ton. Avg. monthly set-out per customer = 95.36 pounds = (15,017 tons x 2,000 pounds/ton / 12 months) / 26,247 customers Monthly disposal cost = \$1.21/hh/month = (95.36 pounds / 2,000 pounds/ton) x \$25.45/ton
F	The current automated collection truck replacement cost is \$342,450. Using the City's method for truck replacement, the annual truck cost is the cost of the truck purchased, plus a 7-year 3% annual compounding cost, divided over the 7-year life of the collection truck. Annual truck cost = \$48,921 per year = (\$342,450 replacement cost / 7 year life) Monthly truck cost = \$0.93/hh/month = (\$48,921 / 2,132 route hours/week) / 107 customers/hour x 4.33 weeks/month
G	Allocated administrative costs for route supervisor operations, management and planning, administrative and internal municipal services, and customer service total \$499,645. Monthly administrative cost = \$1.59/hh/month = (\$499,645 per year / 26,247 customers) / 12 months/year.

Residential Compost Collection and Composting

Compost collection and composting costs were calculated utilizing the same method as residential waste collection costs. Compost service varies slightly in that direct costs of collection (labor, fuel, repair and maintenance, composting) are only incurred during 9 months of the year, while fixed costs (truck costs including seasonal truck rental, facility depreciation, and administrative costs) are incurred over the entire 12-month year. Costs are therefore calculated and denoted as either 9-month or 12-month costs in Table 6.

Table 6 provides a detailed breakdown of costs for residential compost collection and composting by cost component. Additional detail is provided in the notes to Table 6, including the calculations completed to derive the monthly cost per household contributed by each cost component. The notes correspond to the letters identified in the first column of Table 6.

TABLE 6. RESIDENTIAL COMPOST COLLECTION AND COMPOSTING COST OF SERVICE

Note	Cost Component	Count / Unit Cost	Unit	Cost / Household / Month
Route Parameters				
A	Residential Customers	26,247	customers	
	Truck Route Hours (Total)	9,431	hours	
	Weekly Routes	4	routes	
	Truck Route Hours per Route	2,358	hours	
	Customer Pick Ups per Hour	103	customers per hour	
Labor Cost				
B	Labor Cost per Hour	\$29.55	per hour	
	Benefit %	28.0%	% of labor cost	
	Total Labor Cost	\$37.82	per hour	\$1.59 (9 months)
Fuel Cost				
C	Average Fuel Consumption	4,926	gallons	
	Fuel Cost (\$ per gallon)	\$2.93	\$ per gallon	
	Annual Fuel Cost	\$14,430	per year	
	Per Route Hour Cost	\$6.12	per hour	\$0.26 (9 months)
Truck Repair and Maintenance Cost				
D	Truck Repair and Maintenance Cost	\$50,248	per route per year	
	Per Route Hour Cost	\$5.33	per hour	\$0.22 (9 months)
Compost Cost				
E	Residential Compost Tons	9,085	tons per year	
	Monthly Set Out Weight	76.92	lbs / hh / month	
	Compost Cost per Ton	\$18.95	per ton	
	Monthly Compost Cost	\$0.73	per hh / month	\$0.73 (9 months)
Truck Cost				
F	2010 Mack w/Labrie Packer (Typical)	\$265,672	per truck	
	Replacement Cost (+3% per year)	\$326,743	per truck	
	Annual Cost (7 year life)	\$46,678	per truck per year	
	Truck Cost Per Route Hour	\$19.80	per hour	\$0.83 (12 months)
Seasonal Truck Rental Cost				
G	Truck Rental	\$141,011	per year	\$0.45 (12 months)
Facility Depreciation				
H	Compost Facility Depreciation	\$97,120	per year	\$0.31 (12 months)
Direct Cost, Residential Compost				\$3.72 (12 months)
Allocated Administrative Costs				
I	Supervisor / Ops Cost	\$105,985	per year	\$0.34 (12 months)
	Mgmt. & Planning	\$65,373	per year	\$0.21 (12 months)
	Administrative & Municipal Services	\$105,371	per year	\$0.34 (12 months)
	Customer Service	\$81,527	per year	\$0.26 (12 months)
Allocated Administrative Cost, Residential Compost				\$1.14 (12 months)
Total Residential Compost Cost				\$4.83 (12 months)

TABLE 6. RESIDENTIAL COMPOST COLLECTION AND COMPOSTING COST OF SERVICE

Notes to Table 6 (subtotals may not sum exactly to totals due to rounding):

The overall 12-month cost per customer was calculated by summing all monthly costs and multiplying by 9 months, then summing costs denoted as 12-month costs and multiplying by an additional 3 months. The total annual cost was then divided by 12 months to calculate an average monthly cost on a 12-month basis.

A	Total labor hours were provided by the City. On-route hours, or truck hours, were assumed to be 95% of labor hours. The remaining 5% of labor hours are considered to be non-productive time for activities such as pre- and post-trip inspections. Based on the labor hours worked, the average compost collection truck is on-route 2,358 hours annually over the 9-month program. Productivity averages 103 customers per hour.
B	The City's total labor cost is based on an average hourly labor cost of \$29.55 plus 28.0% for tax and benefit costs. This labor cost includes full-time City employees as well as temporary labor positions, temporary labor positions were used more extensively during FY2018 in this program area. Dividing the labor cost per hour by the customers per hour yields the labor cost per customer per week, which is converted to a monthly cost by multiplying by the average number of weeks per month. Total labor cost = \$37.82 per hour = \$29.55 x (1+.280) Monthly cost = \$1.59/hh/month = (\$37.82 per hour / 103 customers per hour) x 4.33 weeks/month
C	The average fuel cost per truck was \$14,430 in FY2018. Monthly cost = \$0.26/hh/month = (\$14,430 per truck / 2,358 route hours per truck) / 103 customers per hour x 4.33 weeks/month
D	The total cost for truck repair and maintenance was \$50,248 in FY2018. Monthly cost = \$0.22/hh/month = (\$50,248 / 9,431 total truck hours) / 103 customers per hour x 4.33 weeks/month
E	Compost collected from residential routes was 9,085 tons in FY2018. The composting cost was \$18.95 per ton. Avg. monthly set-out per customer = 76.92 pounds = (9,085 tons x 2,000 pounds/ton / 9 months) / 26,247 customers Monthly composting cost = \$0.73/hh/month = (76.92 pounds / 2,000 pounds/ton) x \$18.95/ton
F	The current automated collection truck replacement cost is \$326,743. Using the City's method for truck replacement, the annual truck cost is the cost of the truck purchased, plus a 7-year 3% annual compounding cost, divided over the 7-year life of the truck. Annual truck cost = \$46,678 per year = (\$326,743 replacement cost / 7 year life) Monthly truck cost = \$0.83/hh/month = (\$46,678 / 2,358 route hours) / 103 customers/hour x 4.33 weeks/month
G	Truck rental includes costs to rent additional trucks during the fall leaf collection season.
H	Depreciation represents allocated costs for development and improvement of the compost facility.
I	Allocated administrative costs for route supervisor operations, management and planning, administrative and internal municipal services, and customer service total \$358,256. Monthly administrative cost = \$1.14/hh/month = (\$358,256 per year / 26,247 customers) / 12 months/year.

Commingled Cart Recycling Collection and Processing

The City contracts with Recycle Ann Arbor for cart-based collection of recyclables. While this service is primarily provided to residential customers, Recycle Ann Arbor also provides collection of commercial recycling carts outside of the downtown area. These commercial customers are served on the regular residential routes, and therefore costs for cart recycling collection provided under contract are not segregated by residential or commercial costs. Costs are calculated per customer, inclusive of the commercial customers in addition to residential customers. Recycle Ann Arbor's

contracted collection cost equates to labor costs associated with collection. The City provides the carts, collection trucks and the costs to operate and maintain the fleet.

Table 7 provides a detailed breakdown of costs for commingled cart recycling collection and processing by cost component. Additional detail is provided in the notes to Table 7, including the calculations completed to derive the monthly cost per household contributed by each cost component. The notes correspond to the letters identified in the first column of Table 7.

TABLE 7. COMMINGLED CART RECYCLING COLLECTION AND PROCESSING COST OF SERVICE				
Note	Cost Component	Count / Unit Cost	Unit	Cost / Customer / Month
Route Parameters				
	Residential Customers	26,247	customers	
	Commercial Customers	2,539	customers	
	Total Commingled Cart Customers	28,786	customers	
Labor Cost				
A	Contracted Collection Cost	\$1,736,689	per year	
	Monthly Contracted Collection Cost	\$144,724	per month	\$5.03
City-Owned Truck Operations Cost				
B	Recycling Truck Operations	\$84,069	per year	
	Fuel	\$98,110	per year	
	Repair and Maintenance	\$517,662	per year	
	Annual Cost (subtotal)	\$699,841	per year	
	Per Route Hour Cost	\$26.78	per hour	\$2.03
Truck Cost				
C	City Fleet Charge	\$387,456	per year	\$1.12
Processing Cost				
D	Collected Recycling Tons	10,566	tons per year	
	Monthly Set Out Weight	61.4	lbs / hh / month	
	Processing and City MRF Cost	\$255.27	per ton	
	Less, Material Value	\$(53.17)	per ton	
	Net Processing Cost	\$202.10	per ton	
	Monthly Processing Cost	\$6.18	per cust. per month	\$6.18
Direct Cost, Commingled Cart Recycling				\$14.36
Allocated Administrative Costs				
E	Mgmt. & Planning	\$90,254	per year	\$0.26
	Administrative & Municipal Service	\$145,474	per year	\$0.42
	Customer Service	\$81,527	per year	\$0.24
	Outreach	\$90,837	per year	\$0.26
Allocated Administrative Cost, Commingled Cart Recycling				\$1.18
Total Commingled Cart Recycling Cost				\$15.54

Notes to Table 7 (subtotals may not sum exactly to totals due to rounding):

A	In FY2018, Recycle Ann Arbor invoiced \$1,736,689 for collection of cart recycling to residents and businesses. This includes labor but not the cost of City-provided trucks.
	Monthly cost = \$5.03/customer/month = (\$1,736,689 per year / 28,786 customers) / 12 months/year

TABLE 7. COMMINGLED CART RECYCLING COLLECTION AND PROCESSING COST OF SERVICE

B	<p>Equipment, materials and supplies, fuel, and repair and maintenance totaled \$699,841 for the year. Monthly cost = \$2.03/customer/month = (\$699,841 per year / 28,786 customers) / 12 months/year</p>
C	<p>The City incurred \$387,456 in truck costs charged by the City's fleet department for the trucks assigned to collect recycling. Monthly cost = \$1.12/customer/month = (\$387,456 per year / 28,786 customers) / 12 months/year</p>
D	<p>Processing costs for the collected materials are based on the total cost to process commingled materials (see Table 8). In addition to processing, the City also incurs costs for its MRF and the associated labor to maintain the facility. Processing costs are detailed in Section 5 and Table 8 of this report. The net cost per ton was \$204.02 and recycling collected was 10,566 tons. Avg. monthly set-out per customer = 61.2 pounds = (10,566 tons x 2,000 pounds/ton / 12 months) / 28,786 customers Monthly cost = \$6.18/customer/month = (61.2 pounds / 2,000 pounds/ton) x \$202.10/ton</p>
E	<p>Allocated administrative costs for management and planning, administrative and internal municipal services, customer service, and outreach total \$408,091. Monthly administrative cost = \$1.18/customer/month = (\$408,091 per year / 28,786 customers) / 12 months/year.</p>

SECTION 5

RECYCLABLE MATERIAL PROCESSING COST OF SERVICE

The City contracts with Recycle Ann Arbor for the processing of commingled recyclable material collected from both residents and businesses; Recycle Ann Arbor has subcontracted with Rumpke Waste and Recycling Services (Rumpke) for processing of recyclables. The contract cost is \$157.30 per ton which includes transfer haul from the City's MRF (MRF) to Rumpke's Cincinnati processing facility for processing. Source separated cardboard delivered to the City's MRF is handled separately and transported to a local facility for recycling at a reduced cost per ton compared to commingled recyclables. In addition, the City incurs costs for MRF oversight, MRF repair and maintenance, utility costs, and MRF depreciation. The processing cost is reduced by the value of the sorted material, which fluctuates monthly based on market prices, and is provided to the City as a credit on Recycle Ann Arbor's processing invoices.

Table 8 details the cost of service calculation for recycling transport and processing for commingled single-stream residential and commercial single-stream materials. Costs were allocated based on the invoiced tonnages for single-stream and commercial cardboard tons from the Recycle Ann Arbor invoices. The recyclables credit is based on the average material value per ton each month, applied to the composition of the City's recyclables (which are audited on a periodic basis).

TABLE 8. COST OF SERVICE FOR RECYCLING PROCESSING

Contractor Invoice Data	Single-Stream	Commercial Cardboard	Total / Weighted Average
Invoiced Processing Cost (RAA / Rumpke)	\$1,972,869	\$125,805	\$2,098,674
City MRF Cost (Depreciation, Utilities, Maintenance)	\$1,228,712	\$131,580	\$1,360,291
Gross Recycling Cost	\$3,201,581	\$257,385	\$3,458,966
Annual Invoiced Material Tons	12,542	1,343	13,885
Processing Cost per Ton	\$157.30	\$93.67	\$151.14
City MRF Cost per Ton	\$97.97	\$97.97	\$97.97
Gross Recycling Cost per Ton	\$255.27	\$191.63	\$249.11
Recyclables Credit (FY2018 Actual)	\$(666,819)	\$(127,435)	\$(794,254)
Recyclables Credit per Ton (Average, FY2018)	\$(53.17)	\$(94.88)	\$(57.20)
Net Recycling Cost	\$2,534,761	\$129,950	\$2,664,711
Net Recycling Cost per Ton	\$202.10	\$96.75	\$191.91

Table 8 presents the average cost of service for recycling processing in FY2018. However, it is important to note that the monthly material value per ton over the 12-month period declined from \$79.22 per ton in July 2017 to \$34.78 in June 2018. Table 9 summarizes the net processing cost of

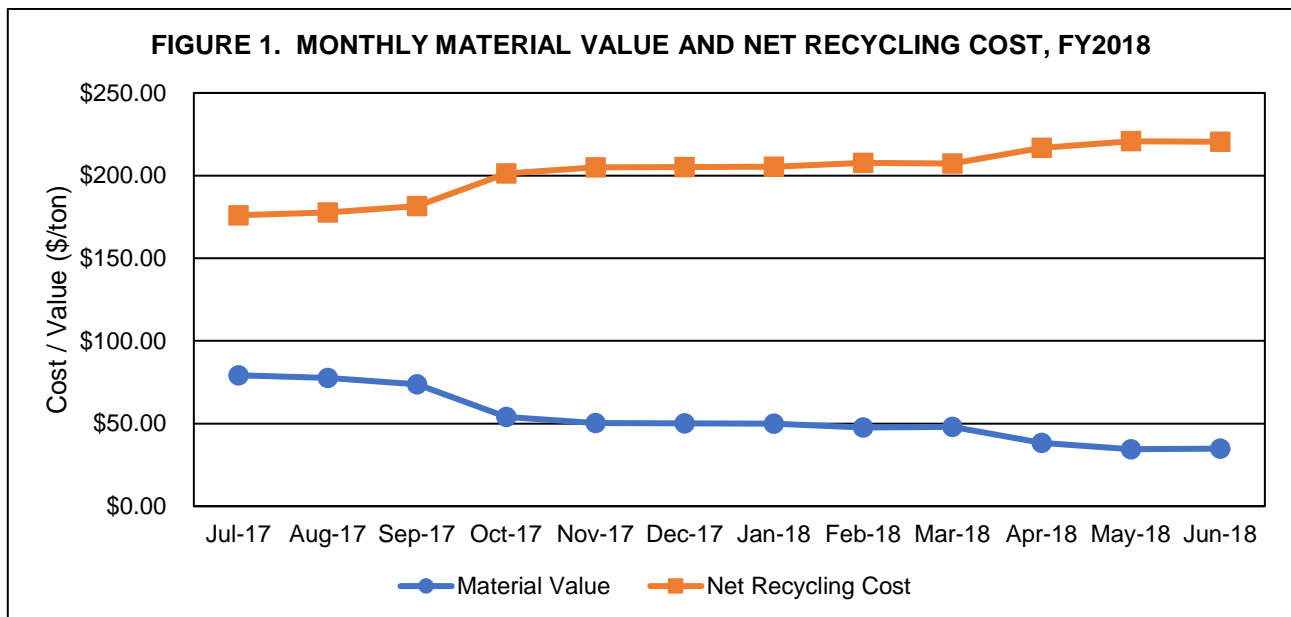
the commingled mix on a monthly basis in FY2018, and Figure 1 graphically summarizes the trends in material value and net cost per ton. Based on material value at the end of FY2018, the net cost per ton to process single stream recycling was \$220.49, approximately 10% higher than the average cost in FY2018 and 25% higher than the cost at the start of FY2018. Intra-year changes in material value can therefore have a significant impact on costs of service.

TABLE 9. MONTHLY COST OF PROCESSING SINGLE STREAM RECYCLING IN FY2018

Month	Processing Cost per Ton	City MRF Cost per Ton	Less Material Value per Ton	Net Cost per Ton
July-17	\$157.30	\$97.97	\$(79.22)	\$176.05
August-17	\$157.30	\$97.97	\$(77.66)	\$177.61
September-17	\$157.30	\$97.97	\$(73.79)	\$181.48
October-17	\$157.30	\$97.97	\$(54.00)	\$201.27
November-17	\$157.30	\$97.97	\$(50.28)	\$204.99
December-17	\$157.30	\$97.97	\$(50.06)	\$205.21
January-18	\$157.30	\$97.97	\$(49.87)	\$205.40
February-18	\$157.30	\$97.97	\$(47.64)	\$207.63
March-18	\$157.30	\$97.97	\$(47.94)	\$207.33
April-18	\$157.30	\$97.97	\$(38.39)	\$216.88
May-18	\$157.30	\$97.97	\$(34.49)	\$220.78
June-18	\$157.30	\$97.97	\$(34.78)	\$220.49

Note:

1. City MRF Cost includes MRF oversight, repair and maintenance, utility costs, and depreciation.
2. Subtotals may not sum exactly to totals due to rounding.



SECTION 6

COMMERCIAL COLLECTION COST OF SERVICE

Commercial collection includes periodic (weekly or more frequent) collection of waste and recycling from multi-family properties of 3 units or more and businesses and institutions. Commercial collection service levels vary and include differences in container size (from 64-gallon carts to 40-cubic yard containers) and collection frequency (from once per week to 6-days per week).

Commercial service consists of the following activities and related costs:

- Picking up the waste or recycling container and emptying the contents into the collection truck;
- Delivering the collected material to the City's transfer station (for waste) or material recovery facility (for recyclables); and
- Invoicing commercial customers for the service (for waste).

These three actions have unit costs that are combined to calculate an overall cost of commercial service. Service providers and the type of service provided by each were identified in Table 1 and are summarized as follows:

- City crews provide three types of commercial collection: rear-load collection of solid waste carts; front-load (dumpster) collection of solid waste from multi-family units that own their own front-load container; and, recycling collection for businesses that generate enough material to require a front-load dumpster, or are located in the downtown area.
- Waste Management, through its commercial waste collection franchise agreement with the City, provides waste collection to businesses and multi-family properties that require a front-load container and for which Waste Management provides the container.
- Recycle Ann Arbor provides recycling collection service to multi-family properties and businesses that utilize a cart for collection of commingled recyclables. These costs were calculated in Table 7.

Table 10 details the cost of service for each commercial collection function. Total commercial collection costs from Table 3 have been segregated by the specific function to calculate the cost of service. Disposal and recycling processing costs are based on the quantity of material collected, which varies based on container size and collection frequency; these costs are calculated in Table 11.

TABLE 10. DETAILED COSTS FOR COMMERCIAL COLLECTION SERVICES

Expense Type	Rear Load Waste	Multi-Family Waste	Front Load Recycling	Front Load Waste (WM)
Collection Cost				
Labor	\$187,582	\$178,286	\$298,189	
Operations	\$1,426		\$19,411	
Depreciation	\$33,780	\$68,185	\$80,052	
Vehicle Rental	\$546		\$61,240	
Vehicle Repair & Maintenance	\$12,610	\$132,832	\$93,038	
Fuel	\$6,665	\$30,798	\$21,191	
Equipment		\$4,193	\$10,629	
Utility	\$23	\$674		
Contracted Services			\$82,311	\$1,585,679
<i>Collection Cost Subtotal</i>	<i>\$242,632</i>	<i>\$414,968</i>	<i>\$666,061</i>	<i>\$1,585,679</i>
Administrative Cost				
Route Operations	\$33,895	\$34,784	\$66,844	
Mgmt. & Planning	\$8,640	\$66,341	\$9,665	\$197,745
Admin & Municipal Service	\$13,926	\$106,931	\$15,578	\$318,732
Customer Service	\$1,407	\$1,838	\$10,804	\$7,559
<i>Administrative Cost Subtotal</i>	<i>\$57,868</i>	<i>\$209,894</i>	<i>\$102,891</i>	<i>\$524,037</i>

Table 11 details the cost of service for each City-provided commercial and multi-family service. Notes providing further explanation of the calculated costs are provided following the table, with each note denoted by letter in the first column of Table 11.

TABLE 11. COMMERCIAL COLLECTION COST OF SERVICE

Note	Description / Cost	Rear Load Waste	Multi-Family Waste	Front Load Recycling	Front Load Waste (WM)
A	Collection Cost	\$242,632	\$414,968	\$666,061	\$1,585,679
B	Annual Lifts	58,292	37,284	20,436	75,838
C	Cost per Lift	\$4.16	\$11.13	\$32.59	\$9.33
D	Collected Container Tons	1,201	9,219	3,320	27,480
E	Annual Container Yards Serviced	27,567	223,756	81,744	517,903
F	Density (Pounds per Yard)	87.11	82.40	81.22	106.12
G	Disposal / Processing Cost per Yard	\$1.11	\$1.05	\$6.48	\$1.35

TABLE 11. COMMERCIAL COLLECTION COST OF SERVICE

H	Administrative Cost	\$57,868	\$209,894	\$102,891	\$524,037
I	Customer Count	150	196	393	806
J	Monthly Admin Cost per Customer	\$32.15	\$89.24	\$21.82	\$54.18
K	Monthly Cost - 96-gal Cart (1x/wk)	\$52.44			
L	Monthly Cost - 2-yard Container (1x/wk)		\$146.51	\$219.03	\$106.26

Notes to Table 11 (subtotals may not sum exactly to totals due to rounding):

A	Collection Cost is the Total Collection Cost from Table 10
B	Annual container lifts obtained from City route sheets and customer summaries
C	Cost per Lift = Collection Cost (A) divided by Annual Lifts (B)
D	Collected Container Tons obtained from City scalehouse data
E	Annual Container Yards Serviced obtained from City route sheets
F	Density (Pounds per Yard) = Collected Container Tons x 2,000 pounds per ton / Annual Container Yards (D x 2,000 / E)
G	Disposal / Processing Cost per Yard = Density (Pounds per Yard) / 2,000 pounds per ton x the SW tip fee (\$25.45) or the processing cost per ton (\$159.57; this is a blended cost based on the commercial cardboard cost and the single stream cost)
H	Administrative Cost is the Administrative Cost Subtotal from Table 10
I	Customer Counts by function were provided by City staff
J	The Monthly Admin Cost per Customer = Administrative Cost / 12 months / Customer Count (H / 12 months / I)
K	The cost of service calculation is: (Cost per Lift (C) x lifts per week x 4.33 weeks/month) + ((96 gal cart / 203 gals/yd.) x (Disposal Cost per Yard (G) x lifts per week x 4.33 weeks/month)) + Monthly Admin Cost (J)
L	The cost of service calculation is: (Cost per Lift (C) x lifts per week x 4.33 weeks/month) + (2 yds. x Disposal Cost per Yard (G) x lifts per week x 4.33 weeks/month) + Monthly Admin Cost (J)

Commercial Cost Comparisons

Excluding City administrative costs, the monthly cost of collection and disposal for commercial rear load service is \$20.29 (\$52.44 - \$32.15) per 96-gallon cart. The City’s commercial cart collection cost is higher than residential cart collection (calculated to be \$6.08 per month excluding administrative costs). The increased cost for commercial cart collection can be explained by the differences in service density, automation and access. The City’s rear-load routes outside of the downtown are less dense than the residential collection routes, resulting in greater cost per customer. Rear load collection also requires more service time per stop for the driver to start, stop, exit the truck, and dump the cart compared to an automated side load residential cart collection that does not require the driver to exit the truck. In addition, commercial rear load routes are typically in tight access areas, particularly in the downtown area, requiring more maneuvering and slower travel between stops.

Again excluding administrative costs and considering only direct costs, the collection cost for the City's front load service is also higher than Waste Management's rate for similar service under the commercial franchise agreement. Waste Management's average price to the City per lift is \$9.33. This price is inclusive of Waste Management's costs for labor, truck capital, truck operating and maintenance, administration, and profit; the cost of the container has been factored out because the container cost varies by size while the lift cost is largely constant and not dependent on container size. Excluding an assumed 15% profit margin from Waste Management's cost, Waste Management's estimated cost per lift for front load collection is \$7.93 ($\$9.33 \times (1 - 15\%)$). Table 12 compares Waste Management's collection costs per lift to the City's front load collection cost per lift.

TABLE 12. COMPARATIVE COMMERCIAL COLLECTION COSTS

Provider	Average Cost per Lift	Variance vs. WM
Waste Management	\$9.33	
Waste Management (profit removed)	\$7.93	
City Front-Load Solid Waste	\$11.13	\$1.80 (+19%) / \$3.20 (+40%)
City Front-Load Recycling	\$32.59	\$23.26 (+249%) / \$24.66 (+311%)

The difference in the cost between the City and Waste Management can be explained by a number of reasons:

1. Waste Management's service is provided with greater route density than the City's services. Waste Management provides collection to 806 customers Citywide, compared to 196 customers served by the City for front-load solid waste collection. The greater route density results in more efficient, lower cost collection per lift.
2. Waste Management utilizes dynamic routing combined with on-board systems that increase collection efficiency by charting the shortest distance between each stop. The City currently uses hand-drawn maps for routing and has not optimized its routes.
3. Waste Management's administrative costs embedded in its cost per lift are low due to consolidation of systems within the corporation and allocation of administrative costs across a large, national customer base.
4. Because of its size and the number of collection trucks and containers it purchases, Waste Management receives a substantial discount on trucks and containers compared to the costs paid by small quantity purchasers.
5. The City has not established standards or requirements for collection performance and does not measure such metrics. Private companies, including Waste Management, track and evaluate various performance metrics to optimize efficiency.

SECTION 7

PROGRAM AREA REVENUE

Revenue for the operation of the City's resource management program is generated primarily from a property tax levy, with additional revenue provided by fees for services, recyclable commodity value, royalties on third party tonnage accepted at the transfer station and compost facility, and payments on the sale of finished compost. In FY2018, the program area generated \$16,675,449 in revenue from the following sources:

- Refuse levy: \$12,635,609 of revenue (76% of total revenue), based on a FY2018 tax rate, or millage rate, of 2.4134 mills. The millage rate is applied to every \$1,000 of assessed value of each property. Based on the taxable valuation of properties in FY2018, approximately 65.5% of the taxable value was assigned to residential-classed properties² and 35.5% was assigned to commercial and industrial-classed properties. Therefore, residential property millage revenue was approximately \$8,276,000 and commercial property millage revenue was approximately \$4,486,000 in FY2018. By comparison, the cost of residential services in FY2018 was approximately \$9,500,000, and the cost of commercial services was approximately \$6,300,000.
- Fees for services: \$2,892,296 of revenue (17% of total revenue). Service fees include charges for commercial waste collection, residential cart upgrades, additional container tips, or other additional services.
- Royalties and revenue shares not covered under the levy or captured through service fees, and other miscellaneous sources: \$1,147,544 of revenue (7% of total revenue); this amount is subject to greater variability from year to year based on commodity markets and the flow of third party tonnage to the City's transfer station and compost facility.

² Owner-occupied properties typically claim the Principal Residence Exemption (PRE); properties that are not owner-occupied (such as investment and rental properties) are not eligible for the PRE. By value, residential-classed properties claiming the PRE represent 52.5% of total taxable value, and non-PRE properties represent 13% of the total taxable value.

SECTION 8 CONCLUSION

Based on total operations expenses of \$16,157,889 (Table 3) and revenues of \$16,675,449 (Section 7), the City's solid waste operations costs were covered by the various revenue streams received in FY2018, resulting in a small operations surplus (\$517,560, or approximately 3%) in FY2018. However, adjustments to the City's expenses are also made annually. Though they are not direct cash expenses, these adjustments impact the Solid Waste Fund balance equity, either positively or negatively. The adjustments may include:

- Pension (GASB) and retiree benefit (OPEB) funding based on the number and pay scale of current employees for the program area
- Landfill closure and post-closure care liability adjustments based on engineer's cost estimates
- Capital asset adjustments
- Future Generally Accepted Accounting Practices (GAAP) requirements

While these costs are not driven by current solid waste operations, they are direct obligations charged to the Solid Waste Fund equity. In recent years, large adjustments have occurred to initially fund retiree benefit accounts, recognize the pension liability, and fund the landfill closure liability, each resulting in negative impacts to the Fund balance. In FY2018 these adjustments to the Solid Waste Fund equity totaled \$2,394,035, exceeding the \$517,560 surplus noted above by \$1,876,475, resulting in a reduction in the Solid Waste Fund balance. Therefore, the program area experienced a net loss of nearly \$2 million in the Solid Waste Fund equity in FY2018. Though these adjustments may be more modest in some years, they may also be large as was experienced in FY2018.

Other factors also impact Fund sustainability. For example, during FY2018 there was a greater utilization of temporary labor than typical, evidenced by the calculated residential compost collection costs that resulted in lower program costs than can typically be anticipated. In addition, because revenues include streams that are subject to variation (such as royalties on third party waste at the transfer station and recyclables material credits), this surplus could be narrowed or negated and result in a deficit in other years. For example, the material value of single-stream recyclables declined \$44.44 per ton from the beginning to the end of FY2018. Had material value been at the lower end-of-FY2018 value all year, the recyclables credit would have been reduced by \$557,366 and a deficit in the operations portion of the Solid Waste Fund performance would have been experienced.

This cost of service analysis provides a sound understanding of costs and cost drivers within the City's current programs. It also identifies that, though there is a positive Fund balance, a number of factors impact the long-term sustainability of the Fund and limit its use. The analysis provides the basis to evaluate costs of options being considered in the Solid Waste Resources Management Plan; provides baseline data to evaluate funding methods in the Plan (including additional revenues or cost savings necessary to implement and sustain program expansions or additions); and will be a useful tool for the City when developing annual budgets, monitoring operations and financial performance, and ensuring the Solid Waste Fund is able to absorb annual adjustments.



SOLID WASTE RESOURCES MANAGEMENT PLAN
ADVISORY COMMITTEE MEETING #2

January 15, 2019

OPPORTUNITIES FOR ADVISORY COMMITTEE INPUT

Four Advisory Committee meetings

- Meeting #1 - Wednesday, November 14, 2018
- Meeting #2 - Tuesday, January 15, 2019
- Meeting #3 - Tuesday, March 12, 2019 (1 p.m. to 3 p.m.)
- Meeting #4 - Tuesday, May 14, 2019 (1 p.m. to 3 p.m.)

Comment on draft deliverables

- Accepted between/during meetings

Individual debriefings

- As appropriate

NORMS FOR COMMITTEE CONDUCT

- Start on time ... end on time.
- Meeting summaries provided to participants no more than 2 weeks after meeting.
- Project team to submit deliverables in timely manner, as promised.
- Treat all participants with mutual respect – no finger pointing!
- Try to differentiate between I know (facts) and I think (opinions).
- Committee is not decision-making body.

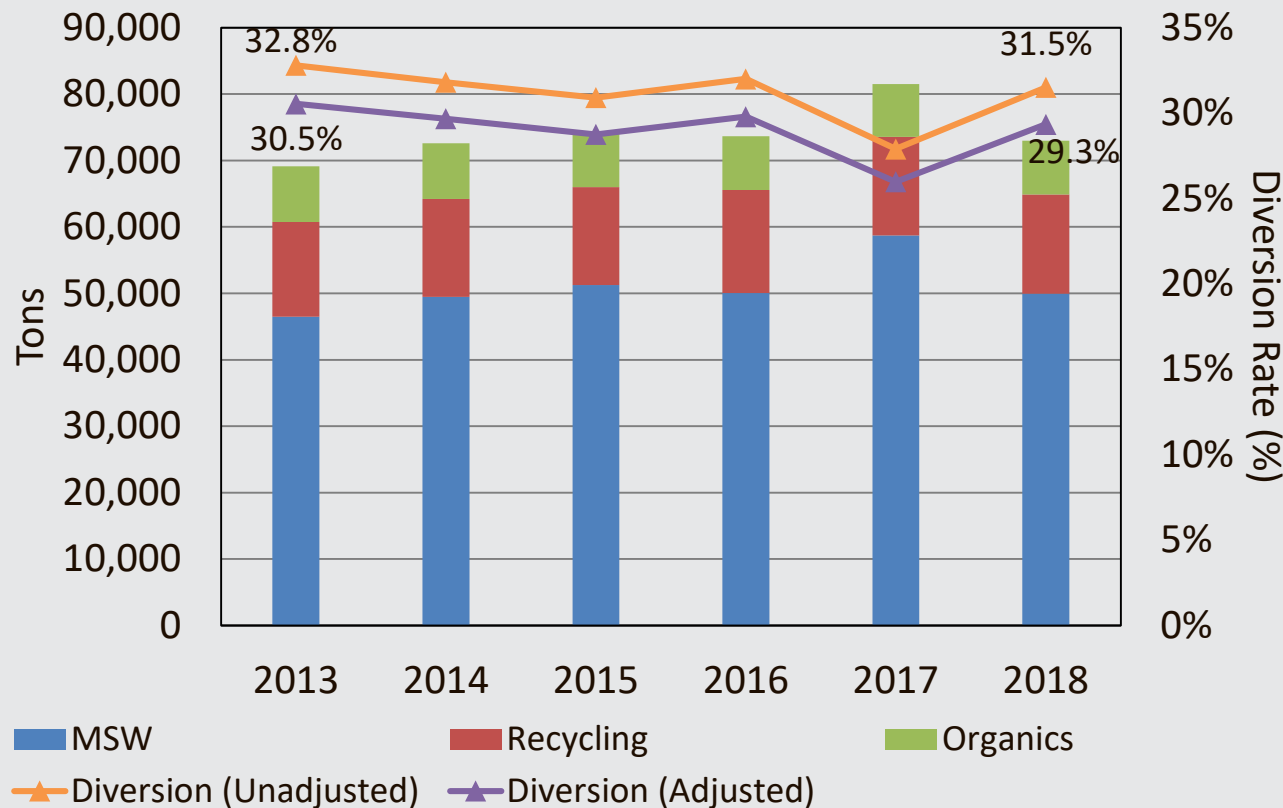
KEY ACCOMPLISHMENTS SINCE MEETING #1

- ✓ **Public engagement**
 - Responded to Advisory Committee questions from first meeting
- ✓ **Received request to delay contract procurement**
 - City staff issued memo notifying City Council that procurement to replace expiring contracts will be delayed until the SWRMP is completed
- ✓ **Reviewed and compiled current City resource management practices and quantities**
- ✓ **Completed Solid Waste Cost of Service Analysis for current programs and services**
- ✓ **Ongoing research:**
 - Benchmarking against peer communities
 - Program and service options

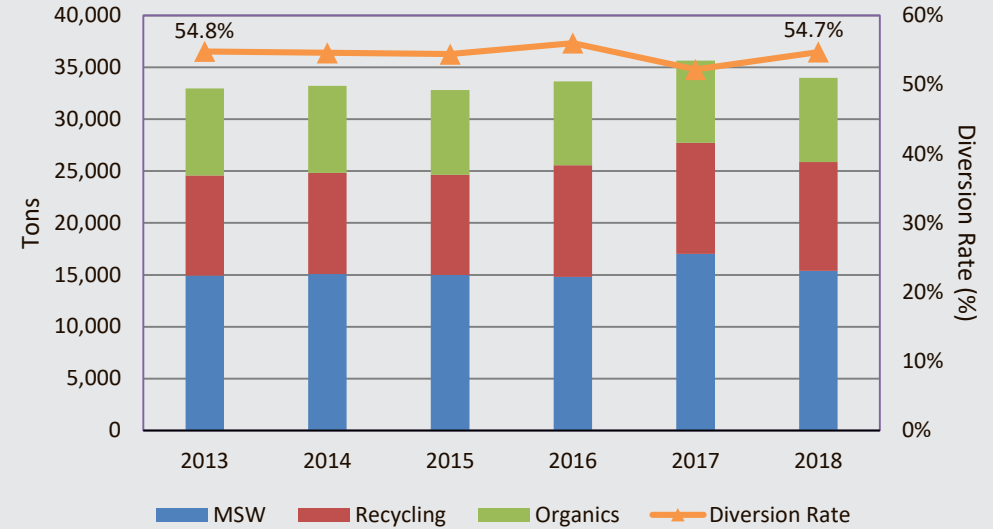
TONNAGE AND DIVERSION RATE TREND (2013-2018)

Diversion = $\frac{\text{Tons recycled and composted}}{\text{Total tons generated}}$

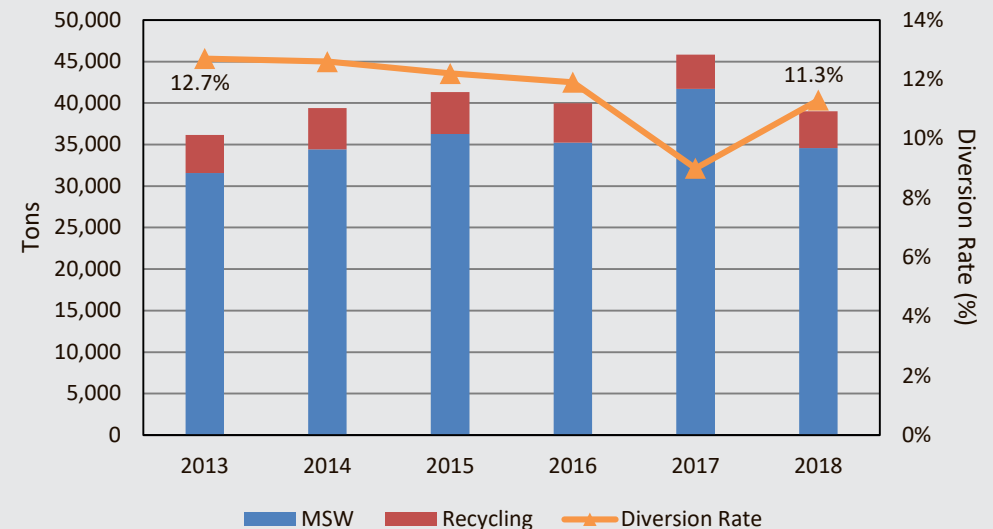
ANN ARBOR TONNAGE AND DIVERSION RATE (ALL SECTORS, 2013-2018)



RESIDENTIAL SECTOR TONNAGE AND DIVERSION RATE



COMMERCIAL SECTOR TONNAGE AND DIVERSION RATE



COST OF SERVICE ANALYSIS: FINDINGS

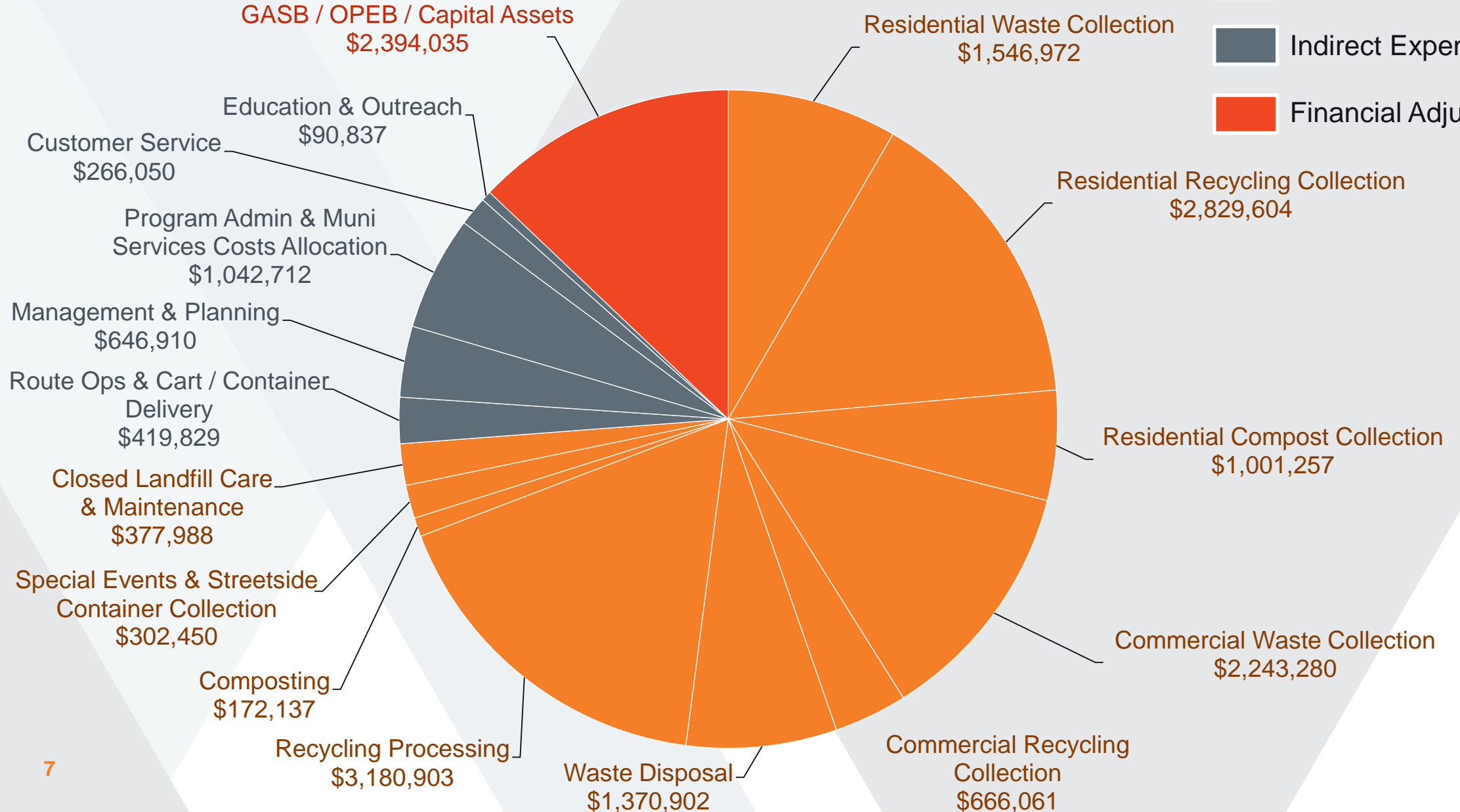
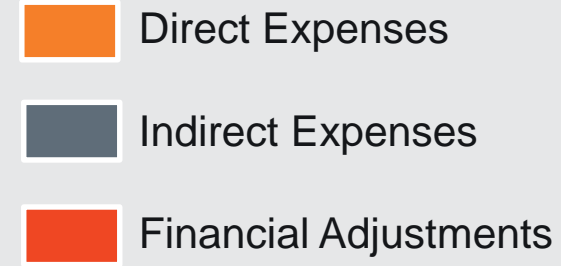
Costs of current programs

- Residential services = \$9.5 million/year; \$29.09/household/month
- Commercial services = \$6.3 million/year
- Other services (former landfill) = \$378,000/year

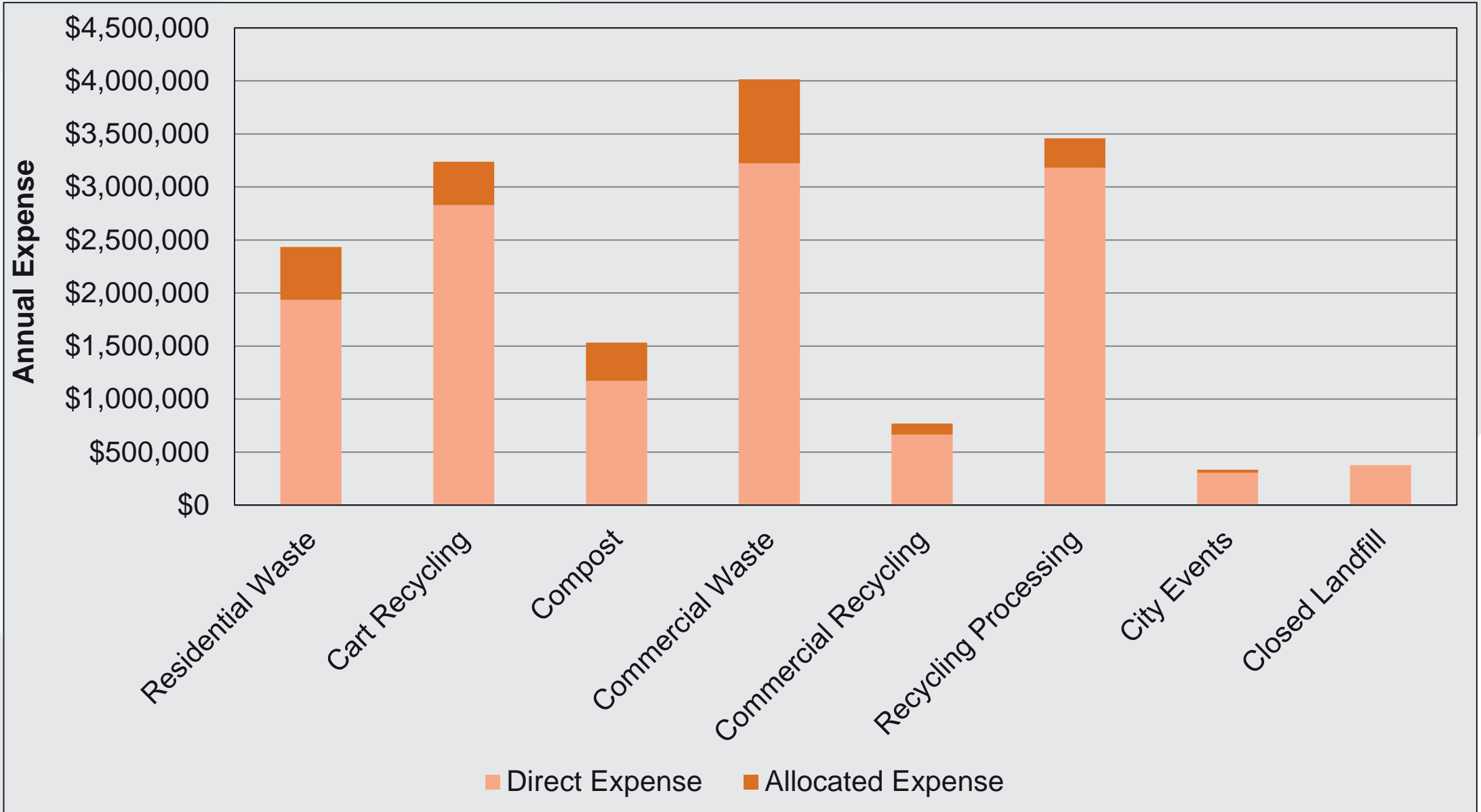
Funding sustainability

- In FY2018, revenues and operations expenses balanced, with a slight revenue surplus
 - BUT operations expenses will increase in future years - more full-time staff for City collections than in FY2018, persistent depressed commodity markets
 - Annual equity adjustments also impact the Fund balance
- Current revenues are not expected to be sufficient to sustain current services over the longer planning period
 - Fund balance will continue to decline unless expenses decrease and/or revenue increases

COST OF SERVICE ANALYSIS: EXPENSES

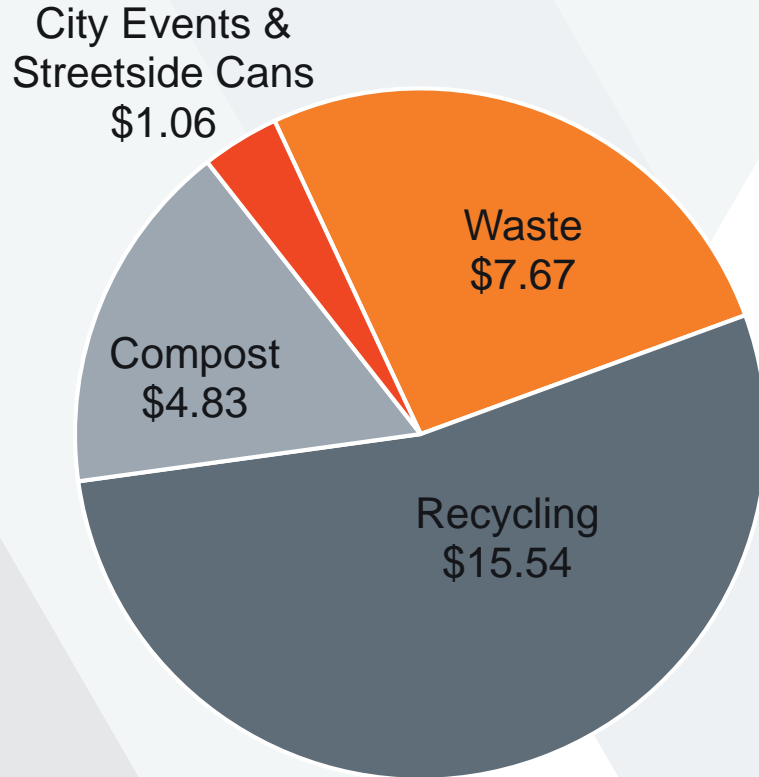


COST OF SERVICE ANALYSIS: FUNCTION EXPENSES



COST OF SERVICE ANALYSIS: RESIDENTIAL SERVICE

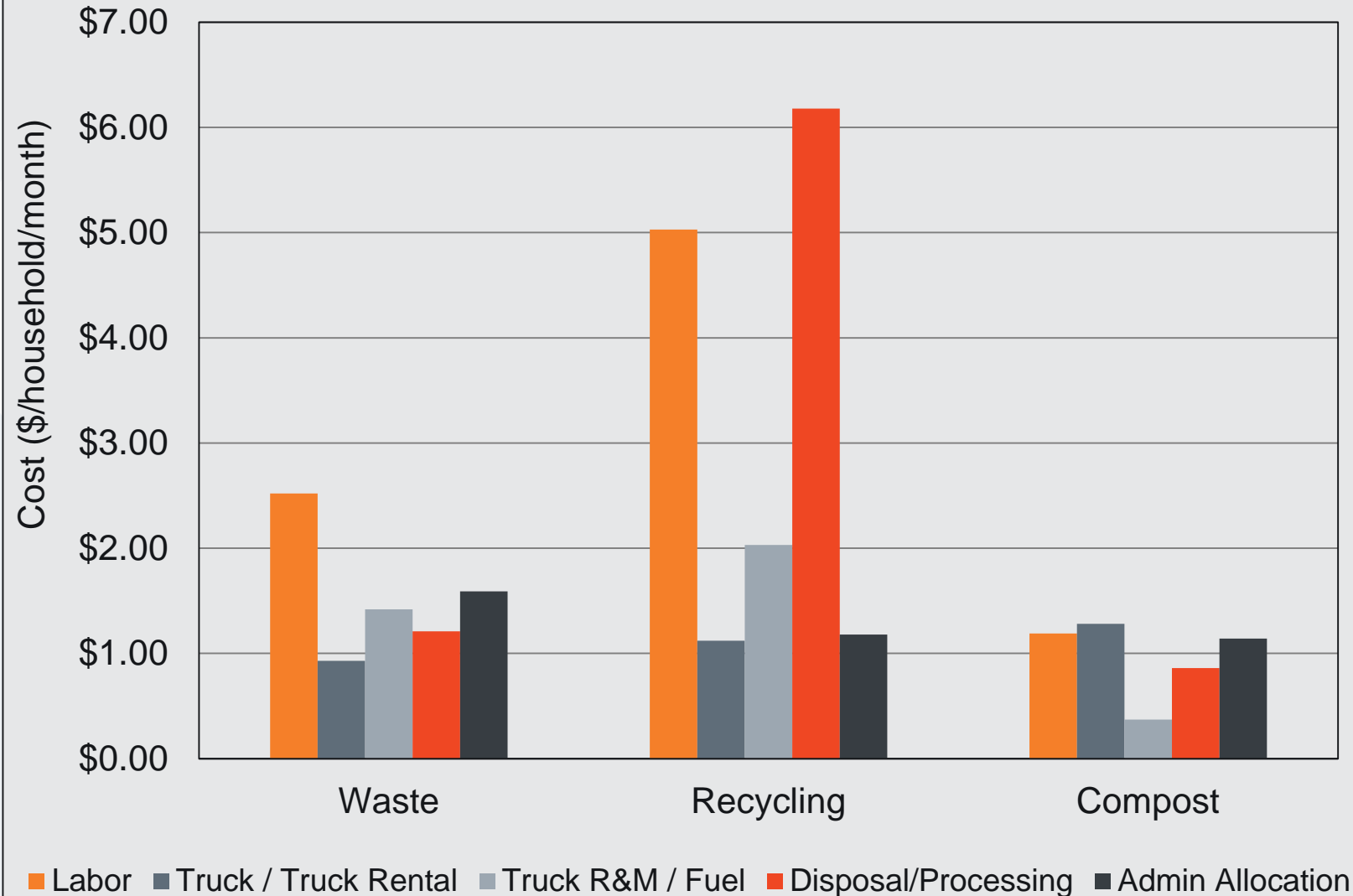
Residential Cost of Service (\$/household/month)



Total = \$29.09/household/month

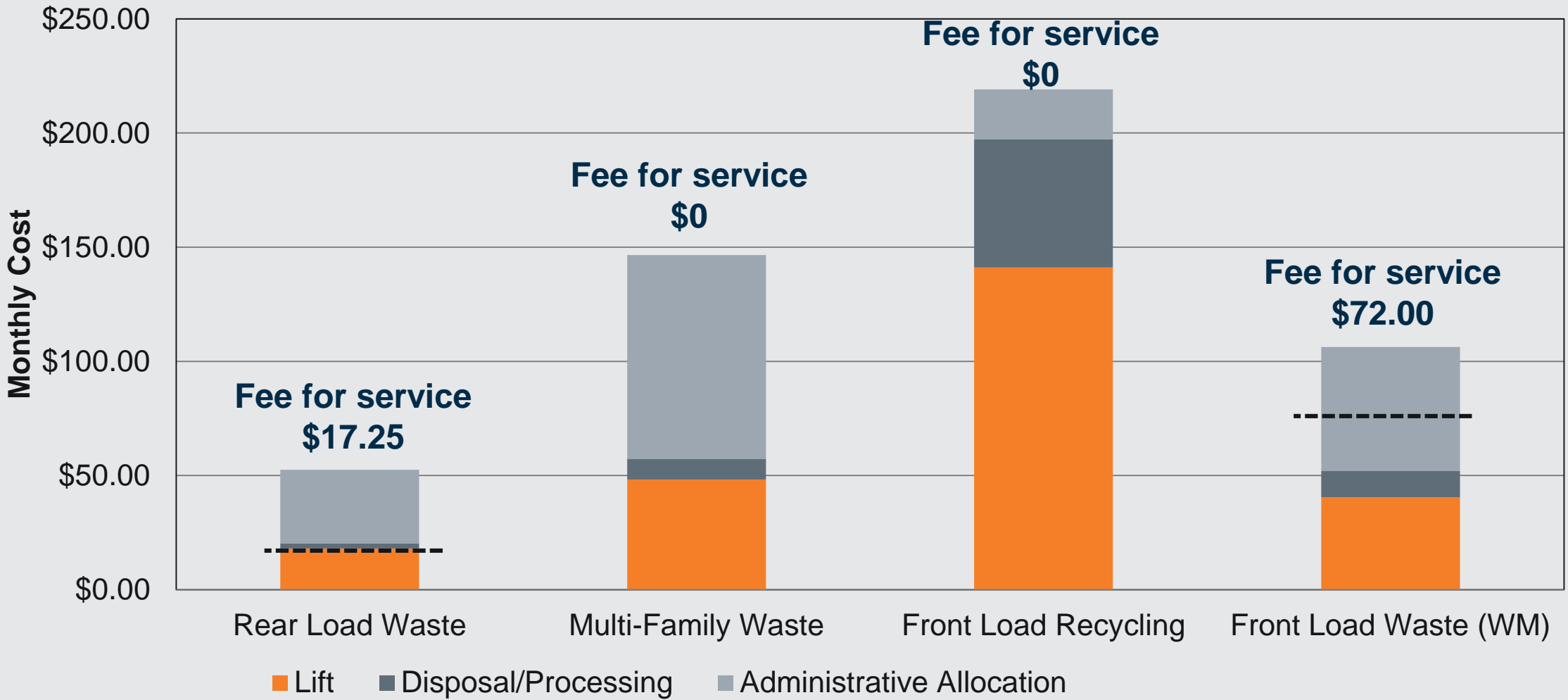
Note: Subtotals above sum to \$29.10 due to rounding.

Costs by Service and Component



COST OF SERVICE ANALYSIS: COMMERCIAL SERVICE

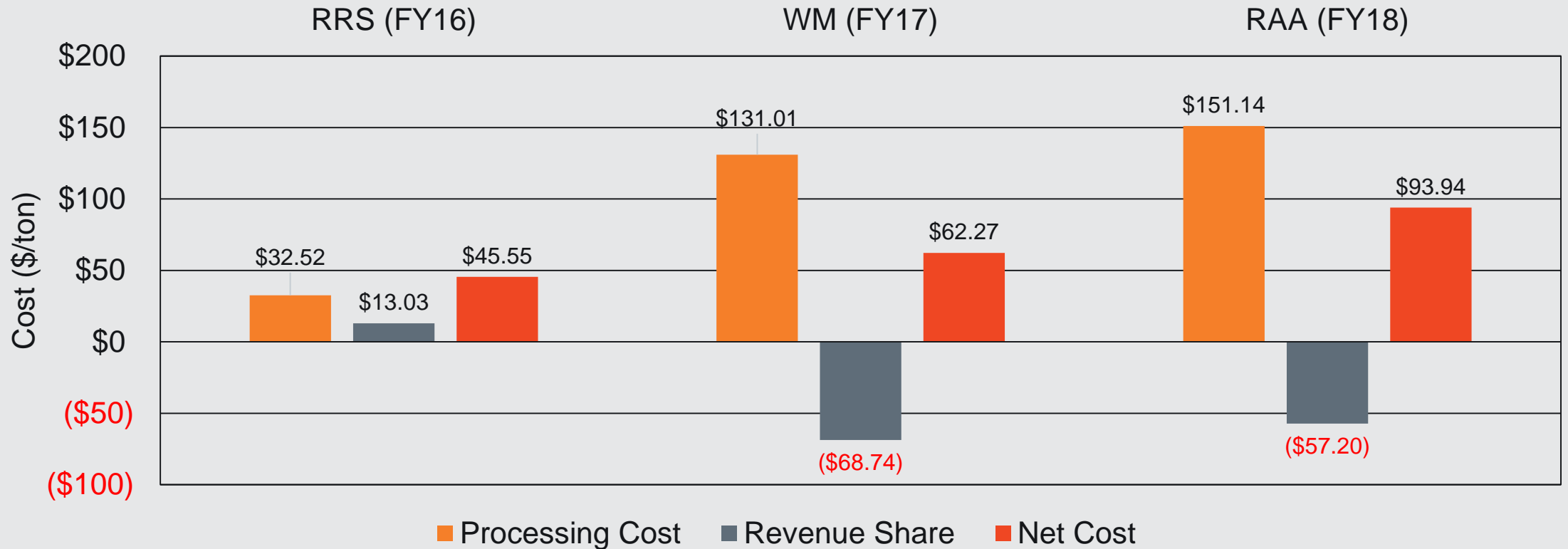
COMMERCIAL COLLECTION - MONTHLY COST (1 LIFT/WEEK)



Note: Rear Load Waste is a 96-gallon cart. All other collections are 2-yard dumpsters.

COST OF SERVICE ANALYSIS: RECYCLING PROCESSING

RECYCLABLES PROCESSING COSTS PER CONTRACTOR INVOICES (FY2016-FY2018)



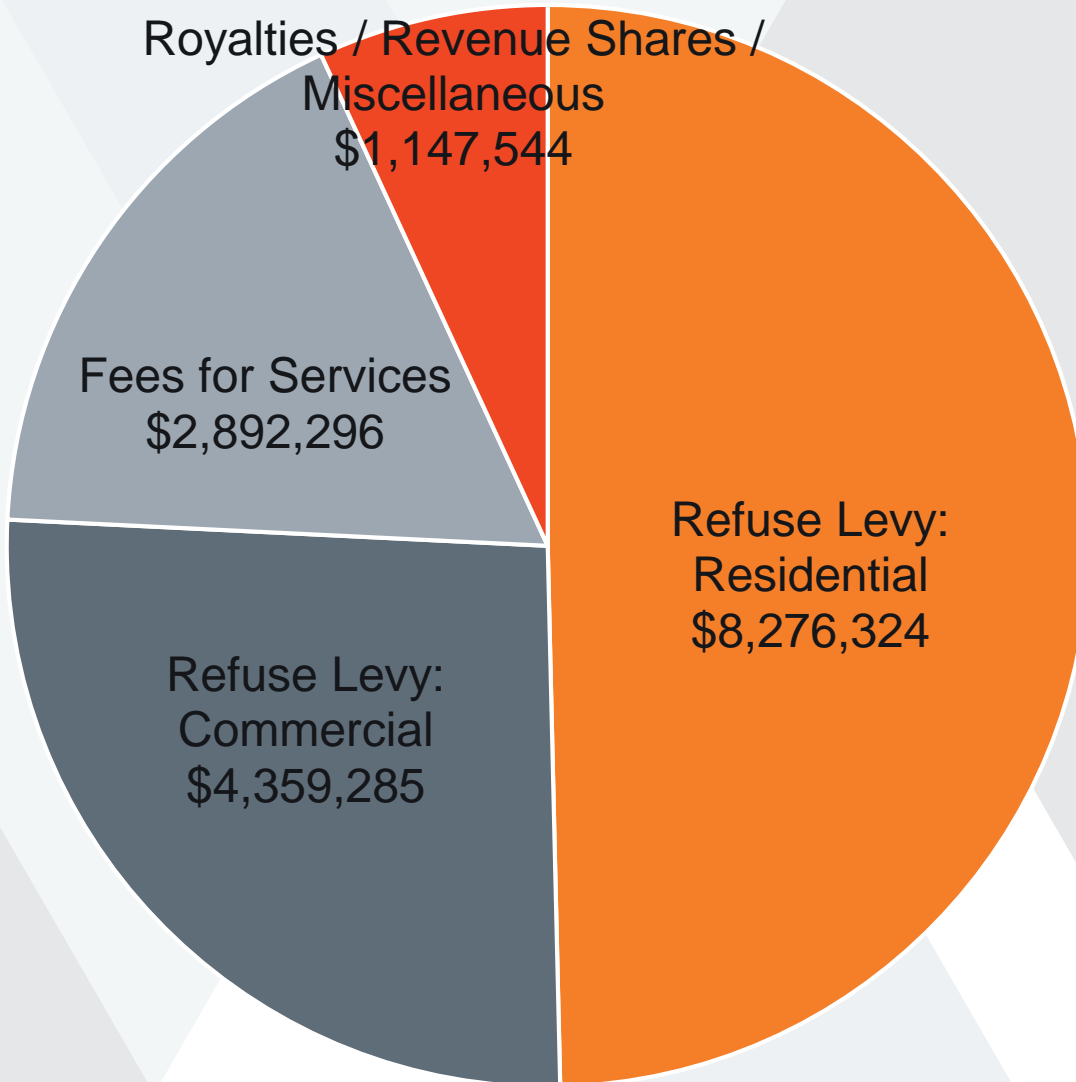
Note:

City MRF Cost (\$1.36 million in FY2018) increases the net cost per ton in FY2018 to \$191.91; cost includes:

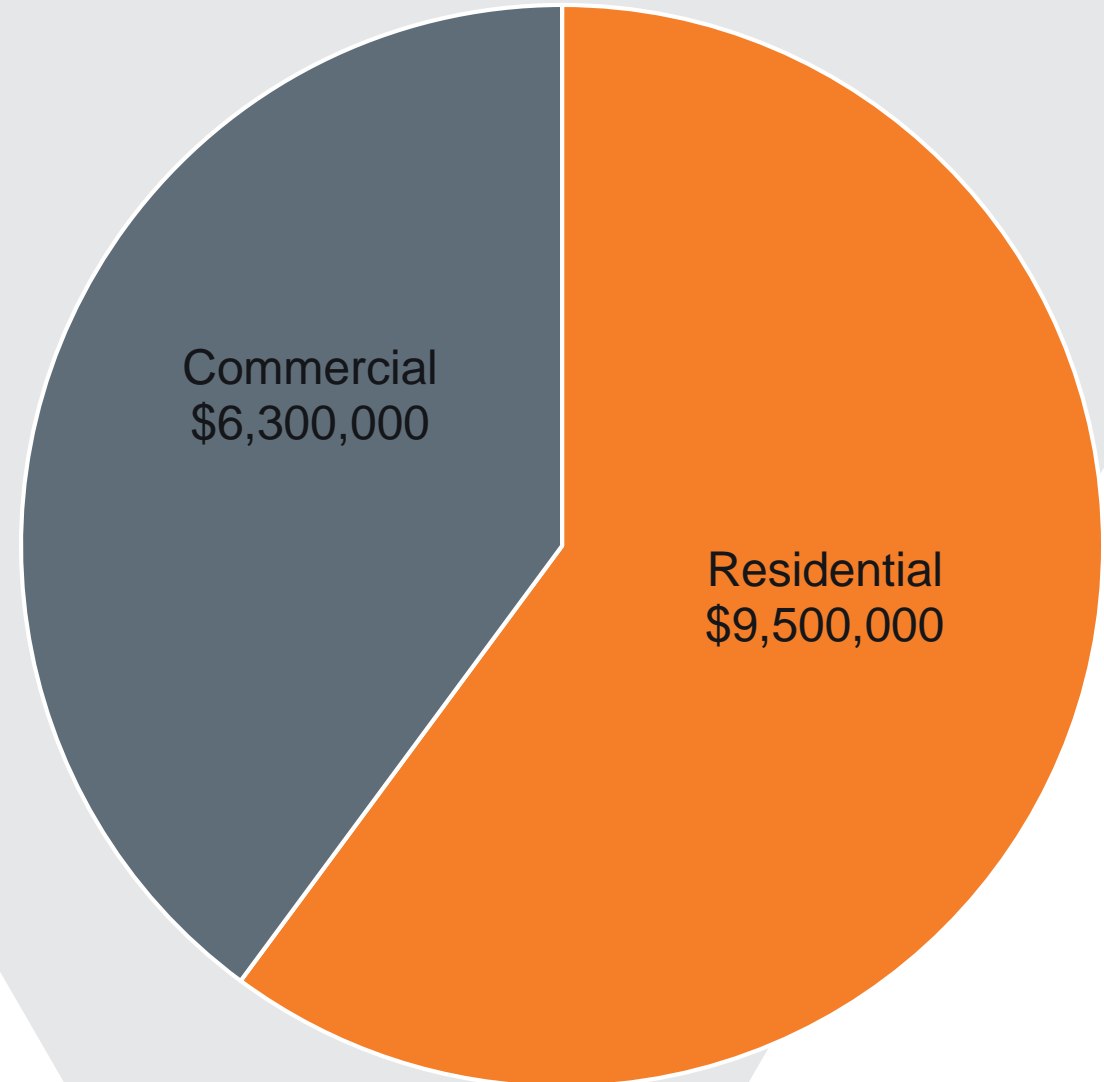
- 11 Depreciation (building & equipment) = \$625,000 MRF oversight = \$130,000 Utilities = \$23,000
- Repair & maintenance (building & equipment) = \$304,000 Administrative allocation = \$278,000

COST OF SERVICE ANALYSIS: REVENUES

REVENUE, BY SOURCE



EXPENSES, BY SECTOR



COST OF SERVICE ANALYSIS: FUND BALANCE

FY2018 operational revenue / expense summary

- Revenue = \$16,675,449
- Expense = \$16,157,889
- Revenues exceeded expenses by \$517,560 -> Fund operations surplus

FY2018 equity adjustments negatively impacted Fund balance

- Adjustments = -\$2,394,035 (expense / negative impact to Fund)
- Adjustments are required for:
 - Pension (GASB) and retiree benefit (OPEB) funding
 - Landfill closure and post-closure care liability
 - Capital assets
 - GAAP requirements

Fund balance declined \$1,876,475 during FY2018

REGIONAL COLLABORATION OPTIONS

Authority Formation Committee

- Facilitated by Washtenaw County Public Works
- Eight jurisdictions participated

City of Ann Arbor	Ann Arbor Township	City of Dexter	Pittsfield Township
City of Saline	Scio Township	City of Ypsilanti	Ypsilanti Township

Developed *Articles of Incorporation* for anticipated regional authority

- Washtenaw Regional Resource Management Authority (WRRMA)
- Will be shared with other jurisdictions for their consideration as well
- To be presented to Boards and Councils for action on acceptance
 - Anticipated presentation to Ann Arbor's Environmental Commission in January, 2019 and City Council in February/March, 2019

REGIONAL COLLABORATION OPTIONS

Committee's discussions on potential initial efforts include:

- Education and outreach
 - Common, consistent recyclables across member communities
 - Improved quality and quantity of recyclables
- Data and metrics for member communities and Authority as a whole
 - Create common accepted system
 - Gather baseline data and ongoing tracking of materials
- Future potential of shared collections contracting
- Work on member communities becoming attractive for recycling processing contractor
 - Providers of high quality and high quantity recyclable materials
 - Contract collaboratively or through the Authority for recyclables processing

BENCHMARKING: OVERVIEW

Benchmark communities:

- Boulder, CO
- Grand Rapids, MI
- Lincoln, NE
- Madison, WI
- St. Paul, MN
- Seattle, WA

Why selected:

- University communities with high student / rental population
- Similar population to Ann Arbor
- Commitment to high diversion
- Availability of data and information

BENCHMARKING: LEVEL OF SERVICE

Waste

- Generally consistent between communities - weekly collection, larger (64 or 96 gallon) carts
- Most include some level of bulky item collection, with or without a fee or limit

Recycling

- Weekly or every-other-week curbside collection with carts
- Curbside is single-stream, drop-offs may be single-stream or source-separated

Compost (Yard Waste / Mixed Organics)

- Widely variable schedule / frequency of collection between communities
- Service may be included/required as part of curbside collection, or by subscription, or drop-off
- Containment may be carts, bags, bundles, loose, or a combination
- Food may or may not be included in curbside collection

BENCHMARKING: FUNDING & SERVICE DELIVERY

Service delivery:

- City crews
- City-contracted private hauler
- Private haulers on open market (selected by customer)

Funding:

- User fees - flat rate, container-based rates, pure pay-as-you-throw rates with charges per setout or stickers
- Tax assessments - flat rate or valuation-based millage
- Combination of the above

BENCHMARKING: BANS & MANDATES

Services:

- Customers must subscribe to collection services (Boulder, Seattle)
- Haulers must provide recycling and compost collection (Boulder, St. Paul)
- Special events must include recycling and compost collection (Boulder)

Recycling:

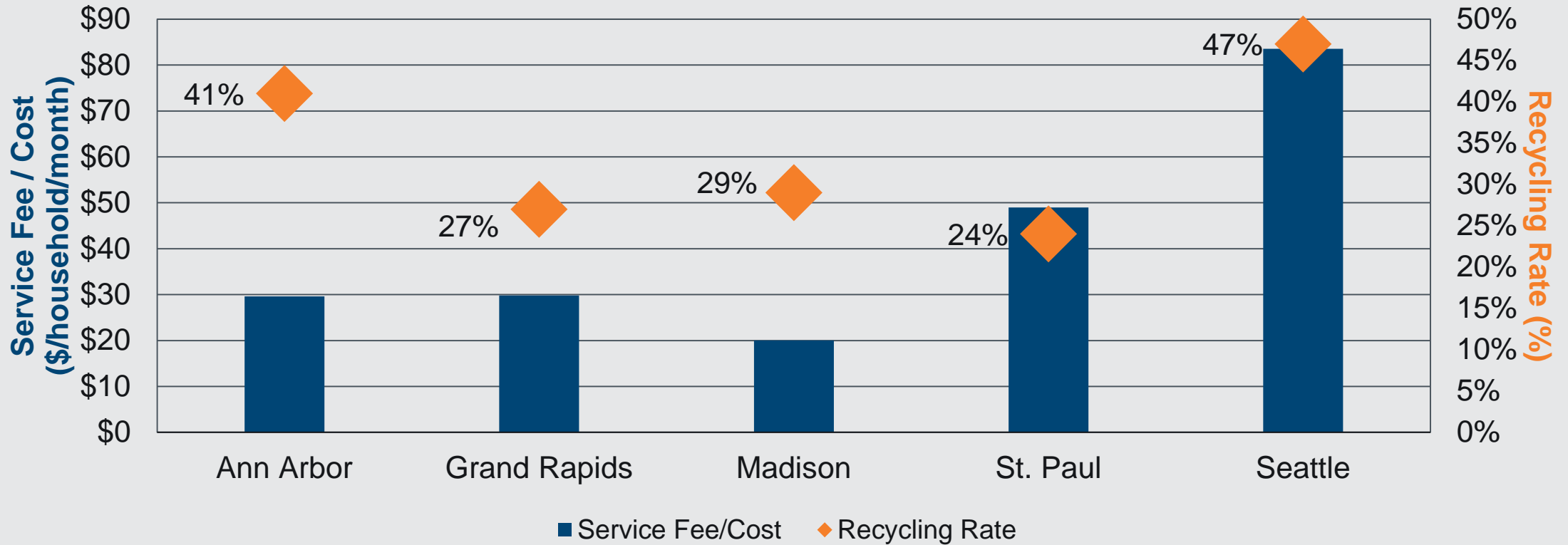
- Mandatory to recycle (Seattle, Madison)
- Must not dispose recyclables (Seattle) / cardboard (Lincoln) in trash

Composting:

- Must not dispose food (Seattle) / yard waste (Seattle, Grand Rapids, Madison, St. Paul) in trash

BENCHMARKING: FEES/COSTS VS. RECYCLING RATE

RESIDENTIAL SERVICE: FEE/COST VS. RECYCLING RATE



Notes:

1. Recycling Rate = (Tons Recycled) / (Tons Recycled + Tons Disposed)
2. For comparability between communities, recycling rate reflects residential recycling only and excludes compost diversion due to lack of compost tonnage data from some communities.
3. Monthly service fee/cost reflects comparable service to Ann Arbor for communities that have variable rate container pricing or PAYT service (weekly 64-gallon trash / recycling / subscription or mid-level compost collection).
- 20 4. Service fee/cost reflects rates charged to customers (fee) or cost of service. Service fees may not reflect the full cost of service and may be subsidized by other funding sources.

ANN ARBOR RESOURCE MANAGEMENT STRENGTHS

Comprehensive, uniform services widely available

Exemplary level of diversion achieved

Successes achieved without mandates or disposal bans

Lower cost of service than many peer communities

BENCHMARKING: DOWNTOWN ALLEY SERVICES

Seattle - Clear Alleys Program

- Bag-based collection - significantly reduced containers in public alleys
 - Exemptions for organics containers and grease containers, or other containers if City confirms inside space is not adequate
- Multiple collections per day - 3 for trash, 2 for recycling
 - High level of service must be provided by contractor

Dearborn - service consolidation and relocation

- Modified City ordinance to state that when containers are on public property (including public alleys), City has control over collection - including container size, location, and collection frequency
- Established container corrals and reduced numbers of containers
- Selected a single hauler and worked out collection frequency required
- Funded through millage funds

BENCHMARKING: DOWNTOWN ALLEY SERVICES

Nashville - moving containers inside businesses and off City service

- Historically provided 2 trash carts and 2 recycle carts to businesses with once per week pickup
- Evolved into need for continuous collection in downtown area
 - Trash - daily collection, 10 AM - 5 AM the following day - complete 2-3 collections daily
 - Cardboard - daily collection, 6:30 AM - 2 AM the following day
- Cost for service far exceeds funding from businesses - working now to enforce City ordinance and service limits and push containers back inside businesses for storage

Lexington - two collection cycles daily, streetside

- Daily collection - 2 AM - 10 AM (Wed-Sun); 2 PM-10 PM (Mon-Fri)
- Split-body truck for trash and recycling collection
- Many complaints about containers on sidewalks, but work with businesses to provide education and keep them aware of requirements to store carts inside or behind business after collection

ANN ARBOR ALLEY EFFORTS TO DATE

2016 alley investigations and internal work group

- Completed in-depth review of every alley
- Changed ordinance to allow earlier collection hours

Current conditions

- Addressing issues on a case-by-case basis
- Monitoring developing discussions with DDA and downtown business associations regarding alternative alley service

OVERVIEW OF RESIDENT SURVEY TOPICS

Current programs

- Awareness of available services and costs
- Behavior / use of services

Needs

- Specific programs and services
- Information and awareness - how information is obtained, what would motivate participation in programs

Future program enhancements / new programs

- Likelihood of use
- Willingness to pay for services / cost tolerance

RESIDENT SURVEY VALUE

Will the resident survey provide enough valuable information to justify its cost (\$30,000)?

The survey has a number of benefits:

- Identifies residential education needs
- Identifies what services residents want and how much they are willing to pay for them
- Provides cost sensitivity factor for cost model
- Provides opportunity for resident engagement in the SWRMP
- Explanatory / background information will be provided to residents during the survey

WHAT'S NEXT? 90 DAY LOOK-AHEAD...

Develop questionnaire and field scientific, random resident survey

Identify and outline program and service options

- Service delivery
- Tonnage impact
- Financial model to reflect resources required and costs

City staff activities

- Contract extensions with RAA and Waste Management
- Regional authority formation progress
- Monitor / participate in downtown alley plan development

KEEP UPDATED ON THE PROGRESS OF THE SWRMP

Website:

www.a2gov.org/SWRMP

Email:

SWRMP@a2gov.org

Individual Contacts:

Cresson Slotten

Project Manager

City of Ann Arbor

(734) 794-6430 x 43701

cslotten@a2gov.org

Christina Seibert

Project Manager

APTIM

(630) 762-3306

christina.seibert@aptim.com

Charlie Fleetham

Lead Facilitator

Project Innovations

(248) 476-7577

charlie@projectinnovations.com



TO: Mayor and City Council

FROM: Howard S. Lazarus, City Administrator

DATE: December 24, 2018

SUBJECT: Solid Waste Program Area Contracts Status

The delivery of services in the solid waste programs area has evolved over the years resulting in multiple parties, City staff and multiple contractors, providing different aspects of services associated with the programs area. The City currently has eleven separate contracts through seven contractors in the solid waste programs area. Three of the current contracts for collections and processing services will be expiring at the end of the current fiscal year: the commercial solid waste collection franchise contract with Waste Management of Michigan (WMM); the recycling collections contract with Recycle Ann Arbor (RAA); and, the interim operations contract for the Materials Recovery Facility (MRF) with RAA. A specific task in the City's contract with APTIM for the Solid Waste Resources Management Plan (SWRMP) is for their team to assist City staff in developing a Request for Proposals (RFP) to procure contractor services to replace these expiring contracts.

During the first meeting of the SWRMP Advisory Committee on November 14, 2018, the project team gave a presentation providing an overview/status on the SWRMP project that included a statement that the City is developing a consolidated Request for Proposals (RFP) for replacement of the existing contracts that will be expiring on June 30, 2019. Following the presentation, a question was raised by some of the participants as to whether or not this RFP should be delayed until after the SWRMP is completed.

On December 6, 2018, the Environmental Commission passed a resolution requesting that the City Council have the City Administrator consider not issuing the RFP until the SWRMP process is complete, which is anticipated for July, 2019. As per standard practice, the Environmental Commission's resolution is being forwarded to the City Council as a communication item on the January 7, 2019 agenda.

Rather than wait until a future date when City Council might act upon the Environmental Commission's request, staff and administration have discussed and considered the advantages of delaying the RFP process versus proceeding at this time. Though there are considerations, and even some advantages to issuing the RFP as soon as possible, there are several advantages and reasons to delay issuing the RFP as requested in the Environmental Commission resolution, including:

- If the SWRMP process results in recommendations proposing significant changes to existing services that would be covered by the replacement contract, they can be incorporated into the RFP.
- It would provide the opportunity for input from the informed members of the community through the SWRMP Advisory Committee; and, as Advisory Committee members raised the question of a possible extension to the existing contracts, delaying the RFP process would increase the trust and confidence of the Advisory Committee in the SWRMP process.
- There is a potential that a regional authority for solid waste materials management may be established in early 2019, and if so the City will have the opportunity to become a member of the authority; if the authority is formed, and the City decides to participate, delaying the RFP provides time to determine if/how to factor the authority into the RFP.
- If a Regional Authority is formed and the RFP is issued after it is established, the RFP may garner more interest from proposers interested and willing to invest in restarting the Ann Arbor Material Recovery Facility (MRF) as a processing facility to serve the greater region.
- The City will be able to continue to develop a beneficial plan for in-house services (at a minimum protecting current positions) and efficiently expanding services (e.g., looking to being able to extend residential organics collection to year-round service at no additional cost) by exercising management's right to assign work with an eye on evolving the "means and methods" of the City's delivery of services to embrace best practices, consistent with the spirit of City Council's approval of Resolution R-18-194, and reporting back to Council as these changes are made to ensure that there is no perceived conflict with the Council resolution.
- Several representatives of downtown merchant associations let staff know that they want to explore the potential of a new downtown solid waste district that would be managed by the DDA, as a way for them to have more opportunities to weigh-in on management decisions and flexibly adjust their solid waste service levels. Delaying the RFP allows for further development of this service delivery model to determine whether or not to include downtown services in the City's RFP.
- More time would be available for vendors to develop proposal responses.
- Delaying the RFP provides greater time for Council deliberations on and award of the contract, and for the selected contractor(s) to procure necessary equipment to perform the contracted service(s).

Taking into account all of these factors and considerations, I have determined that it is in the City's best interest to delay the issuance of the RFP until the conclusion of the SWRMP process. Staff is reaching out to WMM and RAA requesting that they agree to extend their expiring contract(s) for a one-year period to June 30, 2020 to ensure continuation of their services until the delayed RFP process takes place and replacement contract(s) are awarded. Once agreement to this request is received from the contractors,

staff will present a resolution to City Council to authorize the necessary contract amendments to put these extensions into place.

Cc: John Fournier, Assistant City Administrator
Craig Hupy, Public Services Administrator
Marti Praschan, Public Services Chief of Staff
Cresson S. Sloten, Public Services Area
Molly Maciejewski, Public Works Manager