



MEMORANDUM

TO: Mayor and City Council
Environmental Commission

FROM: Howard S. Lazarus, City Administrator

SUBJECT: Solid Waste/Recycling Update

DATE: July 17, 2017

I am forwarding the attached update to provide a comprehensive response to the questions that many in our community have had concerning solid waste and recycling issues over the past several months. The update provides a brief overview, followed by a discussion of the current status, intermediate planning efforts, and potential long term strategies. Undoubtedly, this document will “stir the pot,” but my hope is that it will also stimulate creative and positive discussion that reinforces our commitment to environmental sustainability as we look to the future.

As always, please do not hesitate to contact me if I can be of further assistance.

1 Attachment

cc: T Crawford
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SOLID WASTE/RECYCLING UPDATE

July 17, 2017

ABSTRACT

The recent challenges the City has experienced with the operation of the Materials Recovery Facility (MRF) have focused community attention on the overall approach to solid waste management. While updates and progress reports have been presented to both the City Council and the Environmental Commission, a comprehensive overview of the plans and strategies being considered for the future of solid waste management for the Ann Arbor community has not been presented. The intent of this memo is to address this topic with a review of the current funding and contractual status, to provide an update on intermediate planning efforts, and to promote a discussion of long term strategy options.

BACKGROUND

The City of Ann Arbor and its residents promote progressive approaches to environmental issues, and its methods for addressing solid waste management provide the cornerstone of its sustainability ethic. Consistent with this community value, the City provides a robust suite of services to its residents and businesses, including collection, transfer, and transport of solid waste; residential and commercial recycling (material recovery); compost collection; and landfill maintenance. Ann Arbor is the regional leader in recycling and waste diversion, as evidenced by the data presented in Table 1 below:

PARAMETER	CITY OF ANN ARBOR	ALL OTHER ENTITIES IN WASHTENAW COUNTY
Population	118,017	241,437
Households	49,789	100,654
MSW Generation (tons)	49,321	96,255
Recycling Estimate (tons)	14,714	12,630
Yard Waste Estimate (tons)	8,137	9,722
Total Waste Disposed (tons)	26,470	73,903
Total Diversion Rate	46.3%	23.2% ²
Total Diversion Rate Range		2% - 34%
Yard Waste Recovery Rate	31%	7% ²
Yard Waste Recovery Rate Range		1% - 28%
Average Annual Household Cost	\$297 ³	\$261 ⁴

¹Data obtained through Washtenaw County.
²Weighted average of all other jurisdictions in Washtenaw County.
³Calculation for an average annual household cost for Ann Arbor assumes a \$240,700 home using the current millage.
⁴Simple average of other jurisdictions in Washtenaw County.

The recent discussion concerning the partial closure of the MRF has raised concerns about the City's standing as a recycling leader. However, the data above indicates that recycling levels have remained

consistently high with a diversion rate above the national average 34.6% (2014 EPA rates). While the 46.3% exceeds the citywide goal of 40% rate targeted in the *Waste Less: City of Ann Arbor Solid Waste Resource Plan Update 2013-2017*, the total diversion rate is still below the 50% achieved by progressive locations (San Francisco’s rate exceeds 80% and California has required >50% rates statewide. Germany’s overall rate is ~62%) and the overall zero waste objective. It should be noted that the higher cost for service in Ann Arbor can be attributed to the legacy landfill costs and other factors unique to the City, and is not necessarily directly related to higher recycling rates. The data above should be viewed as “directionally correct,” and will be reviewed and revised as part of the update to the City’s Solid Waste Management Plan (see discussion in subsequent sections).

CURRENT STATUS

The City provides solid waste and recycling services through a variety of internal and external entities. Table 2 below identifies the current providers, the scope of services, and the contract status (as applicable):

TABLE 2 – CURRENT SERVICE PROVIDERS			
SERVICE	PROVIDER	CONTRACT EXPIRATION	NOTES
<i>Solid Waste</i>			
Transfer Station Operations and Landfill Tipping	Advanced Disposal	6/30/2022	Option for up to two additional 5-year periods.
Single-Family Residential Collection	City Staff	N/A	
Multi-Family Residential	City of Ann Arbor (Primary)	N/A	Generally, City collects all carts, and contract provider collects from dumpsters.
	Waste Management	06/30/19	
Commercial Waste Collection	Waste Management	06/30/19	Part of same contract noted above.
	City of Ann Arbor (carts and some dumpsters)	N/A	
Landfill Gas Recovery	ARIA	Rolling	May be terminated by either Party.
Landfill Monitoring & Maintenance	TetraTech	6/30/19	2-year contract with one 2-year option.
<i>Recycling</i>			
MRF Operations	Recycle Ann Arbor	6/30/2018	Option for one additional 1-year period.
Residential Recyclables Collection	Recycle Ann Arbor	06/30/18	Option for one additional 5-year period; City provides vehicles.

TABLE 2 – CURRENT SERVICE PROVIDERS			
SERVICE	PROVIDER	CONTRACT EXPIRATION	NOTES
Commercial Recyclables Collection	Recycle Ann Arbor (carts & 300-gallon totes)	06/30/18	Part of same contract for residential recyclables collection.
	City of Ann Arbor staff (Downtown; all dumpsters)	N/A	
Student Move-Out	Recycle Ann Arbor	06/30/20	Option for one additional 2-year period
Drop-Off Station Operations	Recycle Ann Arbor	12/31/17	
In-School Education Services	Ecology Center	6/30/18	
MRF Tours/Education	Ecology Center	6/30/18	Services now provided at Wheeler Center.
<i>Compost/Organics</i>			
Compost Center Operations	WeCare Denali, LLC	01/28/2018	
Residential Compost/Organics Collection	City of Ann Arbor staff	N/A	
<i>Overarching Items/Areas</i>			
Customer Service	City of Ann Arbor staff	N/A	
Scalehouse	City of Ann Arbor staff	N/A	
Compost Sales	City of Ann Arbor staff using WeCare equipment	N/A	

The most recent award of the contract for operation of the transfer station and landfill tipping has produced lower costs than the previous contract, however the contracts for interim MRF operations and student move-in/move-out include higher rates than the previous agreements. The interim MRF operations agreement is of particular interest, and provides for separation of cardboard and loose-loading of recyclables. Although much has been made about the suspension of the equipment to separate single stream materials, the contract with the interim operator actually calls for lower residuals than were required in the past and includes greenhouse gas reduction as a performance measure. While the materials are being transported in an unsorted condition, there is no reduction in the City's total diversion rate.

In addition to the contracts/service providers identified above, the City has two contracts with Chicago Bridge & Iron (CB&I, formerly Shaw Environmental). One contract provides for development of the Organics Management Plan, and that effort has been completed. The second contract provides for the evaluation of the City's previous contract for MRF operations and examination of business models for

MRF operations across the country. The report on this examination was completed last October and is available on the City’s website. CB&I’s final task under this agreement is to prepare a technical memorandum examining the interim operation of the MRF, and to identify the key parameters that impact the future processing of the City’s recyclables. The draft memo has been submitted and is undergoing review. Staff anticipates the memo will be finalized during the week ending July 21st.

The City of Ann Arbor’s Solid Waste Fund provides the resources for solid waste operations, without support or subsidy from the City’s General Fund. The sources and uses of funds are detailed below in Table 3.

TABLE 3 - FINANCIAL SUMMARY					
(All figures in millions of \$\$)					
	ACTUAL		PROJECTED		
	FY2015	FY2016	FY2017	FY2018	FY2019
<i>Revenues</i>					
Solid Waste Millage	\$11.7	\$12.0	\$12.4	\$12.6	\$12.9
Recycling Processing Credit	0.1	-	1.1	1.0	1.0
Waste Collection – Commercial	2.4	2.5	3.2	3.3	3.4
All Other	<u>0.6</u>	<u>1.9</u>	<u>0.7</u>	<u>0.7</u>	<u>0.7</u>
Total Revenues	\$14.8	\$16.4	\$17.4	\$17.6	\$18.0
<i>Expenses</i>					
Waste	\$5.5	\$5.8	\$6.1	\$5.6	\$5.7
Material Recovery	3.8	3.6	6.6	7.0	7.1
Compost	1.2	1.4	1.3	1.3	1.3
Depreciation	0.9	0.8	0.9	0.9	0.9
All Other	2.2	7.2	2.5	8.0	3.0
Total Expenses	\$13.6	\$18.8	\$17.4	\$22.8	\$18.0
Net	\$1.2	\$(2.4)	\$0.0	\$(5.2)	\$ -
<i>Memo</i>					
Anticipated Capital Needs			\$1.7	\$1.4	\$1.3
Unrestricted Fund Balance (net position)	\$15.1	\$12.7	\$11.0	\$4.5	\$3.2
OBSERVATIONS ABOUT ABOVE FINANCIALS:					
<ul style="list-style-type: none"> • FY15 All Other Revenues includes \$1M in returned monies from Project Mgmt/Fleet/Risk funds. • FY16 All Other Expenses includes a one-time change in landfill liability of \$5M. • FY18 All Other Expenses reflects one-time OPEB costs of \$5.2M. 					

Table 3 does not include an estimated \$6.8M for repair and/or replacement of the MRF. The planning-level estimate (provided the CB&I technical memorandum) provides for \$3,000,000 for equipment replacement (consistent with the early estimates staff previously provided) and \$3,800,00 for building modifications/upgrades to accommodate new equipment and address facility conditions. This is a variable number (and is likely to be one of the more scrutinized estimates), and is highly dependent upon the outcomes of the Solid Waste Management Plan update and potential partnerships/regionalization in the provision of solid waste services (see discussion in later sections). The funding of the MRF rehabilitation will be required in FY2019 and FY2020, under the assumption that the City will reach a determination on the future role of the facility during the current fiscal year and move to a long-term

strategy in FY2019. The current interim operations contract has a potential two-year duration in support of this direction.

INTERMEDIATE PLANNING EFFORTS

The past several months have been both hectic and stressful for City staff as they have seamlessly transitioned the transfer station/landfill contractor and replaced the emergency operations contractor to a longer term interim operator for recycling operations. During this period, staff has also advanced the following initiatives.

- Working with CB&I, staff is developing a Request for Proposals (RFP) for a new multi-year contract for compost center operations as the current contract expires in January 2018. The scope of services is currently being finalized, and the RFP is targeted for release by late summer.
- Following the release of the Compost Center Operations RFP, staff will begin work on developing the scope of services for the City Solid Waste Plan RFP. This RFP is currently targeted for a late fall/early winter release.

City staff will most certainly engage with the Environmental Commission and the larger community as these efforts progress.

In addition to the internal planning efforts, the City has been working with Washtenaw County staff to investigate the opportunities for partnerships in offering solid waste solutions. County staff is hosting the “Washtenaw County Regional Recycling Stakeholder Discussion” on August 2nd to gauge the interest in examining collaborative approaches to recycling and solid waste programs and operations. Representatives from all jurisdictions within the County, the University of Michigan, and the Ann Arbor Public Schools System are being encouraged to attend. The outcome of the August 2nd discussion will influence the City’s direction over the next 9 – 12 months.

Finally, the City is also considering several initiatives as interim measures that will also be included in the long term strategies. These approaches include the following:

- The changing landscape of the City’s development patterns calls for periodic reviews of collection routing and pick-up schedules. Staff will review the current assignments for efficiencies over the coming months.
- City staff is developing “Zero Waste Event” guidelines for the many special events that take place in Ann Arbor. These guidelines most likely can be adopted and enforced administratively.
- City staff is also developing “Green Purchasing” guidelines that will address not only the manufacturing processes and composition of materials procured, but will also provide for reductions in packaging and disposal of debris. We anticipate these requirements may also be adopted administratively.

LONG-TERM STRATEGIES

When the known and potential operating and capital costs are combined, it is clear that the City needs to assess its approaches to solid waste management as the Solid Waste Fund is not financially sustainable beyond the next two years. The preparation of the update to the Solid Waste Management Plan must include a detailed financial approach that is in concert with the included zero waste goals to prevent incongruity between environmental values and resource availability. The plan must provide strategies that address the following fiscal, market, and operational factors:

Fiscal

As stated above, the operating costs and capital requirements are expected to exceed the available financial resources beginning in FY2020. The stresses on the operating budget under the current model will continue to be affected by personnel costs, depreciation and equipment replacement, routing and equipment modifications to respond to changes in the market, fuel and transportation costs, introduction of new materials and items into the waste stream, and the balance between the incremental costs and benefits of increasing the recycling rate from the current 46%. Comparisons with other cities must be tempered with factors including transport costs and related emissions, the cost and availability of landfill resources, and restrictions in place at the state level.

The primary source of revenue into the City's Solid Waste Fund City is the dedicated millage included in the overall property tax bill. The millage provides ~72% of the \$17.6M in the current fiscal year. Therefore, increases in revenue to meet program needs in the future will almost certainly have to include discussions about the millage rate. Rising property taxes create burdens on commercial and residential property owners, adversely impacting community affordability and the competitive standing of the City as a place in which to do business. The financial component of the Solid Waste Plan Update should include a discussion of how the cost of service is captured, the nature of how services are provided, and whether or not consumers have options on types and frequencies of services.

Market

Changes in market have and will continue to strongly affect the City's solid waste and recycling strategies. The two primary areas of concern are (a) the changing nature of materials and the variability of the recycling market; and (b) how service providers are approaching the nature of contracted services. Each of these are discussed below:

The market for recovered recyclable materials has always been variable, but in recent years changes in the nature and types of materials have added uncertainty. The materials manufacturers are using are becoming more complex (Elizabeth Daigneau, *Governing Magazine*, "Is Recycling Broken?" June 2017). These materials require more sophisticated processing equipment that also require more frequent adjustment. Further, social changes – such as the virtual elimination of newsprint – have changed the economics of recycling. "Richard Coupland, vice president of municipal sales for Republic Services, notes that five years ago, the largest fraction of what his company was selling was newsprint. Today, he says, 'there's no supply and there's no demand for it, and yet we bought huge pieces of equipment to extract

newspaper and are still paying for those.” (Ibid). Other changes in the market include the decreased value of and demand for glass and plastics, as well as local diversion of aluminum due to “bottle and can” laws add to volatility of the market. In consideration of these factors, the City’s long-term strategy must consider whether or not it makes economic sense to invest almost \$7M in a fixed facility such as a MRF.

In the past, recycling contracts have incorporated the value of recovered materials into the pricing structures. However, with the changes in the market recycling companies are seeking to change the way in which they are compensated. Increasingly, they seek to mitigate their risk due to the recycling market and move to a cost of service reimbursement. Cities should begin to think about treating the recovered value as a nonrecurring source of revenues, while providing incentives for its service providers to continue to obtain the best reasonable prices for the materials (conversation with Robert Gedert, RSS consultant, July 2017).

Operational

The financial and market factors identified above will influence the long-term operational strategies that will be considered in the Solid Waste Management Plan Update. The primary areas of concern to be considered, but are not limited to the following:

- **Best Practice Benchmarking**: The setting of goals should be aspirational and set a “high bar,” but they should be achievable. Most municipalities are struggling with the same market factors as is Ann Arbor, and there are likely lessons learned that we can adopt and adapt. Objectives should follow the SMART principle, in that they are specific, measurable, assignable, realistic, and time-related.
- **Regionalization/Partnerships/Commercialization**: As previously mentioned, the City has requested that Washtenaw County lead a broad discussion about collaboration on solid waste and recycling strategies. We can anticipate this conversation will address the improvements in service levels and costs each entity can expect through cooperative relationships. Deeper cooperation and joint agreements may require the harmonization of practices (e.e. glass recycling with the University).
- **Revitalization of the MRF**: The discussion above has referenced the revitalization and future use of the City’s MRF facility. As stated, the expenditure of almost \$7M in a fixed facility that will require more frequent reinvestment than the City has provided in the past will need to be evaluated. Turnkey options (design/build/operate/maintain/finance) with private partners should also be considered.
- **Single-Stream Viability**: The primary force driving reconsideration of single-stream processing is the marketability of and contamination caused by glass. While many glass beverage containers carry the incentive of recovery of the bottle deposit, glass containers are still significantly present in the single-stream collection process. Some participants in the industry are trending toward source separation of glass containers, with local drop-off stations being provided. The counter to this “dual-stream” approach is the concern over reduction in recycling and diversion rates.
- **Education**: The City should review and determine which “best-practices” in consumer education it should adopt as part of the Solid Waste Management Plan. The means and methods of

communicating with the public and incenting behavior have changed considerably since the last update, and an evaluation of what would work well in the Ann Arbor community should be conducted.

- Legislative Action: Finally, the Solid Waste Management Plan Update should clearly and with a high degree of specificity list actions that will require legislative action to accomplish at the local, state, and federal levels. Potential areas of concern should include pursuit of items such as the local “bag ban” option and disposal by commercial waste haulers, as well as outreach to materials manufacturers.