SOLID WASTE RESOURCES MANAGEMENT PLAN

DRAFT REPORT PRESENTATION TO ENVIRONMENTAL COMMISSION

WORK COMPLETED SINCE APRIL 2019

✓ Draft SWRMP Report prepared

- Reviewed by City staff and revised for distribution to Advisory Committee and Environmental Commission
- Commented on by Advisory Committee

✓ Public engagement

 All Advisory Committee meetings complete - including an added 5th meeting to discuss draft SWRMP



WHAT HAVE WE PRODUCED?

Financial model

- Based on FY2018 actual costs and projections through FY2024
- Baseline (current) conditions
- Alternate scenarios for cost-impacting recommendations

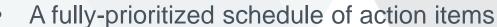
Comprehensive recommendations - 24 in total

- Service improvement or expansion 20 recommendations in 5 focus areas
- Funding 3 recommendations
- Cost savings 1 recommendation, \$775,000 in savings in first year

WHAT THE SWRMP IS NOT, AND WHY

The SWRMP is <u>not</u>:





Why is it not these things?

- Scope of work sought:
 - Current system analysis to identify needs
 - Cost of service study and financial model for near-term projections of Solid Waste Fund impacts
 - Solutions to address current system needs including known service issues in the downtown alleys, FOG management, education and outreach
- Scope validated through stakeholder interviews, focus group, and
- **Environmental Commission visioning**



Leader in Solid Waste Resources Management

Commitment to Zero Waste



OTHER ACTIVITIES PARALLEL TO SWRMP DEVELOPMENT

Regional collaboration

- City staff participated in planning and strategy discussions and development of Articles of Incorporation for the Washtenaw Regional Resource Management Authority (WRRMA)
- City has not decided whether to become a member of WRRMA

City MRF and recyclables processing

- Viewed as a regional need, potentially impacted by direction of WRRMA
- Currently seeking proposals for recyclables processing, including option for City MRF equipping and operation

Drop-Off Station replacement / options

 Operates as a regional facility, and has been discussed and studied as part of Washtenaw County Solid Waste Plan process and in WRRMA discussions

COST IMPACTS OF PARALLEL ACTIVITIES

Regional collaboration

- Initial membership commitment = \$5,000
- Future costs and funding method to be determined based on activities undertaken

City MRF and recyclables processing

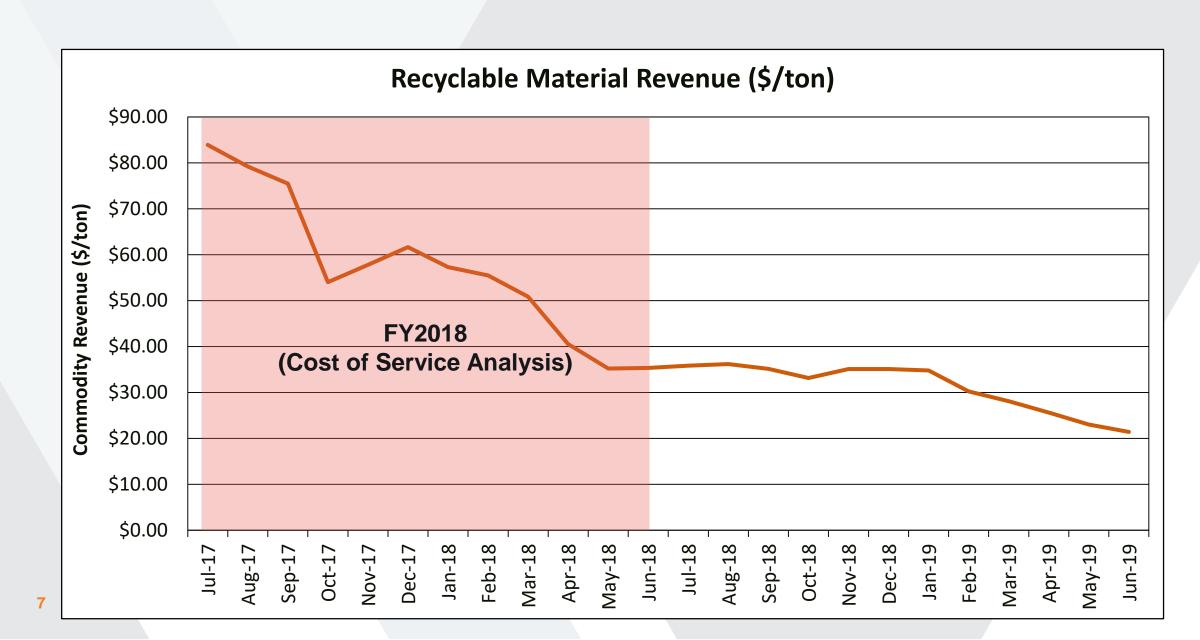
- Processing costs = loading + transport + processing
- Material revenues reduce net cost, but value of recyclables has declined significantly

Drop-Off Station replacement / options

- Capital cost for DOS replacement continues to be identified in City's 5-year CIP
- City desires funding commitments from other communities

Solid Waste Resources Management Plan

CITY MRF AND RECYCLABLES PROCESSING COSTS



WHAT ARE THE GOALS OF THE SWRMP?

2019-2023 SWRMP objective:

 Strategic approach to provide effective solid waste area services and programs to the community that meet the needs and desires of the community in a financially sustainable manner

Goals established in the 2013 Solid Waste Resource Plan based on the City's Zero Waste goal and incorporated in Sustainability Framework

- Goals continue to be relevant as broad planning targets and may be retained in the Sustainability Framework
- The 2019-2023 SWRMP provides technical, strategic direction to further the implementation of services and programs towards the previously stated goals

COMPREHENSIVE PUBLIC ENGAGEMENT GUIDED SWRMP DEVELOPMENT

Stakeholder interviews - July-September 2018

• 33 interviews with diverse range of stakeholders and participants in City's solid waste resources management

Focus group - September 2018

16 participants representing downtown perspectives

Resident survey - March 2019

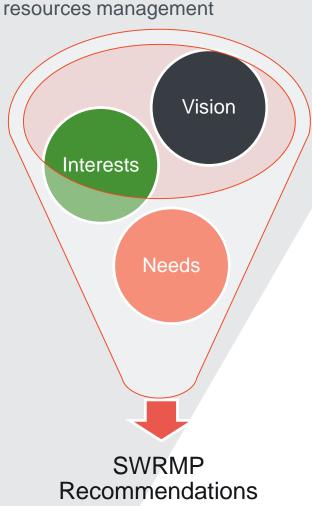
400 responses from representative sample of City resident population

Advisory committee - November 2018 - August 2019

- 5 meetings
- 60+ unique participants, representing 30+ organizations / residents

Unofficial / informal discussions with stakeholders - over course of project

- Downtown service options and service delivery structure
- Draft recommendations



ADVISORY COMMITTEE FEEDBACK ON RECOMMENDATIONS

Verbalized and written support for many recommendations

- Service expansions residential and commercial organics, textiles
- Service improvements downtown / alley services, commercial ordinance enforcement
- Education and outreach

Opposition to 1 recommendation by 6-10 participants

- Consolidating residential collection by bringing cart recycling in-house to be performed by City crews
 - Estimated savings of \$775,000 in first year
- Opposition based on:
 - Purported added value provided by current contractor and concerns about future recyclable material quality if current contractor not providing the service
 - Questioning validity of cost savings analysis

RATIONALE FOR CONSOLIDATED RESIDENTIAL COLLECTION

Increases service efficiency

- More efficient for fleet, staffing, routing, customer service
- Addition of 4-7 route drivers provides greater flexibility in meeting solid waste staffing and operations demands
- Right-sizes services particularly for multi-family properties best served with recycling dumpsters

Consistent with service delivery in benchmark communities

- High diversion rate communities, including Madison, San Francisco and Seattle
- Zero Waste goal communities, including Austin and Boulder

Creates significant cost savings of \$775,000 annually

- Support costs of other recommendations to improve and expand services
- Focus can be placed on education, motivating residents to separate materials properly <u>before</u> collection



COST SAVINGS ESTIMATE: LABOR ONLY

Current costs: RAA recycling cart collection

- RAA fee = collection labor (truck drivers, supervisors) + contract management (City invoicing, customer service)
- RAA fee based on contract rate:
 - Fee per cart + fee per ton collected
 - FY2018: \$4.00 + \$18.74/ton = **\$4.49/cart/month**
 - City incurs additional costs for City's provision of all equipment, including carts, trucks, fuel, and maintenance / repairs (this is a very unique arrangement)

Future costs: City-performed recycling cart collection

- Estimated City cost based on City unit costs for trash collection
 - Cart-based trash and recycling collection are identical operations in function and equipment
- City cost (FY2018): \$2.44/cart/month to perform current RAA services (collection labor)
 - Savings vs. RAA = \$2.05/cart/month (labor)
 - Cost savings may be greater; some multifamily / commercial properties with cart-based recycling may be converted to dumpsters, no estimate has been made of this savings

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CURRENT RAA CONTRACT COSTS

ANN ARBOR CITY COLLECTION CONTRACT INVOICE RESIDENTIAL RECYCLING SERVICES SOLID WASTE DEPARTMENT PURCHASE ORDER #2016-0000005 INVOICE 87280 ENDOR CODE: RECY0110

New annual tip fee 7/1/17

7,073 Fiscal YTD

16,163,81

16,163.81

This Invoice

Recycling collection cost = 1 + 2:

- **Cart Count**
- FOR SERVICES IN THE MONTH OF June 2018 Scheduled Lifts Single Family Carts MF Carts 8,065 Commercial Carts 2,151 Add MF Lifts 1,677 33,389 No of Units, This Involce

10805

11887

10804

11886

13075

4 18 74

\$ 20.00 25.00

100

PART D: PER-TON COMPENSATION YTD Tonnage, Last Invoice

Jun 2018 Tonnage YTD Tonnage, This Invoice

Tier 2

- 1. Cart count
- 2. Tonnage incentive

2 - Tonnage Incentive

Additional costs paid to RAA:

- **Customer education and** customer service support
- 4. Special events

- 3 Customer Education and **Customer Service Support**
- **Maintenance reimbursement**
 - RAA-performed maintenance, with cost paid by City back to RAA

4 - Special Events



Other adjustments

- Multi-tips at parks (3x/week)





Parks recycling collection

Cart purchases

COST SAVINGS ESTIMATE

Current costs: RAA recycling cart collection

At FY2018 values:

RAA contract: \$1,736,689

• Fleet: \$387,822

Vehicle R&M: \$517,662

• Fuel: \$98,110

FY2018 Total: \$2,740,283

FY2020 (3% annual increase): \$2,907,166



Future costs: City-performed recycling cart collection

At FY2018 values:

• City labor: \$905,195

• Fleet: \$334,152

Vehicle R&M: \$389,917

• Fuel: \$122,450

FY2018 Total: \$1,751,714

FY2020 (3% annual increase): \$1,858,393

FY2020 recycling collection savings with City collection = \$1,048,773 (Net savings is reduced to \$775,000 by including compost collection cost

increase due to transition from temp to regular labor)

OVERVIEW OF THE SWRMP: TOOLS, RECOMMENDATIONS, AND NEXT STEPS

NEW PLANNING TOOLS TO SUPPORT SWRMP IMPLEMENTATION

1. Cost of service analysis

- Reviewed at April 25 Environmental Commission meeting
- Identifies component costs for each functional area based on FY2018 expenses
- Enables comparisons across functions to identify cost and Solid Waste Fund balance drivers

2. Financial model

- Baseline (current) conditions, based on FY2018 financials
- Recommendations with cost impacts, beginning FY2020
- Projects costs and calculates Solid Waste Fund balance change compared to Baseline - utilized to determine added revenue needs

UNDERSTANDING THE FINANCIAL MODEL

Model Components:

- 1. Tonnage by sector and stream
- 2. Per ton disposal / processing / composting fees
- 3. Revenues
- 4. Expenses by function and type
- 5. Calculation of net operating surplus (deficit)
- 6. Other financial impacts: financial adjustments and capital projects
- 7. Fund balance
- 8. Residential and commercial program cost analyses

			Actual	Projected	Projected
			FY 2018	FY 2019	FY2020
Tonnages					
Residential Waste			15,017	15,017	15,017
Residential Recyclabl			10,566	10,566	10,566
Residential Organics	Component 1		9,085	9,085	9,085
Commercial Waste	Component		37,900	37,900	37,900
Commercial Recyclab	oles		3,320	3,320	3,320
Commercial Organics	5		0	0	0
Total	otal		75,888	75,888	75,888
Processing Fees (per	contract)				
Waste Transfer/Disp	osal (\$/ton)	\$	25.45	\$ 25.88	\$ 26.32
Recycling Processing	Fee (\$/ton)	\$	151.14	\$ 158.42	\$ 163.00
City MRF Cost	Component 2	\$	97.97	\$ 99.00	\$ 100.00
Recycling Processing	Credit (\$/ton)	\$	57.20	\$ 31.70	\$ 31.70
Organics Composting Fee (\$/ton)			18.95	\$ 22.00	\$ 22.42
Commercial Organics	Fee (\$/ton)	\$	-	\$ 25.00	\$ 25.83
Revenues					
Solid Waste Millage		\$	12,635,609	\$ 12,951,499	\$ 13,275,286
Commercial Waste F	ees	\$	2,760,171	\$ 2,898,180	\$ 3,043,089
Recycling Processing	Credit - 4 2	\$	794,557	\$ 440,186	\$ 440,186
Other	Component 3	\$	485,112	\$ 499,665	\$ 514,655
Total	Comp	\$	16,675,449	\$ 16,789,530	\$ 17,273,216
Expenses					
Residential Waste	1. A				
Collection	Component 4	\$	1,546,972	\$ 1,593,380	\$ 1,641,180
Transfer/Disposal	Compa	\$	388,115	\$ 388,640	\$ 395,247
Allocated Administr	ative	\$	499,645	\$ 514,634	\$ 530,073
Subtotal	a anonent 5	\$	2,434,732	\$ 2,496,654	\$ 2,566,500
Net Operating Surplu	Component 5	\$	517,559	\$ 151,701	\$ 185,986

UNDERSTANDING THE FINANCIAL MODEL

Model Components:

- 1. Tonnage by sector and stream
- Per ton disposal / processing / composting fees
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- 4. Expenses by function and type
- 5. Calculation of net operating surplus (deficit)
- 6. Other financial impacts: financial adjustments and capital projects
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			Actual		Projected		Projected
			FY 2018		FY 2019		FY2020
Financial Adjustments	(Credits)						
GASB Pension Liabilit	ry	\$	337,009	\$	275,000	\$	266,750
OPEB		\$	3,096,076	\$	(250,000)	\$	(250,000
Change in Landfill Lia	bility	\$	(172,799)	\$	(172,799)	\$	(172,799
Change in Capital Ass	sets, net of debt	\$	(948,972)	\$	-	\$	-
Subtotal	_	\$	2,311,314	\$	(147,799)	\$	(156,049
	a monent 6						
Capital Projects	Component 6						
Compost Pad Replace		\$	-	\$	-	\$	-
Drop-off Station Impo	rovements	\$	-	\$	-	\$	
Landfill Entrance Imp	rovements	\$	-	\$	-	\$	880,000
Methane Collection S	System Upgrades	\$	-	\$	-	\$	100,000
Subtotal	•	\$	-	\$	-	\$	980,000
		\$	(1,793,755)	\$	299,500	\$	(637,969
Fund Balance	. 7						
Beginning Balance	Component 7	\$	11,351,180	\$	9,557,425	\$	9,856,92
Ending Balance	Company	\$	9,557,425	\$	9,856,925	\$	9,218,960
Residential Program C	Cost Analysis						
Revenues							
Millage (65.5% of To	tal)	\$	8,276,324	\$	8,483,232	\$	8,695,31
Recycling Processing	Credit	\$	604,375	\$	334,942	\$	334,94
Subtotal		\$	8,880,699	\$	8,818,174	\$	9,030,25
Expenses							
Residential Waste	Component 8	\$	2,434,732	\$	2,496,654	\$	2,566,50
Residential Recycling	Colliboration	\$	5,869,616	\$	6,054,727	\$	6,213,73
Residential Compost		\$	1,531,650	\$	1,600,169	\$	1,645,99
City Events	-	\$	333,451	\$	343,456	\$	353,75
Subtotal		\$	10,169,449	s	10,495,006	S	10,779,98
Net Operating Surplus	s (Deficit)	s	(1,288,750)		(1,676,832)		(1,749,73
Deficit/Household	,	•	(-,,)	•	(-,-:-,500)	•	(-)
Annual		\$	(49.10)	s	(63.89)	s	(66.6
Monthly		Š	(4.09)		(5.32)		(5.5

UNDERSTANDING THE FINANCIAL MODEL

Recommendation Scenarios:

- 1. Enter new / changed expenses
- 2. Calculate resulting impact on Fund balance
- 3. Compare direct cost vs. the baseline (current) condition scenario
- 4. Evaluate unit cost (per household) impacts (residential only)

			Actual	Projected	Projected
			FY 2018	FY 2019	FY2020
Expenses					
Residential Waste					
Collection		\$	1,546,972	\$ 1,593,380	\$ 1,641,180
Transfer/Disposal		1 5	388,115	\$ 388,640	\$ 453,941
Program Addition - Bulky Item Col	lection	5	-	\$ -	\$ 318,041
Allocated Administrative		\$	499,645	\$ 514,634	\$ 530,073
Subtotal		\$	2,434,732	\$ 2,496,654	\$ 2,943,236
Fund Balance					
Beginning Balance	2	\$	11,351,180	\$ 9,557,425	\$ 9,856,925
Ending Balance	_	\$	9,557,425	\$ 9,856,925	\$ 8,842,225
Residential Program Cost Analysis					
Revenues					
Millage (65.5% of Total)		\$	8,276,324	\$ 8,483,232	\$ 8,695,312
Recycling Processing Credit		\$	604,375	\$ 334,942	\$ 334,942
Subtotal		\$	8,880,699	\$ 8,818,174	\$ 9,030,255
Expenses					
Residential Waste		\$	2,434,732	\$ 2,496,654	\$ 2,943,236
Residential Recycling		\$	5,869,616	\$ 6,054,727	\$ 6,213,731
Residential Composting		\$	1,531,650	\$ 1,600,169	\$ 1,645,995
City Events		\$	333,451	\$ 343,456	\$ 353,759
Subtotal	3	\$	10,169,449	\$ 10,495,006	\$ 11,156,720
Direct Cost Change vs. Baseline	9	\$	-	\$ -	\$ 376,735
Net Operating Surplus (Deficit)		\$	(1,288,750)	\$ (1,676,832)	\$ (2,126,466)
Deficit/Household					
Annual		\$	(49.10)	\$ (63.89)	\$ (81.02)
Monthly		\$	(4.09)	\$ (5.32)	\$ (6.75)
Change in Deficit/Household from	Baseline				
Annual		4 \$	-	\$ -	\$ 14.35
Monthly		\$	-	\$ -	\$ 1.20

BROAD DRIVERS FOR SWRMP RECOMMENDATIONS

Residential sector

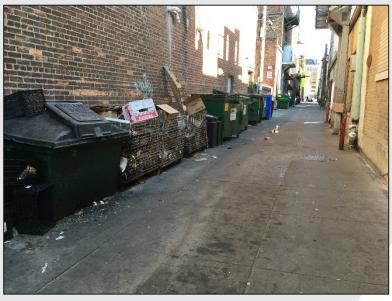
Build on existing programs / services / infrastructure

Commercial sector

- Ensure all businesses are participating in trash and recycling collection in accordance with City ordinances
- Increase diversion, including through addition of services

Downtown-area / alleys

Improve conditions / alley appearance related to solid waste resources management





SWRMP IMPLEMENTATION: BALANCING PRIORITIES

Operational Interests

High Quality Service

Waste Reduction

Fiscal Conditions

Available Funding

Customer Willingness to Pay

REVIEW OF RESIDENTIAL RECOMMENDATIONS

RESOURCE REQUIREMENTS AND IMPACTS											
	Resource R	equirements	Solid Waste Fund	Diversion	GHG Emissions						
Recommendation	Staff	Equipment	Direct Cost	(Incremental Tons)	(MTCO ₂ e)						
R.1. Year-Round Compost Collection	Change 2 schedules	+ 2 trucks (rent for 4 months)	\$147,000 \$0.47/hh/mo	110-274 \$540 - \$1,340 / ton	(61-176)						
R.2. Curbside Textiles Collection	None	None	\$0; revenue potential \$500 - \$2,860	25-143	9-(71)						
R.3. Bulky Item Collection	+ 2.5	+ 1 truck	\$380,000 \$1.20/hh/mo	0 tons	31						
R.4 / R.5. E-Waste and HHW Collection	None	None	\$0	Up to 340 (100% recovery)	No change						
R.6. Consolidated Residential Collection	+ 7 (less if some reassigned)	Replace 7 trucks	(\$775,000) (\$2.46/hh/mo)	No change	No change						

Note: Costs stated in \$/hh/mo indicate the cost impact per household per month, based on 26,247 City-collected households.

PROPOSED IMPLEMENTATION SCHEDULE											
	2020		20	21 20		22	20	23			
Recommendation	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec			
R.1. Year-Round Compost Collection				_							
R.2. Curbside Textiles Collection											
R.3. Bulky Item Collection				_							
R.4 / R.5. E-Waste and HHW Collection											
R.6. Consolidated Residential Collection											

REVIEW OF COMMERCIAL RECOMMENDATIONS

	RES	SOURCE F	REQUIRE	MENTS AND	IMPACTS				
Recommendation	Resource Ro	equiremer Equip		Solid Was		Diversion (Incremental Tons)		GHG Emissions (MTCO ₂ e)	
C.1. FOG Management	+ 0.25-0.5	No	ne	\$20,0	000	No ch	nange	No ch	nange
C.2. Commercial Organics Collection	+ 3	None		\$555,000		1,000-2,400 \$230-\$555 / ton		(700-	1,680)
C.3. Student Move-In / Move-Out Support	Short-term; assign 3.5	5 weeks/year)		\$55,0	000	0 tons		<1	
C.4. C&D Waste Diversion	+ 0.5	None		\$51,0	000	TE	3D	No ch	nange
C.5. Commercial Participation Enforcement	+ 1.5-2	+ 0.5-1 truck		\$840,000 - \$	\$1,680,000	1,700-4,400 \$380 - \$495 / ton		(4,879-12,628)	
C.6. Consolidated Commercial Collection	- 3 (reassigned)	None; may reduce truck fleet		City ops savings (\$660,000); contracted cost increase TBD		No change		Nominal savings	
	PRO	OPOSED I	MPLEME	NTATION SO	CHEDULE				
		20	20	20	21	20	22	20	23
Recommenda	ation	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
C.1. FOG Management									
C.2. Commercial Organics (Collection								
C.3. Student Move-In / Move	nt Move-In / Move-Out Support								
C.4. C&D Waste Diversion									
C.5. Commercial Participation	on Enforcement								
C.6. Consolidated Commerc	cial Collection								

REVIEW OF EDUCATION & OUTREACH RECOMMENDATIONS

	RESOURCE REQUIREMENTS AND IMPACTS											
	Resource Re	equirements	Solid Waste Fund	Diversion	GHG Emissions							
Recommendation	Staff	Equipment	Direct Cost	(Incremental Tons)	(MTCO ₂ e)							
E.1. Hire Education and Outreach Lead	+ 1	None	\$94,000									
E.2. Marketing / Advertising Campaign	Outside contractor	None	\$150,000	To be determined;								
E.3. Grassroots Outreach	+4 half-time to full-time	None	\$100,000 - \$200,000	based on implementation experience								
E.4. Track Performance	None	None	\$0									

Note: Cost impacts represent incremental costs for education and outreach in addition to the current contracted education services performed by The Ecology Center. Continuation of current services to be determined as part of overall strategy identified by the Education and Outreach Lead.

P	ROPOSED	MPLEMEN	ITATION SO	CHEDULE				
	2020		20	2021		22	2023	
Recommendation	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
E.1. Hire Education and Outreach Lead								
E.2. Marketing / Advertising Campaign								
E.3. Grassroots Outreach								
E.4. Track Performance								

REVIEW OF DOWNTOWN-AREA SERVICE RECOMMENDATIONS

	RESOURCE REQUIREMENTS AND IMPACTS											
	Resource Re	equirements	rements Solid Waste Fund		GHG Emissions							
Recommendation	Staff	Equipment	Direct Cost	(Incremental Tons)	(MTCO ₂ e)							
D.1. Mandatory Saturday / Sunday Collection	+ 0.75-1.25	None	\$330,000									
D.2. Container Consolidation Design	Consultant, with City staff support	None	\$45,000	No change	To be determined; based on design							
D.3. Procure Single Downtown Service Provider	None	None	TBD									

PROP	OSED IMP	LEMENTA	TION SCH	EDULE				
	2020		20	2021		22	2023	
Recommendation	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
D.1. Mandatory Saturday / Sunday Collection								
D.2. Container Consolidation Design								
D.3. Procure Single Downtown Service Provider	(Schedule depends on commercial franchise inclusion or not)							

REVIEW OF DIVERSION-RELATED FACILITIES AND FUNDING RECOMMENDATIONS

PROPOSED IMPLEMENTATION SCHEDULE											
	20	2020		21	2022		20	23			
Recommendation	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec			
Diversion-Related Facilities Recommendations											
DF.1. Drop-Off Station Replacement											
DF.2. Procure City MRF Operator											
Funding Recommendations											
F.1. Millage Increase - Headlee Override											
F.2. Waste Diversion Surcharge											
F.3. Service Fees		(As needed	based on	implement	ation of oth	ner recomn	nendations)			

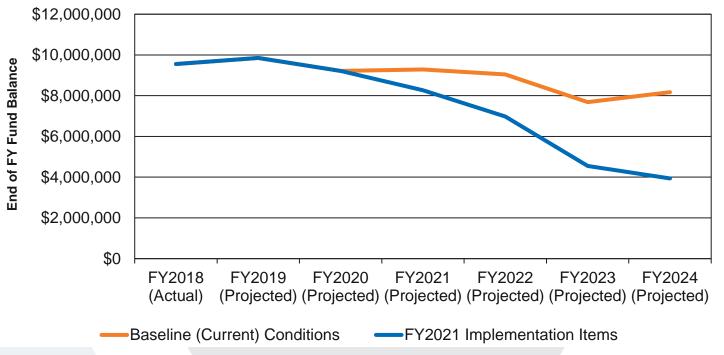
SOLID WASTE FUND BALANCE PROJECTIONS

Solid Waste Fund balance projections calculated in the financial model (Attachment D of the SWRMP) for current conditions and each recommendation with a cost impact

- Financial model does not include <u>any</u> added revenue for recommendations only cost impact
 - Some recommendations (e.g., commercial participation enforcement) would result in increased revenue based on current fee structure this would offset at least a portion of cost increases

Solid Waste Fund balance projections through FY2024 based on:

- Baseline (current) conditions (orange line)
- Recommendations suggested for FY2021 implementation (blue line)
- Fund balance projections based on current recycling processing and City MRF-related costs



FY2021 Implementation Items: Year-Round Residential Organics; Curbside Textiles; E-Waste and HHW; Consolidated Residential Collection; Commercial Organics; Student Move-In/Move-Out; Commercial Participation Enforcement; Consolidated Commercial Collection; Education and Outreach Lead and Grassroots Outreach; Downtown Mandatory Weekend Collection.

MOVING THE SWRMP FROM PLAN TO ACTION

Environmental Commission resolution regarding SWRMP completion

City Council work session - September 9

- Solid waste area updates
- SWRMP status and implementation steps
- WRRMA status and City membership direction

Near-term implementation of key SWRMP recommendations due to upcoming contract expirations

- Recyclables processing / MRF operations RFP
- Commercial franchise RFP
- Confirmation of direction to move forward with City collection of recycling carts

QUESTIONS/DISCUSSION