



City of Atlanta Department of Public Works

Solid Waste Plan

June 2018

MAYOR KEISHA LANCE BOTTOMS | WILLIAM M. JOHNSON, COMMISSIONER

Executive Summary: Solid Waste Plan

The City's Solid Waste Service Enterprise (SWS) is currently operating with a deficit year over year and is severely dependent on financing from the General Fund. In the absence of a major SWS fee overhaul, the deficit will continue to grow due to future expenditures from the rise in minimum wage to hike in disposal fees. Operations will also be negatively impacted due to the cost of replacing an aging fleet with new garbage trucks. **We are confident the proposed fees and continued focus from leadership on operational efficiency will steer this enterprise in the right direction, towards better servicing and educating the City's residents and businesses with the care and urgency they deserve.**

The City's SWS fee has had no significant adjustments since 2004. Since the 2004 increase to the garbage collection fee, there have been citywide technology implementations (e.g. Oracle, Kronos, and 311), escalating costs for fuel, disposal, labor, and maintenance and cost of living adjustments. None of these changes are reflected in the current SWS base fee.

The Solid Waste Office is aware that fee increases alone will not contribute to operational efficiency. To that end, we are now making pivotal changes to solid waste operations including; **1) Established partnership with Rubicon Global** to implement optimized collection routes, distributing a more balanced workload amongst internal crews and **reducing average distance traveled per route by nearly 20%.** **2) Enhancing our performance management routines** focused on rewarding and retaining top performers. **3) Utilizing technology/performance data to drive professional development.** We estimate **cost savings of \$1MM+** from operational efficiencies. (pg 7-9)

The proposed SWS fees add approximately \$18.5MM to the SWS operating budget. The proposed fees increase the total SWS fees by \$9 on average for residents (pg 12). Proposed fees include a commercial lot assessment fee according to parcel size across commercial businesses within city limits for front footage services. **Most of the services provided under front footage, seen on pg 5, are performed in commercial areas, currently funded by residents.** Additionally, the proposed fees introduce a fee for vacant lots of **\$700 per year**, covering the costs of disposal and clean-up associated with vacant lots.

The Proposed Fee Adjustment Would: (pg 14)

- 1) Eliminate enterprise dependence on General Fund** - The proposed SWS fee increase will cover current expenses and **end the dependency on the City's general fund.** Solid Waste ran -\$13MM deficit in FY17, with a **current total deficit of -\$82.8MM over previous years.**
- 2) Restructure an aging garbage truck fleet (pg 10 & 14)** - The proposed fees will pay for 49 additional garbage trucks over the next three years **adding approximately \$1.9MM total to the department's annual debt service.** Presently, SWS has no funding available for routine replacement. Each truck has a 8-year life-cycle. The average age of our existing garbage truck fleet is 7 years. We currently have 27 (31%) of 87 total trucks past their life cycle. **Garbage trucks are integral to operations, making it essential to have an established equipment replacement program.** Lack of reliable equipment affects operational efficiency and impacts overall service delivered to residents of the City. Currently the daily garbage truck requirement for optimal performance is 73, however only 61 trucks are available on average for daily service. This directly impacts the departments ability to carry out it's critical functions, such as the collection of residential yard trimmings.
- 3) Account for the minimum wage increase** - The proposed fees **compensate for the approximately \$2.1MM increase in personnel expenses** for the on-going compression from the rise in minimum wage, from \$13 to \$15 per hour for city workers per recent legislation (Ordinance 160171)
- 4) Account for an increase in disposal fees** - The proposed fees will take into account the recent 22% increase in disposal fees to the City's landfill vendor, saving the General Fund \$800K in annual expenses.
- 5) Fund CHaRM Drop-off Centers, SWEET Enforcement Officers, APS Partnership, and Solid Waste Website** - \$1.2MM (pg 11).



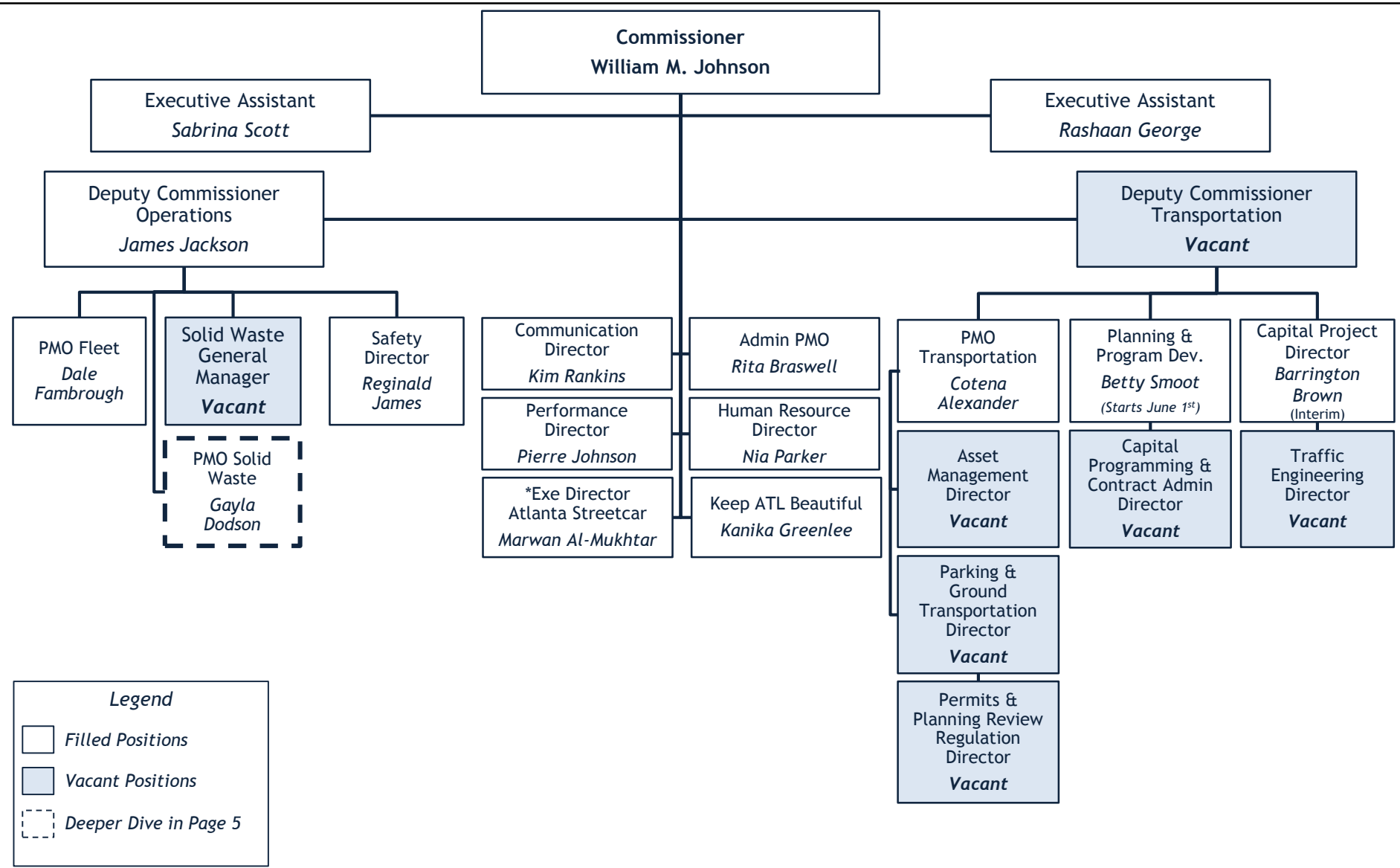
Table of Contents

Pages

A	Solid Waste Service Overview	4-6
B	Operational Efficiency Improvements in Progress	7-9
C	Equipment Replacement Plan	10
D	Additional Benefits	11
E	New Proposed Solid Waste Service Fees	12-13
F	Financial Summary (3-Year Proforma)	14
G	Next Steps	15
H	Appendix	16



A Solid Waste Leadership: Organizational Chart



Legend

- Filled Positions
- Vacant Positions
- Deeper Dive in Page 5

*Scheduled to be transferred to MARTA June 30, 2018

A Solid Waste Leadership: Organizational Chart (SWS Only)

Legend

- Solid Waste Manager
- Business Manager
- Installation Chiefs
- Supervisors
- Entry Level Employees

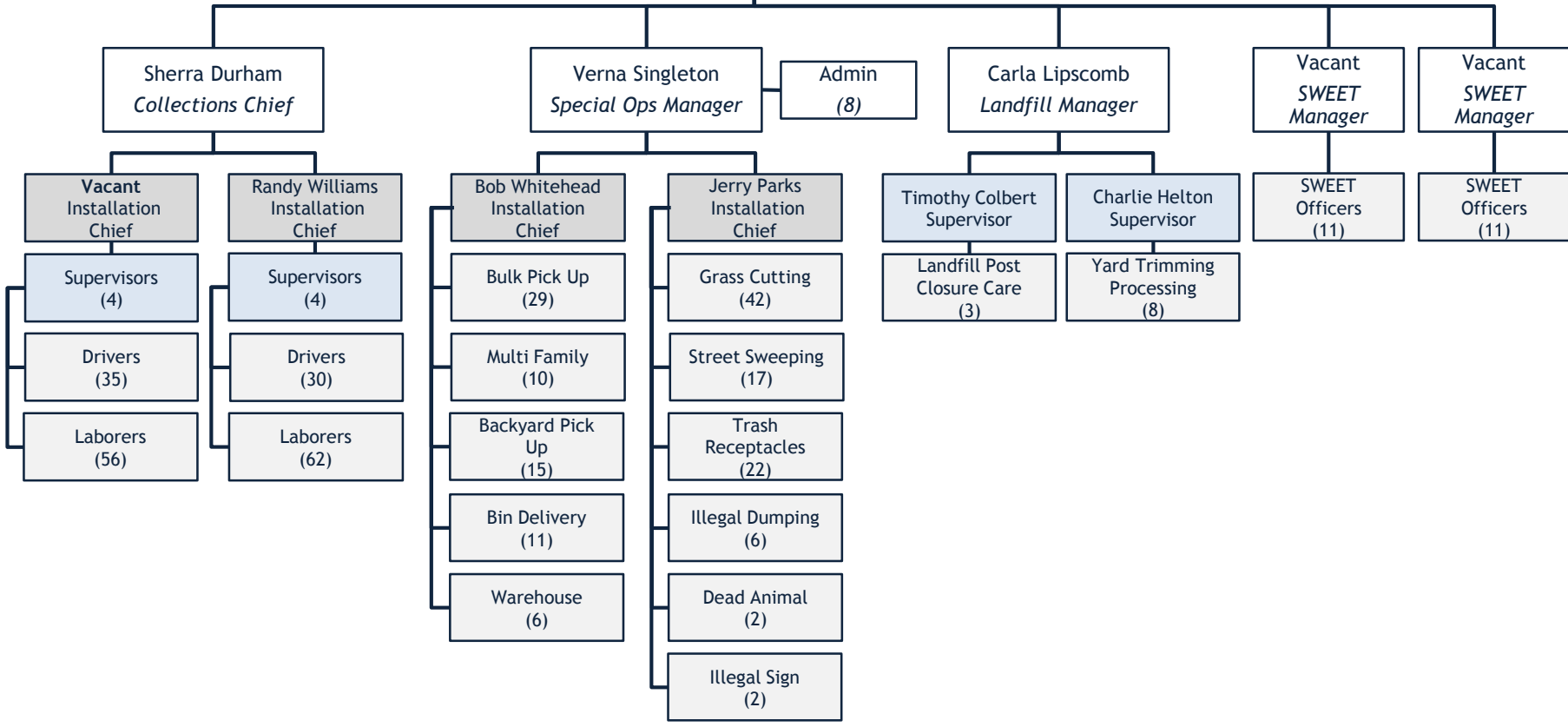
Total Employee Count

- 194 = Collections
- 173 = Special Operations
- 14 = Landfill
- 24 = SWEET
- 2 = Executive

- 407 = Total**

Gayla Dodson
PMO Solid Waste Service

Executive Admin



A City of Atlanta Solid Waste Service

Mission: The City of Atlanta Department of Public Works provides environmental services to over 450,000 residents and thousands of businesses each week. We develop and execute programs to promote waste diversion, recycling, environmental education, cleaning, greening, and community beautification throughout the City. We partner with key stakeholders in this effort, and support those initiatives that support the vision of making Atlanta among America's cleanest and greenest cities.

Collections



- Curbside Waste
- Curbside Recycling
- Curbside Yard Trimming
- Backyard Collections
- City Facility
- Residential Multi-Family
- Government District

Front Footage (Special Ops) Services



- Right-of-Way Maintenance
- Bin Delivery
- Dead Animal Removal
- Bulk Waste Collection
- Street Sweeping
- Illegal Dumping
- Illegal Sign Removal
- Special Event Staffing
- Vacant Lot Cut & Clean

Education & Enforcement



- Solid Waste Education Enforcement Team
- Supports Keep Atlanta Beautiful
- Public Education Information
- Community Outreach/NPU's



B Rubicon Partnership: Enriching Leaders via Technology

Route Optimization

Street by Street Directions - Detail

Solution Name: <active scenario>
Solution Label:

Disclaimer: The directions provided below are computer-generated and may be required to obey all traffic rules and regulations at all times. Such traffic rules computer-generated directions.

Route 5101

Directions	Address
Start route	Maddox Park
Left out of facility	NORTH AVE NW
Turn right onto (0.2 miles)	MARIETTA BLVD NW
Straight onto (3.4 miles)	MARIETTA BLVD NW
Turn right onto	BOLTON DR NW
Turn left onto	LIBERTY PKWY NW
Stay to the right on (0.5 miles)	LIBERTY PKWY NW
Keep left on	LIBERTY PKWY NW
Keep right on	LIBERTY PKWY NW
Keep right on	LIBERTY PKWY NW
Keep left on	LIBERTY PKWY NW

- ### Route Optimization
- Optimizes collection routes, distributing a more balanced workload amongst internal crews and reducing average distance traveled per route by nearly 20%.
 - Allows new routes to be sequenced any time new stops are added.

Data Pod Integration

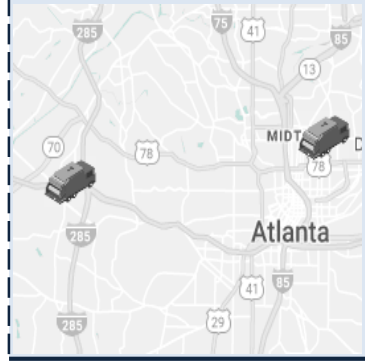
FridayRouteMSW 30466 has been stationary for

FridayRouteMSW 30466 has been stationary for

FridayRouteSSR Phone Battery is Below 10 %

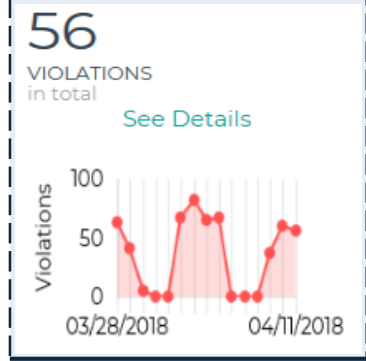
- ### Data Pod Integration
- Installed on each truck to monitor vehicle maintenance and route activity, in addition to collecting detailed information on recycle participation.
 - Examples include: oil light is on, headlight is out,, # of stops serviced, streets missed, vehicle has been stationary for extended period of time etc.
 - The Pod is plugged directly into the waste collection vehicle's dashboard and requires no interaction from drivers.

Vehicle Tracking



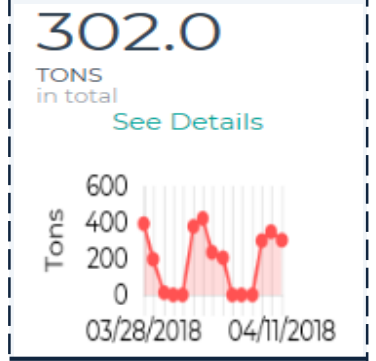
- ### Vehicle Tracking
- Supervisors can now view live maps of all vehicles and their locations.
 - Provide supervisors insights into driver productivity and route completion percentages.

Educate Residents



- ### Resident Education
- When a location is not serviced, drivers are prompted to flag the reason (e.g. 'Bin Not Out,' 'Contaminated,' 'Blocked,') and take a photo of the issue.
 - Once a photo of the issue is captured it is flagged to a specific location.
 - Solid Waste Services has the ability to e-mail the image directly to the resident with tips on how to fix the issue for future pick-ups.







Disposal Reporting



- ### Disposal Reporting
- Application logs daily records of the total waste and recycling tonnage collected throughout the City.
 - Once a driver is at a disposal site, the app prompts driver to enter ticket and weight numbers, creating a digital disposal record, reducing incidents of unaccounted tonnage + equipping leaders with productivity insights.

B Rubicon Partnership: Service Area + Route Optimization

Facing resource challenges in the existing Solid Waste operating model, our team engaged Rubicon Global to optimize service areas (zones) and daily collection routes. Rubicon and Solid Waste team combined technical + operational expertise to deliver an execution plan for a more efficient collection operating model.

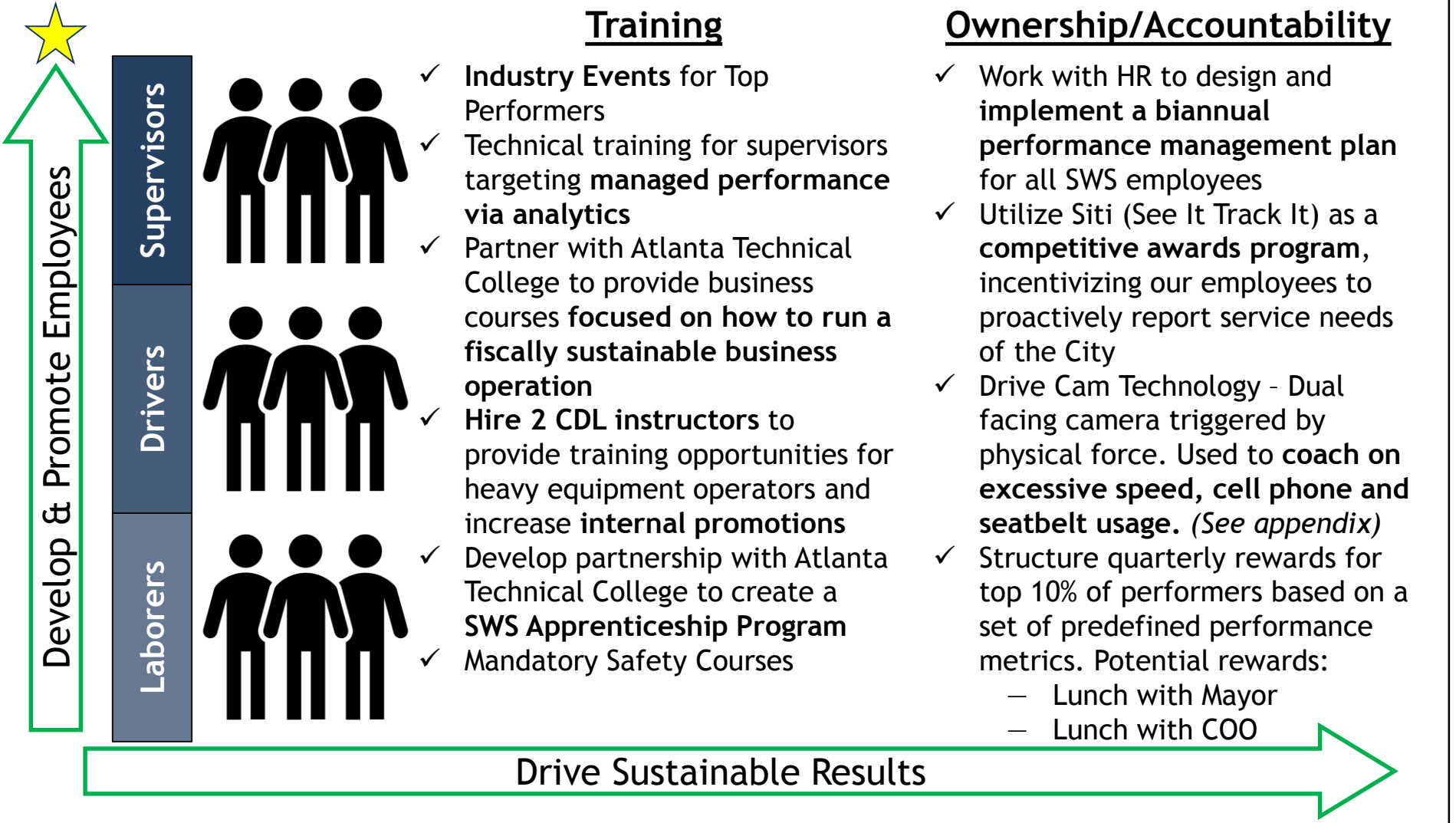
Servicing ~97,000 Households		Current (4 Day Service)	Future (5 Day Service)	Key Benefits
Service Areas	Total Service Areas	4 Service Areas	5 Service Areas	<ul style="list-style-type: none"> Optimizing collection service areas lessens the variance in route times and evenly distributes work load across Solid Waste Crews. Optimizing the routes will reduce the average distance traveled per route by ~20%, minimizing fuel and overtime cost. Current (4-Day) - 58 Routes per day <ul style="list-style-type: none"> 24 Garbage Routes 17 Recycling Routes 17 Yard Waste Routes Future (5-Day) - 50 Routes per day <ul style="list-style-type: none"> 20 Garbage Routes 15 Recycling Routes 15 Yard Waste Routes HR & Fleet Impact: Reducing the routes per day scales down the daily personnel and truck requirement, saving \$1MM+ annually
	Total Garbage Routes	97 ¹ Routes	100 Routes	
	Garbage Routes Per Service Area	24 Routes	20 Routes 	
Routes	Routes Per Day (All Streams)	58 Routes	50 Routes 	
	Avg Garbage Route Distance	85 Miles	65 Miles 	
	Hours Per Day (Route Times)	6-12 Hours	8 Hours 	
	Hours/Week Per Employee	Up to 48 Hours (8 hours overtime per week)	40 Hours 	
HR & Fleet Impact	Daily Truck Requirement	74 Trucks	65 Trucks 	
	SWS Collection Active Employee Total	184 Employees	160 Employees (Reduction through natural attrition)	



¹ 24 Routes Monday - Thursday and one route on Friday
DEPARTMENT OF PUBLIC WORKS

B Enhanced Performance Management: Training & Accountability

Utilize performance analytics to drive professional development, building organization wide trust and ownership.



C Equipment Replacement Program: Aging Garbage Truck Fleet

The Goal of the equipment replacement program is to operate a fleet of vehicles entirely within the vehicle's 8-year life cycle.

Solid Waste Fleet		Current	Future (Year 1)	Future (Year 2)	Future (Year 3)	Comments
Total Fleet	1 Total Trucks	87 Trucks	84 Trucks	79 Trucks	73 Trucks	1 Currently the SWS average vehicle age is 7 years 2 Without purchasing new trucks, 63 of 87 trucks will be beyond their life cycle in year 3
	2 Scheduled Out of Life Cycle	27 Trucks	27 Trucks	38 Trucks	63 Trucks	
3 Equipment Replacement Program	Purchase	0 Trucks	+9 Trucks	+20 Trucks <small>(25% Fully Automated)</small>	+20 Trucks <small>(50% Fully Automated)</small>	3 Full equipment program cost on page 13 4 Goal of equipment replacement program is for all trucks to operate within the 8-year life cycle 5 1/3 of the rear loader fleet is out of service daily 6 Reducing the routes per day reduces the daily truck requirement 7 Daily Shortage directly impacts the department's ability to carry out its critical functions, such as the collection of residential yard trimmings 8 Older trucks are consistently in and out of service. Replacing older trucks with new ones will decrease the daily average number of trucks that are inoperable. Trucks past life cycle average cost of \$55K per year in maintenance while those within life cycle average \$35K per year. Full execution of replacement plan can save up to \$1.2MM on maintenance and \$500K from operating fully automated vehicles
	Sell	0 Trucks	-12 Trucks	-25 Trucks	-26 Trucks	
	4 Planned Vehicles Out of Life Cycle	27 Trucks	15 Trucks	1 Trucks	0 Trucks	
	5 Daily Average Inoperable	26 Trucks	24 Trucks	18 Trucks	10 Trucks ↓	
	Daily Average Availability	61 Trucks	60 Trucks	61 Trucks	63 Trucks ↑	
Daily Requirement	6 Daily Collection Routes	58 Routes	50 Routes	50 Routes	50 Routes	
	Daily Vehicle Breakdown	6 Trucks	5 Trucks	4 Trucks	3 Trucks	
	Spare Requirement	10 Spares	10 Spares	10 Spares	10 Spares	
	Total Daily Requirement	74 Trucks	65 Trucks	64 Trucks	63 Trucks	
7 Daily Shortage		-13 Trucks	-5 Trucks	-3 Trucks	0 Trucks	
8 Potential Maintenance Cost Savings		\$-	\$240K	\$760K	\$1.2MM	

D Additional Funding for CHaRM, Enforcement & Education

Cost

CHaRM	Fund 4 new CHaRM drop-off centers - The Center for Hard to Recycle Materials (CHaRM). It is a permanent drop-off facility that aims to improve our environmental health by encouraging reuse and diverting thousands of pounds of household hazardous waste, bulky trash and other hard to recycle items from Metro-Atlanta landfills and water systems.	\$800K
SWEET	Solid Waste Education & Enforcement Team (SWEET): SWEET Officer program will be expanded from a 5 day work week to a 7 day work week. One SWEET officer will be assigned to each NPU. SWEET Officers oversee education and enforcement of City of Atlanta solid waste ordinances/codes which provide for the protection of property, safety and the welfare of the general public.	\$280K
APS Partnership	The Department of Public Works partners with Atlanta Public Schools to support student enrichment by providing environmental outreach and educational resources. To further promote STEM-related instruction and align with current standards, we offer informative and interactive educational workshops about recycling and the students' role in litter prevention and beautifying their community. Our goal is to reach residents in their youth to develop responsible environmental stewards for years to come.	\$100K
Solid Waste Website	Comprehensive DPW Solid Waste Portal: The portal is a website where residents can see a comprehensive view of their collection schedule. Residents can type in their address and receive information on their garbage, recycling, bulk, and yard trimming schedules. The Portal can send notifications and alerts to residents regarding their solid waste services by request. The Portal also enables residents to schedule their special service needs.	\$20K

Total **\$1.2M**

E Proposed Solid Waste Service Fees

We propose removing the front footage fee for residences, recycling to remain constant and increasing residential fees by \$9 on average per resident. In addition, we are proposing a commercial and vacant residential lot fee itemized below.

Proposed Annual Solid Waste Fees

Solid Waste Services	FY 2018 (Current)	FY 2019
<i>Residential Fees</i>		
Residential Recycling	\$88	\$88
Residential Single-Family Base Fee	\$307	\$366
Residential Front Footage (Avg)	\$50	\$0
Residential Total (Avg)	\$445	\$454
<i>Residential Backyard (Optional)</i>	\$962	\$1,146
<i>Residential Vacant Lot</i>	\$0	\$700
<i>Commercial Fees</i>		
Commercial Parcel Lot Fee (1 - 100 ft.)	\$2.89 - \$289*	\$600
Commercial Parcel Lot Fee (101 - 200 ft.)	\$292 - \$578*	\$1,300
Commercial Parcel Lot Fee (201 - 450 ft.)	\$581 - \$1,300*	\$3,000
Commercial Parcel Lot Fee (451 - 700 ft.)	\$1,303 - \$2,023*	\$5,000
Commercial Parcel Lot Fee (701 - 850 ft.)	\$2,025 - \$2,456*	\$7,000
Commercial Parcel Lot Fee (>850 ft.)	\$2,456+*	\$10,000

\$9 Increase

*Current COMMERCIAL & INDUSTRIAL - Table is based on \$2.89 per foot

- \$ 7.60 per foot of street frontage property located in central business/downtown district receiving street cleaning nightly
- \$ 3.70 per foot of street frontage for property located in all areas receiving special thoroughfare street cleaning (at least once a week)
- \$ 2.89 per foot of street frontage for all other commercial and industrial property receiving regular street cleaning
- \$ 0.67 per foot of unpaved street frontage from commercial and industrial property abutting unpaved streets to cover rubbish collection cost
- SWS Fee for multifamily owners (6 units or greater) will have no fee impact.
- Senior discount remains the same



E Fee Benchmark: Service Operating Models Vary

There are no exact comparable fee benchmarks. Cities run various operating models.

Operating Model

#	City	Rates	Waste Frequency	Recycle Frequency	Yard Waste Frequency	Bulky Waste Frequency	Residential and/or Commercial	Own Landfill or Transfer Station	Private Haul (Yes/No)	Bulky Waste Fee	Back Door Fee
1	Seattle, Wa	\$1,332	1x week	1x week	1x week	Upon request	Both	Yes	No	Yes	Yes
2	Oakland, CA	\$1,224	1x week	1x week	1x week	Upon request	Both	No	Yes	No	Yes
3	San Jose, CA	\$1,194	1x week	Varies	Upon request	Upon request	Both	Yes	Yes	No	Yes
4	Portland, OR	\$528	Every other week	1x week	1x week	Upon request	Both	Yes	Yes	Yes	Yes
5	San Francisco, CA	\$480	1x week	1x week	1x week	2x year	Both	Yes	No	No	No
6	Miami, FL	\$464	2x week	2x week	1x week	2 Call in per year	Both	Yes	No	Included	Yes
7	Atlanta, GA	\$445	1x week	1x week	1x week	Monthly	Residential Only	No	No	No	Yes
8	Tampa, FL	\$418	2x week	1x week	1x week	Upon request	Both	Yes	No	No	N/A
9	Minneapolis, MN	\$342	1x week	Biweekly	1x week	2 items per week	Both	Yes	No	Included	No
10	Douglasville, GA	\$320	1x week	1x week	1x week	Upon request	Both	No	No	Yes	No
11	Marietta, GA	\$316	2x week	1x week	1x week	Upon request	Residential Only	No	No	Yes	No
12	Cobb Co.	\$315	1x week	1x week	1x week	Upon request	Both	Yes	Yes	Yes	N/A
13	Augusta, GA	\$310	1x week	1x week	1x week	1x week	Residential Only	Yes	No	No	No
14	Dekalb Co	\$265	1x week	1x week	1x week	Upon request	Both	Yes	No	No	No
15	Decatur City	\$234	1x week	1x week	1x week	1x week	Both	No	Hybrid	No	No
16	Orlando, FL	\$231	2x week	1x week	1x week	1x week	Both	Yes	No	Included	No
17	Gwinnett Co.	\$230	1x week	1x week	1x week	Upon request	Both	No	Yes	Yes	N/A
18	South Fulton, GA	\$225	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	N/A
19	Clayton Co.	\$220	1x week	Drop-off	1x week	Upon request	N/A	Yes	Hybrid	Yes	N/A
20	Sandy Springs, GA	\$215	N/A	N/A	N/A	N/A	Both	Yes	Yes	No	N/A
21	El Paso, TX	\$204	1x week	Drop-off	Not provided	Upon request	Both	Yes	Private	Yes	Yes
22	College Park, GA	\$200	2x week	Drop-off	1x week	Upon request	Both	Yes	No	Yes	No
23	Tucson, AZ	\$200	1x week	1x week	1x week	2x year	Both	Yes	No	Yes	Yes
24	Charlotte, NC	\$186	1x week	1x week	1x week	1x week	Both	Yes	No	Yes	Yes

City of Atlanta Solid Waste Service provides a number of services that combined are not typically rendered by other City solid waste departments with similar size populations.

- + Signage Removal
- + Right-of-Way Maintenance

- + Street Basket Collection
- + Dead Animal Collection

- + Street Sweeping
- + Vacant Lot Cleaning



F Financial Summary: Sustainable Solid Waste Budget

Solid Waste 3-Year Proforma Includes: Elimination of enterprise dependence on General Fund, restructured aging garbage truck fleet, accounts for the minimum wage increase, increase in disposal fees, funds CHaRM Drop-offs, SWEET Enforcement Officers, APS Partnership, and Solid Waste Website.

Solid Waste 3-Year Proforma <i>In Millions</i>	FY 2018 (Current)	FY 2019	FY 2020	FY 2021	Financial Comments
Revenue					
Current Revenue	\$51.0	\$51.0	\$51.0	\$51.0	
① Increase From New Fees	-	\$18.5	\$18.5	\$18.5	① Fee Increase ✓ Residential removal of frontage fee ✓ Increase residential rates by \$9 on average in FY19 ✓ Commercial lot fee addition in FY19
Total Revenue	\$51.0	\$69.5	\$69.5	\$69.5	② Current Expenses - Currently running on a -\$13MM annual deficit
Expenses					
② Current Expenses	-\$64.6	-\$64.6	-\$64.6	-\$64.6	③ Vehicle Debt Service - \$1.9MM annually ✓ FY18 - 9 trucks for an additional \$300K/year (6 years) ✓ FY19 - 20 trucks for an additional \$800K/year (6 years) ✓ FY20 - 20 trucks for an additional \$800K/year (6 years)
Additional Expenditures					
③ Additional Vehicle Debt Service	-\$0.3	-\$1.1	-\$1.9	-\$1.9	④ Rise in Minimum Wage - \$2.1MM annual add for compression ✓ FY18 - \$13/hour compression impact of \$500K ✓ FY19 - \$14/hour compression impact of \$700K ✓ FY20 - \$15/hour compression impact of \$900K
④ Rise in Minimum Wage	-\$0.5	-\$1.2	-\$2.1	-\$2.1	
⑤ Hike in Disposal Fees	-	-\$0.8	-\$0.8	-\$0.8	
⑥ CHaRM, Enforcement & Education	-	-\$1.2	-\$1.2	-\$1.2	
Additional Capex	-	-\$2.6	-\$2.6	-\$2.6	
Total Operating Expenses	-\$65.4	-\$71.5	-\$73.2	-\$73.2	⑤ Hike in Disposal Fees - \$0.8MM annually ✓ FY19 - Disposal cost per ton increased 22%
Expense Reduction: Route Optimization	-	\$1.0	\$1.5	\$1.5	⑥ Additional Solid Waste Services - \$1.2MM annually ✓ 4 CHaRM drop-off locations - \$800K ✓ Additional SWEET Officers - \$280K ✓ APS Partnership - \$100K ✓ Solid Waste Website - \$20K
Expense Reduction: Vehicle Maintenance	-	\$0.2	\$0.8	\$1.2	
Expense Reduction: Labor Reduction	-	\$0.5	\$0.7	\$1.0	
Net Income	-\$14.4	-\$0.3	-\$0.7	\$0.0	

*Proforma does not include any expense impacts from future uncontrollable external events



Next Steps

- 1** City Council vote on proposed SWS fees (July 2018)
- 2** Submit purchase order for the immediate need of 9 garbage trucks (In Progress)
 - Estimated 7-8 months for truck delivery
- 3** Implement route optimization plan (July 2018)
- 4** Execute performance plan enhancements (August 2018)



H Appendix: Solid Waste Plan

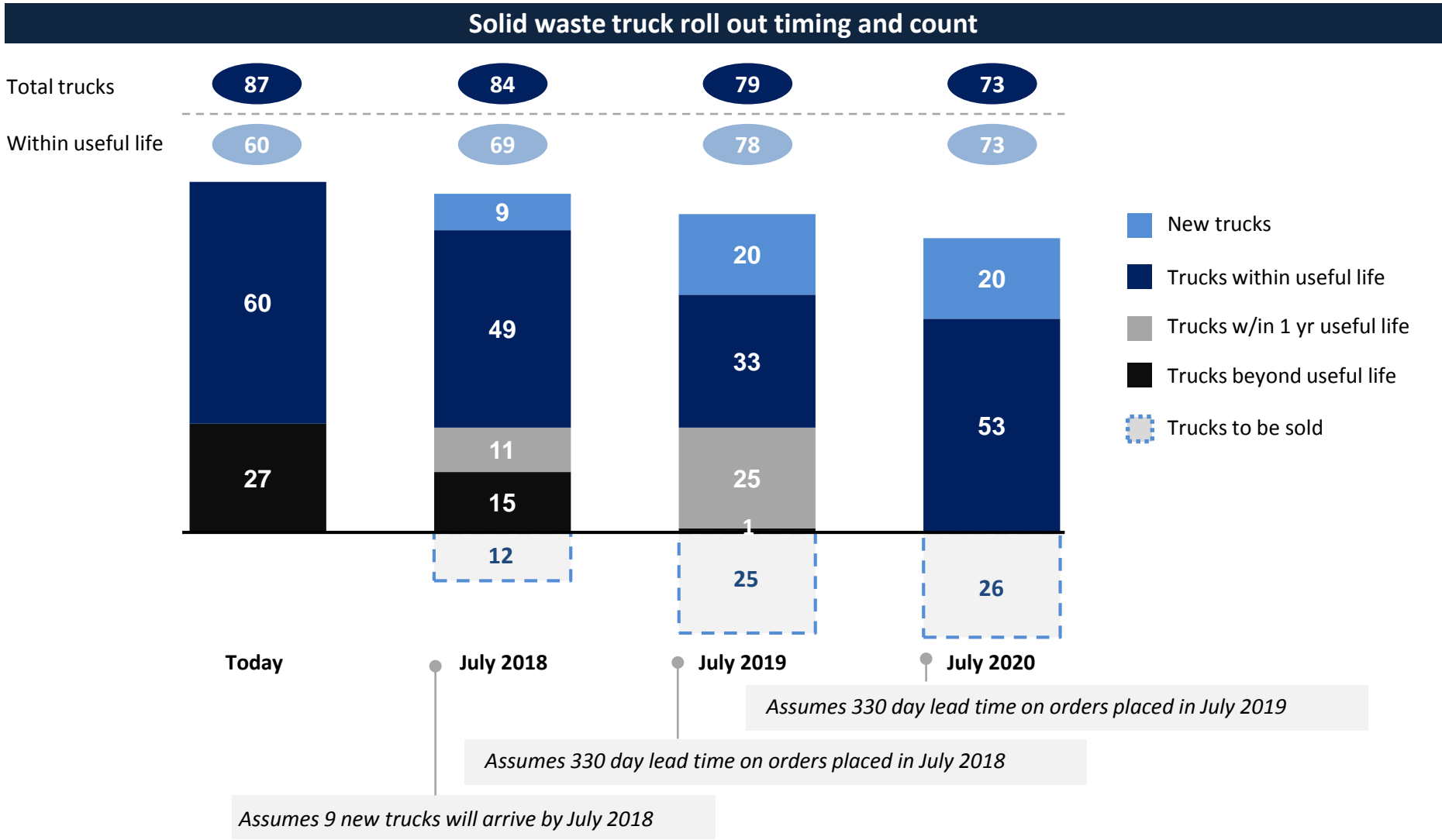


Risk Management: Drive Cam

The City's Risk Management Department recently implemented a comprehensive Vehicle Safety Program, a part of which is a video-based driver safety program called the DriveCam® Program. This Program captures short (12-second) video clips only when risky driving behaviors occur. Risky driving behaviors include hard braking, sudden acceleration, swerving, or other unsafe actions that can lead to a collision. The DriveCam Program helps detect risky driving behaviors early on among drivers of our fleet vehicles is for early detection of risky driving behaviors among drivers of our fleet vehicles.



Truck Replacement Plan: Solid waste truck replacement timing focuses on balance by 2020



Current plan will reduce overall size of solid waste fleet by 14 trucks, decrease daily truck needs by 8 through route optimization, and increase truck run time through fleet upgrades

