



City of Dallas

Advancing Solid Waste

- ***Bulk and Brush - Phase II***
- ***Collections – Safety and Efficiency Improvements***

**Environment and Sustainability
Committee
August 2020**

Tim Oliver, Interim Director
Department of Sanitation Services
City of Dallas

Presentation Overview



- Purpose
- Background/History
- Current Focus Areas
 - Bulk and Brush Collection
 - Collections Advancement Opportunities
 - Automated Collection Options and Obstacles
- Next Steps



- Present Phase II recommendations for further bulk and brush program improvements
- Discuss collections safety and efficiency advancement opportunities; the benefits and challenges
- Receive feedback in order to develop actions for future Council consideration

Background - Sanitation Services

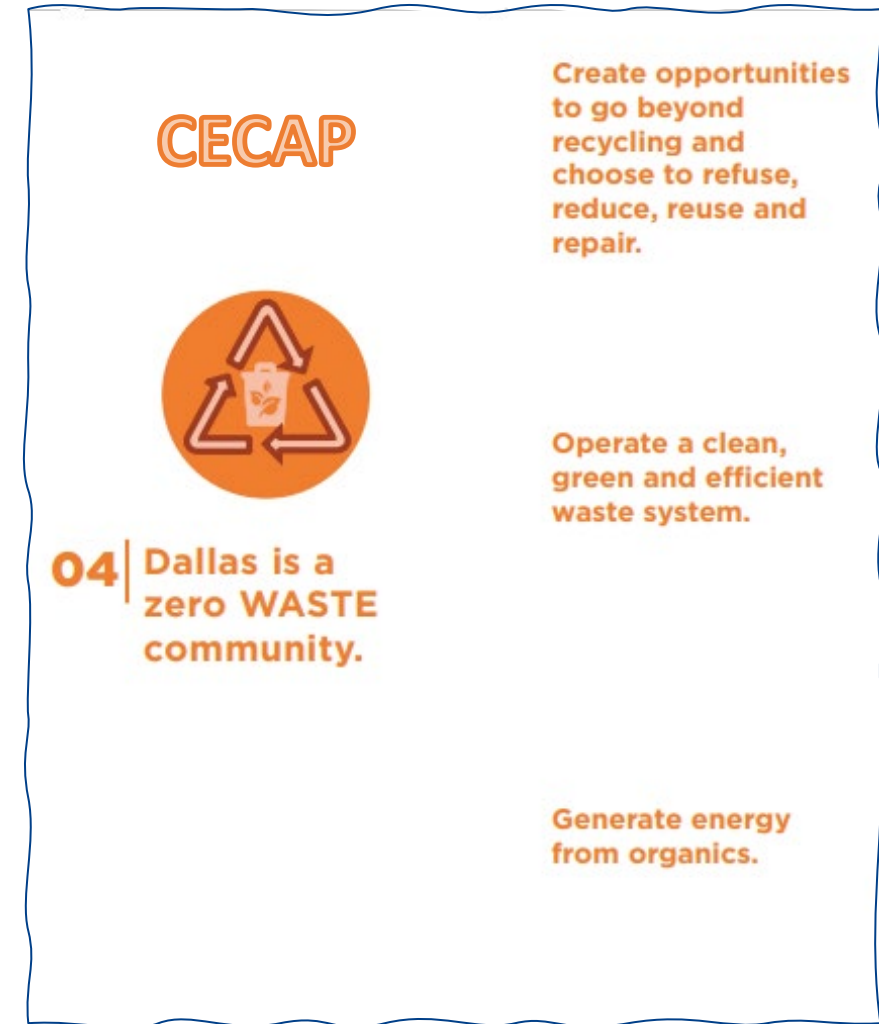


	Sanitation Services	Refuse	Recycling	Bulk and Brush	Transfer Stations and Transfer Fleet Operations	McCommas Bluff Landfill	Special Services	Animal Remains	Waste Diversion
Service Level	244,214 homes	Weekly	Weekly	Monthly	3 Transfer Station and Transfer Fleet	1.99MM tons/year	Cart Repairs/Exchanges City Facility Collections Rut/Damage Crews	Service is performed by DAS. Funded by SAN	Team Led by OEQS
Budget	\$128,813,418	\$31,445,802	\$12,135,233	\$21,778,357	\$8,467,093	\$38,790,213	\$4,941,029	\$472,335	\$2,543,141
Employees	495	89	55	115	51	102	12	5	4
Equipment	565	125	75	173	50	116	15	8	0





- Local Solid Waste Management Plan, LSWMP, often referred to as the zero-waste plan, was approved in 2013 and provides the objective of reaching an 85% diversion rate by 2040
- LSWMP is currently being updated



Background - Bulk and Brush



- On June 12, 2019, the City Council approved an ordinance establishing reasonable limits for bulk and brush collections, and additional regulations related to size and placement
 - Collection limits went into effect July 1, 2020
 - Limits set out to 10 cubic yards
 - Residents may request an oversize collection of up to 20 cubic yards once a year by calling 3-1-1 the week in advance of pickup
 - Ongoing public awareness campaign began in May 2020
 - “Clean Curb” approach



Background – Bulk and Brush



- “Clean Curb” approach
 - All waste on the curb is collected
 - Piles exceeding the 10 cubic yard limit will be collected and documented
 - Piles with items outside of guidelines (construction debris, loose trash) will be collected and documented
 - After a “soft launch” for education and outreach, residents are billed for the excess volume over the limit or prohibited items



Background – Bulk and Brush



- “Clean Curb” Positive Impacts
 - Decrease annual collection volumes by an estimated 20-30 thousand tons
 - Reduce monthly volume spikes
 - Improved collection timeliness
 - Increase in neighborhood cleanliness
- Council requested that following the effective date of the bulk/brush limits in July 2020, recommendations be brought forward to further improve the efficiency of the bulk and brush program along with other collection efficiency suggestions



- Two discussion areas for consideration:
 - ***Part 1:*** Phase II – Bulk and Brush Collections
 - ***Part 2:*** Garbage and Recycling Collection Safety and Efficiency Improvements



Part 1:

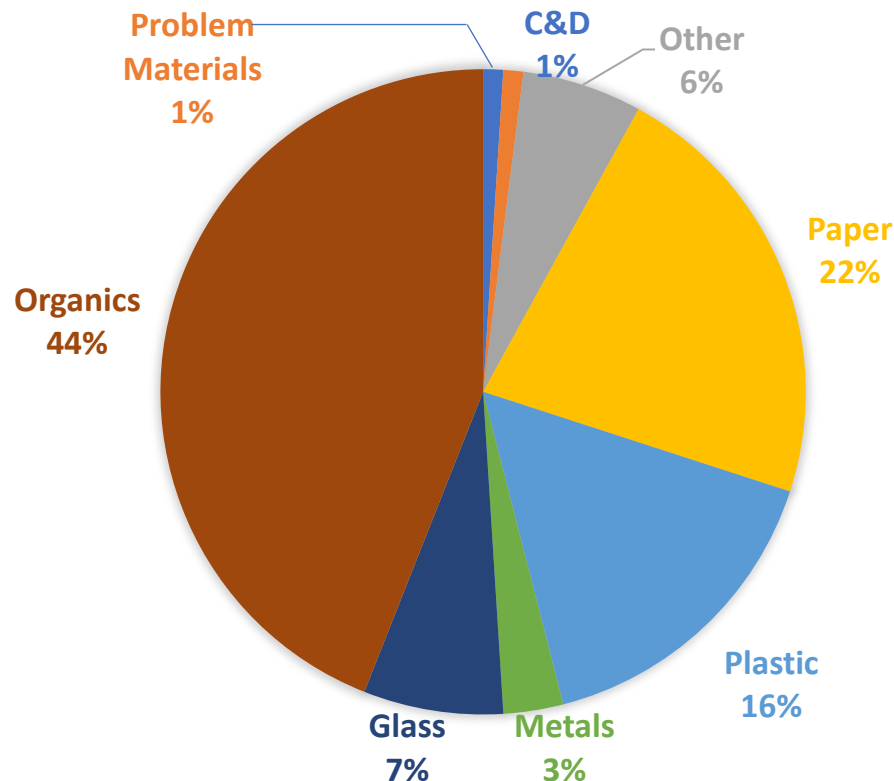
Phase II – Bulk and Brush Collections



Phase II – Bulk and Brush Collections



- Phase I of the Bulk and Brush program updates did not address the separation of bulky trash and brush and/or organic waste



- Greatest opportunity for increased diversion is of organic material
- 2018 Set-out survey demonstrated that 72% setouts contain some brush or yard waste
 - Of this total, over 55% were brush-only setouts and could be easily diverted

**Source: North Central Texas Council of Governments, 2018*



Further Brush and Bulky Trash Collection Improvements



Comparison of Brush and Bulky Trash Collections by City

	Austin ¹	Fort Worth	San Antonio ²	Houston	Dallas
Number of Homes	~193,000	~207,000	~340,000	~380,000	~240,000
Scheduled Bulk	2x/year (restrictions)	Monthly (10 cubic yards)	2x/year (8 cubic yards)	Bi-monthly (8 cubic yards)	Monthly (10 cubic yards)
Scheduled Brush	2x/year (restrictions)	None	2x/year (8 cubic yards)	Bi-monthly (8 cubic yards)	
Scheduled Yard Waste	Weekly	Weekly	None	Weekly	None
On Call	None	None	2x/year (bagged leaves)	None	None
Annual Bulk and Brush Lbs/Home	470 lbs	580 lbs	680 lbs	840 lbs	See Note ³

1. Bulk and brush collection weeks are not always on the same week and not always every 3 months
2. Residents are notified 7-10 days before their bulk or brush collection begins
3. 10 cubic yard limit took effect July 1. Previous estimate was 1,400 lbs.



Further Brush and Bulky Trash Collection Improvements



- Phase II – Alternatives

	Existing System	Scenario 1	Scenario 2	Scenario 3
Yard Trimmings	Monthly	Monthly	Weekly	Every other Month
Large Brush			Twice per year	
Bulky Items		Call-in	Twice per year	Every other Month
SAN Fee impact (est.)/mo.	\$0.00	-\$0.97	-\$1.35	-\$0.76

- All Alternatives include:
 - Current volume limits on bulky items or large brush (10 cubic yards or 20 cubic yards - 1x/year)
 - Require use of bundles or paper/compostable bags for yard trimmings
 - No material collected from private landscapers
 - No collection of construction and demolition debris



Further Brush and Bulky Trash Collection Improvements



- Staff Recommendation

	Existing System	Scenario 1	Scenario 2	Scenario 3
Yard Trimmings	Monthly	Monthly	Weekly	Every other Month
Large Brush			Twice per year	
Bulky Items		Call-in (2x/year)	Twice per year	Every other Month
Sanitation Fee Impact/Month	\$0.00	-\$0.97	-\$1.35	-\$0.76
Annualized SAN Fund/Fee Impact (est.)	\$0.00	\$2,819,247.00	\$3,936,344.00	\$2,231,089.00

- Organics diversion
- Easily utilizes existing equipment and schedule
- Quicker implementation schedule
- Allows for further phases of development





- Challenges to a new program:
 - Need for substantial public outreach and education
 - What level/type of enforcement
 - Development of mulching and/or composting facility
 - Possible public/private partnership
 - If scenario 3 is selected, is brush allowed during bulk only months
 - Possibility of increased litter, illegal dumping, bulky trash violations
 - Development of new community drop off locations and extended transfer station/landfill availability





Part 2: **Garbage and Recycling Collections– Safety and Efficiency Improvements**



Garbage and Recycling Collection Improvements: Current Program



- City crews provide once per week collection of refuse and recycling carts using fully automated side-load collection vehicles and semi-automated rear-load vehicles
- Collections occur both curbside and in alleys

Automated Collection



Rearload Collection



Garbage and Recycling Collection Improvements: Current Program



- Current collection type allocation

	Automated	Rearloader
Route Days	199	301
	39.80%	60.20%

- Collection type comparison

	Automated	Rearloader
Productivity - homes/hour	100 - 140	50-80
Crew	1	2 - 3
Disposal Trips/day	2-3	4-5
Capacity	25-35 yds3	10-20 yds3
Maintenance Cost/hour	~\$19.00	~14.75

- Move to full automated collection would represent \$6.6MM (est.) in annual expense savings





- Automation Benefits

- Safety Improvements
 - Reduction in accidents and worker injuries
 - Improved workers compensation losses
 - Touch-free collections (lessons learned during COVID-19)
- Operational Efficiencies
 - Lower route hours
 - Fewer delays related to personnel
- Opportunities for employee advancements
 - Development of career path opportunities for labor positions
 - Training program for laborers to transition to truck drivers and other skilled labor positions





- Automation Challenges

- Alley Collection

- Currently 44% of collection occur in alleys. By comparison, the City of Austin collects approximately 10% of households in the alley while Fort Worth collects close to 3%

- Alley Collection Impact

- Safety – Due to space constraints, damage to gas meters, fences, yards and approaches occur daily
 - Efficiency – collections in the alley can take up to roughly 2x the time as curbside collection
 - Less space for carts – some alleys have only 8' or less pavement and only 2' alley easement for carts, eliminating the ability for automated trucks to collect from the side of the truck
 - Pavement condition - Narrow, light weight alley pavement does not hold up well to continued use by heavy sanitation vehicles



Garbage and Recycling Collection Improvements: Automation



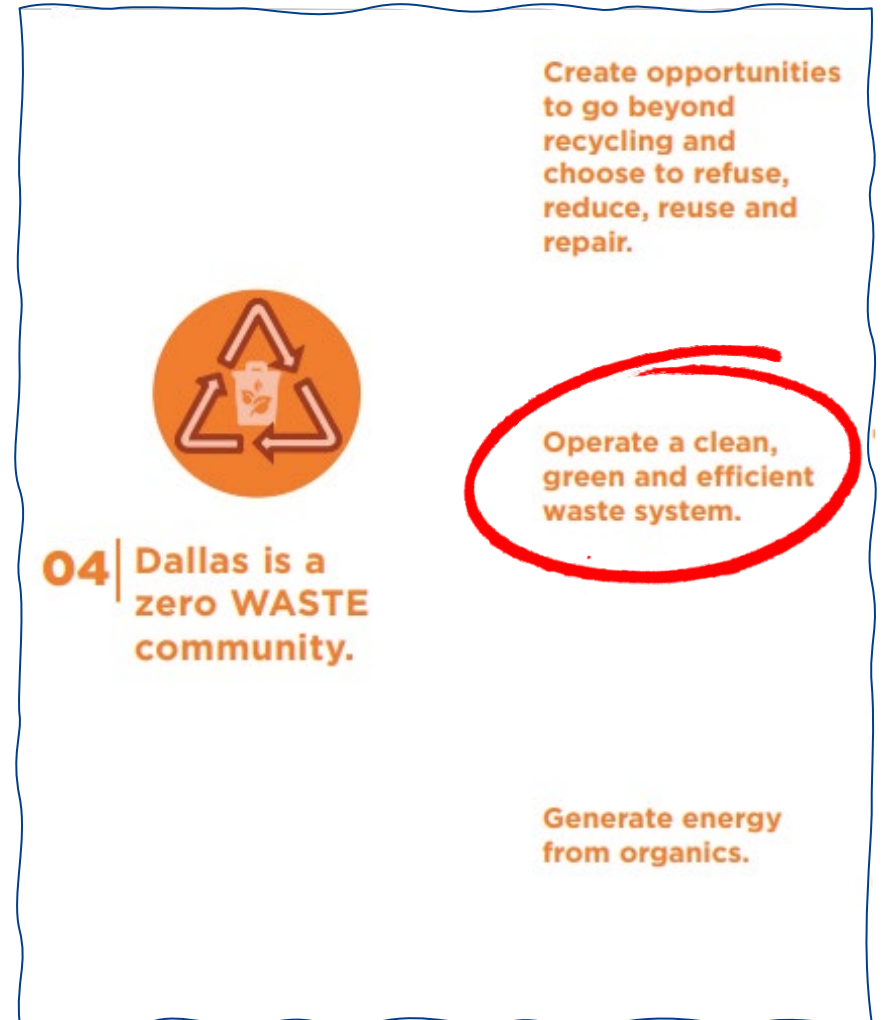
Garbage and Recycling Collection Improvements: Automation





- Staff Recommendations

- Transition to 95% automated collection over the next 2-3 years
- Develop concise alley condition/size requirements to allow for collections in alley with automated equipment
- Produce effective marketing and outreach campaign with adequate time for launch
- Staff a cart relocation crew to assist moving carts to curbside for those in need of assistance
- Offer smaller carts and or helping hand service to those with genuine limitations/ability to pull carts to curb



- Receive Committee feedback and direction
 - Phase II of bulk and brush program
 - Collections safety and efficiency
- Discuss future action and timelines





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