



SOLID WASTE COLLECTION ANALYSIS PRESENTATION

MAY 18, 2020

PRESENTED BY:

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STUDY UPDATE 2009 TO 2020



EXISTING COLLECTION PROGRAM EVALUATION



EXISTING COLLECTION PROGRAM EVALUATION (2018)

Population: 12,938

Households served: 4,272

Collections:

- Trash: 4,542 tons
- Recycle: 335 tons
- Yard Waste: 1,228 tons
- Special Materials: 1,651 pick-ups
 - Bulk
 - Appliances
 - Tires

City Revenue Sources

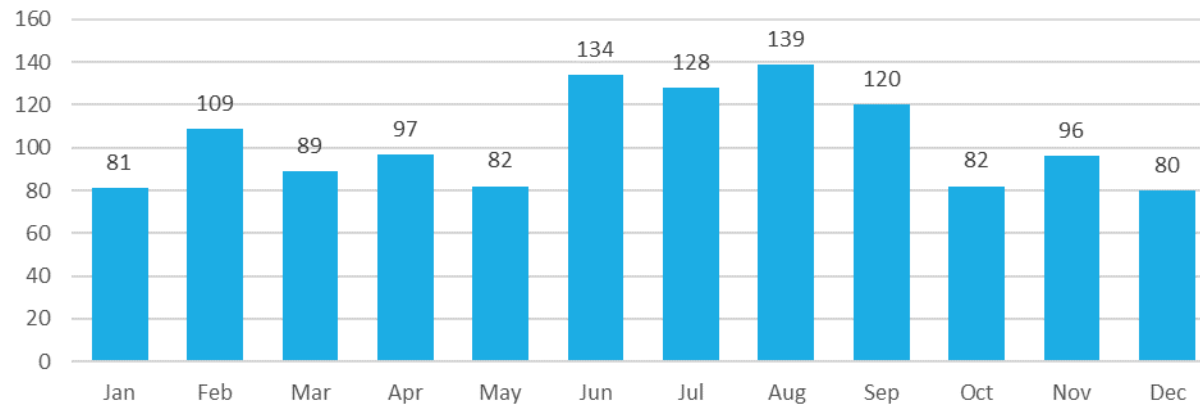
- Recyclable Revenue: \$689.60
- Special Pick-Ups: \$18,350.00
- Total: \$19,039.60

City Expenses

- Labor/Benefits: \$930,140
- Disposal/Processing: \$184,778
- Overhead: \$44,131
- Maintenance: \$58,165
- Total: \$1,217,214

EXISTING COLLECTION PROGRAM EVALUATION

Missed Pick-ups by Month in 2018





EXISTING COLLECTION PROGRAM EVALUATION

Trash

- Transfers Trash to Republic Services – dba – Browning Ferris Industries of Ohio, Glenwillow.
- 29 miles round trip.
- One driver (recycling route driver) hauls all loads to the transfer station.
- In 2018, 4,542 tons of trash was delivered to the transfer station at a total cost of \$184,778.

Recyclables

- Delivers recyclables to Kimble Transfer & Recycling, Twinsburg.
- 40 miles round trip.
- In 2018, 313 tons of recyclables was delivered to Kimble Transfer & Recycling at no cost.
- 22 tons of fiber materials to Greif for a cost to the City of \$1,242.85.



EXISTING COLLECTION PROGRAM EVALUATION

Staffing Position	2018
Full-time Rubbish	5
Part-time Rubbish	2
Full-time Rubbish	4
Part-time Rubbish	3
Recycling	1
Yard Waste	1
Bulk/Special	2
Maintenance - Lead	1
Maintenance - Assist	1
All Staff	13



ROUTE STUDY - General Observations

- Kubotas have to drive against traffic and perform u-turns in front of traffic in certain areas of the City in order to dump their loads in the packer truck
- Packer truck driver assists Kubota drivers by walking up some driveways to collect trash and recyclables if time allows
- Packer truck driver operates the truck Kubota driver operates the dumping controls, while Kubota driver remains in the Kubota during this process
- If a car is in the way in the driveway or a gate is closed/locked, the Kubota driver has no choice but to skip the house
- Some drivers do not wear safety vests while outside their vehicles
- Some recyclables are thrown out with the trash (rare) if they are not in blue bags
- Overloaded scooters have a tendency to scatter litter onto the roadway that is not always detected by the crew
- Some route areas have homes with very short driveways where the trash and recyclables are only a few feet away from the curb
- Some route areas have long driveways or driveways that have a semi-steep incline
- Major roadways such as Cedar, Belvoir and Warrensville present unique difficulties for the crews because of traffic
- A significant amount of cardboard is not recycled even though it is source separated by residents
- Recyclables are still bagged as a direct result of side door service. Bags are being eliminated in other recycling programs to decrease contamination
- Bulk or large items along with yard waste are placed at curb
- Routes finished after 2nd break, crews then went on call back pick-ups and special pick-ups
- One of the recycle drivers is utilized to swap out trash trucks on route or during breaks to bring the trash to the transfer station, thus keeping the trash routes operating without having to directly go to the transfer station



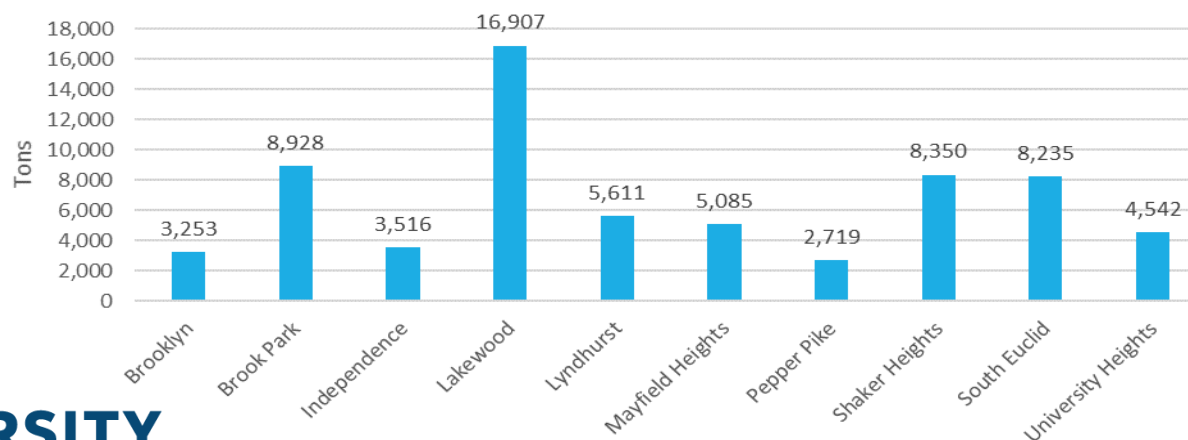
COMPARABLE MUNICIPALITY EVALUATION

City	Population	Households	Median Household Income
Brooklyn	10,737	4,000	\$40,661
Brook Park	18,533	8,360	\$49,854
Highland Heights	8,405	3,301	\$103,787
Independence	7,167	2,960	\$93,443
Lakewood	50,100	14,000	\$45,098
Lyndhurst	13,484	5,145	\$70,496
Mayfield Heights	22,278	2,337	\$48,936
Pepper Pike	6,333	11,500	\$166,786
Shaker Heights	27,302	9,000	\$49,650
South Euclid	21,473	5,248	\$57,058
University Heights	12,938	4,272	\$71,007

COMPARABLE MUNICIPALITY EVALUATION

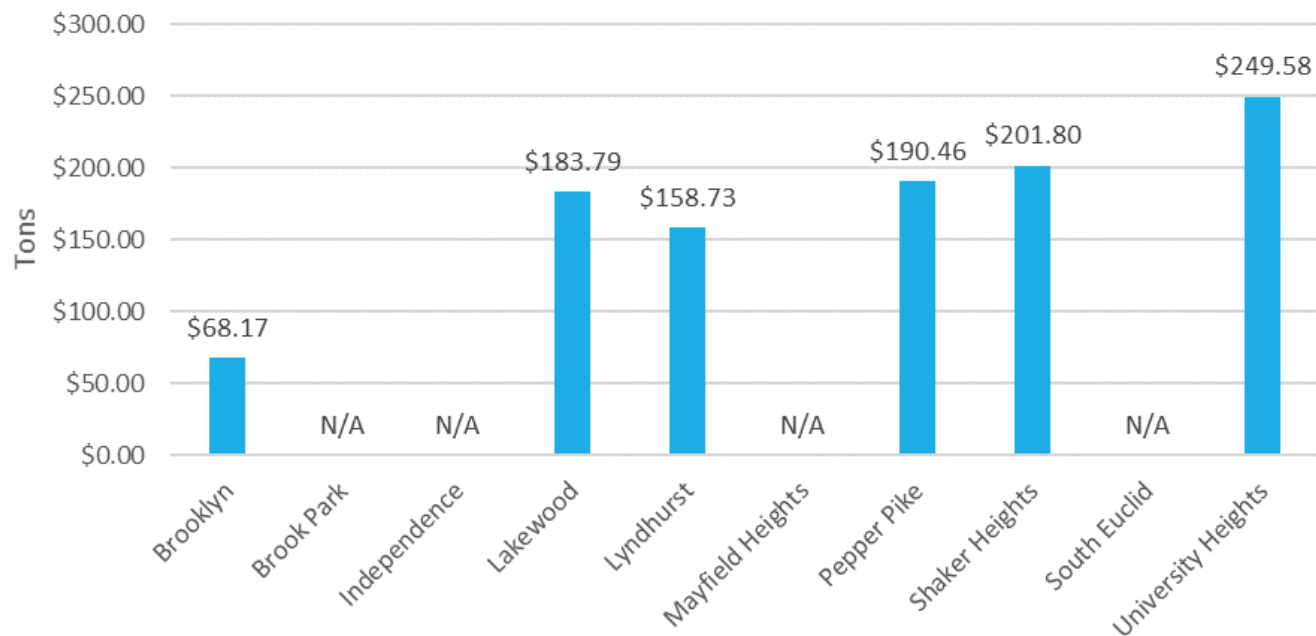
City	Stops per Route	# of Sanitation Employees per Trash Route
Brooklyn	1,000	1
Lakewood	Varies	Varies
Lyndhurst	1150-1200	2
Mayfield Heights	N/A	Kimble
Pepper Pike	599	5
Shaker Heights	700	3
South Euclid	N/A	Kimble
University Heights	450-500	3

City Comparison – 2018 Garbage Tons Collected



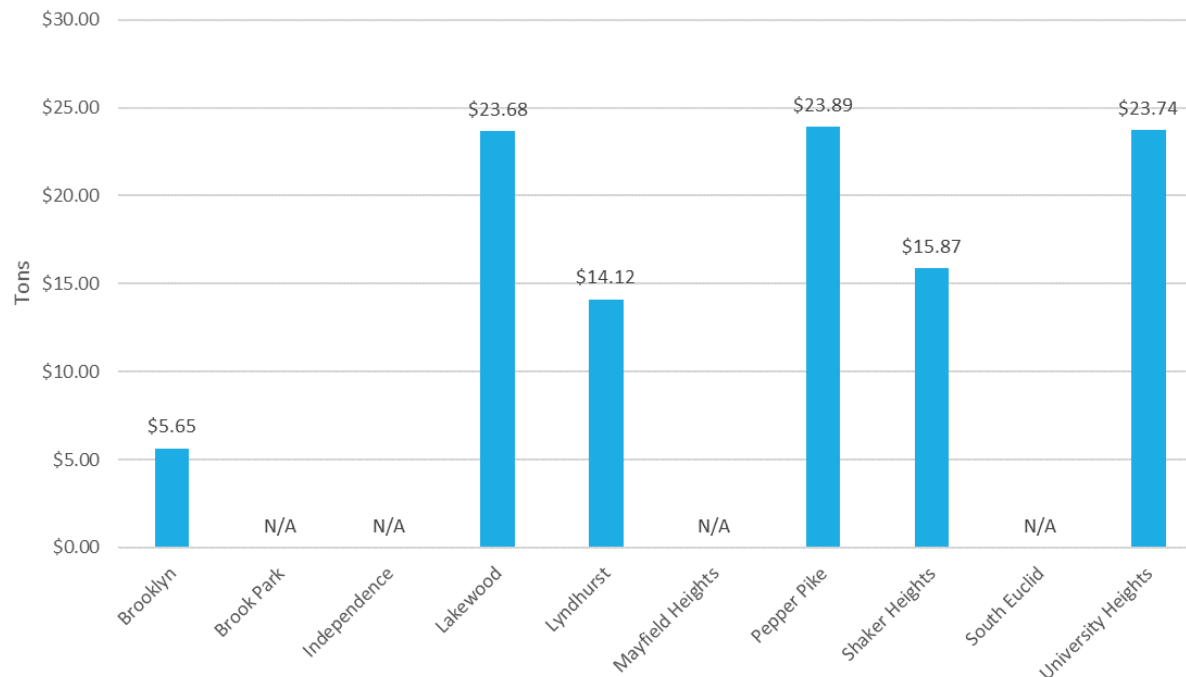
COMPARABLE MUNICIPALITY EVALUATION

City Comparison - Cost Per Ton

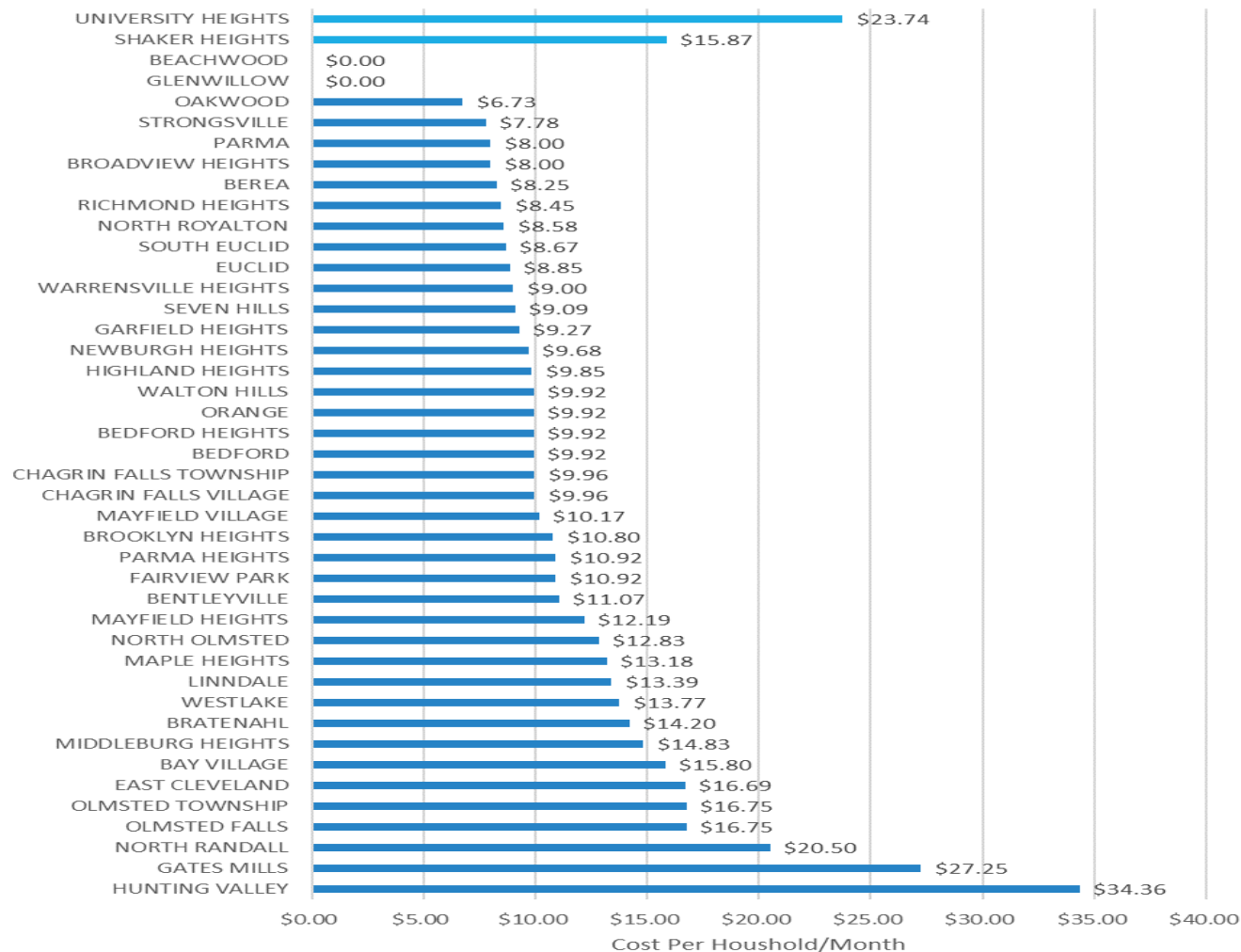


COMPARABLE MUNICIPALITY EVALUATION

City Comparison - Cost Per Household Per Month



PRIVATE SECTOR COMPARISON EVALUATION



\$14.18
Average

SOUTH EUCLID BID (2012-2018 AND 2020-2025)

2017 Estimated Cost/Unit	Manual - Base Bid	Automated - Alternate A	Manual - Alternate B	Automated - Alternate C	2018 Estimated
Number of Households	8,700	8,700	8,700	8,700	8,700
Price per Residential Unit per Month	\$7.00	\$6.41	\$6.94	\$6.35	\$8.67
Disposal Cost Per ton	\$41.61	\$41.61	\$41.61	\$41.61	\$42.57
Estimated Disposal Cost per unit/Month (based on 2018 8,234.53 tons)	\$3.28	\$3.28	\$3.28	\$3.28	\$3.36
Automated Recyclables Collection per Residential Unit per Month	None	None	\$2.42	\$2.13	Included
2017 Estimated Cost/Unit	\$10.28	\$9.69	\$12.64	\$11.76	\$12.03

Description	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Bid Price	\$14.87	\$15.32	\$15.78	\$16.25	\$16.90



LAKEWOOD COMPARISON

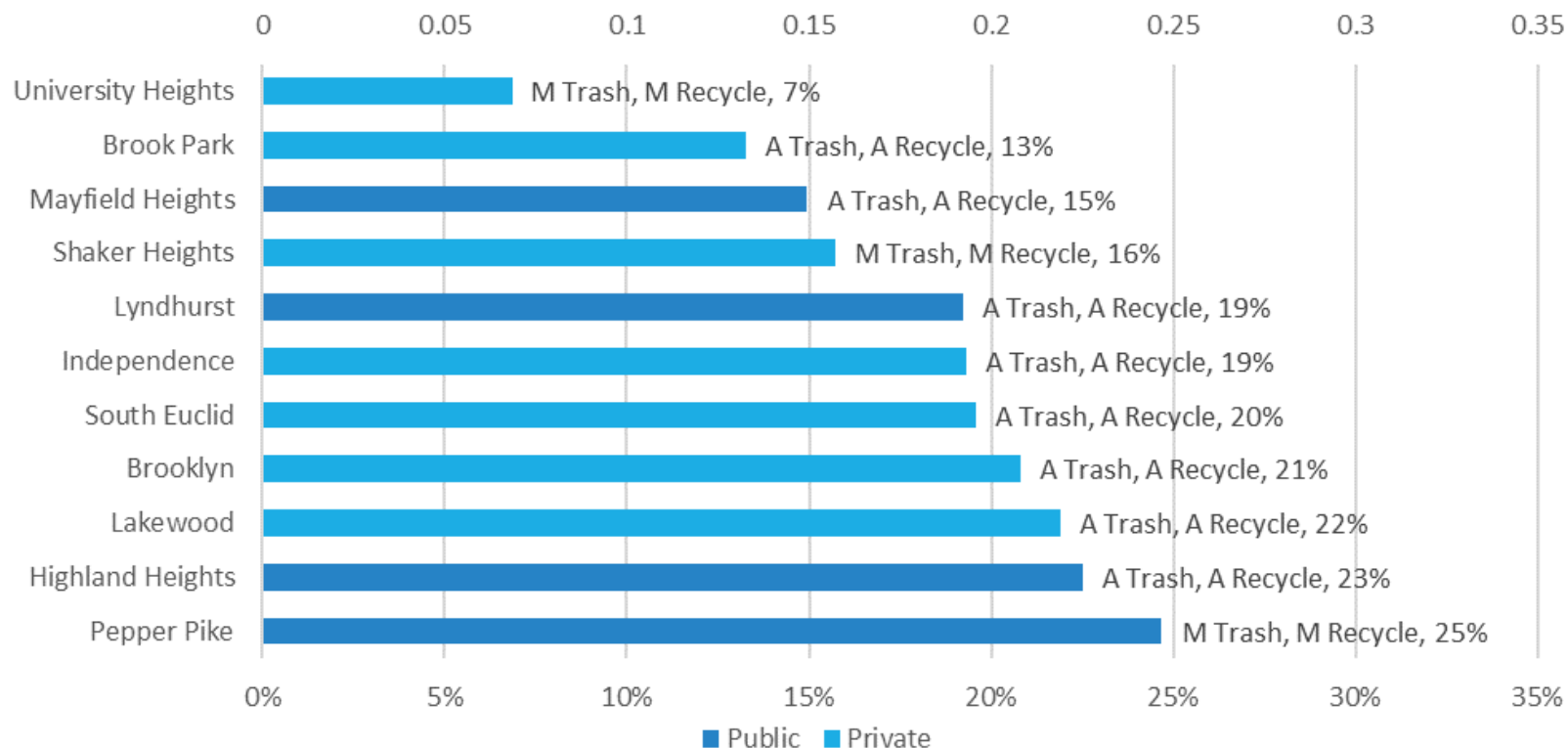
Lakewood	2008	2018	Difference
Operation Costs	\$4,411,000	\$3,978,000	-10%
Rubbish Tons	19,990	16,907	-15%
Recycling Tons	3,786	4,738	25%
Number of Households Serviced	14,000	14,000	0%
Operation Costs/Household/Month	\$26.26	\$23.68	-10%

University Heights	2008	2018	Difference
Operation Costs	\$1,023,000	\$1,217,214	19%
Rubbish Tons	5,645	4,542	-20%
Recycling Tons	338	335	-1%
Number of Households Serviced	4,114	4,272	4%
Operation Costs/Household/ Month	\$20.72	\$23.74	15%

LAKEWOOD COMPARISON

2018 Financial Analysis	University Heights	Lakewood
Operation Costs	\$1,217,214	\$3,978,000
Minus 2018 Capital	\$1,217,214	\$3,678,000
Operation Costs Include	*Rubbish Collection *Recycling Collection *Yard Waste Collection *Bulk Collection	* Trash Collection *Recycling Collection *Leaf Collection *Bulk Collection *Yard Waste Collection 10 months of year *Staffed Drop-off Trash/Recycling Facility
Rubbish Tons	4,542	16,907
Recycling Tons	335	4,738
Population	12,938	50,100
Number of Households Served	4,272	14,000
Operation Costs/Household	\$23.74	\$21.89 – Without Capital \$23.68 with Capital
Per Capita Costs per Month	\$7.84	\$6.62
University Heights Projected Annual Costs Using Lakewood Per Capita Costs as Basis	\$1,122,315	

RECYCLE PERFORMANCE COMPARISON



18.18%
Average



NEW PROGRAM OPTIONS

Change in Collections/Operator

Collection Program	Operator	Cost per Household (HH) per Month	City HH	Total Costs	Potential Annual Savings
Side/Back Door	City's Average	\$23.74	4,272	\$1,217,214	\$0
Side/Back Door	Average Public Sector	\$21.25	4,272	\$1,089,360	\$127,854
Curbside	Average Public Sector	\$18.90	4,272	\$968,889	\$248,325
Curbside	Average Private Sector	\$14.18	4,272	\$726,923	\$490,291



EXISTING PROGRAM IMPROVEMENTS

1. Program Promotion, Education and Awareness
2. Customer Service
3. General Collection Operations
4. Trash Program
5. Recycle Program
6. Yard Waste Program
7. Paper Program



EXISTING PROGRAM IMPROVEMENTS

1. Program Promotion, Education and Awareness

Suggested Alternative 1.1 – The City’s web page for trash collection should be enhanced with the tools and information available from the Cuyahoga County Solid Waste District community tool kit which is offered on their web site.

2. Customer Service

Suggested Alternative 2.1 – The City should consider conducting a customer service survey.



EXISTING PROGRAM IMPROVEMENTS

3. Trash Program

Suggested Alternative 3.1 – The City should consider re-routing the entire city to obtain the best efficiency for trash routes.

Suggested Alternative 3.2 – The City should require residents that have gates or significant driveway parking issues to bring their trash to the curb to reduce missed pick-ups and call backs.

Suggested Alternative 3.3 – If the City transitions to curbside trash services, the City will need to provide side door services to residents that meet the requirements of the American with Disabilities Act.

Suggested Alternative 3.4 – If the City transitions to curbside trash services, the City could offer a side door service for those residents that do not meet the requirements discussed in Suggested Alternative 3.3 for a fee.

EXISTING PROGRAM IMPROVEMENTS

4. Recycle Program

Suggested Alternative 4.1 – Carboard recycling, although offered, is often time not accepted by the crews because of the capacity of the Kubotas for recyclables.

Suggested Alternative 4.2 – With the upcoming ban on plastic bags from Cuyahoga County, the City should consider alternate collection methods for recyclable.

Suggested Alternative 4.3 – The City should consider modifying its packer truck fleet to be able to hold the collected recyclables from each route, especially if the Kubotas are not modified as suggested in 4.1.



5. Paper Program

Suggested Alternative 5.1 – Since the City pays to recycle the paper and paper products at the service garage, GT suggest eliminating this program if the curbside option is implemented in 8.1.

EXISTING PROGRAM IMPROVEMENTS

6. Major Program Changes

Suggested Alternative 6.1 – The City should consider transitioning the side door service to curbside service. The table below shows the average costs for the current program and other side door and curbside programs.

Program Option	Operator	Calculated Cost/HH/Month	City HH	Total Costs (based on 2018)	2023	2028	Potential Annual Savings (based on 2018)	Potential Annual Savings (based on 2023)	Potential Annual Savings (based on 2028)
Side/Back Door	City's Average	\$23.74	4,272	\$1,217,214	\$1,379,118	\$1,540,315	\$0	\$0	\$0
Curbside Rear Load - Existing Trucks	City	\$21.48	4,272	\$1,101,290	\$1,082,867	\$1,205,135	\$115,924	\$296,251	\$335,181
Backyard Trash/Manual Bin Recycle	City	\$25.57	4,272	\$1,310,788	\$1,487,457	\$1,653,744	(\$93,574)	(\$108,339)	(\$113,429)
Curbside Semi-Automated	City	\$22.60	4,272	\$1,158,616	\$1,294,127	\$1,438,089	\$58,598	\$84,991	\$102,226
Curbside Automated	City	\$21.34	4,272	\$1,094,092	\$1,211,622	\$1,326,795	\$123,122	\$167,496	\$213,520



AUTOMATED COLLECTION

Switching to an automated curbside recycling and trash program offers the following benefits:

- Safer for City or contractor personnel
- Increased recycling
- Decreased cost to City
- Allows City to eliminate bagged recyclables to comply with County ban on bags

Perceived negatives for switching are listed as follows:

- Change in service requires residents to adapt to new requirements
- Added container placement responsibilities shifted to residents for curb service
- Capital and maintenance expense for equipment if publicly operated



QUESTIONS

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